

## FuSe 12

### Interpretation's Future and the End of Lonerganism

There are two sections in this essay: first a broad sweep, then some helpful hints. There could have been a third section, dealing in more detail with the blind alley of present comparative work. But I omit it: first, we need to deal with it as counterpositional in the fourth seminar, on dialectic; secondly, the **hints** section gives some help there, and some hope.

#### 1. The Broad Sweep

This is the third and final essay dealing with the Second Seminar, the topic of which was Functional Interpretation. FuSe 10, "Contexts of Functional Interpretation", written in March, set the bar high. FuSe 11, "Lonerganism's Crippling Difficulties with Interpretation," recognized, after two weeks of the seminar, that the bar was way too high, and related the associated difficulties to the failure of Lonergan studies to take Lonergan serious. The first short section of that essay asked for some reflection on my central suggestion, that present strategies of interpretation within the Lonergan school were stuck in an old rut that Lonergan's heuristics rendered obsolete, a rut that strangled his project of grounding an effective global collaboration.

I did not go forward, in that section, to criticize in detail that obsolescence, that strangling. Such a criticism would itself be obsolete. Instead, I invited you, the readers, first, to see if the rut could be identified without my help, and secondly, to see what you could make of the second section of the essay, a dense indication of how we are to reach the deeper control of meaning that the second canon of hermeneutics compactly suggests.

The problem is one of specifying a climb towards a control of descriptive meaning that would lift global collaboration in interpretation into an effective cyclic science of progress. How might I help in this essay? Certainly, not by compacting my

own climbing of fifty years, unless the compacting resembled those two pages of *Method in Theology* that pitch in an abundance of footnotes to climbing to be done.<sup>1</sup> Specifying the climb? How does one give the metaphysical equivalents of the climb to what is a distant unknown hope?<sup>2</sup> What does one say to Icarus about the modern control of flying metal?

The problem of lifting description into its fullest possible explanatory and heuristic control has puzzled me for fifty years. Perhaps you might join me in the venture of Cantower 23, “Redoubt Describing”, a relatively recent venture into the problem?<sup>3</sup> The problem still haunted me when I wrote the sequel, *Loneragan’s Standard Model of Effective Global Inquiry*, to the 2007 book, *Method in Theology: Refinements and Implementations*. The haunting led me to the odd strategy of adding **Cantower 23**, as a sort of undertow, in the footnotes of the final chapters of the sequel. Since finishing that book the task has been a steady preoccupation, something that is evident from e.g. note 39 of **Fuse 10**. Add to those essays the bundle of scribbled notes that are the back-up to the second section of **FuSe 11**, in which I invited you to putter creatively, a puttering no doubt full of frustrations.

Yet without that puttering breaking beyond frustrations to a self-pedagogy, you

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<sup>1</sup>I am thinking of those two pages 286-7, which reference most of the book *Insight*. I have often told the story of my delight, when doing the index to *Method* in December of 1971, in reaching those pages. I had been watching to see how he would solve the problem he raised with me in the Summer of 1966, as he agitatedly paced his room on the sixth floor of the Bayview Regis. What was he to do about a first chapter to the book on *Method* .... he could not pack in all of *Insight*? These two pages were part of his subtle effort to point beyond the descriptive putterings of his tired book. And then, not so subtle, as he beat forward on his little typewriter: “From this broadened basis one can go on”(287) to rewrite the first half of *Method*. See Appendix B of Fuse 11.

<sup>2</sup>Chapter 10 of my Website book, *Method in Theology: Revisions and Implementations*, “Metaphysical Equivalents and Functional Specialization” talks of the problem of searching for metaphysical equivalents of the not-yet.

<sup>3</sup>Written in late 2003.

just cannot be with me when I push the analogy of science reached out to by “bolder spirits. They select the conspicuously successful science of their time.”<sup>4</sup> Within such analogical thinking<sup>5</sup> they can drive slowly, so slowly, towards an effective fantasy of “cumulative and progressive results,”<sup>6</sup> “*cumulative and progressive results*,”<sup>7</sup> that are quite foreign to the present horizon of those involved in theological alchemy, that belong to a fancy of the Field.<sup>8</sup>

Now it does not help that the successful science - the simplest, physics - lacks integral maturity at present. That immaturity is simply an indication of the deeper shifting of culture.<sup>9</sup>

Physics is to take on the same cyclic dynamics that is to be the source of a shift of the statistics<sup>10</sup> of cumulative and progressive results in all communal ventures of

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<sup>4</sup>*Method in Theology*, 3.

<sup>5</sup>There is a need for a lengthy treatment of analogy that connects it with luminous inverse insight. One must be clear on the dynamics of analogical talk: a matter of luminous affirmation, negation and eminence. More about this when we move to special categories, but I would note the value of reading thesis 5 of CWL 12, on mystery.

<sup>6</sup>*Method in Theology*, 4.

<sup>7</sup>*Ibid.*, 5.

<sup>8</sup>I refer here implicitly to the sketchings on horizon and field in CWL 18. “The field is the universe, but my horizon defines my universe” (*Phenomenology and Logic*, 199).

<sup>9</sup>On the shift into and out of the Axial Period, see Appendix C. See, for a context of the Appendices, note 7 of FuSe 11.

<sup>10</sup>It seems to me important to draw attention here to the need to know what one is talking about e.g. when talking of emergent probability. I raise questions of the meaning of probability and its presence in the dynamics of progress in *Randomness, Statistics and Emergence*. There is, I fear, a great deal of talk of emergent probability by people who would not know a probability distribution from a hole in the ground. The mention above of a shift in statistics relates to the sort of shift that would be represented by the move from Poisson distribution to Normal Law distribution. Poisson’s work has been summed up nicely in an 1898 book by Ladislaus Bartkiewicz, *The Law of Small Numbers*. Indeed, some experts consider that the distribution merited the title *The Bartkiewicz Distribution*.

humanity.<sup>11</sup>

Nor does it help, perhaps, for me to write more here in this compact fashion. I ask you, again, to muse over solemn efforts such as the Comparison of Lonergan and Jones, or Jones and Ben Rama. Muse over the parallel in amateur gardening or early animal husbandry. Over the past decade I have written of methodology's relation to method as being paralleled by Zoology's relation to animals. Might that help as a guide to musing? What happens to a gardener's comparison of the rose and the tulip when the context has become an explanatory evolutionary science? And now think of the later explanatory cyclic science of philosophy or theology, when *Comparison* finds a new unimaginable precision in its efforts to "seek out affinities and oppositions."<sup>12</sup>

But we, you and I, are up against a huge challenge of imagination. One has to push hard and in detail the analogy with a mature science, one that has a standard model, such as the periodic table in its quantum updatedness.<sup>13</sup> In such a science one is not endless going over long-solved problems, except in the context of classroom pedagogy. One is not endlessly trying to re-discover differences of the carbon patterns of diamonds and dross. One, rather - and here of course I am thinking of functional research - hunts for positive and negative anomalies. One finds the buckyball, or the nanotube, and cycles it round the Tower of Able towards better street-life.

The functional interpreter of the next millennium is to take, baton-wise, a precise nudge regarding progress from the functional researcher, reach for its meaning within

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<sup>11</sup>I suggest re-reading page 364 of *Method*, with vigorous creativity, page in this context, starting on the last line of the previous page. The last paragraph of p. 364 shows him musing over lesser problems, but he was not unaware of the broader possibilities. See Appendix D below for some powerful suggestions regarding that lift, a lift that relates to the shift to serious explanation of the usual elements of meaning whose descriptions are so easily mistaken to be explanatory.

<sup>12</sup>*Method in Theology*, 250.

<sup>13</sup>There is the deeper updateness that is brought out in Appendix E, below.

the full contemporary context of UV + GS + FS,<sup>14</sup> and hand on, baton on, the suggested meaning to the functional historians who are tuned to searching, in that same context, for realities and possibilities of ongoing meanings.

I see no point in going on here. The seminar participants will be going on in these tracks as we move now to the final seminar of this year, dialectic. Perhaps for those of the opposition looking on secretly I should repeat in **bold-face letters** my offensive conclusions to previous works?<sup>15</sup> But my appeal to them is simple: com out of the secrecy and the silence and attack my position, even if you have not get the guts to move in print, self-revealingly, through lines 18-32 of page 250 of *Method in Theology*.

## 2. Helpful Hints

First I would note again the helpful hinting that the Appendices to **FuSes** 11 and 12 give, seven appendices in all.<sup>16</sup> My collaborators were not asked to do a refined job, but to sow seeds. My helpful hinting here puts that sowing in a fuller context that is still pragmatic, a manageable start.<sup>17</sup>

At this stage in the present essay I paused precisely to give helpful hints: the helpful hints that come from answering question online every second Thursday of each seminar. This Thursday, May 25<sup>th</sup>, there were three questions to be handled by me - combinations, actually, of different connected questions. When I had finished my brief, but I hoped helpful, answers or hints, it struck me that, well, this illustrates concretely what is going on regarding helpful hints. So I simply add the questions and answers

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<sup>14</sup>This is the topic of section 3 of **FuSe 10**.

<sup>15</sup>I think of the concluding words of either *A Brief History of Tongue* or of *Sane Economics and Fusionism*. Surely some people should take offense and attack me publically?

<sup>16</sup>See notes 7 and 28 of *FuSe* 11.

<sup>17</sup>Appendix F, below, contains my own enlargement of hints in relation to the future of economics.

here. You note that the questions are numbered **23, 24, 25**: they belong to the full series of questions for the 25 seminars available on the BLOG. And what might be the elusive answer to the task of meshing explanatorily the norms of *Method 7* and the canons of hermeneutics of *Insight*? Well, you'll just have to follow up the hints in the further questions and answers! The next question is already listed here - Question **26** - which you might well associate with that ending of *Insight 19*'s section 9: "In the 26<sup>th</sup> place..." You might like to brood on your answer: my answer will, obviously, be in the Q and A of Thursday June 2<sup>nd</sup> 2011.

But perhaps I should conclude here with the central helpful hint regarding The Future of Interpretation: please try very seriously for a fantasy of the mature science that is to emerge, something quite different from the present pre-scientific ramblings of philosophy and theology.<sup>18</sup> The "cumulative and progressive results"<sup>19</sup> of 9011 A.D. will be refinements of a global perspective, a Standard Model, leading cyclically to delicate tunings of human hearts.

## **Q. And A. Session**

**May 19<sup>th</sup> 2011.**

The questions coming to me in these weeks indicate that this is a tough seminar. The reasons are clear to some, but the following questions help both in giving light and in revealing the extent of the darkness. On we go then, cheerfully!

**Q.23** It seems that a key trouble of tackling the task of interpretation, whether solely in the context of *Method 7* or by adding *Insight 17.3*, is revealed, displayed, by adverting

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<sup>18</sup>The final Appendix below, Appendix G, is a help there.

<sup>19</sup>*Method in Theology*, 4,5,

seriously to the demands of the first aspect of understanding the text (*Method*, 155): understanding the object. I took up the task of **interpreting Aristotle on seeing**, and this first aspect, when I took it seriously - perhaps for the first time - just blew me away. Could you comment on this?

**A.23** Oddly, raising this question, or aspect of interpretation, is a great way of finding the canons of hermeneutics relevant to the task understanding or of “doing” of *Method* 7. I ramble a bit here, but always bear in mind that **THIS** is the crisis question of getting functional collaboration off the ground, of getting Lonerganism out of its rut [more on this in **FuSe** 11 and **Fuse** 12, coming shortly!]. So: bear in mind that we all have a long way to go. Meshing Canon 2 and Method 7 is a challenge of this century.

Our three questions, coming in various formats to me, mesh nicely, and you’ll find bits of the answer to each question in the other answers. “Understanding the object”: think of the history of any science. So, e.g, Yes, Aristotle on seeing is a challenge towards figuring out hylemorphism and further aggreformism. But... understanding the object? Wow. We are at a fresh beginning in this 21<sup>st</sup> century. Think of my rambles in the 41 *Field Nocturnes* with my basic textbook, **Neuroscience**. But you are on to a good thing in being blown away. Let me add to the wind or the blow. Section 2 of the first chapter of *Method* begins: “Operations in the pattern are **seeing** .....” I bet reading **seeing** there did not blow you away at all on a first reading. A bit of a shock, isn’t it to find that you are not reading the text properly. How many people pause there and go off the find out about the object?!!

Now cheer up, things could get worse. “Understanding the object”. What is seeing? For the concrete methodologist the question reaches out to all methods that weave round the reality of seeing, and that reality is not an isolated piece of being, but sight-seeing in

the Cosmic Ark of NoAskingexcluded. So, best to have - to be - an adequate heuristic. You **see** the elitist challenge (*MIT*, 351)?. But this question carries us into the next question, of how luminous that seeing is, and what we - you and I - might do about it.

**Q.24** Could you give some direction regarding the task of “understanding oneself” as it emerges from our seminar or seminars?

**A.24** To quote Lonergan in that section, “this is an existential dimension of the problem of hermeneutics.” (*MIT*, 161). Yet it is also global, and, to repeat the end of the previous answer, What are we going to do about it?

It is important to be very intimately existential yet very global in this or any of the seminars: *glocal* is a useful word here. What is the main drive of these seminars? To get the Lonergan community awake and involved regarding, in guarding, the project of positive global orientation within emergent probability. That positive project includes the genesis of a critical mass of global population that are genuine integral heuristics. In my two page outline for LA and more broadly in my essay for the Mexican Meeting on June 16-17, “Arriving in Cosmopolis”, I put in the tentative date of 9011 A.D. as a date for the emergence of the suggested adequate Tower Community of 250,000,000,000 that would care for a global community of 10 billion. Will the billion one-acre gardens have emerged by then? And will they provide food, or will food supplying have gone in that other direction that I and other ecologists have talked about? Here recall Lonergan’s view of future gardening and money on page 20 of *For A New Political Economy*, “a superchemistry to clear away finance and even money, to make economic solidarity a memory, and power over nature the only difference between civilization and primitive gardening”. And, within that, there is to be a New Covenant, a massive luminous transformation of the meaning of *promise*, a promised and promising land and globe, so so far away, as a reality of money, from the present malice and vulgarity

of, say, derivative goings-on and hedge-fund managing.

But why am I thus pushing for this vision? Because that is a grounding motivation for our little efforts. The task of “understanding oneself” becomes, thus, a present task of getting us on the road towards the quarter-of-a-billion Tower-Caregivers. Among other things, they will have read *Insight* in its contemporary versions and be tuned into the simplest of the sciences, physics. [pull in *Insight* 17 section 1.2 here, on Adequate Self-knowledge.] BUT our little efforts need not include that. Indeed, here we are at the heart of present “Lonerganist Trouble” . The Care Givers that were Lonergan’s audience in the second half of the 20<sup>th</sup> century and on until now, were and are just not up to the culture that had emerged in the past five hundred years. So they wriggle round his challenge, perhaps in a good will meshed in invincible ignorance. Lonergan’s writings and hopes on the matter are quite clear: THIS JUST WONT DO! Most of my collaborators in this seminar are uncouth when it comes to serious science. That is not the harm. The harm is the crippling of Lonergan’s project and hope by leading the next generation to be similarly uncouth.

I am tired of people battling me on the topic of NOT NEEDING PHYSICS TO DO PHILOSOPHY. Certainly you - and I mean you possibly, even with statistical high probability - may get on with doing good, teaching philosophy or running a business or whatever, without understanding physics. But if you don’t encourage the next generation of philosophy teachers to go that different way “not only to read *Insight* but to discover themselves in themselves” (MIT, 260), to become “elite” (MIT, 350-1) not “effete” (MIT, 99) then we, Lonergan followers, are going to continue in what - when you have paused over my claim enough to shake your invincible ignorance - is an immoral style of educating the future Care-Givers. Lonerganism will continue on its silly way, but now sinfully, blabbering commonsense papers at one another with almost no effect on the desperate situations of the globe.

Lonergan's answer to the impossible task of generating Cosmopolis was and is functional collaboration. You may not understand physics, but you can understand Lonergan's stand sufficiently [again, I point to the Biography, chapter 10] to slowly intussuscept his view on getting in tune with the needy globe. Functional collaboration is so structured that it will, as I have said in various places, spin forward people with adequately differentiated consciousnesses.

You do not have to do physics to support that, to move that distance beyond the abuse you received in you own education. But I would note, for some of you - it is for you to discern - that a pause from your goings-on might do the larger trick ... a year, even a summer, of serious humble calculus (see *Topics in Education* 145, on this and add *CWL* 6, 121 155, on the menace and malice of *haute vulgarization*.) I recall one of my audience in a Boston Workshop of the 1970s, who seemed to be impressed by my appeal, asking me what to do for the summer, which he said he had free. I suggested physics. He didn't: he now pontificates destructively in leading others into the general bias of sophisticated enriched description, layered plentifully with references to dead Germans and live Frenchmen.

I seem to have taken a strange line on the task of "understanding oneself", but it is a line that is central to our effort, especially our present effort of e.g. grappling with canon 2 of Hermeneutics.

Most of us have, in fact, no experience of such grappling, "... never bitten by theory ... no understanding of what Newton was about" (*CWL* 6,155), "lost in a no man's land between the world of theory and the world of common sense" (*CWL* 6,121). SO: this task I have given in this seminar, of trying to figure out the meshing of *Insight* 17.3 and *Method* 7, is a crazy invitation to, perhaps, have a first shot at doing some serious scientific thinking. Now, wouldn't the knowledge of THAT be a worthwhile piece of self-knowledge, perhaps slowly cutting the heart our your eloquence regarding some

dead German, or even regarding a particular dead Canadian?

**Q. 25.** I have been dipping into various authors on the question of Lonergan's hermeneutics ... best not name names here ! - but not getting much help? How best to go about pushing for his meaning?

**A.25** Nor will I mention authors, Lonergan-centred or otherwise. Certainly putter along with Lonergan, BUT you need to be working with the two previous questions and answers bubbling in your brain-chemicals: numbers **23** and **24**. And that is why I put the questions in this order. I recall one of my great moments (about 30 years ago!), reading *De Intellectu et Methodo* ( now in English ....you get the details and the actual piece of text I am referring to in *Cantower VII*, "Systematics and General Systems Theory", at note 29.)

I was trying to figure out the meaning of pure formulation (in *The Sketch, Insight 17*). The piece of Lonergan in *De Intellectu et Methodo* was about the historian of mathematics: he or she is adequate to the task when he or she has an up-to-date grip on that history. From brooding over this text, it became increasingly luminous to me that functional systematics was to be a genetic retrieval, structuring, of all systems. This led me, first, to get a grip on reversing counterpositions, in that there can be something creative in, so to speak, blind alleys [not just those that establish inverse insights that ground further structures]. Later, it pushed me towards the heuristic view of **GS** as geohistorical. That helped me to diagram and quasi-systematize Lonergan's various suggestions of ongoing, overlapping, merging, etc contexts.

I seem to be leaping forward from your question, but I am not. My suggestion is that you follow analogies of science, as Lonergan suggests at the beginning of the first chapter of *Method*. You can broaden your reach by venturing into the zones of

technologies and of the arts, tracking technologies and aesthetic norms that “live on” as seeds of creativity. The difficulty of reading various authors on hermeneutics is that the literature tends to cycle round a range of mistakes. Nor is the cycle anything like the cycle for creative collaboration, which is so structured that it is to be a spin-cycle: spinning **in** the “live on” stuff and spinning **off** - either to outer space or to operable commonsense patterns - what is not the stuff of Tower Work. Again, here, I am thinking of the progress of physics, especially as it enters the Tower-cycling in this next century.

There is lots more to say, but we are handicapped by our discretion re mentioning authors: you might raise questions about the value of reading W, X, or Y and **if** I have been into their texts I can privately write to you. I would note, however, that as the Hermeneutic Cycling advances, less and less attention will be paid to people that have been taken too seriously too long. We will seek, systematically and globally, to live on with the “live on” stuff. Authentic solipsists do not talk to other people, and if they do other people do not bother to listen, unless the solipsist is a dear relation in a mental home. So with various traditions of hermeneutics.

**Q.26 It seems that the major problem in initiating functional collaboration is not functionality but the absence of what you call an *acquis*, a Standard Model, a shared scientific view. Could you please hint, in some decent detail, the pragmatics of the moves towards this in the next decade or century?**

**APPENDIX C    The Second Stage of Meaning                      Alexandra Gillis**

Part One: A Context for an Interpretation

This short article aims not at a full functional interpretation of the second stage of meaning,<sup>20</sup> but at the identification of some key questions that need to be asked (and answered) if we are to reach for that fuller interpretive understanding. The three stages of meaning in *Method in Theology*<sup>21</sup> present a brief outline of a perspective that had its roots for Bernard Lonergan in a much earlier work, *De Deo Trino*.<sup>22</sup> They encompass and embrace, as does all of *Method*, the entire work of *Insight*,<sup>23</sup> so an interpretation of the second stage of meaning, at least one that would meet the incisive demands of the canons of hermeneutics in *Insight* (particularly the second canon of explanation), needs to acknowledge this much fuller context.

An essential background to the second stage of meaning is to be had from *De Deo Trino*, question 21, in which Lonergan talks about the two times of the temporal subject. It is an evolutionary perspective of the emergence and development of humanity toward its own effective, collaborative, luminously self-appropriated living. There is a first lengthy time in which our thinking operates spontaneously; there is a second time in which a revelation of our human nature has occurred, our thinking is explicitly affirmed by us and our living is a differentiated self-directing. The first and third stages of meaning in *Method* coincide with the two times of the temporal subject in the *De Deo Trino* writing, while the second stage of meaning, simply put, is the (lengthy, axial) in-between time.

As implied above, this second stage of meaning has also been called ‘axial’ by Philip McShane, taken from Karl Jaspers’ notion of an axial period.<sup>24</sup> Jaspers’ axial period idea was taken up and

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<sup>20</sup> My article “Philip McShane’s Axial Period: A Functional Interpretation”, which runs to fifty pages, was an earlier and fuller attempt at functional interpretation on this topic. See *Journal of Macrodynamic Analysis*, 4 (2003): 128-179. The first ten pages give a more complete interpretation of the second stage of meaning, or Axial Period.

<sup>21</sup> Bernard Lonergan, *Method in Theology* (Toronto: University of Toronto Press, 1972).

<sup>22</sup> Bernard Lonergan *The Triune God: Systematics. Collected Works of Bernard Lonergan, Vol. 12* (Toronto: University of Toronto Press, 2007), Q. 21, 399-413.

<sup>23</sup> Bernard Lonergan, *Insight. Collected Works of Bernard Lonergan, Vol. 3* (Toronto: University of Toronto Press, 1992).

<sup>24</sup> Karl Jaspers, *The Origin and Goal of History*, trans. Michael Bullock (London: Routledge and Kegan, 1953), 2.

extended by both Arnold Toynbee<sup>25</sup> and Eric Voegelin<sup>26</sup> and then further extended by Philip McShane in the context of Lonergan's two times of the temporal subject and his three stages of meaning.<sup>27</sup> As McShane's work explores the implications of the above-mentioned fuller context of Lonergan's stages of meaning (the second stage of meaning in particular), it is important to include it in any consideration of the second stage of meaning.

As expressed by Lonergan in *Method in Theology*, the second stage of meaning is just one of three stages of meaning. Since the second stage is in the context of all three stages, a first key question needs to ask about all three stages of meaning, and specifically about our meaning of meaning, and our own foundation of meaning. This, perhaps, sounds obvious. Yet *Insight* makes clear that an adequate self-knowledge<sup>28</sup> is not common sense but theoretical, and an actuation of that self-knowledge in our living "presupposes an exact and very difficult knowledge"<sup>29</sup> that only slowly emerges in a long personal climb.

Not only is there the long climb, but for those of us not fortunate enough to be comfortable with mathematics and science from our early education, it requires that we make an effort to get comfortable with and commit to our own growth in some kind of theoretic work. This is by no means an easy job. My own experience has involved battling deep childhood scars from a societal male bias which led teachers to state openly that 'girls were not good at math and science.' Such beliefs enter into the neurochemistry of children (certainly of my own) and, when backed by male bias in the family environment as well, create lasting chemical, molecular and psychic schemes of recurrence that are more than a little difficult to overcome. Nevertheless, I entered into an early degree in Kinesiology, struggling through anatomy (my great love), physiology, applied kinetics and biomechanics. Much later, I intentionally entered into a decade-long struggle with basic mathematics (only to discover another great love, and a heart-warming redemption of childhood suffering) that

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<sup>25</sup> Arnold Toynbee, *Mankind and Mother Earth: A Narrative History of the World* (London: Oxford University Press, 1976).

<sup>26</sup> Eric Voegelin, *Order and History, Volume Four: The Ecumenic Age* (Louisiana: Louisiana State University Press, 1974).

<sup>27</sup> Key works are *The Shaping of the Foundations: Being at Home in Transcendental Method* (New York: University of America Press, 1976); *Lonergan's Challenge to the University and the Economy* (Washington: University of America Press, 1980); "Middle Kingdom, Middle Man" in *Searching for Cultural Foundations* (New York: University of America Press, 1984), 1-43; *Process: Introducing Themselves to Young (Christian) Readers*, 1989, available on the website [www.philipmcshane.ca](http://www.philipmcshane.ca); *A Brief History of Tongue: From Big Bang to Coloured Wholes* (Halifax: Axial Press, 1998). Please see my article (note 1) for a more complete analysis of the works through which McShane's ideas have developed.

<sup>28</sup> *Insight*, 558-60.

<sup>29</sup> *Triune God*, 405.

has led me now to secondary school teaching of mathematics grades 8-10. What is important in all this is what I call my key motivation: a moment of inescapable truth in which I squarely faced the implication of my own orientation to explanation, to the known unknown, to the ‘objective of [my] pure desire to know’. If this is who I am as human, am I not obligated, responsible, for at least trying to push toward some form of explanatory theoretic experience? My personal answer was an unqualified ‘yes.’ And the commitment and struggle has provided me with an invaluable measure of what is needed in my ongoing foundational reach for adequate self-knowledge.

A second key question asks about our understanding of interiority, and specifically, about our understanding of interiority if we are *not* in an explanatory context. Further, what role does common sense have to play in the second stage of meaning? The second stage of meaning includes a slow movement toward the explicit metaphysics of the third stage of meaning, characterized by the emergence of interiority in the culture as a whole. Such a long transition will need to be intimated to common sense before it can be embraced by a culture. Part of the job of interiority will be to ask how we can communicate and intimate the beauty of this larger world of explicit metaphysics to the common sense cultures of the world as it is now.

A third key question asks about mystery. I have been emphasizing the orientation toward explanation as our proper home, and yet common sense remains the primary means of cultural communication. What, then, is the role of mystery in the second stage of meaning and how does it promote a shift to the third stage of meaning, or to the second time of the temporal subject? What is the (extreme) importance of symbols and images in promoting a cultural ethos that appreciates and cherishes our natural openness to mystery, to the known unknown, to the secret wonders in the cosmos that await our questions and glimpses of understanding as we reach for the glory of creation’s intelligibilities?

A fourth key question asks how humanity is to lead itself (ourselves) out of the second stage of meaning and into a third self-directed stage of meaning. Here the pointing is to functional specialization: to a growing global minority who are committed to the personal and communal climbing that puts explanatory reaching effectively at centre stage and that promotes the development of a cultural common sense ethos open to such a future.

A fifth and final key question asks about Lonergan’s optimism that “the second stage is

vanishing and a third is about to take its place.”<sup>30</sup> This comment needs contextualizing. In the sections on stages of meaning in *Method*, Lonergan does a broad sweep of movements in history. He places the beginnings of the shift to the second stage of meaning in ancient Greece, with the ‘Greek discovery of mind’. He then moves through the centuries to arrive at Galileo, the rise of modern science with Descartes, and the consequent problem of the split between common sense and theory.

Likewise, he places the beginning of the shift to the third stage of meaning in 18<sup>th</sup> century Europe, with Hegel, Kierkegaard, Schopenhauer, et al and the shift in philosophy to the priority of the subject. The parallel is evident: just as Homer, the Greek tragedians and the early Greek philosophers were a mere foreshadowing of what 1500-2000 years later blossomed into the rise of modern science, so Hegel, Kierkegaard and Lonergan himself are a mere foreshadowing of our future. It seems we have a good couple of millennia before the third stage of meaning could hope to emerge in any kind of authentic way. Our job now is to reach for full understanding of the meaning of this complex second stage of meaning and to try to implement its transitional implications.

## Part Two - Audience

In re-reading Part One, the question comes up: who am I writing to? Reflecting on this question, it seems clear that I am writing to an audience I assume to be competently in possession of an interiority, ‘an explicit metaphysics’ that would normally include: some struggle and level of success in theoretic displacement; some essential and fundamental appreciation of functional specialization as meeting the long term demand for and answer to the longer cycle of decline and cosmopolis; an appreciation of meaning and the heuristic importance of the universal viewpoint; a positional ‘stand’ or horizon; an openness to symbols and imagery, both as received and to be created; a commitment to and ongoing reach in sustained adult growth for adequate self-knowledge.

Perhaps my writing is somewhat unforgiving and unappreciative of those who are struggling in more beginning positions than this, and I apologize to those people. Why do I write to a more

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<sup>30</sup> *Method*, 96.

differentiated audience? First, if I am to be honest, I suppose it is out of my own lack of inspiration and motivation in trying to communicate to a less differentiated audience. Secondly, I have always been energized by work that challenges me to a larger understanding and pushes me to crystallize my questions and reach for my own wider horizon, so my natural inclination is to write out of a spontaneous belief in the value and inspiration of pointing beyond. And whether the reader is within the audience I have identified or outside it, the questions I have chosen as focal points point to a beyond, to work-to-be-done. In that sense, I could say that I am writing to readers of all levels.

Still, it is worth asking: how would I write about the second stage of meaning to beginning Lonergan students? In a sense, this question asks for a different article since to answer it empirically means working it out, doing it, getting down to it. But some intimation of where I might go is possible. Key, then, is the clear - or not so clear! - problem of what is lacking: “The neglected subject does not know himself. The truncated subject not only does not know himself, but also is unaware of his ignorance and so, in one way or another, concludes that what he does not know does not exist.”<sup>31</sup> This, I think, is the central difficulty in trying to intimate the second stage of meaning to undifferentiated common sense. Not only is there a lack ‘in the beings talk,’<sup>32</sup> but also there is a lack of *awareness* of the lack.

A comparison might help. Think of a lack in diet. I can be lacking in iron, and there are two possibilities in this situation: if I am *aware* that I am lacking iron, I also can be aware of the symptoms of the lack that my bodily rhythms indicate. Further, I can do something to meet the need, such as taking a supplement. But if I am not aware that I am lacking iron, my health and daily living can suffer unbeknownst to me. Then my confused bodily rhythms indicating the lack are not an indication but simply a series of mysterious occurrences and sufferings. As long as the sufferings stay ‘manageable,’ I can be quite content. It is only when they flare up and become traumatic that I am driven to ask about what is going on.

Likewise, undifferentiated living in the second stage of meaning is a sort of contented blind drifting with its series of mysterious life occurrences and sufferings, sometimes manageable,

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<sup>31</sup> Bernard Lonergan, *A Second Collection* (Toronto: University of Toronto Press, 1974), 73.

<sup>32</sup> Philip McShane, *Lack in the Beingstalk. A Giant's Causeway* (Nova Scotia: Axial Publishing, 2006).

sometimes not. More intense sufferings and disasters prompt us to ask what is going on, but there is a missing ‘diagnosis’. And the real problem is that no one imagines there *is* a diagnosis; a fundamental understanding is missing. So the crucial question is, how do we go about suggesting that there *is*, in fact, a self-to-be-known and a world-to-be-known that is quite different than the one in which we are presently and spontaneously “meeting persons and dealing with things that are ‘really out there’.”<sup>33</sup>

Staying with the health analogy, one possible answer is in pointing to the symptoms of the lack. We can creatively and humorously point out the fragmentation and dis-ease of our present axial, ‘second stage’ living evident in layers of our global living: world finance and economics, world politics, environmental crises, religious conflict, ongoing dichotomies between ‘first world’ and ‘third world’ countries, unsettling shifts in gender, family and community life. Further, this pointing can be hopeful and future-looking if placed in the long-term historical context of an evolving human group.<sup>34</sup> Instead of living ‘from hand to mouth,’ there is the need to promote a longer term view, a slow, steady emergence of new schemes of human questing and self-directing. Then the creative pointing to our globally fragmented living of these past 5000+ years urges us in our inner dynamic to ask: what is going on? Is there a better way? How do we move forward? The way becomes open – a little more each century – to a wider ethos of mystery, of redemption and of hope in a new way of ‘searching ourselves forward.’

The second stage of meaning, then, “with all its sham, drudgery, and broken dreams,”<sup>35</sup> is our struggle and search for meaning. It calls to us in our misery and loneliness, opening our hearts and nudging us forward. And just as Jesus calls to his first tentative disciples, asking them, ‘what do you want?’<sup>36</sup> so the Word in history calls to us now, asking us: What do we want?

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<sup>33</sup> *Insight*, 411.

<sup>34</sup> Emergent probability is the relevant context. See *Insight*, the whole of chapter four with particular focus on sections 2.4 and 2.5.

<sup>35</sup> *Desiderata*

<sup>36</sup> John 1: 35-39

## APPENDIX D

### Preconceptual Apprehension and Evaluation of Objects

William J. Zanardi

#### I Overview

The following essay begins with a question about how to interpret some puzzling remarks Lonergan made in a letter. In Part III the significance of that brief text quickly expands to include a much larger puzzle as old as Aristotle's *sensus communis* and as current as contemporary neuroscientific reports on the binding problem. Given this much larger set of texts to interpret, Part IV steps back to ask methodological questions about how to proceed. There the question is what heuristic framework might be adequate in interpreting texts from several disciplines ranging from the neuroscience of attention to psychology and intentionality theory. Four features of such a framework are first identified and then applied in the last two parts of the essay.

#### II The Initial Puzzle

At the beginning of his "Humus 2," Philip McShane quotes an unpublished letter from Lonergan to Fred Crowe. The cited passage reads:

Incidentally, re anxiety, what the Freudians call the Super-Ego is Aquinas' *cogitativa*: just as the little birds know that twigs are good for building nests and the little lambs know that wolves are bad, so little human beings develop a *cogitativa* about good and bad; it reflects their childish

understanding of what papa and mamma say is good or bad [,] and in adult life it can cause a hell of a lot of trouble.<sup>37</sup>

This passage is puzzling for three reasons. It is not obvious, even with the examples, how the Freudian superego is an instance of the *vis cogitativa*. Second, Lonergan's linking of the two terms is seemingly a departure from the traditional interest in the *cogitativa* as part of an inquiry into how human sensibility already "recognizes" the universal in the particular, e.g. in classifying something sensed as an instance of a general class such as a noise. Third, when contemporary neurosciences take up the inquiry into the "binding problem" (i.e. the ordering or unifying of different types of sensations into consciousness of a single object), they make no mention, as far as I have found, of Freud's superego.

This "musing on the *vis cogitativa*," as McShane calls it, is something of an oddity because it links terms that past discussions have not mentioned together and because it seems unrelated to the questions about object recognition that prompted Aristotle's speculation about a *sensus communis* and medieval writers' talk about a variety of inner senses.

As an exercise in basic research, this author assembled the relevant texts on the *vis cogitativa* and the superego in Lonergan's published works.<sup>38</sup> The key text suggesting how to relate the two terms occurs as part of Lonergan's comments on human development.

...[I]t hardly will be remiss to indicate that our definition

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<sup>37</sup> From a letter dated December 27, 1955. Listed under Humus at [www.philipmcshane.ca](http://www.philipmcshane.ca).

<sup>38</sup> "Lonergan's Puzzling Comment about the *Vis Cogitativa*," available at [www.sgeme.org/BlogEngine/2011/02/default.aspx?page=1](http://www.sgeme.org/BlogEngine/2011/02/default.aspx?page=1).

of development serves to supply a single scheme that unites otherwise unrelated principles. Thus, the notion of finality brings together Freud's wish fulfillment, his somewhat ambiguous sublimation, and Jung's archetypal symbols. The unconscious neural basis neither means nor wishes in the proper senses of those terms, for both meaning and wishing are conscious activities. But the unconscious neural basis is an upwardly directed dynamism seeking fuller realization, first, on the proximate sensitive level, and secondly, beyond its limitations, on higher artistic, dramatic, philosophic, cultural, and religious levels. Hence it is that insight into dream symbols and associated images and affects reveals to the psychologist a grasp of the anticipations and virtualities of higher activities immanent in the underlying unconscious manifold.

A similar phenomenon on a different level is offered by Freud's superego: within consciousness, it is a compound of preceptive symbols and submissive affects; by its finality it anticipates, by its subordination it reflects, by its obsessive and expansive tendencies it caricatures, the judgments of rational consciousness on the conduct of a rational being.<sup>39</sup>

This quotation provides clues as to why the author linked the two terms. The following experiment in the second functional specialty of interpretation will follow those clues in trying to understand what Lonergan meant by his "musing." In doing so, this seemingly minor puzzle will open onto a much more significant set of puzzles.

### III A Larger Puzzle

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<sup>39</sup> Insight. CW 3 (Toronto: University of Toronto Press, 1992), 482.

I assume Lonergan's puzzling remark is related to a more general and much older puzzle: How do we explain the preconceptual apprehension of objects? Aristotle's response was in terms of the *sensus communis*. Our different "external senses" receive their varied sensations, but what we apprehend<sup>40</sup> are objects as unities with varied properties, e.g. the color, shape, position, texture, smell of a single object. Presumably a "power" over and above the distinct senses must be at work in unifying these distinctly different sensations.<sup>41</sup> The medievals were alert to even more complexity in the apprehension of objects. They posited a variety of *vires* to account for the everyday experience of objects. For example, we commonly recognize similar objects over time (*vis memoriae*) and have similar affective responses to them (*vis aestimativa*).<sup>42</sup> While such multiplication of subtle distinctions once seemed mere word play, contemporary neurosciences are more appreciative of the analytic sophistication of the medievals in their writings about the puzzles of object recognition and evaluation.

The terminology has changed such that the "binding problem"

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<sup>40</sup> "Apprehend" and "apprehension" are used in this essay to mean an intentional act of attending to some object that is accompanied by a minimal understanding of an object as of a determinate kind.

<sup>41</sup> In writing on the *sensus communis*, one author formulated the old philosophical puzzle: "...while recognizing that some contemporary philosophers are still influenced by an atomistic view of sense impressions, most acknowledge that we are aware not merely of isolated disparate sense data, but of concrete individual sensible things, which at the level of the external senses are wholes composed of many sensible aspects. One of many philosophical problems faced by these philosophers, however, is to explain precisely how these distinct simultaneously presented sensible aspects are objectively (that is, with respect to their being distinct sensible aspects of one individual concrete sensible thing) and subjectively (that is, with respect to the unity of the diverse activities of the external senses, all as pertaining to the same awareness center or subject of awareness) cognized as belonging to the same individual sensible thing." Stephen J. Laumakis. "The *Sensus Communis* Reconsidered" in *ACPA Quarterly* 82 (Summer 2008), 429.

<sup>42</sup> Could the child's superego, in responding affectively to acts and objects, be an instance of what an earlier scholarship meant by the *vis aestimativa*?

is the current title for the old set of puzzles.

The binding problem in cognitive science has many facets, but one problem traditionally at its core is to explain the unity of perception. How is the information processed by different sensory systems brought together to provide a unified representation of the world? Call this the perceptual binding problem. The problem is Janus faced. On one side, we want to explain phenomenal binding: the fact that we experience a single world rather than separate perceptual fields for each sensory modality. On the other side, we are faced with a computational or functional problem, namely, to explain how a neural net like the brain links representations of objects with representations of their properties, for example, the representation of an apple with representations of its color, shape, taste and heft. In general, we want to know how the brain manages to represent the assignment of instances (this apple) to types (red).<sup>43</sup>

This statement of the puzzle leaves implicit even more complexity in object recognition. The binding problem is not monolithic but a series of puzzles.

The singular term "problem" suggests that binding is a unitary problem. In fact, the binding problem is a class of problems, and some of the confusion in discussions of binding may stem from the fact that different phenomena are being referred to by a single name. Besides visual binding, which includes binding information across visual space,

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<sup>43</sup> James W. Garson. "(Dis)solving the Binding Problem" in Philosophical Psychology 14 (No.4, 2001), 381.

binding information across types of features, and binding neural signals across cortical space, binding occurs in other modalities. For instance, auditory binding may be needed to discriminate the sound of a single voice in a crowd; binding across time is required for interpreting object motion; and cross-modal binding is required to associate the sound of a ball striking a bat with the visual percept of it, so that both are effortlessly perceived as aspects of a single event.<sup>44</sup>

So how does Lonergan's puzzling remark open onto this contemporary set of problems? Addressing this question follows upon some basic questions about how functional specialists in interpretation might proceed in handling both sets of puzzles.

#### IV Methodological Puzzles

How are we to go about interpreting this series of puzzles? Historically writers have used various "frameworks." While Aristotle used metaphysical categories to describe intellectual "motions" leading to acts of object recognition, Descartes, in

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<sup>44</sup> Adina L. Roskies. "The Binding Problem" in Neuron 24 (September 1999), 7. Another author suggests how the various puzzles might be classified and kept distinct. "For any case of binding, the binding problem can actually be dissected into three separable problems. Different theories have focused primarily on one of the three.

(a) Parsing. How are the relevant elements to bind as a single entity selected and segregated from those belonging to other objects, ideas, or events?

(b) Encoding. How is the binding encoded so that it can be signaled to other brain systems and used?

(c) Structural description. How are the correct relations specified between the bound elements within a single object?

The second and third operations are not necessarily sequential, and in fact some models combine all three as part of the same process." Anne Treisman. "Solutions to the Binding Problem: Progress through Controversy and Convergence" in Neuron 24 (September 1999), 105.

separating the *res extensa* and the *res cogitans*, generated an epistemological question about how motions occurred between the two. Cognitive psychology brackets the epistemological question, but twentieth-century depth psychology suggested that cognitive acts themselves were the playthings of a Cartesian “evil genius.” Intentionality theory corrected Descartes’ flawed wording of the puzzle, but new puzzles arose about the neurochemical and biological antecedents of intentional acts. A contemporary study of the identified puzzles should proceed from an adequately informed historical perspective and also from the findings of the relevant sciences of the day.<sup>45</sup> So this study begins by acknowledging the historical shifts from metaphysics to epistemology and on to cognitive and depth psychology and, more recently, to the neurosciences.

The general heuristic employed in the neurosciences today anticipates making and finding correlations among psychological acts, brain locales, neurochemical events at specified locales and, increasingly, the genetic substrates for those events. This general project is not without problems:

Psychological categories appear with some frequency in supposed explanations of neural processes, e.g. talk of neurons communicating with one another, sending messages along neural pathways, even making decisions about what to single out for attention.<sup>46</sup>

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Explicit claims that psychological acts are reducible to neurochemical events are not infrequent.

Addressing each type of problem is a task for dialecticians.

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<sup>45</sup> What does it take to be “adequately informed”? Remarks below on functional specialization will respond to this question.

<sup>46</sup> A vigorous debate about this mixture of categories is recorded in Maxwell Bennett et al. Neuroscience and Philosophy: Brain, Mind and Language (New York: Columbia University Press, 2007).

Yet how are functional specialists in interpretation to proceed without taking a stand on these issues? Perhaps the task is to lay out their own heuristic frameworks and then proceed without debating the relative merits of alternatives but leaving it to dialecticians and foundation specialists to sort out and evaluate the differences. The practical wisdom here may be what Paul Samuelson had in mind when he supposedly said that one did not destroy a theory by arguments but by producing a better theory. In that case, the task is to provide a more adequate explanatory heuristic that promises a "way forward" beyond debates over current assumptions and practices. Lonergan provided a broad outline of such a way forward.

The interpreter's differentiation of the protean notion of being must be not descriptive but explanatory. It will aim at relating, not to us, but to one another, the contents and contexts of the totality of documents and interpretations. As long as interpretation remains on the descriptive level, it may happen to be correct[,] but it cannot escape the relativity of a manifold of interpretations to a manifold of audiences; in turn, this relativity excludes the possibility of scientific collaboration, scientific control, and scientific advance towards commonly accepted results.<sup>47</sup>

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<sup>47</sup> Insight, 609-610. Lonergan goes on in the next paragraph with comments that perhaps anticipate his later, more developed insights into functional specialization.

"The explanatory differentiation of the protean notion of being involves three elements. First, there is the genetic sequence in which insights gradually are accumulated by man. Secondly, there are the dialectical alternatives in which accumulated insights are formulated, with positions inviting further development and counterpositions shifting their ground to avoid the reversal they demand. Thirdly, with the advance of culture and of effective education, there arises the possibility of the differentiation and specialization of modes of expression; and since this development conditions not only the exact communication of insights but also the discoverer's own grasp of his discovery, since such grasp and its exact communication intimately are connected with the advance of positions and the reversal of counterpositions, the three elements in the explanatory differentiation of the protean notion of being fuse into a single explanation."

To date there is some evidence of "scientific advance." For example, the neuroscience of attention correlates psychological acts with brain locales and neurochemical events. The following diagram cites a few of those correlations.

| <b>Acts of Attention</b> | <b>Brain Locales</b>   | <b>Main Chemical Regulators</b> |
|--------------------------|--|---------------------------------|
| Orientation/Orienting    | Right Parietal and Frontal Hemispheres   | Norepinephrine (NE)             |
| Arousal/Alerting         | Superior Parietal Lobe, Frontal Eye Fields, Superior Colliculus, Nuclei in Thalamus, Temporo-Parietal Junction | Acetylcholine (Ach)             |
| Focus/Focusing           | Lateral Prefrontal Regions, Anterior Cingulate Cortex, Basal Ganglia   | Dopamine (DA)                   |

Such an initial achievement may signal how to conduct further inquiries. They will begin with the "thing for us," e.g. with familiar experiences of paying attention to, focusing on,

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Is the brief historical survey at the beginning of Part III a thin sketch of the first "element"? The shift from talk of motions and powers to differentiated and related intentional operations is, however, not complete. The recurrent problems noted above with muddled categories and reductionistic assumptions reflect the presence of the second element in the neuroscientific literature.

some sight or sound. Waiting for a traffic light to change and scanning old books in an antique store are common enough experiences. But we can go on to ask: How are we able to attend to objects? How does any object become something "in focus"?<sup>48</sup> What are our expectations in asking these questions? As hinted above, some minimal "training" in the sciences should orientate an inquirer to search for key variables, identify likely candidates, work out promising correlations among them and investigate how well those patterns make sense of available data.<sup>49</sup>

So far so good, but is such a trained response to further questions at all self-luminous or does it, do we, remain opaque? The broader issue is whether competent performance in inquiry requires more than mimicry of what earlier trainers prescribed and proscribed. Apparently it may not. Years of class work and postgraduate research can proceed without inquirers reflecting on or having much understanding of why they are doing what they are doing.<sup>50</sup> So a further step, could, for example, be to pay attention to paying attention, i.e. to take oneself as a specimen of "being attentive" and so bringing objects into focus. Briefly

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<sup>48</sup> Preliminary answers to these questions are slowly worked out in Chapters One and Two of this author's A Theory of Ordered Liberty (Austin: Forty Acres Press, 2011). Those chapters identified but did not answer harder questions about how acts of attending arise from but are not reducible to biological or organic functions that, in turn, arise from but are not reducible to neurochemical processes. These are challenging questions for this new century's neuroscientists, biologists and psychologists.

<sup>49</sup> A question of whether such correlations are descriptive or explanatory is worth noting. Explanatory correlations are responses to further why-questions that demand more than identifying "conjunctions" among variables. Descriptive correlations are common in the social sciences when, for example, voting results reveal patterns among variables of age, education level and average income.

<sup>50</sup> Evidence from the undergraduate years turns up when collegians are at a loss to explain why multiplying a positive number by a negative number yields a negative product or why it is impossible to draw a Euclidean circle. Evidence from more advanced audiences shows up in the puzzled looks that follow a claim about Newton first inventing the law of gravity or a claim that what makes a business an ongoing enterprise is an ongoing series of invisible acts of meaning.

put, the challenge is to adopt generalized empirical method.

[It] operates on a combination of both the data of sense and the data of consciousness: it does not treat of objects without taking into account the corresponding operations of the subject; it does not treat of the subject's operations without taking into account the corresponding objects.<sup>51</sup>

What should we expect from this oscillating attention to both intentional acts and their objects?<sup>52</sup> If we assume that any known object is a correlate of the operations originally intending its intelligibility and facticity, then relations among those operations will have their parallels in the intelligible relations that comprise the object. As a result, a basic heuristic framework for exploring both operations and objects will take the form of a series of analogous proportions between objects and operations.<sup>53</sup> Thus, as images are to the insights that make sense of them, so neural impulses are to the organic processes that order them; as aggregates of data are to formulated statistical frequencies so organic capacities are to psychological states or acts. The relevant similarities here are found in the reciprocal relations between multiple operations and the materials they unify.<sup>54</sup>

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<sup>51</sup> Bernard Lonergan. A Third Collection (New York: Paulist Press, 1985), 141. Evidence that Lonergan employed this method shows up repeatedly when he takes patterns among intentional acts as the models for understanding chemical and biological processes. Examples appear below.

<sup>52</sup> By "object" I mean anything whatsoever that can be a term or end of an intentional act.

<sup>53</sup> The analogies presuppose that without differentiated and related operations there are no differentiated objects; hence, differences among the former will have corresponding differences among the latter.

<sup>54</sup> The to-be-ordered materials are preconditions for the occurrence of the operations (e.g. without puzzling images there is nothing to investigate and understand); but the operations are distinct and irreducible to their prior conditions. Hence, neural impulses make thinking possible, but neurons do not "first invent and then discover" themselves. Those are the tasks for

How useful might the preceding heuristic framework prove for studying the binding problem?<sup>55</sup> Acts of understanding are further integrations of rudimentary objects of attention. Attentional acts have their neural and organic conditions, and the same is true of any objects of attention.<sup>56</sup> For example, there is evidence that the "unitary representation of objects" is dependent upon an emergent set of neural and organic conditions. At around eight months the infant brain has developed enough to meet the neural-electrical preconditions for object recognition.<sup>57</sup> This suggests that the apprehension of objects "takes time" and the act of object recognition has preconditions beyond psychological states and acts.<sup>58</sup> Yet, once in place, how do these conditions become further "organized" such that object recognition occurs?

Using analogies to relations between images and insights is not an explanation but a heuristic pattern guiding further searches for explanations. Empirical evidence of "organizing" abound. Reading these ink marks provides a first-hand

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intellectual operations in neuroscientists attending to data.

<sup>55</sup> The heuristic framework is relevant to a far broader set of questions: (1) How is it that part of Being became self-conscious? (2) How did this part become a questioning of the whole? (3) Even more perplexing, how did this part become capable of fantasizing about possibilities better than what is, better than Being? (4) In counterpoint to fantasy, why does this part so readily become inert in its questioning and fantasizing? Here we anticipate the question of the repressive functions of the superego as well as the tired routines of conventional thinking and practice.

<sup>56</sup> The second half of this claim may be troubling to some readers. Are not objects of attention independent of the neural processing of an observer? But where are the objects or images of attentional acts? Where are the words formulating these questions?

<sup>57</sup> G. Csibra et al. "Gamma Oscillations and Object Processing in the Infant Brain." *Science* 290 (November 24, 2000), 1582-1585.

<sup>58</sup> One way of resolving Libet's Puzzle is to recognize that we do not have an explanatory understanding of conscious apprehension. This author has argued that the source of the famous but avoidable puzzle is an unnoticed mixing of descriptive reports of "conscious decisions" and calibrated measurements of neural activities. See A Theory of Ordered Liberty, Chapter One, Part VI.

experience. Teachers organize the neural impulses of students by teaching them new words. Patients detecting the onset of certain seizures can be trained to block the electrochemical storms by deliberately doing mathematical calculations. Sensory feedback experiments and meditation techniques provide evidence of psychological acts affecting changes in organic states and neurochemical processes. But how is any of this possible?

One hypothesis using the findings of current neuroscience offers some clues.

The average human brain consists of about 100 billion neurons (or nerve cells). However, it is more concrete to think of the brain not as an assembly of bodies - nerve cells - but rather as a collection of events - nerve impulses. Nerve impulses are essentially waves of electromagnetic potentials that vary in complicated ways and surge along the pathways of our nerve cells. Most nerve cells are capable of 1000 electrical impulses per second. Not every nerve cell fires this frequently, and estimates of how often they do fire on average vary widely. Still, an average of about 100 impulses per cell per second is frequently used in the literature. This would mean that there are something like 10 trillion nerve impulses per second in the active adult brain.<sup>59</sup>

Suppose this vast number of potential impulses is initially disorganized, but, as the brain develops, "impulses across nerve synapses forge links so that previously disconnected impulses combine to form recurring sequences."<sup>60</sup> Thus, neural patterns are formed that are basis for memories, expectations, routine

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<sup>59</sup> Patrick Byrne. "Neuroscience, Consciousness, Freedom and Lonergan," unpublished paper given at the Lonergan Philosophical Society session at the American Catholic Philosophical Association (November 2007), 8.

<sup>60</sup> Ibid. 9.

skills. Next, suppose that (a) the entire range of potential nerve impulses "never becomes completely organized" into a single system or complex series of patterns. (What begins as a vast number of disorganized events gradually becomes a less vast number of disorganized events.) Therefore (b), there are "materials" available for further patterning by future psychological acts, acts which operate with a relative independence from those materials.

Suggestive as this hypothesis is, it still does not explain how psychological acts organize neural "resources." The questions remain of how conscious acts emerge from more basic neural processes and how the former, in turn, organize as yet unpatterned neural materials.

Exploiting the benefits of generalized empirical method allows some control over how we handle these questions. As insights emerge from intentional acts operating on materials, e.g. puzzling sights and sounds, so more complex patterns develop among initially less developed substrates. As insights accumulate and sometimes lead to novel integrations surpassing earlier ones, so new chemical and organic integrations appear that transcend their initial conditions in terms of more complex and differentiated patterns of organization. When the model is that of the unifying moment of insight and not the logical deduction from premises to conclusions, the parallel development in the intended object can be one of "a series of leaps" from "the order of one integration to that of the next."<sup>61</sup>

But what do we mean by "development"? The control offered by

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<sup>61</sup> Insight, 502. This essay began with an initial puzzle about Lonergan's "musing." The interpreter is proceeding to act upon the given text with the expectation of developing a series of insights that will be more complex and differentiated integrations of the initial clues and guesses regarding the text. The emergent interpretation, i.e. the new text about the initial text, will then represent a corresponding development in the materials for subsequent interpreters. [See *ibid.* 494.]

generalized empirical method will be useful in answering this question. That control and a sketch of Lonergan's theory of development will appear in Part V.

However, to this point, what has this reflection on a set of methodological questions yielded? An apparently simple musing has engendered multiple puzzles. An interpretive framework should be responsive to the related questions about operating in an explanatory context, taking seriously the claim that the complete data of any inquiry include the data of the inquirer,<sup>62</sup> and incorporating a theory of development broad enough to encompass the variety of "leaps" in integrations among operations and their objects.

These questions pose challenges beyond the competence of any one person to meet. Recognizing as much in his own inquiries, Lonergan sketched how functional specialization was a practical solution to future scholarly and scientific work. Why might it be a promising strategy for integrating the findings of neurosciences, biology, psychology and the latter's subset, intentionality theory, in response to the cited "musing" and the binding problem? Suppose that the division of labor that functional specialization demands is an adaptation of human inquiry to the evolving cosmos. A bit of historical musing may suggest why this is the case.

Inquiry presupposes a capacity for a variety of intentional acts. That capacity presupposes "complex patternings of molecules with a history."<sup>63</sup> Part of that history is incompletely recorded in organic evolution. Another part of that

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<sup>62</sup> "The data of physics in its fullness, of course, includes the physicist: that is the claim of my full expression of the meaning of generalized empirical method." Philip McShane. "Lonergan's Meaning of *Complete* in the Fifth Canon of Scientific Method" in Journal of Macrodynamic Analysis. 4(2004), 57.

<sup>63</sup> The phrases in quotation marks in the following two paragraphs are borrowed from various texts by Philip McShane.

history includes the biographical variables of particular human specimens of such patternings. Among those specimens with a capacity for intentional acts will be some who attend to both their own histories and to fantasies about what is not yet. Such "neurodynamic bundlings of chemicals" raise questions about themselves and a broader universe; and, since what is and what has been are less than satisfactory, the questions push beyond both to envision better times. So the human organism not only sustains itself, it reaches for an understanding of the cosmos and goes on to invent new realities. In time the reaching and the inventing have expanded exponentially, and the aggregated results are beyond the capacity of any single person to comprehend; thus, appears the need to divide up the labor and to impose a new framework on the flood of inputs into history.

Given the economic meaning of "deepening," we can think of this division of labor as a new and more efficient way of reaching and inventing. If we do, then our orientation shifts in what we expect of ourselves as inquirers. Our focus is divided between the object of inquiry and how we envision going about that inquiry. As "complex patternings of molecules" producing intentional acts, we expect that those acts can order themselves to make history better than it has been.<sup>64</sup>

But that history has yet to be made. For example, an adequate "framing" of future research into the binding problem is more a vague dream than a detailed project. So I turn to the interpretation of the original "musing" anticipating the needed tools but not having them ready-to-hand. What I begin the

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<sup>64</sup>For example, expectations that inquiry should pursue explanatory correlations will alter what neural patterns are "laid down" in the brain. Functional specialization, like any method, amounts to a new set of expectations, a new intelligent and intelligible design, for ordering intelligible "materials." But those materials are the intentional acts of functional specialists who eventually will more efficiently integrate an indefinite range of objects and events.

interpretation with are: (1) an expectation that the long-term goal is to work out sets of explanatory correlations among neurochemical processes, specific brain locales, psychological acts and the bound objects of acts of preconceptual apprehension and evaluation; (2) a willingness to experiment with generalized empirical method in tracking both acts and the objects operated on by those acts; (3) a sketch of Lonergan's theory of development that provides a framework for understanding emerging complexity in acts and their objects; (4) a rudimentary understanding of the second functional specialty, its objectives and limits.<sup>65</sup>

#### V An Interpretation of Lonergan's "Musing"

This essay began with the question of why Lonergan linked the *vis cogitativa* with the Freudian superego. At least some answers are possible about this short "musing." For instance, we can assume that Lonergan followed Aquinas in holding that the animal's *vis aestimativa* was replaced in humans by the *vis cogitativa*.<sup>66</sup> Thus, his reference to the *cogitativa* and children's estimates of good and bad is not all that surprising. Second, his linking of that early understanding to "what papa and mama say is good or bad" is in line with commonsensical beliefs about parental influence over a child's thinking. But why did he or any of us believe this? So there are further questions both

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<sup>65</sup> To adopt Heidegger's terms, what is ready-to-hand methodologically "stands out" as inadequate to meet the four listed tasks. Most noticeably *in absentia* are adequately developed insights into and practice with the second functional specialty of interpretation, not to mention the other seven functional specialties. These are the barely glimpsed "mega-tasks" for future generations of scholars. Thus, what is present-at-hand are the missing tools and the frustrated tasks of several types. As well, given the envisioned tasks and the deficits in current practice, there may also be present a paralyzing doubt about whether even simple scholarly tasks can any longer be performed with a good conscience.

<sup>66</sup> Summa Theologica, Ia, q.78. a.4.

about why parental influence is so decisive and about how a child is able preconceptually to apprehend and evaluate objects. In pursuing answers to these questions, we begin with descriptive examples.

Our earliest operations were on commonplace objects.<sup>67</sup> Flat on our backs in our cribs, we reached for bright shiny objects, responded to sounds, grew anxious over digestive upsets or dirty diapers and only slowly began to recognize our own flailing limbs and to respond affectively to our parents' faces. Such early experiences are relevant data for the initial puzzle of why Lonergan linked Aquinas' *vis cogitativa* with the Freudian superego. What did he understand about each that led him to make this unconventional connection?

Some clues lie in remarks Lonergan made about the *cogitativa*. What is minimally understood at first as a puzzling sight may in time become a recognized object. Further intentional acts can transform the initial object, so that, for example, the child learns that not only is the object a knife, but also that it is sharp, dangerous and a "bad" thing to touch. With further experiences of similar objects, the child gains a minimal prereflective understanding of a class of objects called "knives." This is the basic and first grasp of a universal mentioned by Lonergan in Verbum:

...[T]he man of experience knows that such and such medicine cured such and such patients in such and such circumstances; but the technician knows that such a kind of medicine cures such a kind of disease. Like the senses, the man of experience merely knows *quia*; but the technician knows the abstract universal, which is an inner word consequent to

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<sup>67</sup> Recall the earlier note that by "object" is meant anything whatsoever that can be the term or focus of an intentional act.

insight. But the man of experience merely knows the *universale in particulari*, and that knowledge is not intellectual knowledge but exists in a sensitive potency variously named the *ratio particularis, cogitativa, intellectus passivus*. It carries on comparisons of particulars in virtue of the influence of intellect, and it knows Socrates and Callias, not merely as Socrates and Callias, but also as *hi homines*, and without this sensitive apprehension of the universal in the particular it would be impossible for intellect to reach the abstract universal.<sup>68</sup>

What do these remarks contribute to the original puzzle? We can

all cite experiences of recognizing strange sights and sounds as at least sights and sounds. These instances of classifying particular experiences are what Aristotle called experiences of "proper sensibles," e.g. colors, sounds, feelings. But we go on in experiencing multiple cases to compare and contrast them and so arrive at more specific apprehensions of some object, e.g. as "this reddish color" or "the sound of a violin." The "particular" objects of our attention and understanding are being apprehended with greater specificity.

This much is the "sensitive apprehension" of the first type of universal, i.e. of an object as belonging to a class; and it presupposes acts of attending, remembering, comparing and

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<sup>68</sup> Verbum: Word and Idea in Aquinas. CW2 (Toronto: University of Toronto Press, 1997), 43. In commenting on the requirements for providing "an object in act for the possible intellect" (183), Lonergan went on to write: "The third requirement is connected with the work of the *cogitativa* which operates under the influence of intellect and prepares suitable phantasms; the significance of this preparation appears from the statement that different intelligible species result from different arrangements of phantasms just as different meanings result from different arrangements of letters." (184) What "arranges" the phantasm? I take this question to be a precursor to the contemporary puzzle about how intentional objects are bound?

contrasting such that accumulating data allow a "leap" to a minimal understanding of an object as belonging to a "specific kind."

All of this is still far short of an understanding of what makes any object what it is. Lonergan's distinction between two types of universals reflects an understanding of this distance and implicitly acknowledges the gap between a descriptive and an explanatory understanding of whatever is apprehended.

What leads many astray is the opinion of those who hold that universals are known only through the intellect, and therefore whenever they come to know a universal, they immediately think they have understood something. But there are two universals: one is that which is uttered because a 'why' has been grasped; the other is the universal in a particular individual, which is apprehended by some sensory faculty.

[What follows in the text is a lengthy quote from Aristotle to which he then adds:]

Those, therefore, who claim to understand because somehow or other they perceive a universal are absolutely wrong. Take, for example, the case of the circle: those who know perfectly well the external shape, the Gestalt, of a circle yet have never thought about why a circle is necessarily round have really not progressed beyond the operations of their senses.<sup>69</sup>

This distinction between sensitive apprehension and intellectual grasp of distinct types of universals is relevant to the question about the objects of preconceptual apprehension and evaluation. Those objects are the first type of universal since

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<sup>69</sup> The Triune God: Systematics, 587.

the intentional acts required for the second type have not yet occurred. For example, a child's earliest moral integrations are instances of particular "leapings" or recognitions of objects and actions as good and bad requiring little, if any, reflection. Part of what is required is that authoritative voices within a given culture prescribe or proscribe some moral integrations for the child. The range of such integrations is quite broad, individually and culturally. Common experiences of eating, playing, observing others and hearing commands depend on relatively similar and stable neural "manifolds," but cultural responses to demands for food, play and approval are quite variable. For example, hungry children in one culture may fantasize about wild boar roasting on a spit while in a different culture a Golden Arch may evoke anticipated delight. To generalize, within limits decidedly different integrations can correspond to similar neural substrates.<sup>70</sup> A relatively common neural base may be one reason that differences in cuisine, music and laws are not complete barriers to mutual understanding across cultural boundaries. In many cases they may be but different paths to the same end.

What other commonalities undergird the child's earliest experiences of objects and events? Among the earliest observable variables in the "binding" and evaluating of objects are: (1) experiences of pleasure and pain, and (2) the presence of authoritative figures in a child's life. The link between the

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<sup>70</sup> I assume this is an example of what Lonergan meant by a "principle of correspondence." As will be stated again below, he was responding to a two-part puzzle about how different manifolds could be the basis for quite similar integrations while quite similar manifolds could support quite different integrations. Regarding the latter possibility, he wrote: "[Persons who later exhibit] widely different temperament and character began, as infants, from instances of sensitive consciousness that not only were remarkably similar but also remarkably undifferentiated; there were sensations, but perceptiveness was undeveloped; there was nothing to remember, and powers of imagination were latent; affects were global affairs of elementary types; and skills were limited to wailing." Insight, 478.

two is social. The child's recognition of authoritative figures presupposes a prior estimate of their status and initially that estimate may derive from the demonstrated power of those figures to produce experiences of pleasure and pain.

Why should these two variables be so important? A primordial condition of infants is their sensitivity to pleasure and pain. Since they are also primordially social beings, their early development will depend in part on mimicry of other human beings. Why is this the case? If developmental processes within the infant's psyche are initially an indeterminate orientation toward growth or greater being,<sup>71</sup> then available models of purported growth supply determinate content or objects for that orientation.<sup>72</sup> Through early acts of apprehension and mimicry, the child internalizes images of the model's actions and reactions as its expectations. Let "expectation" here refer to an understanding of how orientation slowly takes on specific content. For example, the psychic operator, in responding to the demand for images and feelings, gradually integrates specific objects and estimates of them as "interesting" or "uninteresting," "good" or "bad." Such evaluations become the basis for how one's psyche is consciously but prereflectively orientated toward further instances of similar images. As noted above, comparing and contrasting particular instances yields a sensitive apprehension of something as belonging to a class, e.g. being of a good kind or a bad kind.

Such durable recognition and evaluation of similar objects must have preconditions in stable neural patternings. One of the

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<sup>71</sup> This reference to "greater being" as an objective of psychic orientation may make more sense after the principle of finality and its role in development receive some attention below.

<sup>72</sup> What Lonergan understood as finality's "universal striving toward being," René Girard located more narrowly in human subjects having a spontaneous desire for greater being that evoked mimetic desire and so provoked dynamic and often violent relations in human history. See his Violence and the Sacred (Baltimore: The Johns Hopkins University Press, 1977).

major puzzles in psychology is how this connection between conscious evaluation and neural patternings is made.<sup>73</sup> This is not just a puzzle for neuropsychologists since it is part of the broader puzzle of how mental operations emerge from but also affect changes in neurobiological conditions.<sup>74</sup> What is known is that emotions (and so evaluative responses to intentional objects) have neurochemical and organic correlates such that specific images can evoke emotions that instigate chemical cascades effecting changes in neural activity and muscular fibers.<sup>75</sup>

While there is abundant experimental data supporting correlations among emotions, images and neurochemical activities at specific brain locales (e.g. the amygdala), we remain largely in the dark when asked to explain these patterns. As a result, one may wonder how much progress has been made between the medievals' positing of a *vis aestimativa* and contemporary discussions of how objects and affects are bound together. How much development has there been in understanding such puzzles?

But what do we mean by "development"? Already in Part II, a text from Insight offered some clues. The first clue was Lonergan's remark that "our definition of development serves to supply a single scheme that unites otherwise unrelated principles."<sup>76</sup> Perhaps this definition will also suggest how to connect the usually unrelated terms of the *cogitativa* and the *superego*.

What is Lonergan's definition of development? He wrote of

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<sup>73</sup> The medieval *vis memoriae* was an early speculative response to this puzzle.

<sup>74</sup> Antonio R. Damasio acknowledged that the neurosciences have not closed the gap between neural patterns and images. That is, the latter depend on the former, but it is unclear how mental experiences emerge from their biological preconditions. See his The Feeling of What Happens (New York: Harcourt, Brace and Company, 1999), 322.

<sup>75</sup> For examples, see Rita Carter, Exploring Consciousness (Berkeley: University of California Press, 2002), 196-199.

<sup>76</sup> Insight, 482.

"a flexible, linked sequence of dynamic and increasingly differentiated higher integrations that meet the tension of successively transformed underlying manifolds through successive applications of the principles of correspondence and emergence."<sup>77</sup> This compact definition seems to have four parts: (1) "higher integrations of underlying manifolds," (2) occurring in a flexible sequence, (3) with later integrations being increasingly more complex and differentiated than those that preceded them, and (4) with the attendant transformations of manifolds occurring through successive applications of the principles of correspondence and emergence.

The formulated definition presupposes a sequence of increasingly differentiated and more complex insights into underlying puzzles. What might those puzzles have been? We can suppose that Lonergan had a series of questions about evolution, about static patterns of development in plants and animals and about dynamic patterns of development found in the emergence of new genera and species.<sup>78</sup> His model for understanding "higher integrations" of "underlying manifolds" was the relation of insights to puzzling sensitive presentations or psychic representations. Insights occur within a flexible and dynamic pattern of (1) distinct but related intentional acts, (2) responding to the demands (3) of the different types of intentional operators (4) reaching for their proper objects.<sup>79</sup> This pattern of relations among demands, operators, acts and objects may have served as his heuristic pattern for understanding generic sequences of physical, chemical, biological and neural integrations of aggregates of "lower order"

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<sup>77</sup> Ibid. 479.

<sup>78</sup> For Lonergan's distinction between static and dynamic patterns of development, see *ibid.* 477-478.

<sup>79</sup> For more specific comments on the differences and relations among demands, acts, operators and their objects, see A Theory of Ordered Liberty, Chapter III, Part III.

materials.<sup>80</sup> For example:

...[C]hemical elements and compounds are higher integrations of otherwise coincidental manifolds of subatomic events; organisms are higher integrations of otherwise coincidental manifolds of chemical processes; sensitive consciousness is a higher integration of otherwise coincidental manifolds of changes in neural tissues; and accumulating insights are higher integrations of otherwise coincidental manifolds of images or data.<sup>81</sup>

One basic question may have been why such "higher integrations" occur. The heuristic pattern with its four categories can guide efforts to explain such sequences of integrations. In interpreting Lonergan's theory of development, this writer has found it useful to impose this framework on the various principles of that theory. Descriptive examples will support each of the four categories, but the goal is to understand how the resulting theory of development provides some clues as to what is occurring in the child's earliest recognition and evaluation of objects.

The sequences cited in the last quotation are instances of what Lonergan intended to explain in part by the principle of emergence. It was an ingredient in his explanatory answer to questions about the origins of sequences of increasingly more complex and differentiated integrations. But to understand how the heuristic pattern of demand, operator, act and object may help track his understanding of emergence, we need to understand

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<sup>80</sup> Recall the claim above that, since a known object is a correlate of intentional acts, patterns of relations among the latter will be paralleled in the intelligible relations comprising the former.

<sup>81</sup> Insight, 477.

what he meant by the other principles of correspondence and finality.

So what did he mean by a principle of correspondence? Presumably it was part of his response to the question of why there is so much diversity in the cosmos, ranging from types of stars to species of plants and animals. Some of his key insights were possibly into the flexibility of both the materials to be integrated and their possible forms of integration. Again, his examples are helpful.

Significantly different underlying manifolds require<sup>[82]</sup> different higher integrations. Thus, the chemical elements differ by atomic numbers and atomic weights, and these differences are grounded in the underlying manifold. Different aggregates of aggregates of chemical processes involve different organisms. Neural events in the eye and in the ear call forth different conscious experiences. Different data lead to different theories. It is true, of course, that not every difference in the underlying manifold demands a different integration; the same kind of atom can have subatomic components at different energy levels; the same kind of organism admits differences of size, shape, weight; similarities of character and temperament are compatible...with neural differences; and the same theory can be reached from different data. Accordingly, the principle of correspondence enjoys a measure of flexibility; within limits the same integration will systematize differing manifolds; the point to the principle is that these limits exist and that to transgress them is to eliminate the higher

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<sup>82</sup> Does Lonergan's use of "require" suggest the primacy of the principle of finality in his understanding of the three principles of development?

integration.<sup>83</sup>

Extinctions are presumably instances of what follows upon major transgressions of limits. Within those limits flexibility is in evidence when different chemical environments give rise to similar types of plants; different types of plants support the same herbivores; and, regarding child development, "similarities of character and temperament are compatible...with neural differences." So, while it is true that a "higher systematization is limited by the manifolds which it systematizes,"<sup>84</sup> different manifolds may allow a limited range of similar integrations. In other words, the principle of correspondence formulates the intelligibility of a relative stability and uniformity observed in both physical processes and the human psyche. Whence, then, the instability and variability observable in both?

Lonergan's definition of development referred to a sequence of dynamic integrations meeting a tension generated by "successive applications of the principles of correspondence and emergence." His prior insights were possibly into how puzzling over some data may yield an initial surmise, but further questioning and new insights may radically depart from that first integration or surmise. For example, the skilled detective has hunches about suspects but professionally requires more than guesses. Sometimes the hunches are on target; at other times a dramatically different understanding of the case emerges. The "tension" here is presumably between a demand for what is familiar (and so for stability) and a further demand for a more complete understanding of a problem (hence the need in a theory

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<sup>83</sup> Insight, 477.

<sup>84</sup> Ibid. 468.

of development for more than the principle of correspondence).<sup>85</sup>

But why should a series of integrations be subject to instability and so be either at risk of extinction or open to a dramatic "leap" to greater complexity? Besides principles of emergence and correspondence, Lonergan mentions a principle of finality. Again, an analogy between intentional acts and their objects may be the basis for this third principle.

Just as cognitional activity does not know in advance what being is and so has to define it heuristically as whatever is to be known by intelligent grasp and reasonable affirmation, so objective process is not the realization of some blueprint but the cumulation of a conditioned series of things and schemes of recurrence in accord with successive schedules of probabilities. Just as cognitional activity is the becoming known of being, so objective process is the becoming of proportionate being. Indeed, since cognitional activity is itself but a part of this universe, so its heading to being is but the particular instance in which universal striving towards being becomes conscious and intelligent and reasonable.<sup>86</sup>

Let this reference to "universal striving toward being" be the first approximation to the general meaning of "demand" in the four-part heuristic pattern. For the inquirer the demand is for

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<sup>85</sup> For the scientist this demand can take the form of the canon of complete explanation (cf. *ibid.* 107-109).

<sup>86</sup> *Ibid.* 470. Further texts making use of this analogy between intentional acts and "objective process" are abundant. One of them is particularly succinct. "As what is to be known becomes determinate only through knowing, so what is to be becomes determinate only through its own becoming. But as present knowing is not just present knowing but also a moment in process toward fuller knowing, so also present reality is not just present reality but also a moment in process to fuller reality." (*Ibid.* 471.)

a complete understanding of being.<sup>87</sup> If we generalize about cosmic process, the demand is for ever more complex and differentiated integrations of whatever materials are available. Every "determinacy is limitation, and every limitation is to finality a barrier to be transcended."<sup>88</sup> The principle of emergence, then, refers to an understanding of how an indefinite number of demands are met both in inquiry and in cosmic evolution.<sup>89</sup> Let the principle of finality be the second approximation to the meaning of "demand."

In regard to intentional operators, just as a what-question responds to the demand of intelligent consciousness by moving from fragmentary data to intelligible order, so sensitive consciousness, responding to a psychic demand for images and feelings, operates on "otherwise coincidental manifolds" of neural impulses to yield experiences of recognized objects. But how does any of this occur? This was the question that led Aristotle to talk of the *sensus communis*, the medievals to write about a variety of inner senses and contemporary neuroscientists to investigate the binding problem. At this point in the essay the question is what are the intentional operators for such integrations? Presumably they are to be known by, inferred from, their acts.

Most of the readers of this essay will already be familiar with Lonergan's use of distinct types of questions to differentiate types of intentional acts and their objects. The following diagram formulates the relevant distinctions and

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<sup>87</sup> This demand has competitors. One basic "tension" in living is between the imperative of common-sense living, "Be practical!" and the imperative of theoretical inquiry, "Be comprehensive!"

<sup>88</sup> *Insight*, 477.

<sup>89</sup> Complex questions about sufficient conditions for meeting demands and the probabilities of those conditions being recurrently fulfilled are beyond the competence of this writer to answer.

parallels among acts, questions and objects.

| INTENTIONAL ACTS  | QUESTION TYPES              | OBJECTS               |
|-------------------|-----------------------------|-----------------------|
| Normative Acts    | Questions of Decision       | Best Option           |
| Deliberative Acts | Questions for Deliberation  | Possibilities/Options |
| Critical Acts     | Questions of Judgment       | Fact/Truth            |
| Intellectual Acts | Questions for Understanding | Guess/Hypothesis      |
| Empirical Acts    | (Acts of Attending)         | Clues/Data            |

What types of operators can we infer from these distinct but related types of intentional acts? Again, most of the readers will already be familiar with the types of intentional operators even if the terminology used in the following diagram is new to some.

| OPERATORS             | INTENTIONAL ACTS      | MEDIATING QUESTIONS          |
|-----------------------|-----------------------|------------------------------|
| Normative Operator    | Acts of Deciding      | Question of Decision         |
| Deliberative Operator | Acts of Deliberating  | Question for Deliberation    |
| Critical Operator     | Acts of Judging       | Question of Judgment         |
| Intellectual Operator | Acts of Understanding | Question for Understanding   |
| Psychic Operator      | Empirical Acts        | (Preconceptual Apprehension) |

The vagueness of the term "operator" may diminish if we understand how question types represent development toward anticipated ends. For example, suppose a demand for understanding is what moves one to anticipate answers by asking questions of the first type. Or let a demand for knowing what is the case be what moves one to anticipate settling issues of fact by asking questions of the second type. The meaning of intentional "operator" is descriptively what moves one to pay attention or to inquire. To shift this term into an explanatory context, we need to fix its meaning by its relation to a correlate. Doing so requires talk of multiple operators evoking types of intentional acts that mediate between the demands of the operators and their proper objects or integrations. For example, the operator for intellectual acts is a demand for an intelligible integration of clues, puzzling images or fragmentary data, but the integration is the answer that meets the demand. The operator for critical acts is a demand for what is true, factual or genuinely good and so evokes questions of judging with the integration being a correct answer that meets the demand. The operator for deliberative acts is a demand for new goals or possible solutions to problems, and the integration is the creative option that responds to that demand. Questions mediate between demand and response, between operator and integration, as means both for expressing demands and for reaching their ends. Furthermore, suppose that new questions represent the principle of finality.<sup>90</sup> This is part of the answer to the question of why operators challenge previously achieved integrations and anticipate further developments in understanding, i.e. newer and more complete integrations.

How do the preceding distinctions help answer the question about developments in both understanding and "objective process"?

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<sup>90</sup> See footnote 51.

The four-part scheme of categories can serve as an analogy in which the relevant similarity is in relationships among the terms. For example, as images are to answers so neurochemical processes are to organic systems; as aggregates of data are to formulated statistical frequencies so neurobiological systems are to psychological states. While the operator impelling development from images to answers is the demand for understanding (expressed in questioning), the operators promoting transitions from chemical functions to organic functions and from biological processes to psychological states are to be discovered through empirical research. What the categorical framework offers is a heuristic pattern for exploring how more differentiated and complex integrations emerge and develop.<sup>91</sup>

To return to the limited focus of this essay: How do basic intentional integrations of apprehended objects occur? Using the previous diagrams we can locate such rudimentary objects as the proper ends of acts of attending that mediate the demand of the psychic operator for images and feelings. The *cogitativa* was posited by the medievals in response to the question of how objects could be apprehended as particular kinds of things. As noted above, they went on to posit a *vis aestimativa* to account for how evaluations of such apprehended objects were possible. In terms of the heuristic pattern employed above, just as an act of attending occurs with a minimal understanding of its object and anticipates a more complete understanding through the questions and intentional acts that follow, so an act of

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<sup>91</sup> “Clearly, though this specification of the operator is extremely general, it offers some determination of the direction of development. Its application to concrete instances may not only confirm it but also give rise to further questions. The further questions will lead to further insights and so to still further questions. In this fashion, one’s understanding of the operator begins to be an instance of higher system on the move in the development of scientific knowledge of development.” *Insight*, 492. The envisioned scientific knowledge remains a remote achievement, at least in regard to the specific operators effecting transitions from chemical to biological systems and on to psychological states and acts.

attending may contain a minimal and undeveloped estimate of its object and anticipate a more developed evaluation through the questions and acts that follow upon it.

Before exploring what the neurosciences have discovered about processes of object recognition and evaluation, we end this section by asking how Lonergan understood the superego and its relation to estimates of apprehended objects.

In the opening musing from 1955, Lonergan seems to understand the superego to be little more than the child's borrowed understanding of "what papa and mama say is good or bad," an early understanding that, if left undeveloped, "in adult life...can cause a hell of a lot of trouble." Four years later he offered a more detailed commentary.

In the frontal lobes are located the controls and the integration of nervous activity, and there is a correspondence between this part of the brain and Freud's superego. The account of the superego, the ego, and the id in terms of their neural foundations in the brain removes some of the mythical thinking connected with Freud's theories, and at the same time enables us to draw on what is useful in his distinctions.

Now the formation of the superego, which on its neural side entails the development of the frontal lobes of the brain, keeps occurring through childhood with the world of 'do' and 'don't.' And the intellectual crisis of adolescence is the period in which adolescents reject the set of precepts and evaluations that were imposed externally through precepts at a time when they were not able to think for themselves.<sup>92</sup>

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<sup>92</sup> Topics in Education, CW 10 (Toronto: University of Toronto Press, 1993), 101.

In these brief remarks Lonergan links normative intentional acts (the prescriptions and proscriptions of the superego), brain locales (the frontal lobes), neural activities and the development of all three. The Freudian superego thus loses some of its "mythical" status by being transposed into an explanatory correlation. The shift from Freud's description of the superego as "like a garrison in a conquered city"<sup>93</sup> to understanding it as a series of normative acts and meanings (integrations) in relation to a neural base and organic sites is evidence of how casually Lonergan operated within a horizon of theory.

Earlier in Insight he had translated the Freudian superego into the terms of complex theory of development. To repeat part of one of the opening quotations in this essay:

[The] unconscious neural basis is an upwardly directed dynamism seeking fuller realization, first, on the proximate sensitive level, and secondly, beyond its limitations, on higher artistic, dramatic, philosophic, cultural, and religious levels. Hence it is that insight into dream symbols and associated images and affects reveals to the psychologist a grasp of the anticipations and virtualities of higher activities immanent in the underlying unconscious manifold.

A similar phenomenon on a different level is offered by Freud's superego: within consciousness, it is a compound of preceptive symbols and submissive affects; by its finality it anticipates, by its subordination it reflects, by its obsessive and expansive tendencies it caricatures, the judgments of rational consciousness on the conduct of a rational being.<sup>94</sup>

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<sup>93</sup> Civilization and Its Discontents (New York: W.W. Norton, 1962), 71.

<sup>94</sup> Insight, 482.

Here Lonergan alludes to examples of dynamic patterns of development in neural, biological, psychological, artistic, intellectual and spiritual growth. In slightly greater detail he refers to the demands ("anticipations") of the psychic operator that can be inferred from "dream symbols and associated images and affects." More directly relevant to this essay is his understanding of the superego as an integration of "preceptive" images and feelings or, in other words, an early recognition of and submission to normative meanings. But he identifies it as an incomplete development subject to the principle of finality. From his understanding of the critical operator and its demands, the submissiveness of the superego to precepts and its insistence on ruling over and evaluating all conduct are early anticipations of "rational consciousness" and its judgments on what is true and good.

Fundamental to Lonergan's reading of the superego is his principle of finality, his understanding of what impels development not only in the psyche but across the cosmos. Revisiting that principle will afford an opportunity to summarize this section of the essay and link it to the review of neuroscientific literature that follows.

In the general case, [the operator] is the upwardly directed dynamism of proportionate being that we have named finality. It is conditioned by instability in the underlying manifold, by incompleteness in the higher integration, by imperfection in the correspondence between the two. It is constituted inasmuch as the higher system not merely suffers but provokes the underlying instability; inasmuch as the incompleteness of the higher system consists in a generic, rudimentary, undifferentiated character that can become differentiated, effective, specific; inasmuch as the

imperfection of the correspondence is, so to speak, under control and moving towards a limit where the principles of correspondence and emergence result in the replacement of the prior integration by a more developed successor; inasmuch as such operators form a flexible series along which the organism advances from the generic functioning of the initial cell to the flexible circle of ranges of schemes of the mature type.<sup>95</sup>

While attempting no more than a sketch of Lonergan's theory of development, this section has identified some of its principle ingredients. Doing that much served the purpose of linking acts of preconceptual apprehension and evaluation to the superego. Exploring that linkage was guided by a four-part heuristic pattern grounded in intentionality analysis. The latter allowed Lonergan to distinguish two types of universals and two corresponding acts: sensitive apprehension (the work of the *cogitativa*) and intellectual grasp of what makes something what it is. What the child apprehends and evaluates belongs to the first types of objects and acts. Sensitivity to pleasure and pain and exposure to parental models are proximately the sources of determinate estimates of objects as good and bad. Remotely the demand of the psychic operator grounds the acts of attending to and evaluating images and feelings. Intermediately neurochemical integrations at specific brain locales (discussed in the next section) are correlates of such intentional acts and psycho-social conditions.

But how do chemical, biological and psychological systems work together to give rise to increasingly more differentiated and complex intentional acts and their correspondingly more differentiated and complex objects? Lonergan's theory of

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<sup>95</sup> Ibid. 490-91.

development provided guidance in trying to understand what is occurring. The principle of correspondence reflects insights into how neural and organic manifolds can support relatively stable integrations. Still, in both biological evolution and intellectual development, there are recurrent examples of instability, of radical shifts away from prior integrations in species and in systems of thought. A principle of finality reflects some insights into why dramatic processes of development transcend prior integrations.

There is much more to understand about the principles of correspondence, emergence and finality and the empirical data from which they are inferred. However, the use of Lonergan's theory of development was intended only to supply a context for applying the heuristic pattern of demands, operators, acts and objects. With "demands" understood as specifications of the principle of finality, the focus narrowed to the demands of intentional operators, their corresponding acts and proper objects. In mediating the demands of operators, new questions represent the principle of finality in challenging determinate and limited integrations of meaning.

What, then, has been learned about Lonergan's understanding of the superego? He seems to have understood it to be a series of preconceptual apprehensions and evaluations relative to the neural, organic and psycho-social development of the child. Since it too is a phenomenon subject to the principle of finality, it anticipates, is preliminary to, more complex intentional acts and their intended objects.<sup>96</sup> As sensitive apprehension is to intellectual grasp, so the content of the

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<sup>96</sup> Resistance to further acts, insights and changes in both understanding and doing supplies evidence for the repressive function of the superego. Failure to develop more complex moral integrations provides evidence for Freud's complaints about infantile patterns of thinking lingering into adulthood. Might the Jungian archetype of *puer aeternus* have similar origins in a failure to develop?

superego is to the proper objects of moral judgment.

## VI What the Neurosciences Have to Contribute

If Lonergan understood the *cogitativa* as at work in the preconceptual apprehension and evaluation of objects and if he understood the superego as one term in a pattern of relations among acts of apprehension, normative meanings, brain locales and a neural base, all of which were "contextualized" by his theory of development, what new discoveries in the neurosciences over the past fifty years can add further specificity to his views about the apprehending (binding) and evaluating of objects?

It would take a book to review the massive literature of the past two decades on the binding problem. The first diagram in this essay was a synopsis of some of what has been learned about neurochemical and organic correlates of acts of attending that apprehend objects with at least a minimally determinate meaning. Much more was discussed in the first two chapters of A Theory of Ordered Liberty, but even there the literature review was sketchy. Again, the need for functional specialization becomes increasingly obvious.

The ideal situation would be for a group of researchers to have assembled all the relevant findings about the genetic, neurochemical and biological antecedents to each type of intentional act. To date that research is more extensive in regard to acts of attending and deciding than it is in regard to acts of judging and fantasizing. The limited research I have done in regard to acts of attention will be summarized below to the degree it proves relevant to the question of this section.

An earlier note about the problem of reductive analyses in much of the neuroscientific literature requires further

comments.<sup>97</sup> Currently much of neuropsychology is a sustained inquiry into the precognitive antecedents to basic intentional acts. Studies of the dependency of conscious acts on organic functions and of the latter on chemical transmitters and genetic substrates are attempts to understand the more complex in terms of the simpler. However, might these relations of dependency also go in the other direction? That is, might deliberate acts of attending and understanding exercise an “executive function”<sup>98</sup> over “simpler” conditions?

The literature on such “top-down” ordering is sparse. Posner and Synder detected the problem in 1975. Decades ago they speculated about the future of attention studies and predicted a “kind of research schizophrenia” with one focus being on “mechanisms that subserve” neural processing and conscious attention and the other being on conscious strategies that “modify and build upon ‘automatic processes.’”<sup>99</sup> Most of the current literature reflects an opting for the first focus, so their original question remains largely unanswered.

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<sup>97</sup> Criticism of the assumptions of such analyses is a task for the fourth functional specialty, so the following comments are more informative than evaluative.

<sup>98</sup> Various definitions of “executive control” are offered in the literature. For example, Gruber and Goschke propose “a neurocognitive model of executive control according to which the human ability to flexibly adapt to changing behavioral requirements, i.e. executive control, depends on dynamic and context-sensitive interactions between... brain systems.” (105) Regardless of the definition, most subsequent research into executive functioning focuses on brain locales and neural activities. For example: “The involvement of the prefrontal cortex in the ability to engage executive control constitutes one of the fundamental results of cognitive neuroscience. Current research focuses on the respective roles of frontal lobe structures such as anterior cingulate cortex (ACC), dorso-lateral prefrontal cortex (DLPFC), or orbito-frontal cortex (OFC) in this general process of control.” Lionel Naccache et al. “Effortless Control: Executive Attention and Conscious Feeling of Mental Effort are Dissociable” in *Neuropsychologia*, Vol. 43, No. 9 (2005), 1318. Here we have evidence of further insights into frontal lobe development noted by Lonergan some forty-five years ago.

<sup>99</sup> “Attention and Cognitive Control” (1975), reprinted in *Cognitive Psychology: Key Readings*, A. Balota and Elizabeth J. Marsh, eds. (New York: Psychology Press, 2004), 221-222.

To what extent are our conscious intentions and strategies in control of the way information is processed in our minds? This seems to be a question of importance to us both as psychologists and as human beings. Yet... most theorists in psychology have avoided consideration of the relationship between conscious and unconscious mental events.<sup>100</sup>

In taking the relation between image and insight as a model for understanding relations among mental acts and their precognitive variables, this essay has tried to have it both ways. To identify neural and biological antecedents to intentional acts (1) is not the same as explaining the latter but (2) does provide some evidence of what intentional operators are possibly doing in integrating "coincidental manifolds."<sup>101</sup> Still, how mental acts emerge from and how they, in turn, organize neural-biological materials are the enduring questions.

Descriptive examples of "executive functions" are easy to cite. Deliberate interventions in brain disorders through pharmacological means are evidence that conscious acts can indirectly alter neurobiological conditions. Experiments in biofeedback produce evidence of test subjects deliberately altering patterns among neural activities. There are similar results associated with meditation techniques and hypnotism.<sup>102</sup>

What is talk of an "executive function" modeled on if not the experience of conscious and deliberate acts controlling

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<sup>100</sup> Ibid. 205.

<sup>101</sup> The hypothesis here is that as images are a patterning of neural impulses by the psychic operator, so meanings are a patterning of images by the intellectual operator and, in the case of the child's superego, by emergent but undeveloped critical and normative operators.

<sup>102</sup> "A number of human practices, including ingestion of drugs, meditation, and hypnotism, are known to alter attention." Michael I. Posner, "Progress in Attention Research" in *ibid.* 7.

performance?<sup>103</sup> Consider how the following assumes such a model: "The executive network plays its main role when processing and/or responding requires any kind of control. For example, control is necessary when...a wrong response has been emitted and the subject has noticed it..."<sup>104</sup> Noticing a wrong response presupposes someone has made a judgment, i.e. a type of intentional act which follows upon and is more complex than acts of attention which have their own neurobiological preconditions. But once the judgment is made, once the mental operation occurs, a new series of acts is evoked and so a new set of neurobiological events occurs.

Further examples are plentiful. We have all experienced sustained attention, i.e. "the volitional maintenance of the current focus of attention. This may mean awaiting the change from red to green in traffic stoplights..." or simply waiting for water to boil.<sup>105</sup> But what does "volitional" control of conscious acts of attention mean?<sup>106</sup> How can conscious acts effect nonconscious changes in brain activities? Descriptively we can all recount how, at some time or other, we deliberately shifted our attention away from disturbing sights or distracted ourselves

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<sup>103</sup> Perhaps the following quote manages to reflect both the implicit model of executive control and the explicit focus on organic and neurochemical conditions for it. "Flexible cognitive control over our behavior is a key part of human intelligence. In what we call here the top-down excitatory biasing (TEB) model of cognitive control...,the prefrontal cortex (PFC) is viewed as maintaining representations that guide control of tasks. These PFC representations provide an excitatory top-down bias to groups of neurons processing task-relevant information." Seth A. Herd et al. "Neural Mechanisms of Cognitive Control: An Integrative Model of Stroop Task Performance and fMRI Data" in Journal of Cognitive Neuroscience, Vol. 18, No.1 (2006), 22. What is missing here is "equal time" for the second half of Posner's question.

<sup>104</sup> Luis J. Funes, "Inhibitory Processing in the Attentional Networks" in Michael J. Posner (ed.) Cognitive Neuroscience of Attention (New York: Guilford Press, 2004), 46.

<sup>105</sup> Melinda Beane and Richard Marrocco, "Holinergic and Noradrenergic Inputs to the Posterior Parietal Cortex Modulate the Components of Exogenous Attention" in *ibid.* 318.

<sup>106</sup> The vocabulary of faculty psychology is surprisingly persistent in the neuroscientific literature. One purpose of A Theory of Ordered Liberty was to offer a new way of talking about liberty and intentional acts.

from painful memories by staying busy. We were trying to control our emotional responses by controlling our attention.<sup>107</sup> In doing so, did our conscious acts have repercussions on our biochemical states?<sup>108</sup>

The general puzzle is how mental acts can effect (i.e. have an executive function in relation to) organic changes. One clue to solving the puzzle may lie in studies of how emotional states (e.g. depression) can have effects on organic systems (e.g. the immune system). With the discovery that the nervous system and the immune system are not separate but interactive, it is now reputable to explore how a mental condition (e.g. depression or anxiety) can bring about organic changes. Carter summarizes some of the intriguing findings.

The knock-on effect, from one system to another, of molecular changes explains why a condition such as depression - normally thought of as an illness of the 'mind' - may also have profound effects on many other parts of the body. For example, one common bodily change in depression (and dementia) is a drop in the levels of the excitatory neurotransmitter noradrenalin. This manifests as mental sluggishness because noradrenalin stimulates brain cells in the cortex, helping to generate thoughts and perceptions. However, reduced levels of noradrenalin also cuts [sic] down activity in the nerves which stimulate the tissues that keep certain immune cells circulating. So

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<sup>107</sup> Such deliberate acts to "control" attention are evidence that attention is not monolithic but occurs in gradations. Damasio provides support for talking about various levels or gradations of attention by citing cases of epileptic automatism. During seizures patients are awake but exhibit only a low-level attention to the activities they carry out. After the seizure they have no recollection of their actions during it. The Feeling of What Happens, 96-99.

<sup>108</sup> Cf. Seth D. Pollack and Stephanie Tolley-Schell, "Attention, Emotion, and the Development of Psychopathology" in Cognitive Neuroscience of Attention, 359.

instead of moving around the body, seeking out and fighting invaders like bacteria and viruses, the immune cells sit around in the body tissues, allowing infections to flourish.<sup>109</sup>

It appears, then, we have more than "folk psychology" to rely on in talking about reciprocal effects between mental acts or states and their precognitive conditions. Correlating depression with chemical levels and cellular activity in the brain is a result of the type of research that Posner noted had too often been neglected. The question of selectivity has sometimes prompted similar research.

Asking why one image, out of a field of potential objects of attention, actually comes into "focus" (i.e. is selected) is an avenue of research relevant to questions about mental acts and the deliberate "binding" of objects. The findings of the neurosciences indicate that selectivity occurs in two generic ways. First, out of an indeterminate field of possible objects of attention, a person's determinate orientation is predisposed to select part of that field for attention. For example, some sights, sounds and smells routinely evoke reflex responses of fight, freeze or flight. But attention may also be "automatically" aroused on a wider basis. "Attention is automatically triggered by more or less anything that stands out against its background either because it is unusual, emotionally salient (a familiar face, say) or exceptionally 'noisy' (e.g. it excites sensory neurons by its colour, motion or size)."<sup>110</sup> So a variety of types of sensory data can have a priority status when it comes to "arousing" attention. How is this possible? One hypothesis is that "memories" stored in the amygdala allow for

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<sup>109</sup> Exploring Consciousness, 198.

<sup>110</sup> Ibid. 150.

quick responses to some types of data, e.g. signs of danger.<sup>111</sup> Another hypothesis is that “sensory learning” can enhance a person’s ability to detect what others fail to notice.<sup>112</sup>

Since our narrowed focus is on how deliberate (“executive”) acts of attending integrate specific images or objects, the link between emotion and selection is a promising avenue of inquiry. Ruz writes of the selective function as most in evidence in “decision making, error detection, novel or difficult situations, or when overcoming a habitual response is needed.”<sup>113</sup> When we are aware of having made a mistake or of needing to change habits, we usually are not indifferent but experience some emotions. Descriptively put, emotions “weight” some images or objects thereby increasing their salience. Neuroscientific research detects increases in activity in the limbic system when some images produce stronger emotional responses than others.<sup>114</sup> The

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<sup>111</sup> Mapping the Mind, 94-95. Aquinas appears to support the idea that sensory data already associated with emotional responses have priority in arousing us. He wrote: “An image or imagined form of an object without some appraisal that it is beneficial or harmful leaves the sensitive appetite unmoved. It is the same with the apprehension of a truth apart from its being good and desirable. Accordingly Aristotle observes that we are moved, not by the theoretical, but by the practical reason.” Summa Theologiae Ia, 2ae, 9,1 ad 2. (Blackfriars 1970), 67.

<sup>112</sup> Citing E.J. Gibson’s work, Paul V. McGraw et al. list examples of sensory learning: “the lore of the wine connoisseur that can discriminate subtle differences in grape varieties; the musician’s ear that can discriminate fine changes in the temporal structure of a musical piece; the experienced eye of a radiologist that can detect almost imperceptible shadows in an X-ray image...” “Introduction. Sensory learning: from neural mechanisms to rehabilitation.” Philosophical Transactions of the Royal Society B: Biological Sciences. 364(1515). (February 12, 2009), 3.

<sup>113</sup> The author goes on to link the process of selection with brain parts and chemical substrates. “Research using the Stroop task has shown the relevance of lateral prefrontal regions, the anterior cingulate cortex (ACC) and basal ganglia in mediating executive attention. The neurotransmitter most relevant in this case is dopamine (DA) from the ventral tegmental system, and its imbalances are known to affect executive functions.” Maria Ruz. “Let the Brain Explain the Mind: the Case of Attention,” in Philosophical Psychology. Vol.19, 4(August 2006), 500.

<sup>114</sup> “Emotional reactions are the result of processing along the parallel neural pathway that goes through the limbic system. A familiar face, for example, creates more activity in these regions than an unfamiliar one, and a lover’s face, or one that looks threatening, sets the circuitry zinging with excitement. As well as producing instant, specific reactions, such as running or

increased activity occurs “when the process of emotion leads to the secretion of certain chemical substances in nuclei of the basal forebrain, hypothalamus, and brain stem, and to the subsequent delivery of those substances to several other brain regions.”<sup>115</sup> Among the effects of such releases are changes in the speed with which images are produced (either slowing or accelerating the speed) and in the clarity of the images (either blurring or sharpening them).<sup>116</sup>

The processing of inchoate images or objects through the limbic system takes time in at least two senses. Not only does it take time to become conscious of an object (cf. Libet’s Puzzle), the integration of an object cannot precede but must await development in the underlying manifold (cf. Csibra’s study or the child’s superego as far less differentiated than the moral judgments of the adult). When development does not occur (usually because of biological or psycho-social impediments), “the nonconscious neural base can send up its signals that express its starved affectivity or other demands for fuller living...”<sup>117</sup> Hallucinating during sensory deprivation experiments provides evidence of both frustrated demands and of a psychic operator inventing alternate ways of meeting them. Fixations at early stages of sexual development provide other signs of incomplete integrations of demands, acts and objects. Lonergan’s

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reaching, emotional excitement brings about peripheral changes in the body state which prepares the body generally for ‘fight, grab or flight’ behaviour. These changes – mediated by hormones and neurotransmitters such as adrenalin and cortisol – feed back to the limbic system and amplify activity there....” Exploring Consciousness, 196-197.

<sup>115</sup> Damasio, 80.

<sup>116</sup> Everyday examples of these effects are found in athletic competition when attention to details increases. So professional tennis players learn to speedily anticipate opponents’ moves, but the latter adjust by deliberately feigning moves to deceive the expectations of their opponents. To exemplify the blurring of images, consider how the emotionally “flat” world of chronic depression conflates the varied details of everyday life, so that there are no moments of elation and none of great sorrow.

<sup>117</sup> Insight, 497.

remark about the superego causing trouble in adult years reflects similar insights into incomplete development.

With this introduction of the question of time, selectivity becomes a much more complex set of issues. Objects that could meet psychic demands may be missing; selected in their place may be substitutes that frustrate those demands and put the child on a wayward path extending into adult years. What we can conclude is that the limbic system is part of the base for "executive" acts of selecting and evaluating, but it and its neural and psychological correlates take time to develop, and the "free variables" of any individual biography make multiple lines of integration possible.

To end with another static diagram of acts correlated with brain locales and neurochemical releases is perhaps at odds with the earlier emphasis on development. All the same, what we do not know is far greater than what we do know about how these variables interact in any preconceptual apprehending and evaluating of objects. A mapping of some of what we do know is a way of keeping track of the limited distance traversed since the early speculation on the *cogitativa* and other inner senses.

| <b>Act of Apprehension</b>         | <b>Brain Locales</b>   | <b>Main Chemical Releases</b>    |
|------------------------------------|--|----------------------------------|
| executive functions<br>(selection) | prefrontal cortex<br>anterior cingulated cortex<br>basal ganglia<br>dorso-lateral PFC<br>orbito-frontal cortex | noradrenalin<br><br><br>dopamine |
| evaluation                         | limbic system  | adrenalin<br>cortisol            |

## APPENDIX E

### Towards Functional Interpretations of Generalized Empirical Method:

by James Gerard Duffy

“Generalized empirical method operates on a combination of both the data of sense and the data of consciousness: it does not treat of objects without taking into account the corresponding subject; it does not treat of the subject’s operations without taking into account the corresponding object.”[1]

The generalized empirical method (GEM) formula appears in the essay “Religious Knowledge,” the second of three lectures on religious studies and theology delivered by Lonergan at Queen’s University, Kingston, Ontario, on March 2, 3 and 4, 1976.[2] What follows is a first step towards interpreting the formula, taking as a guide the four-step program of understanding object, words, author, and oneself described in *Method in Theology* chapter 7 “Interpretation,” with an occasional consideration of *Insight* 17.3 “The Truth of Interpretation.”

Immediately I ask myself why name these forty-six words a “formula”? Why not call them a “directive,” “mandate,” “fantasy,” or “X-way”? The question points to the rather hairy issue of what I am about here, typing away on this fine Saturday afternoon in the month of May. What is a “formula” for me as I type? What meaning does “formula” have for you, my reader? Are we not already into the deep A-B-C-D-E, A’-B’-C’-D’-E’, A”-B”-C”-D”-E” waters of ever-shifting audiences, the limitations of our commonsense and the historical sense, and the fantastic hermeneutics-as-science discovery of “some method of conceiving and determining the habitual development of all audiences,” not to mention an invention of “some technique by which its expression

escapes relativity to particular and incidental audiences"?[3]

I will begin with a "let" -- while entertaining the strong possibility that the can(n)on-blast of the universal viewpoint has not fired, that the interpreter (c'est moi) is not beginning from the universal viewpoint, and that there is indeed a relativity of the interpreter to you, my reader, and a relativity of both of us to a time and place, a tribe, a sect, or a little philosophical school: Let "formula" mean the forty-six words written (or spoken), already-out-there at the top of page 141 staring me in the face. On the other hand, let "formulation" mean a personal achievement, in this case Lonergan's achievement of out-going meaning in March of 1976, which he expressed in a flow of words. The formula is in the public domain, while the formulation is Lonergan's.

### 1. Understanding the Object

I have chosen forty-six words from one of fifteen essays that appear in *A Third Collection*. What is the object being treated in my chosen text? The formula tells me that the object is a "method," a procedure, a way of doing something, one that is "general" and "empirical." A second observation about the object GEM is that it does (operates) two things at a time. It is not like a date in which I treat you today and you pick up the tab tomorrow. It is more like a double-Dutch date, a double-treating: "treating of objects" and "treating of subjects." Already things are getting strange: the object of my understanding is not 'just an object,' but a tandem treating of both objects and subjects that involves distinct and related kinds of data.

Obviously, the more I know about this method, the better position I am in to interpret the formula. "[T]he wider the interpreter's experience, the deeper and fuller the development of his understanding, the better balanced his judgment, the greater likelihood that he will discover just what the author meant." [4] So I ask myself: "James, have you done the double-treating described in the formula? When? Where? Have

you written about it? Talked about it? Has it affected your way of reading? Has it changed your way of teaching? Has the double-treating mediated and/or been mediated by a desire to tongue forth integral, baby-laughed or baby-uttered words?"

## 2. Understanding the Words

The meaning of the forty-six word GEM formula, so the author tells us, is "an intentional entity" and "a unity that is unfolded through parts, sections, chapters, paragraphs, sentences, words." [5] The formula appears in the fourth paragraph of the fifth section of the second of a three lectures delivered in 1976. In the second paragraph of section five Lonergan writes that GEM is "a normative pattern of related and recurrent operations that yield ongoing and cumulative results," and in the third paragraph he adds that GEM "envisages all data." [6] Was he joking? Apparently not, for he went on to say in the paragraph that follows the forty-six words that GEM wants to go behind the diversity that separates the experimental method of the natural sciences and the quite diverse procedures of hermeneutics and of history. It would discover their common core and thereby prepare the way for their harmonious combination in human studies.[7]

It would appear that Lonergan had something big in mind as he tongued and typed his forty-six word formula.

How do I go about understanding GEM? As interpreter I "spiral into the meaning of the whole" formula in a process of learning in which I note, perhaps with the help of a guide or teacher, my failures to clearly understand. For example, I might read "data of sense" and initially interpret what most people mean by sense-data - imagined colors, sounds, textures, tastes, etc. This common meaning does not include real stacks of real journals in real libraries as part of this data. The oversight is doubly-tricky, for the real journals in real libraries are no more imaginatively already-out-there than are real feelings already-in-here. So much for the bogus "bridge-problem" that shackles most of

us in a half-animal, half-human position somewhere between materialism and idealism, AND that prevents us from understanding the words.[8]

### 3. Understanding the Author

In chapter 7 of *Method in Theology* the author writes that the problem of understanding the author (!) is one of “understanding the author himself, his nation, language, time, culture, way of life, and cast of mind.”[9] The context is the common sense task of understanding another person’s common sense, or what Lonergan calls “becoming a scholar.” What are we to make of Lonergan’s common sense as he typed-out or tongued-out the forty-six words?

Now, it might appear less harsh to inquire about understanding Lonergan’s common sense than to inquire about understanding his freakish uncommon sense, but understanding the common sense of the formulator of GEM could very well be an elusive thing. Did his 1976 cast of mind include an uncommon appreciation of the “dramatic component” of “ordinary human living”?[10] Was the drama of his ordinary living agonized by a “labor to persuade people” and “to undo the mischief brought about by alienation and ideology”?[11] Did his 1976 cast of mind embrace the 1959 mind-casting “to move into the practical pattern of experience without contracting one’s horizon presupposes perfect charity,”[12] or the later mind-castings about “the need to speak effectively to undifferentiated consciousness,”[13] systematic theology being “a homely affair”[14] and communication theology presupposing “that preachers and teachers enlarge their horizons to include an accurate and intimate understanding of the culture of the language of the people they address”?[15]

Suppose that Lonergan’s 1976 cast of mind included his 1968 concern, while typing chapter 7 “Interpretation” in *Method in Theology*, with the correctness of one’s interpretation, a concern that found him admonishing his readers to be mindful that

“the context of the paragraph is the chapter. The context of the chapter is the book. The context of the book is the author’s opera omnia ... his problems, prospective readers, scope and aim.”[16] Instead of fast-forwarding from *Method in Theology* to the lecture “Religious Knowledge,” rewind to what Lonergan had written in *Insight*:

But it also follows that new meanings can be expressed only by transforming old modes of expression, that the greater the novelty, the less prepared the audience, the less malleable the previous mode of the expression, then the greater will be the initial gap between meaning and expression and the more prolonged will be the period of experimentation in which the new ideas are forging the tools for their own exteriorization.[17]

If we assume that GEM is something of a great (greater? greatest?) novelty, an intentional entity in the double-Dutch dating scene of higher and lower education in the twenty-second century, how did the problematic “gap between meaning and expression” play upon and play out in Lonergan’s writing for a less prepared prospective audience of readers?

#### 4. Understanding Oneself

If my initial understanding of the object GEM, the words of Lonergan, his nation, language, time, culture, way of life, and cast of mind is inadequate, then in order to interpret GEM, I will need to change, grow and develop, and possibly undergo a revolution in my outlook. “This is the existential dimension of the problem of hermeneutics.”[18]

As I ponder (i) the object that is a tandem treating of objects and subjects; (ii) the forty-six words nested in the second of three essays on religious studies and theology; and (iii) Lonergan’s problems, way of life, scope and aim, and 1976 cast of mind, it is

fairly evident that correctly understanding the formula would indeed be quite an existential achievement. Why is this? First, twofold attention requires study of some object, be it water-flows (hydrodynamics), or basic and surplus flows of goods and services (economic dynamics). This is the “scaffolding” for understanding and affirming understanding and affirming.[19] A familiarity with the symbols  $H_2O$  or  $d_2s/dt$ , or the so-called “transcendental precepts,” like a familiarity with the rules of logic, “can be obtained by a very modest effort and in a very short time,” while a change in my thinking, teaching and living emanating from “notable progress in cognitional analysis” is a whole other thing-ing.[20]

Secondly, GEM states that notable progress is to be mutually mediating. I would carry out object studies in careful self-attention to a myriad of operations – tasting, seeing, patiently loving and living the questions themselves,[21] understanding, formulating, diagramming, jumping to conclusions, reading, tongue-ing forth words in workshops, reading, writing in a diary, for an e-seminar on a blog spot , or perhaps even for publication in a journal: around and around I go, in a “slow, repetitious, circular labor of going over and over the data,” where “data” now means both sets of data – sense and consciousness.

For example, if my interest is linguistics, according to the formula I would not treat uttered or signed words, the dramatic story of Helen Keller ‘getting’ the word “water,” or the volumes of journals and books written in the area of linguistics, without taking into account myself as operating subject ‘getting’ the word “water”, i.e. ‘getting’ myself ‘getting’ the word “water”; nor would I treat of myself as operating subject without taking into account the spoken, written or signed word “water,” and the written words about written or signed words awaiting my perusal in the stacks at the library. If my interest is hydrodynamics rather than linguistics, then according to the formula my attention is still twofold. For example, I would not treat my study of water flows in

physics 201 without taking into account myself as operating subject; nor would I treat myself as operating subject without taking into account the object “water” while reading hydrodynamic journals. It (GEM) would be the same two-fold method, the same praxis, if one were to go on to write a non-truncated high school hydrostatics textbook, or even a non-truncated high school economics textbook contributing to the emergence of macrodynamic economics as a science in the next one hundred years or so, and to the effective and literal delivery of sane economics “into the hills of Ghats and onto the banks of the Godavari.”[22]

Now whether I am splashing with Archimedes towards a GEMlike and un-hurried reading of the relatively simple object “displacement” on the bottom of page one of *Insight*,[23] struggling with the watery object “kitten” of chapter 8 of *Insight*, inventing “appropriate symbolic images of the relevant chemical and physical processes” of the watery plant in chapter 15, climbing at a high altitude towards a compact symbolic expression of the watery object “satire and humor” in chapter 18, or fantasizing writing high school textbooks in and for a double poise, GEM is structurally and dynamically the same.

The challenge is to read something like  $f(\pi ; cj ; bk ; zl ; um ; rn)$ [24] into my interpretation of *Insight* – or any other text -- so as not to miss the objects of my reading. This meta-word (W1) is convenient in so far as it helps me not to dis-embody and neuter the watery kitten or the watery satirist. Aha, “so this is what this book is about.”[25]

In order to manage the complexity of GEMly twofold attention to spoken, written or signed words as objects and the corresponding operations of subjects, we might consider some such convenient symbolism:

$$v_{\text{W}}(\mathbf{p}_i ; \mathbf{c}_j ; \mathbf{b}_k ; \mathbf{z}_l ; \mathbf{u}_m ; \mathbf{r}_n) > \text{HS}(\mathbf{p}_i ; \mathbf{c}_j ; \mathbf{b}_k ; \mathbf{z}_l ; \mathbf{u}_m ; \mathbf{r}_n) [26]$$

This complex symbol (W2) refers to the correlating that is the extremely complex reality of human beings operating as subjects while writing, speaking or otherwise making signs. It is convenient in the sense of helping me to think-in-order-to-understand what is happening while reading, writing, or tongue-ing forth words such as “water,” “money,” or “charity.” [27]  $W(\mathbf{p}_i ; \mathbf{c}_j ; \mathbf{b}_k ; \mathbf{z}_l ; \mathbf{u}_m ; \mathbf{r}_n)$  symbolizes the written, spoken or signed word “water” as the actuation of a capacity to write or tongue-forth that is a higher integration of lower physical, chemical, biological manifolds in the very strange human thing.  $>$  symbolizes the fact that outer written, spoken or signed words of the strange human thing, which are part of the data of sense – like the words staring you in the face as you read --, point to inner words, inner achievements, which are also actuations of a capacity that is a higher integration of lower manifolds in the strange human thing. H symbolizes the pointed-to inner words as emergent in history, while S refers to ‘the sum of things historical’ as possibly, probably or actually recurring. [28]

What would happen if I replace the object “water” with the object GEM? Now the object being treated is not the (long[29]) struggle to speak adequately about water, but rather the (long) struggle to speak adequately about a twofold method that pivots on other (long) struggles, including the struggle to speak adequately about water, sensibility and the watery sensibility of the kitten. Thus the interpretation of the GEM formula “would not be possible without the prior development of the sciences and the long clarification of more general issues by philosophic inquiries and debates.” [30] GEM is a form of double-whatting that is to be discovered in an “ongoing genesis of methods” in which GEM is experimental and “the experiment is conducted not by any individual, not by any generation, but by the historical process itself.” [31] As GEMly understanding the object “water,” “circle,” “film making,” “beer making,” “love

making," or "x" is on the move, ipso facto understanding the object GEM is emerging as well. In any and all cases, philosophical talk about subjective operations and the data of consciousness that is not mediated by knowledge of film-making, beer making, or of some other "x," is a mockery of methodological decency.

As part of this ongoing genesis of methods, some few will self-digesting-ly[32] repeat the historical breakthrough of systematics of water in order to luminously sort out the historical sequence of water-talkings. This is not an easy task, since "the adequate sorter must know his or her stuff: understand the fully developed subject, which means the subject thus far developed, the incomplete genetic systematics of an open-ended search." [33] The "baton pass" of this adequate sorter will eventually circle around to the interpreter in the ongoing revisions of the *acquis* of the dream team Cosmopolis, and since understanding of the object GEM is to emerge in an open-ended search for the sensibility of the watery kitten or watery beer making, the ongoing revisions of the *acquis* will yield better functional interpretations of GEM, i.e. methodological "cumulative and progressive results." Go figure.

## Final Comments

I have attempted to interpret GEM to a reader-friend. Such a listening-speaking is a very strange daily-experienced-to-be-understood, symbolized by duplicating W2 -- Jack and Jill, or James and Janet, invisible face to invisible face, double-double-treating in a double-Dutch dating that is biography meeting biography in history and her-story. Normatively speaking, the reality of teachers lovingly interpreting their students is one such double mutual-mediation. The **Childout Principle**, a gem of a precept, reads: "When teaching children geometry one is teaching children children." [34] We could and probably should add that "the children are teaching teachers teachers as well." Adequate speaking and listening in kontekst would be quite a sophisticated

achievement, as would the “scientific collaboration, scientific control and scientific advance towards commonly accepted results” that “escapes the relativity of a manifold of interpretations to a manifold of audiences.”[35]

Correctly interpreting the forty-six words at the top of page 141 of *A Third Collection*, i.e. digesting them sufficiently to achieve an appreciation of Lonergan’s inner achievement, would make all forty-six words disappear into the thin air of a post-Merleau-Ponty luminosity regarding the is-ing of concrete extensions and durations.[36] Is this a bizarre way to think about hermeneutics, or am I merely trying to meet and cherish my friend who typed the forty-six words, biography meeting biography in history? Of course it is possible to memorize the formula and cover up not having sweatingly climbed much or at all to meet and greet my friend, nor having encouraged my students to climb thusly towards such meeting and greeting. Such memorizing and covering-up is the monster of our daily academic daze.

AND, yes, if it is any consolation to you dear reader, as I type I am sweating about a “what’s-to-be-done?” In August I will teach a course with the title “Modernity and Postmodernity.” The course syllabus includes readings from Nietzsche, Heidegger, Habermas, Foucault, Lyotard, Derrida and Lonergan, among others. My inclination is to scrap the course syllabus – which I designed five years ago!!! – and instead do simple water exercises so as to “promote the self-appropriation that cuts to the root of philosophic differences” and to “distinguish, relate, ground several realms of meaning and, no less, ground the methods of sciences and so promote their unification.”[37]

Does my crazy inclination provide an image of an axial challenge in/of/for our axial selves, oh-so neurotically hiding behind pseudo interpretations of Nietzsche, Heidegger, Lonergan et al, to get the X-show (Cosmopolis) on the road? “¡Agua!”[38]

\*Parts of this essay were presented at WCMU 2011, Loyola Marymount University, Los

Angeles, April 30, 2011.

## NOTES

[1] Bernard Lonergan, "Religious Knowledge," *A Third Collection*, New York, Paulist Press, 1985, p. 141.

[2] The three lectures were "Religious Experience" (March 2), first published in Thomas a. Dunne and Jean-Marc Laporte (eds.), *Trinification of the World: A Festschrift in Honour of Frederick E. Crowe* (Toronto: Regis College Press, 1978), pp. 71-83; "Religious Knowledge" (March 3, 1976), first published in Frederick Lawrence (ed.), *Lonergan Workshop, Vol. I* (Missoula, Montana – now Chico, Cal.: Scholars Press, 1978), pp. 309-327; and "The Ongoing Genesis of Methods" (March 4, 1976), first published in *Studies in Religion, Vol. VI* (1976-1977), pp. 341-355.

[3] *Insight*, CWL 3:585-587.

[4] *Method*, 157.

[5] *Method*, 159.

[6] *A Third Collection*, 140.

[7] *A Third Collection*, 141.

[8] "Empiricism, idealism, and realism name three totally different horizons with no common identical objects. An idealist never means what an empiricist means, and a realist never means what either of them means." *Method in Theology*, p. 239.

[9] *Method*, 160.

[10] *Insight*, CWL 3:210.

[11] *Method*, 361.

[12] *Topics in Education*, University of Toronto Press, 1993, CWL 10:91.

[13] *Method*, 99.

[14] *Method*, 350.

[15] *Method*, 362.

[16] *Method*, 163.

[17] *Insight CWL* 3:612. In this section Lonergan is considering stages in the development of meaning. GEM might belong to a stage in the development of meaning that has not (yet) “become propagated and established in a cultural milieu” (611). How do we read into the “scope and aim” of GEM what thirty-three years earlier, in January of 1935 Lonergan wrote in a letter that the Catholic philosopher “always tends to express his thought in the form of a demonstration by arguing that opposed views involve a contradiction. The method is sheer make-believe but to attack a method is a grand scale operation calling for a few volumes.” Letter to Henry Keane, January 22, 1935. Archives of the Lonergan Research Institute, Toronto.

[18] *Method*, 161.

[19] See Introduction to *Insight CWL* 3:20.

[20] The reference is to *Insight CWL* 3:598, with a bow to the earlier chapter 8 “Things.” Also relevant is the remark by Lonergan about learning physics without understanding the calculus: “It clutters the mind.” *CWL* 10:145.

[21] “You are so young, so before all beginning, and I want to beg you, as much as I can, to be patient toward all that is unsolved in your heart and to try to love the questions themselves like locked rooms and like books that are written in a very foreign tongue.” Rilke on *Love and Other Difficulties*, trans. by John J.L. Mood, New York, W.W. Norton, 1975, 25.

[22] A context is McShane’s discussion of how Sir James Lighthill’s three volumes (*Collected Paper of Sir James Lighthill*, four volumes, edited by M.Yousuff Hussaini, Oxford University Press, 1997) carried forward the 1897 *Hydrodynamics* of Horace Lamb. “Might one not consider plausible that some dedicated Indian scientist like Lighthill in the West would bring forth a four-volume economic work in 2097 that would bring Lonergan’s work effectively, and indeed literally, into the hills of Ghats and onto the banks of the Godavari.” “The Global Economy and My Little Corner,” *Divyadaan: Journal of Philosophy and Education*, Volume 21, no. 2 (2010), 245-256, at 252.

[23] McShane has written up one such slow reading in *Cantower XXVII* "Atoms in Motion," <http://www.philipmcshane.ca/cantower27.pdf>

[24] See Phil McShane, "Metagrams and Metaphysics," <http://www.philipmcshane.ca/prehumous-02.pdf>

[25] Phil McShane *FuSe 2* "Pedagogical Struggling with the Second Canon of Hermeneutics," <http://www.philipmcshane.ca/fuse-02.pdf> at page 6.

[26] This particular diagram appears in Phil McShane, *A Brief History of Tongue*, Axial Press, Halifax, 1998, 122-123 (hereafter **BHT**) and "Metagrams and Metaphysics" <http://www.philipmcshane.ca/prehumous-02.pdf>. McShane argues for the necessity of such diagramming in "Metaphysical Control of Meaning," *Method: Journal of Lonergan Studies* 24, 2006.

[27] In the epilogue of *Insight*, Lonergan points to some such convenient symbolism: "The advent of absolutely supernatural solution to man's problem of evil adds to man's biological, psychic, and intellectual levels of development a fourth level that includes the higher conjugate forms of faith, hope, and charity." CWL 3:762.

[28] **BHT**, 120-121.

[29] The object "sensibility" is, in a sense (!), on the move, if I am "thinking of the long human struggle to understand sensibility, to mediate its possibilities in people, cultures, history, to appreciate the chrysalis of its pilgrim meaning and anticipate its eschatological glory." Phil McShane, "Interpretation: Method 7 lifted into Canons and Collaboration II," <http://www.philipmcshane.ca/fusion-12.pdf> at page 9. The same thing is true of any object "x", be it beer making or film-making. "So, if you want to talk about the operations of film-making intelligently, you do it in the style of the new culture by being competent both in the film-making business and being competent in operations-talk: AND the competencies are a matter of mutual mediation." *Cantower* 11, "Lonergan: Interpretation and History," <http://www.philipmcshane.ca/cantower11.pdf> at page 13.

[30] *Insight* CWL 3:558-559.

[31] "The Ongoing Genesis of Methods," 3C, 152.

[32] Please, pretty please, do not be put off by the word "self-digesting-ly," which merely points to the first half of the formula: "it does not treat of objects without taking into account the corresponding subject."

[33] Phil McShane, *Cantower 7* "Systematics and General Systems Theory," <http://www.philipmcshane.ca/cantower7.pdf> at page 13. What McShane means by "subject" in this quote is what Lonergan means by "object" in his forty-six word formula.

[34] See Phil McShane, *Cantower 41* "Functional Policy" <http://www.philipmcshane.ca/cantower41.pdf> McShane writes that reading and writing are to be luminous to the teenagers in the third stage of meaning if we can somehow make operative this Principle from womb through grade one and beyond. See Fusion 18 "Sorting Out the Second Canon of Hermeneutics" <http://www.philipmcshane.ca/fusion-18.pdf> at note #16.

[35] *Insight CWL 3:609*. The context is the canon of explanation for methodical hermeneutics. In a related context McShane writes about imaginary first and second year courses "*Fusion 101*" and "*Fusion 201*": "Listening and speaking in context is a sophisticated achievement, and its understanding - the layered, objective of *Fusion* - is and was quite beyond the first year effort of tasting the fundamental orientations in oneself. With a full year course, one might get as far as noting the general problem of what I call effective telling, meeting each other, biography in history." Phil McShane, *SURF 12*, "Tackling Lonergan on Interpretation," <http://www.philipmcshane.ca/SURF-12.pdf> at pages 3-4.

[36] See Terry Quinn's contribution to this e-seminar "Body Bridge and the Concrete Intelligibility of Space and Time," Appendix A of *FuSe 11*. <http://www.sgeme.org/BlogEngine/post/2011/05/12/Body-Bridge-and-the-Concrete-Intelligibility-of-Space-and-Time-by-Terry-Quinn.aspx> and Phil McShane's *Fusion 12* "Interpretation: Method 7 lifted into Canons and Collaboration II"

<http://www.philipmcshane.ca/fusion-12.pdf>

[37] *Method*, 95. Another common failure, a manifestation of being shackled in and by longly cycled common sense philosophy and theology pretending to be efficient and “with it,” is to read Lonergan’s description primary and secondary function of philosophy as continuous with traditional divisions of courses, conferences, journals, seminars, and workshops. In the preface to the three lectures on religious studies and theology Lonergan explicitly states that *Method in Theology* was “conceived on interdisciplinary lines” (3C:113). Part of the rub of GEM is that “pure philosophy” and “pure theology” simply do not cut it, where “cutting it” refers to the intervention of Cosmopolis in healing our sad, unlivable lives. “From moral theorists we have to demand, along with their various other forms of wisdom and prudence, specifically economic precepts that arise out of economic process itself and promote its proper functioning.” “Healing and Creating in History,” *Macroeconomic Dynamics: An Essay in Circulation Analysis*, Toronto, University of Toronto Press, 199, CWL 15, 105. The university, at present, is failing in its mission to treat “this ridiculous situation” as conceived by José Ortega and Gasset: “It is a question of life and death for Europe to put this ridiculous situation to rights. And if this is to be done the university must intervene, as the university, in current affairs, treating the great themes of the day from its own point of view: cultural, professional, and scientific.... The university must assert itself as a major >spiritual power,= higher than the press, standing for serenity in the midst of frenzy, for seriousness and the grasp of intellect in the face of frivolity and unashamed stupidity.” J. Ortega y Gasset, *Mission of the University*, translated with an Introduction by Howard Lee Nostrand, Princeton University Press, 1944, 98-99. Quoted in Phil McShane, “Arriving in Cosmopolis,” at page 4.

[38] “Aguas” is Spanish for “waters,” and when shouted it means “Be careful!”

## Appendix F.

### 1. An Illustration of Functional Interpretation from Economics, meshed with Contextualizations.

**Philip McShane**

This is my own contribution to the seven illustrations of interpretation.

My problem is, to illustrate functional interpretation from the first three chapters of *For A New Political Economy*. Let me make it as *easy* as possible: think of this *easy* as relating to my passing on the new twist to a functional historian who is up-to-date in the full contemporary standard model of the time. I make it easy by simply homing in on a single word, the first word of the title chapter three of the book: "Transition to Exchange Economy". So: we are poised over the word *transition*, each of us in our own way.

Within a certain maturity of the Cyclic Tower Science, I, as functional researcher, notice, in my Model-contexted-reading (see *Verbum*, 238, the top, re context) of the word *transition*, fresh possibilities of meaning. Please recall our early talk of physics and observers on the look-out for odd track-or-particle behaviour. What track is the particle *transition* on? Go back to the end of *For A New Political Economy* chapter 2: "... when we have applied our general analysis of the pure process to a particular case of the exchange process. To that we now turn".

So we turn the page to the title. But of course it is I who am talking about my turning the page. You are listening in, as it were, to my lining up a possible new lift of meaning to be worked on by functional interpreters. Notice here that I am taking us back to me as functional researcher, and reading with a fresh suspicion the word *transition*, and talking to you - but in the mature science the talking is to functional interpreters, a talking suggesting that, since Lonergan is writing about a "particular case", would not the Mature Standard Model give a larger reading of *transition*, thus locating Lonergan's meaning in fuller context? What is that fuller context? It is the present attainment - by me, the present reader - of what was described in section 3 of Fuse 10, introducing this seminar. The title there was/is *UV + GS + FS*.

I am talking here, with focus on content and method blended [see Duffy's Appendix E].

But can I give you hints of its meaning, a salvaged [see Henman's Appendix G] *haute vulgarization*? I am talking about an object - really a massive range of actual and possible objects - reaching from something like what Shute describes in the *transition* of a primitive community deciding that "we'll have to **make a note** of this" ("Real Economic Variables," *Divyadaan*, 21, 2010, No. 2, - titled **Do You want a**

**sane Global Economy?** - p.194) to the remote state of a much later culture where the transition is a genetic move to a New Covenant of Promise, where the **note** is somehow swept up into a culture that MANAGES TO "clear away finance and even money" (*FNPE*, 20).

I am talking about an object better known to me now than in the then-Standard-Model within which Lonergan knew the object in 1942, even if he lifted it hypothetically into his FS view of 1965. Yes, he had grappled around that time in the early 1940s with the meaning of decision in *Grace and Freedom*, but was he not the better in meaning when he rose to glimpse more fully, during the later 1940s, in the *Verbum* articles, the *Verbum Practicum*, so leading us to a larger Standard Model? It is that later enlargement that dominates my reflections on *transition* above.

But I should say that I am cutting back strategically and pedagogically here on the full enlargement, such as is hinted at in section 3 of **Q. 26** on the Q and S Session of June 2, 2011. The limited enlargement here refers particularly to the better grip on Thomas' "sixty-three articles in a row" (*Grace and Freedom*, 94: the articles are those of *prima secundae* qq. 6-17) to be had through the mediation of a grip on *Verbum*. That mediated grip gives a luminous grip on the meaning of **belief** and **promise**.

This leads me to point you towards thinking further about functional research. Regularly, there is a nudge from circumstances towards a new twist of focus: think again of the research physicist when someone suggests to her or him a new problematic twist. Or more simply, think of a fable about Newton, lying under an apple tree, looking up and happening to see both the moon and an apple over his head, the moon eclipsed by the apple. A new twist bubbles up for him: why does the apple eventually fall, but the moon does not? So, here, beyond Lonergan in 1942, my circumstances - in particular the history of American madness regarding money-making in the past seventy years - give me new nudges, focused here in the question, twisted to help you: Why does the **derivatives'** business eventually fall, but real-money-business does not?

The twisted question means no more to you than would Newton's funny question mean to Galileo. It needs a context to hold it together meaningfully and carry it forward towards resolution. Indeed, it needs the context of Lonergan's economic analysis, one that is perhaps yours, but certainly it is alien to the present Economic Establishment. The present establishment talks about money like Galileo talked about weight. There is simply no science, and that absence is manifested by the simple suggestion, **there are two types of firm**, which lurks in **FNPE** chapter 2. It still lurks unanswered in present elaborate discussions of money-as-commodity.

But you notice that I am losing you? To find me, you would have to start with the simply claim, **there are two types of firm**, eat the heart out of the silly diagram that every schoolgirl and schoolboy learns in the first month of economics, and then push grimly on to the new economics that, incredibly, no one shows any interest in. [again, see Henman, Appendix G]. Why do they show no interest in it? Well, there you have to take seriously Zanardi in Appendix D: their neurochemistry has been patterned by teachers of present economic mythologies who **cannot dream of** (chemistry again!) "a readaptation of the whole existing structure" (FNPE, 6), "a new beginning" (FNPE,7)

An important point here is that the persons to whom I pass the baton - the functional interpreters if I am a researcher, the functional historians if I am an interpreter - would have that under their belt - or their hat! - if they were up-to-date on the present standard model that includes the new economics. The new angle comes from my adverting to a possible connection between pseudo-money [think of derivatives generally, of hedge funds, of Credit Default Swaps, whatever] and the absence of a culture of "money as promise", money that is a "giving credit for an idea". To glimpse the challenge that the up-to-date cyclic person has already overcome here, think of the entry in the index of FNPE under *Concomitance*. It is the longest entry in the index, 25 lines long. That lengthiness was intentional on my part, as you'll gather further from my Introduction to the Index, which ends quoting Wordsworth: "and now I see with eye serene, the very pulse of the machine". By the beginning of this next century I have some hope that this grip on the pulsing of the global economy would be a mindset of economists, journalists, governments. AND they will have gone beyond the present best mindset in that the pointers connected with my new suggestion would be by then built into the cycles and their street dynamics.

Does this make **some** sense to you? .... it takes quite a bit of spirited mental chemical reactions! And its importance goes way beyond economics: it is a great illustration of how the cyclic science is to work towards "cumulative and progressive results"(MIT,4,5). At any stage in the science's progress, when it is mature, **everyone** in "The Tower of Able" will be tuned to the contemporary Standard Model, **SM**. So, in my illustration, I take my start from a state where the anomalies connected with money-as-commodity have not cycled in thematically. My research discovery (indeed, I recall when I made it about 18 months ago, and began pushing for an interpretation) is the possibility of a lift in **SM**. It should help you to work with the parallel that I already mentioned, especially if I give it a helpful twist. There is the emerging science of physics at the time of Newton's messing. Motions had been measured with great accuracy - think of Brahe and Kepler) but there is no answer to Newton's puzzle, **Why does the moon not fall,**

**while the apple does?** Now think around the oddly parallel puzzle that is associated with my innovation, my anomaly: **Why does the real money not fail, but the added money does?** My very cute parallel answer is, **What circulates properly does not fail (fail).**

I consider that bit of nonsensical paralleling to be a cheerfully neat piece of pedagogy, but it needs your energetic follow up, even if you are only reaching for *haute vulgarization*. Think of the word **properly**. It is the interpreters' task to find a precise meaning for it, the refined law of orbits, or the refined law of **concomitance**. Further, I would note that Newton leads to Laplace and the enlargement of Lonergan leads to ... well, I discuss that in a parallel with global hydrodynamics in *Sane Economics and Fusionism*. (See section 3 of Chapter 4 ).

I suspect that you are quite lost now, but what the initial research-jump leads to is a precise identification of the precise unintelligence and immorality of the separation of **promise** and **concomitance** from the meaning of money. BUT the powerful thing about cyclic functional

collaboration is that identification means **effective** identification: that is why it brilliantly solves the problem of **Cosmopolis**, and gives wonderous unity to human global care. "It is quite legitimate to seek in the efficient cause of a science, that is in the scientist, the reason why a science forms a unified whole" (*Topics in Education*, 160, line 16).

But have you at least a glimmer of how the cycle is to work, when we mature as a human group? The problem, as I noted in the beginning of the first seminar, is the absence, in the potential community of collaborators, of a **SM**. These seven interpretative efforts are related to the road to that standard model: the necessity of homing in on neglected directives of Lonergan. I asked my 6 collaborators not to push too hard, but to point to the present struggle, theirs and **those** who finally are going to take Lonergan seriously. Are you to be one of **those**? Don't forget that you can take Lonergan seriously and still **not** push forward towards serious understanding; but I leave Henman to deal with that in the final appendix, G. Meantime, use the appendices as you discern best to enlarge your perspective. **A**, from Quinn, is the challenge of thinking out spacetime **properly** - that word again. **B**, from Oyler, adds the challenge of thinking out the first part of *Method* properly. **C**, from Gillis, adds a helpful perspective on the gap between the first and the third stages of meaning: our Existential Gap (see CWL, vol 18) can be startlingly and startlingly identified with a warped axial super-ego. **D**, from Zanardi, adds the massive challenge of seriously identifying that warp; **E**, from Duffy, points to an omnidisciplinary

methodological luminousness that will boost the cycling, when it does move out of our axial treacle. **F**? Well, you are in it, as it identifies both the treacle-creep and the vortex-cycling of later times. And then there is **G**, from Henman, with some hints of the moves from treacle-creep to later whirling.

## APPENDIX G

### Functionally Interpreting Communications<sup>118</sup>

Robert Henman

My topic is interpretation of the 8<sup>th</sup> functional specialty, communications. There are four contexts which I have chosen for this work in order to make some effort at communicating what communication is within the larger context of functional specialization. There are many contexts within which communications can be discussed and I have worked out four which I list now. The first context is the explanatory context that is expressed in the text **Insight**.<sup>119</sup> The second context is the writings of Philip McShane.<sup>120</sup> The third context is functional specialization as outlined in **Method in Theology**. The fourth context is that of present Lonergan scholarship. The strategy is to offer an interpretation of the specialty communications<sup>121</sup> that may lead hopefully to a better understanding of implementation as the

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<sup>118</sup> Bernard Lonergan, **Method in Theology**, Darton, Longman & Todd, Gr. Br., 2<sup>nd</sup> Edition, 1973. Chapter 14 outlines Lonergan's description of the specialty Communications. *Part Two: Foreground* outlines the eight specialties.

<sup>119</sup> Bernard Lonergan, **Insight: A Study of Human Understanding**, CWL 3, University of Toronto Press, 1992. Lonergan had expressed often in conversations and interviews that he had a larger book in mind than **Insight** that would include a method for theology. It would not appear for 14 years after **Insight**.

<sup>120</sup> Philip McShane, in his first three published articles; *The Contemporary Thomism of Bernard Lonergan*, Philosophical Studies, Ireland, 1962, *The Hypothesis of Intelligible Emanations in God*, Theological Studies Vol. 23, No. 4, December 1962, and *Theology and Wisdom Sciences Ecclesiastiques*, Vol. XI, 1963, was promoting a development of a method in theology within the context of the explanatory horizon. This emphasis on the explanatory is relevant to his later writings and possibly the adverse reaction by Lonergan scholars to much of his later writings.

<sup>121</sup> In 2010 I carried out research on communications. In fact it was an effort at a functional interpretation of a particular scheme of recurrence as **internal** communication to the specialty history. <http://www.sgeme.org/Articles/sgeme-007-analysis-of-localized-education9.pdf> See Phil McShane's Cantower XIV <http://www.philipmcschane.ca/cantower14.pdf> on Communications for a distinction between internal and external communications.

actualizing of explicit metaphysics.

Communications has more than one outcome. The task of communications is to communicate understanding to an audience and that understanding need be expressed differently to different audiences so one needs to have some grasp of the particular differentiation of consciousness of one's audience. Within the context of functional specialization communications is to communicate the results of the other seven specialties<sup>122</sup> to either other specialists or to a non-specialist audience. Internal communication combined with external communication is to focus on making metaphysics explicit. Operators working in the various specialties are challenged to function in the explanatory horizon: **FS + UV + GS**.

I begin with a discussion of the last context of the present situation in Lonergan scholarship in order to set the stage for the drive of this paper. In the **first** place, the explanatory horizon of the book **Insight** has been bypassed and what has followed and continues is "pseudo-met myth"<sup>123</sup>. **Insight** is an explanatory expression of intentionality analysis and its implications for science, metaphysics and method in the sciences. In the **second** place implementation in the definition of metaphysics basically reaches to what Lonergan would eventually discover as functional specialization. In the **third** place, functional specialization has been generally ignored by Lonergan scholarship in terms of actually doing it. In the **fourth** place, present Lonergan scholarship for the most consists of comparing and contrasting what may be a position for some with the counterpositions of other philosophers. This set of research comments is something for interpretation, history and dialectic to work out, but they point to a present state that seems to have little to do with implementing Lonergan's achievements. In the **fifth** place, *haute vulgarization*, quoting Lonergan as an authority, an unscientific procedure, has been the main pastime of the majority of follow-up to Lonergan's achievements. In the **sixth** place, this activity has downplayed Lonergan's achievements through forms of dialogue that do not communicate theoretical meaning, so the scientific community turn away, while the theological community continues on thinking it has

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<sup>122</sup> **Method in Theology**, page 355. "Without the first seven stages, of course, there is no fruit borne. But without the last the first seven are in vain, for they fail to mature."

<sup>123</sup> **Insight**, page 528.

it. In the **seventh** place, the very solution, that Lonergan outlined in **Insight** to renew culture, has now become the solution needed to rescue Lonerganism from itself. In the **eighth** place, there is the need to develop a form of communication for the various audiences referred to above that will not only share the proper cognitive meaning but also be persuasive<sup>124</sup> in ensuring the audience of the validity of the achievements as well as the insights essential to those achievements.

I list these eight “places” as if they exist as fact. Depending on the evidence one has accumulated for a judgment of fact one may be skeptical about my statements. They can be taken as research observations at this time. Some light may be provided by what I am saying here, and in the saying, my own struggle with understanding communications may shed light on a generic light on an all pervasive problem of the second stage of meaning that few, if any, should claim to have overcome. Indeed the making explicit would perhaps be revelatory. The achievement, the overcoming, is a precarious foothold that may only be secured by admitting the difficulties of living and reaching within the second stage of meaning.

Let us now return to the first context in our discussion, the text **Insight**. Throughout the text **Insight** Lonergan is quite explicit about the need to function in the explanatory horizon. He distinguishes between the horizons of common sense and theory by what appears as a very simple separation. The horizon of common sense relates things to oneself, and that of theory reflects on the relations between things. That seems simple enough. Is it so simple of a distinction that it encourages nominalism? In much of the Lonergan literature it would seem to have rated that position. And yet that distinction is contextualized throughout the text by examples of an explanatory nature. Why the emphasis on the explanatory horizon? Well, what does it mean to be in the explanatory mode of consciousness?

This is a major area of concern for it is more than just doing science; it consists of becoming aware of the heuristic that anticipates the scientific venture, of exposing ourselves in the process. I quote from Phil McShane’s contribution to this seminar the focus of the 7 articles. Our efforts signify the difficulty of this self-exposure.

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<sup>124</sup> **Method in Theology**, page 356.

*“A, from Quinn, is the challenge of thinking out spacetime **properly** - that word again. B, from Oyler, adds the challenge of thinking out the first part of Method properly. C, from Gillis, adds a helpful perspective on the gap between the first and the third stages of meaning: our Existential Gap (see CWL, vol. 18) can be startlingly and startingly identified with a warped axial super-ego. D, from Zanardi, adds the massive challenge of seriously identifying that warp; E, from Duffy, points to an omnidisciplinary methodological luminousness that will boost the cycling, when it does move out of our axial treacle. F? Well, you are in it, as it identifies both the treacle-creep and the vortex-cycling of later times. And then there is G, from Henman, with some hints of the moves from treacle-creep to later whirling.”*

In Appendix F Phil highlights all of our efforts by offering pointers that should elevate all efforts towards a **higher level of reaching** for the explanatory context. And I see now that this **higher level of reaching** is tantamount to an interpretation of communications.

All of the 7 essays, and I include my own, express difficulty in interpreting various texts of Lonergan’s work. Such difficulty is not what one experiences if one does a perusal of Lonergan scholarship over the past 50 years. Let us think of this absence in two ways. First, there is the challenge of doing science with the heuristic in mind. Has that been the experience of scholarship to date? Secondly, there is the challenge of expressing the challenge. I would add that it is the latter issue that is inhibiting the first observation. And this latter issue reflects back on my 8 “places.” As observations they take on a new meaning when we note the latter absence. They are perhaps now observations with some degree of validity that further enquiry might bring to a frightening set of facts through interpretation and history?

How is one to come to an appreciation of the explanatory horizon as the way forward, in a simple statement, by doing it? But that doing is the challenge. If I have no experience of the explanatory horizon, can I understand what Lonergan means by metaphysics, and if I have no idea what he means by metaphysics, can I understand what he means by implementation, and finally if I cannot understand what he means by implementation, can I understand the nature and relevance of functional specialization? This is extremely relevant to interpretation. In chapter 17, section 3 of **Insight**, the difficulty should be revealed. It was recently revealed to

me in an earlier effort to offer a functional interpretation of implementation within the context of Lonergan's definition of metaphysics. That effort was not without its merits. It revealed to me the consistency of Lonergan functioning in the explanatory horizon, my own inadequacy in that mode, as well as the need to grasp that mode if I was to adequately interpret the term implementation. We might reflect on our own need to parallel Lonergan's own searching if we are to come to an adequate appreciation and understanding of functional specialization.

I have wrestled with elementary physics over the past 3 decades, partly due to Phil McShane's nudging, and partly to my own curiosity about a subject I enjoyed in high school. It is a slow bit of progress in understanding. But the experience is quite different from other forms of understanding, common sense, etc... What did this teach me? That explanatory understanding is very difficult and yet without it am I functioning in the world of reaching for being? Can I understand what Lonergan meant by metaphysics without that experience? I don't see how I can. The explanatory mode of operating provides one experience of self-transcendence.<sup>125</sup> So to say we are self-transcending beings has no base without this experience.

I hesitate to go on about the need for the explanatory horizon<sup>126</sup> as the making of the point tends to circle back to attempting to make the point over and over. But it relates to an interpretation of communication in as much as without the explanatory context just what are we communicating? Can collaboration exist without this context of communication? Are we able to subsume the second stage of meaning into the third without the explanatory context? I

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<sup>125</sup> There is the self-transcendence of being in love and loving. The mediation of that loving in the world of proportionate being raises the issue of how and the second stage of meaning with all of its fragmentations complicates the "how" beyond our present fantasies.

<sup>126</sup> I wish to make a distinction here between intellectual conversion and theoretic conversion. The discovery that one knows the real in judgment is the essence of critical realism, but theoretic conversion is coming to an appreciation of what intellectual conversion points to, but without theoretic conversion, intellectual conversion can and will slip into philosophical mudslinging. The two conversions are distinct but complimentary. But they are not the same thing. Until one has explained some data, one does not have an experience that fills out intellectual conversion. Intellectual conversion is incomplete without theoretic experience. What Lonergan calls metaphysics then remains a definition that the real is a correctly understood experience. It can be memorized but not explained and then pedagogy never rises to the challenge of noticing the difference between what is experienced and what is known in the invisible.

could go on in terms of further conclusions to end with a theological context in that the absence of the explanatory context inhibits cooperation with divine providence.

I wish to take up my second context which is the writings of Philip McShane. In footnote 120 I mentioned three articles that Phil published early in his life shortly after working through **Insight** and the **Verbum** Articles as they have become known. I no longer have a copy of his first article; *The Contemporary Thomism of Bernard Lonergan*.<sup>127</sup> It has been lost through my poor filing system, or perhaps I loaned it out to a friend! The other two I have in my possession. In discussing the procedure of analogy as how to attempt an understanding of the intelligible emanations in God, Phil states on page 557(see footnote 120 for reference); *A successful scientific hypothesis is an advance in understanding, and its success is measured by the degree to which its intelligible consequences account for what awaits explanation*. The year is 1962 and Phil puts forth the need for explanatory work in understanding data adequately. In this instance the data is by analogy as there is no data on God. But the heuristic procedure is still explanatory in its reach. In *Theology and Wisdom*, Phil states on page 423(see footnote 120 for reference); *What is demanded is a transition from empirical self-knowledge to scientific self-knowledge, where the former is the basis of the latter*. This point references my comment in footnote 126. To work through Phil's writings over the past 50 years for further references to the need for explanatory work would be a horrific enterprise. But we might jump ahead to his two latest published works of 2010 to make a point. In **Sane Economics and Fusionism**<sup>128</sup> we read; *The people in the Tower will share, to a very large degree, a Standard Model of Progress, one that is sophisticatedly explanatory and heuristic*. In **Bernard Lonergan: His Life and Leading Ideas**<sup>129</sup> we read and I quote at length; *The last section's ending phrase may well sound like metaphor, yet it points to a future enlarged explanatory metaphysics bluntly yet subtly anticipated by Lonergan in Chapter 16 of **Insight**. The note to that phrase mentions Cantower 30, and so it seemed reasonable, in this impressionistic chapter, to avail of my effort there to lift*

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<sup>127</sup> This article has been posted on Philip McShane's website at [www.pmcshane.ca](http://www.pmcshane.ca) under the index title Archives. At present the file is corrupted and access is denied.

<sup>128</sup> Philip McShane, **Sane Economics and Fusionism**, Axial Press, Vancouver, BC, 2010, page 84.

<sup>129</sup> Pierrot Lambert and Philip McShane, **Bernard Lonergan: His Life and Leading Ideas**, Axial Press, 2010, page 179.

*us forward towards a glimpse of Lonergan's suggestions regarding energy and the prime potency of finitude. The fuller context of the Cantower is obviously a better invitation to the struggle with Lonergan's meaning; indeed the ingesting of the five interlocked Cantowers, 27-31, seems to me an unavoidable achievement of these next generations if we are to lift ourselves communally into an explanatory perspective, the Standard Model that might be a Tower Presence in a hundred years or so.*

"To lift ourselves communally into an explanatory perspective", echoes of 1961 and beyond? And finally most recent, in Phil's contribution to this seminar, Appendix F, we read; "**BUT the powerful thing about cyclic functional collaboration is that identification means *effective* identification...**" One finds throughout over 50 years a consistency of Phil's emphasis on the explanatory horizon as concomitant with Bernard Lonergan's own emphasis. Now, does that ring of *haute vulgarization*? Only if one has not *effectively* discovered the Standard Model, made an effort at an explanatory account of something. Phil and I only yesterday shared humor over his puzzle presented in his Appendix F in wondering why the apple falls and the moon does not. It takes a bit of explanatory work to figure that out. Phil offers a hint in his Appendix F. But without a fair bit of effort in understanding velocity, acceleration, orbital paths, one never can adequately account for that phenomenon.

What contribution does this brief analysis offer in helping us to understand communication? Does it not again emphasize that communication within functional specialization is of the explanatory horizon and that implementation of an adequate metaphysics requires a structure, a Standard Model that can implement such a thing?

I move on now to my final context, that of functional specialization. To do this properly is to bring forth the central point made in the discussion of the former two contexts. The point brought out in both of those former contexts and discussions is that the explanatory horizon is the essence that underlies Lonergan's achievements and that functional specialization is, I hold, his greatest achievement, for within its dynamic resides the possibility of a collaborative explanatory control of meaning that has the potential to offer a control and direction of history, that Lonergan knew was so badly needed and that he so worked for from the 1930's

until his death in 1984.<sup>130</sup>

Within the context of functional specialization I earlier mentioned two types of communication, internal and external. Both are relevant to my topic but require separate treatment. We need bring the previous context of the explanatory horizon forward into this discussion. If functional specialization is to implement metaphysics each specialty needs to pass forward to the next specialty expressions resulting from the explanatory horizon. This series of cumulative internal communications provides for the specialty communications the data of external communication. That external communication need be developed through the sharing of cognitive meaning in a manner that has the potential to persuade audiences that such meaning is relevant to the ongoing development of science and human well being. This expression also need be developed into a form that takes on the role of data for the specialty research ensuring that the cyclical dynamic of functional specialization continues in its cumulative potential.

The situation at present is that there is little data on communications as a specialty in the manner that I have described above. Sandy Gillis, in her paper, raises questions that need to be addressed in the struggle of moving from the second stage of meaning to the third and in order to initiate a beginning in this transition both internal and external communications need take up the challenge of the explanatory horizon. Bill Zanardi explores neurochemistry in its development and its lack of cultivation in axial period philosophy hinders development and can screen off the ability to recognize our ineffectiveness.

In conclusion we might ask: **What are we about here?** My effort to interpret the specialty communication along with the six essays that precede this one express not only the deficiencies of cultural fragmentation but the difficulty of overcoming such deficiencies. If we,

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<sup>130</sup> See Patrick Brown's *Implementation in Lonergan's Early Historical Manuscripts and System and History in Lonergan's Early Historical and Economic Manuscripts* at <http://journals.library.mun.ca/ojs/index.php/jmda/issue/view/8> Also see Mike Shute's **Lonergan's Discovery of the Science of Economics**, University of Toronto Press, 2010. Chapter 8, Section 2, *Further Contexts*, page 233. I visited Lonergan at Pickering in August of 1984, 3 months before he passed away, and we had a brief discussion of his work in economics. He told me he was still working on it. For a brief discussion of this meeting and Phil McShane's relevant context of that discussion to my above comment on Lonergan's lifelong efforts see Pierrot Lambert and Philip McShane, **Bernard Lonergan: His Life and Leading Ideas**, Axial Press, 2010, pages 253-54.

(I), are to learn insightfully from our present ineffectiveness to follow up on Lonergan's achievements, we must attempt what Lonergan attempted early in his life: reach up to the mind of someone else's achievement.

*"After spending years reaching up to the mind of Aquinas, I came to a twofold conclusion. In the one hand, that reaching had changed me profoundly. On the other hand, that change was the essential benefit. For not only did it make me capable of grasping what, in the light of my conclusions, the vetera really were, but also it opened challenging vistas on what the nova could be."*<sup>131</sup>

**What we are about** is reaching, and the natural reaching dynamic of our human quest is our way. Can we say that we have reached that experience of profound change? Can we even imagine that at some stage in history that some one, or more effectively, some collaborative group, might intelligently go beyond the mind of Bernard Lonergan? So, "while we await common cognitive agreement, (the standard model) the possible expression is collaboration..."<sup>132</sup>

It would be, perhaps, a worthwhile exercise now to reread my "observations" listed earlier in this paper within the context of all seven papers and stop to reflect as to whether they still warrant that description.

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<sup>131</sup> **Insight**, page 769[748].

<sup>132</sup> **Method in Theology**, page 368. Bracketed terms my own but perhaps you see my emphasis on shared cognitive agreement relating to understanding the standard model of functional specialization.