Posthumus 2 : The Riverrun to God: Randomness, Statistics and Emergence

(this essay is a Preface to an new electronic edition of *Randomness, Statistics and Emergence*, to appear shortly).

Foreward

Those interested in the original text of *Randomness, Statistics and Emergence*, will find it here unchanged except for typo-corrections. What has changed is the context given by this Foreword. But does not this change radically – and there's the radical rub – the meaning of the text of forty five years ago? A question there, for myself and for my reader of any age, around which this Foreword circles.

I pause over the addition to the original title, and draw your attention to the two first words, but now reversed, separated and decapitalized: "riverrun the". The two words, the first and last of James Joyce's *Finnegans Wake*, leave the four dots meaning that large strange flow of words that those two words bracket. And here I add to that large strange flow, and its global referents, some oddments of my own riverrun of the forty five years since I completed that book.

The proximate field¹ of the riverrun is that contained in the recent book, *The Road to Religious Reality*, the title of which echoes a 21st century book on physics by Penrose, *The Road to Reality*.² The Road to Religious Reality has many messages, but a central message is that we, who make a study of religions, have to take seriously the powerful shift of the simplest of sciences, physics, that has occurred in the past two centuries.³ By "taking seriously" I mean moving into that world in a way that carries one quite beyond the semi-popular writing of Penrose, or, OM preserve us, *Scientific American*. That was my message to philosophy in *Randomness, Statistics and Emergence*, and of course it was implicitly a message to theology and to my comrades in the Lonergan community. A second central message of *The Road to Religious Reality* is that we who study religions need to open ourselves to the global lift in

¹ My emphasis throughout here is on the concreteness of our minding reach, which Lonergan intimates by his use of the word *field*. "The field is *the* universe, but my horizon defines *my* universe." (B.Lonergan, *Phenomenology and Logic*, edited by P.McShane, University of Toronto Press, 2001, 199.) My invitation is to a concrete fantasy that would lift scholarship into a full open content-full explanatory heuristic. The notes to the text weave round that neurochemical invitation.

²Roger Penrose, *The Road To Reality. A Complete Guide to the Laws of the Universe*, Vintage books, 2003.

³ There is the deeper shift that places the question, What is physics?, in the full cyclic dynamic from research to teachings and technologies. That topic cannot be developed here.

empirical studies that is given to us by Bernard Lonergan in his specification of a global dynamic collaboration.⁴

It is immediately important to locate the book Randomness, Statistics and Emergence in the story of Lonergan's discovery of that wild dream. In the months before I began Randomness titled "The Logic of Statistical Inquiry with Special Reference to Evolution Theory" in the Autumn of 1965 as a doctorate thesis in Oxford – I received word by letter from Fr. Fred Crowe, Lonergan's colleague and editor, that Lonergan had broken through the problem posed to him by the mess of theology and religious studies. Neither Fred nor I knew what the break-through was, but we had been hovering round the problem for a decade, especially in the context of Lonergan's search for the X called Cosmopolis, some collaborative structuring of human loneliness that would make effective the drive towards authentic global happiness.⁵ I plunged into the thesis in September of 1965 and indeed had a pretty complete manuscript by June of the next year. Meantime Lonergan had a lung removed in a cancer operation and was recovering in Regis College, Bayview Avenue, Toronto, and to that place I betook myself the following summer. It was then that Lonergan pointed me to his solution as we sat in his room, poised opposite one another as I asked the central question. He immediately swung his two hands towards each other, trembling fingers inches apart, and remarked laconically, "well its easy: you just double the structure". He gave me a ten-minute lecture on the new heuristic of inquiry, a lecture that has kept me poised now for 47 years.

I returned to Oxford to push my thesis through. It was a matter, really, of hiring a typist to put the stuff in formal shape. My good and patient director, Rom Harre, was impressed by this move towards final shape. His optimism was all the more welcome in that I was in fact flying back and forth to Dublin in order to teach philosophy of science there. But the main point I wished to make is that I did not modify the first draft in the light of the radically new view of philosophy and of methodical collaboration. As it was, the thesis was peculiar enough. Rom and I mused over who might examine it and the final odd choice was a physicist and a biologist, their names long forgotten by me. They were sympathetic readers but would not approve of the thesis without [1] my adding a clearer account of my method; [2] the elimination of chapter 8 of the book, which they considered to be merely pure mathematics.⁶ It was at this stage that

⁴The specification was initially given in "Functional Specialties," *Gregorianum* 50 (1969), 485-505. Later it was published as chapter 5 of *Method in Theology*, Herder and Herder, 1972.

⁵The X of Cosmopolis was to be slowly identified, but the tragedy of its general reception by his followers is that they did not effectively recognize that there remained, scientifically, the X, the Higgs particle of religious studies predicted by Lonergan. It had been simply named in terms of old divisions, a shabby standard model, but what was/is X?: that is a massively difficult challenge of serious understanding and heuristic envisagement. See chapter ten, "Metaphysical Equivalence and Functional Specialization", of my Website book, *Method in Theology: Revisions and Implementations*.

⁶Was their claim true? The answer from a new culture of generalized empirical method is, No. "Generalized empirical method operates on a combination of both the data of sense and the data of consciousness: it does not

Lonergan wrote me a letter which included the advice, "give the fellow what he wants ... get the union card". I added the simpler account, thus replacing chapter one of the book in acceptable fashion, and I cut out chapter eight on "Foundations of Statistics". The revised effort is no doubt somewhere in the Bodleian Library, but the book published in 1970 and again now is the original manuscript.

What Lonergan did about his discovery of February 1965 is a story told elsewhere.⁷ As I pondered over this introduction I returned to his post-*Method* writings, especially those contained in *A Third Collection*, musing over his strategy in – might I say? – hiding or underplaying his discovery. I like to think that he himself was taking his advice to me about giving the audience what it wanted or needed or could tolerate. In the essays of *A Third Collection* he rarely alludes to his massive shift in method, but the shift is echoed here and there.⁸ Still, it is as well to add a more fundamental view on this reticence expressed in Lonergan's answers to questions put by Professor Val Rice in those late interviews of the early 1980s:⁹ he was leaving the push towards the meaning and the actuality of functional collaboration to his disciples.

The push towards the meaning of that collaboration has not found a serious place among his followers. Perhaps it is because, unlike Fr. Crowe and myself, they had not lived with the problem, the question, through the previous decade. Lonergan's most reliable presentation of

treat of objects without taking into account the corresponding operations of the subject; it does not treat of the subjects operations without taking into account the corresponding objects." (Bernard Lonergan, "Religious Knowledge," *A Third Collection*, edited by F.E.Crowe S.J., Paulist Press, 1985, 141. Referred to below simply as *A Third Collection*) This perspective underpins both the book and my main thesis here, about religious studies. Chapter 8 illustrates philosophy of mathematics in that new culture. An earlier version of this Foreword ventured into the manner in which various chapters impinged on philosophy in other domains, but – recalling note 3's point – it would carry us into other complex areas, such as contemporary refinements of randomness-analysis in relation to computer vulnerabilities. But I cannot resist noting the relevance of chapter 4, "Reasonable Betting" to the undermining of various pseudo-statistics that parade as subtle wisdom in the destructive world of hedge-funds. ⁷See Pierrot Lambert and Philip McShane, *Bernard Lonergan. His Life and Leading Ideas*, Axial Publishing, 2007, especially 215-18, 236-39, 255-59. The book is referred to below as **Lonergan**.

⁸A Third Collection: "as yet the world religions do not share some common theology or style of religious thinking" (70); "the cultivation of religious experience is its entry into harmony with the rest of one's symbolic systems, and as symbolic systems vary with the culture and the civilization, so too does the cultivation of its religious experience" (127); "it envisages the conditions under which the study of religion and/or theology might become an academic subject of specialization and investigation" (129); "In man, the symbolic animal, there is an all but endless plasticity that permits our whole bodily reality to be fine-tuned to the beck and call of symbolic constellations …. " (133); "establishing such a framework" (as against) "provide glib talkers" (138). So he arrives at the issue of "generalized empirical method" (140-41: see the quotation in note 6 above) and points the reader (note 7, 140) to the beginning of *Method in Theology*.

[°]See **Lonergan**, 110-12.

his discovery appeared in 1969, prior to the International Florida Conference, but it was not aired in that conference, apart from my venture into its dire need in musicology.¹⁰

I must now go back to Oxford of the 1960s, and to the question of the sympathy of the readers and indeed the tolerance and patience of Rom Harre. I am going to be blunt and state that in that world, truncated subjectivity reigned supreme. "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."¹¹ Or perhaps I might say that, for the truncated subject, what is known by precise naming and description, especially rich comparative description, is thus sufficiently, even essentially, known.

Now I might well extend my suspicion regarding truncation to Europe and America of the 1960s – was it some parallel sentiment that fermented the 1968 student disturbances? – and so talk of, say, pragmatisms, existentialisms, phenomenologies, but that is a venture of future functional history, a plethora of books. So I cut back to a discomforting particularity, to Lonergan's following in Rome, where he was condemned to teach in 1953, and make the claim that there was no miracle there of self-discovery. "To say it all with the greatest brevity: one has not only to read *Insight* but also to discover oneself in oneself."¹² In the paragraph leading up to this conclusion Lonergan is quite blunt. "One has to be familiar with theory and with technical language. One has to examine mathematics and discover what is happening when one is learning it and, again, what was happening as it was being developed."¹³ These are quite crazy demands for the philosophers and theologians, students and faculty, of the Rome from

¹⁰The two papers that I presented at the Florida Conference – one on botany, one on musicology - "Insight and Emergence. Towards an Adequate Weltanschauung", and "Metamusic and Self-meaning", appeared later as chapters 1 and 2 of *The Shaping of the Foundations*, University Press of America, 1976. The book is now available on the Website.

¹¹ B.Lonergan, "The Subject", *A Second Collection*, edited by W.F.J.Ryan S.J. and B.J.Tyrrell S.J., Darton, Longman and Todd, London, 1974, 73. Truncated subjectivity is a neurochemical patterning regularly associated with Scotus but it is comfortably Aristotelian and thomist and increasingly inhabits Lonerganesque minds. It can rule the roost quietly in a discussion of questions, insights, desires: even laud generalized empirical method (see note 6 above) but never rise to theoretic reaching in that strange zone. Common sense comfortably detects patterns in commonsense talking and thinking, and even in the language of sciences, even rises to types of prescriptive metaphysics, but the serious climb of scientific understanding is only mimed. Truncated subjectivity certainly is not authentically, existentially, at ease in Augustine's shock regarding " a word brought forth when we utter what we know, a word that is before all sound, before all thought of sound" (see Lonergan, *Verbum*, CWL 2, note 8) and so knows nothing of psychic skin's potential for luminosity, religious or noetic.

¹² B.Lonergan, *Method in Theology*, Herder and Herder, New York, 260.

¹³ For Lonergan's fuller expression of this last demand, "what was happening as it was being developed," see McShane, *The Road to Religious Reality*, 36-37. That demand, fully articulated in omnidisciplinary fashion, becomes the heuristics of a geohistorical genetics of human progress in serious understanding.

which Lonergan's sickness rescued him in 1965. What was more palatable for the community of students interested in Lonergan's obvious revolution was the interest he showed, in that decade, in more subtly suggestive writings about meaning. Add to that what is being increasingly identified as a light-weight grip on Lonergan's position on truth, reality, objectivity.¹⁴ Such an ethos, laced with a comparative reaching into truncated cultures, dominated the First Lonergan International Conference in 1970. Such an ethos has, in the main, dominated Lonergan studies in the decades since.

I push further now to ask you to consider the strange question, whether the ethos dominated Lonergan in that decade, the 1970s? But it seems best to paint broader strokes that go back to what I might consider his last mad reach for serious intimations of the world of theory: his lectures on mathematical logic of 1957.¹⁵ The 1958 lectures on *Insight* were a transition to the inadequate intimations necessitated by compact and summary presentations. *Insight* itself was already a doctrinal book:¹⁶ but now Lonergan became his own Fontenelle,¹⁷ and one finds that same bent in the summer presentations of the following years.¹⁸ So I find a sad irony in his

¹⁴The point is well made in particular by Mark Morelli's work. For a summary from him see M.Morelli, "Lonergan's Debt to Hegel and the Appropriation of Critical Realism", *Meaning and History in Systematic Theology. Essays in Honor of Robert M. Doran S.J.*, edited by John Dadosky, Marquette University Press, 2009. For a context from him see Mark D. Morelli, *At the Threshold of the Halfway House. A study of Bernard Lonergan's Encounter with John Alexander Stewart*, Boston College, 2007.

¹⁵The lectures are presented in *CWL* 18, *Phenomenology and Logic*, edited by P.McShane, University of Toronto Press, 2001. My introduction speaks of the genius of his effort, especially in his astonishing three-day journey through Jean Ladriere's classic work, *Les limitations internes des formalismes* (see CWL 18, xx-xxi) . The questionsessions show that his audience were not in his ballpark, nor indeed were the masters of logic he deals with: "my answer ... quite independent of those people" (*CWL* 18, 330) is a comment that could spread across the entire effort. Think of the Morelli context of the previous note and then ask "what might either audience have made of the comment "the criterion of truth is the virtually unconditioned"? (338). But Lonergan knew that more precise control of his data was needed. In what was almost our last conversation in the early 1980s he shared with me his ongoing puzzling about the meaning of Goedel's Theorem. Later I gave a detailed invitation to the climb to its elementary meaning, relying on excellent work by Penrose, in "Goedel's Incompleteness Theorem", chapter 1 of the Website book, *Lonergan's Standard Model of Effective Global Inquiry* (2007). Its full meaning is another matter, a matter of adding theorems of incompleteness to the simple presentation of "positioning" of *Insight* 413, theorems reaching toward an eschatology of incompleteness correcting Paul's claim of completeness in *First Corinthians* 13: 12.

¹⁶For decades I have been drawing a very enlightening paralleling of *Insight* with the classic graduate text, Georg Joos, *Theoretical Physics*, (Blackie, London, 1951) a book I used in 1956 as a graduate. I met *Insight* the following year: it is obviously a graduate text written boldly in the absence of undergraduate texts. So, Joos treats, in thirty pages, "the mechanics of systems of particles" (106-35) a topic that requires a set of undergraduate texts to understand. Think, now, of that great stumbling block of Lonergan studies, the thirty odd pages of chapter 17, section 3, on Interpretation, on the mechanics of systems of persons (see note 25 below). My comments here obviously broaden the point I am making about the relevance of the struggle through *Randomness, Statistics and Emergence*.

¹⁷ Herbert Butterfield nicely identifies, in the final chapter of his *The Origins of Modern Science*, 1300-1800, Fontenelle's role in *haute vulgarization*.

¹⁸I pause only over the final lecture of the 1959 lectures on education published as *CWL* 10, *Topics in Education*. In a conversation with Lonergan about them at the time of their early editing he remarked, "I was just trying to work

comments on *haute vulgarization* of 1962¹⁹ and 1963.²⁰ His audience was, and it seems to me it continues to be, largely an audience "with no real grasp of theory of any kind …. never bitten by theory of any kind,"²¹ "lost in some no man's land between the world of theory and the world of common sense."²²

It seems useful, if shocking, to return now to muse on some aspects of the volume already mentioned at note 8 above, *A Third Collection*. First, lucky for us, the index is simply a propername index, with four pages of names. Many of these are familiar names in religious studies of the mid-twentieth century. Lonergan takes them respectfully, tolerantly, in their own contexts, but gives the odd nudge towards the need for a larger view. The nudges are modest. Nowhere does he insist openly on the need either for a context of serious theoretic understanding, and only occasionally does he point to the convenience of a functional division of labor.²³ Is he "giving the audience what they want", what they can tolerate?

Neither his audience nor his cited authorities are beyond the world of Linnaean classification. But, you may gasp, do they need to be? I counter with the claim that a Linnaean classification of *Phaseolus limenses*, Lima beans, is not contemporarily significant for cultivating their growth; what of the cultivation of *genus humanum*, human beings?²⁴ My odd question leads us you into the discomforting context of *Insight* chapter 17,²⁵ but here particularly to the section on *"The Genesis of Adequate Self-Knowledge"*, with its demand for education in the simple science of

²² "Time and Meaning", 121.

out a few things". In that final lecture, on history, he was brooding over "the problem of general history, which is the real catch." (*CWL* 10, 236). A careful reading of the text can detect his struggle to give a positive lift to *haute vulgarization*. The solution to his problem was over five years away, but hidden, in its expression, in the dense meaning of the single word, "*Comparison*." (*Method in Theology*, 250).

¹⁹ "Time and Meaning," reproduced in CWL 6: see page 121.

²⁰ "Exegesis and Dogma," CWL 6: see page 155.

²¹ Ibid.

²³ See *A Third Collection*, 179 with the corresponding note 13 on page 183; 196, where he points to the key role of the two specialties, Dialectic and Foundations.

²⁴It is as well to recall Lonergan's broad pointing to the issue: "The initiative seems permanently in the hands of those who invoke science against religion, and it mattered little to them that at any given moment the issue had shifted from physics to Semitic literature, from Semitic literature to biology, from biology to economics, or from economics to depth psychology." (Insight, 755).

²⁵ I refer especially to the third section of the chapter, where Lonergan takes off in the crazy solitude of the summer of 1953 to talk of theoretic eigenfunctions of meaning, something he only accurately determined in 1965 as eight in number. With that eightfold way there can be foreseen, at present only in fantasy, the "fuse into a single explanation" that ends the climb of the second paragraph of the second canon of hermeneutics (*Insight*, 610, line 9). But let me add concrete embarrassment to my sweeping words. The volume titled *Lonergan's Hermeneutics. Its Development and Application* (edited by Sean E.McEvenue and Ben Meyer, the Catholic University of America Press, Washington D.C., 1989) was the result of our (yes, guilty!) gathering on that topic without adverting to having ingloriously missed the pointing. The point continues to be missed, or dodged.

physics and the blunt conclusion of its second paragraph: "Most of all, what is lacking is knowledge of all that is lacking, and only gradual is that knowledge acquired."²⁶

So I arrive at the place of such works as *Randomness, Statistics and Emergence* in the gradual acquisition of an aesthetic-toned²⁷ knowledge of our 21st century's need to start over. But it is not a simple placing, for our context is that described in chapter 7 of *Insight*'s account of bias and in his global solution to that sick living. Both the study of religion and the study of Lonergan are caught in complexes of biases, swept into a common comfort of general bias: they need the radical remedy of a glocal rinse cycle.²⁸

This is a fiercely discomforting claim based on sixty years of journeying through the brutalities of institutions of the second half of the 20th century. It is expressed in my writings of the years between Randomness, Statistics and Emergence, and The Road to Religious Reality. Perhaps it is sufficient in this short Foreword to point you to the Website project of the past ten years, the ten-volume *Cantowers* that weave together the challenge of *Insight* and *Method in Theology*. The particular challenge of scientific seriousness is bluntly expressed in chapter ten of the Lonergan biography, which insists that the context of progress cherished by Lonergan is that of competence in the simplest science. I would add here the deeper issue of competence in the more difficult next science, chemistry. That deeper issue is brought out, or in, only by a slow neurochemical ingesting - here the topic of the character of adult growth emerges as a crisis in human history²⁹ – of a self-luminous poising of Gown that would mediate a new Town psyche. The topic is too vast and novel to enter into here. But perhaps a stretch towards its fantasy in terms of randomness, statistics and emergence would help seed hopes and focus efforts. There is the randomness of present discontent with disorientations of religiosities and confusions of religious meanings, with corrupt banking and its idiot economic backing, with destructive ecobehavior and its grounding in sick patterns of greed, with hidebound bureaucracies and their stranglehold on government. That randomness can shape up, in tiny collaborative steps, to a statistics of the emergent recurrence-schemes internal to a global Tower of Care. "The probability of the single events are the same as before, but we cannot suppose that the probability of the combination of all events in the set is the same as before. As is easily seen, the concrete possibility of a scheme beginning to function shifts the probability of the combination from the product pqr ... to the sum p + q + r ... For in virtues of the scheme, it now

²⁶ Insight, 559.

²⁷ See P.McShane, "Aesthetic Loneliness as the Heart of Science", *Journal of Macrodynamic Analysis* 6 (2011) 51-84. (A Website Journal).

²⁸The failure of Lonergan studies is more obvious in that there is an acknowledgment within the school that Lonergan has raised the bar without the school measuring up to that raising (see, in particular, notes 11, 15 and 27 above). A sad consequence is the non-occurrence of Lonergan's view or even name in standard present survey work, such as Ian Barbour, *When Science Meets Religion*, Harper, 2000. Barbour's effort remains, sadly, Linnaean.

²⁹ The crisis is briefly described in pages 161-3 of P.McShane, *Lack in the Beingstalk*, Axial Publishing, 2007.

is true that A and B and C and ... will occur if either A or B or C or occurs; and by the general rule of probability theory, the probability of a set of alternatives is equal to the sum of the probabilities of the alternatives."³⁰ The cyclically-summed actualities can, over millennia, shift from Poisson distribution to a Normal and normative law, giving supreme plausibility to a Tower of Able³¹ of serious intimate³² understanding grounding, literally, a plain plane of radiant life in the next million years.

³⁰ Insight, 144.

³¹ See **Lonergan** 163, "The Tower of Able: Lonergan's Dream", the concluding image of the book's Second Part, "Images of Lonergan".

³²The intimacy is a matter of a shared inner word, "eo magis unum" (See the final chapter of Lonergan, Verbum: Word and Idea in Aquinas, CWL 2) with a shared neurochemistry of imaged psychic tonalities. For Christian Towerdwellers that shared neurochemistry centres on the noise Jesus expressing the gradual ever-incomplete achievement of a field view of history. As a lead-in see P.McShane, "The Hypothesis of Non-Accidental Human Participation in the Divine Active Spiration," Method: Journal of Lonergan Studies N.S. 2.2 (2011), 187-202. Other religious groups must find their way to their specification of the sequence of meanings of history lurking in the heuristic word, "Comparison" of page 250 of Method in Theology. But of course here I have been writing of the Tower People. The plain plane people move differently, tower-mediated in the "Yes", "and" of Faith, Molly's "yes" that end's Ulysses' each Bloomsday day's riverrun, and a Finneganend "and" –where Finnegan beginsagain, opening loneliness to tomorrow and eternity.