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<http://www.mun.ca/jmda>

General Editor: Michael Shute  
Department of Religious Studies  
Memorial University of Newfoundland  
mshute@mun.ca

Managing Editor Ian Brodie  
Department of Folklore  
Memorial University of Newfoundland  
f95ibb@mun.ca

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Department of Religious Studies  
Memorial University of Newfoundland  
St. John's NF, A1C 5S7 Canada

*jmda@mun.ca*

*<http://www.mun.ca/jmda>*



## EDITOR'S INTRODUCTION

MICHAEL SHUTE

With the appearance of a second issue of *The Journal of Macrodynamics Analysis* our Quixotic venture has established a toehold for the discussion of macrodynamics. It is not, however, that any of the articles from our first issue could be clearly identified as written within a particular functional or hodic speciality. The simple habit of identifying what speciality we are working in, is not yet a communal expectation. We are, most of us, in the hold of dominant patterns of expression born of pre-hodic academic ideals and still working out how to make the move to hodic specific expression. My optimism, then, is not based on present achievement in the journal itself but only in the readiness of our writers and readers to take on the question.

We begin our current issue with Terry Quinn's article "The Calculus Campaign." The article addresses a pedagogical issue: How do we teach calculus in a way that effectively communicates an understanding of its fundamental notions? Quinn's strategy respects the slow pace of understanding and avoids the common tendency to teach the technique without the understanding. The article has a further relevance to those interested in macroeconomic dynamics. The calculus analogy was important in the discovery of both macrodynamics (philosophy of history) and macroeconomics. Lonergan conceived of his philosophy of history as a differential calculus for anticipating future praxis, and images from the calculus were fundamental to Lonergan's conception of the dynamics of the economic circuits.

By far the largest response from readers of the first issue was to Bruce Anderson's article on "Foreign Trade." There is

clearly an interest in macroeconomic dynamics and a need for articles which introduce its basics. For this reason we include in this issue a further contribution from Anderson. The article, "Basic Economic Variables," is an earlier version of a chapter of Anderson and McShane's recently published volume *Beyond Establishment Economics: No Thank You Mankiw*.<sup>1</sup> That volume tackles the malaise in the textbook tradition of mainstream macroeconomics. In this article Anderson's efforts are directed to specifying in a very introductory manner the core elements of macroeconomic dynamics. We can identify Anderson's work as a poised first-step in dialectic. It is a contribution to the assembly of materials relevant to the comparison of Mankiw and Lonergan that is attempted in *Beyond Establishment Economics*.

At the other end of the spectrum is Tom McCallion's article, "The Basic Price Spread Ratio." The article directs our attention to a specific section of Lonergan's "Essay in Circulation Analysis."<sup>2</sup> McCallion's work is a tremendous achievement, going a great distance towards a precise interpretation of Lonergan's account of the cyclical variations in price spread.

While the articles by Anderson and McCallion are both quite specific, Philip McShane's contribution to the second issue, "Business Ethics, Feminism, and Foundational Ethics," is in the style of random dialectic which has characterised his recent work. In this article McShane addresses the teaching of business ethics in university. He provides us with a foundational vision of future teaching of business ethics that takes seriously both macroeconomic dynamics and functional specialization.

We have had about a year to digest the response to our first issue of the journal. Certainly I am pleased by positive

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<sup>1</sup> Bruce Anderson and Philip McShane, *Beyond Establishment Economics: No Thank-you Mankiw* (Halifax: Axial Press, 2002).

<sup>2</sup> See Bernard Lonergan, *Macroeconomic Dynamics: An Essay in Circulation Analysis*, ed. Frederick Lawrence, Patrick Byrne, and Charles Helfling, 15 *Collected Works of Bernard Lonergan* (Toronto: University of Toronto Press, 1999), 156-162. See also Lonergan, *For a New Political Economy*, ed. Philip McShane, 21 *Collected Works of Bernard Lonergan* (Toronto: University of Toronto Press, 1998), 301-307.

comments and words of encouragement received. I am, however, especially pleased with the arrival of critical comments. Controversy is good for development and I have encouraged those with critical comments to submit their criticisms for inclusion in the journal. Some have agreed to do so, and we will reap the benefit of their efforts in future issues. In this issue we can enjoy the first fruits of disagreement. Soon after we made the inaugural issue available online an article arrived from Fred Crowe disagreeing with comments made by Patrick Brown in his article, "System and History in Lonergan's Early Historical Manuscripts." Fred took issue with Patrick's criticism of his view of Lonergan's development. Patrick responded with a rich and detailed reply. We end our current issue with this exchange. We trust it is a good omen for the future.

At the beginning I noted the communal challenge of lifting our efforts into an explicitly hodic context. To encourage this process, we thought we might be able 'to kill two birds with one stone.' In the last year we had been planning to put together a *Festschrift* to honour the 70<sup>th</sup> birthday of Phil McShane, whose teaching and writing, more than any other contemporary writer, have been devoted to the issue of fostering functional specialization. I asked Phil if he would write an article on the topic of 'implementing functional specialization' which would be designed with an eye to encouraging responses. Happily, Phil agreed to write the article and happily too about twenty scholars have agreed to respond. Respondents will include Robert Doran, Fred Crowe, Patrick Byrne, Michael Novak as well as many of the original respondents from the Florida Conference of 1970. McShane's original article and the varied responses to it will constitute a special issue of the journal we hope to have ready by this time next year.

Finally, our next regular issue will be devoted to the exploration of the hodic or functional speciality of interpretation. With this in mind we invite our readers to submit articles that address the problem of this specialty or are specific contributions to writing in the specialty. The contribution can be in any science or academic field. Here I

would ask contributors - and readers - to bear three things in mind with regard to interpretation.

First, there is the problem of one's own a priori. Lonergan remarks that "the use of the general theological categories occurs in any of the eight functional specialties."<sup>3</sup> Now, if we take seriously the demands made by his later definition of generalized empirical method,<sup>4</sup> the genuinely up-to-date interpreter would have control of the best contemporary understanding of the object with which the interpreted writer is dealing. This is a very tall order in present circumstances. Let me spell this out in terms of the task of interpreting Lonergan's writing. Recently, I have been working at an interpretation of Lonergan's early writings on finance. My interest is in understanding how Lonergan understood the notion of 'credit.'<sup>5</sup> Lonergan himself was not satisfied with his own effort, and the whole question of finance, especially the problem of long-term financing, remained unfinished business for him.

What, then, is involved in understanding the relevant object, that is, the function of credit in an economy? Like Lonergan himself I would have to research into the best available contemporary understanding of credit. An excellent starting point would be the relevant chapters in Joseph Schumpeter's *The Theory of Economic Development*<sup>6</sup> and *Business Cycles*.<sup>7</sup> This was Lonergan's own strategy in 1942, a strategy he returned to again in the 1970s. I have attempted the same strategy. Lonergan's reading of Schumpeter in 1942 and again in the 1970s was informed by a much deeper

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<sup>3</sup> Lonergan, *Method in Theology* (New York: Herder and Herder, 1972), 292.

<sup>4</sup> "Religious Knowledge," *A Third Collection*, ed. Frederick Crowe (Mahwah NJ: Paulist Press, 1985), 129-145, at 141 (noting that generalized empirical method "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>5</sup> Lonergan, *For a New Political Economy*, 21 *Collected Works*.

<sup>6</sup> Joseph A. Schumpeter, *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*, trans. Redvers Opie (Cambridge: Harvard University Press, 1934).

<sup>7</sup> Schumpeter, *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process* (London: McGraw Hill, 1939).

understanding of macroeconomic dynamics. Whatever credit is, it must include an understanding of its functional significance in the basic and surplus phases. To this I would add the function of re-distributional activity. But over and beyond Lonergan's own work is the task of developing an appreciation of how credit, both short-term and long-term, functions in the global economy. My work on Lonergan research must also be supplemented with the best available current research on the dynamics of credit.

My problem is that I am still learning the basics of Lonergan's macroeconomic dynamics, and I do not adequately understand the economy which is the object I am trying to interpret. Nor am I alone in this. My, and perhaps your, real status as an interpreter of Lonergan on macroeconomics, and therefore his notion of credit, is that of a student. The best I can do at this point is admit the short-coming. I find such an admission a welcome relief. The effort at pretending expertise is draining and, I strongly suspect, ultimately holds back genuine progress. Most importantly, the explicit admission of this shortcoming reawakens an appreciation of the real mystery of the intended object of study.

Secondly, then, if we seek an adequate interpretation of Lonergan's writing then we would need to be in control of, and be controlled by, his general categories. These are expressed briefly, inadequately, and with a key omission, on pages 286-7 of *Method in Theology*. Before I note the inadequacy and the omission, I suggest that most, if not all, of us would admit that we are not in control of the categories as listed on those two pages. This would mean that what we might call "an interpretation of Lonergan on X" is actually more an attempt at a learning of Lonergan's meaning of X. Such learning does not fall, per se, within the functional specialty of interpretation. Alternatively, we might say that we admitted such expression, but then it must be subject to the first principle of criticism of the third canon of interpretation: that is, the validity of the work is questionable, and needs to be sifted for successful contribution.<sup>8</sup> In fact, it would be a good idea not to exclude for the time being such beginning efforts at interpreting

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<sup>8</sup> *Insight*, 588 [611]

Lonergan. However, it would also be a good idea if the interpretation were criticised. We are back at the problem raised by the Brown-Crowe exchange. My suggestion for now is that it would be better to begin such criticism as self-criticism, and that this self-criticism should include an expression of where we stand personally with regard to the general categories. This undoubtedly requires some discomfiting honesty, a stand against *voraussetzungslosigkeit*.<sup>9</sup> For example, we bring to our interpretation admissions like the following: “I am trying to interpret Lonergan’s view of doctrinal development but I have not as yet come to grips with his work on genetic method.” Such self-criticism and self-revelation would be enormously beneficial in our attempt to come to grips with the full challenge of Lonergan’s notion of interpretation.

I mentioned an inadequacy and an omission. The omission has been noted by McShane in his recent work *Lack in the Beingstalk*<sup>10</sup> and bears noting here. There should have been a listing number (10) on page 287 of *Method in Theology*, a listing that claimed some categorial acceptance of functional specialization as foundational. Secondly, there is the inadequacy—and this, fortunately, is noted by Lonergan in the paragraph after the listing—the substance of which is that the first half of *Method* is merely descriptive, thus methodologically inadequate. “One has not only to read *Insight* but also to discover oneself in oneself.”<sup>11</sup>

Thirdly, what has been said of interpreting Lonergan applies in general. So, for example, if one is interpreting Aristotle or Kant on the object called “deliberation” then one should know the object. To know that particular object, of course, one is helped enormously by working on Aquinas’ discussion of deliberation in Ia IIae, qq. 7 - 17. Similarly, to interpret either Newton or Kant on space-time one had best have some grip on the contemporary shift to conceive forces as conjugate forms whose meaning is geometrical and with the rejection of notions of spacetime as other than grounded in

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<sup>9</sup> *Insight*, 578 [600]

<sup>10</sup> Available online at: <http://www.philipmcshane.ca/books.html>

<sup>11</sup> *Method in Theology*, 260

properties of things. Again, to interpret Freud or Kant on the sense of duty one had best be up-to-date on the contemporary neuro-chemistry of compulsion.

These are tall orders with regard to efforts to interpret. But to objectify our inadequacy would be at least a beginning of the move to linguistic feedback that will characterise later luminous hodic writing.<sup>12</sup> Are there any of us brave enough to venture such a beginning? I hope so.

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<sup>12</sup> *Method in Theology*, 88, n.34.

## THE CALCULUS CAMPAIGN

TERRANCE J. QUINN

I will discuss some of the difficulties that I have encountered in teaching Calculus. I will follow this, in Part I, with certain examples that my students have been finding helpful in reaching a preliminary notion of *derivative*. The focus in Part II is the genesis of the Fundamental Theorem of Calculus.

### **Introduction**

Over the years I have become increasingly aware that there are problems with the standard textbook approach to teaching calculus. That there is a problem can show up in many ways, and in particular, in courses like Differential Equations, for which Calculus is a prerequisite. I have often taught third and fourth year courses in differential equations. The audience for these courses has varied. In some cases the course was intended for mathematics majors and concentrated on proofs and theoretical development; in other cases for physicists and engineers and concentrated on physical and technological applications; and in other cases for secondary certification students specializing in mathematics. The same problem, however, has consistently emerged in all of these student groups.

What I am speaking of, frankly, is a lack of basic understanding in Calculus. With that said, please know that the kind of *basic* understanding that I speak of is not the further more specialized understanding needed to generate proofs in Advanced Calculus courses. And it is not merely an inconvenience. Based on several years of teaching experience, it has become evident that this lack in understanding undermines the possibility of elementary competence, whether

in merely computational applications or in theoretical development.

For instance, in one third-year differential equations class, I was teaching motion of a mass-projectile. Part of the problem was to integrate an equation. Together, we worked through to an answer. That there was a problem was revealed when I asked the students particular questions about the motion of the projectile. In friendly and candid discussion we discovered that while most were at least familiar with some of the differentiation and integration formulas, several did not know how to apply these formulas; and even some of the “A - Calculus students” admitted that they did not really know what these formulas meant. It is noteworthy that, in particular, while most of the students could reproduce the general formula  $\frac{d}{dx}(x^n) = nx^{n-1}$ , none of the students could give either reasons or examples regarding the derivatives of  $x^2$  and  $x^3$ .

That there are inadequacies with the standard textbook approach is of course well known. As already described, one common situation is where the “Calculus Graduate” remembers some of the symbolism but is otherwise unable to solve particular problems. To address this issue in the United States, various studies have been done. Results of these studies have included the Harvard Calculus Reform, together with a number of follow-up textbooks intended to be in keeping with the precepts of the Reform. It is not my purpose here, however, to enter into a study of Calculus Reform as such. Note also that I will leave to a further paper any discussion of axiomatics, proof, or other possible generalities.

Let's look instead to the beginnings of the story. *The Calculus* was discovered in the 17<sup>th</sup> century, by both Newton (1642 - 1727) in England and Leibniz (1646 - 1716) in Germany. Their discoveries led to solutions of what at that time were outstanding problems in mathematics and physics. In particular, the tremendous success of Newton's mechanics and theory of gravitation, formulated in terms of accelerations, is well known. But these initial discoveries were only the first stage of a long and fascinating campaign. In military terms, Newton and Leibniz established a beach-head. It was several

decades, however, before a follow-up advancement occurred.

Like any discovery, in addition to answering questions, the results and techniques of the early Calculus also called forth new questions. In particular, there was the notion of *limit* that, while eminently useful, needed definition. This problem was solved by at least three mathematicians, namely, Cauchy (1789 - 1857), the Czech mathematician Bolzano (1781 - 1848) and the Portuguese mathematician Anastácio da Cunha (1744 - 1787), all of whom discovered essentially the same definitions of limit and convergence, with Anastácio da Cunha doing his work as early as 1782.<sup>1</sup>

Following on Cauchy's discoveries, Riemann (1826 - 1866) further advanced the front-lines of Calculus by discovering a definition of "area" and other integrals. When it exists, the *Riemann Integral* of a function is then a limit (as in Cauchy's work) of "Riemann sums" (over partitions of diminishing norm).

The developments of Cauchy and Riemann are, however, beyond the scope of the present article. The prior discoveries of Newton (1642 - 1727) and Leibniz (1646 - 1716) were made long before the work of Cauchy and then Riemann. And with regard to teaching Calculus, I have found that students (mathematics majors and non-majors alike) can enjoy being guided along a similar path. In particular, I have found that introducing definitions of *limit* and *limit of Riemann sum* too soon can leave students more than a little puzzled and wondering, for example, why The Fundamental Theorem is called *Fundamental*.

The advancement and envelopment that comes with definition can be an ultimate objective, especially for the mathematics major. On the other hand, students have often expressed to me their delight with the basic understanding reached by starting with simple examples of advancing areas and front-lines. So the primary purpose of this article is not a

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<sup>1</sup> The works of Bolzano and Anastácio da Cunha "appeared in the far corners of Europe and were not appreciated, or even read, in the mathematical centers of France and Germany. Thus it was out of Cauchy's work that today's notions developed." Victor J. Katz, *A History of Mathematics: An Introduction* (New York: Addison-Wesley: 1998), Ch. 16.

development of the subject based on the explicit formulation of the definitions of Cauchy, Riemann, et al., and as would be called for in a course in Advanced Calculus. My purpose, rather, is to encourage the implicit and definite beginnings of a first understanding that can be had by a beginner, whether the beginner is mainly interested in applications or is hoping perhaps to do later work with axioms and proofs. I have found that by following this approach students typically reach a command of the general formulas for themselves; and for the mathematics major, the need for definition can become poignant.

### **Part I: Ratios of Change – The *Derivative***

The main objective of Part I is to use “increasingly accurate” ratios in order to determine a “rate of change”. The examples are of certain domestic situations that my students have found engaging.

#### *1. The Sneaky Farmer*

Suppose that farmer Sam say, has a square field, 100 yards by 100 yards. Two adjacent sides of the field are bordered by straight roads, and the other two sides are bordered by the large fallow pastures owned by farmer Frank.

Sam is not happy with the situation, for he would like to own more property. But the roads, together with Frank’s pastures, have Sam’s square property hemmed in. What to do?

Sam has his clever moments; and it is not past him to be somewhat sneaky. He is even capable of being a little dishonest, if the need arises. So Sam devises a plan. He decides to increase the size of his property “little by little”, hoping that by doing this slowly enough, his neighbor Frank won’t notice. Sam is patient. He plans, in fact, to work his scheme over a period of one year.

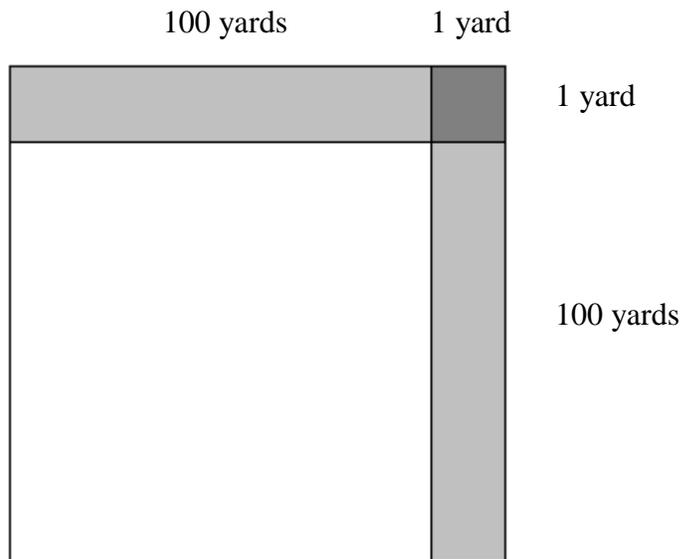
Here is what Sam plans to do under cover of darkness. The first night he will sneak out to the property. He will mark one extra yard along the road-sides of his property. There are property marker posts both where the properties meet the road and at the far corner away from the roads - so three marker posts in all. He plans to dig three new holes and then move the marker posts to the new holes.

Sam will then wait one month. After one month, the original post-holes will be well covered with growth, and he will then go on to repeat this process for twelve months. At the end of twelve months Sam hopes to take what he feels will be a well-earned rest.

The question now is: At what rate will Sam be increasing his property?

We can start by looking at a diagram for the layout of property.

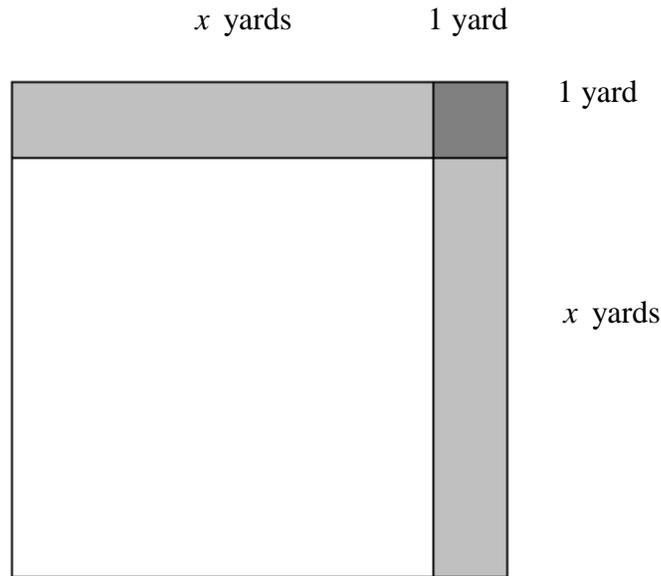
At the beginning of the first month, Sam's property is 100 yards by 100 yards. Because of Sam's "extension program", at the end of the first month the marked field will be 101 yards by 101 yards.



Looking to a diagram, the added property comes from the rectangles along each edge together with the square corner. Following convention, this new property can be calculated to be  $(100 \times 1) + (100 \times 1) + (1 \times 1) = 2(100) + 1$  square yards.

Let's follow Sam in his scheme. The second month, his marked property will change from 101 yards by 101 yards to 102 yards by 102 yards.





So, using the conventional formulas for area, the added property is  $(x \times 1) + (x \times 1) + (1 \times 1) = 2x + 1$  square yards. In other words, except for the square yard at the corner, the monthly rate at which Sam gets new property is 2 times the boundary of the square field, that is, the monthly rate is  $2x$ .

## 2. *The Sneaky Apprentice*

In this example, suppose that an apprentice Al works in a metal workshop. Al is very keen on working with metal. In addition to what he does at his master's workshop, Al also has several projects of his own that he works on at home in his free time. One project that is especially dear to him requires quantities of lead. As luck would have it, there is a cube of lead at the workshop. Unfortunately, somewhat like his country cousin Sam, Al is not always honest. So Al too decides on a somewhat devious plan.

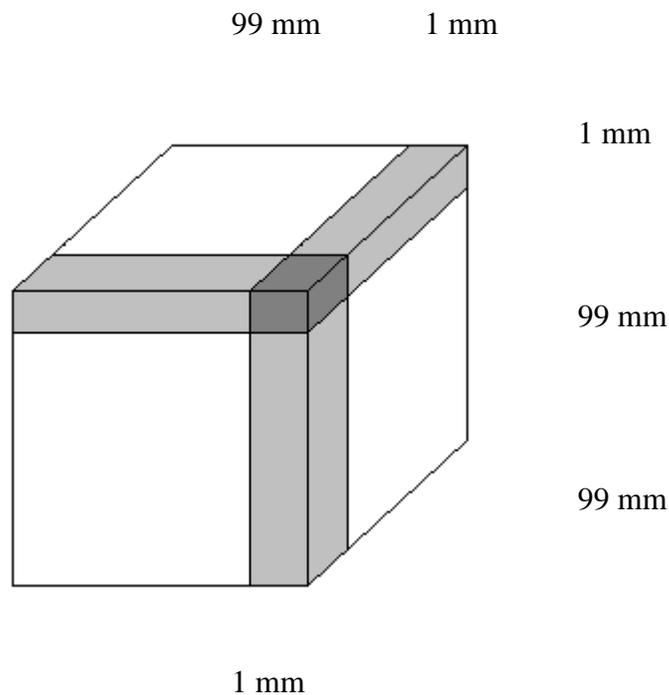
The cube of lead at the workshop is 100 mm by 100 mm by 100 mm (mm = millimeters). Al hopes that his master Mack won't notice small changes to the cube. In fact, there is a device at the workshop that might be handy for this. The block of lead can be placed in a steel corner. There are hot blades that can then be used to shave lead off of each of the three exposed

sides.

On each occasion, Al plans to remove 1 mm from all three sides. That way the cubic shape will be preserved and the changes will hopefully go unnoticed. Like his cousin Sam, he plans to do this only once a month.

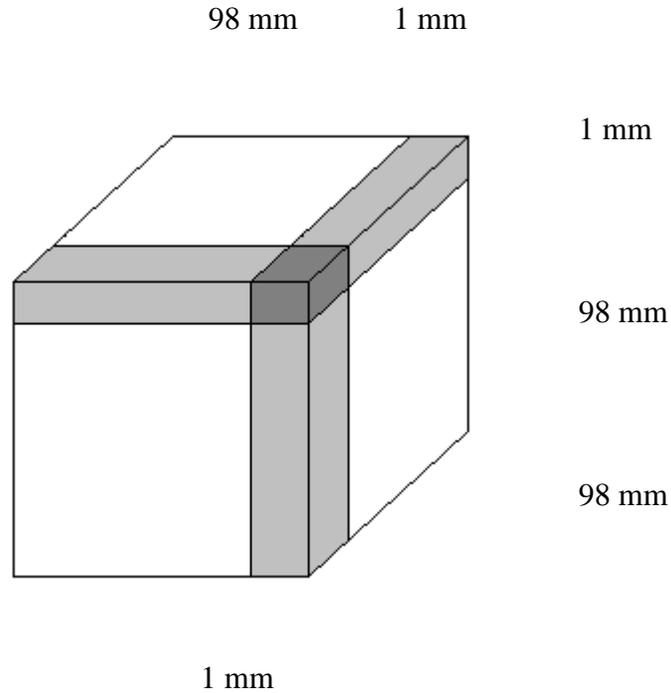
Again, the question is, what is the monthly rate at which Al will get lead for his home projects?

At the beginning of the first month the cube of lead is 100 mm by 100 mm by 100 mm. After Al shaves the cube, the remaining lead will measure 99 mm by 99 mm by 99 mm.



Now, the convention for calculating the quantity of a solid is to multiply the measured lengths of perpendicular sides. (This is usually called *volume*.) Looking to the diagram, the lead that Al will take will consist of three cut portions from each square surface, three narrow rectangular edges, and one cubic mm at the common corner. So, in total, Al takes away  $3(99 \times 99 \times 1) + 3(99 \times 1 \times 1) + 1(1 \times 1 \times 1) = 29,403 + 297 + 1$  cubic millimeters of lead.

The next month Al will repeat the process.

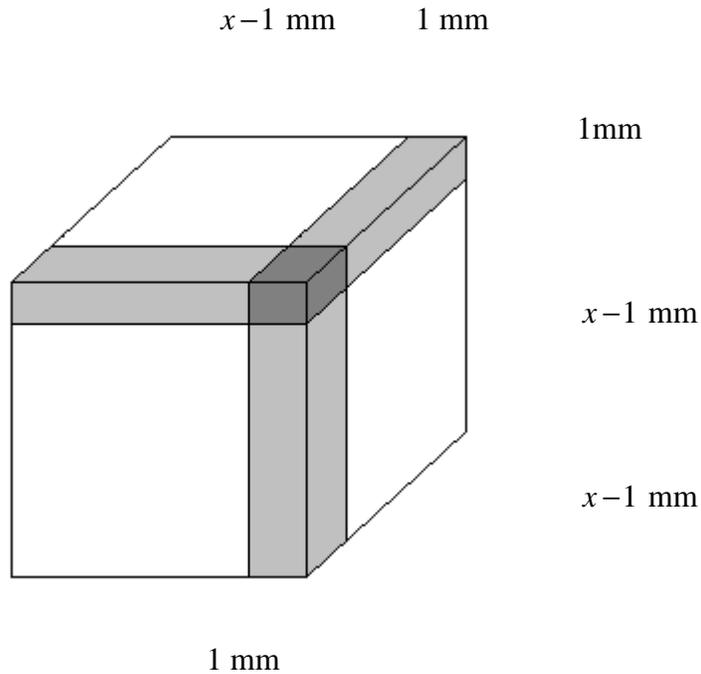


This time the amount of lead that Al takes away is  $3(98 \times 98 \times 1) + 3(98 \times 1 \times 1) + 1(1 \times 1 \times 1) = 28,812 + 84 + 1$  cubic millimeters of lead.

Do you see a pattern?

The main contribution to the lead that Al is taking away comes from the three exposed square surfaces of the cube. Again, using algebra, we can be more precise. Suppose that the cube of lead measures  $x$  mm by  $x$  mm by  $x$  mm.

If Al then removes 1 millimeter from each of the three exposed sides; he will take home  $3[(x-1) \times (x-1) \times 1] + 3[(x-1) \times 1 \times 1] + 1[1 \times 1 \times 1] = 3x^2 - 3x + 1$  cubic millimetres. In other words, taking lead from the three exposed  $x$  by  $x$  square surfaces (each of which is  $x^2$  cubic millimeters), the main contribution to the monthly rate at which Al removes the lead would be  $3x^2$ .



### 3. Refinement of the Rates

#### (a) The Farm Field

Suppose that Sam the Sneaky Farmer reconsiders his original plan. His desire to have more property remains, but he suspects that, after all, surely his neighbor Frank would notice if the field markers were changed by a full yard each month. So, taking a more cautious approach, Sam decides to increase his field, not by 1 yard each month as originally planned, but by  $1/3$  of a yard (1 foot) each month.

Let's now ask the same question as before: What is the monthly rate at which Sam will be increasing his claimed property?

As before, at the beginning of the first month, the dimensions of the field are 100 yards by 100 yards. Once the length of the field along the road is changed by  $1/3$  yard, the new field will then be  $(100 + 1/3)$  yards by  $(100 + 1/3)$  yards.

As before, we can look to the diagram (exercise). The added property comes from the two outer rectangles along the

field lengths together with the square corner furthest from the road junction. Calculating, Sam would obtain an additional  $(100 \times 1/3) + (100 \times 1/3) + (1/3 \times 1/3) = 2(100 \times 1/3) + 1/9$  square yards.

Sam now wants to know how efficient this is, in other words, he wants to know how much is he getting for his effort. One way to answer this question is to calculate the ratio [added property] to [change in length], that is, the change in property per change in length. Using the above sum, we get  $[2(100 \times 1/3) + 1/9]$  divided by  $[1/3]$ , which reduces to  $2(100) + 1/3$ .

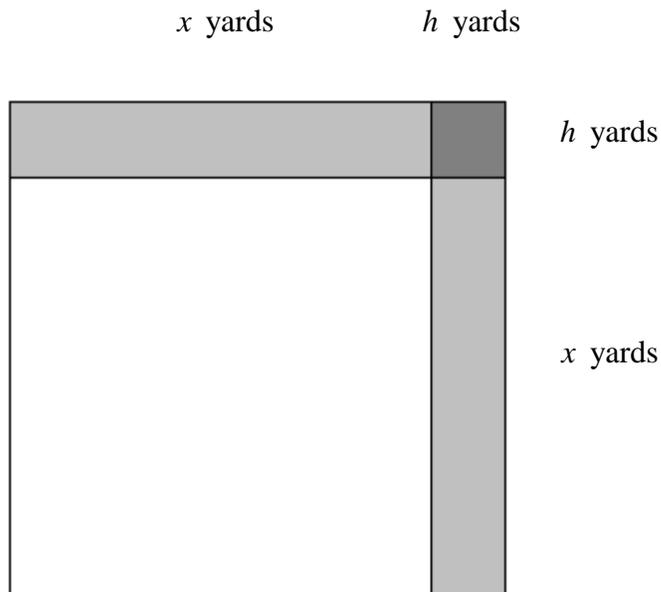
In exactly the same way, if we look at what happens in the second month, we get a ratio of  $[2(100 + 1/3) \times 1/3] + 1/9$  divided by  $[1/3]$  which reduces to  $2(100 + 1/3) + 1/3$ .

As with Sam's original plan, again let's see what algebra can reveal. If the original length of each side is  $x$ , and this is increased by  $1/3$ , then the added property is  $(x \times 1/3) + (x \times 1/3) + (1/3 \times 1/3) = (2x \times 1/3) + (1/3 \times 1/3)$ . So the ratio [additional ground cover] to [change in length] would be  $2x + 1/3$  square yards of property per yard changed in property length. This is much the same as the result from Sam's original plan. But this time, the approximate rate is even closer to being exactly  $2x$ .

Comparing the two calculations, the smaller change in length corresponds to a ratio of change that is closer to being  $2x$  (2 times the starting length  $x$ ). To push this further, let's give the change in length a name,  $h$  say. (In Sam's first plan,  $h = 1$ ; in the revised plan,  $h = 1/3$ .) But, now using  $h$  in place of any particular number, perhaps we will be able to detect a general pattern of change.

If the original length is  $x$ , and this length is changed by  $h$ , then the new length would be  $x + h$ . Just as before, the added property will come from the rectangles along the edge of the new square field together with the corner that is  $h$  yards by  $h$  yards.

The ratio [additional ground cover] to [change in length] would then be  $2x + h$ . So, as anticipated from the numerical examples, the smaller  $h$  is, the closer the ratio of change  $2x + h$  is to being  $2x$ .



## (b) The Cube of Lead

Can we now get some similar type of result for the cube of lead? For Al too decides to be more careful. Instead of 1 mm per month, he decides to take  $\frac{1}{2}$  mm of length each month.

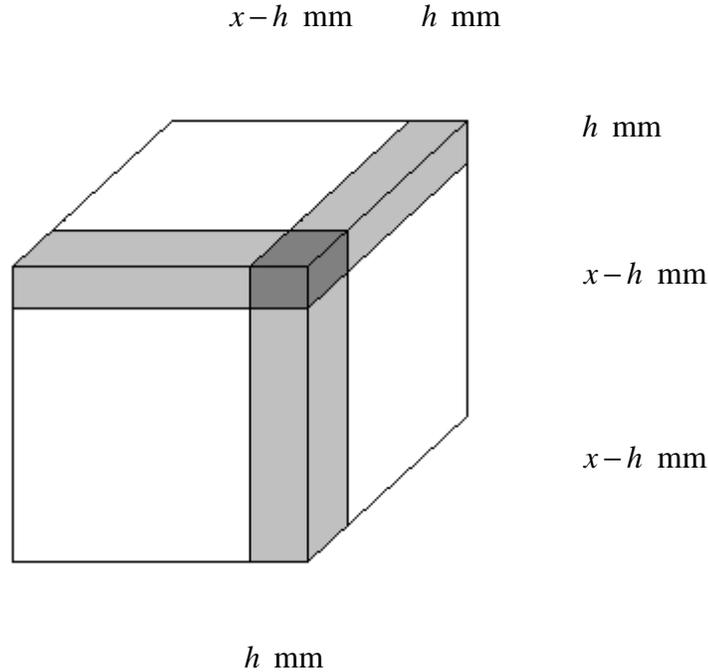
*Remark:* At this point (having completed the square field example), I have found it can be a good exercise for the student to do some numerical calculations for the cube by themselves. Most of the time, the student is already onto the game. They compare the two cases and find that, for a starting length of  $x$ , the ratio [change in quantity of lead] to [change in length] is closer to  $3x^2$  for the smaller change in length  $\frac{1}{2}$  mm. Again, a key point here is that the  $x^2$  term is the quantity of lead from each face of the cube. The factor of 3 comes from there being 3 faces where the change takes place.<sup>2</sup> Following this exercise, I usually jump to the ratio of change of lead for an arbitrary (non-zero) change of length  $h$ . That is, the change in volume

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<sup>2</sup> This key point of course re-appears in the multi-variable calculus as Green's Theorem, The Divergence Theorem, and the other "Stokes" Theorems.

of lead given by  $[x^3 - (x-h)^3]$  compared to the change in length given by  $x - (x-h) = h$ .

Suppose then that the cube that Al starts with is  $x$  mm by  $x$  mm by  $x$  mm, and that he shaves off  $h$  mm.



As can be seen from the diagram, the lead that Al obtains in this way comes from 3 cut faces, 3 narrow edges, and the corner piece. This adds to  $3(x-h)^2h + 3(x-h)h^2 + h^3$  cubic millimeters of lead.

From the diagram, the main contribution to the lead that Al takes away comes from the three cut faces. Again, using algebra, we can be more precise:

The ratio of change [change in quantity of lead] to [change in length of the cube] is the ratio of  $[x^3 - (x-h)^3]$  to  $x - (x-h) = h$ . Doing the calculation, this is  $[3(x-h)^2h + 3(x-h)h^2 + h^3]/h = 3(x-h)^2 + 3(x-h) + h^2 = 3x^2 - 3xh + h^2$ .

Keep in mind that  $x$  is a fixed number – the number  $x$  is whatever the starting length is for the sides of the cube; and the

number  $h$  is whatever is removed from  $x$ . So the calculation reveals both that the ratio depends on how much is actually removed, and that the smaller  $h$  is, the closer the ratio of change is to  $3x^2$ .

### Summary for Squares and Cubes

#### The Square

Suppose that a square has dimensions  $x$  by  $x$ . Then for small changes in length of the sides, the ratio [change in area] to [change in length] is approximately  $2x$ . That is, the ratio is approximately 2 times the length. The smaller the change in length, the closer this ratio is to being exactly  $2x$ .

#### The Cube

Suppose that a cube has dimensions  $x$  by  $x$  by  $x$ . Then for small changes in length of the sides, the ratio [change in volume] to [change in length] is approximately  $3x^2$ . That is, the ratio is approximately 3 times the surface area of each face. The smaller the change in length, the closer this ratio is to being exactly  $3x^2$ .

#### *4. Higher Powers*

Suppose that Ralph owns a property out of town where he makes a vegetable-based liquid fertilizer for gardens. Ralph sells this fluid and transports it in metal cubes. The cubic containers are made by a machine that, within limits, can be adjusted to any length from 1 foot to 5 feet. Since the larger cubes contain more liquid, they are heavier and require further reinforcement. So Ralph sells his fertilizer at a rate that depends on the size of the cube in which he delivers the cube. If a cube is 2 feet by 2 feet by 2 feet, then Ralph charges 2 dollars per cubic foot. If a cube is 2.5 feet by 2.5 feet by 2.5 feet, then he charges 2.5 dollars per cubic foot. And so on. So, within the limits of construction, for a cube that is  $x$  feet by  $x$  feet by  $x$  feet, Ralph sells his fertilizer at  $x$  dollars per cubic foot. That means that Ralph's revenue on a cube that is  $x$  feet by  $x$  feet by  $x$  feet is (the number of cubic feet of fertilizer)  $x$

( $x$  dollars per cubic foot)  $x^3 \times x = x^4$  dollars.

Evidently, the revenue increases with the length of the cube. Ralph would like to know more. He would like to know at what rate his revenue increases with an increase in the length of the cubes.

Just as with Sam the farmer and Al the apprentice, we can compare the changes in quantities - in this case the ratio in question is [change in the revenue] to [change in length]. This will give an approximation to the rate at which the revenue  $x^4$  increases per change in linear foot  $x$ . Motivated by our success with algebra in the previous examples, we can calculate this ratio explicitly. If  $x$  is a given length of cube, and the length is increased by  $h$ , then the change in revenue is  $[(x+h)^4 - x^4]$ . So the ratio of change is  $[(x+h)^4 - x^4]/h = [4x^3h + 6x^2h^2 + 4xh^3 + h^4]/h = 4x^3 + 6x^2h + 4xh^2 + h^3$ .

As before, remember that  $x$  is a fixed number. So, from the algebra, the ratio depends on the change  $h$ ; and the smaller  $h$  is the closer the ratio is to  $4x^3$ . In other words, for a relatively small  $h$ , Ralph would be increasing his revenue at a rate that is approximately  $4x^3$  dollars per linear foot.

From here, students often jump to the generalization for higher powers of  $x$ . What we have so far is that for quantities of the form  $x^2$ ,  $x^3$ , and  $x^4$ , a small change  $h$  in  $x$  produces rates of change that, respectively, are approximately  $2x$ ,  $3x^2$  and  $4x^3$ . Students will conjecture that for quantities of the form  $x^5$ ,  $x^6$ ,  $x^7$ , ..., a small change  $h$  in  $x$  will produce rates of change that, respectively, are approximately  $5x^4$ ,  $6x^5$ ,  $7x^6$ , ... . Note that quantities involving higher powers can be illustrated using investment examples that involve compound interest.

Now it is one thing to make a conjecture (based on patterns in symbolism). Can we do more? Since algebra has been useful so far, can we do for the higher powers of  $x$  something like what we did for the first few powers?

Let's look again at the quartic  $x^4$ . The ratio of change is  $[(x+h)^4 - x^4]/h$ . In the above calculation, I calculated the numerator explicitly. Let's do this again, but this time let's not

focus so much on getting the explicit result, but on determining the role played by  $h$  in the ratio.

The numerator is the change in the quartic  $[(x+h)^4 - x^4] = (x+h)(x+h)(x+h)(x+h) - x^4$ . The product of parentheses expands to give a sum of products. Each product in the sum consists of some  $x$ 's and some  $h$ 's - but always four factors in total. The first term will be  $x^4$ , and this will cancel with the  $-x^4$ . Tracing the multiplication through the parentheses, there will be four ways to get terms of the form  $x^3h$ , and the rest of the terms will be of the form  $x^2h^2$ ,  $xh^3$  and  $h^4$ . But the ratio of change is obtained by dividing  $[(x+h)^4 - x^4]$  by  $h$ . So the ratio of change will be of the form  $4x^3 +$  (a sum products of terms - each of which has at least one power of  $h$ ). Again, remember that  $x$  is fixed. It follows that the smaller  $h$  is, the closer the ratio will be to  $4x^3$ . In other words, for small changes  $h$  in  $x$ , the rate of change of the quantity  $x^4$  is approximately  $4x^3$ . Of course, we already have this result. But do you see perhaps how this approach can be applied to the higher powers?<sup>3</sup>

Let's test this approach on a power of  $x$  that is beyond easy explicit calculation. Suppose then that a quantity is of the form  $x^{10}$  say. Then a ratio of change is  $[(x+h)^{10} - x^{10}]/h$ . Writing this out as above, the numerator is  $[(x+h)(x+h)\dots(x+h)] - x^{10}$ , where the parentheses  $(x+h)$  are repeated 10 times. Again, tracing through the multiplication, there will be one term of the form  $x^{10}$ , which cancels with the  $-x^{10}$ . There will be 10 ways of getting  $x^9h$ ; and the rest of the numerator will be a sum of products, each of which has at least 2 powers of  $h$ . Calculating the ratio cancels one  $h$  in each product. The ratio  $[(x+h)^{10} - x^{10}]/h$  is then of the form  $10x^9 +$  (a sum of products, each of which has at least one  $h$ ). So, for small changes  $h$ , the rate of change of the quantity  $x^{10}$  will be approximately  $10x^9$ .

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<sup>3</sup> Note that this approach does not require using the general formulation of the binomial theorem.

*Student Exercises:*

1. Using the above approach, explain why, for small values of  $h$ , the approximate value of the ratio  $[(x+h)^{20} - x^{20}]/h$  is  $20x^{19}$ .
2. Suppose that  $n$  is a non-negative integer. Using the above approach, explain why, for small values of  $h$ , the approximate value of the ratio  $[(x+h)^n - x^n]/h$  is  $nx^{n-1}$ .

*5. A Common Denominator*

We have been studying rates of change in quantities that are given by powers of  $x$ . In each case, we get a notion of a distinguished quantity. For instance, in the case of Sam the Sneaky Farmer, if his field is originally 100 yards by 100 yards, and if he were to increase the length of his field by  $h$ , then the ratio  $[\text{Change in Property}]/[\text{Change in Length}] = 2(100)+h$ . As already discussed, the smaller the change in length  $h$ , the closer this ratio is to being exactly  $2(100)$ . This distinguished quantity  $2(100)$  need not be an actual ratio of change; but actual ratios can be made close to this quantity, by choosing  $h$  to be small. Historically, it is this approximation to  $2(100)$  that gave rise to the name *limit*. The distinguished quantity  $2(100)$  is more precisely called the *limit* of  $[(100+h)^2 - 100^2]/h$ , as  $h$  goes to zero (that is, as  $h$  gets small). Our general result for the square field was that, for small  $h$ , the ratio  $[(100+h)^2 - 100^2]/h = 2x+h$  is close to the distinguished value  $2x$ . So the value of the *limit* depends on  $x$ , the starting value for the length.

This can all be a little tricky to write down. It is generally accepted that both Newton (1642-1727) in England and his contemporary Leibniz (1646-1716) in Germany independently discovered these *limits*. Where Newton used Calculus to establish a new physics, it is the notation of Leibniz that better represents the quantities involved and suggests further mathematical results (such as the chain rule and the product rule). Following Leibniz then, we obtain the following

formulas:  $\frac{d}{dx}(x^2) = 2x$ ,  $\frac{d}{dx}(x^3) = 3x^2$ ,  $\frac{d}{dx}(x^4) = 4x^3$ , and so

on. The symbols  $\frac{d}{dx}$  express the following: (a) we consider ratios of differences, hence the symbols “ $d$ ” for “difference”; and (b) the answer need not be any particular ratio, but is a distinguished quantity, the quantity to which the particular ratios are close for small changes  $h$  in  $x$ .

## **Part II: A Lucky Advance – *The Fundamental Theorem of Calculus***

For Part II, the topic is the particular instance of rate of change determined by an advancing “area”. The examples that I use are drawn from World War II and the liberation of Nazi-occupied Europe. My students have been enjoying the stories of the advancing front-lines and have been using them to make their own first breakthroughs toward The Fundamental Theorem of Calculus.

### *1. Normandy and Beyond*

D-Day was June 6, 1944 -- Allied Forces landed on the beaches of Normandy and began Operation Overlord, the invasion of Nazi-occupied Europe. During late July and early August, the “Third Army spearheaded Operation Cobra, the great breakout from the Normandy bridgehead. In a matter of days, what had been a troubling and potentially deadly stalemate, turned into one of the most dramatic Allied victories of World War II. The German army in Normandy was shattered, and its survivors were forced to retreat in disarray, mostly on foot, behind the River Seine”<sup>4</sup>. Paris was soon liberated from Nazi occupation and army groups consisting of British, American and Canadian forces swept northward into Belgium and eastern France. At the same time, as part of the U.S. Twelfth Army Group under General Bradley, Patton’s U.S. Third Army moved across southern Normandy and then eastward. Allied army groups were to converge later along the Rhine.

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<sup>4</sup> John Nelson Rickard, *Patton at Bay: The Lorraine Campaign, September to December 1944* (Westport CT: Praeger Publishing: 1999), xi.

Famous in military history are *Lucky's*<sup>5</sup> advances across Europe, despite extreme enemy opposition and difficult terrain. The Third Army, however, was dogged in its purpose. Overcoming numerous difficulties, in only 231 days Patton lead his Incredible Third<sup>6</sup> to victory over occupying Nazi Forces, liberation of the terrible death camps, and the liberation of European territories ranging from Normandy to Germany<sup>7</sup>.

## 2. *Advancement of a Front-Line*

Gains in territory depended on circumstances in the field, and so varied from one battle to another. One question then is the following: Is there some way to determine the “rate” at which territory is obtained by an advancing army?

Let's look at the progress of Lucky's U.S. Fourth Armored Division in the Eifel campaign. In a startling advance, the Fourth Armored established the Trier-Koblenz corridor, breaking Nazi front-lines from Trier to the Rhine (Koblenz) in just three days.

For purposes of illustration, let's suppose that the width of the Fourth's advancing front-line was approximately 4 miles.

If this “4 mile” front-line was advanced 1 mile, then the territory gained would have been 4 miles in width and 1 mile in depth, that is, 4 square miles. Advancing the front-line a second mile, another 4 square miles would have been obtained. So, for an advance of 2 miles, the territory gained would be 4x2 square miles; and so on. In other words, one way that we can determine the “rate” at which territory is gained is by using the width of the front-line. In this example, where the front-line is 4 miles in width, the territory gained is 8 square miles per mile that the front-line is advanced.

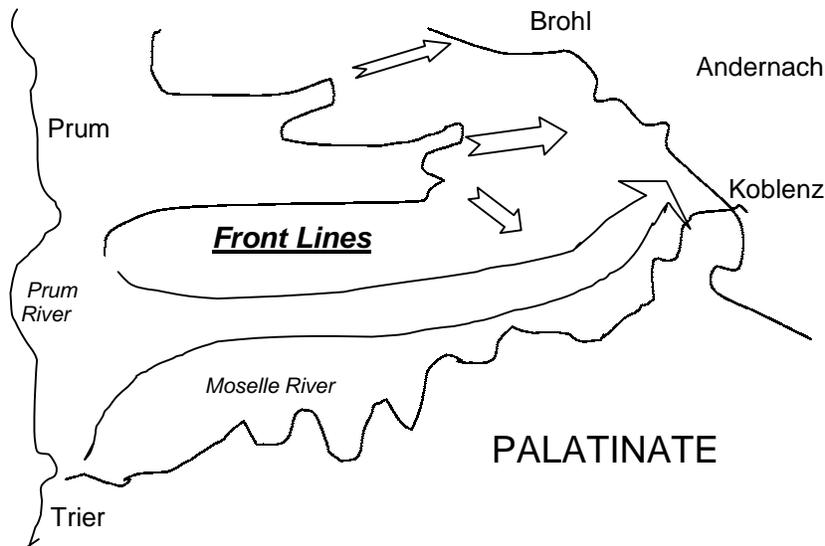
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<sup>5</sup> Military groups were commonly given pseudonyms. “Lucky” was the name Patton gave to the Third Army.

<sup>6</sup> Gen. Paul D. Harkins, with Eds. of Army Times Pub. Co., *When the Third Cracked Europe - The Story of Patton's Incredible Army* (Harrisburg PA: Stackpole Books, 1969).

<sup>7</sup> Robert Allen, *Lucky Forward - The History of Patton's Third U.S. Army* (New York: The Vanguard Press, 1947), 395.

## THIRD ARMY'S BREAKTHROUGH TO THE RHINE IN THE EIFEL



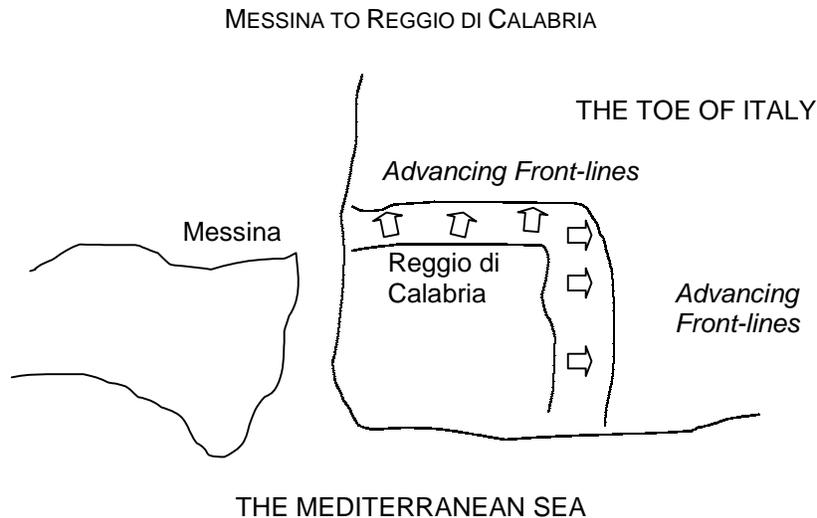
Scale: 0 --- 5 --- 10 MILES

Of course, the actual width of front-lines was not usually constant, but would change through the course of battle. But, if the width changed, that change would have taken place in stages. So, even if the front-line width was not constant at 4 miles, for as long as it was approximately 4 miles across, the gain in territory would have occurred at a rate of approximately 4 square miles per mile advanced. As the front-line width was expanded to 5 miles, then for as long as that front-line width was approximately 5 miles, the rate at which territory was gained would have been 5 square miles per mile advanced. And so on. So, one answer to our question is that if territory is advanced along a straight front-line, then the rate at which territory would be gained would be given by the width of the front-line.

### 3. Expansion of Front-Lines

You may be thinking that front-lines not only change in length, but typically are not straight. So, for our next example, let's return to an earlier part of the war. After being taken by the combined forces of U.S. Seventh Army under Patton and

British Eighth Army under Montgomery, Sicily was the base for a jump-off<sup>8</sup> to mainland Italy<sup>9</sup>. On September 3<sup>rd</sup>, 1943, “two divisions of Montgomery’s Eighth Army crossed from Messina to Reggio di Calabria and advanced up the Italian toe against slight resistance.”<sup>10</sup>



Again, our question is the rate at which territory is obtained by an advancing army. So let’s imagine the advance of the Eighth Army as it pushed its front-lines across the toe of Italy. The territory was bound on the west by the shore-line of the Strait of Messina and on the south by the Mediterranean Sea. So imagine the expansion of Allied territory occurring in two directions at once, both north and east.

The region is almost square and so, again for purposes of

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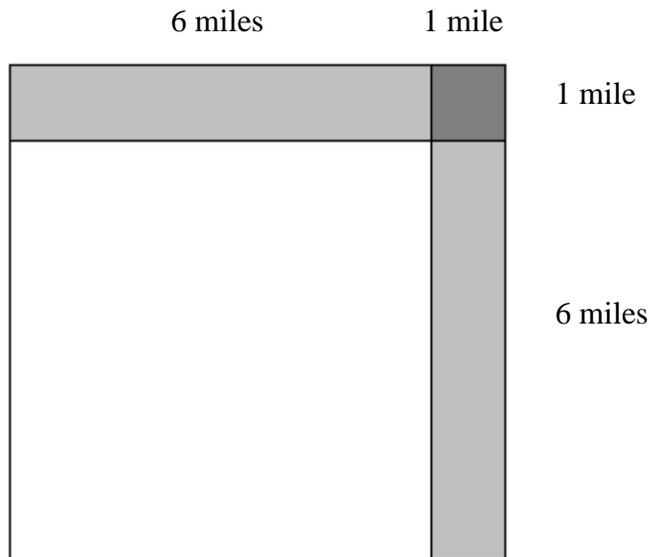
<sup>8</sup> On July 10<sup>th</sup>, 1943, British Eighth Army under General Montgomery and U.S. Seventh Army under General Patton landed on the south coast of Sicily. The Allies entered Messina on August 16<sup>th</sup>, the campaign having lasted 38 days.

<sup>9</sup> Henry Steele Commager, ed. *The Pocket History of the Second World War* (New York: Pocket Books, 1945), 334-335.

<sup>10</sup> The main attack on was planned for Salerno and Naples. Montgomery hoped to sweep north, to trap enemy forces between the toe and Salerno. *Ibid*, p. 337.

illustration, consider a northern front-line of 6 miles say, and an eastern front-line also of 6 miles.

The reader may now recall the square field of Sam the Farmer, from Part I of this paper. Algebraically, the calculations for change in the square area are the same in both examples. Following the clue from Section II.2 above on the advancement of a straight front-line, the focus now, however, is specifically on how the total length of the front-line fits into the picture.



Suppose, then, that the front-lines are both advanced by 1 mile, from 6 miles across to 7 miles across. Then the main territory gained would be along each front-line, with an extra 1 square mile at the north-east corner. So the total territory gained would be  $(6 \times 1) + (6 \times 1) + (1 \times 1)$  square miles. If both front-lines are again advanced, this time from 7 miles across to 8 miles across, then the territory gained would be  $(7 \times 1) + (7 \times 1) + (1 \times 1)$ . And so on. That is, if the square region is  $x$  miles across the northern front-line and also  $x$  miles across the eastern front-line, then (except for the 1 square mile at the north-east corner), an advance of all front-lines by 1 mile gains

$2x$  square miles of territory. In other words, for every mile that the front-lines are advanced, the gain in square miles of territory is simply the length of the front lines that have been advanced.

But what if the front-lines along the  $x$  by  $x$  square territory are advanced some distance less than 1 mile? Say, for example, the front-lines are advanced only  $1/2$  mile.

Then the gain in territory would be  $(x)x(1/2) + (x)x(1/2) + (1/2)x(1/2) = (2x)x(1/2) + (1/4)$  square miles. As it turns out, we get essentially the same result as for the advance of 1 mile, that is, that the main contribution to the gain in territory is simply the length of the front-lines advanced (which is  $2x$ ) times the distance advanced (which is  $1/2$ ). This time, however, with the advance of only  $1/2$  mile, the extra territory at the north-east corner is even less significant than before, for this time there is only an additional  $(1/2)x(1/2)$  square miles unaccounted for in the product (length of front-line) $\times$ (distance advanced).

As we did in Part I, to reach a basic pattern it can help to bring some algebra into play. For whatever the advance happens to be,  $h$  say, we can consider the ratio of square miles gained compared to distance advanced.

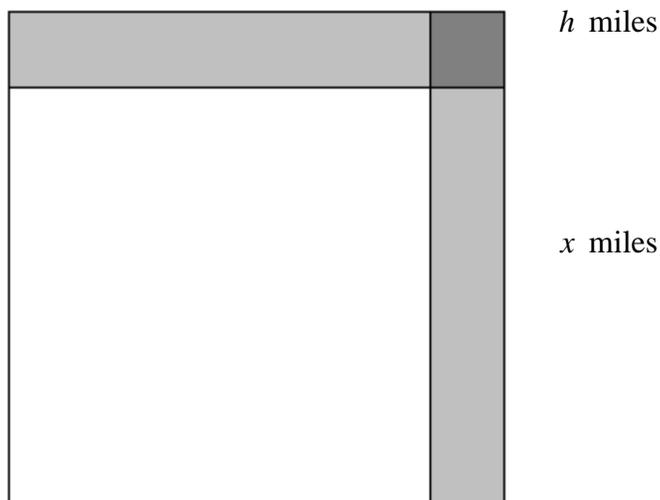
From the diagram, an advance of the front-lines by  $h$  provides a gain in territory equal to

$(x \times h) + (x \times h) + (h \times h) = 2xh + h^2$ . Note that when  $h$  is small,  $h^2$  is even smaller. (Think of the example above with  $h = 1/2$ ; and other examples like  $1/3$  of  $1/3$ ;  $1/4$  of  $1/4$ , etc.) So the smaller  $h$  is, the closer the gain in territory is to being just  $2xh$ . To clinch things, let's calculate the ratio of territory gained compared to distance advanced. Dividing  $2xh + h^2$  by  $h$ , we get  $2x + h$ .

What does this mean? In Part I, we already worked through to a notion of limit. What is new here? Remember that  $x$  is the initial distance across one edge of the square front-lines. Our question now adds further significance to the ratio by relating it to the total length of the advanced front-lines. Our result, then, is that the smaller the advance considered, the closer the ratio [territory gained]: [distance advanced] is to

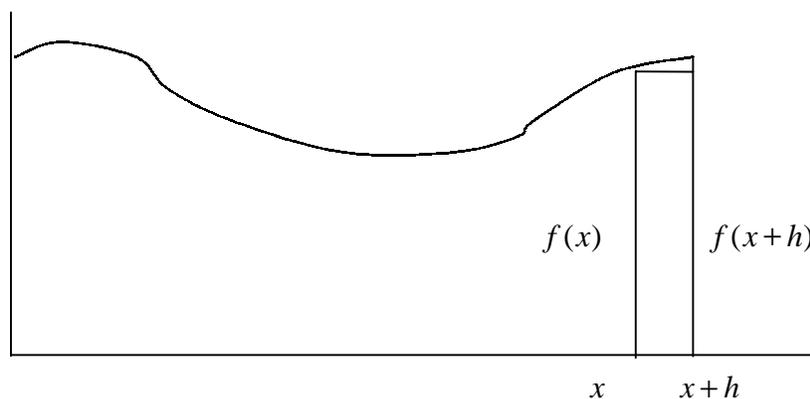
being exactly the total length of the front-lines, namely  $2x$ .

47  $x$  miles  $h$  miles



4. *The Fundamental Theorem*

You may realize that the calculations that we have done so far will work for other things besides advancing armies. Historically,  $x$  -  $y$  coordinate lines are added to the picture. So imagine a region ("territory") that is bounded on the left by the  $y$ -axis, across the bottom by the  $x$ -axis, across the top by a curve, and on the right by a vertical straight "front-line" at some  $x$ .



Just as the length of the front-line in a military campaign may vary as the army advances in the  $x$ -direction, the  $y$ -height of the region in the diagram also can vary. At an  $x$  along the  $x$ -axis, let's denote the height up the curve by  $f(x)$ . Let  $A(x)$  denote the "area" of the region from the  $y$ -axis up to the front-line at  $x$ . If the front-line of the region is advanced from  $x$  to  $x+h$ , then the ratio of area gained compared to the advance  $h$  is  $[A(x+h)-A(x)]/h$ . But, when  $h$  is small, the main contribution to the area gained  $A(x+h)-A(x)$  is the rectangular area  $(f(x)\times h)$ . So, for small  $h$ , except for the small corner region, the ratio is approximately  $f(x)$ , the length of the advancing front-line.<sup>11</sup> Or as it is said in modern Calculus (that is, after Cauchy, Bolzano and da Cunha), "the limit as  $h$  goes to zero of  $[A(x+h)-A(x)]/h$  is  $f(x)$ ". Using the notation of Leibniz,  $\frac{dA}{dx} = f(x)$ .

As mentioned in the *Introduction*, in the 19<sup>th</sup> century Riemann discovered a definition for *area* using limits (*limit* defined by Cauchy et al.) of finite sums (of rectangular approximations, that is, *Riemann Sums*). So in notation after Riemann, the area bounded on the left by the  $y$ -axis; below by the  $x$ -axis; above by the curve  $f$ ; and on the right at  $x$  by the vertical ("front-line") of height  $y = f(x)$ , is denoted

$$A = \int_0^x f dx. \text{ (The symbol } \int \text{ is a stylized } S \text{ for "sum" -}$$

indicating the fact that the area is determined by a limit of sums.) Expressing our result in this notation, we get that the

rate of change of area is  $\frac{dA}{dx} = \frac{d}{dx} \left[ \int_0^x f dx \right] = f(x)$ . This result is

called Part I of the Fundamental Theorem of Calculus.

Historically there were two problems: One problem was to

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<sup>11</sup> The interested reader might now consult one of the standard textbooks, where this situation is discussed in the fuller context of a complete Calculus course. For instance, see James Stewart, *Calculus - 4<sup>th</sup> Edition* (Pacific Grove CA: Brooks/Cole, 1999), 338.

determine *relative rate of change* of a quantity (especially change of distance with respect to time); and the solution discovered by both Newton and Leibniz was given by the limit of ratios of differences -- now called the *derivative*. The other problem had a different focus, but was actually a special case. For the other problem was to determine (in particular) the rate of change of an advancing area.

Part I of the Fundamental Theorem relates these two problems, and at the same time provides a solution to what is often called the “inverse problem” or *anti-derivative* problem: Find a function whose derivative with respect to  $x$  (rate of change) is equal to a given a function  $f(x)$ . Part I of the Fundamental Theorem shows that any changing area whose front-line at  $x$  has length  $f(x)$  will do. In particular, one such

function will be  $A = \int_0^x f dx$ , representing the area under the

graph of  $f(x)$  itself.

Part II of the Fundamental Theorem concerns the solution of the anti-derivative problem. In specific content, however, Part II is a distinct result. For the basis of Part II of the theorem is not “area” or “Riemann integrals”, as such, but regards the “uniqueness” of a solution to an anti-derivative problem. In particular, where Part I of the theorem produces one anti-derivative for a given function  $f(x)$ , we may enquire into the range of all possible anti-derivatives for  $f(x)$ . But, because a derivative is a *ratio of change*, and not an actual function value, it follows that if two functions  $F(x)$  and  $G(x)$  have the same derivative (that is, if they both change in exactly the same way), then as functions they must differ by a constant. (This is like saying that if two cars are driving along a road at the same speed in the same direction, then the distance between them stays the same.) Applying this to Part I, we find that not only is

the area  $A = \int_0^x f dx$  an anti-derivative for  $f(x)$ , but except for

being able to add in a constant, it is the only anti-derivative for  $f(x)$ . So the general anti-derivative for  $f(x)$  is given by

$F(x) = \int_0^x f dx + C$ , where  $C$  can be any constant. This can be re-phrased using Riemann's notation: Let  $a$  and  $b$  be real numbers, and consider  $F(b) - F(a) = \int_0^b f dx - \int_0^a f dx$ . Under present hypotheses, this difference is a difference of areas under the graph of  $f$ , from  $x = a$  to  $x = b$ ; and in Riemann's notation this area is written  $\int_a^b f dx$ . The usual modern statement of Part II of The Fundamental Theorem is then that if  $F$  is any anti-derivative for  $f$  (that is  $\frac{dF}{dx} = f$ ), then

$$F(b) - F(a) = \int_a^b f dx .$$

Still keeping to the preliminary context (and so not requiring the precision of definitions and hypotheses on terms and functions involved), we can now state at least part of why The Fundamental Theorem is *fundamental*: (1) it shows exactly how to produce an anti-derivative; (2) it establishes the general form of all possible anti-derivatives; and (3) in empirical science, it provides a basis for the two-way pivot between possible abstract law involving a derivative and measurements of a coordinate that would be obtained in experiment.

### Concluding Remarks: Calculus and Beyond

In this paper, which can be taken as a primer for a Calculus student, I have not discussed "velocity", "tangent lines" or "dynamics". Again, my purpose has not been an axiomatic development of the Calculus as such, but rather a fostering of the (two) basic insights that can help a student begin his or her reach toward the Calculus. Newton, of course, did much more than merely begin. And in his research into the dynamics of the planets, he made free use of coordinate techniques. Consequently, his results on rate of change apply also to limits of ratios obtained from slopes of secants of a

graph. In other words, he discovered how to calculate the slope of a tangent line. His work then contributed toward the possibility of a verifiable geometry of space and time. In particular, from his (Calculus-based) abstract laws of gravitation, Newton was able to account for Kepler's Laws regarding the orbits of planets.<sup>12</sup>

As it later turned out, the truly fundamental nature of The Fundamental Theorem of Calculus allowed for a profound 20<sup>th</sup> century generalization that, because of its origins in the Calculus of Newton and Leibniz, also is called The Fundamental Theorem of Calculus (but, for "Manifolds"). The 20<sup>th</sup> century theorem also generalizes three 19<sup>th</sup> century integration theorems that were of special interest to physicists, namely Green's Theorem, The Divergence Theorem, and Stokes' Theorem. [So another name for the 20<sup>th</sup> century version of The Fundamental Theorem of Calculus (for Manifolds) is Stokes' Theorem (for Manifolds)]. The 20<sup>th</sup> century theorem distinguishes itself from the classical calculus theorem partly by the fact that it embraces higher dimensions.

There are clues to the generalization to higher dimensions

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<sup>12</sup> In Kepler's Three Laws of planetary motion, the first is a particular rule for orbits of planets; the second relates directly to a rate of change of an "area" (*area* not yet defined in Kepler's time); and the third directly regards certain space and time measurements. The three laws together are: (1) A planet's orbit is elliptical, with the sun at one of the foci; (2) The focal radius from the sun to the planet sweeps out equal areas in equal times; and (3) The squares of the times required for any two planets to make complete orbits about the sun is proportional to the cubes of their mean distances from the sun. (See, for example, David Burton's *The History of Mathematics: An Introduction*, 4<sup>th</sup> ed (New York: McGraw-Hill, 1999), 335. For a detailed and illuminating telling of Kepler's struggles and success, see Katz, Section 10.3.4.) Note that in Kepler's second law, the rate of change of the ("orbital") area is a constant for each planet. So while Kepler's Laws were subsumed by Newton's system of abstract laws, they remain important in their own right, as precursor to conservation laws and The Variational Calculus. Over the last century, conservation laws have been proving to be of central importance in empirical science. As shown by Noether et al., many conservation laws can be derived in Variational Calculus from the 20<sup>th</sup> century generalization of The Fundamental Theorem of Calculus for Manifolds. (See the last two paragraphs of this paper.)

in Calculus itself. Recall that  $\frac{d}{dx}(x^2) = 2x$ ,  $\frac{d}{dx}(x^3) = 3x^2$ ,  $\frac{d}{dx}(x^4) = 4x^3$ , and so on. If (as in the examples discussed in this paper) we consider the elementary geometry involved, then we get the following: The rate of change of a “2-dimensional square area” is the “1-dimensional length” of the advancing “front-line”; the rate of change of a “3-dimensional cubic volume” is the “2-dimensional area” of the advancing “front-surface”; and so on. It is a precise grasp and formulation of this “and so on” that leads to the generalized Fundamental Theorem of Calculus for Manifolds. For, going from the examples of powers of  $x$ , the rate of change of an  $n$ -dimensional quantity is the  $n-1$ -dimensional quantity of the advancing “front-surface”. Where the classical theorem formulates the two-way pivot between measurement of a coordinate and abstract law involving a derivative, the generalized theorem formulates the two-way pivot between measurement of several coordinates and abstract law involving quantities with several rates of change. So the Fundamental Theorem of Calculus is not only fundamental in Calculus itself, but leads to fundamental results, in both mathematics and science, of on-going general significance. It is a well-named theorem.

Terrance J. Quinn teaches in the Department of Mathematics at Ohio University Southern. He can be reached at [quinnt@ohio.edu](mailto:quinnt@ohio.edu).

Comments on this article can be sent to [jmda@mun.ca](mailto:jmda@mun.ca).

## BASIC ECONOMIC VARIABLES

BRUCE ANDERSON

When I lectured on Lonergan's economic writings at Boston College, Fordham, or Woodstock, people asked the same questions: What's the big deal about Lonergan's economics? How does it differ from mainstream economics? What's Lonergan's solution to poverty? This paper is a move towards answering those questions.

To help set the scene for an introduction to Bernard Lonergan's writings on economics it is worth quoting his views on the exchange process. He is, of course, a strong supporter of a sound exchange economy.

An exchange economy is an attempt to give a continuously satisfactory answer to the continuously shifting question, *Who* among millions of persons, is to perform *which*, among millions of tasks, in return for *what*, among millions of possible rewards?

The answer it offers is as follows.

First, it distinguishes what people do or make for themselves, what they do for others expecting little or no return, and what they do for others expecting a proportionate remuneration. It decides that the first two can take care of themselves, and it concentrates its efforts on the third.

Second, it directs the aggregate of goods, services, and property that are for others, yet expect a proportionate return, to a pyramid of local, regional, national, and world markets of various kinds.

Third, it leaves it to the markets to control contributions and to apportion rewards.

The excellence of this solution is palpable. It

leaves each one free to do as he pleases; but if what pleases him is not what others want, then demand will be zero and his reward zero. It encourages inventiveness and initiative in anticipating others' wants; for such anticipations are met with a strong demand and a high reward. It encourages each one to do his best, for excellence in performance creates favorable preferences or yields the efficiency which, when prices are uniform, produces a differential rent. It places the risks of production on producers, but it leaves control of production ultimately to the integration of consumers' decisions to exchange or not exchange. It apportions the measure of reward each is to receive by the integration of individual decisions, but it leaves the precise reward each receives to his individual choice.

The excellence of the exchange solution becomes even more evident when contrasted with the defects of a bureaucratic solution. The bureaucrat is under no pressure to anticipate precisely what people will want and to give it to them in the precise measure that they want it; he gives them what he thinks good for them, and he gives it in the measure he finds possible or convenient; nor can he do otherwise, for the brains of a bureaucracy are not equal to the task of thinking of everything; only the brains of all men together can even approximate to that. But further, even could the bureaucrat meet this issue, he could not do so continuously, for it is continuously changing; he has to work with plans, and every new demand as well as every new invention tends to upset the old plans and make a new beginning necessary; when a limited liability company has served its day, it goes to the bankruptcy court; but when bureaucrats take over power, they intend to stay. Finally, even if the bureaucrat could meet both these problems, he could not give them a human solution; men learn by experience; you can teach them to stay on one job by letting them roam about trying others; you can let

them learn by experience that their abilities are not quite so great as they fancy; but when the pressure of terrorism is needed to oil the wheels of enterprise, then the immediate effect is hatred and the ultimate effect is either an explosion or else a servile degeneracy.<sup>1</sup>

It is evident from the quotation that Lonergan's focus is the exchange economy. His writings on economics are not concerned with the renovations done by do-it-yourselfers on their own homes, handy-people who repair their friends' cars for a case of beer, work done by grandparents who baby-sit or knit socks for their grandchildren, the important work performed by volunteers, unpaid housework, or goods changing hands in some sort of a barter system. Even the work done by Robinson Crusoe is not part of an exchange economy. Rather, Lonergan's concern is the exchange economy itself – *the production of goods and the performance of services that are sold and paid for with money.*

Because they also lie, strictly speaking, outside the exchange economy, Lonergan is not concerned with the reasons individuals buy and sell particular goods and services. Psychological motivations, marginal utility, opportunity costs, and the value of goods and services compared to alternatives are not elements of the exchange economy. For instance, whether a government should build a hospital or buy a missile defense system, buy food for its starving population or purchase new rifles for its army are issues that, *strictly speaking*, are not economic issues. Further, Lonergan is not attempting to construct a system for redistributing incomes from rich people to poor people. His focus is how an economy *actually* works.<sup>2</sup>

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<sup>1</sup> *CWL 21*, 34-35

<sup>2</sup> For more on the aims and context of Lonergan's work on economics, see Frederick Lawrence, "Editor's Introduction," Bernard Lonergan, *Macroeconomic Dynamics: An Essay in Circulation Analysis*, 15 *Collected Works of Bernard Lonergan*, ed. Frederick Lawrence, Patrick Byrne, and Charles Hefling (Toronto: University of Toronto Press, 1999); Philip McShane, "Editor's Introduction," Lonergan, *For a New Political Economy*, 21 *Collected Works of Bernard Lonergan* (Toronto: University of

It's not that Lonergan is not interested in so-called moral issues; his objective is to identify, and to understand, how the fundamental elements in an economy are related. He claims he is zeroing in on the elements that are *purely* economic, elements that can be distinguished from personal, philosophical, cultural, political, moral, or religious factors. Lonergan's focus is on the production and exchange of goods and services for money. Within the boundaries of the exchange economy the production and sale of porn films, bullets, and cocaine sit alongside ice-cream, fishing rods, and vacation packages. His objective is to keep the question *How does an economy work?* separate from questions about the worthwhileness of particular goods and activities.

The aim of this paper is to lead you to appreciate the elements that, in Lonergan's theory, are the fundamental or essential elements of an exchange economy. I begin by spelling out and illustrating the crucial distinctions Lonergan sees between basic goods and services and surplus goods and services. Then I illustrate how payments for the sale of these two different types of goods and services form distinct circulations of money. The drive of this paper is to help you appreciate how an economy works.

Lonergan's writing style – he seems to disregard what readers know and do not know – plus the breath-taking originality of his work add up to texts that are very difficult to decipher. Hence I plan to begin with simple illustrations and detailed examples in order to lead you toward some grasp of his view.

## **1 Distinguishing Between Different Types of Goods and Services**

### *1.1 Orthodox Distinctions: Producer Goods, Consumer Goods, and Capital*

Establishment economists distinguish between producer goods, consumer goods, and capital. Producer goods are distinguished from consumer goods according to how the

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Toronto Press, 1998). See also Philip McShane, *Pastkeynes Pastmodern Economics: A Fresh Pragmatism* (Halifax: Axial Press, 2002).

goods are used. A producer good is something that is used in the production of other goods and services. For example, a pencil bought for use in a drawing-office is a producer good, but a pencil bought for a child is for entertainment and a consumer good. Sheet steel used in the production of cars would be a producer good.<sup>3</sup>

By contrast, a consumer good is ‘an economic good or commodity purchased by households for final consumption.’ Consumer goods include chocolate and beer consumed immediately as well as durable goods which yield a flow of services over a period of time such as a washing machine,<sup>4</sup> an automobile, or a television. Whether or not a good is a consumer good depends on how it is used, not the characteristics of the good itself. Electricity or a computer bought for a home is a consumer good, but the same things purchased for a factory are producer goods.<sup>5</sup>

The term capital is used by orthodox economists in a number of different ways. Capital is commonly defined as assets which are capable of generating income. Physical assets themselves that have been produced such as machines, plant and buildings that make production possible are called capital. (Raw materials, land, and labour are not capital strictly speaking.) The essence of capital is that it represents deferred consumption. The term capital is also used to refer to financial assets that are capable of generating income.<sup>6</sup> The education and skills of members of a workforce are called human capital. And the term social capital is used to refer to the particular endowments of a group.

These distinctions are not precise.

### *1.2 Lonergan’s Distinctions: Basic Goods and Services and Surplus Goods and Services*

The key to appreciating Bernard Lonergan’s economic theory is to understand how he sharpens the orthodox

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<sup>3</sup> Graham Bannock, R.E. Baxter, and Evan Davis, *The Penguin Dictionary of Economics* (London: Penguin Books, 1992), 220. Producer goods are also known as intermediate goods, 342-343.

<sup>4</sup> *Ibid.*, 84.

<sup>5</sup> *Ibid.*, 84.

<sup>6</sup> *Ibid.*, 56.

distinctions between producer goods, consumer goods, and capital and then goes on to fully exploit the distinction he draws. The particular distinction Lonergan draws is one of the fundamental building blocks of his theory.

Lonergan does not use the terms *consumer* goods or *producer* goods. Rather, he uses the terms *basic* goods and services and *surplus* goods and services. But don't be misled by the terms. *Basic* does not mean essential to life and *surplus* does not mean extra, superfluous, or luxurious. Lonergan's explanation of *basic* goods and services is roughly analogous to *consumer* goods and services as understood by orthodox economists, and his term *surplus* goods and services is roughly analogous to orthodox economists' description of *producer* goods and capital. But the analogy does *not* hold. There are important differences. Lonergan sharply distinguishes between basic and surplus goods and services. For him, these are fundamental elements in an economy.

To help you appreciate the distinction and its significance it is necessary to start with simple illustrations. Remember you must keep in mind that when we use the term basic goods and services or surplus goods and services we mean something different from, and more precise than, orthodox economists.

When I was a kid my parents gave me an allowance – a certain amount of spending money each week. I remember spending this money on things like chocolate bars, bus rides to the shopping mall, hockey sticks, camera film, bowling, skating. These expenditures were all made for basic goods and services. Today, I spend the money I earn on groceries, newspapers and spy novels, gas for my car so I can go sight-seeing, tickets to see the Washington Capitals play hockey, beer, movie tickets, video rentals, wood for the kitchen table I am making, my phone bill, and rent. These sorts of things are also basic goods and services. I spend money on these goods and activities in order to survive, not to make money from them.

So, in that precise way, my purchases are different from the fisherman paying to have his boat tuned up, a carpenter upgrading to the latest computer accounting program, a dentist buying a new dental chair, a bicycle courier upgrading the

components on her bike, a shipping company adding a new fleet of airplanes, or a corporation building a new plant. In these situations goods are purchased and services are performed in order to maintain equipment, replace it as it wears out, or to buy new equipment. What makes these goods and services different from basic goods and services is that these goods and services are bought with the intention of using them to make other goods. These goods and services are part of the process of producing and selling other goods and services – catching fish, building an extension on a house, filling cavities in teeth, delivering packages, manufacturing new products. The engine tune-up, the accounting program, the dental chair, the bike components, the airplanes are not used just one time, but are used over and over again in the process of producing goods to be sold or in the process of performing services to be paid for. According to Lonergan's theory this distinguishes them as surplus goods and services.

Perhaps you are thinking that there does not seem to be much difference between orthodox economists' descriptions of producer and consumer goods and Lonergan's distinction between surplus and basic goods and services. On both accounts consumer goods and basic goods are consumed, used up by entering the standard of living. On both views, producer goods and surplus goods continue to be part of the process of producing other goods and services to be sold. Further, for both orthodox economists and Lonergan the criterion for distinguishing between consumer and producer goods and between basic and surplus goods is how the goods are used.

But orthodox economists think unclearly of producer goods as used in the production of consumer goods. An example is the use of sheet metal in automobiles. Sheet metal, for them, is a producer good that is used to make consumer goods, i.e., automobiles. For Lonergan, however, what determines whether a good is classified as basic or surplus is its use when it is sold as a finished product. A car used solely for leisure activities would be a basic product, but a new car purchased and used by a salesperson to sell printing presses would be a surplus good. The sport fisherman paying a mechanic for an engine tune up would be paying for a basic

service, but the inshore fisherman would be paying for a surplus service. A cyclist who buys new gears so she can more easily ride around the countryside has purchased basic goods, but the bike courier who buys new gears so she can quickly deliver parcels has bought surplus goods. The home handyman who buys the same table saw as a carpenter has purchased a basic good, but the carpenter has purchased a surplus good. The recreational pilot who buys his own plane has purchased a basic good, but Air Canada has bought a surplus good. Orthodox economists don't make such clear distinctions.

It seems relatively easy to distinguish basic expenditures from surplus expenditures. But consider the lawyer who not only uses her computer to write memos and pleadings but who also uses it to surf the web for the best price on a vacation. Is the computer a surplus or a basic good? Take the stockbroker who uses his car to visit clients and also to pick up his children from school. Is the car a surplus or a basic good? Imagine the business person who wines and dines clients and also likes to take the family out for dinner. Are the dinners surplus or basic goods? For Lonergan, distinguishing between such basic and surplus goods is essential.

What about the tuition payments for a BA or an LLB degree? The purchase of university textbooks? Are these payments for basic or surplus goods and services? Is the BA degree a basic expenditure because it is considered by many people to be of no practical use? Is the LLB degree a surplus expenditure because it is training for a job? What about a side of beef purchased by a restaurant from a wholesaler? Is that a basic or a surplus expenditure? Some meals will be charged on company credit cards, but others will be purchased by vacationers. What about the purchase of sheet steel used in washing machines? Is it an expenditure for surplus goods or basic goods? Will it make a difference if the washing machines are used in laundromats or homes? Are the books purchased by university professors basic goods or surplus goods?

Will a client's payment to a lawyer for settling a personal injury case be a payment for basic or surplus services? Should a lawyer's services incorporating a company be classified as basic or surplus? Will the interest payments on a car loan be

basic or surplus expenditures? Should the interest payments on a business loan be considered basic payments or surplus payments? Will government spending on new roads be classified as payments for basic or surplus goods and services? Are the payments for new navy warships basic or surplus expenditures? Can the same goods and services be both basic and surplus? It is very difficult to answer these questions. In fact, in order to answer them we must have some appreciation of the productive process. We will discover that the key to settling this issue lies in how the goods are used.

Here it is worth emphasizing that for orthodox economists the distinction between consumer goods, producer goods, and capital is not a key issue. By contrast, for Lonergan the distinction he draws between basic and surplus goods and services is fundamental to understanding how an economy works. In short, there are two types of goods and services. One type – basic – is consumed. The second type of goods and services – surplus – is involved in producing basic goods and services. Later in this paper, we'll see how Lonergan's explanation of how an economy works rests on this fundamental distinction between the two different ways goods and services are used.

## **2 The Productive Process**

If we are to sharply distinguish between basic goods and services and surplus goods and services it makes sense to sharply distinguish between two types of production and sale: one process concerned with the production and sale of basic goods and services and the other process concerned with the production and sale of surplus goods and services. But it is difficult to find businesses that are solely involved in producing and selling either basic goods and services or surplus goods and services in light of the fact that the same goods produced by a business can be basic or surplus depending on how they are used. Goods and services do not neatly fall into one category or another. A lawyer advising a corporation on an intellectual property issue would be providing a surplus service if the product that is ultimately sold or licensed is a surplus good such as a patent used in the design

of an airplane used by Federal Express. But if the same plane is sold to a person who uses it solely to take vacations the lawyer's advice would be part of the basic productive process because the airplane in this situation is a basic good. Hence it is crucial to focus on how the final products are used.

In Lonergan's analysis if the final product is used as a basic good, then the factors of production are part of the basic productive process. If the final product is used as a surplus good, then the factors of production are part of the surplus productive process. The manufacture of a table saw purchased by a home handyman would have been part of the basic productive process, but the same saw purchased by a carpenter would have been part of the surplus production process. A business lunch would be part of the surplus productive process, but the groceries used to make a meal for a friend would be elements in the basic productive process. A washing machine purchased by a hotel and used to wash tablecloths and bed sheets would be a surplus expenditure, but a washing machine purchased by a household to wash both work clothes and leisure suits would be partly a basic expenditure and partly a surplus expenditure.

I have drawn your attention to the difference between basic goods and services and surplus goods and services, but for goods and services to be part of the exchange economy they must be sold and paid for with money which, so far, we have not considered.

### **3 Basic Exchanges: the Flow of Money Connected to Basic Goods and Services**

In the previous sections we were concerned with how goods and services were used. Basic goods were consumed and surplus goods were used to make basic goods. But in this section and the following sections our concern is with how money is being used.

Orthodox economists would have us believe that money makes the world go round. The more money you make the better. The higher a corporation's profits the better. The bigger a country's GDP per capita the better. The greater the NASDAQ Index the better. Lonergan, by contrast, holds a different view.

In his opinion, money and finance should not be considered the centre-piece of an economy. Rather, money and finance should meet the needs of production. Production should not be manipulated to meet the needs of finance.

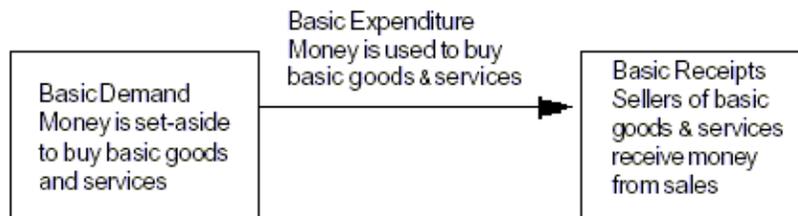
Money is an instrument invented by man to make possible a large and intricate exchange process. While there is no simple and even perhaps no ascertainable correlation between the quantity of money and the volume of exchange activity, it remains true that variations in the volume, if not to result in inflation or deflation, postulate some variations in the quantity. Now in the long run these variations in quantity can be had only by the introduction of a money of account, but if the money of account...stands side by side with a commodity money, then not only are there the undue perturbances of the exchange process from international movements of capital and from financial crises and crashes, but the whole economy comes to be regulated not by the social good, not by the objective exigences of the economy itself, but by the money invented to serve the objective process and the social good. For when the money of account is conditioned by a relation or law connecting it with the stock of commodity money, then the money of account has to obey this law; on the other hand, the exchange process has its own objective laws, and these laws have to be subordinated to the law of money, for without money (which will be present or absent according to the law of money) exchanges cannot take place no matter how useful, how desirable, how necessary. To put the matter more vividly: the objective process has an exigence for a pure cycle, but the law of money can be satisfied only in a capitalist phase and the earlier part of a materialist phase; in consequence we have not the pure cycle but the trade cycle; as net surplus drops, the volume of credit contracts; as credit contracts, the volume of economic activity contracts; the expansion ends by reverting to a pre-expansion position or

something worse.<sup>7</sup>

This quotation and the idea that finance must keep pace with production raise issues that cannot be adequately dealt with unless preliminary insights are achieved.

Let's begin by focusing on the payments corresponding to the purchase and sale of basic goods and services. Consider the wages you receive at the end of the week or month. What is the money used for or spent on? You have living expenses to pay – your mortgage payments, phone bill, heating, gas for your car, entertainment, groceries, restaurant meals, the carpenter's bill for materials and the work done to build a new addition to your house. Payments for these goods and services represent expenditures for basic goods and services. From the point of view of the suppliers of such basic goods and services they are receipts for the sale of basic goods and services.

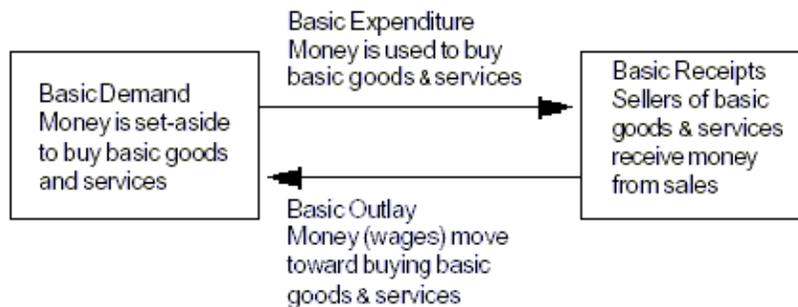
But let's back up for a moment. When you set-aside the amount needed to spend on basic goods and services, before you actually pay your bills, we can say that a particular amount of money is *set-aside*, *poised for*, or *devoted to* basic expenditures. The money might be set aside only momentarily, the moment it is deposited in your bank account by electronic transfer and just before it is withdrawn by direct debit to pay a particular bill. The use of the money you receive is that it is simply *held in readiness* for consumer expenditures. You might say the money is first used to demand basic goods and services. The second use of the money is as an expenditure to pay for basic goods and services. The third use of the money is as receipts of the businesses who supplied you with your basic goods and services. A diagram can capture the uses of your money.




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<sup>7</sup> CWL 21, 104-105

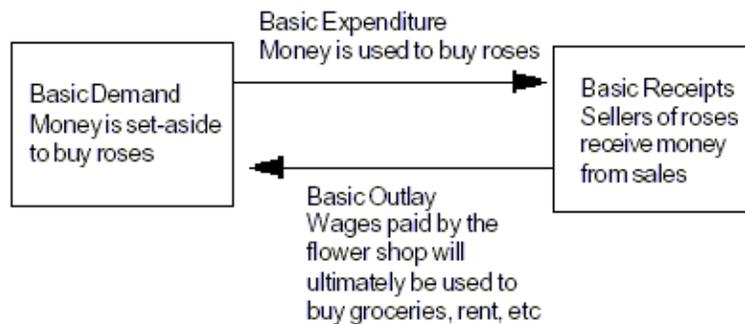
Say you paid the carpenter for work done on your house. How does this money move? Let's trace the flow of payments: (1) You *set-aside* money for the renovation. (2) Your payment to him is a basic *expenditure*. (3) From his point of view it is a *receipt* for basic goods and services. But the carpenter also has to live. How does he use the money he receives? From his receipts he has to pay his own mortgage, phone bill, electric bill, groceries, entertainment, restaurant meals, flowers for the garden. (4) Hence he directs a portion of his own receipts toward purchasing consumer goods. In this way, the carpenter's payments are set-aside or held for the purchase of basic goods and services thereby joining the flow of money used to buy and sell basic goods and services. The more complete diagram looks like this.



It is apparent from the diagram that your own expenditures on basic goods and services are involved in a circulation of payments for basic goods and services. We started with the basic payments of an individual consumer and followed those payments to a supplier of basic goods and services who in turn sets-aside money for basic expenditures and who also spends money on basic goods and services.

Let's take another example of the flow of money connected to the purchase and sale of basic goods. Suppose you decide to buy a dozen roses for your Valentine. In your mind you set-aside \$25 for roses. Money is poised or ready for a basic expenditure. Another way to say it is that there is a demand for basic goods, the roses. You make a basic expenditure when you pay for the roses. Your expenditure is part of the basic receipts of the flower shop who supplied you with the roses. The flower shop, in turn, has basic outlays. For

example, it pays wages to employees who will, in turn, purchase basic goods and services. The various uses of money consist in (1) your money being set-aside for, or demanding, basic goods – roses, (2) your basic expenditure – paying for the roses, (3) the basic receipt of the flower shop – receiving money for the roses, (4) the basic outlay of the flower shop – wages of employees who will demand, or set money aside for, basic goods and services. This circulation of money can be captured by this diagram.



In the discussion above of how money is used in relation to basic goods and services I have not been concerned with the actual amounts of payments or the time intervals during which they take place. Of course, these are important dimensions and it is essential to know how much money and how it is actually being used in particular time intervals. But for now I am content to stress how the use of money with respect to basic goods and services shifts. In other words, what I want to communicate is that the purchases and sales of basic goods and services constitute a circulation or flow of payments.

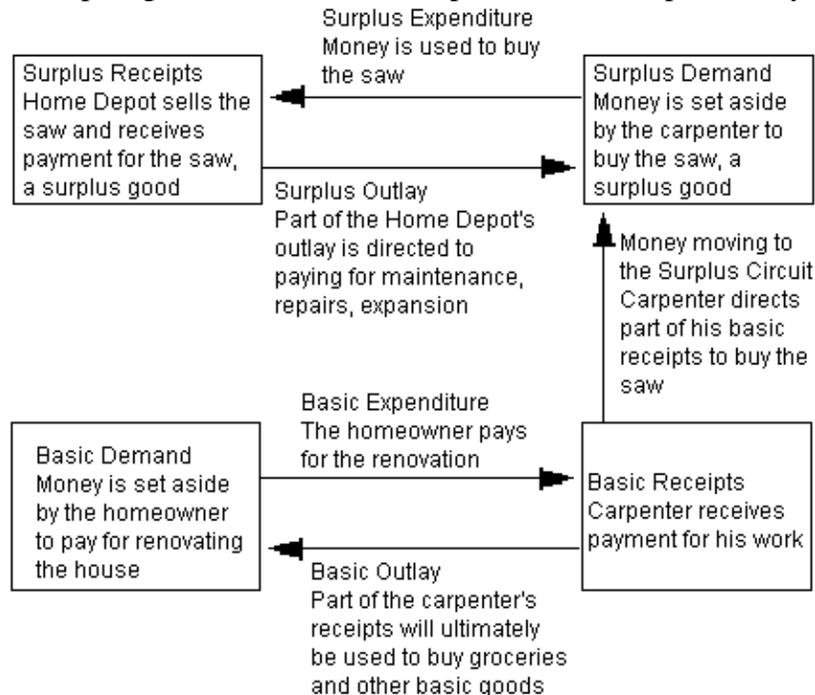
And this flow of payments is comprised of: (1) money is set-aside for purchasing basic goods and services; (2) money is spent on purchasing basic goods and services; (3) sellers of basic goods and services receive money from sales; (4) sellers of basic goods and services direct their money toward purchasing basic goods and services for themselves. And so on.

#### **4 Money Leaving the Basic Circulation of Payments and Joining the Surplus Circulation of Payments**

From time to time a carpenter needs to buy a new circular

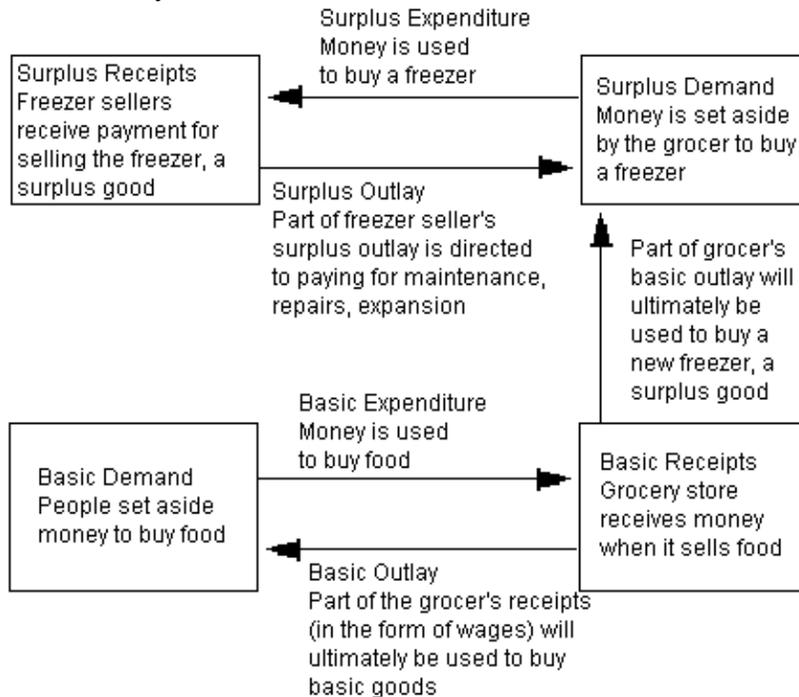
saw. These saws wear out after using them day in and day out. Is this purchase a basic or a surplus expenditure? Purchasing this new saw will *not* be a basic expenditure because the saw will be used on any number of jobs. It will be a surplus expenditure. Presuming that the carpenter specializes in renovating houses, his receipts are for supplying basic services. But the money the carpenter spends on the circular saw is a surplus expenditure. Hence money must leave the basic circuit and enter the surplus monetary circuit.

From the carpenter's receipts, that is, the money he receives for doing home renovations, the carpenter has outlays. He pays his expenses. Not only does his money – in the form of his wages – move toward purchasing basic goods, but a portion of his money is also set aside to be used for purchasing surplus goods like the new circular saw. Thus we can say that a portion of the carpenter's money is used to demand surplus goods. When he buys the saw at Home Depot he has made a surplus expenditure. The supplier or seller of the saw – Home Depot – treats this payment as a surplus receipt. But suppliers of surplus goods such as Home Depot also have surplus outlay.



They use their receipts from the sale of surplus goods and services to pay their expenses. Home Depot may buy a new boom truck, replace its paint mixer, or change the oil in its delivery trucks. In other words, a portion of the surplus goods supplier's money is ultimately spent on buying surplus goods. This flow or circulation of money is captured by the diagram above.

Let's consider another example of money leaving the basic circulation of payments and entering the surplus flow of payments – a grocery store that wants to buy a new freezer. The grocery store is a supplier of basic goods to the extent it sells food to people who eat it and have no intention of using it to make and sell power-breakfasts or business lunches. Not only does the grocery store use its receipts as basic outlay – in the form of wages that ultimately will wind up being spent on consumer goods and services such as food, rent, entertainment – but if the grocery store needs a new freezer a portion of its outlay will be set-aside for a surplus expenditure. Buying a new freezer is a surplus expenditure. If the grocer bought a new delivery truck, a new saw blade for the meat saw, or a new



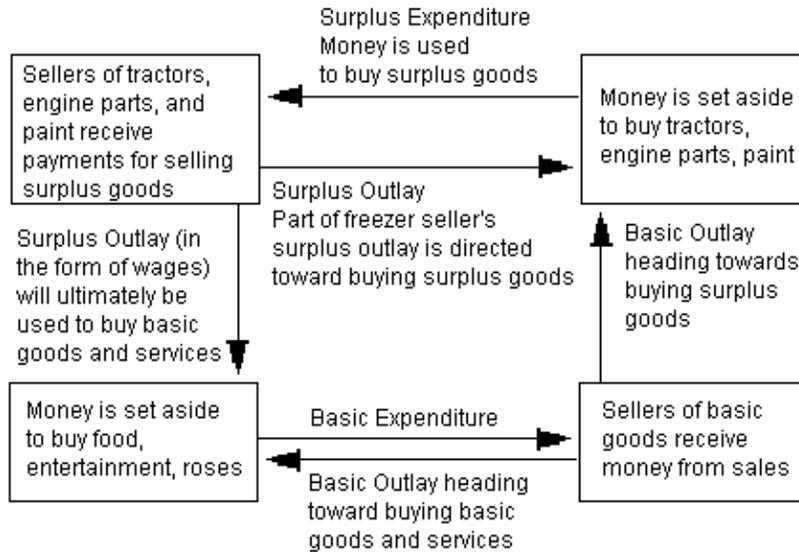
cash register they would also be surplus expenditures. The above diagram indicates how the money would circulate in this situation.

## **5 Surplus Exchanges and the Flow of Payments Connected to Surplus Goods and Services**

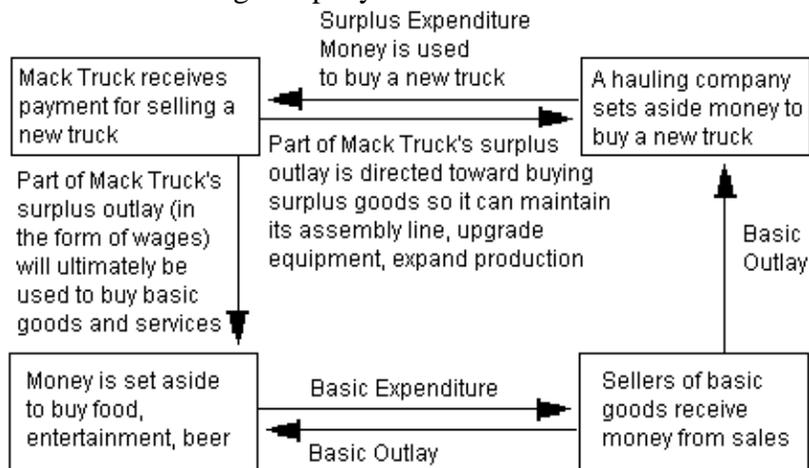
Let's begin by examining a selection of payments made by the owner of a cargo ship. The owner is paid for transporting goods around the world. If the ship owner transported tractors that will be used in a farm business then the payments made to the ship owner for transporting the tractors will be surplus expenditures. For the ship owner, these payments represent receipts for surplus goods. These are surplus receipts because the final goods sold – the tractors – are surplus goods. The ship owner is a supplier of a surplus service. A portion of the ship owner's money will ultimately be spent on painting the ship, buying new engine parts as they wear out, up-grading the navigational equipment from time to time. These will be outlays for surplus goods and services.

When the ship owner *sets-aside* a portion of his receipts to purchase maintenance for the ship we can say that the money demands surplus goods or is poised or ready to buy surplus goods. Paying for the maintenance is a *surplus expenditure*, an expenditure on surplus goods and services. From the point of view of the paint seller, the engine parts supplier, and the navigational equipment suppliers, such payments are *surplus receipts*. These businesses in turn have *surplus outlays*. They also pay to maintain and repair their own machines and buildings and sometimes expand their businesses.

But a portion of the ship owner's outlay is also spent on wages – the captain and crew must be paid. Assuming that these people spend all their wages on basic goods – groceries, rent, entertainment, heat, phone, electricity, car payments – a portion of the ship owner's outlay moves toward and into the basic monetary circuit. In this way money leaves the surplus circulation of payments and enters the basic circulation of payments. The diagram on the next page captures this movement.

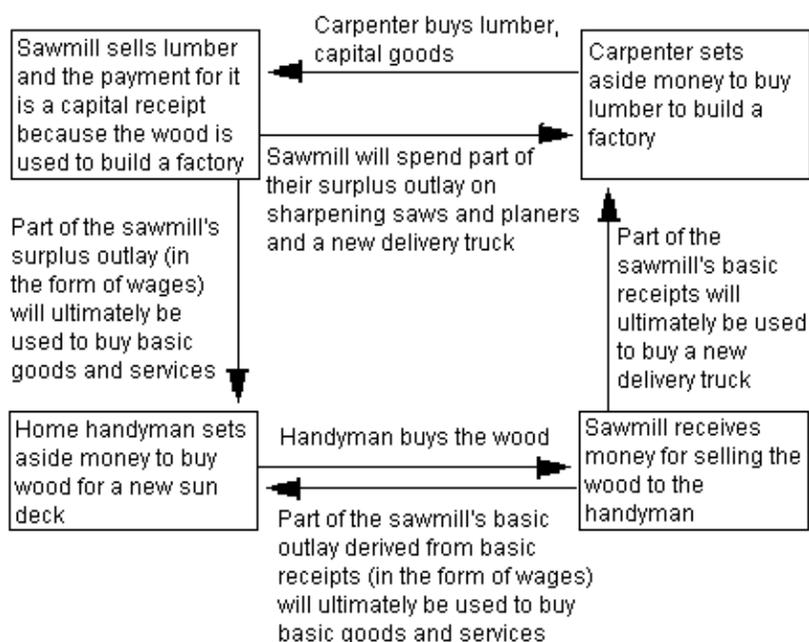


We can also diagram the flow of payments connected to the sale of a transport truck from a manufacturer like Mack Truck to a trucking company.

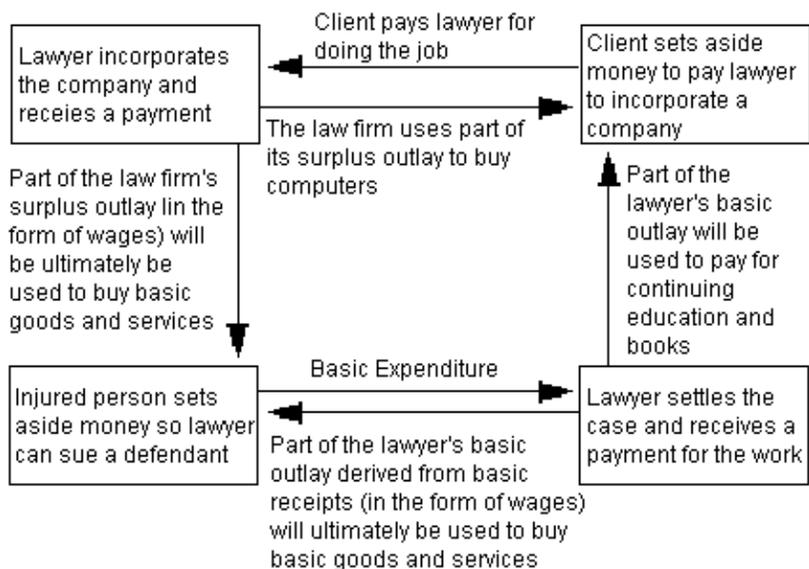


### 6 Enterprises Selling Both Basic and Surplus Goods and Services

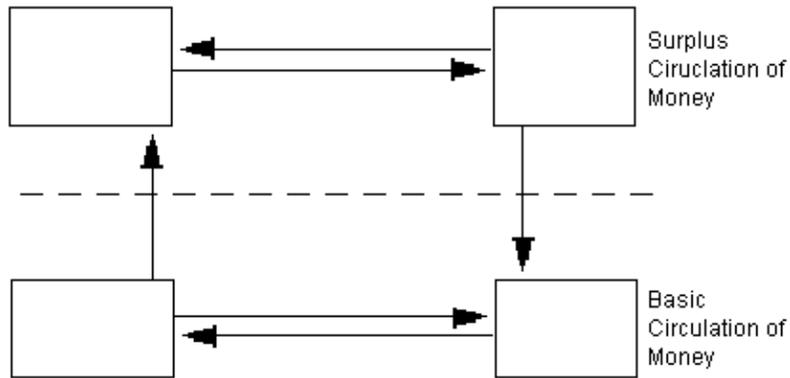
In an effort to draw together the circulation of payments for basic and surplus goods and services consider a sawmill that sells lumber to do-it-yourselfers and also to carpenters who construct buildings to be used by businesses. Can we map out the circulation of payments?



Let's analyze the flow of payments involving a lawyer who incorporated a company for one client – a surplus service – and who also settled a personal injury claim for another client – a basic service.



Take a store like CompUSA which sells computer accounting programs to businesses and games to people who just want to have some fun. See if you can map out the flow of payments.



### 7 Redistributive Exchanges: Exchanges That Do Not Involve Goods and Services

Our concern up to this point has been with the production and sale of new goods. We have focused on payments for goods that cover the costs of production and payments for services that cover the costs of performing those services. When they are purchased, goods leave the productive process. If those same goods are resold later it would be a mistake to include those payments in the monetary circuits we analysed above. To include payments for second-hand goods such as used clothing and used carpentry tools would amount to counting the payments for those goods twice.

Consider a house. A couple hire a contractor to build their dream home. When it is completed they pay the contractor. The house is no longer part of the productive process when it is paid for. We could say our basic good, the house, leaves the productive process when it is purchased. Two years later, however, the couple decide to sell their house. After being on the market for a few months they close the sale. This sale is different from the original purchase of the house. The original owners of the house do not use the money they receive when they sell their house to pay the contractor. The contractor has already been paid for his services and has paid his expenses. In

this second sale money is transferred from the buyer to the couple. But the transfer of money is simply given to the couple in exchange for owning the house. This payment is not connected to the productive process in the sense that here the money is not an expenditure for building the house. The transfer of money is not a payment to the contractor or anyone else for his services in building the house. The cost of building the house has already been paid by the original owners. In other words, the second sale is not used to take a product out of the productive process. The house was taken out of the productive process when the original owners paid the contractor. To classify the resale price of the house as a basic payment would mean counting the cost of the house twice.

Other sales that simply involve a change in ownership are purchases of second-hand cars. Purchases of all the weird and wonderful things found at garage sales and flea markets are simply changes in ownership too. Buying or selling shares in Microsoft or Royal Bank simply represent changes in the ownership of shares. When you get a bank loan the principal is a transfer of money. Taking out a loan or paying back the principal is not payment for surplus or basic goods. An insurance company reimbursing you when your car is stolen is simply transferring the ownership of money from it to you. A defendant ordered by a judge to pay a plaintiff a sum of money as compensation for personal injuries is not connected to the productive process either. Perhaps it is obvious that the sale of stolen goods simply represents a change in possession. Perhaps it is easier to see that gifts, inheritances, government transfer payments, tax payments, and charitable donations do not move goods and services through the productive process. Lonergan calls these types of exchanges *redistributive exchanges*.<sup>8</sup>

However, we cannot forget that most of these exchanges come at a price. The second-hand car dealer takes a percentage of the sale price, the stockbroker charges a fee, insurance companies have their deductibles, interest must be paid on

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<sup>8</sup> Don't be misled by the term *redistribution*. Lonergan does not use the term to mean redistributive justice or the redistribution of incomes. He uses it to stress exchanges that are not directly connected to the process of producing basic or surplus goods and services.

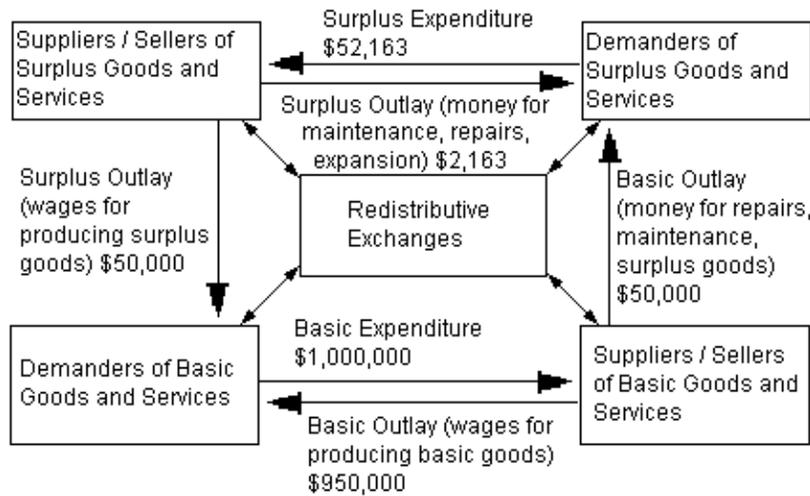
bank loans, and lawyers don't like to work for free. These charges and fees are part of the productive process. They are payments for services rendered. Whether the payments are for the performance of basic services or surplus services depends on the nature of the service and the goods. The percentage collected by the second-hand car dealer would be a receipt for the performance of a basic service if the car is used for sightseeing. A fee paid to an insurance broker who looks after the insurance of a company engaged in producing surplus goods should be classified as a receipt for performing a surplus service.

### **8 The Circulation of Payments for all Goods and Services in a Closed Economy**

I have focused on payments for circular saws, groceries, freezers, trucks, lawyers' advice, paint, home renovations in order to indicate how payments for basic goods and services and how payments for surplus goods and services circulate in an economy. Lonergan's idea is that *all* the payments connected to the sale of basic goods and services and *all* the payments connected to surplus goods and services in a particular time interval in an economy should be kept track of. This means that it is crucial to accurately measure how much money is moving or flowing in each circuit of payments – the basic circuit of payments and the surplus circuit of payments – and to measure how much money is leaving or entering each circuit during particular time intervals. Measuring the movement or flow of money in an economy is the key to understanding what is going on. The diagram on the next page integrates the analysis above by indicating how money would flow in an economy.

### **9 Concluding Pointers**

We have arrived now at a fundamental diagram of economic activity. What the diagram means to you depends, of course, on the amount of work and economic experience you bring to it. What the diagram does is help you hold together and develop your economic understanding. I have identified



the essential elements, the significant variables in an economy. More work will help you read that diagram in a fuller fashion.<sup>9</sup>

In summary, I sharply distinguished between basic goods and services and surplus goods and services and went on to identify two main types of exchanges: *basic exchanges* involving the sale of goods and services that are consumed and *surplus exchanges* involving the sale of goods used in the process of producing other goods to be sold.

The connection between the production and sale of basic goods and services was portrayed as a flow or circuit of payments in which: (1) money is set-aside to buy basic goods and services, (2) money was spent on purchasing basic goods and services, (3) sellers of basic goods and services received money (receipts) which they treated as income, and (4) sellers of basic goods and services paid their employees and bought surplus goods and services. I portrayed the connection between the production and sale of surplus goods and services as a flow or circuit of payments in which: (1) money is set-aside to buy surplus goods and services, (2) money was spent on purchasing

<sup>9</sup> For example, you will find it worthwhile to examine the relations among the economic variables when an economy is experiencing a static phase, a surplus expansion, and a basic expansion, when a government collects taxes and spends money, and when an economy is involved in international trade.

surplus goods and services, (3) sellers of surplus goods and services received money (receipts) which they treated as income, and (4) sellers of surplus goods and services bought surplus goods and services and paid their employees.

Loneragan's concern is the exchange economy, with the goods and services that are produced and sold for money. Gifts and barter lie outside his interest. Further, it doesn't matter whether the goods and services sold are cocaine or coconuts, guns or greens, sex or spaghetti. As long as these goods and services are sold at market value they are part of the exchange economy. Prescribing solutions to complex issues such as poverty has not been part of my immediate agenda. Before tackling such problems we must first *understand* as best we can how an economy works. An analogy may help. In order to properly treat a person with kidney failure a doctor has to know how kidneys work. Similarly, in order to know how to properly treat a sick economy we must first identify the significant variables and understand how they are related.

What particular goods we produce and sell, whether or not we should devote our efforts to selling popcorn or porn, building armies or fighting AIDS, paying off the national debt or building hospitals, drilling for oil or saving energy, buying stocks or donating to charity, are important questions. But they are not the questions I raised in this paper. Rather, my point is that issues having an economic dimension can only be adequately tackled after getting to grips with the economic dimension itself. To be blunt, there are two main sets or flows of payments in an economy – basic and surplus – and without making that distinction you are in the field of guess-work. Hence I have been concerned with matters that are *strictly* economic. And the starting point is Lonergan's key diagram.

Bruce Anderson is the author of *'Discovery' in Legal Decision Making*, and, with Philip McShane, *Beyond Establishment Economics*. He can be reached at [axial@bellatlantic.net](mailto:axial@bellatlantic.net).

Comments can be sent to [jmda@mun.ca](mailto:jmda@mun.ca).

## THE BASIC PRICE SPREAD RATIO

TOM MCCALLION

This essay endeavours to follow my reading of the argument in Bernard Lonergan's quite brief discussion of the above topic, to be found in *Macroeconomic Dynamics: An Essay in Circulation Analysis*, Collected Works of Bernard Lonergan 15 (Toronto: Toronto University Press, 1999) (hereafter *CWL 15*), as §28 (pages 156-162).<sup>1</sup>

An immediate difficulty must be faced. Section 28 occurs late in Lonergan's development of his argument, and must therefore build on concepts and 'theorems' that he has introduced in earlier sections. I can indicate when these are used, but it would be unreasonable to expect their conclusions to be justified again here.<sup>2</sup>

Apart from minor changes in notation, etc., and some greater detail in the use of mathematical arguments, there is little that is novel in what is offered. It merely reflects what I found helpful, and the augmentations I needed, in my own attempts to grasp Lonergan's arguments. It is tendered here in the hope that some other readers may find it helpful, and where

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<sup>1</sup> A related previous discussion was given in *For a New Political Economy*, Collected Works of Bernard Lonergan 21 (Toronto University Press, 1991) (hereafter *CWL 21*), as §15, on page 301. It concerned the Basic Price Spread difference itself ( $P' - \pi'$ ), rather than the ratio of these two. It would take us too far afield here to analyse in detail why it failed to deliver the results Lonergan sought, and so was dropped in favour of the present approach.

<sup>2</sup> This essay is in effect just one chapter in a longer and more ambitious project to integrate/paraphrase the whole of *CWL 15* (and the *For a New Political Economy* essay in *CWL 21*.) Points used in the present chapter/essay will then have been justified in earlier parts of this much larger text.

I have got it wrong it may perhaps spark off a debate.

The essential point made by Lonergan is that the cyclical variations in the ratio under discussion are treated as signals of what is happening in the economy. It is because these in practice are often misinterpreted (primarily because of misleading underlying theory rather than as a result of malevolent greed) that the ongoing 'pure cycle' becomes corrupted into the boom and bust of the 'trade cycle'.

### **Notational Conventions.**

Following *CWL 15*, flow variables (so much every so often) are indicated by upper-case letters. Any exceptions will be noted where they occur. The related quantity variables, if needed, will be indicated by the corresponding lower-case letters.

All fractional variables and index numbers that are newly introduced in this section are indicated by lower-case Greek letters. They will either be direct transpositions of Lonergan's Roman lettering or will have some convenient mnemonic value. For variables carried over from earlier sections of Lonergan's text it would cause unnecessary confusion to change these, so they are kept more or less as given in *CWL 15*. Again, any slight differences will be pointed out when they occur.

### **The Diagram.**

A great deal of Lonergan's analysis is based around his famous Diagram, of which there are a number of different versions. I have had the temerity to give my own version, as *Figure 1* (below). The following are its essential differences from Lonergan's presentation: -

- (i) It follows Philip McShane's rotation of the presentation so that the two Surplus functions are on top and the two Basic ones are below.<sup>3</sup>
- (ii) The Basic Supply and Demand areas are switched, so that the direction flow in both stages is the same (left-right). To avoid the two 'crossover' components having to be drawn on

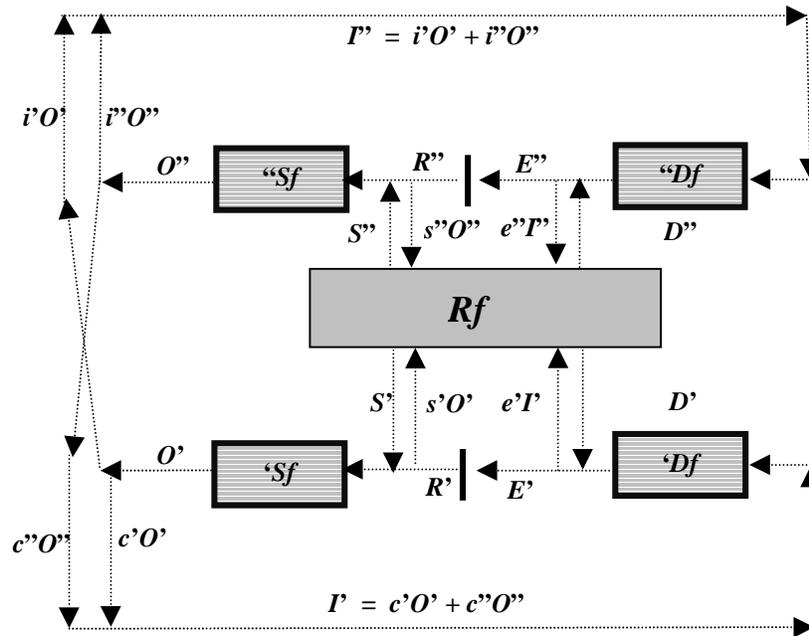
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<sup>3</sup> Philip McShane, *Economics for Everyone* (Halifax: Axial Press, 1998), 92.

the diagonals, and so overlapping confusingly with the Redistributive area, this change necessitated some diversion of the arrows.

(iii) To meet the difficulty arising from *CWL 15*'s duplicated use of fractions,  $s'$  and  $s''$ , two new ones,  $e'$  and  $e''$ , have been introduced. Notice that the positioning of these four flows into  $Rf$  means that we depart from the *CWL 15* equations in that for each stage we in fact only have:  $i + c = 1$ .<sup>4</sup>

*The Diagram.*



*Figure 1.*

**The Analysis.**

Lonergan begins by saying that there is a sense in which the portion<sup>5</sup> of Basic outlay [=  $c'O'$  ] that moves to Basic

<sup>4</sup> This equation introduces another convenient notational abbreviation. Where variables that would normally be accented (to distinguish Basic and Surplus) are used in unaccented form, the absence indicates that what is said applies equally to both cases.

<sup>5</sup> Lonergan repeatedly uses the word 'fraction' to mean a part of something, so that in the case in question this would be an amount of money per interval. It seems preferable to substitute the word 'portion' and keep the term 'fraction' as meaning a pure number, the ratio of that part to

income is the ‘cost’ of Basic production.<sup>6</sup>

This certainly seems counterintuitive. In truth the economy is only ‘for’ the Basic stage, aimed at an emergent material and cultural standard of living (*SOL*). As this is its ‘end’, the Surplus stage is only a ‘means’. It is of course not just a means to ensure the existence of a Basic flow, but essentially intends the latter’s further growth. It behaves as a kind of bonus over and above the mere persistence of that Basic flow. But it is not pure bonus. At any particular moment some of it is required, in the form of depreciation (which we have written as *Dep*), (*i.e.*, the demand for maintenance and replacement). The rest, what Lonergan refers to as ‘net fixed investment’ (*NFI*), is the true bonus.<sup>7</sup>

Since we are assuming at this stage in Lonergan’s argument that the ‘continuity condition’ [ $D' - e'I' = 0 = D'' - e''I''$ ] applies, then  $I''$  is keeping pace with  $E''$ . If we therefore project the same proportional breakdown that we have in  $E''$  [*i.e.*,  $NFI : Dep$ ] backwards onto  $I''$  we get a partition of  $I''$  into what he calls pure surplus income (*PSI*)<sup>8</sup> and ordinary surplus income (*OSI*). In symbols: -

$$NFI : Dep = PSI : OSI.$$

Of course  $I''$  has another partition as well, based on its sourcing in either Surplus or Basic outlays. [*i.e.*,  $e''O'' : c'O'$ .] We have no good reason for assuming that these two partitions would be the same, nor even merely in the same proportion. We shall have to return to this important point later.

*PSI* is the income equivalent of the ‘bonus’ discussed above. As a result of this analogy Lonergan can use it as his

the whole.

<sup>6</sup> Recall that for us  $i'' = 1 - c''$  and  $i' = 1 - c'$ .

<sup>7</sup> This terminology had all been set out by Lonergan in his previous section (§27)

<sup>8</sup> It almost goes without saying that Lonergan’s use of the term ‘surplus’ for the circular flow made up of all the accelerator stages is immensely irritating. After all, the term ‘pure’ in “pure surplus income” should really just be the (ordinary usage) term ‘surplus’, meaning ‘excess’. I think this whole matter needs amending in the tradition, but it would introduce too many distractions to attempt it here.

definition of a macroeconomic (= functional) notion of *profit*.

This is not of course an accountant's simplified view of 'profits', as the excess of receipts over outlays. The bulk of the latter are included by us as outlays, as being in a sense the 'wages' paid to managements or owners.

Loneragan does not say this, but symmetry would lead one to assert that there are two kinds of 'profit', relating to the two stages. Let us redesignate the profit defined above as *Surplus Profit*. In the Basic case the total income, *I*, could be similarly partitioned into pure Basic income and ordinary Basic income. The latter would act to maintain the existing *SOL*. The former would be what enabled its growth, and could reasonably be referred to as *Basic Profit*.

In normal usage the obverse of 'profit' is 'cost'. But Lonergan makes an unexpected change. It would have seemed that the Surplus Cost might most simply have been defined as the income equivalent of Depreciation, and Basic Cost as the income equivalent of simple maintenance of an existing *SOL*.

Recall the point made earlier that there is no good reason for assuming that these are the same partitions of the two total incomes as the partitions that are made on the basis of their sources in Outlays.

Despite this *caveat*, Lonergan opts instead to use just such an outlay-based division to define his term 'Basic Cost' as being precisely  $c'O$ . [And 'Surplus Cost' as being  $c''O''$ .] This is a little surprising. He may, of course, define his terms as he wishes, but since he has already fixed the notion of 'profit' this now means that 'profit' and 'cost' in his macroeconomic sense are no longer obverse terms. The remainder of Basic outlay,  $c'O$  is not at all the same as 'profit' in the sense in which he has defined it.

It will be important to keep in mind that our intuitive notion of what 'basic costs' should(?) mean will not follow the theoretical definitions. We shall have to be wary.

In fact, of course, attempts at descriptive justification are not important. We are proceeding by developing our own definitions, some of them 'implicit'.<sup>9</sup> Ultimately the

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<sup>9</sup> This is where terms define a relation and the relation defines the terms, and this alone is treated as being sufficient, there being no additional

justification of such invention is that it ‘works’, in that it gives us a powerful explanatory context.

For brevity of expression the term “Basic costs” will hereafter mean  $c'O'$ . The fraction of Basic outlay that moves to Basic income is an *index* of the ‘cost’ of Basic production.

Recall that total Basic income is given by

$$I' = c'O' + c''O'' \quad [4]^{10}$$

Loneragan has already discussed how  $O'$  and  $O''$  are functions not of the quantities  $Q'$  and  $Q''$  currently being sold at the two final markets, but of the corresponding quantities that are in production, which may be more or less than these, and which are designated as  $\alpha'Q'$  and  $\alpha''Q''$ .<sup>11</sup> (He referred to these  $\alpha$  values as acceleration coefficients. We shall see another way of viewing them later).

It follows that each  $O$  is some price index multiplied by the corresponding  $\alpha Q$ . This will give an equation of the form  $cO = \pi\alpha Q$  for each of the two stages.

We will therefore define two *cost price indices* by

$$\pi' = \frac{c'O'}{\alpha'Q'} \quad \text{and} \quad \pi'' = \frac{c''O''}{\alpha''Q''} \quad [41, 42]^{12}$$

This means that

$$I' = \pi' \alpha' Q' + \pi'' \alpha'' Q''$$

When  $D' - e'I' = 0$ , which is a general condition of circuit balance, we have  $E' = I'$ . In addition,

requirement imposed that would necessitate one delineating a meaning for the terms descriptively.

<sup>10</sup> I will use the equation numbering in *CWL15*. In the case of the present equation [4], however, note that as presented here it has no equivalent of Lonergan’s  $sO$  term. This most adequately meets the point made in footnote 57 (page 49) of *CWL15*. It is already clearly implied in our version of the diagram in Figure 1 above.

<sup>11</sup> E.g., *CWL 15*, p. 112-113.

<sup>12</sup>  $\pi$  replaces Lonergan’s  $p$ . We should also replace the later  $P$  (in  $P'$ ) but this might cause confusion.

$$E' = P'Q' \quad [28]$$

where  $P'$  is the Basic selling price index.<sup>13</sup>

Putting this all together we get: -

$$P'Q' = \pi' \alpha' Q' + \pi'' \alpha'' Q''$$

Now divide through by  $\pi' Q'$ : -

$$\frac{P'}{\pi'} = \alpha' + \alpha'' \frac{\pi'' Q''}{\pi' Q'}$$

Let us introduce two new fractional variables and terms.

$$\rho = \frac{\pi'' Q''}{\pi' Q'}$$

will be called the *Surplus to Basic Ratio*. [A]

$$\beta = \frac{P'}{\pi'}$$

will be called the *Basic Price Spread Ratio*.<sup>14</sup> [B]

So now we have:

$$\beta = \alpha' + \alpha'' \rho \quad [45]$$

Before proceeding, it would seem worthwhile to pause for a moment to try to ‘get our minds around’ these two new concepts,  $\rho$  and  $\beta$ .

By its definition,

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<sup>13</sup> Notice that in this instance, despite being upper case (and not being a Greek letter),  $P'$  is not a rate.

<sup>14</sup>  $\rho$  (rho) replaces for Lonergan’s  $R$  which was altogether too problematic, suggesting the word ‘receipts’. Recall that in this essay we are considering the Basic Price Spread Ratio. As already mentioned in footnote 1, Lonergan’s earlier (unsuccessful) treatment was of the cyclic properties of the Basic Price Spread itself,  $P' - \pi'$ .

$$\beta = \frac{\text{price index for Basic goods sold}}{\text{cost - price index of current Basic production}}$$

By [41] it can also be written: -

$$\beta = \frac{P'\alpha'Q'}{c'O'}$$

$$\frac{\text{current Basic PRODUCTION but priced at present Basic SELLING prices}}{\text{Basic costs}}$$

$$= \frac{\text{PROJECTED value of current Basic production}}{\text{Basic costs}}$$

The source of the Basic Price Spread is the difference between<sup>15</sup> Basic Receipts,  $R'$ , and Basic-Outlay-sourced Basic Income. [More will be said on this below.]

$\rho$ , on the other hand, can be expressed by:  $\rho =$

$$\frac{\text{present Surplus 'finishing' but priced at present Surplus COST prices}}{\text{present Basic 'finishing' but priced at present Basic COST prices}}$$

$$= \frac{\text{REPLACEMENT cost of Surplus goods sold}}{\text{REPLACEMENT costs of Basic goods sold}}$$

The second form shows that  $\rho$  is the ratio of replacement costs ( *i.e.* it depends on  $\frac{\pi''}{\pi'}$  rather than on  $\frac{P''}{P'}$  ). But these two price ratios will be approximately the same.

This means that the essential variability of  $\rho$  is with the ratio  $\frac{E''}{E'}$ <sup>16</sup>, and so with  $\frac{I''}{I'}$ . This makes it correspond more closely to our intuitive expectations of what a 'surplus to basic

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<sup>15</sup> Lonergan's use of the expression 'difference between' can be confusing. It does not always mean, as it would for a mathematician, the result of a subtraction, but seems to be just a synonym for 'distinction between' or 'non-equality of'.

<sup>16</sup> Since  $\frac{\pi''Q''}{\pi'Q'}$  is approximately the same as  $\frac{P''Q''}{P'Q'} = \frac{E''}{E'}$ .

ratio' would be.

Because  $\beta = \alpha' + \alpha''\rho$ , the influence of  $\rho$  on the Basic Price Spread is mathematically clear. Since  $\alpha''$  is positive, increasing  $\rho$  will mean increasing  $\beta$ .

But it is also easy enough to understand.<sup>17</sup> The greater the value of  $\frac{I''}{I'}$ , which we have just seen to be effectively the same

as  $\rho$ , the greater  $I''$  will be as a fraction of total Basic Income  $I = I'' + I'$ . This will tend to feed through to mean a greater contribution from Surplus outlay to the Basic stage, and so in turn a lower such contribution from Basic outlay. But this latter is just another way of saying a lower level of Basic Cost. Finally, since Basic Cost is the denominator of its alternative fractional expression,  $\beta$  will increase as well.

Let us now investigate  $\rho$  in greater detail. It can be written as  $\left(\frac{\pi''}{\pi'}\right)\left(\frac{Q''}{Q'}\right)$ .

For any variable  $X$  the proportional rate of change of  $X$  is  $\frac{dX}{X}$ .<sup>18</sup>

**A notational convention.**

Hereafter we shall write  $\hat{X}$  to indicate this proportional rate of change, [*i.e.*  $\frac{dX}{X}$ ].

[This is traditionally read as “X hat”.]

It is fact (based on fairly straightforward calculus considerations<sup>19</sup>) that if both  $Q$  values are positive then the rate

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<sup>17</sup> The formalism of mathematics is not a substitute for understanding. Indeed, it is too frequently a mask for its absence. You can switch off your head and just ‘let your mathematical fingers do the walking’!

<sup>18</sup> An example would be the traditional notion of a growth rate (of GDP, for instance).

<sup>19</sup> Proof. For brevity, let us write  $d$  for  $\frac{d}{dt}$ .

$d\left(\frac{A}{B}\right) = \frac{BdA - AdB}{B^2} = \frac{A}{B}\left(\frac{dA}{A} - \frac{dB}{B}\right)$ , by using the ‘Quotient Rule’.

of growth of the ratio  $\frac{Q''}{Q'}$

will be respectively  
exactly as

$> 0,$	$= 0$	$< 0$
$\widehat{Q}'' > \widehat{Q}'$	$\widehat{Q}'' = \widehat{Q}'$	$\widehat{Q}'' < \widehat{Q}'$

In  $\rho$ , however, there is another extra multiplier,  $\frac{\pi''}{\pi'}$  of the ratio  $\frac{Q''}{Q'}$ .

Normally we would expect  $\frac{\pi''}{\pi'}$  to be close to unit value, or at least fairly constant, since cost prices, *e.g.* wage rates, in the Surplus and Basic stages are determined by more or less the same considerations. If there is a difference it might be expected that  $\pi''$  will be higher than  $\pi'$  (*e.g.* wage rates in hi-tech industries, where a larger than average proportion of the production might reasonably be expected to be Surplus, may be higher than the general rates in the economy). But even then one would expect the ratio to be relatively constant. This implies that the rate of growth of  $\rho$  will be of the same sign as that of  $\frac{Q''}{Q'}$ .<sup>20</sup>

Since the conditions  $\widehat{Q}'' > \widehat{Q}'$ ,  $\widehat{Q}'' = \widehat{Q}'$  or  $\widehat{Q}'' < \widehat{Q}'$  are

With  $A$  and  $B$  positive, this means  $d\left(\frac{A}{B}\right)$  and  $\frac{dA}{A} - \frac{dB}{B} = \widehat{A} - \widehat{B}$  have the same sign. [Proved]

<sup>20</sup> If  $X = kA$ , where  $k$  is a constant, then  $\widehat{X} = \widehat{A}$ . [*i.e.* not  $k\widehat{A}$ , as would be the case with an ordinary derivative.]

Proofs.

[Each of the proofs uses the fact that  $k$  is a constant, so that  $\frac{dk}{dt} = 0$ ].

(i)  $X = kA \Rightarrow \ln X = \ln A + \ln k$

Differentiate *w.r.t.* time:  $\frac{1}{X} \frac{dX}{dt} = \frac{1}{A} \frac{dA}{dt}$  QED.

Alternatively, (ii) using the product rule,

$\frac{dX}{dt} = k \frac{dA}{dt} \Rightarrow \frac{1}{X} \frac{dX}{dt} = \frac{1}{kA} k \frac{dA}{dt} = \frac{1}{A} \frac{dA}{dt}$  QED.

respectively those for Surplus Expansion, Proportionate Expansion and Basic Expansion,<sup>21</sup> these three are therefore correlated exactly with the cases  $d\rho > 0$ ,  $d\rho = 0$  and  $d\rho < 0$  respectively.

This can be conveniently assembled into a Table.

$\widehat{Q}'' > \widehat{Q}'$	$\widehat{Q}'' = \widehat{Q}'$	$\widehat{Q}'' < \widehat{Q}'$
Surplus Expansion	Proportionate Expansion	Basic Expansion
$d\rho > 0$	$d\rho = 0$	$d\rho < 0$

Figure 2.

The next section in Lonergan’s text was in his earlier notes, but was marked for exclusion from the 1978 version. This was not because it was incorrect, nor even uninteresting, but because it is difficult for most people and the central thrust of the argument can be sustained without it. Lonergan probably realised that for his long-suffering students the cake was just not worth the candle, and so decided to leave it out. Having investigated the effect of  $\rho$  on the values of the Basic Price Spread Ratio, he wished to discuss the effects of the two acceleration coefficients, the  $\alpha$  values. The reader may treat my discussion (with a side bar and between the horizontal lines) as a long parenthesis, and simply skip it.

Let us begin with the accelerator equation  $q = \alpha Q$ .<sup>22</sup>  
 Differentiate this: -  $dq = \alpha dQ + Q d\alpha$

<sup>21</sup> Note that these are the conditions for Surplus Expansion, *etc.* (as in Lonergan’s original version given in *CWL21*). It is not in fact the confused amendment [*e.g.*  $|\widehat{Q}''| > |\widehat{Q}'|$ ] suggested in *CWL15*. The addition of the absolute-value signs would make the working of the present analysis quite impossible, and is in any case even inconsistent with Lonergan’s own statements (and usage).

<sup>22</sup> Recall that when variables for which one would normally expect accenting are written unaccented this is to be taken as implying that the analysis applies equally well to the Basic and the Surplus cases. Notice also that the use of a lower case  $q$  here breaks our normal notational convention. It still represents a rate, but the one that applies at a different moment in the process.

$$\begin{aligned}
 \text{i.e.} \quad Qd\alpha &= dq - \alpha dQ \\
 d\alpha &= \frac{1}{Q}dq - \alpha \frac{dQ}{Q} = \frac{\alpha}{q}dq - \alpha \frac{dQ}{Q} \\
 &= \alpha \left( \frac{dq}{q} - \frac{dQ}{Q} \right) \\
 d\alpha &= \alpha(\hat{q} - \hat{Q}) \quad [46]
 \end{aligned}$$

Dividing by  $\alpha$  gives:  $-\hat{a} = \hat{q} - \hat{Q}$  [C]<sup>23</sup>

*An analogy.*

Before proceeding it may help to consider a better-known example of such an equation.

If nominal (quoted) interest rates on savings are  $r$  [ $r$  % expressed as a decimal] and inflation is running at  $\phi$  [again a decimal] then we say the ‘real’ interest rate is  $r - \phi$ .

There is a true sense in which the interest rate  $r$  paid on savings  $s$  is exactly what we mean by  $\hat{s}$ . Similarly, the inflation rate  $\phi$  could be expressed, in terms of price  $p$ , as  $\hat{p}$ . The ‘real’ interest rate will then be  $\hat{s} - \hat{p}$ .

Let us say that the real interest rate measures the growth of something we could call *worth*,  $w$  (or better, perhaps, ‘*purchasing power*’)

Then we have:  $\hat{w} = \hat{s} - \hat{p}$ <sup>24</sup>

The analogy between this [ $\hat{w} = \hat{s} - \hat{p}$ ] and (my) equation [C] above is obvious.

$q$  represents the quantity in production, and  $Q$  the quantity sold in the same interval.

Thus  $\hat{\alpha}$  could be described as the ‘real’ growth rate of the laying down of production (*i.e.* net of ‘losses’ to sales!)  $\alpha$  itself might therefore be described as the ‘production power’ of the stage in question.

<sup>23</sup> This result can be reached more quickly by just applying to the ratio  $\alpha = q/Q$  a general growth-rate Theorem that if  $X = \frac{A}{B}$  then  $\hat{X} = \hat{A} - \hat{B}$ .

<sup>24</sup> Notice of course that it would be quite meaningless to move from this to  $w = s - p$ . The ‘hat’ is not an derivative that could, as it were, be integrated away.

*Back to the analysis.*

Let us now return to analysing the equation

$$d\alpha = \alpha(\hat{q} - \hat{Q}).^{25}$$

Since we always have  $\alpha > 0$ , the equation tells us that  $d\alpha > 0$  will coincide with  $\hat{q} > \hat{Q}$ . Let us assume that the phase represented by  $\alpha$  is an expansion.<sup>26</sup> This means that we have  $\alpha > 1$

The next section of Lonergan's text is made excessively difficult to read because of his (recurring) use of such long winded expressions as 'the rate of current production of ... quantities ... in proportion to its size'. The latter just means the growth-rate of current production, or symbolically,  $\hat{q}$ .

Imagine that one was attempting to hold  $\alpha$  constant, at some value greater than 1. So one would be trying to maintain  $q$  as some fixed multiple ( $> 1$ ) of  $Q$ . This would imply that  $d\alpha = 0$  and so  $\hat{q} = \hat{Q}$ . But as soon as each component in  $q$  reached the final market, it would become part of the new value of the sales,  $Q$ , a part that, on our assumption, is greater than the equivalent had just been. This means that  $Q$  would undergo an acceleration.<sup>27</sup> This would make  $\hat{Q}$  exceed  $\hat{q}$ , so that  $d\alpha$  would become negative.  $\alpha$  would fall in value. So the acceleration coefficients are, as Lonergan remarks, 'magnificently unstable'.

The only way to ensure the continuance of a high value of  $\alpha$  would be to maintain  $\hat{q}$  at a constant positive value. Lonergan has already shown that  $\hat{q} = \text{constant}$  means that  $q$

<sup>25</sup> We are still within the 'parenthesis'.

<sup>26</sup> *i.e.* if we are thinking of  $\alpha$  it is a Basic expansion, and if  $\alpha$ ' a Surplus one.

<sup>27</sup> There are two points to note here. First, if there was only one good, the transition would be sudden and discontinuous, so that it would hardly be called an acceleration in any ordinary sense of the word. But  $Q$  is an aggregate of many smaller parts, and these will be sold at slightly different times. This means that the aggregate value will in all likelihood change more continuously.

The second point is that the word 'acceleration' refers to  $dq$  [or more adequately,  $dq/dt$ , and recalling that  $q$  is already a flow], not to  $\hat{q}$ .

itself has to be growing in geometrical proportion<sup>28</sup>, a near miraculous situation that could not be long sustained.

The outcome of all this is that  $\alpha$  rises to a maximum, and then stays there for as long as  $\hat{q}$  can maintain its constant value. But this cannot be for very long. Eventually, therefore,  $\hat{q}$  will have to fall, (so that  $q$  itself will begin to rise ever less rapidly), and then the value of  $\alpha$  will begin to drop.<sup>29</sup> In accordance with equation [45] this will in turn lead to a drop in the Basic Price Spread Ratio.

In any expansion the lag between quantities sold,  $Q$ , and quantities in production,  $q$ , means that we will have  $\alpha > 1$ . In a controlled economy the  $\alpha$  values might conceivably be held at their 'theoretical' values, but in 'free' economies there can be no such restriction. Additional amplification effects (or their opposite – 'de-amplification'?) will be possible because of speculation, bull or bear.

Consider again: -  $\beta = \alpha + \alpha' \rho$

This can be differentiated:  $-d\beta = d\alpha + \rho d\alpha' + \alpha' d\rho$

Lonergan refers to the 'cyclic' factors in this. By this he presumably means the factors affected by the current phase of the cycle, which are  $\rho$  and  $d\rho$ .

In all three cases,  $\rho$  is just a fraction, (and probably very small, since in general  $Q''$  is much smaller than  $Q'$ ), and it will remain one. This ensures that  $d\rho$ , as a change in such a number, is itself also a fraction.

As long as we have expansion at all (of any of the three kinds),  $\alpha'$  and  $\alpha''$  will both be greater than unity. It will perhaps be easiest to assure oneself of this by viewing the sample graphs drawn by Lonergan, and to be found in *CWL15*, 122 and 124.

Let us now consider the modifying effects of the  $\alpha$  values, and in particular of the  $d\alpha$  ones,<sup>30</sup> on these general comments,

<sup>28</sup> See at *CWL 15*, p. 120. The mathematical background to this assertion is given in the Appendix.

<sup>29</sup> This is the end of the 'parenthesis'.

<sup>30</sup> Recall that there is no necessary connection between the  $\alpha$  and  $d\alpha$  values. A comparison would be the distance  $x$  travelled by a car and the speed  $dx/dt$  at which it was then travelling. One can proceed at more or less

for each of these phases in turn.

*Surplus Expansion.* [ $\hat{Q}'' > \hat{Q}'$ ]

We have seen that this means  $d\rho > 0$  and so  $\rho$  itself will be increasing. Since  $\alpha'$  and  $\alpha''$  are both greater than 1 this means in turn that the Basic Price Spread,  $\beta$ , will also be increasing rapidly.

For recall that: -  $d\beta = d\alpha' + \rho d\alpha'' + \alpha'' d\rho$

Every part of this is positive, and so  $d\beta$  is resoundingly positive.

$\rho = \frac{P'}{\pi'}$  could, in strict mathematics, be increasing either

because  $P'$  was increasing or because  $\pi'$  was decreasing. But especially in a situation of rising production it is extremely unlikely that  $\pi'$  would be decreasing. [For instance, in an expansion acceptance of pay reductions by workers will be at its least likely.] In fact, therefore, it will mean that  $P'$  is rising. Such rising selling prices may call out speculators, who will always want to 'go while the going is good'. Such speculative money will flow into even more production, so further augmenting  $\alpha'$  and  $\alpha''$ .  $\alpha''$  will mount to reach its maximum and stay there (with  $d\alpha'' = 0$ ).  $\alpha'$ , on the other hand, will mount initially but then contract (*i.e.*  $d\alpha'$  will fall back to negative values.)<sup>31</sup>

In the initial step the increases will swing back again through  $\beta = \alpha' + \alpha''\rho$  to expand the Price Spread even more. And this will repeat in a positive feedback loop.

In phase *2b* the positive  $d\rho$  can mitigate the effect of the negative  $d\alpha'$  so that  $d\beta$  can stay positive for longer than might

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any speed (subject to common sense and police control!) at any particular point.

<sup>31</sup> Compare sub-phases *2a* and *2b* in Lonergan's illustrative graphs in *CWL15* (particularly page 123). This is one of the points referred to in the Preamble, where practicality means that we must simply proceed on the basis of his earlier results, since any attempt at a full justification would necessitate a long digression. Essentially, in sub-phase *2a* we have  $\hat{Q}'$  constant (which means that  $dQ$  must be growing geometrically), whereas in *2b* we only have  $dQ$  holding constant (so that  $\hat{Q}'$  is falling).

otherwise have been expected. How long will depend on the size of  $d\rho$ . (The latter will of course stay positive until the switch to a Basic Expansion.) But if eventually the negativity of  $d\alpha'$  wins out,  $d\beta$  will become negative and then a crisis will have come.  $P'$  will fall, and speculators may panic and attempt to retrench. If they can ride this storm there are better times ahead as the Proportional Expansion is about to begin. [Whether they can or not will depend on how far out on a limb the speculators have already gone and whether they can manage to 'hang in there' without having to liquidate their stocks.] In anticipation of a later comparison by Lonergan let us call this first sub-cycle of minor boom to panic and possible crisis as *Kitchin 1*.

*Proportionate Expansion.* [ $\hat{Q}'' = \hat{Q}'$ ]:  $d\rho = 0$

Since  $d\rho = 0$  we have  $d\beta = d\alpha' + \rho d\alpha''$

Since it is an expansion neither  $\hat{Q}$  can be zero. [for then they would both have to be zero, and we would instead be in a Static phase.]

This must mean that both  $d\alpha'$  and  $d\alpha''$  will be positive for a while, as the short-term acceleration develops.

During this period we will therefore have

$$d\beta > 0 . \quad [ (+) + (+) \times (+) = (+) ]$$

So  $\beta$  will be increasing.

However,  $d\alpha'$  cannot continue to be positive [*i.e.*, greater than some non-zero number], for this would necessitate compounding of the effects on  $Q'$ , giving rise as a geometric progression.<sup>32</sup> But this means that  $d\alpha'$  will have to turn negative.

Because this turn round in  $d\alpha'$  will take some time it is likely that  $\alpha''$  will be well along on its upward path to its maximum by the time it happens, so that  $d\alpha''$  will be either zero itself or close to zero. Since we are still considering a Proportional Expansion,  $d\rho$  remains at 0 and so we still have

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<sup>32</sup> Lonergan has already discussed this in an earlier Section. See *CWL* 15, p. 120. See again footnote 28 above, and the related Appendix.

$d\beta = d\alpha' + \rho d\alpha''$ . But this means that now  $d\beta$  will either simply take its sign from  $d\alpha'$  and be negative or at least follow it very soon after as any residual positivity in  $d\alpha''$  is overcome.

Of course  $d\beta$  will be even more negative if surplus production has also faltered, making  $d\alpha''$  negative as well. In any case,  $d\beta$  will become negative, so that the price spread will fall. As we have already argued, this will result in a fall in  $P'$ . Speculators may again panic and attempt to retrench. This second instance of the boom, panic, crisis pattern will be *Kitchin 2*.

*Basic Expansion.*  $[\hat{Q}'' < \hat{Q}'] d\rho < 0$

If the second crisis is survived, eventually  $d\alpha'$  will return to a positive value, at the start of the Basic Expansion. Both  $\alpha'$  and  $\alpha''$  will mount to their maxima, and once again there will be a minor boom.

But when they have reached this maximum they will stay there (*i.e.*, with  $d\alpha' = 0 = d\alpha''$ ). This will mean that

$$d\beta = \alpha'' d\rho$$

But now that we have entered the Basic Expansion, this is negative (because  $d\rho$  is negative). Speculators will wish to pull out as prices begin to fall. Both  $d\alpha'$  and  $d\alpha''$  will become negative. This third example of boom, panic, crisis will be *Kitchin 3*. In a reverse of the previous argument, a negative feedback may ensue, and the economy fall into a slump.

If at this stage the speculative feedback did not occur we would be entering the egalitarian phase of a pure cycle. But this is not what tends to occur in practice. Instead the signals are misread, and there is no recovery mechanism, and if no new genie can be pulled out of the hat we will fall into a full-blown depression.

As already anticipated, Lonergan has suggested the identification of his triple boom-and-crisis pattern with Schumpeter's three smaller cycles he called *Kitchins*, within one longer cycle (ideally a pure cycle but probably the 'trade' version) called a *Juglar*. He rejects (as non-economic, and probably entirely) the notion of an even longer '*Kondratieff*'

cycle due to such things as technological change. If such an effect is in fact apparent in the data then it must be just a spurious pattern due to random effects. The only way one could argue to such a true long-period cycle would be on the basis of some 'theory of history', which would have its own presuppositions entirely outside the economic sphere. This is not the case with the *Kitchins* and the *Juglars*, which were derived by analysing the internal dynamics of the economy and its interactions with human adaptation (especially by way of adequate understanding).

Finally, recall that all of the above analysis assumed that there were no transfers from the Redistributive function (*i.e.*,  $D' - e'I' = 0$ ). [Otherwise we could not have argued from  $I'$  through to  $E'$ .]

A speculative boom could occur because of a positive  $D' - e'I'$ . Alternatively it could happen by way of increases in the proportion of total income that goes to Basic Demand offset by increased  $D'' - e''I''$  to counteract the effect of this on Surplus Demand. In either case the extra money amounts will permit the price spread to be maintained or reinforce its tendency to expand. In *Rf*, however, this will appear in such results as a growing stock market. The misfortune of this is that if there is indeed an eventual *collapse*, it will be made worse, for the bigger they are the harder they fall.

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### Appendix: A Connection Between Growth Rate and Quantity.

(Recall again that we are using the more compact notation  $\hat{X}$  for the growth rate of a variable X, in place of Lonergan's  $\frac{1}{X} \frac{dX}{dt}$  ).

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Consider the case where  $\hat{X}$  is a positive constant.

Verbal Statement: If growth rate  $\hat{X}$  is a positive constant then X itself must be increasing in geometric proportion [*i.e.*, exponentially.]

Symbolic statement:

$$\dot{X} = k - 1 \Rightarrow X = k^{n-1}X_1 \text{ where } k > 1$$

Proof. Discrete case: (Take  $dt = 1$ )

$$\begin{aligned} \frac{dX}{X} = k - 1 &\Rightarrow dX = (k - 1)X \\ \Rightarrow X + dX &= kX \\ \Rightarrow X_n &= kX_{n-1} \\ &= k(kX_{n-2}) = k^2 X_{n-2} \\ &= \dots = k^n X_1 \end{aligned}$$

Continuous case: It will be simpler to replace  $k - 1$  by  $a$ , say.

$$\begin{aligned} \frac{1}{X} \frac{dX}{dt} &= a \\ \frac{dX}{X} &= adt \end{aligned}$$

Integrate this over time:  $\log X = at + C$

When  $t = 0$  let  $X = X_0$

So  $C = \log X_0$   $\log X = at + \log X_0$

$\begin{aligned} \log X - \log X_0 &= at \\ \log \frac{X}{X_0} &= at \\ \frac{X}{X_0} &= e^{at} \end{aligned}$
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Final result:  $X = X_0 e^{at}$

Common example. Compound Interest (C.I.).

Let the interest rate, expressed in decimal form, be  $r$ .

The rule for C.I. can be written as  $A_{n+1} = (1 + r)A_n$  where  $A_n$  is the 'Amount' held in year  $n$ .

Applying this recursively gives the usual formula: -

$$A_{n+1} = (1 + r)^n A_1 \quad [\text{The traditional form is } A = P(1 + r)^n ]$$

This formula applies if the growth rate (the interest rate) is  $r$ .

[Simply replacing  $1 + r$  by  $k$  gives the same result as in the discrete case above.]

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Tom McCallion is a retired schoolteacher and scientist living in a small country town in the mid-west of Ireland. He has worked as an administrator in Ireland's Department of Finance. He can be reached at [tandsmccall@hotmail.com](mailto:tandsmccall@hotmail.com).

Comments on this article can be sent to [jmda@mun.ca](mailto:jmda@mun.ca).

## FOUNDATIONAL ETHICS, FEMINISM, AND BUSINESS ETHICS

PHILIP MCSHANE

A course on Business Ethics became a feature of many universities' Religious Studies or Philosophy Departments in the 1980s. One might be cynical and say that it was an enrolment move but let us see the past as better than it was and view it as progress.

The phrase *seeing the past as better* has an echo for the Lonergan scholar, to whom this effort is primarily addressed, an echo of the dialectic effort.<sup>1</sup> So, it is a reminder of one of Lonergan's main cultural achievements: thematising functional specialization. Then one might envisage Business Ethics as it is taught as one of the fruits of that specialization.<sup>2</sup> As so envisaged it is not part of the theological process proper but a result of the specialty called Communications: it is an outreach.<sup>3</sup> Then the question rises, How might that external reach vary, improve, with the ongoing genesis of a more adequate eighth specialty?

I had the privilege at one stage in my career of directing a doctorate thesis that related to this topic.<sup>4</sup> One result of the work was the discovery that the prevalent view of Communications was a narrow one, almost as if Communications was a reflective pause before preaching or

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<sup>1</sup> The phrase occurs in the treatment of dialectic method, *Method in Theology* (London: Darton, Longman and Todd, 1972), 251.

<sup>2</sup> *Ibid.*, 353.

<sup>3</sup> *Ibid.*, 132.

<sup>4</sup> Sinead Breathnach, *Lonergan's View of Communications*, Trinity College Dublin, Department of Higher Education, 1990. The thesis is also available at the Toronto Lonergan Centre.

teaching. That view certainly had grounds in the manner in which Lonergan treated the topic in *Method in Theology*. It was not a topic, as far as I know, that Lonergan ever lectured on formally.<sup>5</sup> In the 1971 course on Method the book was already completed but he did not even present the chapter; I had the doubtful privilege of giving a perspective on the matter. Since then I have sought to envisage, an effort of fantasy, this crown of theology's achievement.<sup>6</sup> I have renamed it varyingly in order to bring out its reflective, withdrawn, status: *Executive Reflection*, *Communising*.<sup>7</sup> Perhaps it is no harm to try the name thing again: and here I suggest *Strategics*. That has a nice ring about it, the significance of which will, I hope, gradually begin to emerge.

First of all the name *Strategics* fits in with my most recent effort to give some notion of the new genetic Systematics.<sup>8</sup> For anyone brought up on the Aristotelian or Newtonian view of System this notion involves a big shift in perspective. It is perhaps easier for one familiar with the old style biology with its interest in the process of development.<sup>9</sup>

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<sup>5</sup> One might make an exception of a lecture he gave, Easter week, 1961, in the Jesuit Milltown Institute, Dublin. He had been asked to speak on Communications. In fact, he did a piece from *De Deo Trino* on early developments of Trinitarian understanding. On the way from the lecture in a taxi to the Leeson St. residence where he was staying during the lectures at University College, he grinned at me and said, 'Well, that took care of communications!' He was referring to a favourite phrase of his, if you understand you can express that understanding in twenty different ways. The discovery of functional specialisation was, of course, still almost five years away.

<sup>6</sup> I introduced the category *fantasy* in "Instrumental Acts of Meaning and Fourth Level Specialization", chapter four of *The Shaping of the Foundations* (Washington: University Press of America, 1976). The book is available, free of charge, on the Axial Press Website.

<http://www.philipmcshane.ca/foundations.pdf> The category can be related to Aquinas' treatment of deliberation in the *Prima Secundae*.

<sup>7</sup> See, for example, "Systematics, Communications, Actual Contexts", *Lonergan Workshop*, Volume 6 (Atlanta: Scholars Press, 1986); chapter three of *A Brief History of Tongue* (Halifax: Axial Press, 1998).

<sup>8</sup> See chapter three of Philip McShane, *Pastkeynes Pastmodern Economics: A Fresh Pragmatism* (Halifax: Axial Press, 2002).

<sup>9</sup> One might muse over whether Lonergan was reaching towards a genetic systematics of theology in *Insight* (see the index under

We need to pause over this new perspective. My preferred illustration at present is from tennis. Take someone like Martina Hingis. One might envisage her development as a tennis player from little girl to champion and beyond in stages of increasing excellence. At each stage she is, one might say, an incarnate system.<sup>10</sup> But it is more than genetically complex, in a way that parallels dialectic and contrafactual analyses' contribution to any field. Each stage includes flaws: the flaws need to be sublated and, as far as possible, reversed. An over-powered backhand top-spin can be turned to a powerfilled asset. Furthermore, the tennis player is not amnesiac. Strokes dominant in an earlier Martina are still available and may be useful not only when teaching or playing with inferior talent, but in eccentric moments of championship stuff. At all events, I invite you to think this out, add in contrafactual reflection shared with a coach or a physiologist or a friend, etc., and see how far you can carry this glimpse of Lonergan's subtlety. It is useful, too, to lift the hope of *Insight* into this later context by re-reading a relevant passage: "The antecedent willingness of hope has to advance from a generic reinforcement of the pure desire to an adapted and specialised auxiliary ever ready to offset any interference..."<sup>11</sup> But the main task is to glimpse the power of the new view of Systematiks in their relations to

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*Development*). I do not think so. His focussed struggle emerged in his graduate seminars on History and System in the late fifties. My own shift of discovery came from reading the last parts of *De Intellectu et Methodo*. I return to the topic in an article entitled, "Sunflowers, Speak to Us of Growing." See <http://www.philipmcshane.ca/cantower2.pdf>. The central issue of that essay, however, is the issue of integral consciousness and feminist possibilities. The fragmented consciousness of contemporary science may eventually be identified as a patriarchal mis-take.

<sup>10</sup> Within the new subjectivity it is as well to think of the functional specialties incarnately. This is Lonergan's view of foundations as persons, "ongoing developing realities" (*Method in Theology*, 270). I sometimes find misspelling a convenience. So, a Systematik is someone; likewise, perhaps, a Strategik. The incarnate system, Martina, was comfortably eliminated from the American Open 2001 by Serena Williams, As I type now, September 8th, I await a historic sisters-final. For you it will be history, but also, perhaps, a piece of future system.

<sup>11</sup> *Insight* [1957], Collected Works of Bernard Lonergan 3 (Toronto: University of Toronto Press, 1992), 747.

Strategiks. The first work noted in footnote 7 is a lengthier lead to this, and can hardly be summarised here. But a flexing of the imagination can exploit the parallel with global tennis. Systematiks in theology are normatively a global community incarnating a retrieval of the past; Strategiks are also a global community, mediated in their perspective particularly by the previous four specialties, but also richly informed about local global conditions.<sup>12</sup> The informedness can be considered in normative optimism. What Lonergan says of research can be thought of and applied here with a new twist: “Some day, perhaps, it will give us a complete information-retrieval system”.<sup>13</sup>

The parallel with playing tennis, or any other game, is limited of course, but worth pursuing. Strategics is not playing, nor even coaching: it is more like forming coaches. But let us for the moment return to a simpler aspect of the analogy, in which Martina represents the global community of Systematiks. Martina has to play, say, Serena or Venus Williams at Wimbledon. Strategiks will push for a ‘fix’ on Williams’ game on grass, anywhere, but in particular in Wimbledon during June. What parts of the genetic systematics that is Hingis should be called into play? So, you begin to see what I meant by the relationship between  $S_{ij}$  and  $C_{xyt}$  in “Systematics, Communications, Actual Contexts”? Think of  $x$  and  $y$  as longitude and latitude,  $t$  as the time: it is useful, too, to imagine not a globe but a flat projection, moving forward. To shift the illustration, one may envisage a problem of presenting a divine incarnation to an unsophisticated community in the Andes. Like Hingis with a beginner, one chooses bits from the retrieved (and reversed if necessary) systematic slice of Luke or Irenaeus rather than from John the Evangelist or John Damascene.<sup>14</sup> One advantage of the analogy of tennis is that it

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<sup>12</sup> Think of the Club of Rome slogan, “think globally, act locally”, but the acting locally is here an activity of withdrawn discernment.

<sup>13</sup> *Method in Theology*, 127.

<sup>14</sup> This type of reflection can take such an effort as Neil Ormerod to handle the ‘whole sequence of changing forms of ministry’, “System, History, and a Theology of Ministry”, *Theological Studies* 61 (2000), 433 into the new context. Ormerod writes about carrying forward Doran’s view of “a systematic theology of history”(432). The above perspective depends on a

lifts our perspective to the global level quite easily. Tennis is a global enterprise, and its Systematics – in any of the senses – has to be brought to bear on local conditions. One could also think of soccer or baseball, but I would lose the focus on the incarnate subject.<sup>15</sup> Further, in all contemporary competitive sports there is the sophistication of the mediations of chemistry, physiology, dietetics, and so on. Without parallel sophistication theology is liable to be “always arriving on the scene a little breathless and a little late”.<sup>16</sup>

But it is time to pause over our title. What might it mean, actually and normatively? ‘Business Ethics’, actually is what we are familiar with as a course within some academic discipline. Obviously, it is not ‘playing’ but pouring over possibilities and probabilities, regularly in a normative way. What those norms as presented breed in terms of discourse and discussion depends obviously on the teacher and the ethos of the class, but the textbook presentations are mainly of a standard Western view.<sup>17</sup> Since I am writing mainly for an audience familiar with Lonergan’s perspective the question immediately arises: What does this perspective add to business ethics? Again, one must think of the teacher and the particular

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clear distinction between history and system. Systems, of course, may have historical identifications, like Maxwell’s electromagnetics or Irenaeus’ Christology, but such identifications are more related to convenience of reference.

<sup>15</sup> The West Dublin Conferences of both 2000 and 2001 concentrated on the topic “Cultivating Categorical Characters”, where the word character, layered with resonances, was taken from *Method in Theology*, ch. 14, section 1. With that short section I like to associate the equally short section in chapter three on “Incarnate Meaning”. The twist is towards that self-taste which makes for incarnate competence.

<sup>16</sup> *Insight*, 755.

<sup>17</sup> I have selected, as a basic text in the field, *Business Ethics in Canada*, edited by Deborah C. Poff and Wilfred J. Waluchow, 3rd ed. (Toronto: Prentice-Hall Canada, 1999). I do so simply because it is handy and taught in a local university. It is not properly a text but a collection of readings. That has the advantage for me - unfair, some may well say - of necessitating a compact presentation of *standard views* at the beginning, and also of including brief statements on a range of topics. Since I do not wish to distract you here from my main topic and point, I postpone comments on that text to the second part of this essay, where I weave the reflection round the main point of the article.

group. Then one expects a heightening of subjectivity, a self-identification and the cultivation of self-taste in teacher and class. How far this goes depends on the ethos of the institution, the department, etc.

It is, I think, worthwhile to think out classroom dialogue – my reader may find this a strange jump! – in the context of Lonergan’s later definition of generalized empirical method. “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 operations of subjects; it does not treat of subjects without taking into account the corresponding objects”.<sup>18</sup> What would this mean for a classroom? Even without adding the further sophistication of a general change in the ethos of word-pointing,<sup>19</sup> one can envisage a change of classroom mood in my slogan: “When teaching children geometry, one is teaching children children”. The slogan emerged from my consideration of the generation of a new ethos of geometry in the context of envisaging a sublation of Husserl’s perspective on geometry.<sup>20</sup> It involves a gentle shift of teaching attention. One aims at a concomitance of self-discovery and discovery of geometry, and this in both students and teacher. The slogan, obviously, can be shifted to any zone, to business ethics. It would definitely challenge both the persons and the texts whose mode of presentation is slanted, for example, by Scotist conceptualism. A classroom style to “make conversion a topic and thereby

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<sup>18</sup> Lonergan, *A Third Collection*, ed. F.E. Crowe (Mahwah NJ: Paulist Press, 1985), 141.

<sup>19</sup> I am referring to that powerful suggestion in *Method in Theology*, 88, note 34: “At a higher level of linguistic development, the possibility of insight is achieved by linguistic feed-back, by expressing the subjective experience in words and as subjective.”

<sup>20</sup> The reflection was originally designated as Appendix A of Lonergan, *Phenomenology and Logic*, ed. Philip McShane, Collected Works of Bernard Lonergan 18 (Toronto: University of Toronto Press, 2001). I removed it to satisfy the biased yearning of a publisher’s reader who seemed to consider that it went beyond *haute vulgarization*. It appears as chapter five of McShane, *Lack in the Beingstalk: A Giants Causeway*, Axial Press, Halifax, published February 18, 2002, free of charge, at <http://www.philipmcshane.ca/lackinthebeingstalk.pdf>.

promote it”.<sup>21</sup>

There can, then, be this difference in a business ethics course influenced by the turn to the subject associated with Lonergan. So, business as usual may receive a lift: the insights and adventure of business enterprise can be identified, even cultivated. But what of the ethical dimension? Yes, it too receives a lift: business knows that it has responsibilities, and now it can be more luminous regarding such responsibilities: responsibilities to staff, to customers, to shareholders, to needs of innovation and versatility, to quality, to integral aesthetic needs, to sales management, to environmental conditions etc. And, of course, to regulations of government in regard to taxes and standards.

But is there more to the mediation of Lonergan’s perspective? So we come to the question of the first half of the title. What might I mean by foundational ethics?

It is useful to have a helping diagram, and here the help comes from page 48 of *Method in Theology*. It is I hope a familiar diagram, laying out in a relational structure human capacity and need, present institutions and tasks, and that challenging third line that carries considerations beyond present structures to creative liberty and personal loneliness, institutional possibilities and distant goals. And here we reach the nub of the matter. Challenges of this type may emerge randomly – like Lonergan’s thematic of functional specialization – but they must gradually find operative foundational identity in community. And prior to that effective cultural presence, there must be foundational acknowledgement.

So, I invite you to foundational acknowledgement of a projected and required institution: the institution that would be in place were functional specialization suitably operative.

There are various aspects of this invitation that require pondering and fantasy. In the first place there is a matter of belief. You may well accept Lonergan’s discovery as significant even though you have little idea what its operative cultural presence might be. This certainly was the case in 1965, when Lonergan made the leap for theology, gave hints about it in the following years, wrote it up for the 1969 *Gregorianum*.

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<sup>21</sup> *Method in Theology*, 253.

But since that time, strangely, it has remained as only a vague belief regarding a convenience in thinking personally about theology, not a real assent to a desperate need for an institutional shift in the shabby good of the present order. The heartfelt need that carried Lonergan through the dark decade prior to the discovery is not a shared ethos. I am writing here about “what an existentialist would call an existential category. It is a constitutive component of the group as human. It is an aesthetic apprehension of the group’s origin. The aesthetic apprehension of the group’s origin and story becomes operative whenever the group debates, judges, decides, or acts – and especially in a crisis”.<sup>22</sup>

There is no operative apprehension. Further, the crisis is larger than the circumstances of Lonergan’s life allowed him to apprehend. And that larger crisis is a condition of the possibility of the emergence of the missing operative apprehension.

Here is not the place to deal with that larger crisis, with the human group’s need to apprehend its dynamic emergence in these past centuries, the manner in which it strains the present inadequate good of order, the imperatives of a new order. Rather, let us stick with our particular interest as named in the title. What, then, is business ethics?

Business ethics is obviously in the context of business and business studies. And the fundamental, the foundational, crisis of business studies is the generic disorder of those studies.

Later I will focus on some particular disorders of those studies and the concomitant perspective on business practice: the disorder that is grounded in a mythic economic theory; the disorder that has its roots in a failure to grasp the significance of human leisure. But the disorder that I would have us attend to at the moment is the disorder that business studies shares with all other areas of inquiry, a disorder of ordering. It does not take genius to get a sense of this disorder. One has merely to take time around the library journals of business to glimpse unconnectedness, lack of serious orientation, absence of all-

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<sup>22</sup> Lonergan, *Topics in Education*, Collected Works of Bernard Lonergan 10 (Toronto: University of Toronto Press, 1993), 230.

round efficiency and of any overall goal.<sup>23</sup> One might pause in one's library ramble and venture deeper. Are there, as well, "methodological conventions that exclude the heart of the matter"?<sup>24</sup> Is there the further flaw that "they labour under the delusion that their inquiry is *voraussetzungslos*"?<sup>25</sup> Is there a massive commitment to common sense overlaid with mathematical sophistication? And how does all this affect the entire business department program?

Now my reader may say that this is all very well – indeed all very ill – but what has it got to do with business ethics? And I concede that it may have little to do with business ethics as presently taught, precisely because of some of the flaws listed. A course in business ethics may well be caught up in methodological conventions, indeed the conventions of the current texts.

We are back, then, with the question, What is business ethics? – but now with a normative edge. We are, if you like, on the third line of the diagram of page 48 in *Method*, in the zone of freedom and fantasy. In the zone, even if you don't like [it], of that gloomy section 8 of chapter seven in *Insight*, where the stand against institutionalised dullness and misery centres on freedom and fantasy. "The principle of progress is liberty for the ideas occur to the man on the spot, their only satisfactory expression is their implementation, their only adequate correction is the emergence of further insights; on the other hand, one might as well declare openly that all new ideas are taboo, as require that they be examined, evaluated, and approved by some hierarchy of officials and bureaucrats; for members of this hierarchy possess authority and power in inverse ratio to their familiarity with the concrete situations in which the new ideas emerge; they never know whether or not the new idea will work; much less can they divine how it might be corrected or developed; and since the one thing they dread

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<sup>23</sup> I am handing here what I have dealt with at chapter length in other disciplines such as music, linguistics, literary studies, economics. See, for example, *Economics for Everyone: Das Jus Kapital* (Halifax: Axial Press, 1999), chapter five. Perhaps one of my interested readers would venture the same in the present area?

<sup>24</sup> *Insight*, 735-6.

<sup>25</sup> *Ibid.*, 600.

is making a mistake, they devote their energies to paper work and postpone decisions”.<sup>26</sup>

The lengthy quotation, from the centre of that lengthy gloomy section, seems necessary. It takes massive fantasy to eye, aye, the meaning of decline’s product: “the social situation deteriorates cumulatively”.<sup>27</sup> And, to pun terribly, it is not something that the I can behold with an adequacy that is effective, efficient. This, indeed, is the message of that section, which moves forward through the gloom of the major sell-out of the theoretic (7.8.2) to cultures’ entrapment (7.8.5) in “the monster that has stood forth in our day.”<sup>28</sup> What is needed is a Cosmopolis (7.8.6) that will sustain the individual effort.

I am not here interested in juggling with religious and non-religious views of Cosmopolis. All I will claim is that a component in Cosmopolis is a shift in method, and that the core of that shift in method is the division of labour talked of by Adam Smith, thematized by Lonergan. This, I would propose, is the foundational business ethic that has emerged in these centuries.

There is a variety of ways of approaching this proposal, but first I suppose it is important to note that it is a proposal, a suggestion, that is an ethical nudge towards implementation. The nudge comes from two directions, and it is worth picking up on the quotation just given to see how the two come together. There is the nudge coming through me from Lonergan, the alternative of adopting a higher viewpoint; there is the nudge of need generated by fragmentation and bias. Business studies in its disorder ferments forward towards partial ordering, but it needs a persuasive confrontation with a potentially full ordering to lift it to an operative higher viewpoint. But notice the broader lift involved. The fresh ethics of order in theology occurred “to the man on the spot” [in theology] “and its only satisfactory expression is its implementation”. Yet there is no sign of that expression within theology, even within theology as an enterprise cultivated by those who claim to respect Lonergan’s perspective. The above

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<sup>26</sup> *Ibid.*, 259-260.

<sup>27</sup> *Ibid.*, 254.

<sup>28</sup> *Method in Theology*, 40.

lengthy quotation expands on reasons to “postpone decision”. These reasons can be identified as embedded in institutions, roles, tasks, of old ways. So, there emerges a Lonergan tradition that lives lightly within his rediscovery of Aristotelian interiority and meshes its labour with old ways. Lest this be too general and vague, it is worthwhile to pause over the meaning of a single word within Lonergan’s strange new way, the word *Comparison*.<sup>29</sup> The new task of dialectics gives the word precise meaning and bids farewell to old style comparisons of Smith and Jones or whatever. Perhaps it might be useful to think of the phlogiston-meaning of the word *combustion* before Lavoisier and then leap to its meaning within the context of Mendeleev. So, in this popular article, I might legitimately compare Keynes’ view of employment with Lonergan’s, but such comparison does not belong in the new context. By illustrations of this type one arrives at a better grasp of “methodological conventions that exclude the heart of the matter”.

This, clearly, is a discomfoting challenge in theology or philosophy. It is part of the task of institutionalising functional specialization in the evil of order that is theology. And here I am focussing on another discomfoting task: a preaching, if you like, of what we as philosophers are not practising. But at least there is a twisted advantage in preaching the division of labour to business: the sermon might begin to echo in our own backyard.

The implementing of my proposal is, then, quite simple: within even an elementary course on business ethics, that large ethic is an essential topic. Bruce Anderson’s work in law illustrates the inclusion. It can be a final topic in a course, pointing to deeper problems and possibilities of present and future business.<sup>30</sup> But what of the rest of the course in business ethics? We already considered the lift that the regular course gets from Lonergan’s transcendentals. But a richer course would also drive towards an exposure of present “moral evil”

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<sup>29</sup> *Ibid.*, 250.

<sup>30</sup> Bruce Anderson, *Discovery in Legal Decision-Making* (Dordrecht, Netherlands: Kluwer, 1996). The final chapter raises the issue of specialization.

and the history of its dialectic genesis. I use the phrase “drive towards” in a loose and popular sense: like the word *Comparison*, *Drive Towards* has a precise meaning in the new context. Perhaps an ambitious course might shift to that precise meaning by beginning the course with the basic ethical issue in business studies: the need for a business-like organisation of that study, identifiable as the eightfold division that Lonergan describes in *Method in Theology*. It is important to pause over my meaning here of *identifiable* and *describe*. Strategically, it might be just as well to avoid introducing the ground of the division: the division is pragmatically suggested by the present mess. Indeed, I would consider arguable that the way to introduce the levels of subjectivity is through the emergence of the fragmentations of study and the divisions that those fragmentations suggest.<sup>31</sup> Such described divisions would make the consequent drive and exposure more luminous.

My reader is certainly interested in some ideas regarding just what I have in mind when I write of moral evil, “the monster that has stood forth in our day”. But such a venture would be at least book-length, and the book has been available for some time.<sup>32</sup> A few pointers in a short article will hardly make a difference. Still, I may have a reader fresh to this perspective, one who might take up that volume of Lonergan and be quite astonished that this man has a following interested in such contemporary agonies as social justice, third world abuse, urban slums, etc., who nonetheless find his solution worth neglecting.

So, a few musings.

I mentioned Keynes and a possible comparison with Lonergan, specifically the comparison of *The General Theory*

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<sup>31</sup> This is in line with my suggestion of pragmatic categories in chapter three of *Pastkeynes Pastmodern Economics: A New Pragmatism*. I suggest there two categorial grounds: the fact of sensAbility, an undefined bent towards sense acceptable to a range of positions, and the need for division of labour. What I suggest above is merely spelling out one of the effects of this strategy. The division of labour will gradually differentiate the category of sensAbility.

<sup>32</sup> I refer to Lonergan’s 1942 *For a New Political Economy*, which is the first third of the book of the same title published by University of Toronto Press, 1999, *Collected Works of Bernard Lonergan* 21.

of *Employment* with *For a New Political Economy* of Unemployment. My addition to Lonergan's title no doubt gives you pause. Do I mean that Lonergan tackles the problem of unemployment head-on, to get some new solution that will beat the 'natural rate of unemployment' and give an optimistic twist to the Phillip's Curve? No: I mean that Lonergan has a quite different twist on human life, on the function of production, on progress and profit, on cycles in the economy, on business success, on the rhythms of advertising, on innovation, on subsidiarity, on taxes and government, on export and import, on local autonomies, etc., etc.

How does one arrive at this different twist? There are two ways. One can struggle, somewhat as Lonergan did for fourteen years: "to discover such terms is a lengthy and painful process of trial and error. *Experto crede* [believe me: I've tried and erred!]." <sup>33</sup> The process may not take that long, since it is a rediscovery through reading Lonergan's work. My own experience – *experto crede* – is that it takes a decade! And when you have had some success, what is the situation? The situation is that there is now Lonergan and you so that instead of *The Silence of the Lambs*, Lonergan putting his work back in his files in 1944, there is the Newfoundland version of the sequel, *Ewes Be Quiet*.

In recent years I have begun to admire increasingly the courage and wisdom of Lonergan in putting his answer to the alchemy of Smith and Ricardo and Keynes back in his files for twenty-four years. <sup>34</sup> He could have wasted his energy trying to

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<sup>33</sup> *For a New Political Economy*, 112.

<sup>34</sup> Of course he may have thought of it in between. Eric Kierans, who became a minister of finance in a later Canadian government, was given the typescript of *For A New Political Economy* at some later stage with the comment, "this is easier to start on." It seems that what Lonergan passed around originally was the 1944 version, tougher reading but elegantly complete. I recall Kierans admitting to me that he hadn't time then to read that version. The 1942 version from which I did the work of editing, the only one in existence, was in Kierans' possession till 1986, when he passed it on to the Lonergan Research Institute. Scribbled comments on it showed that Kierans had read it but didn't get the point. I mention 24 years above because it was in 1968 that he communicated to me the request to "find an economist" and the '44 typescript: he had been reading Metz and felt that we just couldn't go on like this, with the usual family wage stuff.

break the hold that Keynes' New Deal came to have on the West and now has globally. In the Autumn of 1977, when we worked together to see how he might present his view – basically the 1944 version – in the Spring of 1978, he remarked to me “this is going to take 150 years”.

Well, we are down now to 126 years. It seems that the first way is not going to work; so there is the second way. That is the way on which I have centred attention in this article.<sup>35</sup>

It seems best to leave it at that, and move to the relevant consideration of my chosen representative text. But a final point is worth noting that brings in the context of Lonergan's reflections in *Phenomenology and Logic* on the role of philosophy. What sort of Queen of sciences and business might philosophy or theology be? The answer lies in a tasting of the meaning of mutual self-mediation, of a new meaning of enlightened self-interest. Business should rule in its own house. But is there some strange sense in which the metaphor of *Queen* might be be sublated into a post-axial reality? Let me place this odd question in a rather prosaic context, the context of the book mentioned already: *Business Ethics in Canada*.<sup>36</sup>

It seemed to me that a few pointers regarding this text would be helpful towards illustrating the problems to be dealt with in business ethics by those reaching for generalized empirical and hodic method.<sup>37</sup> To old hands in the zone, my points may be elementary. But there are also those of you who like what they find in Lonergan, but are not too far into self-tasting. Also I am thinking of those of you who are beginners: either beginning a thesis, or beginning teaching, especially if you have been suddenly landed with the job of teaching business ethics. In either of these scenarios my views, perhaps,

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<sup>35</sup> In *Pastkeynes Pastmodern Economics: A Fresh Pragmatism*, chapter five, I add various suggestions regarding strategic implementation of a new context for business and economics, suggestions that need detailed spelling out. So, for instance, there is a much richer ethic of banking and credit waiting in the wings.

<sup>36</sup> The title is, of course, the title of the work referred to in note 17.

<sup>37</sup> *Hodic* (method) is an adjective I invented to by-pass the clumsiness of the phrase *functional specialist* (method). It has Indo-European roots, but it also echoes a line from the song *Finnegan's Wake*: “to rise in the world he carried a hod.”

are already known. I follow the advice that Lonergan gave me when I was having doctorate doubts in Oxford: give the fellow what he wants and get the union card. This advice applies not only to theses but to teaching. Tenure is, at present, a union card. Corrupt the youth carefully if you wish to survive the hemlock in order to corrupt further. My own experience is that you can teach good stuff from bad texts: you can get the youth to read self-attentively about the massive hold truncated consciousness has on the present academy. But as a beginner, of course – according to both Camus and Zen it takes 10 years to get an idea – you probably have no serious molecular hold on that massive disorientation. Pushing for a better hold is the benefit of teaching according to generalized empirical method. The opposite is to teach from a glibness fostered by chapters two and three of *Method in Theology*: neither teacher nor student gets to grips with the fact that the self-energy of inquiry is much more difficult to investigate than the self-energy of the electron, not at all a first year university topic in physics. This must especially be borne, and slowly born, in mind regarding my *doctrinal* comments to follow.<sup>38</sup>

My comments are divided into three zones. First, I shall focus on the Introduction by Wilfred Waluchow. Secondly, I turn to the essay by Friedman. Finally, I place the volume in the context of the main challenge of my essay: the move that each of us might make towards promoting the molecular turn to the idea, *die Wendung zur Idee*, that is hodic method. I do not think it is at all necessary to have the book to hand. Each culture or country will have its own version of the text and its own variety of local or continental interests. The zones I focus on are, as you will notice, zones that point towards the problem of international invariants of business progress.

Waluchow's "Introduction: Ethical Theory in Business" runs from page 1 to 37, but my comments are restricted to the first seven general pages and to pages 28-30, where he deals all too briefly with feminist ethics. Why I limit my reflections to

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<sup>38</sup> This is a huge and hugely important topic. Systematic and Doctrinal understandings are as different as climbing and map-reading. *Insight* is a doctrinal book; *Method in Theology* is doctrinal writing cut back to a level of description.

these ten pages will gradually emerge.

There are all sorts of subtle ways of approaching these ten pages. At its loftiest the task becomes a matter of struggling for a pure formulation of content and context, this task and role, moreover, sublated into the precision of differentiation given by the stumbling institution of hodic procedure. But I mention this only to slide past it into luminous *haute vulgarization*.<sup>39</sup>

The cultural context is one of a truncatedness which is almost irremedial. Serious thinkers like Piaget, Voegelin, Langer did not escape this truncation, and perhaps the point is to notice that one's own living is in this context. Do not presuppose a post-axial luminous liberation in yourself too easily. Certainly, do not be too unkind to the struggling community of ethicicians represented by Waluchow. This axial period of increasing and crippling truncation could well run another 500 years. But at least we should and even might be wiser, through some descriptive historical consciousness of 'the third time round': Aristotelianism, Thomism, Lonerganism.

There are a host of other -isms, but my focus is on a peculiar bent in and of subjectivity to be found in the originators of these three -isms. Later studies, especially from an integral feminist perspective, will reveal flaws in these founders' searchings, flaws related to fragmented consciousness, but the positive side of their searching is a focussed radicalness that edges towards integrity and integrality. Neither the positive nor the negative aspects of these men are enlarged on here: I wish rather to emphasise context.

I wrote above about the cultural context in its truncatedness, and mentioned an axial period that may cling to that truncatedness for some time to come. So it seems as well to raise now the problem of cultural context in its fullness. What might I mean by that? I do not wish to enter here into my perspective on the Axial Period, a notion that sublates Jaspers' view of the short global period 600 B.C. – 200 B.C. into

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<sup>39</sup> See pp. 121 and 155 of *Philosophical and Theological Papers 1958-1964*, Collected Works of Bernard Lonergan 6 (Toronto: University of Toronto Press, 1996). There is the irony of the volume representing Lonergan's entrapment in patterns of *vulgarization*.

Loneragan's reachings for an understanding of two times of the temporal subject, three stages of meaning, and a long cycle of decline.<sup>40</sup> And perhaps I might recall here a little book that impressed me in the early seventies, when I was still struggling with Jaspers' narrow view of axiality: Elaine Morgan's *The Descent of Woman*.<sup>41</sup> My larger view of axiality is of a descent into fragmentation that may well be associated with the emergence of written language, and later with patriarchy, but at all events it broadens Jaspers' period to a length of at least five thousand years – the number is symbolic rather than accurate (perhaps 6666 would be better), but I would note that the end of the period is not yet in sight. Could the end be in view, if not in sight, in a deeper radical feminism?

There is spontaneous human subjectivity, inarticulate but integral. One may think of the distant primitive, but there is also the present, if disappearing, bush-tribe. I am not writing of some primitive savage as noble and innocent: but at least the savagery, as well as the nurturing, was integral. The axial period is a period of fragmentation. Regularly I take the emergence of Greek drama as an illustration here: the transition from the relative integrality of Aeschylus and Sophocles to the fragmentation of Euripides, regarded as the paternal parent of Western drama. Obviously such illustrating needs meshing into the concrete weave of decay, the longer cycle of decline: a hodic task. But let me ramble on in vague suggestiveness.

Perhaps a good starting point is a drawing of attention to the non-integral meaning of key words in the writing of Waluchow: words such as *question*, *concept*, *term*, *principle*.

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<sup>40</sup> The relevant texts for the three features mentioned are, respectively, Lonergan, *Quaestio XXI* of *De Deo Trino II: Pars Systematica*, Gregorian University Press, 1964, to appear as volume 9 of *Collected Works of Bernard Lonergan*; *Method in Theology*, section 10 of chapter three; *Insight*, section 8 of chapter seven.

<sup>41</sup> My Bantam edition is dated 1973, but I presume it has been republished many times. I cannot help recalling here the view of another impressive lady, even though fictional. Molly Bloom soliloquizes: "I don't care what anybody says it'd be much better for the world to be governed by the women in it you wouldn't see women going and killing one another and slaughtering..." *Ulysses* (New York: Random House, 1986), 640.

When Waluchow writes “questions concerning the ethics of business – i.e. business ethics – are significant” (p.1: I am avoiding unnecessary footnoting here), does he really *mean* question? What are questions? Are they not human molecular upsurgings? I am reminded of Kurt Goedel’s nickname as a child: *Herr Warum*. Yet *Herr Warum*, for all his searchings of the questions of incompleteness theorems, somehow was absent from his own nickname, from the question as obviously his, deeply his, radically him. And I can wander back in the axial period to the same missed point, mist point, in Arjuna’s *Bhagavad-Gita* question to Krishna, “What is man?” The question is its own answer, a Molly Bloom concluding *Ulysses*’ ramblings with “yes I said yes I will yes”. Then the questions of business ethics are the women who cling to Indian trees, the men with limp ties to pseudo-success, the children school-abused and labour-slaved.

And what does the word *concept* mean in this article, indeed in most of this text? There is a conception and a birth that is part of womanhood as a reality or a possibility. Is there any parallel between this slow integral conception and the conception that relates to the word *concept*, or indeed to the words, *term*, *principle*? Mothers can identify with such phrases as *the term of a pregnancy* or *oneself as principle of the child*. Do these meanings have anything in common with the meanings in the text? Those incarnate meanings seem very remote from a discourse about “clarifying the terms of moral debate” (1) or “examining the fit of moral principles” (1). More broadly, what is this “desire for clarity of thought” (2) that Waluchow writes of? Does it somehow parallel a quest for conception?

On a presently dominant view, an establishment view, concepts result from swift impregnations of sensibility. The job is done, even if there remain problems of clarifying. On a non-establishment view, concepts are the result of an integral nurturing of sensAbility, of the molecules and nerves that are the bones and blood of our images and fantasies. The concept slowly emerges, almost as a second self, a pleasing bloodied presence. It is a self-justifying presence.

This is a world of suffering and meaning that is quite

foreign to the first seven pages of the text we are considering, so superficially. We cannot delay, gestating: I must leap to the end of the seven pages to note the bold super-capitals, **SOME BASIC CONCEPTS**. The text here begins: “before examining the theories of Kant and Mill, and Ross, and Aristotle and the feminists, we should look at some basic terminology”. (7) What in human’s name is going on, going forward,<sup>42</sup> here? Certainly, one can set up terminology in some way that corresponds to a pre-Linnean classification of flowers, suitable names relating to sufficiently distinguishable realities. But that does not seem to do justice to the implicit claim in the text. In the text we are into the serious business of solid summary familiar to anyone who has suffered through a conventional first-year university textbook.

Earlier in the text Waluchow remarks that “it is a serious mistake to think that morality is exhausted by conventional norms or that moral justification ends with the invocation of a conventional rule. The norms must always be subject to critical moral scrutiny”. (3) Indeed it is, a serious mistake. But what I am getting at here is a long-term gross mis-take that perhaps echoes the mis-take on evolution conveyed by the corrective title *The Descent of Woman*. There are conventional norms about thinking about norms that are grossly inadequate and inefficient. There are conventions of critical scrutiny that are scholarly in the worst sense, an established patriarchal inheritance. But if there has been a mis-take of such proportion, summary is not a solution. Still, I can quote Waluchow meaningfully, with a new reach for the heart of the matter, the heart of the *mater*. “Most feminists are opposed to the search for the abstract, universalizable principles and rules with which to answer everyone’s moral questions.” (29) There is something deeply wrong with this search and with its conventional findings. Can the opposition breath and breed life into the search?

I find it useful here, anticipating my next zone of discussion of this text, to quote a lady who lived in an

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<sup>42</sup> There is here of course the full question of hodic history; but one can also smell with common knows the brutal nominalism of standard first-year university texts in many fields.

ambiguity of loyal opposition. In a short text, which was certainly not promoted by the establishment,<sup>43</sup> she took a courageous stand regarding economic theory, “It is time to go back to the beginning and start again”.<sup>44</sup> But the sad fact is, and this is key, that she did not begin again. She began with father Ricardo. “Far more than Quesnay, he deserves the title of the father of modern economics, for he devised the method of analysis which we know as setting up a model”.<sup>45</sup> And so her critical perspective on Keynes was warped, doomed.

What is my point? Perhaps Susan Sherman can give an ambivalent lead. “Most women experience the world as a complex web of interdependent relations, where responsible caring for others is implicit in their moral lives. The abstract reasoning of morality that centres on the rights and duties of independent agents is inadequate for the moral reality in which they live. Most women find that a different model for ethics is necessary; the traditional ones are not persuasive”.<sup>46</sup> The *complex web* brings us back and forward to the issue and importance of context. What I am trying to do here is to raise the questing to its fullest molecularity of context. What is it “to go back to the beginning and start again” either in economics or in ethics? It is almost to try the impossible and it is no wonder that Susan Sherman trips. Joan Robinson tripped in respecting Ricardo’s bent towards model-building. Susan Sherman writes of the need for a new model. No: we do not

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<sup>43</sup> An account of Robinson’s problems is given in Marjorie S. Turner, *Joan Robinson and the Americans* (New York: M.E. Sharpe, 1990).

<sup>44</sup> Joan Robinson and John Eatwell, *An Introduction to Modern Economics* (London: McGraw Hill, 1973), 52.

<sup>45</sup> *Ibid.*, 11. In a lengthier treatment I would certainly give space to a contemporary mother of economics, Jane Jacobs, to whom Lonergan referred as “Mrs Insight.” In a letter to me of some years ago she acknowledged that she had not delved into Lonergan’s view but remarked “I’ve just been pondering your explanation of the difference between operative and redistributive events, an understanding which is so much needed. Our business papers typically treat redistributive activity of many kinds as if it were the Big and Important News.” Stock trading, in spite of idiot media coverage, is not at all at the heart of business.

<sup>46</sup> Susan Sherman, “Ethics, ‘Feminine Ethics’, and Feminist Ethics”, in Debra Shogan, ed., *A Reader in Feminist Ethics* (Toronto: Canadian Scholars Press, 1993), 10.

need a new model either in ethics or in economics. We need to go back, beyond, forward, to some radical newness.

Let me begin – that dangerous word – with the issue of ethics. The radical newness is in the future and the task for the feminine is to “Remember the Future” in a way that cuts to the nerves and neurons within women that could redeem words and phrases, full stops and question marks. It must employ a new grammar of descent, a descent of woman that is an assent to the complex web that is the life-weave of women. I borrow the phrase “Remembering the Future” from an essay on J.M. Synge, but these are double-edged words, calling in also a Proustian remembrance of times past.<sup>47</sup> The essay on Synge focuses on the challenge of de-colonising language, a topic that I have been implicitly raising all through this section. We have, at the centre of this decolonisation challenge, the task of rescuing the real parts of speech from the eight parts that ground abstractive abuse. How are we to do that? I would look with hope to a new radical feminism, a femininity that searches the hearts of speech.<sup>48</sup>

I cannot emphasise enough how novel the findings and language might be. I wrote of it twenty years ago in terms of Joyce’s *Ulysses* episode “Oxen of the Sun”, an episode in a maternity hospital dealing in tandem with the evolution of language and the birth of a child. What I wrote then has taken on enormously more significance for me in the past decade. I can, perhaps, point forward a little by asking you, Do you feel a new skin tone in the achievement of a serious conception? What words might we use for that instead of that dead word *concept*? Again, I think of Gabriel’s failure in “The Dead”: the

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<sup>47</sup> “Remembering the Future” is the title of the chapter on Synge in Declan Kiberd, *Inventing Ireland: The Literature of the Modern Nation* (Cambridge: Harvard University Press, 1995). The abundant references in the index to *colonization* are well worth following up in relation to the present topic.

<sup>48</sup> Even without the reach of fantasy that the next paragraph seeks to stir, there are evident points of attack on present staleness, for example, in battling towards a fresh meaning of *attention*. Female attention has quite a different molecularity and neurology than its male counterpart. Attention to this attention would shift massively the slim descriptions given by Lonergan in chapter three of *Method in Theology*.

meaning of his wife escapes him. Perhaps we need to redeem words like *concept, term, judgment, question, desire, interest, planning,*<sup>49</sup> *love?* Or perhaps we need a new Babel, beyond *Finnegans Wake*, a new breeding? In mentioning Babel I am recalling the central character, Isaac Babel, of my little book, *Pastkeynes Pastmodern Economics: A Fresh Pragmatism*. The frontispiece, perhaps, gives the mood of the new search, the new beginning: “Gorky called me into his office, and what he said to me there decided my fate. ‘There are small nails,’ he said, ‘and there are nails as large as my finger,’ and he brought his long powerful, delicate chiselled finger up to my eyes. ‘A writer’s path, dear dreamer, is strewn with nails, mostly of the larger sort. You will have to walk upon them barefoot and they’ll make you bleed. And with each year the blood will flow more freely. If you are a weak man they’ll buy and sell you, harass you and lull you to sleep, and you will wilt while pretending to be a tree in bloom. But for an honest man, an honest writer and revolutionary, to travel this path is a great honour; and it is for this arduous journey, my friend, that I give you my blessing.”<sup>50</sup>

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<sup>49</sup> The transposition of the meaning of *planning* is a central task of the new economics. The new meaning will be almost a non-planning, a heuristics of collaboration altogether closer to jazz grouping than to pre-programmed symphonic performance. It was such a heuristics that Lonergan had in mind sixty years ago when he wrote of democratic economics, but perhaps his sad little appeal of 1953 is worth quoting from: the quotation centres on the heading “Planned Society”. “Obviously, if men are just aggregates of small knobs, then experts are needed to do their thinking for them, popularisers are needed to tell them what has been thought for them, social engineers are needed to condition them to like it, planners are needed to tell them what to do, and organizers are needed to get them to do it in the right way... Education ceases to transmit a culture that passes judgment on society and becomes an ever more efficiently organized department of bureaucratic government. One is assured that in due time the world will be a paradise of prosperity, security and peace. But, while men wait for the utopia promised by universal organization, there are wars, transplanted populations, refugees, displaced persons, unemployment, outrageous inequalities in living standards, the legalized robbery of devalued currencies, and the vast but somewhat hidden numbers of the destitute.” Lonergan, “Respect for Human Dignity”, *The Canadian Messenger of the Sacred Heart*, Toronto, July, 1953, 415-6.

<sup>50</sup> Isaac Babel, *The Beginning*, quoted in James E. Falen, *Isaac Babel*,

There is a sense, then, in which I am asking for a Donna Quixote to face an arduous journey, to reach into a pre-axial depth, a memory of compact consciousness, and begin to virgin-birth a decolonisation of language that would be a fresh feminist anthropology.<sup>51</sup> I am asking, perhaps for a new and dedicated loneliness reminiscent and sublational of Hermione's molecular yearnings: "Ah Harry, we have to stumble through so much dirt and humbug before we reach home. And we have no one to guide us. Our only guide is our homesickness".<sup>52</sup>

The guidance of our homesickness and the imaging of our destiny are perhaps not too remote from each other, but I expect that my reader, even if she be a Christian feminist, may be surprised that I would risk a paragraph here on trinitarian theology. Clearly, however, what I have been saying has relevance there. The divine first person was historically thought of as Father, but the agony and the ecstasy of the eternal conception-birth of a second person – not eternally male – is best imaged by the homesickness of the woman. A glib processional analysis needs to be sublated into a glorious umbilicality. Might I add too that Thomas, for all his odd views on women, has some startlingly open things to say about divine incarnation?<sup>53</sup> Any grouping of divine persons might become human any number of times. Further, I like to throw my hat among the papal pigeon by reflecting on the curious possibility of the second coming of the second person being female. But would this be the same Person that suffered under Pontius Pilate? Yes. The second Person of the divinity suffered under Pontius Pilate. Food for thought. More prosaically and generally, it seems to me that Thomas' regular reflections on *convenientia*, convenience, have to be recontextualised by

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*Russian Master of the Short Story* (Knoxville, University of Tennessee Press, 1974), 19.

<sup>51</sup> I recall the tone of the works of women like Ruth Benedict and Margaret Meade in the last century, but this is a deeper and larger venture. Also it should reach into all the sciences to change the meaning of *science*, to make science a pursuit and achievement of integral consciousness. Perhaps the tone is intimated a little by the suggestiveness of the title of the botanical study, "Sunflower, Speak to Us of Growing." See note 9, above.

<sup>52</sup> Hermann Hesse, *Steppenwolf* (London: Penguin, 1965), 179.

<sup>53</sup> *Summa Theologica* III, question 3.

axial considerations, so that the convenience of a single-Person male incarnation within the axial period of history resonates with our gendered and sexual homesickness.<sup>54</sup>

And what of economics? There is here no room for the type of abstractive thinking that mistakenly leaves out what it (he?) calls the inessential. A future metaeconomics, like a future metaphysics, cannot dodge the complex web. Metaeconomics and economics, like the metatennis of the Williams sisters, must strive to be a mesh of concrete anticipations.

If it seems to me that Aristotle, at his concrete best in his ethics, and Lonergan, in his core achievement on both economics and metaphysics, were on the right track, still, both wrote from limited contexts and in a style that allowed partially legitimate doctrine to foster what I call the *doctrinaire disease*. Theirs is a language that allows post-systematic meaning to pose as wisdom, that allows a control of words that parallels the control a London taxi-driver has over London: she or he can get around the streets while missing the heart of the city. One can follow Leopold Bloom round the Dublin of *Ulysses* with a standard map; one can struggle to keep track of Molly's molecule-speech that, at the end, falls on Leopold's sleeping ears; but only a mad circulatorix can follow Anna Livia round the globe of *Finnegans Wake*.<sup>55</sup> But how do we follow through

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<sup>54</sup> "The sexual extravagance of man, unparalleled in the animals, has its ultimate ground in St. Augustine's 'Thou hast made us for thyself, O Lord, and our hearts are restless till they rest in thee.'" Lonergan, "Finality, Love, Marriage," *Collection*, Collected Works of Bernard Lonergan 4 (Toronto: University of Toronto Press, 1988), 49. Unfortunately, as Lonergan remarks in the same article, "theologians, let alone parents, rarely think of the historical process" (47). Not thinking of oneself biohistorically is, however, a massive categorial defect.

<sup>55</sup> The Irish novelist Edna O'Brien remarked that no woman novelist has emerged that could deal with male consciousness as Joyce does with female consciousness in Molly's soliloquy. Jung's view was that perhaps the devil's grandmother might do what Joyce did. Where will our search lead us? Humanity is not at an end but at a beginning. Northrop Frye wrote, "The forms we have been isolating in fiction, and which depend for their existence on the commonsense dichotomies of the daylight consciousness, vanish in *Finnegans Wake* into a fifth and quintessential form." *Anatomy of Criticism* (Princeton: Princeton University Press, 1957), 314.

from *Finnegans Wake*?

I leave that question in your molecules and turn now to the short, and perhaps already familiar, essay by Milton Friedman, “The Social Responsibility of Business is to Increase its Profits” (43-7) Here I wish only to home in on a single point: the meaning of *social*. Does that meaning include also, in some way, a meaning that is economic? Friedman remarks that “the discussions of the ‘social responsibilities of business’ are notable for their analytic looseness and lack of rigour.” In pursuing this flaw Friedman concentrates on the acceptable notion that only persons have responsibilities: one can follow down that track, as Friedman does, without raising the issue that is my concern. So, one nurses a convenient analytic looseness of the meaning of ‘social responsibility’. And that analytic looseness – or could it be three-card trickery? – allows Friedman to home in on profit-making as a central reason for doing business.

I would insist that we are in deep water here. To do business is to belong to an exchange economy, even if what is exchanged is only a shell: and I might add that in such a primitive situation Friedman’s principle would seem to add up to the notion that the point of doing business is the accumulation of shells. Wittgenstein could perhaps go to town on this: is business a game, like playing marbles? Did Friedman go into the business of economics in order to gain rather than loose marbles, or is there more to it? Why did Friedman write this essay? To gain more marbles? We must assume that Friedman means more than gaining rather than losing his marbles.

And why do we read Friedman’s article, or put it up-front in such a volume as this? Is it not because Friedman is considered to have the right to an informed opinion on economics? His name is ‘out there’ not merely for his suggestions about monetary expansion. Perhaps he writes, and we read, because we suspect that there is such a reality as economic science?

And is not this the reason why Friedman writes about profit maximisation? If profit maximisation is not somehow an economic good, then we are back to playing marbles within some Darwinian daftness.

What, then, has profit maximisation to do with economic process and progress? One can leap immediately to the possibility of growth, of expansion, of investment, of invention and innovation. But the leap, if scrutinised slowly and carefully, plunges us right into the problem of the analytic looseness that is my central concern. And that, far from being a walk in the park, is the issue that has haunted two centuries of relatively loose economic thinking. Profit maximisation is certainly one reason to engage in business within an exchange economy, and it is one of many. There is, for instance, the reason of avoiding starvation. The accumulation of such reasons ground in practice the success or the horror of the coincidence of decisions to exchange.

“What causes the coincidence of decisions to exchange? Undoubtedly there are causes, but the causes are infinite. There is the whole realm of truth and the far larger realm of possible error. There is the stimulus of desire and of fear, of ambition and of passion, of temperament and of sentiment. At any given time or place any of these may be more prominent: desire plays a large role in free countries, and fear plays a large role in others; ambition presses forward the new citizens of new lands, and a sullen hopelessness presses further down the depressed classes of senile states; nationalist sentiment dominates with protection, and phlegmatic individualism with free trade. But neither the folklore of popular beliefs, the mythologies of antiquated science, nor the psychology of national and ethnic groups is of concern to any economic science, and least of all to an economic generalisation. Accordingly we dismiss the causes of decisions to exchange, with one exception. That exception is obvious. Economic science itself has to exert an influence on decisions to exchange.”<sup>56</sup>

Economic science would, presumably, involve an understanding of economic process. Alas, the presumption is at present wrong, massively and disastrously wrong. And that was and is the point of Lonergan’s struggle, to get it right. Friedman does not understand the economic process, nor does any inheritor of the mantle of Keynes.

This is an audacious and provocative statement. It echoes

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<sup>56</sup> *For a New Political Economy*, 30.

the title of the book, *Beyond Establishment Economics: No Thank You, Mankiw*.<sup>57</sup> Like the book against Mankiw (which, of course, rhymes with ‘thank you’) it is meant to annoy, to provoke. But the statement cannot be backed up here. However, at least I can note that the statement represents the perspective of some respectable dissenters. Nether Drucker nor Heilbroner think that Keynes had the economic process figured out: they prefer Schumpeter’s work of a century ago.<sup>58</sup> And Schumpeter’s view of Keynes’ efforts is just as audacious as mine.<sup>59</sup> But I prefer Lonergan to Schumpeter, however magnificent Schumpeter’s effort: we are back at the question of analytic looseness.

Lonergan escapes the analytic looseness by tackling the problem of understanding economic process in an integral manner that, I would hope, will gain respect through the efforts of a feminism that disdains the abstractness of economic modelling, whether that of Keynes’ manipulation of interest rates or that of World Bank manipulations of pseudo-growth or that of Friedman’s manipulation of money supply. All are just silly solutions to an aggregate of concrete problems of local innovations and global exchanges. It is a silliness that grounds global disarray: my central image of the destructive arrogance comes from a television vision last year of the two men, George Bush and Alan Greenspan, shoulder to shoulder in their ignorance of economic process, juggling with ungrounded centralist policies.

But there is the consequent smaller analytic looseness that was the initial focus. If the word *social* does not include *economic* in the phrase ‘the social responsibility of business’ then Friedman has no more authority than a non-economist in the matter. Business ethics is then just ethics *in* business, and

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<sup>57</sup> Bruce Anderson and Philip McShane, (Halifax: Axial Press, 2002).

<sup>58</sup> Peter Drucker, “Schumpeter and Keynes,” *Forbes*, May 23, 1983, 124-28; Robert Heilbroner, “Was Schumpeter Right After All?”, *Journal of Economic Perspectives* 7 (1993), 87-96.

<sup>59</sup> Schumpeter wrote a biting critical review of Keynes’ *General Theory* on its appearance in *Journal of the American Statistical Association*, December, 1936, 791-95. It is reproduced in Joseph A. Schumpeter, *Essays*, ed. Richard V. Clemence (London: Transaction Publishers, 1997), 160-64. The review is well worth a visit.

that ethics is bred by the non-economic virtues of business persons.

Does Friedman not, then, have a sort of three-card trick? The social responsibility of business persons is evidently no different from that of persons in other roles, task, institutions. The responsibility that Friedman identifies is one that springs from his economic perspective. He lays it on us like a Sinai tablet, to be swallowed as bible. Profit maximisation is an ungrounded maxim of a muddle of economic thinking that goes back to way before Adam Smith.

Might I add hints of the better view that lurks in Schumpeter's early work and in Lonergan's sustained effort of the 1930s? Any business person knows that a business must yield not just a living – for those at the top a very good living – but a surplus that covers maintenance.

That is a necessary surplus. It is necessary in a non-expanding business or economy. What of an expanding economy? In such an economy there has to be another type of surplus, an innovation surplus. Non-abstractive analysis of real business reveals that this surplus is associated with ideas that mediate the expansive production of non-consumer goods that, with a lag, ground the provision of consumer goods. Non-abstractive analysis reveals, further, that the mediation and the lag give rise to oscillations in the innovative surplus so that there are rhythmic recurrences of the shrinkage of innovative surplus income. That revealing analysis would expose Friedman's maxim as just a gross unthinking, unanalytic, mistake, one that costs dearly in terms of the growth of the supply of consumer goods, the growth of global well-being.

The key word here is *would*. Schumpeter and Lonergan in the first half of the last century invited the tough thinking that *would reveal*. Omerod can now write, expressing the mood of many, of *The Death of Economics*. But his suggestions for reform just do not cut it. However, he makes a valid point that is important in the present context. "It may be said in passing that, in the market for strategic advice, the revealed preference of companies is to use management consultants and business school academics rather than economic theorists. The former group tend to have few, if any, theoretical preconceptions, and

draw instead on a wide range of practical experience.”<sup>60</sup> Businesses, I suspect, are not enamoured by contemporary macro- and micro-economics. The mention of such stuff may merely bring back memories of memory work in compulsory economics courses. Businesses certainly have to keep an eye on interest rates, the more so in businesses with long turnover periods. Curiously, or not so curiously, turnover analysis is not at all central to economic analysis.<sup>61</sup> Indeed, the economic analysis of the standard textbook is quite a comic abstraction.<sup>62</sup>

But from such comic and monstrous abstraction there comes hope. It is the hope for a business ethics that could emerge to displace the death-hold of establishment economics.

Business ethics *qua* business centres on the social responsibilities that are purely economic, that relate to making the whole business, the whole of business, work in a way that does credit to it, in a way that gives *credit* an old richness. But how is such a business ethics to emerge, to emerge moreover as democratic? Certainly, there is the hope that the analysis of business, suggested by Schumpeter and Lonergan, would be undertaken and slowly implemented. Not a very pragmatic hope at present: witness the last century of narrow mindlessness. So I return to my serious hope that business

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<sup>60</sup> Paul Omerod, *The Death of Economics* (London: Faber and Faber, 1994), 57.

<sup>61</sup> Check the indices of texts. Mark Blaug asks, “Why is the quantity theory of money the oldest surviving problem in economics?” *The Quantity Theory of Money from Locke to Keynes and Friedman* (Brookfield VT: Edward Edgar Publishers, 1995), chapter 2. I would claim that it can only be solved by precise turnover analysis. For Lonergan’s solution see the Appendix to either McShane, *Pastkeynes Pastmodern Economics: A Fresh Pragmatism* (Halifax: Axial Press, 2002), or Anderson and McShane, *Beyond Establishment Economics: No Thank You, Mankiw* (Halifax: Axial Press, 2002).

<sup>62</sup> Recently, while lecturing in Austin, Texas on economics, I took the opportunity to check locally-used textbooks. There was little or nothing about the large economic area, Texas, in the texts. See chapter five of *Pastkeynes* for pointers towards restructuring of economic thinking. There is, for example, a clear need for the development of a study I would call *meso-economics*. It would investigate local rhythms of economic behaviour in a way that would transpose various efforts of Jane Jacobs and throw light on the movements described in Michael Barratt Brown, *Africa’s Choice: After Thirty Years of the World Bank*, New York, Penguin Press, 1995.

studies would expand and differentiate its scope and methods. For instance, to Schumpeter's massive history of economy theory there must be added the history – contra-factual as well as factual – of economic practice. That history will generate eventually a dialectics of practice that will be rich in detailed and local suggestions, quite unlike silly 3% abstractions of the Friedman style, silly fractional percentages of Greenspan. Eventually? In this century? "Is my proposal utopian? It asks merely for creativity, for an interdisciplinary theory that at first will be denounced as absurd, then will be admitted to be true but obvious and insignificant, and perhaps finally be regarded as so important that its adversaries will claim that they themselves discovered it".<sup>63</sup>

It is time to bring my weaving reflections to a compact conclusion. Oddly, I recalled this morning, as I faced this task of ending, being asked by Fred Lawrence about twenty five years ago – it was the Boston Workshop in which I presented the weaving spiralling paper "Instrumental Acts of Meaning and Fourth-Level Specialization"<sup>64</sup> – about the weave of my style. I am closer now to a clear answer, one that is clear to me, one that might be obscurely clear to an integral subject with a sense of "the complex web". Clarity on the difference between doctrine and system was still twenty years away from me then; clarity on the nature of *vulgarization*, both *haute* and in various layers of *culture*, still eludes me: I shall struggle with it and intimate directions of clarity when I bring together *Lack in the Beingstalk: A Giants Causeway*. But perhaps you can see the connection my obscurity has to the problem of integral feminism? "Women's enterprise in patriarchal culture might be the excavation and confrontation of the Uncanny".<sup>65</sup> Elsewhere I put that problem of feminist criticism in the fuller context of functional specialization, the context of my present

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<sup>63</sup> Lonergan, *Macroeconomic Dynamics: An Essay in Circulation Analysis*, Collected Works of Bernard Lonergan 15 (Toronto: University of Toronto Press, 1999), 106.

<sup>64</sup> Later published as the fourth chapter of *The Shaping of the Foundations* (Washington: University Press of America, 1976).

<sup>65</sup> Sandra M. Gilbert and Susan Gubar, "The Mirror and the Vamp: Reflections on Feminist Criticism," in Ralph Cohen, ed. of *The Future of Literary Theory* (New York: Routledge, 1989), 144-66, at 158.

considerations.<sup>66</sup> But it is no harm to give here a sense of the detailed struggle demanded by that criticism. So I recall a favourite instance of mine. “To investigate women and the piano nocturne in the nineteenth century is to uncover stories of devaluation and sometimes outright exclusion – but also to discover intimations of individual voices questioning the patriarchal tradition”.<sup>67</sup> So, one must meet with one’s mind and muscles and molecules Clara Weick (Clara Schumann) in her *Notturmo, op.6, no. 2*, or Fanny (Mendelson) Hensel in her *G-minor Notturmo*.<sup>68</sup>

However, I must return to my general – yet totally concrete – pointing. For me the Uncanny is to be associated with the Unappreciated. I use the word *Unappreciated* – or any word you prefer – rather than the word *Unknown* (is this a patriarchally-possessed word?) – because I am thinking (another dangerous word) of our molecular yearnings, our molecules reaching for the music, all music. Perhaps you, like I, are lucky in having been *con-fronted* with the integral uncanny at some stage in your life? My luck was to be enthralled by the music of Frederick Chopin through my early teen years, with hours of struggle especially with his *Ballades*.<sup>69</sup> Have you been so blessed? Do you read, with enthralled resonance, as I did very recently, the following passage from George Steiner: “A solo voice, out of sight, arching from the dark or from the quiet of morning, can transmute the space, the density, the perceived tenor of the world ... [music] that breaks the heart ... a Monteverdi lament, the oboes in a Bach cantata, a Chopin ballade”.<sup>70</sup> And do you re-cognize the larger music he intimates: “Certain masters of exact hearing and of linguistic phrasing – of those tonal,

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<sup>66</sup> See *Pastkeynes Pastmodern Economics: A Fresh Pragmatism* (Halifax: Axial Press, 2002), 65.

<sup>67</sup> Jeffrey Kahlberg, *Chopin at the Boundries. Sex, History and Musical Genre* (Cambridge: Harvard University Press, 1998), 60.

<sup>68</sup> See Kahlberg, 30-61.

<sup>69</sup> My early meeting with Chopin was followed much later by my meeting of George Sand. The two great Georges of the nineteenth century are, for me, not British Monarchs but Sand and Evans (George Eliot).

<sup>70</sup> George Steiner, *Errata: An Examined Life* (London: Weidenfeld and Nicolson, 1997), 73.

rhythmic, harmonic lineaments in spoken and written speech which imply some kinship to music – are able to evoke, with tantalising proximity, the actual effects of music on consciousness. Proust, for example, on ‘Vinteuil’s sonata’; Joyce throughout *Ulysses*; Thomas Mann in his *Faustus*.<sup>71</sup> And are we not close to the bone, indeed the bone of my contention, with the brief claim, “Our poetry is haunted by the music it has left behind.”<sup>72</sup> Does this line, within this magnificent essay on music, not capture the integral yearning that we have been focussed on? But how, and for whom?

I spoke yesterday of this essay with a former leader of a symphony orchestra: yes, he had lived with this essay as an echo of his meaning. And I have no doubt that that great lady of music, Nadia Boulanger, would find in it her home.<sup>73</sup> But I would contend that such excellence is not adequate to our times. For some cultured few, such a wink is certainly as good as a nod, but good only in a limited and restricted sense. This is a difficult point, in need of patient pondering. One might contextualise the pondering with the diagram from page 48 of *Method in Theology*: then one can identify such writing as part of the present insufficient good of order. Some will be shocked by my associating with such writing the critical writing of my two favourite contemporary Irish poets: Seamus Heaney and Brendan Kennelly. Much of their writing is spot on, and I have quoted it as such.<sup>74</sup> So, Kennelly writes of the *Journey into Joy* of some of our Irish writers in a manner “that breaks the heart”. For instance, he sums up journey beautifully with four lines from Patrick Kavanagh, which I quote here *by heart*:

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<sup>71</sup> *Ibid.*, 65.

<sup>72</sup> *Ibid.*, 66. In the text mentioned, note 66 above, I raise the issue of a full *hauntology* that would sublimate the work of Derrida: it would merge with the transposition that is pointed to in these concluding remarks.

<sup>73</sup> Nadia was central to my writing of *Process: Introducing Themselves to Young Christian Minders*, Mt. St. Vincent University, 1989, available in 2002 on the Axial Website, [www.philipmcshane.ca](http://www.philipmcshane.ca) free of charge.

<sup>74</sup> But also I have tried to bring out a contrast, perhaps most substantially in the contrast between Heaney’s efforts in the nineteen nineties and my own, captured in the difference of our two titles, Heaney’s *The Redress of Poetry* (New York: Farrar, Straus and Giroux, 1995) and my own *The Redress of Poise*, 1996, available free, 2002, on the Axial Press Website.

All true poets laugh inwardly  
 Out of grief-born intensity  
 Suffering soars on summer air  
 The millstone has become a star.<sup>75</sup>

What, then, can I mean by saying that it is not good enough, enough good? What I have been saying here of integral consciousness is said so *magnificently* in the line, “our poetry is haunted by the music it has left behind”.

But if one is to be radical one has to go further. “Study of an organism begins from the thing-for-us, from the organism as exhibited to our senses”.<sup>76</sup> So too, self-study of the organism that is the yearning musey-self<sup>77</sup> begins also in poetic intensity, perhaps an echo of primitive first words. But if the community, local or global, is to reach adequately beyond present fragmented and botched good, some, called anciently wise, which I might now designate as Ken Missteries, must move beyond, down that decade-long page in *Insight*, in “grief-born intensity” to discover the music left behind in our best poetry. Without that inward kenning laughter our best poetry will generate conventions, and our conventions and gatherings will become slums.<sup>78</sup>

I am writing about, appealing for,<sup>79</sup> the struggle towards a slice of the terminal value, the first word of metaphysics, uttering utterly molecular yearnings in a transposition of Rilke’s “first word” that springs from lived integral memories. “For the memories are not important. Only when they have changed into our very blood, into glance and gesture, and are

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<sup>75</sup> Brendan Kennelly, *Journey into Joy*, ed. Ake Persson (Newcastle: Bloodaxe Books, 1994), 209, quoting Patrick Kavanagh’s *Prelude*.

<sup>76</sup> *Insight*, 489.

<sup>77</sup> “This is the way to the musey room.” Joyce, *Finnegans Wake* (New York: Penguin, 1976), 8.

<sup>78</sup> The reader familiar with the conclusion of chapter three of *Method in Theology* will recognise here an echo of those pages that reflect on the decay of the Greek aesthetic into the conventions of Roman verse and slowly on into the slums of the West.

<sup>79</sup> I am merely repeating the neglected appeal of Lonergan, in the central paragraph of p. 287 of *Method in Theology*, not to leave the early chapters of that book trapped in description, but rather to reach into the molecular self for a larger and vital self-taste.

nameless, no longer to be distinguished from ourselves – only then can it happen that in some very rare hour the first word of a poem arises in their midst and goes forth from them”.<sup>80</sup>

And for the metaphysician, the Ken Misstery, the central birth-issues are the Strategiks and the *implementators* that would reveal the millstone and our molecules as star-glazed.

We are back to the heart of the matter. Only the hodic enterprise can shift seriously the statistics of implementation, of rescuing globally the melody in the heart. And in the long run, that enterprise will spiral forth with higher probabilities if we luminously accept the hodic way as the global heart of our reaching. Can that long run be shortened? It seems to me that there is a shift of statistics to be associated with a radical feminism, a brand of Ken Misstery that cannot be patient with the researching, interpretation and history that would ferment forward a fuller foundations of sensAbility, that would cultivate not models but molecules. I recall the theologian Harnack remarking that men have been dressed in work-clothes for centuries. Suits and uniforms hold our hearts hostage, warp brutally our exchanges, lay waste our buying and selling. Might it not be possible for a radical feminism to sense deeply past the recent millennia, perhaps with random dialectic, to find in their molecular hearts what we have shrunk out of our words, our poems, our production processes? The finding could, mustard-wise, leave business walking, or waltzing, on quite different streets.

Philip McShane is Professor Emeritus of Philosophy at Mount Saint Vincent University. He has recently edited *Phenomenology and Logic*, Volume 18 of the Collected Works of Bernard Lonergan. He can be reached at [pmcshane@ns.sympatico.ca](mailto:pmcshane@ns.sympatico.ca).

Comments on this article can be sent to [jmda@mun.ca](mailto:jmda@mun.ca).

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<sup>80</sup> *The Selected Poetry of Rainer Maria Rilke*, ed. and trans. Stephen Mitchell (New York: Vintage, 1982), 93. I have discussed this problem more fully in “Thoughts, Tongues and Times: The Drive of Foundations”, chapter four of *A Brief History of Tongue*.

*AD COR LOQUITUR*

## HISTORY THAT IS WRITTEN: A NOTE ON PATRICK BROWN'S 'SYSTEM AND HISTORY'

FREDERICK E. CROWE

In a fine article in the first issue of what promises to be a fine journal Patrick Brown has said much that I can only agree with.<sup>1</sup> Progress in ideas, however, is promoted more by disagreement than by agreement, and so when toward the end of his article he challenges a position I had taken some years ago, I can only welcome the opportunity to return to the question.

Dr Brown refers to two editorial notes, one of them explicitly mine, the other more implicitly so, in which I took the position in question. The first is an editorial endnote to Lonergan's essay, "Analytic Concept of History," where I wrote as follows, "Although the distinction [between the history that happens and the history that is written] is already clear to Lonergan, it is only the history that *happens* that concerns him at this early stage; he will never lose that concern, but it is the history that is *written* that is the focus of chapters 8 and 9 of *Method in Theology*."<sup>2</sup>

The other reference is likewise an editorial note:

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<sup>1</sup> Patrick Brown, "System and History in Lonergan's Early Historical and Economic Manuscripts" (hereafter, "System and History"), *The Journal of Macrodynamical Analysis* 1:1 (Summer 2001) 32-76.

<sup>2</sup> "Editorial Notes" to Bernard Lonergan, "Analytic Concept of History," *METHOD: Journal of Lonergan Studies*, 11:1 (Spring 1993) 30-35, at 31, note 11.

“Lonergan does treat these topics [development in philosophy, dogma, and theology] in the final lecture, ‘History,’ in *Topics in Education* (see pp. 241-50). That lecture begins and ends by referring to the history that happens, but the entire treatment is in terms of the history that is written. Further, Lonergan does not there mention the two meanings of history.”<sup>3</sup> Although the volume was co-edited, it was most probably I who contributed this note; in any case I accept it as stating my position.

Brown’s disagreement is expressed as follows: “... even a brief exploration of that topic [what Lonergan meant by historical analysis] may help to lay to rest the notion that the distinction between history as ‘what is written’ and history as ‘what is written about’ can be used to periodise Lonergan’s own thinking, that the first half of his life centred on the history that is written about, while only after *Insight* did his concern turn to the history that is written.” In note 112 to this text Brown states, “This contention appears, for example, in the editorial notes...” – here he refers to the notes to “Analytic Concept of History” and to “The Philosophy of History” that I quoted above.<sup>4</sup>

In undertaking to defend my position, I make a few clarifying notes. My position did not refer to periods in Lonergan’s thinking in general – many topics besides history would be involved in such a division, and various authors would divide in various ways, depending on their purpose – but to periods in his thinking on history; I daresay Brown understands that point in the same way I do. Next, it is the note to “Analytic Concept of History” that seems to be most directly the object of Brown’s critique, so it is that note I will most directly defend. Third, I will discuss the matter only as it regards the history that is written; the history that happens, as I shall explain, would require more than a short note. Finally, my approach is in the line of research rather than dialectic and

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<sup>3</sup> Bernard Lonergan, “The Philosophy of History,” in his *Philosophical and Theological Papers: 1958-1964* (hereafter, *Philosophical*), ed. Robert C. Croken, Frederick E. Crowe, and Robert M. Doran (Toronto: University of Toronto Press, 1996) 54-79, at 79, note 43. (Date of lecture, 1960.)

<sup>4</sup> Brown, “System and History,” p. 68 and note 112.

the burden of my answer will be the simple but fundamental and, I think, effective way of merely collecting the data that led me to the position that Brown refers to.

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What are the data that led me to take 1953 as a turning point in Lonergan's thinking on history? Several times in interviews on the history of his thinking Lonergan referred to the change in locale at that time as the cause or occasion of his changing views. Asked in 1970 about his new interest in meaning, he said: "Well, it was being sent to Rome and having to deal with students from northern Italy and France and Germany and Belgium who were totally immersed in continental philosophy – I had to talk meaningfully to them, and it involved getting a hold of the whole movement of the *Geisteswissenschaften* ..." <sup>5</sup> Asked a year later about his change in attitude between *Insight* and later years: "I was teaching in Rome. I had students from Germany, France, Belgium, Holland, Northern Italy, all very familiar with Existentialism and further, with an extension of Existentialism. As it occurs in Heidegger it is a prolongation of German historical thought." <sup>6</sup> Two years later: "A principal source of the difference between these two works [*Insight* and *Method in Theology*] is that I was transferred from Toronto to the Gregorian University in Rome in the summer of 1953." My students "were about six hundred and fifty strong and between them, not individually but distributively, they seemed to read everything. It was quite a challenge." <sup>7</sup> Some years after that: "While *Insight* had something to say on evolution and historical process, it did not

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<sup>5</sup> Lonergan, *A Second Collection: Papers by Bernard Lonergan, S.J.* (hereafter, *Second Collection*), ed. William F.J. Ryan, S.J. and Bernard J. Tyrrell, S.J. (Toronto: University of Toronto Press reprint, 1996), in "An Interview with Fr Bernard Lonergan, S.J.," 209-30, at 220. (Date of interview, 1970.)

<sup>6</sup> *Curiosity at the Center of One's Life: Statements and Questions of R. Eric O'Connor* (hereafter, *Curiosity*), ed. J. Martin O'Hara (Montreal: Thomas More Institute, 1984) 385. (From conversation with O'Connor, March 30, 1971.)

<sup>7</sup> *Second Collection*, in "Insight Revisited," 263-78, at 276. (Date of lecture, 1973.)

tackle the problem of critical history. But with this issue I was confronted in its multinational form when I was assigned to a post at the Gregorian in Rome.”<sup>8</sup>

It was of some importance to multiply that list, for the issue regards a change in a focal interest of Lonergan and the repetitions indicate how prominent in his memory was the struggle from 1953 on with a new sphere of thought.

But why were these *Geisteswissenschaften* such a challenge to Lonergan? Because they were something new to him, something new in the thinking of his church, and indeed relatively new in the history of thought. On this we have his comprehensive statement: “There is the history that is written and the history that is written about. Today the history that is written is the work of an ongoing community of professional specialists ... History in this contemporary sense largely was the creation of the nineteenth century, and its acceptance in the Catholic church has occurred only slowly and gradually in the present century.”<sup>9</sup> He is quite blunt on this new thinking; “History was discovered in the 19th century and it was applied first of all to early European history, the 13th century on. And then to classical history ... and then to biblical history, the Old Testament and the New Testament.”<sup>10</sup> Late in life (1981): “It was the German historical school which introduced historical thinking, defined it.”<sup>11</sup>

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<sup>8</sup> “Reality, Myth, Symbol,” in Alan M. Olson, ed., *Myth, Symbol, and Reality* (Notre Dame and London: University of Notre Dame Press, 1980; hereafter, Olson), 31-37, at 36.

<sup>9</sup> *A Third Collection: Papers by Bernard J.F. Lonergan, S.J.* (hereafter, *Third Collection*), ed. Frederick E. Crowe (New York: Paulist Press, and London: Geoffrey Chapman, 1985), in “Christology Today: Methodological Reflections,” 74-99, at 80. (Date of lecture, 1975.)

<sup>10</sup> *Curiosity* 425-26. (“Conversation” of March 1980.)

<sup>11</sup> *Caring about Meaning: Patterns in the life of Bernard Lonergan* (hereafter, *Caring*), ed. Pierrot Lambert, Charlotte Tansey, Cathleen Going (Montreal: Thomas More Institute, 1982) 25. (Date of interview, February 1981.) The repetition is important, but can be tedious; let me relegate a selection of other texts to this footnote.

“History as a scientific subject had its principal development in the nineteenth century” (*Philosophical*, “The Philosophy of History,” 55).

“In the nineteenth century new conceptions and procedures were introduced into philology, hermeneutics, and history” (*Second Collection*,

We are studying the trend of Lonergan's thinking on history, and once again the point is clear and the repetition impressive. He had to come to terms with the achievement of the German Historical School and, as we shall see, it was a long, hard struggle. We may wonder that in a thinker of his stature the struggle should be so long and so hard. But on reflection we will perhaps realize that a thinker of his stature does not merely read and learn, as pupils do in grade school; they must also modify and integrate. There was a need, he states, "of integrating nineteenth-century achievement in this field with the teachings of Catholic religion and Catholic theology."<sup>12</sup> Further, Lonergan had his own positions on which he had thought long and deeply and these had to be integrated into the new thinking on history; it was just because of his stature that the integration was so difficult.

The course of his 'long, hard struggle' is well documented. History can minimize attention to meaning and values or, "In contrast, it can embrace the ideal of the German Historical School defined as the interpretative reconstruction of the constructions of the human spirit"; and that is Lonergan's choice.<sup>13</sup> "The new challenge came from the *Geisteswissenschaften*, from the problems of hermeneutics and critical history, from the need of integrating nineteenth-century achievement in this field with the teachings of Catholic religion and Catholic theology. It was a long struggle that can be documented from my Latin and English writing during this period and from the doctoral courses I conducted *De intellectu et methodo*, *De systemate et historia*, and eventually *De*

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in "The Response of the Jesuit as Priest and Apostle in the Modern World," 165-87, at 183-84. (Date of lecture, February 1970.)

"In a brilliant definition the aim of *Philologie* and later the aim of history was conceived as the interpretative reconstruction of the constructions of the human spirit." The constructions: "man's making of man." "The interpretative reconstruction of those constructions was the goal set itself by the German Historical School in its massive, ongoing effort to reveal, not man in the abstract, but mankind in its concrete self-realization" (*Third Collection*, in 'Natural Right and Historical Mindedness,' 169-83, at 171). (Date of lecture, 1977.)

<sup>12</sup> *Second Collection*, "Insight Revisited," 277.

<sup>13</sup> *Third Collection*, in "The Ongoing Genesis of Methods," 146-65, at 163. (Date of lecture, March 1976.)

*methodo theologiae.*”<sup>14</sup> Again: “So I found myself with a twofold problem on my hands. I had to extend my theory of knowledge to include an account of critical history, and then I had to adjust my ideas on theology so that critical historians could find themselves at home in contributing to theology. Finally I managed to publish a book on *Method in Theology* in 1972.”<sup>15</sup> Also, explaining in an interview why *Method* took a long time to complete: “I had to go into history and interpretation, and into *Verstehen*.”<sup>16</sup>

An important influence in this development was Peter Huenermann. “There is a book on that school: Huenermann’s *Der Durchbruch geschichtlichen Denkens im 19 Jahrhundert*. I had been interested, but I learned about it from that book, and what I have to say on it in *Method* is mostly in reference to Huenermann.”<sup>17</sup> Again, answering the question, “Did you study them in order to complete the section on history in the Functional Specialties, or had your study of history preceded *Method*?” he said: “Both. I had to get Huenermann’s book.”<sup>18</sup> There is surely an important experience behind that remark, “I had to get Huenermann’s book,” but details are lacking. The book came out in 1967,<sup>19</sup> when Lonergan had already gone a considerable distance in that ‘long struggle’ he speaks of; his first reference in print to the book that I have noticed is in 1969;<sup>20</sup> and he submitted his MS to his publisher only two years later, so what exactly did Huenermann’s book do for him in that short two-year interval? The question is worth study.

It is time to introduce some moderating and qualifying affirmations. For one thing, though the history that happens

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<sup>14</sup> *Second Collection*, “*Insight Revisited*,” 277.

<sup>15</sup> “Reality, Myth, Symbol,” Olson 36. Add: “German contribution to thought, the contribution worked out in the nineteenth century ... has been the main influence on my own thinking on this issue” (*Philosophical*, in “Time and Meaning,” 94-121, at 95). (Date of lecture, 1962.)

<sup>16</sup> *Caring* 26. Then, *ibid.*, 59 (February 1971), answering the remark, “still it was a long work from *Insight to Method*”: “Yes, because I had to master interpretation and history and dialectic and get them in perspective.”

<sup>17</sup> *Caring* 25.

<sup>18</sup> *Caring* 26.

<sup>19</sup> The date 1957 in *Second Collection* 136 seems to be a typo.

<sup>20</sup> *Second Collection* in “Theology and Man’s Future,” 135-48, at 136. (Date of lecture, 1968.)

and the history that is written are distinct, “quite different things,” they are very closely interwoven. They are quite distinct: “Two quite different things can be meant by ‘history’: the history that is written, and the history that is written about. My first point is history that is written: history as a subject, as a specialized field of inquiry...”<sup>21</sup> But they are closely interwoven: “... the community mediates itself in its history. ... The history that is written about is the mediation, the revelation, of the common sense of the community; the history that is written is the fully reflective product of that self-manifestation. The two are continuous. The community reveals what it is in its living and reflection on the living itself, in its problems, its successes and its failures, reveals the quality of the common sense that constitutes the community. A written history, then, a history that attempts to think things out is the full stage in the reflection, the manifestation, of what the community is.”<sup>22</sup>

A second qualification: history did not start *ex nihilo* with the German Historical School: “You have modern history with the Maurists and with ... the Bollandists in Belgium. But the way of doing history in a university seminar spread to all universities of the world; that is one aspect of the German responsibility for history.”<sup>23</sup>

A third: Lonergan does not always do himself justice. He was not absolutely dependent on the German Historical School. His graduate courses at the Gregorian University reveal his personal input. I have quoted him as saying “German contribution to thought, the contribution worked out in the nineteenth century ... has been the main influence on my own thinking on this issue” – main influence, then, not sole. More specifically: “In a practical way I had become familiar with historical work both in my doctoral dissertation ... and in my

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<sup>21</sup> *Philosophical*, “The Philosophy of History,” 54-55.

<sup>22</sup> *Philosophical*, in “The Mediation of Christ in Prayer,” 160-82, at 172-73. (Date of lecture, September 1963.) Further, there is reciprocal influence: every history that is written is also ipso facto a new event in the history that happens. Still further: we would not know a great deal of what happens unless written history in at least some rudimentary form brought it to our attention.

<sup>23</sup> *Caring* 120. (Date of interview, February 1981.)

later study of *verbum* in Aquinas. *Insight* was the fruit of all this. It enabled me to achieve in myself what since has been called *Die anthropologische Wende*.<sup>24</sup>

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I have limited my topic to Lonergan's post-1953 thinking on the history that is written. It is a precise topic, more easily isolated for study, and clear in its results. Although I agree with the historians that facts never really speak for themselves – always someone is presenting them with a meaning – still, the data I have assembled come about as close as they can get to speaking for themselves. And what do they say? That in the move to Rome in 1953 Lonergan was presented with a new challenge, that the challenge came from the German Historical School, that it had to do with the history that is written, that Lonergan had a long struggle as he tried to come to terms with these new ideas, that it so occupied him that he could say – with exaggeration, yes, but with a solid core of truth – “All my work has been introducing history into Catholic theology,”<sup>25</sup> that the outcome of the struggle is recorded in chapters 8 and 9 of *Method in Theology*.

I do not think this phase of Lonergan's thinking will turn out in the long run to be his most significant contribution to human thought on history. Of course I do regard it as significant, with the promise of multiple applications; most promising, it may be, is its application to the myriad cultures we now have available for study. It is an exciting time, with exciting prospects before us, and exciting guide-lines to follow. But in the long run it will level off in Lonergan studies.

In fact I believe that in the long run even the great achievement of the German Historical School itself will level off in the ranks of human development and human achievement. Lonergan liked to quote Butterfield who said of the scientific revolution of the sixteenth and seventeenth centuries that it “outshines everything since the rise of Christianity and reduces the Renaissance and Reformation to the rank of mere episodes, mere internal displacements, within

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<sup>24</sup> *Second Collection*, “*Insight Revisited*,” 276.

<sup>25</sup> *Curiosity* 427. (“Conversation” of March 1980.)

the system of medieval Christendom.”<sup>26</sup> I believe that the achievement of the German Historical School will, a century or so from now, be similarly ranked as a mere episode within the history of ideas, and that what will take central stage in this theatre is the history that happens. But that is far too vast a topic to be treated in such a short note as I have devoted to the history that is written; I will conclude with a word in explanation of that.

The history that happens began with Adam and Eve, or thereabouts, and will continue till the crack of doom. In the theatre of Lonergan’s work it was an early and absorbing interest. I believe that that is the history he had in mind when, beginning his career, he wrote his Religious Superior asking whether he might pursue his studies on the philosophy of history.<sup>27</sup> I believe it is a main interest in the papers of File 713 that Dr Brown has studied so diligently,<sup>28</sup> papers that are contemporaneous with that letter. In mid-life, Lonergan pinpoints the apostolic need of a theory of history; referring to liberalism, Marxism, and Nazism, he says: there has been “a vacuum of meaning in that merely day-to-day aspect of human living which these modern philosophies of history are attempting to fill. When they fill it, they obtain stupendous results, stupendous influence over human life in all its aspects, as is illustrated by nineteenth-century progressivism – it goes on well into this century – and the influence of Marx at the present time.”<sup>29</sup> In old age he again declared his long-standing concern: after pointing again to the domination of theories of history like liberalism and Marxism, he stated, “It has long been my conviction that if Catholics and in particular if Jesuits are to live and operate on the level of the times, they must not

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<sup>26</sup> *Third Collection*, ‘The Ongoing Genesis of Methods’ 147.

<sup>27</sup> Letter from Dublin to Rev. Henry Keane, dated ‘10 August 1938’: “As philosophy of history is as yet not recognised as the essential branch of philosophy that it is, I hardly expect to have it assigned me as my subject during the biennium. I wish to ask your approval for maintaining my interest in it, profiting by such opportunities as may crop up ...”

<sup>28</sup> Lonergan left a large number of files, including one on ‘History’ numbered 713. For a list of its contents, see Brown’s “System and History,” pp. 35-36, note 16.

<sup>29</sup> *Philosophical*, “The Philosophy of History” 76-77.

only know about theories of history but also must work out their own.”<sup>30</sup> I believe this was Lonergan’s underlying passion throughout life, continually breaking out in penetrating remarks and applications.<sup>31</sup> I believe it is where the future of our Lonergan studies lies. With such an estimate of the history that happens and of the place it has in the life and work of Lonergan, I hope I am not shirking the present task if I decline to present my case on this in the compass of a short note.

Frederick E. Crowe is Professor Emeritus at Regis College, Toronto. He is the founder of the Lonergan Research Institute and, with Robert M. Doran, general editor of the *Collected Works of Bernard Lonergan*.

Comments on this article can be sent to  
[jmda@mun.ca](mailto:jmda@mun.ca).

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<sup>30</sup> Lonergan, in “Questionnaire on Philosophy: Responses,” *METHOD: Journal of Lonergan Studies* 2:2 (October 1984) 1-35, at 14. (Responses to a questionnaire circulated in preparation for a symposium of Jesuit philosophers held in Villa Cavalletti, near Rome, in 1977. Lonergan did not attend but sent this response in 1976.)

<sup>31</sup> See my paper, “The Future: Charting the Unknown with Lonergan,” to appear in a forthcoming volume of *Lonergan Workshop*, ed. Fred Lawrence.

## REPLY TO FRED CROWE'S NOTE ON 'THE HISTORY THAT IS WRITTEN'

PATRICK BROWN

I am grateful to Fred Crowe for the opportunity to discuss in more detail the complex history of Lonergan's treatment of history. In his note, Crowe patiently and carefully builds a case against a suggestion I made in my article on Lonergan's historical manuscripts from the 1930s. My suggestion concerned the relationship between 'the history that happens' (historical fact or process) and 'the history that is written' (historical investigation or historiography). I am thankful, as well, for the editor's invitation to develop my initial suggestion by way of reply. By formulating more explicitly and expansively the grounds on which I disagree with Crowe, I hope with his help to identify an important element in Lonergan's thinking on history and to advance the state of the question concerning it.

### **I. Introduction**

On its face, our disagreement appears to be about footnotes. Crowe takes issue with a footnote in my article calling into question two editorial footnotes authored by him. But really it is a disagreement regarding, in Crowe's words, "the trend of Lonergan's thinking on history." Since the meaning and nature of that trend is too important to be relegated to footnotes, it is entirely appropriate to hone and focus the disagreement in a more extended way. Although so large a topic cannot be definitively settled in a few pages, this exchange may at least give rise to further, relevant questions on the topic.

As I understand it, our disagreement concerns (a) the

nature of the distinction between ‘the history that happens’ and ‘the history that is written,’ (b) the role that distinction plays in Lonergan’s thought about history, and (c) the use to which that distinction can be put in periodizing Lonergan’s thought on history.<sup>1</sup> As one’s view of the latter two will depend largely on one’s view of the first, I will try to sketch a view that differs from Crowe’s and that takes into account a series of texts from the *Insight* and pre-*Insight* period.

My discussion needs to be prefaced by three important qualifications. First, Fred Crowe has a much deeper familiarity with Lonergan’s thought than I have, and the breadth of his knowledge of Lonergan is something I can only aspire to. Yet on the particular point under discussion I believe that he is mistaken – or, perhaps a more plausible alternative, that I have mistakenly interpreted his position.

Second, I find I cannot adequately answer Fred’s remarks without going beyond the limits he sets for his note. For Crowe treats ‘the history that happens’ and ‘the history that is written’ as topics that may be developed separately, and so he confines himself in his response largely to the latter and, indeed, to the latter in Lonergan’s thinking after *Insight*. For my part, I believe the two are related as historical process and historical investigation; they seem to me to be as correlative as subject and object in generalized empirical method.<sup>2</sup> I must therefore treat both topics, although I will attempt to do so as briefly as possible. In addition, Crowe limits his topic to Lonergan’s post-*Insight* thinking on the history that is written, while I will attempt to present relevant key texts from Lonergan’s writings

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<sup>1</sup> Crowe begins with four clarifications. For the sake of clarity I should note that I wholly agree with Crowe’s first clarification, mostly agree with his second, dispute the third, and agree with the approach taken in the fourth, though not with its conclusion.

<sup>2</sup> See “Religious Knowledge,” *A Third Collection*, ed. Frederick Crowe (Mahwah NJ: Paulist Press, 1985), 129-145, at 141 (generalized empirical method “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.”) For an oblique but striking application of this idea to a philosophical account of empirical method that explicitly includes historical method, see “A Post-Hegelian Philosophy of Religion,” *A Third Collection*, 202-223, at 202-204.

prior to and including *Insight*.

Third, though with Crowe I believe that further research can help resolve the question at hand, and though in a later section of this reply I present various texts that at least call into question those presented by Crowe, still I am forced by the logic of my argument to move beyond a presentation of texts to a consideration of contexts. And that, unfortunately, requires a more lengthy and circuitous route than the concise and expeditious path taken by Crowe. Moreover, through the strategic use of Lonergan's late comments on his own early work, Crowe is able to make a strong argument that the disputed issue is a relatively closed and determined one. My task, in contrast, is to suggest as persuasively as I can that the two meanings of the English word "history," their implications, relations, and history in Lonergan's thought, are very much an open and complex question. Unfortunately, exploring that suggestion involves a more lengthy and detailed presentation than Crowe's precise and concise argument.

## II. Crowe's Position on the Distinction

In my article I expressed doubts about the assumptions underlying two editorial notes. The first, from the editor's introduction to Lonergan's "Analytic Concept of History" (1937-38), reads:

"Although the distinction is already clear to Lonergan, it is only the history that *happens* that concerns him at this early stage; he will never lose that concern, but it is the history that is written that is the focus of chapters 8 and 9 of *Method in Theology* ..." <sup>3</sup>

The second, a comment on "The Philosophy of History" (1960), reads:

"Lonergan does not treat these topics in the final lecture, 'History,' in *Topics in Education* (see pp. 241-50). That lecture begins and ends by referring to the history that happens, but the entire treatment is in terms of the history that is written. Further, Lonergan

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<sup>3</sup> "Analytic Concept of History," *Method: Journal of Lonergan Studies* 11/1 (1993), 31, n.11.

does not there mention the two meanings of ‘history.’”<sup>4</sup>

A third editorial note, also representative of the general theme, reads:

“The topic here is the history that happens, that is written about. It was only slowly that the counterpart of this, the history that is written (chapters 8 and 9 of *Method in Theology*), became thematic for Lonergan. This is strange, since the distinction is already clear in the student papers of File 713 ... more than twenty years before the thematic treatment of the two as a related pair occurs in ... *The Philosophy of History* (1960).”<sup>5</sup>

My doubts concern the treatment in these notes of ‘the history that happens’ and ‘the history that is written’ as a distinction verging on a separation or a dichotomy. As I will explain below, I believe the two to be intrinsically related, and I believe Lonergan understood this to be the case even in the period of his early historical manuscripts. Moreover, an explicit concern for ‘the history that is written’ appears in Lonergan’s writings in the 1930s and 1940s and continues up through *Insight*. In short, I think it inaccurate to say that ‘it was only slowly that the history that is written became thematic for Lonergan.’ In addition, I believe that using the distinction to periodize Lonergan’s thinking on history obscures more than it illuminates. As I hope to show in the next several sections, the development of Lonergan’s thinking on history is not so much a shift from one to the other meaning of ‘history’ as a series of shifts within each.

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<sup>4</sup> “The Philosophy of History,” *Philosophical and Theological Papers 1958-1964*, ed. Frederick E. Crowe, Robert M. Doran and Robert C. Croken, *Collected Works of Bernard Lonergan* 6 (Toronto: University of Toronto Press, 1996), 54-79, at 79, n.43.

<sup>5</sup> *Understanding and Being*, ed. Elizabeth A. Morelli, Mark D. Morelli, Frederick E. Crowe, Robert M. Doran and Thomas V. Daly, *Collected Works of Bernard Lonergan* 5 (Toronto: University of Toronto Press, 1990), 423, note f.

### III. Some Potentially Relevant Variant Terminology

First, then, the shifts to which I just referred are obscured by the fact that Lonergan used a variety of different terms for the same idea. By recognizing the range of rubrics Lonergan uses for the same basic idea, one is better able to notice a larger variety of relevant contexts.

As Crowe notes, the distinction between the two meanings of “history” appears as early as “The Analytic Concept of History,” dated by Crowe to 1937-38.<sup>6</sup> The very same language appears as late as *Method* and “Christology Today.”<sup>7</sup> But like his mentor Aquinas, Lonergan does not cling rigidly to an artificially consistent vocabulary.<sup>8</sup> So one must not jump to the conclusion that Lonergan refers to the distinction only when he happens to use the language of ‘history that is written’ and ‘history that happens.’ For example, in “Analytic Concept” Lonergan explicitly uses “historiography” as a synonym for ‘the history that is written.’ (The root image, after all, is the same.) In fact, Lonergan uses the term “historiography” in “Analytic Concept,” *Insight*, *Method*, and in “The Ongoing Genesis of Methods” – in short, throughout every period in his career as a philosopher of history.<sup>9</sup>

Lonergan uses the basic distinction between ‘history the

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<sup>6</sup> For the dating, see the “Editor’s Introduction” to “Analytic Concept of History,” *Method: Journal of Lonergan Studies* 11/1 (1993), 1-2. For the distinction, see *id.*, “Analytic Concept of History,” 9 (“Distinguish [a] history that is written, history books; call it historiography; [b] history that is written about.”)

<sup>7</sup> *Method in Theology*, 175; “Christology Today: Methodological Reflections,” in *A Third Collection*, 80.

<sup>8</sup> “In general, I do not operate out of a fixed vocabulary.” *Method* in Theology Institute at Boston College, 1970, trans. N.W. Graham (Lonergan Center, Boston College, 70.4.1), 476. See also *Caring about Meaning: Patterns in the Life of Bernard Lonergan* [interviews], Thomas More Institute Papers/82 (Montreal: Perry Printing Ltd., 1982), 6 (noting that Aquinas will propose two definitions of “actio,” and then a few pages later three, “and the three don’t correspond to the other two! Scotus will say in one crack: there are fifteen different meanings of *actio*. Scotus was a logician; Thomas was the intelligent man.”)

<sup>9</sup> “Analytic Concept,” 9; *Insight*, ed. Frederick E. Crowe and Robert M. Doran, *Collected Works of Bernard Lonergan* 3 (Toronto: University of Toronto Press, 1992), 588; *Method*, 194, 194 n.11; “Ongoing Genesis of Methods,” *Third Collection*, 146-65, at 158.

process' and 'history the investigation of the process' in a variety of different guises throughout his writings. For example, an important category for 'the history that is written' in *Insight* is "the historical sense."<sup>10</sup> Recognizable references to what he calls "the historical sense" occur as early as 1937-38.<sup>11</sup> Lonergan refers to "historical investigation" in both *Insight* and *Method*, and he refers to "historical process" in *Insight*, *Method*, and other writings.<sup>12</sup> He writes of "historical study" in 1939-40,<sup>13</sup> in 1942<sup>14</sup> and in 1959,<sup>15</sup> and he refers to

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<sup>10</sup> *Insight*, 587; 762. The phrase "the historical sense" is also used in "Method in Catholic Theology" (1959), *Method: Journal of Lonergan Studies* 10/1 (1992), 3-23, at 16, where he refers to "the historical sense, namely, an awareness that concepts are functions of time, that they change and develop with every advance of understanding, that they become platitudinous and insignificant by passing through minds that do not understand, and that such changes take place in a determinate manner that can be the object of a science." This last phrase is, of course, crucial. I take it to refer to Lonergan's explanatory hermeneutics and its relevance for scientific history. Compare *Insight*, 762 ("historical interpretation may be based simply on a historical sense or may operate in the light of the universal viewpoint") with *Understanding and Being*, 384 (noting that "the problem of history as a science is an extremely complex problem," suggesting that "an approach to history in terms of truth" is possible, and adding that "it's that question that to some extent I'm dealing with in the section of chapter 17 on canons of hermeneutics").

<sup>11</sup> See, e.g., the first page of "Analytic Concept," where Lonergan refers to "Christopher Dawson's historical essays" as examples of "synthetic understanding," to be contrasted with "analytic understanding." See also the reference in Lonergan's doctoral dissertation to the advantages of a method that stands to historical events as "the science of mathematics stands to quantitative phenomena," and the context there. *Grace and Freedom: Operative Grace in the Thought of St. Thomas Aquinas*, ed. Frederick Crowe and Robert Doran, Collected Works of Bernard Lonergan 1 (Toronto: Toronto University Press, 2000), 162-63.

<sup>12</sup> *Insight*, 588 (referring to "historical inquiries," "historical interpretation," and "historical investigation"); *Method*, 177, 184 (referring to "historical investigation"); *Insight*, 762 ("the cumulative, historical process of development"); *Insight*, 252 (referring to "the course of human history" as subject to emergent probability); *Method*, 218 ("historical process"), *id.* ("historical reality"); "Reality, Myth, Symbol," in Alan M. Olsen, ed., *Myth, Symbol, and Reality* (Notre Dame: University of Notre Dame Press, 1980), 31-37, at 36 ("historical process"). See also "Ongoing Genesis," 152 (referring to "the historical process itself").

<sup>13</sup> See, e.g., *Grace and Freedom*, 156.

“historical research” in 1953.<sup>16</sup> In 1951 he writes of “explanatory histories of civilizations and cultures, of religion and dogmas,”<sup>17</sup> while in 1954 he writes of “higher level controls” in “scientific method in the historical sciences” that might provide a desired “component in historical method.”<sup>18</sup> In 1959 he writes of changes of meaning over time that “take place in a determinate manner that can be the object of a science.”<sup>19</sup> Similarly, in *Method* he writes of an ascent “towards the notion of scientific history,”<sup>20</sup> while in his last published article he referred to “the possibility of history being scientific”<sup>21</sup> – a possibility he had highlighted 40 years before in the introduction to his doctoral dissertation.<sup>22</sup>

My second point is simple enough. If one is to study the history of Lonergan’s treatment of history, one must attend to the whole range of variant terminology over the whole course of Lonergan’s writing. Once one does so, one notices frequent and consistent uses either before or around 1953 of “historical investigation,” “historical inquiry,” “historical interpretation,” “the historical sense,” “historical method,” “historiography” – even the striking phrase, “the outlines of a heuristic scheme for historical investigations.”<sup>23</sup> And that suggests that ‘the history that is written’ may have been thematic for Lonergan prior to

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<sup>14</sup> *For a New Political Economy*, ed. Philip McShane, Collected Works of Bernard Lonergan 21 (Toronto: Toronto University Press, 1998), 9.

<sup>15</sup> “Method in Catholic Theology” 17.

<sup>16</sup> *Insight*, 564.

<sup>17</sup> “The Role of a Catholic University in the Modern World” (1951), *Collection*, ed. Frederick E. Crowe and Robert M. Doran, Collected Works of Bernard Lonergan 4 (Toronto: Toronto University Press, 1988), 108-113, at 113.

<sup>18</sup> “Theology and Understanding,” *Collection*, 114-132, at 129-30.

<sup>19</sup> “Method in Catholic Theology,” 16-17.

<sup>20</sup> *Method*, 182.

<sup>21</sup> “Unity and Plurality: The Coherence of Christian Truth” (1982), *A Third Collection*, 239-250, at 246.

<sup>22</sup> See especially, *Grace and Freedom*, at 156-58.

<sup>23</sup> *Insight*, 427. Lonergan claims that his sketch of a dialectic of method in metaphysics provides such a heuristic scheme for a more expansive historical investigation of philosophy. It is no stretch to say that the same phrase describes his sketch on method in the introduction to his doctoral dissertation. See *Grace and Freedom*, 155-192.

his transfer to Rome in 1953.

My third point follows from the first two. There is no particular magic in the terminology Lonergan often used to distinguish between the ‘history that happens’ and the ‘history that is written.’ In my view, it was simply a stock distinction, a practical expedient required by the fact that English has one word for both historical process and the intelligent investigation of that process.<sup>24</sup>

My fourth point is more complex but it may be stated simply. One should be wary of exaggerating the distinction. I take the distinction to be analogous to the standard English uses of the word “chemistry.” There is, after all, a “chemistry that happens” and a “chemistry that is written.” Stated otherwise, by “chemistry” one may mean either chemical processes or the scientific study of such processes. The two are distinct but related. The same, I suggest, is true of “history.” Context usually indicates which meaning is intended in ordinary language. In professional discourse, however, it may be necessary to indicate more carefully which use of the word “chemistry” or “history” one intends.

If my analogy holds, then there may be something problematic about Crowe’s assertion that it was only slowly that ‘the history that is written’ became thematic for Lonergan.<sup>25</sup> A serious chemist would not spend years investigating chemical processes without giving any thought to the experimental or scientific method involved in discovering chemical processes – certainly not a chemist who had a longstanding interest in methodology. Similarly, it seems doubtful that Lonergan could have approached his study of historical process without also seriously attending to historical investigation or historical method.<sup>26</sup> By the age of 22 (six years

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<sup>24</sup> Raymond Williams provides an illuminating history of the two English senses of “history” in *Keywords: A Vocabulary of Society and Culture* (New York: Oxford University Press, rev. ed. 1983), 146-48.

<sup>25</sup> *Understanding and Being*, 423, note f.

<sup>26</sup> The connection between the two seems to me inevitable, once one acknowledges that the history that happens is mediated by heuristics. On this, see a remark by Lonergan in 1962: “The history that is written about can be conceived vaguely as the total course of human events; or one can form a heuristic concept with regard to it, something to be known by the

before he began work on the earliest extant historical manuscript) he was already seriously interested in methodology.<sup>27</sup> For this reason, I find a dramatic shift in Lonergan's thinking on history from 'the history that happens' to 'the history that is written' *a priori* unlikely, and I find it doubly unlikely that the shift would happen after *Insight*, which is to say, some 20 years after Lonergan began to think seriously about history.<sup>28</sup>

I hope to show that it is *a posteriori* unlikely as well, through a brief presentation of the distinction in Lonergan's writings from the 1930s, 1940s, and early 1950s. But in order to prepare for that brief examination, I would like first to explore why what I believe to be an unlikely view might seem at least initially very plausible.

#### IV. Interpretive Simplifications and Later Refinements

Lonergan scholarship contains an interesting field in which one may find a small but peculiar crop of ideas on Lonergan's development that later prove to be quite inaccurate. The ideas I have in mind possess two odd characteristics. First, they tend to grow out of various short-hand statements Lonergan himself made. Second, because they have parallels in Lonergan's own comments on his work, they tend over time to accrue almost a sense of self-evidence and inevitability.

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total set of true historical statements. And in developing that heuristic notion, one forms one's general notion of history *and* of the methods of historical study." (Emphasis added). The comment was made in lecture 19 (July 20, 1962) of Lonergan's lectures at Regis College. I am quoting from the handwritten transcription of the lectures by John Brezovec, vol. II, p. 169. I do not think this statement in 1962 was a reflection of a new attitude. To the contrary, the same stance is present in *Insight*. For a clear indication of that, see the remarks Lonergan made in this regard in the Halifax lectures on *Insight, Understanding and Being*, 383-386.

<sup>27</sup> *Caring about Meaning*, 10.

<sup>28</sup> Crowe is right to call this contention "strange" (*Understanding and Being*, at 423, note f) but wrong, I think, not to press the assumptions undergirding it. On the 20 year gap, Michael Shute dates the earliest historical manuscript, "The Philosophy of History," to 1933-34. *The Origins of Lonergan's Notion of the Dialectic of History: A Study of Lonergan's Early Writings on History* (Lanham, MD: University Press of America, 1993), 179. *Insight* was finished in the fall of 1953. See Frederick Crowe, *Lonergan* (Collegeville MN: The Liturgical Press, 1992), 71-73.

I am thinking, for example, of the notion that Lonergan discovered the value of feelings and images only after *Insight*, that the fourth level of consciousness was a product of the period between *Insight* and *Method*, that historical-mindedness in Lonergan's thinking arose through his confrontation with European thought (in particular, with the German Historical School) upon moving to Rome in 1953, and that "constitutive meaning" is a late-breaking idea which Lonergan borrowed from Dilthey. I suspect that Fr. Crowe and I agree the first two are mistaken.<sup>29</sup> I wish to make the argument here that the third is as well. In a future article I hope to examine the notion of "constitutive meaning" and to show that something like it appears in Lonergan's earliest writings on history.

These kinds of simplifications possess utility and even some truth, of course. Adequate interpretation is a matter of successive approximation, after all, and these simplifications provide initial ideal types for interpretation; they offer helpful heuristic indications for histories of Lonergan's thought; they allow preliminary classifications of the data on Lonergan's development. But I think one must remain wary of them for two reasons.

First, although initially helpful, these simplifications may ultimately serve to block further investigation by functioning as premature resting places for unwary interpreters. (This seems to have been the case for the first two I listed, and I suspect the same is true for the others.) If accepted widely enough, they may even end up taking on the status of accepted verities whose "very felicity," to steal a phrase from Oliver Wendell Holmes Jr., "delay further analysis for fifty years."<sup>30</sup>

Second, the notions I listed happen to locate Lonergan on a timeline of before and after. They depend, that is, on an image of Lonergan's thought as a line that can be neatly divided into two segments. This can be a helpful heuristic

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<sup>29</sup> As Crowe remarks in the editorial notes to "Theology and Understanding," "there is need of a study on the positive role of feeling even in the early Lonergan; otherwise, we seize on his negative remarks and then tend to make *Method* a complete about-turn ..." *Collection*, at 281, note 1.

<sup>30</sup> "Law in Science and Science in Law," 12 *Harvard Law Review* 443 (1899).

image, but it also can be an unfortunate and misleading one.<sup>31</sup> For Lonergan's development was rarely unilinear. It was more like a constantly expanding network of ideas, or, in his own words, "a spiral of viewpoints."<sup>32</sup> If so, if his own thinking was a dynamically developing network or spiral of viewpoints rather than a straight line, we might expect him to return to certain themes again and again, albeit from successively higher points of view.

I would contend that is just what happened in Lonergan's thinking about historical process and historical investigation. For, in my opinion, Lonergan conceived the two in tandem from the earliest historical manuscripts all the way through *Insight*. It is true that at each significant turn of his spiral of viewpoints on history he rethinks their nature and relation. But I do not think it is true that he moved from thinking mainly about historical process in the pre-*Insight* period to thinking mainly about historical writing or historical method in the post-

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<sup>31</sup> Sometimes a before-and-after image works. For example, Lonergan's insights regarding functional specialization in February 1965 create a distinct dividing line in the history of his thought. But the before-and-after schema can be misleading as well. To cite one example, Lonergan reviewed a book by Gilson in which Gilson treats philosophies as 'a series of concrete historical experiments.' One might therefore be tempted to think Lonergan got this idea of 'the experiment of history' from Gilson. See *Verbum: Word and Idea in Aquinas*, ed. Frederick E. Crowe and Robert M. Doran, Collected Works of Bernard Lonergan 2 (Toronto: University of Toronto Press, 1997), 262, note h. The argument would go something like this: Lonergan's use of the phrase comes after his reading of Gilson; Lonergan attributes the phrase to Gilson in *Insight*; therefore Lonergan got the idea from Gilson. However natural an interpretation, it is an inaccurate one. Lonergan had already used the metaphor of the experiment of history in "Analytic Concept of History," 11. (By the dialectic of history "we do mean something like a series of experiments, a process of trial and error; yet not the formal experiment of the laboratory, for man is not so master of his fate; rather, an inverted experiment in which *objective reality molds the mind of man into conformity with itself...*") Lonergan seized on Gilson's use of the phrase, it seems to me, because it was coincident with his own idea. But my only suggestion here is limited: we should be careful of treating every new turn of phrase as ipso facto a new development.

<sup>32</sup> See *Insight*, 210 (writing of years "in which one's understanding gradually works round and up a spiral of viewpoints with each complementing its predecessor and only the last embracing the whole field to be mastered.")

*Insight* period.

My contention, however, appears on its face to contradict the solid block of Lonergan's own comments so skillfully assembled by Fr. Crowe. So if the reader will permit one last digression before we proceed to the texts pertaining to historical investigation from *Insight* and earlier writings, I would like briefly to address the nature and status of Lonergan's dicta.

## V. Dicta and Data

Crowe assembles an extensive array of Lonergan's comments on the development of his view of history. I grant that the array of Lonergan's orbiter dicta on the matter is quite impressive. For years I regarded it as quite conclusive. There is a hinge in the history of Lonergan's thinking about history; that hinge is located sometime after *Insight*; the hinge involves a shift in Lonergan's thinking from concentrating on the history that happens to concentrating on critical history, the history that is written; it is somehow connected to Lonergan's need to become acclimated to continental thinking after his move to Rome. Lonergan himself said so, or implied so, and that's that.

Given the clarity of Lonergan's pronouncements, why delve any deeper into the matter? Four reasons provide grounds for a deeper examination. (1) Taken as a whole, the dicta are ambiguous, (2) their accuracy is variable, since it depends on Lonergan's estimate of the intellectual developments and deficiencies of the audience to whom he was speaking, (3) the dicta are subject to Lonergan's important qualifications regarding the variable standard of adequate expression, and, finally, (4) they contradict the actual data on Lonergan's own development.

First, the dicta as a whole are ambiguous. It is quite true, as Crowe points out, that Lonergan once remarked, "While *Insight* had something to say on evolution and historical process, it did not tackle the problem of critical history."<sup>33</sup> On the other hand, it is also true that Lonergan once remarked, "*Insight* is very relevant to working out, from a critical philosophic basis, *just what critical history is*, just what

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<sup>33</sup> "Reality, Myth, Symbol," 36.

objective interpretation is.”<sup>34</sup> It is quite true, as Crowe points out, that Lonergan began to delve more deeply into continental thinking and the German historical school after he moved to Rome. On the other hand, it is also true that when Lonergan was asked, “Did getting aware of the German development alter your own?,” he responded: “No, but it fits in with the various ways in which history entered into my thinking. I was doing history in writing *Gratia Operans*.”<sup>35</sup> And a little while later in the same interview: “The fact of history was evident all along, evident in what was called ‘positive theology,’ and all the good books were historical.”<sup>36</sup> It is quite true, as Crowe points out, that Lonergan often praised the whole movement of the *Geisteswissenschaften*. On the other hand, he also occasionally criticized the weakness of the *Geisteswissenschaften*,<sup>37</sup> including their potential involvement in relativism.<sup>38</sup> It is quite true that Lonergan repeatedly praises

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<sup>34</sup> “An Interview with Fr. Bernard Lonergan, S.J.” (1971), in *A Second Collection*, ed. William F.J. Ryan and Bernard J. Tyrell (London: Darton, Longman and Todd, 1974), 209-230, at 218 (emphasis added).

<sup>35</sup> *Caring about Meaning*, 121.

<sup>36</sup> *Ibid.*, 122.

<sup>37</sup> Method in Theology Institute at Boston College, 525-26 (“The weakness of the German *Geisteswissenschaften* ... there you are being involved in philosophy and you can very easily be involved in philosophic mistakes, so the scientific tendency is away from it.”); *Caring about Meaning* (“You see, the Germans created modern history. I suppose the best man thinking it through was Collingwood, but they created it and then lost it. In the second half of the nineteenth century they got involved in positivism...”).

<sup>38</sup> See, e.g., Lonergan’s 1962 Regis College lectures, July 20, 1962, the Brezovec transcription, vol. II, 181-83. The same lecture intimates the significance of *Insight* for historical writing. “And that upper blade of method is *the contribution of a critical philosophy to historical method*. What one knows through self-appropriation is relevant to understanding the people who are written about by the historian. It is relevant to understanding the historians who do the writing. It is relevant to understanding the critics of the historian. And all along the line it adds a normative element ...” *Id.*, 198 (emphasis added). This concern is not new in 1962; on the contrary, it reaches far back into Lonergan’s thought. Let me mention just two contexts. First, Lonergan was impressed by the problem of relativism in historical writing at the very least since his reading in the late 1930s of Raymond Klbanky’s 1936 *Festschrift* for Ernst Cassirer titled *Philosophy and History*. There are extracts from this book in

the project of ‘the interpretative reconstruction of the constructions of the human spirit.’ On the other hand, something like the same emphasis can be deduced from Lonergan’s insistence in *Insight* on “the retrospective expansion” of the universal viewpoint.<sup>39</sup> It is quite true, as Crowe points out, that when Lonergan referred to the “new challenge” from the *Geisteswissenschaften*, he wrote of his “long struggle” and its documentation in his Latin works without referring to *Insight*.<sup>40</sup> On the other hand, in the very same paper he notes that “the third section of chapter seventeen on truth of interpretation has been given a more concrete expression in chapters seven to eleven of *Method*,”<sup>41</sup> an appraisal that includes not only *Method*’s chapter on interpretation but also its two chapters on ‘the history that is written.’

Second, the accuracy of Lonergan’s asides on his own work are open to question. He often remarked that he was uncomfortable making off-hand remarks, and that he preferred to have time to think out answers to questions that had been

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Lonergan’s handwriting in the Lonergan archives. In addition, Lonergan mentions Huizinga’s essay in that volume from memory in the 1958 lectures on *Insight* when discussing the problem of relativism in historical writing (*Understanding and Being*, 385). (Note also, in this context, the presence in that *Festschrift* of an essay by Friedrich Gundolf significantly titled “Historiography: Introduction to an Unpublished Work: *German Historians from Herder to Burckhardt*,” *Philosophy and History: Essays Presented to Ernst Cassirer*, ed. Raymond Klibansky & H.J. Patton (Oxford: The Clarendon Press, 1936), 277-282.) The second context is Lonergan’s extracts from Toynbee, written probably in 1940-42. The first part of the first part of volume I of Toynbee’s *Study of History* is titled “The Relativity of Historical Thought,” and Lonergan’s extract of it begins: “Current historical writing a by-product of Industrialism and Nationalism.”

<sup>39</sup> *Insight*, 609 (“First, there is the genetic sequence in which insights are gradually accumulated by man. Secondly, there are the dialectical alternatives...”); *Ibid.*, 588-89 (“the universal viewpoint ... has a retrospective expansion in the various genetic series of discoveries through which man could advance to his present knowledge. It has a dialectical expansion in the many formulations of discoveries due to the polymorphic consciousness of man...”) See also *Understanding and Being*, 383-85.

<sup>40</sup> “*Insight* Revisited,” *A Second Collection*, 263-78, at 277.

<sup>41</sup> *Ibid.*, 275.

submitted in advance.<sup>42</sup> In addition, as we know from *Insight*, the dicta are a function of the practical insight governing Lonergan's flow of expression on any given occasion.<sup>43</sup> That practical insight depends on a speaker or writer's estimate of the habitual intellectual development and deficiencies of the anticipated audience. His dicta therefore tend to have a quality of simplification that varies with the audience and occasion.

Third, the limitations of the anticipated audience may "restrict the adequacy with which even one's principal meaning is expressed."<sup>44</sup> As Lonergan notes, "If one has anything very significant to say, then probably one will not be able to express the whole of it except to a rather specialized audience."<sup>45</sup> This relates to what Lonergan termed "the variable standard of adequate expression."

"[H]uman expression is never complete expression. It keeps its eye on the central meaning; it expedites subordinate and peripheral meanings by lowering standards of adequacy to a sufficient approximation to the purpose at hand; and, quite clearly, it cannot add in a parenthesis this somewhat involved account of the variable standard of adequate expression."<sup>46</sup>

Rather than entering into the complexity of the variable standard of adequate expression, I simply want to note here that his dicta on his own development are at best approximate and related to the purpose at hand. To what extent his principal meaning comes through is an open question, as I tried to intimate in my first point.

Fourth, some of the dicta contradict the actual data on Lonergan's development. There may be many reasons for this. One is the fallibility of memory.<sup>47</sup> Another is the temptation to

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<sup>42</sup> The theme occurs repeatedly in *Caring about Meaning*.

<sup>43</sup> *Insight*, 579 ("Clearly, this practical insight (F) differs notably from the insight (A) to be communicated.")

<sup>44</sup> *Ibid.*, 580.

<sup>45</sup> *Ibid.*, 580.

<sup>46</sup> *Ibid.*, 580.

<sup>47</sup> When asked a detail in 1981 about the lectures on the philosophy of education he gave in 1959, Lonergan responded: "You bring that up, you see, because you have read those lectures recently. I've forgotten all about

engage unconsciously in anachronism or creative reconstruction.<sup>48</sup> But perhaps the most important reason is that a thinker, even a brilliant thinker like Lonergan, does not necessarily grasp all the details and nuances of each stage of his or her own development.<sup>49</sup> In any event, the actual data from Lonergan's writings rather convincingly confirm a focal and thematic awareness of and interest in 'the history that is written' in the period prior and leading up to *Insight*.

## VI. The Data on 'History That Is Written' from *Insight* and Before

I touched on 'the history that is written' in Lonergan's historical manuscripts in my article. It is not necessary to repeat that here. I would only emphasize my conclusion that "historical analysis" in that period of his thinking serves as a heuristic structure for an exercise in historical writing that Lonergan calls "historical synthesis."<sup>50</sup> I would emphasize, in

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them." *Caring about Meaning*, 18.

<sup>48</sup> *Ibid.*, 20 ("Thinking about one's development can be rather creative!"); *Ibid.*, 198 (referring to a friend who was asked to write an autobiography, "He considered it and decided: if you start to write an autobiography, you begin to make up things: you interpret the past in terms of the present.")

<sup>49</sup> Lonergan's remark on Aquinas in *Method* may serve as a relevant context. "Thomas Aquinas effected a remarkable development in the theology of grace. He did so not at a single stroke but in a series of writings over a period of a dozen years or more. Now, while there is no doubt that Aquinas was quite conscious of what he was doing on each of the occasions on which he returned to the topic, still on none of the earlier occasions was he aware of what he would be doing on the later occasions, and there is just no evidence that after the last occasion he went back over all his writings on the matter, observed each of the long and complicated series of steps in which the development was effected, grasped their interrelations, saw just what moved him forward and, perhaps, what held him back in each of the steps." *Method*, 165.

<sup>50</sup> See Brown, "System and History in Lonergan's Early Historical and Economic Manuscripts," *Journal of Macrodynamic Analysis* 1 (2001), 32-76, at 67-74. There are two levels to historical synthesis. The first is characterized by "Christopher Dawson's historical essays," "Analytic Concept," at 7; it involves what Lonergan will later call "the historical sense" or "historical scholarship," and its method is what Lonergan later calls "a sophisticated extension of commonsense understanding." *Method*, 230. The second level of synthesis involves "a movement from pure

addition, that ‘the history that happens’ and ‘the history that is written’ are already deeply and thematically intertwined in Lonergan’s idea of a third period of the history that happens in which the process of historical unfolding is guided in part by reflex thought (which “presupposes the discovery of canons of thought and the methods of investigation”<sup>51</sup>). The history-that-is-written using canons of thought and methods of investigation examines the history-that-happens in order to change the future occurrence of the history-that-happens. This is not as unusual as it sounds. After all, the dialectic of history is a fact, and its unfolding as a fact can be altered by the discovery of its nature or structure. That is why Lonergan gives the “‘class consciousness’ advocated by the communists [as] perhaps the clearest expression of the transition from reflex thought to reflex history.”<sup>52</sup> Or, to take another example from the same period, the discovery of the real nature of economic process can provide guidance by which the future economic process (and with it, segments of historical process) could be changed for the better.<sup>53</sup>

So one must not conclude that because the analytic concept of history “does not proceed from historical fact to theory,”<sup>54</sup> that it is therefore irrelevant to historical investigation or ‘the history that is written.’ On the contrary, it moves from its own “abstract terms to the categories of any historical event.”<sup>55</sup> The categories are *a priori*, but their application is not, any more than the application of “Newtonian astronomy” is *a priori*. As Lonergan notes of the kind of understanding that tells us what something is—for example,

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analysis to historical synthesis.” *For a New Political Economy*, 9.

<sup>51</sup> “Analytic Concept,” 17; see also *id.*, 18-19.

<sup>52</sup> “Analytic Concept,” 18.

<sup>53</sup> In other words, just as contemporary economic process is a mess because humans are unaware of, and therefore maladapted to, the requirements of its basic structure, so historical process, guided by nothing more than spontaneous thought or spontaneous history, is a mess because humans are unaware of, and therefore maladapted to, the dialectical structure of history. See “Analytic Concept,” 18-19. My point is that historical process and historical investigation are not nearly so unconnected, even in the early Lonergan, as is often assumed.

<sup>54</sup> *Ibid.*, 8.

<sup>55</sup> *Ibid.*, 8.

what history is—“in this knowledge we have a premise to further knowledge.”<sup>56</sup> That is why he is happy to note that “the history of the last four hundred years in Europe” exemplifies his theory.<sup>57</sup>

I am trying to bring out here the fact that “historical analysis” is a form of historical heuristic, and that the heuristic is extraordinarily relevant to historical writing. As Lonergan put the matter rather concisely around 1940, “*To write history one has to know what history is.*”<sup>58</sup> I do not know of a more thematic statement on ‘the history that is written,’ and it comes long before Lonergan’s return to Rome to teach.<sup>59</sup> Moreover,

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<sup>56</sup> *Ibid.*, 7.

<sup>57</sup> *Ibid.*, 14.

<sup>58</sup> (Emphasis added.) The sentence comes from a typed page in the archives titled “Historical Analysis.” A fuller quotation is provided in my article, “System and History,” 74, n.135.

<sup>59</sup> Although evidence on Lonergan’s reading during the late 1930s and early 1940s is scant, it would seem sufficient to falsify the interpretative hypothesis that Lonergan was not interested in, or not focally aware of, ‘the history that is written’ during that period. To take but one example, in a brief book review published in a Montreal paper in 1941, Lonergan mentions a recent article on the teaching of history by a Professor Adair. See Bernard Lonergan, Review of M.M. Coady, *Masters of Their Own Destiny*, The Montreal Beacon, May 2, 1941, p. 3. That article is a survey, in its author’s words, of “the methods used in the study of history” in Canadian universities. E.R. Adair, “The Study of History at McGill University,” *Culture: Revue Trimestrielle, Sciences Religieuses et Sciences Profanes au Canada*, vol. II, no. 1 (March 1941), 51-62, 51. The article is an extended lament regarding the then-increasing dominance of American models of teaching and studying the history that is written—and of structuring graduate programs in history—over English and continental models.

It is also worth underscoring the implicit theme of historical praxis or historical maieutics in the same short book review. Our grasp of the history that happens, mediated to us by the history that is written, can dramatically affect our influence on the-future-history-that-will-happen. As Lonergan notes, Coady’s book “shows in the concrete what practical education is. It reveals how ignorant, how unimaginative, how narrow-minded, how short-sighted, how stupidly selfish is the human material with which the economic reformer has to deal.” *Id.* An adequate economic praxis is, for the early Lonergan, simply a piece—although an important piece—of adequate historical praxis. And both depend to a considerable extent on effective education. Yet while effective economic education must be diffused widely throughout a society, effective education regarding

that single page shows how much the project of *Insight* was tied up with Lonergan's pre-existing concern with history. "There is then a problem of historical analysis, and its solution can be had only in terms of some philosophy or super-philosophy that not merely embraces all truth but comprehends all error."<sup>60</sup>

To connect that theme with the cognitional theory worked out in *Insight*, and its extension into the universal viewpoint, would require a great deal of detailed and patient work. But my point is that besides historical process and historical investigation there is historical heuristics. My argument is that "historical analysis" was a heuristic structure for historical investigations.<sup>61</sup> And once one takes explicit account of historical heuristics, the dichotomy between 'the history that happens' and 'the history that is written' disappears, as does the notion that the dichotomy can be used to periodise Lonergan's thinking on history.

The history of Lonergan's use of the mathematics/physics analogy regarding historical method, and his image of "an upper blade" of method,<sup>62</sup> are but variations on the need for a

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historical process and historical investigation seems more complexly the province of a creative minority. For a glimpse of the themes of economic and historical praxis in *Insight*, see *Insight* 262 ("culture ceases to be an independent factor that passes a detached yet effective judgement upon capital formation and technology, upon economy and polity.") and *Insight* 266 (cosmopolis "is a dimension of consciousness, a heightened grasp of historical origins, a discovery of historical responsibilities.")

<sup>60</sup> *Ibid.*

<sup>61</sup> One might consider here a comment by the later Lonergan on "analysis." "Understand what analysis means. An analysis leads from what everyone knows to significant variables that are mutually dependent – preferably dynamically dependent – on one another. In that way, you have your primitive terms and the source of a basis for developing a science as an analytic structure. Since your basis is analytic, whenever you apply it to anything, you'll have the analysis of that thing." *Caring about Meaning*, 226.

<sup>62</sup> For a helpful later treatment of this topic, see *Method in Theology* Institute at Boston College, 467. ("[A]ll method is an interaction of two blades. It is a scissors movement. You have data on which you are working and the heuristic structure within which you are operating on the data. Your categories are challenged by the data, they become more and more refined and differentiated, from interaction with the data. Physics is not just

methodical heuristic structure for historical investigations, for ‘the history that is written.’ That is why I think one must recognize a focal concern with ‘the history that is written’ not only in the historical manuscripts but also in Lonergan’s doctoral dissertation. There he writes of the advantages of a method that stands to historical events as “the science of mathematics stands to quantitative phenomena. .... it enables one who lives in a later age to understand those whose thought belongs to almost a different world, and it does so, not by the slow and incommunicable apprehension that comes to the specialist after years of study [read: “the historical sense”], but logically through ideas that are defined, arguments that can be tested, and conclusions that need only be verified. Thus the finer fruits of historical study are taken out of the realm of personal opinion and made part of the common heritage of science.”<sup>63</sup> Lonergan’s writings from the 1940s continue the trend, but surely one may justifiably conclude that the many references in Lonergan’s early writings to historical method and to the struggle against positivism<sup>64</sup> and relativism show a

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mathematics and it is not just experimenting; it is an interaction of the two: a selection of mathematical functions in the light of the data and deductions from the functions as specified by the data, to give you the basis for further experimentation. It is a constant process of interaction between the two.”)

<sup>63</sup> *Grace and Freedom*, 162-63.

<sup>64</sup> Lonergan’s early campaigns against positivism in interpretation and in ‘the history that is written’ continued round the spiral of his viewpoints to culminate in the two chapters in *Method* on ‘the history that is written.’ “The reason for writing chapters, and the setting up specific chapters on each one of these things, is the fact that at the end of the nineteenth century the positivists did capture critical history and give their interpretations to it.” “An Interview with Fr. Bernard Lonergan, S.J.,” *A Second Collection*, 209-30, at 218.

But if that is so, chapters 8 and 9 of *Method* are in radical continuity with Lonergan’s efforts in the 1930s and 1940s and in *Insight*. Late in life, Lonergan characterized the positivist take-over of the German Historical School this way: “For them, the first thing to do is to assemble the facts. They didn’t know that you have to have the interpretation before you can get to any facts. The data are just data and no more than data, something here and now that you can see...” *Caring about Meaning*, 26. As this passage suggests, and as I briefly discuss below, much of what Lonergan has to say about scientific hermeneutics and historical study in *Insight* is a systematic demolition of positivism.

developed and thematic interest in ‘the history that is written.’

But in many ways the clearest evidence for the existence of a focal and thematic interest in ‘the history that is written’ may be found in *Insight*. Here a few key passages will suffice. Take, for instance, this passage from chapter VII:

There is needed, then, a critique of history before there can be any intelligent direction of history. There is needed an exploration of the movements, the changes, the epochs of a civilization’s genesis, development, and vicissitudes. The opinions and attitudes of the present have to be traced to their origins, and the origins have to be criticized in light of dialectic.<sup>65</sup>

Or consider the passage in which Lonergan describes the business of cosmopolis: It is “to prevent the formation of the screening memories by which an ascent to power hides its nastiness; it is its business to prevent the falsification of history with which the new group overstates its case.”<sup>66</sup> Or the passage where cosmopolis is described as “a dimension of consciousness, a heightened grasp of historical origins, a discovery of historical responsibilities.”<sup>67</sup> It is difficult to avoid the conclusion that ‘the history that is written’ has an important role to play in reversing the longer cycle of decline.

Similarly, in chapter XVII of *Insight* Lonergan makes the following explicit assertions regarding ‘the history that is written’:

No doubt, there there can be no history without data, without documents, without monuments that have survived destruction and decay. But even if one supposes the data to be complete ... still there remains

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<sup>65</sup> *Insight*, 265. Note again the interaction between the two kinds of ‘history.’ There is needed a critique of the history that happens before it can be intelligently directed. (Notice the continuity of emphasis between this passage and “Analytic Concept.” See supra, n. 51-53.) But the critique involves the history that is written. Without an adequate ‘history that is written,’ there cannot be needed change in ‘the history that happens.’ And notice, too, that adequate written history requires dialectic.

<sup>66</sup> *Insight*, 265.

<sup>67</sup> *Ibid.*, 266.

to be determined some approximation to the insights and judgments, the beliefs and decisions that made those words and deeds, those feelings and sentiments, the activities of a more or less intelligent and reasonable being.<sup>68</sup>

In the same context:

As the data assembled by historical research accumulate, insights are revised continuously in accord with the concrete process of learning. But besides the revisions forced by further data, there are also the revisions due to the advent of new investigators, for history is written not only by each new culture but also by each stage of progress and decline in each culture. Nor is there any escape from such relativism as long as men cling to the descriptive viewpoint. Common sense succeeds in understanding things as related to us only because it is experimental; it deals with things with which it is familiar; its insights are guides in concrete activity; its mistakes promptly come to light in their unpleasant effects. But if one would step beyond the narrow confines in which the procedures of common sense are successful, one has to drop the descriptive viewpoint and adopt a viewpoint that unashamedly is explanatory.<sup>69</sup>

And again, continuing the theme of explanatory historical writing:

Interpretation of the past is recovery of the viewpoint of the past; and that recovery, as opposed to mere subjective projections, can be reached only by grasping exactly what a viewpoint is, how viewpoints develop, what dialectical laws govern their historical unfolding.<sup>70</sup>

The mention of “mere subjective projections,” of course, is an

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<sup>68</sup> *Ibid.*, 564.

<sup>69</sup> *Ibid.*, 564.

<sup>70</sup> *Ibid.*, 564.

allusion to the canon of parsimony in *Insight's* sketch for a methodical hermeneutics and its extension into history.<sup>71</sup> That extension is central to Lonergan's treatment of historical writing in *Insight*. For "historical interpretation may be based simply on a historical sense or may operate in the light of the universal viewpoint."<sup>72</sup> In short, in *Insight* Lonergan contrasts the historical sense, which not only is open to all the variations of biases and polymorphism but also is incapable of analyzing itself or criticizing itself, with scientific interpretation.<sup>73</sup>

The solution he offers is the heuristic structure he calls the universal viewpoint. Lest there be any doubt that Lonergan regards an explanatory hermeneutics based on the universal viewpoint to be relevant to critical history, consider how Lonergan immediately characterizes it. The universal viewpoint is potential; "it can list its own contents only through the stimulus of documents and *historical inquiries*; it can select alternatives and differentiate its generalities only by appealing to the accepted norms of *historical investigation*."<sup>74</sup> Lonergan goes on to remark, "There are the external sources of *historical interpretation* and, in the main, they consist in spatially ordered marks ... But there are also sources of interpretation immanent in *the historiographer himself* ... in his ability to work backwards from contemporary to earlier accumulations of insights in human development..."<sup>75</sup> Clearly, Lonergan is not here speaking of 'the history that happens.' To the contrary, rather conspicuously, he believes he has discovered some form of historical investigation that goes beyond the vagaries of unguided historical scholarship and goes beyond the relativism

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<sup>71</sup> *Ibid.*, 612 (the canon of parsimony "excludes from consideration the unverifiable"). See also Lonergan's notes for his lectures on *Insight* at St. Mary's in Morgana California (1961), 112 ("Projection – violation of parsimony.") It is worth tracking the references to 'the cinema of what was done and the soundtrack of what was said' through their various contexts in chapter XVII. *Insight*, 564, 604, 612. See especially *Insight*, 604 ("the ideal of the cinema and sound-track is the ideal not of *historical science* but of historical fiction" [emphasis added]).

<sup>72</sup> *Ibid.*, 762.

<sup>73</sup> *Ibid.*, 587 ("just as our common sense is open to individual, group, and general bias, so also is the historical sense.")

<sup>74</sup> *Ibid.*, 587 (emphases added).

<sup>75</sup> *Ibid.*, 588 (emphases added).

with which such scholarship is otherwise afflicted. Its distinguishing feature is that it is both empirical and dialectical<sup>76</sup> – in a word, it is critical history. It is, after all, only on the basis of an adequate cognitional theory that historical scholarship can become truly critical. Contributions can be made without an adequate and explicit cognitional theory: one need only cite here the later Lonergan's praise for Carl Lotus Becker.<sup>77</sup> But those contributions can be remedied in light of the canon of successive approximations and its first principle of criticism.

As for Lonergan's innocence of critical history or the German Historical School until his move to Rome, I find two otherwise unobtrusive references in *Insight* revealing. The first is Lonergan's reference to the detective story in Collingwood's *Idea of History* – a story, by the way, that Collingwood uses to illustrate scientific, critical history.<sup>78</sup> In that volume, which Lonergan read (or at least read from) prior to the completion of *Insight*, there is a wealth of material on German historiography.<sup>79</sup> The second is Lonergan's reference to Ernst Cassirer's *The Problem of Knowledge*.<sup>80</sup> Part III of that work contains 110 pages of material on German historiography. Of course, there is no doubt Lonergan worked through a series of authors and went into much more depth from the mid-fifties

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<sup>76</sup> See the discussion of “the retrospective expansion” of the universal viewpoint together with its “dialectical expansion,” in *Insight*, 588-89.

<sup>77</sup> *Method*, 204 (“It cannot be claimed that Becker was a successful cognitional theorist: there cannot be assembled from his writings an exact and coherent theory of the genesis of historical knowledge.”) May I point out that Lonergan's praise and use of Becker in *Method* is itself an example of the first principle of criticism. *Insight*, 611 (“For though a contributor fails to present his results in terms of the protean notion of being, a critic can proceed from that notion to a determination of the contributor's particular viewpoint, he can indicate how that particularism probably would not invalidate the contributor's work and, on the other hand, he can suggest to others working in the contributor's special field the points on which his work may need revision.”)

<sup>78</sup> *Insight*, 733. See R.G. Collingwood, *The Idea of History*, ed. T.M. Knox (Oxford: Oxford University Press, 1946), 266-282.

<sup>79</sup> *The Idea of History*, 86-133, 165-182.

<sup>80</sup> *Insight*, 504. See *The Problem of Knowledge: Philosophy, Science, and History Since Hegel*, trans. William Woglom & Charles Hendel (New Haven: Yale University Press, 1950).

through the late-sixties. My point is only that Lonergan was interested in ‘the history that is written’ long before he went to Rome, and his interest in critical history was extraordinarily developed before he began a new wave of readings in the mid-fifties.

That point is reinforced by the extremely interesting and valuable response Lonergan gave to a question regarding historical knowledge during the Halifax lectures of 1958.<sup>81</sup> There he explicitly links “an approach to history in terms of truth” to the section in chapter 17 of *Insight* on scientific interpretation;<sup>82</sup> he alludes to his metaphor in *Insight* for a division of labor between upper-blade interpreters on the one hand and scholars on the other,<sup>83</sup> and he expresses the hope that “if you could get an elaborate theory of the method of history, you could create something of a similar situation in history.”<sup>84</sup>

Much more might be said of the period from Lonergan’s early historical manuscripts through *Insight*. But at least it seems well established that Lonergan’s quest for “the upper blade for an empirical method”<sup>85</sup> for interpretation in *Insight* is relevant also to his long-term quest for an upper blade for an empirical method for historical investigation. I think it also clear that the ‘history that is written’ was focal and thematic throughout that period. I think the evidence conclusive that the importance of ‘the history that is written’ had *not* ‘slowly dawned’ on Lonergan, and certainly it did not dawn on him only after *Insight*. Finally, let me say I agree with Crowe when he suggests that Lonergan’s own original contributions to critical history seem as penetrating as anything he learned from the German Historical School or the tradition of the *Geisteswissenschaften* after his return to Rome in 1953. And

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<sup>81</sup> *Understanding and Being* 383-86.

<sup>82</sup> *Ibid.*, at 385.

<sup>83</sup> Compare *Understanding and Being*, 385 with *Insight*, 603-04.

<sup>84</sup> *Understanding and Being*, 385-86. This remarkable response by Lonergan stands in notable continuity with *Insight*. But it is also continuous in important ways with the manuscript on “Hermeneutics” from July 1962. See the unpublished version edited by Charles Hefling at p. 18 for Lonergan’s use of the important phrase, “the upper-blade historian.”

<sup>85</sup> *Insight*, 609.

we agree, too, on the central importance of “Lonergan’s underlying passion throughout his life, continually breaking out in penetrating remarks and applications,” regarding a theory of historical process on the level of the times. I would only add that such a theory requires an historical method on the level of the times, and I believe Lonergan glimpsed that fact beginning in the 1930s.

### **Conclusion**

There may well be a turning point in Lonergan’s thought on history after 1953-54. But if so, I do not think it is a shift from concentrating on ‘the history that happens’ to concentrating on ‘the history that is written,’ for he had been concentrating on both all along. Nor is this surprising. As Fred Crowe notes, the two are closely interwoven. Historical writing is about the history that happens, and our access to the history that happens is mediated by the history that is written. After all, the history that happens is not first ‘out there now’ or ‘already back there then’ somewhere on a timeline and then later written up.

The relevant variable, it seems to me, is not a relative concentration on one or the other of the two correlative ‘histories.’ Rather, I believe, the relevant consideration is the degree of methodological sophistication of the heuristic structure that inevitably guides *any* historical investigation. Even simple historical narrative or chronicle conveys some view of what happened in written form and operates in light of some implicit heuristic structure.<sup>86</sup> Short of fiction, one cannot help but combine both the history that happens and the history that is written (or spoken).

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<sup>86</sup> Lonergan’s eloquent and penetrating remark of 1939 or 1940 remains true: “[E]ven historians have intelligence and perform acts of understanding; performing them, they necessarily approach questions from a given point of view; and with equal necessity the limitations of that point of view predetermine the conclusions they reach. From this difficulty positivism offers no escape, for as long as men have intelligence, the problem remains ... It remains that history can follow a middle course, neither projecting into the past the categories of the present nor pretending that historical inquiry is conducted without a use of human intelligence.” *Grace and Freedom*, 156.

Herodotus and Hegel, Sima Qian<sup>87</sup> and Seignobos, all attempted to investigate some slice of historical process in light of some implicit or explicit heuristic structure, and all left written traces of that attempt. But the methodological component in Hegel and Seignobos is more advanced than the ancient Greek and ancient Chinese historians. Similarly, Lonergan's concern for method, and for heuristic structures guiding historical investigation, is the key component in his thinking about historical process and historical investigation. And that component was quite advanced even in his writings on history in the 1930s and 1940s, to say nothing of his achievements in *Insight*.

Lonergan liked to quote an American historian's remark that if Carl Becker's 1926 address on historical facts had been published at the time, instead of after his death, it would have caused a revolution in historiography equivalent to the revolution in physics caused by quantum theory.<sup>88</sup> But what of the young Lonergan's writings on history? Can the same be said of them? His early struggles against positivism are at least the equal of Becker's. And what of the heuristic structures for historical investigation that Lonergan labored to construct in *Insight* and later in *Method*? If taken seriously, or even noticed, would they not also produce a revolution in historiography like quantum theory's revolution in physics? Lonergan, at least,

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<sup>87</sup> Sima Qian (145 - c. 86 B.C.) is the first great historiographer of ancient China; his *Records of the Historians* "is a comprehensive history that covers over two thousand years and deals with the entire world as the Han historian knew it." Steven Shankman & Stephen Durrant, *The Siren and the Sage: Knowledge and Wisdom in Ancient Greece and China* (New York: Cassell, 2000), 101.

<sup>88</sup> See *Dialogues in Celebration*, 292. The statement Lonergan refers to in the interview was made by the historian Harry Elmer Barnes. See Barnes' *A History of Historical Writing* (Norman, OK: University of Oklahoma Press, 1937), 268 (noting that if "What Are Historical Facts?" were ever published, it would "probably come to have the same place in historical science that the theory of indeterminacy occupies in contemporary physical science." Barnes' statement is quoted in Burleigh Taylor Wilkins, *Carl Becker: A Biographical Study in American Intellectual History* (Cambridge: MIT Press, 1961), 201. Wilkins' book in turn, is cited by Lonergan in *Method*, 204, n. 23.

thought so.<sup>89</sup> But Lonergan may have suffered the unlucky fate of someone who was simply too far ahead of his time.<sup>90</sup>

Patrick Brown teaches in the Seattle University School of Law. He can be reached at [brownp@seattleu.edu](mailto:brownp@seattleu.edu).

Comments on this article can be addressed to [jmda@mun.ca](mailto:jmda@mun.ca).

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<sup>89</sup> See *Insight*, 603, lines 33-37, 604, lines 1-14.

<sup>90</sup> Perhaps there is a poignancy in Lonergan's remark in 1981, "If you are too far ahead of your time, you may be one of those heroes who is never heard of!" *Caring about Meaning*, 30.