Terry Quinn, "Community Climbing: Toward Functional Collaboration"
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# Community Climbing: Toward Functional Collaboration

Terry Quinn

> "In mountaineering terms, Aconcagua is technically an easy mountain if approached from the north, via the normal route. Aconcagua is arguably the highest non-technical mountain in the world, since the northern route does not absolutely require ropes, axes, and pins. Although the effects of altitude are severe (atmospheric pressure is 40% of sea-level at the summit), the use of supplemental oxygen is not required."[1]

## 1. Guidebook-Notes from Advanced Climbers

The title of our conference is the human good and the welcome page of the Comunidad Latinoamericana de Bernard Lonergan includes "promover la colaboración."[2] What I wish to talk about today is the possibility of academic (and other) communities working toward improved ways of collaborating, ways that very much suit[3] the human good. I am referring to a discovery made by Bernard Lonergan in 1965, a solution to a problem that he, as a lead climber, had been struggling

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[1] http://www.aussie7summits.com/#/s7-aconcagua/4560902010.

[2] This paper was originally presented at Segundo Taller Latinoamericano "El Bien Humano," June 13–14, 2013, UIA Ciudad de México. http://www.lonerganlat.com.mx/

[3] The theologian Karl Rahner observed that Lonergan's discovery "seems ... to be so generic that it actually *suits* every science." Karl Rahner, "Some Critical Thoughts on 'Functional Specialties in Theology,'" in *Foundations of Theology* (International Lonergan Congress Florida 1970), ed. Philip McShane, (Notre Dame: University of Notre Dame Press, 1972), 194–196 (emphasis added). See also Karl Rahner, "Kritische Bemerkungen zu B.J.F. Lonergan's Aufsatz: 'Functional Specialties in Theology,'" *Gregorianum* 51 (1970): 537–540.

with for more than 30 years.[4] As it happens, we are a diverse group at the conference, with faculty and graduate students from philosophy, theology, education, and the sciences, and some graduate students from mathematics education. I also am told that some who are attending the conference are only hearing about Bernard Lonergan's work for the first time. So my article will be for a general audience. I ask for the patience of those well versed in Lonergan's writings, because I will not be assuming extensive familiarity with Lonergan's work—although I will offer some detailed references in footnotes.

My main purpose is to draw attention to Lonergan's 1965 discovery of functional specialization, a discovery relevant to (and suited[5] to) collaboration in all disciplines. And so my hope is that this article will help motivate some to follow up on his breakthrough within your own disciplines and areas of interest.[6] The follow-up I am thinking of might include, for example, beginnings toward appreciating the plausibility and feasibility of Lonergan's discovery, or even perhaps some steps toward promoting implementation of the solution within your own area(s) of interest. To help in that, I very much recommend the writings of Philip McShane. His articles and books are available on his website.[7] Throughout his work includes leads for beginners, advanced, and future climbing, up, around, and within Lonergan's breakthrough.[8] What though was the breakthrough I am talking about? I'll give a diagram for this in a moment and will say more as I go through the article. It is something we (the entire academic community) will learn more about as we go.

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[4] In this volume Michael Shute gives details on the problem and context leading up to Lonergan's 1965 discovery. See "Functional Collaboration as the Implementation of 'Lonergan's Method' Part 1: For What Problem is Functional Collaboration the Solution?" (originally published in *Divyadaan: Journal of Philosophy and Education*, vol. 24, no. 1 (2013)). See also Philip McShane, "The Origins and Goals of Functional Specialization," available on the McShane website, http://www.philipmcshane.org/; Pierrot Lambert and Philip McShane, *Bernard Lonergan, His Life and Leading Ideas* (Vancouver, Axial Press, 2010), 76–80; Frederick E. Crowe, S.J., Lonergan (St. John's Abbey, Collegeville, MN: The Liturgical Press, 1992), 106–09.

[5] See note 3.

[6] "Each department has to work out its own specialized criteria." Bernard Lonergan, *Insight: A Study of Human Understanding*, eds. Fred E. Crowe and Robert M. Doran, vol. 3, *Collected Works of Bernard Lonergan* (Toronto: University of Toronto Press, 1997), 269 (hereafter, *CWL* 3).

[7] Unless otherwise stated, all McShane articles and books cited can be found at http://www.philipmcshane.org/. Some of his books are available through Axial Publishing, http://www.axialpublishing.com.

[8] See, for example, Philip McShane, FuSe 18: "Ways to Get into Functional Collaboration" (http://www.philipmcshane.org/fuse/).

Lonergan's result was first presented in dense summary fashion in a short 20-page article in 1969.[9] This article later became chapter 5 of his 1970 book *Method in Theology*.[10] While Lonergan's discovery originally was communicated to theologians, it is a result for all disciplines.[11] As I referred to above, Lonergan's discovery came after more than thirty years of reflecting on the nature and possibility of progress in theology. As can be seen in his many articles over the years, this concern for progress in theology was part of an inclusive and practical concern for progress in communities and disciplines generally—"the problem of general history, which is the real catch."[12] In *Insight*, chapter 7,[13] Lonergan talks about progress and decline, including the cumulative effects that he called the longer cycle of decline.[14] He goes on to work out various features of such decline and then points to the need of implementing a higher viewpoint.[15] He names the solution to this problem cosmopolis[16] and works out a few generic features of what cosmopolis will need to include. Later, in the fuller context of the 20th chapter of *Insight*, he mentions the need for collaboration at least 60 times, and includes the following statement, both visionary and precise: "The antecedent willingness of hope has to advance from a generic reinforcement of the pure desire to an adapted and specialized auxiliary

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[9] Bernard Lonergan, "Functional Specialties in Theology," *Gregorianum* 50 (1969): 485–505.

[10] Bernard Lonergan, *Method in Theology* (London: Darton, Longman & Todd, 1972) (hereafter, *Method*).

[11] See note 4, above. I will say more about this all-discipline relevance throughout this article. In fact, Rahner's comment was more a complaint that Lonergan's discovery was "not theology as such, but only a very general methodology." If we look to etymology, the word 'suit' that Rahner uses (in English translation) in fact suits the nature of Lonergan's discovery: suit - Origin: Middle English: from Anglo-Norman French siwte, from a feminine past participle of a Romance verb based on Latin sequi or follow. See Figure 1, below. So, I am thinking here of the cycling of functional specialties, one specialty following another. Early senses of suit included 'attendance at a court' (I think, here, of functional attendance and the court that is our global community) and 'legal process' (I think, global process) derived from an earlier meaning, namely, 'set of things to be used together' (functional collaboration will be "a dynamic unity," *Method*, section 5.5, 138). The verb sense of 'suit' is 'make appropriate' and dates from the late 16th century. For this, I think of functional collaboration as being appropriate to the already somewhat visible eight-fold division of foci in disciplines.

[12] Bernard Lonergan, *Topics in Education*, vol. 10, *Collected Works of Bernard Lonergan*, ed. Robert Doran and Fredrick Crowe (Toronto: University of Toronto Press, 1993), 236.

[13] *CWL* 3, 232–269.

[14] "General Bias," *CWL* 3, section 7.8. See also "Progress and Decline," *Method*, section 2.7.

[15] *CWL* 3, 259 and 261.

[16] *CWL* 3, section 7.8.6.

ever ready to offset every interference either with intellect's unrestricted finality or with its essential detachment and disinterestedness. The antecedent willingness of charity has to mount from an affective to an effective determination to discover and to implement in all things the intelligibility and universal order that is God's concept and choice."[17] But, as he mentioned earlier in chapter 7, "So far from solving it [the problem] in this chapter, we do not hope to reach a full solution in this volume."[18] More than a decade later, in February 1965, he made his breakthrough to an initial identification of the needed "specialized auxiliary," "a method ... for integrating theology with scholarly and scientific studies ... for promoting good and undoing evil both in the church and in human society generally."[19]

Drawing on data of more than two millennia of scholarship, science, and theology, Lonergan discerned eight main kinds of question, recurrent and variously combined. By the same token he also saw the possibility of a new efficacy in collaboration—new, but "not something altogether new."[20] The new efficacy would not force[21] collaboration into some kind of artificial mold. There is, though, the possibility of inviting investigators and other collaborators to advert to, and take advantage of, normative patterns of collaboration that, to some extent, are visible in "divisions that already exist and are recognized."[22]

A .pdf file of Lonergan's 'Discovery Page' is available online, at the Bernard Lonergan Archive.[23] The original is held at the Lonergan Research Institute, in Toronto, Canada.[24] By contrast with the 1969 article, the Discovery Page provides us with a dynamic image of Lonergan's nuanced grasp of complex ranges of historical data and community dynamics. For convenience, I include the discovery page below as Figure 1.

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[17] *CWL* 3, 747–48.

[18] *CWL* 3, 267.

[19] *Method*, 366.

[20] *CWL* 3, 266.

[21] "First, cosmopolis is not a police force." *CWL* 3, 263.

[22] *Method*, 136.

[23] http://www.bernardlonergan.com/index.php (Lonergan Archives). See archival document 47200D0E060 / A472 V\7\1 - Functional specialties: Breakthrough page.

[24] Lonergan Research Institute, Regis College, Toronto, Canada, http://www.lonergan-lri.ca/. See also Pierre Lambert and Philip McShane, *Bernard Lonergan: His Life and Leading Ideas* (Vancouver: Axial Publishing, 2010), 160.

**The Discovery page, February 1965.**

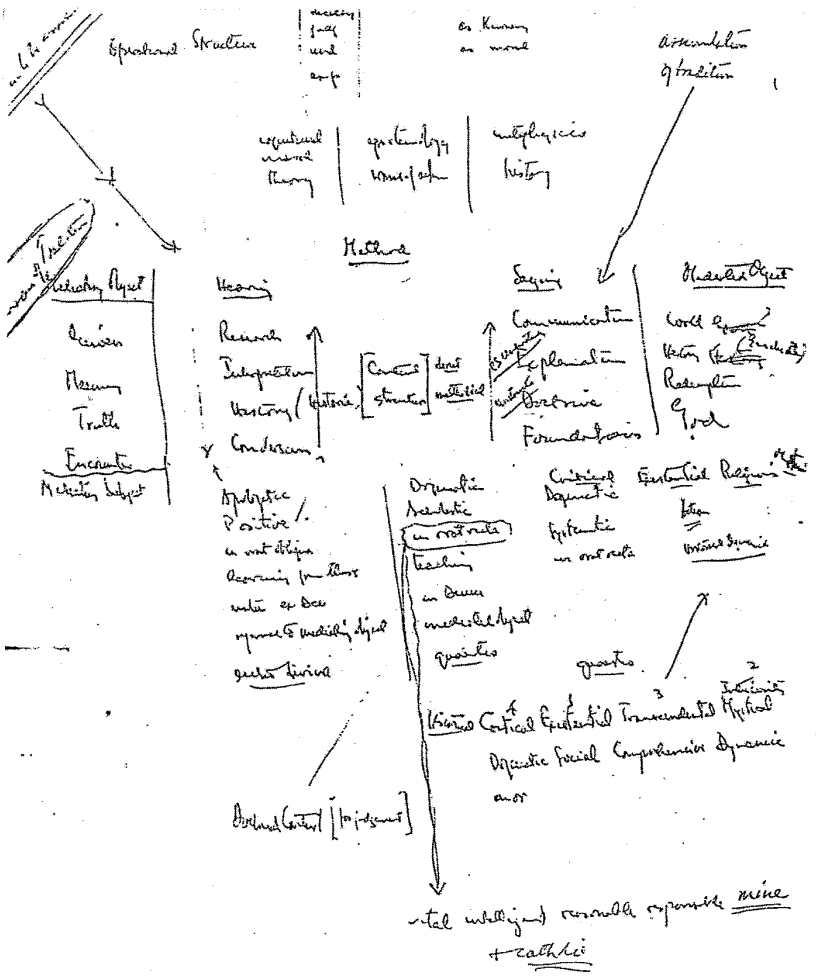

**Figure 1. Lonergan's Discovery Page: Functional Collaboration**.

I note here that, for some years, Philip McShane has been developing images and symbolisms for Lonergan's results, and more.[25] One of McShane's diagrams for functional collaboration is called "The

[25] See, for example, Philip McShane, Prehumous 2: "Metagrams and Metaphysics," http://www.philipmcshane.org/wp-content/themes/philip/online_publications/series/prehumous/prehumous-02.pdf; and see some earlier presentations in Philip McShane, *A Brief History of Tongue: From Big Bang to Coloured Wholes* (Halifax, Axial Press: 1998), 108–110, 119, 122, 124.

Tower of Able: Lonergan's Dream."[26] For my present article, lacking technology needed for more complex graphics, I give a simplified diagram of the cycle of functional specialties, Figure 2.

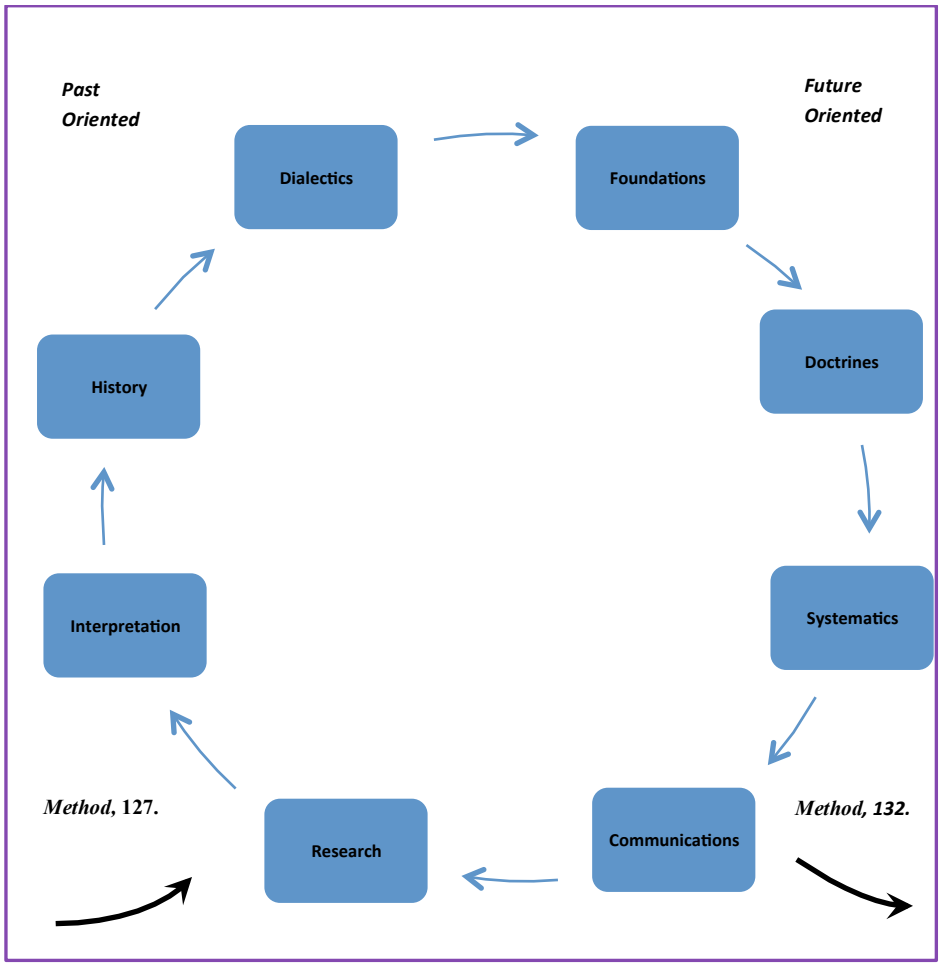


**Figure 2. Functional Division of Labor:** The diagram points to a division of labor, eight functional specialties, eight different tasks. *Method*, 137. Four of these will be past oriented (functional research, interpretation, history, and dialectics); and the other four will be future oriented (functional foundations, doctrines, systematics, and communications). Yet all specialties will lean forward, will be progress oriented. "Functional specialization distinguishes and separates successive stages in the process from data to results." *Method*, 126. The entire division of labor in the community will be a dynamic unity, progress oriented—"a normative pattern of recurrent and related operations yielding cumulative and progressive results." *Method*, 4–5.[27]

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[26] Lambert and McShane, *Lonergan: His Life and Leading Ideas*, 163.

[27] It may be worth emphasizing here that past-oriented is not history for history's sake, but will be a differentiation of consciousness within a leaning forward that is progress-oriented. Similarly, future-oriented is not mere future speculation, but will be a differentiation of consciousness within a leaning forward that is progress-oriented. But these subtleties are best left to empirical follow-up with data from disciplines. See notes 6, 7 and 8. For pointers

Certainly, I do not mean this as any attempt at compact summary. Although the diagram is a simplified version, perhaps that is just as well. For Lonergan's discovery is new for us still. And, by analogy, I am thinking of how we find the rows and columns of a simplified Periodic Table of Chemical Elements[28] conveniently located inside the front cover of a typical high school chemistry text.[29] But it takes considerable study, including access to data, to begin understanding the complex substructures and groupings of a more complete Periodic Table.[30] In a somewhat similar way, Lonergan's Cyclic Table of Collaboration Elements also will include complex layerings and groupings, ultimately will be far more complex than the Chemical Periodic Table, and will include, for example, developing genera and species of collaboration.[31]

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regarding this progress-oriented lean of effective collaboration, see the reference from note 8: "There is the task of all of us, but especially of those reaching some formal way towards changing the future, of discovering operatively that serious forward speaking is direct speaking. Otherwise one becomes a sort of a two-way signpost. And I would note that this is true even of a forward-specialty tendency to point back to Lonergan or Lao-tse or Luke's gospel. A very strange and strenuous business, this functional forwardness." Philip McShane, FuSe 18: "Galactic Functional Research."

[28] Mendeleev's original discovery of the chemical periodic table was published in 1869, 100 years before Lonergan's article. See Dmitri Mendeleev, "On the Relationship of the Properties of the Elements to their Atomic Weights," *Zhurnal Russkoe Fiziko-Khimicheskoe Obshchestvo* 1 (1869): 60–77. Like Lonergan's article, it too was quite brief, in fact, less than 20 pages.

[29] Recall, too, Lonergan's advice to his students: "In larger and more complex questions it is impossible to have a suitable phantasm unless the imagination is aided by some sort of diagram. Thus if we want to have a comprehensive grasp of everything in a unified whole, we shall have to construct a diagram in which are symbolically represented all the various elements of the question along with the connections between them." Bernard Lonergan, *The Ontological and Psychological Constitution of Christ*, ed. Michael Shields, Frederick Crowe, and Robert Doran, trans. Michael Shields, vol. 7, *Collected Works of Bernard Lonergan* (Toronto, University of Toronto Press, 2002), 151.

[30] It may help to have a look at some decent undergraduate chemistry textbook. It can be a humbling experience, but also inviting, to realize that the complex orderings of chemical equations, names, and images of laboratory apparatus are about real properties and real things. And yet even the most comprehensive 1,000 page graduate text touches on only a small portion of known chemical reality, let alone the advancing front lines of 21st century biochemistry.

[31] Differentiations will be within a generic and genetic matrix $C_{ij}$, where i, j = 1, 2, …, 9. See Philip McShane, *A Brief History of Tongue*, 108.

## 2. Progress is Good

I have been talking about progress and decline. But does not talk of progress and decline beg the question, what are progress and decline? One way to talk about progress is to begin with description and appeal to common word usage. So, we could say that progress is when things get better or, when the way that we are with each other improves in some way. If we look to the *Merriam Webster Dictionary*, the word progress has origins in Middle English, from Anglo-French progrés, from Latin progressus, advance, from progredi to go forth, from pro- forward + gradi - to go. In the *Oxford English Dictionary*, for 'progress' we find: development towards an improved or more advanced condition; from Latin progressus, an advance; from the verb progredi, from pro- forward + gradi- to walk. I note too, the connection here to the word gradient, which often refers to a change in elevation, or to a path on a map which follows the direction of steepest ascent and also traces back to an expression for 'to walk.' In a descriptive way, then, we can say that progress is some kind of change for the better. But, "the good is always concrete." "Hence, if one attempts to define the good, one runs the risk of misleading one's readers."[32] And, what of the changes in the good that we call progress?

Whatever progress is, it's pretty evident that different people can have quite different notions about it. There are, for example, now standard views about urban and city planning in North America, views that were strongly rejected by Jane Jacobs.[33] She is no longer with us. But North American suburbs, highways, and shopping malls are and continue to metastasize across the North American continent. In contemporary biology we find various schools of thought on biological and human development. For example, in developmental systems biology we find an emphasis on non-verifiable mathematical modeling and computer simulation. Then, organic development of all kinds is considered to be "analogous to a program, a sequence of prescribed events following a temporal order toward a goal. A set of coded instructions. Most questions about developmental information relate to

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[32] *Method*, 27, for both quotations. Later, Lonergan provides a "scheme" of 18 terms that "regard (1) individuals in their potentialities and actuations, (2) cooperating groups, and (3) ends." "The Structure of the Human Good," *Method*, sec. 2.6, 47, 48. Is the scheme presented verifiable? How will functional collaboration be an effective implementation of the scheme? These are advanced questions, and would be part of empirical follow-up to the invitation of this article.

[33] Jane Jacobs, *The Death and Life of Great American Cities* (Palo Alto, CA: Vintage Books), 1992 (originally published: New York: Random House, 1961.)

its organization, storage, and use as macromolecular tapes."[34] However, if we look to Lonergan, we find a remarkably different (opposing) and verifiable heuristic, not only of organic development of lower organisms, but development of the whole human being—a physical, chemical, botanical, zoological, image-able-intellectual layered (aggreformic) organism.[35]

If we look to our schools, there too, we find examples of differences in notions of development. The now-typical mathematics textbook has topics presented in ways that are intended to be logically rigorous. The prevailing pattern of presentation begins with general concepts and general definitions, then pushes forward with symbolic techniques and derivations of special cases, and only ends with applications and other examples.[36] Within sub-sections for Problems and Exercises, we find the same pattern: symbolic techniques dominate exercise sets; and when there are applications, they are generally given toward the end of the Problems and Exercises. However, this now-standard approach is in opposition to how mathematical discoveries are reached by mathematicians. Mathematicians start with applications or particular problems and only later are there breakthroughs to general results. Again, that now-standard textbook approach also is in opposition to what many successful teachers find they need to do in order to help their students. For instance, there was the famous teacher W. W. Sawyer, who wrote:

> The aim (of a course) may be to (have) every axiom stated, every conclusion drawn from flawless logic, the whole syllabus covered. That sounds excellent, but in practice the result is often that the class does not have the faintest idea of what is going on. … On the other hand … students (may be lead to) collect material, work problems, observe regularities, frame hypotheses, discover and prove theorems for themselves. The work may not proceed so quickly …

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[34] Philip Grant, *Biology of Developing Systems* (New York: Holt, Rinehart and Winston, 1977), 5. This is somewhat dated, but it is still orthodox systems biology in orientation.

[35] *CWL* 3, sec. 15.7. Philip McShane invented the name *aggreformic*. See Philip McShane, http://www.philipmcshane.org.

[36] At this time, a dominant approach to writing mathematics textbooks is rooted in "constructivism" (Lev Vygotsky), a philosophy of learning that, like the "conceptualism" of Duns Scotus, speaks of understanding with priority given to concepts. Thomas Aquinas, though, spoke very differently about understanding, with concepts coming from understanding. "In the present state of life in which the soul is united to a passible body, it is impossible for our intellect to understand anything actually, except by turning to the phantasms." St. Thomas Aquinas, *Summa Theologica*, Ia, Q. 84, a. 7.

> but the student knows what (they) are doing … has had the experience of discovering mathematics … no longer thinks of mathematics as static dogma learned by rote … (is) ready to explore further on (their) own.[37]

I am not trying to give an historical survey of ideas on development and progress. I am drawing attention to the more or less well known (but not often adverted to) fact that there are many perspectives on development and progress, many of which, in various ways, are not compatible; and, that more is true about this. For whether we look to our cities, our various academic disciplines, our high schools, our own lives or the lives of our families and friends, we find that, whether adverted to or not, our various orientations and views about development and progress are not just academic. Our notions of progress shape our questions, impact our daily lives, and in basic ways determine what we learn and how we grow or not.

Would it not be helpful, crucial even, for at least some scholars to pause over and attend to such basic notions in a deliberate and explicit way? What are one's otherwise hidden or latent,[38] but in fact operative, criteria for all that one goes on to call progress, and all that one judges to be decline? When we call one thing progress and another thing decline, does not this depend on knowledge of the things that we are judging and evaluating? If only to avoid adding to the confusion, would it not be helpful, strategic even, to inquire into how and what we know, how and what we discern and choose? And would it not also be helpful to consider our criteria for progress and decline? In other words, crucial to progress is a type of fundamental inquiry that will be a growth in self-knowledge and of oneself in community.

At this time in history this kind of growth in self-knowledge is not promoted. For "when subjected to higher education, one does well to attain some clear and precise understanding of one's own activities in this or that field of specialization. Few indeed attempt the philosophic task of coming to grasp the similarities and the differences of the many ways in which basic operations are variously modified and variously combined to yield the appropriate procedures in different fields. And of the few that attempt this, even fewer succeed in mapping the interior life of the 'black box' in which the input is sensation and the output is talk."[39]

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[37] W.W. Sawyer, *A Concrete Approach to Abstract Algebra* (Toronto: W.H. Freeman and Co., 1959; San Francisco, Dover Pub, 1978), 1.

[38] *CWL* 3, 422.

[39] Bernard Lonergan, *A Third Collection: Papers by Bernard Lonergan*, ed. by Frederick Crowe (New York/Mahwah: Paulist Press, 1985), 197. See also, *CWL* 3, section 16.3.4, "The Significance of Metaphysical Equivalence," which includes a "control of meaning." *CWL* 3, 530.

Note that sensation and talk, undeniably, are partly biological events, in the image-capable thinking and choosing human organism. But, consensus on heuristics for the human organism has not yet been attained by either the scientific or philosophic communities.[40] A few have reached some descriptive understanding of dynamics of knowing and dynamics of doing, or of activities in this or that field. But, explanatory understanding of these multi-layered aggregates of events will be a future achievement. There is the future scientific, philosophical and theological task to reach toward explanation, not only of things, but of the explainers, us … things who talk about things.[41]

This is all very much too brief, just Climbing Club post-card notes about possible expeditions. But, perhaps I've said enough to give some impression of the fact that the human sciences, philosophy, and theology will benefit by taking up essential results from the lower sciences; and, that the needed control of meaning alluded to in the quotation above[42] will include a growth in self-knowledge that, not only will be progress in itself, but will include progress in understanding progress. This growth, then, will include progress in understanding what we are doing when we are knowing and doing; and certainly will need to include becoming increasingly (self-) luminous about the interior life of the biochemical image-capable intellectual organism that each of us is. These are pointings, then, to a needed generalized empirical method defined by Lonergan in *A Third Collection* as follows: "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 the subject; it does not treat of the subject's operations without taking into account the corresponding objects."[43]

I have been pointing to the need of growth in self-knowledge. Lonergan reached remote heights in self-knowledge and control of meaning. But it is also evident that his achievement has yet to have had significant impact in world academic communities. There are, no doubt,

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[40] See, though, chapter 15 of *Insight*, *CWL* 3.

[41] I take this opportunity to point to related questions in Christian theology that are part of the challenge of reaching toward "the level of our times." Frederick E. Crowe, S.J., *Lonergan* (Collegeville, MN: The Liturgical Press, 1992), 58; *ibid*., 76, n.1. For instance, what was the biophysics of the crucifixion? Or, in the New Testament, we read: "Jesus said" but, what was/are genera of (aggreformic) human speech, and what was/is the neuroscience of the divine organism, the Word-Man? And so on. This is not reducing theology to empirical science. But, without the scientific component, does not our theological understanding of Jesus ("like us in all ways except sin") remain limited to description?

[42] *A Third Collection*, 197. Regarding control of meaning, see also *CWL* 3, *Insight*, 530, first paragraph of section 15.3.4.

[43] *A Third Collection*, 141.

many reasons for this.[44] One of them may be described by comparing the 19th century announcement of Mendeleev's Chemical Periodic Table. Leading up to his discovery was a century of accumulating results in chemical analysis. The pressure was on, to reach a unified view. Within ten years of Mendeleev's announcement, the Periodic Table of Chemical Elements had become the standard model for all of chemistry. However, in the sciences, philosophy, and theology, we have not yet seen community-wide pressure to reach a unified view of the elements of progress—neither within the disciplines, nor as mutually related. However, imagine what might be possible if there were at least preliminary consensus on the need of the kind of foundational reflection that I pointed to above?

Imagine, if you will, a sub-group of scholars, each willing and able to enter into foundational reflection, sharing results with each other, a group-effort that might as a group be more effective within the community. This group would work to bring out differences, as well as affinities and compatibilities; and at a given time, such a group would be reaching toward some kind of best-possible (provisional) consensus (even if in some instances it might be a case of "we agree to disagree"[45]). Even if for a time differences cannot be reconciled, there would be a shared effort to make the basis of those differences explicit. Indeed, without such an effort toward being self-luminous to one-self and to the group, differences, affinities, and compatibilities in notions about progress will necessarily continue to circulate in hidden ways. In particular, under such circumstances, even when intentions are good, actions quite regularly can be at cross-purposes.

We have, then, various signs of a needed specialized kind of work within the academic community. Remember, again, that my short article is an invitation only, a pointing to mappings of climbing routes, routes in fact already partly mapped out with precision by the genius Lonergan. See, for instance, page 250 of *Method in Theology*, where Lonergan

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[44] Surely, one reason must be that his work has not been communicated within a community striving toward functional collaboration. In that sense, if the community is not collaborating effectively, even 100 Lonergans might have little effect on "reversing" the large number statistics of present general bias. This will make more sense by the end of the article.

[45] Although, in the future, I imagine that within the professional community a baseline of basic positions will be sorted out. (On *basic position* see *CWL* 3, 413.) Adult growth will be normal. Within the sub-group, foundational differences won't so often be disagreement as maturing views assenting to, aspiring to, and contemplative about, remote differences that are the views of elders. I am reminded of a recent interview of a Canadian-American comedian, light-heartedly revealing a comedian's awareness of his own growth. Interviewer: "What will your next project be?" Comedian: "It's going to be the most important complex work of my life so far." Interviewer: "What is it going to be?" Comedian: "I don't know yet."

gives nuanced, exact, and visionary heuristics of the structure[46] of the specialized task that he called functional dialectics. See, in particular, lines 18–33 that include, "results … will not be uniform. But the source of this lack of uniformity will be brought out into the open."[47] Whatever else might be true about Lonergan's Dream of functional specialties, is it not becoming evident from history that a specialized work like that described on page 250 of *Method in Theology* will meet a pressing need?

What, though, of the other seven functional specialties? In Figure 2, adjacent to functional dialectics (past oriented), we see functional foundations (future oriented). Again, I only point to issues rather than offer any detailed discussion. These are major problems for the community to work out. So, for the moment, I'll just give a few examples that come to mind. I am partly thinking of those shifts in one's very position and orientation, shifts that affect how one moves forward—in one's life, in one's discipline, and in one's community. One may begin to hear secular music as sacred, or sacred music as so beautifully secular. In a somewhat similar way, there are Chinese dancers of the Shen Yun, for some of whom dance has become a union of divine being with "the overall manner of a dancer's style, and the meaning behind his or her movements."[48] Or one may fall in love with someone. And there are those who in some sense fall in love with all of humanity. There are those who fall in love with science. Or working within mathematics one may climb toward higher group theories, homology and other algebraic structures. Within a generalized empirical method some may win through to more adequate and verifiable heuristics about things with layered capacities-to-perform. And for us there are capacities to sense, to imagine, composing and enjoying music, to love one another, to understand higher group theories, to understand biochemistry and neuroscience, and even to reach subtly verifiable analogy within a Trinitarian theology.[49] Or, again, a silent seed of an idea can eventually change the direction of one's life. One may begin to think newly about one's beloved and what might be possible. In science, one may break through to a new basis and be able to envision new

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[46] *Method in Theology*, 249.

[47] *Method in Theology*, 250. See also Philip McShane, *Posthumous* 7: "Lonergan's 1833 Overture," http://www.philipmcshane.org/wp-content/themes/philip/online_publications/series/posthumous/posthumous-07.pdf.

[48] http://www.shenyunperformingarts.org/.

[49] "We can only conclude, therefore, that our knowledge of God in this life is analogical, that is to say, through an understanding of created realities we attain a knowledge of God, as it were by similitude, according to the steps of affirmation, negation, and eminence." Bernard Lonergan, *The Ontological and Psychological Constitution of Christ*, vol. 7, *Collected Works of Bernard Lonergan*, trans. Michael G. Shields (Toronto: University of Toronto Press, 2002), 85.

possibilities or perhaps tune in to data previously not attended to. One's theology may simultaneously become more personal and more explanatory. These are just a few possibilities. The fact is that fundamental shifts occur, basic changes in one's orientation, intrinsic to going forward in new ways toward new results.

For the specialized work of functional dialectics, for example, might it not be helpful (again, crucial even) for scholars to attend to these real dynamics of human progress? In our lives and academic communities, can we avoid new problems, new work, new tasks, new communications, and so on? One may try to limit oneself to old ways. But, eventually, for some at least, fundamental shifts occur and new ways become possible. So there is a task here that goes beyond the achievement of functional dialectics. For there is the work of trying to be luminous about the reach for new, improved, and explicit heuristics of progress itself in the most up-to-date explanatory terms.[50] What is the alternative? If we do not take on this task, do we not more or less guarantee the otherwise spontaneous infusion of new blind spots into the community? Like functional dialectics, it would seem that some kind of (future oriented) functional foundations also would be crucial to progress.

Besides functional dialects and functional foundations, what about the other functional specialties envisioned by Lonergan, namely, research, interpretation, history, doctrines, systematics, and communications? It might help to look to two questions: (a) Is there evidence for the existence of all eight tasks described by Lonergan? (b) Is there evidence that a functional division of labor will be not only possible, but also advantageous?

Certainly for the first question, data was available to Lonergan, for within an adequate empirical method,[51] available data includes the data of consciousness.[52] Lonergan, though, was a millennium-class thinker. Part of the challenge for the rest of us is that we do not have comparable data available to us, let alone the control of meaning that Lonergan attained in his high altitude ascent to self-knowledge. The data to which Lonergan adverted was from scholarship, theology, and a grasp of the sciences and economics up to and including results into the 20th

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[50]For preliminary heuristic pointers, see *Method*, 286–287. As McShane has pointed out, we need to add in a (10), for differentiations of consciousness that will be proper to functional collaboration. Philip McShane has provided helpful symbolizations. See, for example, Philip McShane, *A Brief History of Tongue*, chapters 3 and 4; and *Prehumous* 2: "Metagrams and Metaphysics."

[51] "Generalized empirical method envisages all data." *A Third Collection*, 140. And, as noted by Fred Lawrence, eventually generalized empirical method will simply be adequate "Empirical Method." Fred Lawrence, "The Ethics of Authenticity and the Human Good," in *The Importance of* Insight*: Essays in Honor of Michael Vertin* (Toronto: University of Toronto Press, 2007), 131.

[52] See notes 51 and 43 above.

century.[53] His lead-climb, a scaling and self-scaling[54] in disciplines, was exceptional. What can we do? For us, follow-up climbers, we each at least have some level of familiarity with our own discipline(s). And so we can at least make beginnings in describing differences in types of work with which we are already familiar. This, of course, will involve new challenges and growth in self-attention. But we may begin, for example, to become increasingly familiar with main question foci both within the community and within oneself. In fact, "the other (six) tasks are more precisely focused in the recognizable interests of particular areas of inquiry: legal texts, Biblical interpretation, economic history, ecological policies, the systematics of literary styles, the role of webbing communications in local education."[55] And so, in recent years, there has been a growing number of papers and books making preliminary progress describing the eight different foci verifiably (but not yet luminously) present within disciplines.[56]

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[53] See, for example, his brief remarks on commonsense, scientific method, and interpretation, in "Grounds of the Division," section 5.3 of *Method in Theology*, 134: "The interpreter, however, pursues a different goal." See also section 17.3 of *Insight*, *CWL* 3, and "Interpretation," *Method in Theology*, chapter 7.

[54] The word 'scale' appears twice (scaling and self-scaling) because I am referring to intentionality within what Lonergan called generalized empirical method. See note 43. Note that the English word 'scale' has several etymologies, all of which apply in scale and self-scale: For example, weights and measuring are 'a graduated range of values' and also 'to climb, to drink.' I think, too, of Galileo's scaling of polished wooden ramps and his climb to the discovery of the law of falling bodies. And then there is Lonergan's scaling of ramps of meaning, his scaling of heuristics for aggreformism (*CWL* 3, chapter 15) and his climb to the discovery of the law of collaborating bodies.

[55] The entire chapter 3 of *A Brief History of Tongue* is a rich and detailed introduction to "the plausibility and possibility of this (functional) collaboration." *A Brief History of Tongue*, 105.

[56] The present fragmentation in disciplines, as well as the possibility and potential advantages of a functional division of labor have been discussed in other fields, including musicology, linguistics, economics, law, women's studies, language studies, mathematics, sciences and technologies, and housing. The "emerging pattern … is pretty evident in any area that pauses to take stock of its own fragments. Welleck and Warren's book on literature practically lists the functional parts in the table of contents." Philip McShane, *Field Nocturnes CanTower* 45, "Eau Canada: Global Water Collaboration," *Field Nocturnes*, http://www.philipmcshane.org/wp-content/themes/philip/ online_publications /series/field_nocturnes_ cantower/fnc-45.pdf.) The Welleck and Warren book mentioned is, René Welleck and Austin Warren, *Theories of Literature*, (New York: Harcourt, Brace and World, 1942/1970). Alessandra Drage points out the lonely presence of fragmentation in feminism. See Alessandra Drage, *Thinking Woman* (Halifax: Axial Press, 2005), especially the concluding chapters. On this, see Philip McShane, *Field Nocturnes*, *CanTower 45*. There is also a minimalist view on the basic practicality of functional collaboration in

Since in this article I only point to, and invite, follow-up empirical work within one's discipline(s), let's now look to the second question: is there evidence that a functional division of labor will be not only possible but also advantageous? Part of the challenge here is finding data relevant to functional collaboration when functional collaboration as such is not yet implemented within disciplines. Another difficulty is that some of the advantages that will come with a functional division of labor are, in some ways, already emergent in contemporary physics and other sciences. But, at this time, education in physics (as well as other sciences, philosophy and theology) does not usually include or promote self-attention; and at the same time, contemporary philosophy and theology students are not often helped toward becoming educated in contemporary physics or other sciences. But if we believe that Lonergan might have known what we has talking about, then we might be motivated by his advice to "work out the basis for … a third way," to "appeal to the successful sciences to form a preliminary notion of method."[57] Whether one is motivated by Lonergan's advice, or not, our focus here is on progress. And, as it happens, it is common knowledge that whatever progress is, physicists have been making a lot of it. In fact, the physics community has been astonishingly successful over the last four hundred years, climbing with "cumulative and progressive

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philosophy, adverted to by Robert Henman. See Robert Henman, "An Ethics of Philosophic Work," *Journal of Macrodynamic Analysis*, 7 (2012): 44–53. Philip McShane has an extensive body of work on functional collaboration. See Philip McShane, *Shaping the Foundations* (Lanhan, MD: University Press of America, 1976), chapter 2, Musicology, originally written in 1969; Philip McShane, *Lonergan's Challenge to the University and the Economy* (Lanham MD: University Press of America, 1980), chapter 5 (literary studies); Philip McShane, *Economics for Everyone: Das Jus Kapital* (Halifax, Nova Scotia: Axial Press, 1998). See also Bruce Anderson, "The Nine Lives of Legal Interpretation," *Journal of Macrodynamic Analysis* 5 (2010): 30–36. In addition, see Bruce Anderson, *Discovery in Legal Decision-Making* (Dortrecht: Kluwer Academic Publishers, 1996); John Benton, *Shaping the Future of Language Studies* (Axial Publishing, Canada, 2008); and Terrance J. Quinn, "Reflections on Progress in Mathematics," *Journal of Macrodynamic Analysis*, 3 (2003): 97–116; Terrance J. Quinn, "Invitation to Functional Collaboration: Dynamics of Progress in the Sciences, Technologies, and Arts," *Journal of Macrodynamic Analysis*, 7 (2012): 92–120. More recently, there is the work of Sean McNelis in housing studies: "Cyclic Functional Collaboration: a Scientific Approach to Housing" (Ph.D. Diss., Swinburne University of Technology, Faculty of Life and Social Sciences, The Swinburne Institute for Social Research, 2012), Swinburne Research Bank, http://researchbank. swinburne. edu.au/vital access/manager/Repository/ swin:29430. He has developed his thesis into a book: Sean McNelis, *Making Progress in Housing: A Framework for Collaborative Research* (Oxford: Routledge, 2014).

[57] *Method in Theology*, 4.

results."[58] So, in our thinking about real possibilities of human progress, unless we choose to turn a blind eye to a massive source of data, we can hardly ignore progress in the most elementary science.[59]

Even if you have not studied physics, the success stories of physics are part of popular culture and imagination, and familiar to many through general education. For this article, that will be enough, since I am definitely avoiding details. But, again, this does not mean that I am advocating popular summary. I recall, once again, that my article is only a pointing, an inviting to work to be done, mountains to climb, views to reach. And, my immediate focus is question (b). At this stage, I take it as to some extent verified, through preliminary description, that there are eight foci within disciplines.[60] Question (b) is about the possible advantageousness of deliberately promoting a division of labor around these foci. As it happens, even with only a popular knowledge of physics, we can find signs of a gradually emerging functional division, as well as indications of a growing effectiveness that will be attained when this division of labor is more developed and increasingly luminous.

Within the global physics community of scholars, technicians, teachers, students, and administrators, two large zones of expertise are known in popular terms as experimental physics and theoretical physics. These zones certainly are not separate from each other. On the contrary, they work closely together. It is, in fact, a division of labor that is taken for granted. The division is not a restriction, as such, on the possible interest of any individual. It is, instead, a division of labor that, over time, the community has spontaneously found to be practical, and even necessary. It is true, that a few especially competent leaders in the field might be as comfortable contributing to the design and workings of a new particle accelerator as they would be working out new mathematical aspects of a standard model. But that is rare. And the rarity of such double expertise within physics only highlights the otherwise normal division. For, generally, it is experimental physicists who "have the knowledge and skills needed to handle a cyclotron," while the "theoretical physicists are able to tell what experiments are worth trying and, when they are tried, what is the significance of the results."[61] This

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[58] *Method*, 4, 5.

[59] Note that I do not suggest that there are not foundational problems in contemporary physics, or that physics already is collaborating functionally. Problems of extroversion and reductionism, and the need of a new control of meaning, are as present in physics as in all of the sciences, philosophy, and theology at this time.

[60] As for other disciplines, so also for physics, there is ample evidence for eight main foci. That would be a study for those familiar with details of contemporary physics.

[61] *Method*, 126.

division of labor in the physics community is normal, and, as contemporary history reveals, it continues to be relatively successful.

Note also that in physics, the expectation that any one person, team, or even very large group might be able to contribute comprehensive results would simply never arise in what is now a highly interdisciplinary global enterprise. Instead, the familiar division of labor (one group looking more to data and one group focusing more on theory) conveniently relieves investigators (as well as very large teams of investigators[62]) from what would be an obviously impossible task of simultaneously providing complete, detailed, generic, and specific results about all significant data, as well as all theoretical implications. In physics, "totalitarian ambitions"[63] simply don't arise. Or, if they did, they could not survive the gradients of collaborative expertise already required within the contemporary discipline.

That there are two groupings does not mean that one grouping knows theory and the other does not. In physics, both groupings of investigators are working relative to a shared theory. For example, at present, there is what is called the Standard Model of particle physics. At the same time, the education, expertise, and career tracks of experimental and theoretical physicists are remarkably different. As I already mentioned, analysis of present and possible divisions of labor in physics will be future work for the academic community—both for physics and theology. And such an analysis would, for example, need to distinguish the work of explaining anomalous data relative to a present standard model from the work of thinking out possible new standard models. In the meantime, though, we can already point to at least two types of past-oriented work—namely, the work of detecting anomalous data, and the work of explaining anomalous data. So, in descriptive terms, in the physics community we already see the (pre-) emergence of functional research and functional interpretation, respectively.

The story of physics also points to the fact that method in disciplines can be expected to develop. For instance, you may recall the elementary experiments and mathematics[64] of Galileo's work in his studies of free-fall.[65] Among the apparatus he used were inclined

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[62] See note 66, below.

[63] *Method*, 137.

[64] Teenagers in high school can learn the geometry and algebra of quadratic equations—with the help of a good teacher. See notes 37 and 38.

[65] I mention this example for various reasons: Certainly, when compared with contemporary work, it helps point to the development of method. At the same time, the mathematics and physics involved in Galileo's work is generally accessible to high school students, and so can be a convenient example to reflect on—for graduate students in all disciplines. Recall Lonergan's pedagogical advice from the first two paragraphs of *Insight*, *CWL* 3, on the need to attend to a series of instances. "Attaining familiarity with what is meant by insight" (*CWL* 3, 27), including Galileo's insight into free-fall, would

wooden ramps, and a water clock (a rather imprecise instrument for measuring time, even in Galileo's day). Contrast this with present day CERN[66] research groups: Interdisciplinary teams of theoreticians, experimentalists, technicians, and collaborating groups from around the world are in the hundreds, with there being often as many as 100 named authors of a given paper. The CERN laboratory itself relies on about 2,400 full-time employees. Technology for experimental work is constructed on the basis of up-to-date theory; and digitalized data from scattering experiments are accurate to within nine decimal places. Experimental results, questions, puzzles, and conjectures relative to the standard model are shared with theoreticians eagerly awaiting such (internal) communications. Moreover, these communications normally are in accord with rigorous communication standards, where details are given on materials, methods, data, results, and so on. And a driving force for all of this is a community-wide orientation toward progress. Within physics, then, we can already see some of the great efficiency in what has become a multi-staged[67] collaboration—even though, so far, it is fundamentally non-luminous, and so far only pre-functional.

**Future Expeditions**

Following Lonergan's pointings, it is possible to begin to see that, yes, within disciplines, the pressures of history are slowly bringing eight focal zones into view. And, there is accumulating evidence that a division of labor around these foci will be greatly effective, as a staged process from data to results.[68] Still, this is all so new, and rather strange, especially when contrasted with long established habits of scholarship in the human sciences, philosophy, and theology. So, you may well wonder (especially if this short article is the first time you've heard about Lonergan's discovery): this is all fine and good, but why is more needed, for physics, or for theology, or for other disciplines? Taking note of this patterning of foci is interesting. But there really isn't more that we need to do. Yet, isn't saying that part of taking a position about progress? In as much as we each strive to identify the basis of our position; and in as much as we also make the mutually enriching effort to come to some explicit understanding about each of our positions (in particular, our positions about progress and what we need to do in order to best promote that progress), will we not then already be entering into some preliminary shadowy version of functional dialectics, such as compactly

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provide one important instance in the (your) series. I note that 'series' is another word for 'sum,' an integral result.

[66] CERN stands for Conseil Européen pour la Recherche Nucléaire. The European Organization for Nuclear Research, http://public.web.cern.ch/public/.

[67] "Functional specialization distinguishes and separates successive stages in the process from data to results." *Method*, 126.

[68] See note 67.

pointed to in lines 18–33 of *Method in Theology*, page 250? "Results … will not be uniform. But the source of this lack of uniformity will be brought out into the open."[69]

It is true that the pressures of history gradually are bringing the existence and advantageousness of the eight-fold division to our attention. But it is early days yet. And, for now, we struggle with a lack of control of meaning; the presence of the foci is subtle; they are not yet explicitly adverted to within the community; and, as history shows, non-luminous collaboration generally tends to generate, not progress, but confusion and decline.[70] These are not problems that will be resolved within traditional methods of random collaboration, for these problems are features of such methods. And if it is impossible for any, even very large, teams of physicists to do it all in any single project or publication, and if basic divisions of labor have proven crucial to progress in physics, how much more so will strategic principles of collaboration be needed in the now vastly more complex, global, and highly inter-disciplinary human sciences and theology, disciplines that also, in various ways, include physics, chemistry, and the life sciences?[71] In physics, Galileo did not anticipate particle accelerators; a photon counting detector of an earth-orbiting Hubble telescope; or the mathematics of modern geometries. In an analogous way, we cannot anticipate future accelerators in human meaning; insight detectors of a community-orbiting telos-cope; or the implemented goal-oriented grouping-structures of an eight-fold cycling division of labor. What, though, might we do now, toward such future progress?

One possibility would be to make elementary efforts toward beginning to organize our efforts along the increasingly evident eight-fold organic divisions. Or, as Philip McShane suggests, it may be helpful to begin with the question: Does this deserve recycling?[72] At first, our work will be rough, awkward, no doubt often dispersed in ad hoc ways across focal zones, and for the most part, will continue to be descriptive.

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[69] *Method in Theology*, 250. See, also, Philip McShane, *Posthumous* 7: "Lonergan's 1833 Overture," http://www.philipmcshane.org/wp-content/themes/philip/online_publications/series/posthumous/posthumous-07.pdf.

[70] See *Insight*, *CWL* 3, section 7.8.1, on "The Longer Cycle" of decline.

[71] The foundations of physics, chemistry, the life sciences, and theology will coincide. "Foundations of Physics is to be an omnidisciplinary Foundations." Philip McShane, *Sane Economics and Fusionism* (Vancouver: Axial Publishing, 2010), 64. See also *Method*, 286–287, with functional collaboration to be included as (10) in the list (already implicit in the discussion of functional foundations). See note 51.

[72] This was McShane's slogan for the 2012 Halifax Lonergan Conference, *Moving Lonergan Studies into Functional Talk: Establishing an Effective Legacy*, The 2012 International Halifax Lonergan Conference, July 16–20, 2012, Saint Mary's University, Halifax, Nova Scotia, Canada.

A gradual movement toward functionality will not reach the whole global community right away. But we can expect, I think, that before too long, even early descriptive efforts toward implementing an eight-fold division of labor will increasingly reveal the undeniable efficiency (and even necessity) of that very same eight-fold division of labor. Like climbing Mount Aconcagua, preliminary descriptive ascents toward functionality can be, and in basic ways will be, "functionally non-technical." Although, even then, because of the efficiency of the division of labor, "the effects of altitude" soon will become "severe."[73] The need of development toward explanatory climbing will follow within that increasing efficiency. The movement toward explanation will then be a transition to the South Face, to explanatory climbing (that will include, for example, the reach toward explanation of previous non-explanatory[74] efforts). And as in any serious science, that kind of climbing will be "a journey reserved to only a (relatively) few"[75]—supported by the whole community, a core of elite[76] functional climbers.

I will end, then, with a paragraph of hope and prayer: We can begin. For the foreseeable future results will mainly be descriptive. But that is normal and normative. The rest will come. The rest? It will be rest-ful to be able to work together in increasingly efficient ways. The rest of the academic communities will join in. We can be rest-ful in the knowledge that, even though initial results will be non-luminous, awkward, dispersed across focal zones, as the eight-fold division of labor becomes more established, precision will increase. The pressures to reach empirically grounded explanatory perspectives, within and relative to the new standard model, will emerge quite spontaneously. We will become increasingly self-luminous self-gradients oriented toward "cumulative and progressive results."[77] Finally, I think of this within my Christian perspective—that we are one with Him, and that He is like us in all ways except sin. Thinking, then, of all of the dynamic senses of the word rest mentioned above, I take the invitation from the New Testament partly as a call to growth in the eight-fold unity that we are: "Come to Me, all you that are weary and are carrying heavy burdens, and I will give you rest."[78]

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[73] http://www.aussie7summits.com/#/s7-aconcagua/4560902010.

[74] "To avoid confusion and misunderstanding, it will not be amiss to draw attention to the possibility of an explanatory interpretation of a non-explanatory meaning." *CWL* 3, 610 (section 17.3). See also *Method*, chapter 7.

[75] http://www.planetmountain.com/english/News/shownews1.lasso?l=2&keyid=39023

[76] *Method*, 350–351.

[77] *Method*, 4, 5.

[78] Matthew 11:28.

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