'The Diagram is More Important than is Ordinarily Believed': A Picture of Lonergan's Cognitional Structure

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I. The Challenge

In his article "*Insight*: Genesis and Ongoing Context," Fred Crowe calls out Lonergan's line "the diagram is more important than…is ordinarily believed"[1] as the "philosophical understatement of the century."[2] Sixteen pages later he identifies elaborating an invariant cognitional theory to underlie generalized emergent probability and thus "the immanent order of the universe of proportionate being," as "our challenge," "but given the difficulty" he does not "see any prospect for an immediate answer."[3] Could this have something to do with the lack of a comprehensive diagram of cognitional theory? Appendix A of *The Boston College Lectures on Mathematical Logic and Existentialism* offers diagrams of the dynamics of knowing and doing perhaps copied from Lonergan's own blackboard work,[4] but they do not distinguish explanatory and descriptive insights, let alone statistical insights, and do not illustrate the pull upwards or the fusing of routinized insights. Before we can effectively relate cognitional theory to generalized emergent probability, we must have an adequately rigorous and precise cognitional theory. I firmly believe in the truth of Lonergan's fundamental insights, but in order to rigorously undergird generalized emergent probability there are many pertinent questions about his cognitional theory which must be asked and answered.

In this paper I (1) review some of Lonergan's attempts to diagram cognitional theory and discuss what insights they do and do not express, (2) elaborate and defend principles for making our formulations of insight into insight rigorous and clear, and (3) attempt to build up a diagram which makes full use of those principles in a maximally expressive way. While I think that the challenge is vital, the problems with the existing attempts serious, and the principles I offer important; I do not pretend that I have even discovered all of the further pertinent questions necessary to establish the correctness of my proffered solution, let alone asked and answered them. Furthermore, while I think a comprehensive attempt to rigorously and textually establish Lonergan's views on the relations of the various types of insight would be important and helpful, I am not attempting that

effort here. While I owe a great debt to Lonergan's remarks and the further insights of my own teachers (without them I would assuredly still be an externalist thoroughly uninterested in these questions), this is primarily an attempt at reasoning more rigorously from the data of my own consciousness. How, after all, can one discover the nature of self-appropriate except by self-appropriation?

II. Review

The Tabular Schema in Insight

The first instance of what can by any stretch be called a "diagram" of Lonergan's cognitional theory is in chapter nine of *Insight*, where Lonergan presents a table "represent[ing] schematically the three levels of cognitional process."[5]

I.	Data. Perceptual Images.	Free Images.	Utterances.
II.	Questions for Intelligence.	Insights.	Formulations.
III.	Questions for Reflection.	Reflection.	Judgment.

This schema, while lacking both the extent and sophistication introduced later, expresses at least three important insights. First, the levels are distinguished by new spontaneous occurrences which have as their necessary but not sufficient conditions the responses to spontaneity in the lower levels. So without data one has attended to, the questions "what is this?" "what caused this?" and "what does this mean?" will not arise, but there remain the dull and incurious, to whom those questions do not occur in the face of the data. The question is not caused or constituted by the data, but spontaneously occurs in the human mind, albeit only under certain conditions. Second, it distinguishes the spontaneous initiation of the activity from the activity itself and the expression of that activity. A question is not an insight is not a formulation. Third, it establishes the isomorphism[6] of the levels: each begins in spontaneity, advances through concerted process, and potentially results in expression. Lonergan further clarifies, but does not diagram, that "the three levels of cognitional process operate in two modes. Data include data of sense and data of consciousness."[7] These he coins the direct and indirect modes of cognitional process. Thus Lonergan offers four distinctions yielding eighteen identifications across three levels and two types of data.

One difficulty with this early account is that the third level does not seem quite isomorphic to the first two. The middle term of the first two is a result ("free images", "insights") if only in the mind, whereas "reflection" seems to be a process. Similarly "utterances" and "formulations" seem to exist at least potentially outside the mind, whereas "judgment" proper seems like an internal state. These features seem to be clarified in the diagrams from the BC Lectures and the account in the first chapter of *Method in Theology*,[8] however, so I will not dwell on them here. Of course Lonergan also does not deal with the fourth or fifth levels at this point, since he had not yet had, or at least formulated, those insights. Of more concern is his failure to express the differentiation of explanatory and descriptive insight, or classical and statistical insight, which concern so much of the early part of the book. He also does not grant any explicit place for oversight or inverse insight, which seem critical to the operation of the mind in the Lenten state in which we find ourselves. Do these distinctions arise from differentiations in data or in questions? Do inverse insights require free images? Are oversights a result of something like a "short circuit" where the cognitional process skips important steps or a kind of "blown capacitor" where the cognitional process fails to proceed forward at all? Answers to these questions must be sought elsewhere.

Another important question is the place of this schema within his account of the patterns of experience from chapter six. The account of the intellectual pattern[9] so strongly prefigures the later explicit account of cognitional process ("selective alertness…suggestive images…insight…judgment") that it seems like the natural home. But then what are the accounts of the other patterns doing in *Insight* if they do not involve insight? Are they merely a catalogue of diversions suggesting that oversight is a short circuit rather than a blown capacitor? But the artist "exercises intelligence" in fact he "liberates experience…liberates intelligence"—yet "the validation of the artistic idea is the artistic deed," not artistic judgment. What does that mean?[10] The painting itself validates the insight of the painter without any human aesthetic judgment? If the artist "establishes his insights" by "embodying" rather than "verification" how are we to know whether the insight is established?[11] It seems like many of the elements of cognitional process must be reused, but with some new as-yet-unclear set of differentiations. Further if the dramatic pattern is the "artist[ic] limited by biological exigence, inspired by example and emulation, confirmed by admiration and approval, sustained by respect and affection"[12] then here too cognitional process must be present. Of course it seems like most traditional arts might easily meet Lonergan's criteria for the art of everyday living. Lonergan suggests an isomorphism between questions/complementary insights and roles/selective adaptation (in the psychological, not biological sense), but surely intentional selective psychological adaptation requires insights?[13] So in addition to differentiations by data and level we must also differentiate by scale: some insights are for their own sake, whereas some are embedded in broader processes with other directions.

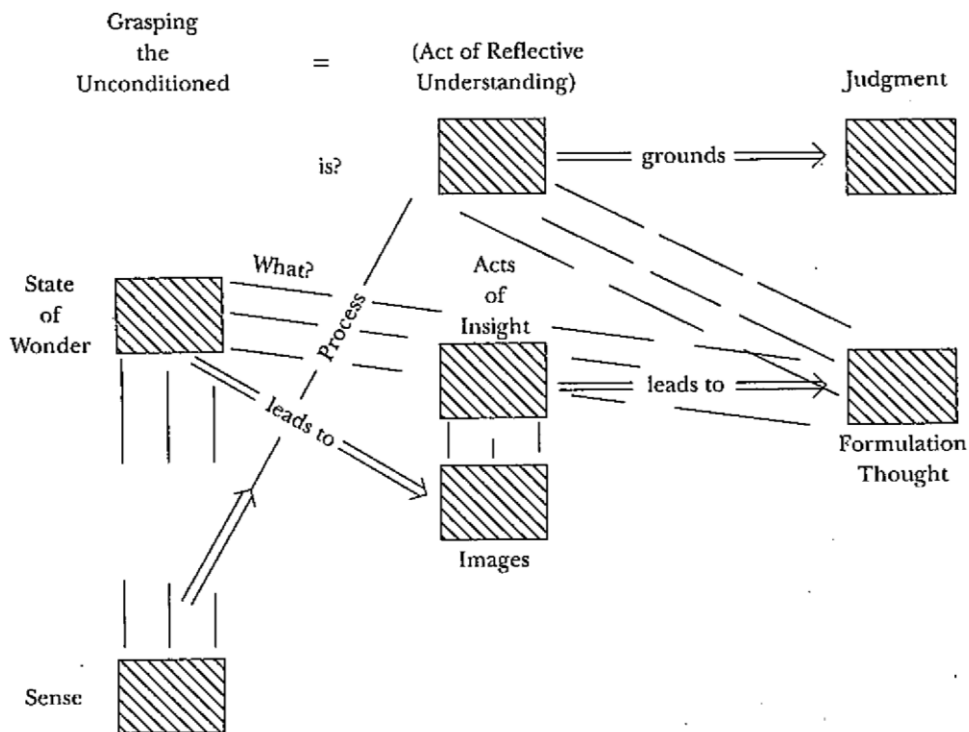*The "Dynamics of Knowing and Doing" – 1961 Blackboard Work in Dublin*

Figure One: The First Diagram from Dublin

This diagram[14] is not normally regarded as marking a great departure in Lonergan's thinking from *Insight* (following as it did only a short time later), but the differences are worth attention. One of the questions in the original schema, the isomorphism of the second and third levels, is greatly clarified. Here each begins clearly with a question, proceeds through a process, and results in an interior product. The precise isomorphism of second and third level insights may be unspecified, but the structure is there. The first level, however, becomes if anything more confusing. Images (presumably correlative to the earlier "free images") are moved up to a sort of halfway-house between the first and second levels. The notion of "utterance"—a pre-insight mental product— goes away entirely. While the question of how knowing is related to doing is taken up in the second diagram, the differentiations of knowing internal to science remain unaddressed.
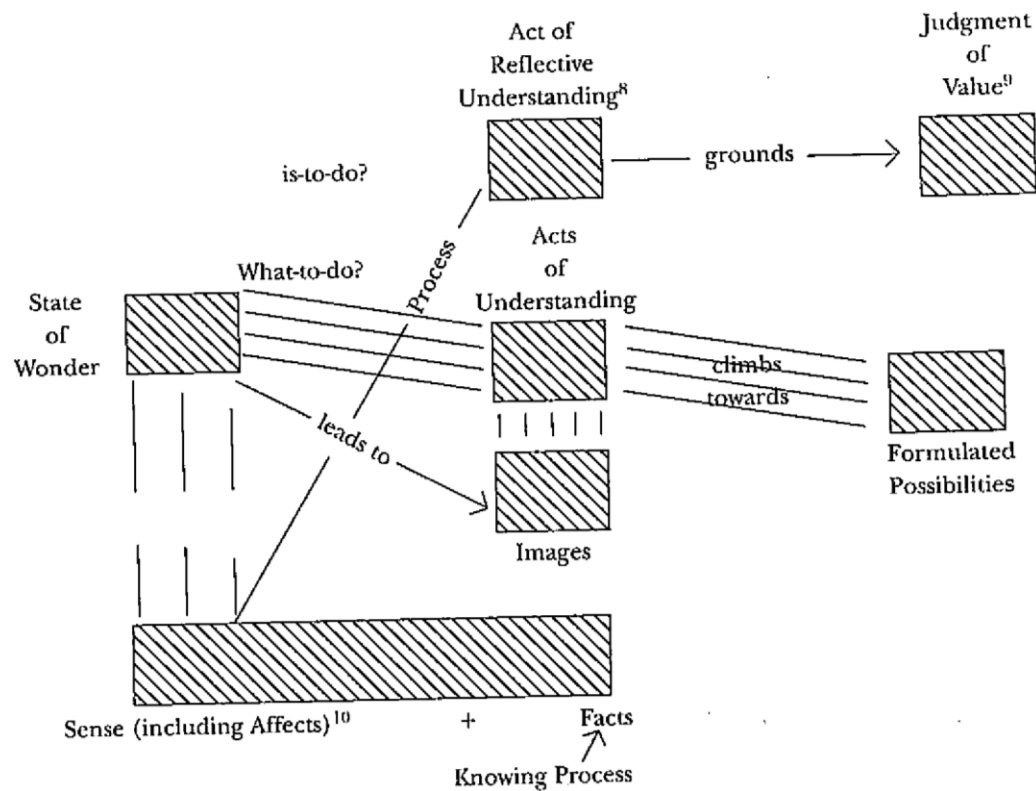

Figure Two: The Second Diagram from Dublin

The second diagram[15] is clearly precisely parallel to the first, which makes certain things explicit but raises further questions. What it makes explicit is that the basic dynamics which lead to knowing and doing are the same in both cases and the differentiation of outputs is traceable to the differentiation in inputs (sense vs affects + facts). It also makes clear that Lonergan is using "images" in a technical sense since one rarely explicitly visualizes all one's possible actions the way one might mathematical or scientific data. It also suggests that Lonergan equivocates insight for understanding, which may make the title of his masterwork redundant, but also indicates that he may have intended a precise isomorphism of the second and third levels even initially. The relationship of this work to *Insight* remains unclear, however: are the fourth level, the dynamics of

doing, and the dramatic pattern all the same thing? This seems logical from the description of the dynamic pattern as concerned with getting things done; it also suggests a nicely minimalist catalog of basic cognitional functions. In *Insight*, however, the dramatic pattern is seen as an outgrowth of the aesthetic, and while feeling does literally enter the picture here, there is no suggestion of any alternate process of validation beyond reflective understanding, and the process is depicted as ending in judgment rather than avoiding it.

In addition to the question of its interactions with the formulations of *Insight*, the blackboard diagrams from Dublin also give rise to two new questions. First, while "judgment" can be (and is probably intended to be) equivocated for "knowing," such that the "Dynamics of Knowing" really do result in knowledge, it is not at all obvious that "judgment of value" can be equivocated for "doing." It seems like an odd contortion of English to suggest that having judged something valuable is the same as having done it, or even acted such as to attempt to do it. But if those terms are not equivalent, then the "dynamics of doing" do not actually result in doing. This oddity is also present in the question Lonergan suggests is evocative for the third level of the "dynamics of doing"—"is-to-do?" Is the answer to that question a judgment (as suggested by the parallelism of "is" with "is it so?") or an action itself (as suggested by "to-do")? In either case it seems like something is missing from the account.

The second issue that arises with this diagram is the question of what insight into "Sense (including affects) + Facts" could possibly mean. Lonergan's early descriptions of insight are all identifications of likeness (whether of property or identity). Circumferences and radiuses have a relation as geometric constructs; crowns and water have relations of volume and weight as physical objects. In what way do feeling and fact interact to yield possibility? For anyone without a strong allegiance to Lonergan's ideas from *Insight* or from the later parts of *Method in Theology* this is apt to seem like a category mistake. Of course *Method* offers the dynamic of doing as a fourth level, not as a parallel operation of the first three with different data, so let us turn to that account, which has become canonical, even if Lonergan does not there offer a diagram.

The Account of Method in Theology
Lonergan does not offer a diagram in *Method* to help visualize his account,[16] and I have not seen one published later by Lonergan himself or one of his close associates. That said, because the four-level account offered there is described in reasonable detail and has become so canonical, I will attempt to render it into a table:

Name	Question	Activity	Intention
1. **Empirical**		experience/ imagine	attention image
2. **Intellectual**	what?	understand	intelligibility
3. **Rational**	is it true/so?	judge	
4. **Responsible**	is it good?	decide	

The first thing to note is that the four-level model is not as clear here as one might think.[17] Not only does imagination retain an unclear place between the first and second levels, but in one list Lonergan also includes "the true" between "the real" and "the intelligible."[18] I would like to dismiss that as an elaboration or infelicity, but with Lonergan that's always a risky move. There are other more pressing difficulties with this account, however.

First, many real things do not seem to spontaneously prompt the question of their goodness. Is the relativistic scaling of mass and length with velocity good? I have no idea what an answer to that question would mean. Does that merely mean that I've internalized the inverse insight, as I might do with more effort in the case of the precise location and momentum of an electron? Or do some levels of cognitional process not seem to occur with regard to operations beginning with some kinds of data? If this is the fully general transcendental model of human cognition, where do Lonergan's trenchant albeit imprecise worries from *Insight* about the distinction of the aesthetic and dramatic from the intellectual fit in?

Second, how does this account square with the blackboard diagram from Dublin? In the Dublin account the answer to "is it good?" is a judgment of value, and so properly on the third level. One can say that in a Thomistic understanding the judgment of goodness is tantamount to the decision to act, but if so then there is no fourth level of decision. If there is a fourth level then decision must be more distinct from judgment, but the question "is it..?" seems calibrated to elucidate judgment. Further, if decisions require affective and factual input, where are they merged? Are there perhaps explanatory, descriptive, and affective insights, which are assembled at the third level into a judgment of value which gives rise to deliberation? Or are there two judgments, the judgment of fact and the judgment of value, which jointly give rise to the question of the fourth level? The latter theory makes sense of why not all facts would spontaneously elicit questions of action, but does not resolve how the two unlike judgments come into conjunction. Additionally, the Dublin diagram suggests that facts are input to judgments of value at the level of **data**, not immediately at the level of judgment—indeed that's suggested by the use of the term *fact*, as the result of a judgment.

The last point—that judgments can themselves be data—is also required for understanding what Lonergan shortly addresses in *Method* as "compound knowing."[19] This is Lonergan's term for the reality that previous insights are nearly always necessary for new insights and undiagnosed previous oversights can hinder new insights. Indeed, prior insights are so deeply involved in new insights that it is frequently impossible to psychologically disambiguate them, so Lonergan seems to me to be on strong ground here with regard to the data of consciousness. What he does not do is explicitly model what flows of cognitional content between elements of cognitional functioning occur. The closing scissors are a fantastic metaphor,[20] but there is no similarly illuminating metaphor for how the then-closed scissors fuse their existing blades and grow a new pivot to accommodate new data.

During his four-level account of cognitional process in *Method*, Lonergan explicitly excludes one factor to be dealt with later—"being-in-love."[21] Some take this to be a fifth level with a new set of questions, operations, and internal and external results; others suggest that it is a principle which pulls one up through the levels in addition to the spontaneous push from below. I wonder to what extent, when the previous point about cognitional process cycling through levels is taken into account, these are genuinely distinct positions. Is not Lonergan's account of the dramatic pattern a description of the way that the fourth level sometimes exerts an upward pull on the first three? And it's precisely the scientist's desire to reach a judgment which so frequently leads to further pertinent questions, the canvassing of additional data, and many further insights.

The next place in *Method* where Lonergan adverts to the levels of cognitional activity is during his justification of the functional specialties; two features of his discussion stand out in this context. First is the way in which he justifies the number and differentiation of the functional specialties with regard to the levels of cognition and an additional extroversion factor which models

the distinction between primary and secondary cognition.[22] As with *Insight*'s matching of cognitional levels and metaphysical elements, however, one wonders if the parallelism helped to guide the number of levels in the first place. I do not mean to suggest that the number of levels is arbitrary, or guided only by theoretical concerns and unverifiable, but I do think it is worthy of attention that Lonergan's schematic presentations of the levels do not tend to become unambiguous until the theoretical concerns are introduced. That seems similar to the scientific process though, if the stories of the periodic table and standard model are anything to go by. Theory requires data, but data is difficult to interpret, and only in the asking and answering of further pertinent questions is insight typically fully distinguished from oversight. If, however, there is a fifth level, why are there not ten functional specialties? Even if there are four levels and eight functional specialties, why are there not four metaphysical elements? An Aristotelian metaphysics grounded in cognitional theory will require some distinction between what is potentially isomorphic to the total structure of the first three levels, what is potentially isomorphic to the total structure of the first four levels, etc. On what grounds should such a distinction be introduced?

The second significant feature of Lonergan's justification of the functional specialties is the way that he moves from the particular to the general. *Insight* introduced the levels in terms of very particular questions leading to mathematical insights and common sense judgments. The *Method* account does not contradict this, and while "compound knowing" presents a more complicated picture, it is still a picture where a particular process operating on particular data in light of a particular question is leading to a single new insight at any given time. The functional specialties, however, involve a vision of a cognitional macro-structure: a person's entire academic effort might be said to be analogous to just one of the operations. Clearly this macro-structure is not actually homogenous…if I learned anything from studying Greek under Fr. Gill, it's that translation involves thousands of insights and judgments—even decision and action. So again we have a situation where the micro- and macro- structures are both undeniable, but lacking a rigorous relation.

III. Problems and Principles

Have I asked enough unanswered questions? Again, my intent is not to cast doubt on Lonergan's core insights into insight: I have no more succeeded in formulating a coherent counter-position than has anyone else. But I also hope that I've asked enough different kinds of questions, in enough different yet important areas, and without obvious answers, to suggest that no mere textual patch-up will solve the extant problems. If we are to move forward—and move forward we must if we are to adequately ground genetic method in cognitional theory—we must elucidate enough theory and gather enough data to snap the scissors shut in a substantive new set of insights. Let us begin by cataloguing what Lonergan has definitively established about cognitional theory and what remains to be understood.

Virtually Unconditioned Judgments about Human Cognition
1. Only with attention do phenomena become data.
2. Questions for understanding spontaneously arise given data.
3. Understanding occurs with and only with data and inquiry in response to a question.
4. Questions of veracity spontaneously arise given understandings.
5. Questions of veracity are answered by, and only answered by, the elaboration and answering of further pertinent questions.
6. Questions about what should be done naturally arise, and are unanswerable without knowledge of the real and the good.
7. Knowledge of the good requires an understanding of affect.

I will not argue for these claims here, either textually or by sharing the data of my own consciousness. I take them to be uncontroversial among those who call themselves Lonerganians (much as Lonergan might dislike that term). Despite these broad areas of agreement, the myriad questions above remain unanswered—but can those questions be grouped under common themes?

Further Pertinent Questions about Human Cognition
1. What relation between cognitional microstructure and cognitional macrostructure must obtain in order to explain the patterns of experience, compound knowing, and functional specialties?
2. What cognitional elements are shared across the varied patterns of inquiry, and what differentiations are necessary in order to support those variations?
3. Where does the necessary data arise for deliberations/judgments of value?
4. What, if anything, lies between judgment and action?
5. Where might being-in-love fit within a cognitional theory?

I make no pretense that these exhaust the further pertinent questions on the subject, but I think that if we can formulate insights which answer these, we will have made a significant advance in cognitional theory. Further I suggest that attempting to express that formulation in a diagram will both guide our progress and make further insights come more easily.

Just as Lonergan had his eye on the divisions of classical metaphysics and a workable professional division for theology when he went looking for evidence in his consciousness of the elements and levels of his cognitive functioning, we are likely to come to insight more quickly and reliably if we have some principles to guide where we look.

Provisional Principles for Cognitional Theories
First, at a general level, there are the Canons of Empirical Method, which I suppose apply fully to this endeavor. They are:

1. Selection: features of the theory must have empirically verifiable consequences
2. Operations: theories show their power or failure in their cumulative results
3. Relevance: purely explanatory insight establishes terms and relations by mutual reference
4. Parsimony: affirm the verifiable, the minimum explanation necessary
5. Complete Explanation: a complete theory completely explains the data
6. Statistical Residues: not all relations are systematic

I hope I've done justice in summarizing these[23], and I shall attempt to hold myself to them. That said, what are some particular features of cognitional theories that are likely to lend themselves to parsimonious yet complete explanations? What heuristics should guide our search for data?

First, in order to account for features at the minute, daily, professional, and social levels with a minimum of complexity, the schema should be scale-invariant. That means we should prefer systems whose diagrammatic representations are similar regardless of zoom level, like a power law[24] or a fractal (like a snowflake). If we can verify a relationship that has that structure, we can use the same named elements in the same relationship at all levels, providing a rigorous account of the relationship of the micro- and macro- structures without introducing new elements or relations at each scale. This feature seems especially important if patterns of experience and functional specialties are to apply to nested (and overlapping) communities of widely diverging sizes and scopes, as many papers applying Lonergan's work attempt to do.

Second, individual processes should be as simple as possible. If each element involves processing one kind of data in an attempt to answer one question, then we can have confidence that they are truly the elements of cognitional theory rather than themselves compounds. If a process seems to work differently at another scale or level, that differentiation would ideally be along a single axis—the same element processing different data, or the same data but with a different question—in order to maintain as many isomorphisms as possible. Think again of the periodic table or standard model, and the way that this property ensures that they meet the canon of relevance. If elements are compounds, or doubly differentiated, then they are not fully implicitly defined by their relations to other elements, in which case our theory probably lacks relevance or completeness. Each element's output type should be the input type of the next element in order to avoid missing elements.

Third, as we draw distinctions of elements in order to explain observed differences, those distinctions should be as independent as possible. For example, if we distinguish levels of cognition, and we also distinguish direct cognition from meta-cognition, each level should operate fully in both modes and each mode should operate fully at all levels. This can be understood as an application of parsimony from statistical cluster theory (where if any dimension is not independent of all existing dimensions of analysis it can be more simply represented as an algebraic combination of existing dimensions). This is a canonical element of fully explanatory theories, e.g. the way that each good quantum number can be independently varied in the standard model of physics—an electron's spin angular momentum tells an experimenter nothing about its orbital angular momentum. Without this property, you either have compound elements or missing sections which cry out for further explanation.

Fourth, controversial elements should be located at the edges of the graph of differentiations. This obviously increases the likelihood of acceptance for the core theory, which may be thought an intrusion of the dynamic pattern on the intellectual, but it also provides an explanation for how both believers and non-believers in for example the fifth level can yet agree (for presumably intellectual reasons) on so much else about the theory. If something core to the theory is being disagreed about, then either the areas of agreement are intellectually accidental or there is a yet deeper theory to explain the areas of agreement and disagreement.

Fifth, we should have some antecedent reason to expect the number of differentiations we have in our final theory. Lonergan could be fairly confident that he was not overlooking a basic level of cognitive operation when what he had formulated was sufficient to explain the elements of classical metaphysics. He had antecedent reasons to suspect the isomorphism of knower and known. In a situation where the empirical verifiability is with respect to the operations of one's own consciousness and thus necessarily not double-blind, this does increase the likelihood of oversight due to bias. Thankfully that can be checked by the canon of operations, namely repeatability in the consciousness of others. This process of pre-specifying cognitional structure by isomorphism,[25] in addition to avoiding simple incompleteness (which would normally be caught in time by the canon of operations anyway) avoids the more important problem of throwing lots of hypotheses at the data that do not heavily discriminate without a powerful selection function, thus leaving us unable to determine which particular specification is closer to the truth. I suggest that this is precisely where we are today on the subject of the further pertinent questions I ask above, with many accounts in *Insight*, more in *Method*, many more in lectures and articles, and yet more in the secondary literature, all of which have compelling features but out of which no clear theory has emerged.

So in review, we can practically maximize our likelihood of finding a theory which will withstand the canons of empirical method by making it:

1. Scale invariant
2. Fully explanatory, with maximally simple elements and data flows, implicitly defined
3. Orthogonally distinct (may reduce to 2)
4. Controversial only at the edges
5. Pre-specified

Before attempting to build up a diagram expressing a cognitional theory which meets these provisions and attempts to answer the further pertinent questions above, I would like to spend some additional time with the first and fifth provisions, since they will guide the overall structure of the theory and shape of the diagram. The chosen model needs to include cycling—the reuse of identical elements at the same scale factor—as when Lonergan refers to the cycling of attention from sensory to free images in the course of a single insight. The first constraint therefore demands a fractal model, since only fractals incorporate scale-invariance and cyclical behavior.

Next let me propose a pre-specification of the elements needed for deliberation and being-in-love by an isomorphism with *lectio divina*.[26] This process moves from *lectio* (what does the text say in itself?) through *meditatio* (what does the text say to us?) and *oratio* (what do we say to God in prayerful response?) to *contemplatio* (what conversion of mind, heart, and life does the Lord ask of us?).[27] I do not presently ask you to accept either that *lectio divina* is a legitimate, let alone normative form of prayer, nor that it is in fact isomorphic to the process of human knowing and doing writ large and small. I only ask you first to note that it has the right kind of structure: it proceeds from knowledge of things in themselves (verified explanatory knowing/judgment/act/being/facts) through action (not only is prayer itself an action, but it's become almost a trope to speak of making one's whole life an act of prayer) to the conversion to being-in-love. Second, whatever its particular merits, it is indubitably a pre-specification that places constraints on the number and placement of elements in any cognitional theory isomorphic to it. Most notably, it predicts a step between judgment and action, and suggests that this step is related to the difference between fully explanatory insight (which relates things purely to each other) and descriptive insight (which relates things to the human knower). If a theory which embraces these features can be empirically verified in human consciousness, then we can powerfully discriminate in its favor since to my knowledge such relations had not previously been proposed by Lonergan or in the secondary literature.
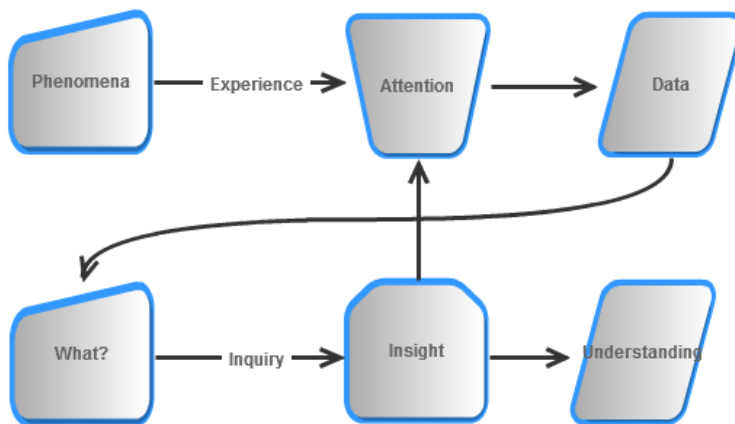
IV. Ideas and Diagrams

Figure 5: A Diagram of Direct Insight

Let's begin with the simplest case: the cartwheel from *Insight*. Phenomena enter consciousness and the subject experiences and attends to them, resulting in data. A spontaneous question arises, "what makes the wheel round?" Inquiry begins, with the subject attending to different bits of the experience until the right data are available for insight, which results in understanding. Here Lonergan places a lot of weight on the "free image" though he never seems to find a solid home for it in his system. Using our principles from above, how can we fit it in? I suggest that the abstraction from a wheel to a circle of zero thickness is itself the result of an insight about what is relevant and then an act of selective attention to that detail. But how does the understanding rise to attention? Here I would like to import Lonergan's notion of primary and secondary cognition. What if we think of intentional imagination as a kind of self-awareness? We thereby get my first proposal:

P1: Any cognitional process output is in principle itself accessible phenomenally.

This does not guarantee that the subject has the self-awareness to attend in this way (due to immaturity or bias), nor that the subject's memory is perfect—any more than the existence of direct insight already assumes that the subject's senses are immaculate. All we rely on is that any cognitive output is in principle a phenomenon, and as such may be attended to, and that in some cases it is.
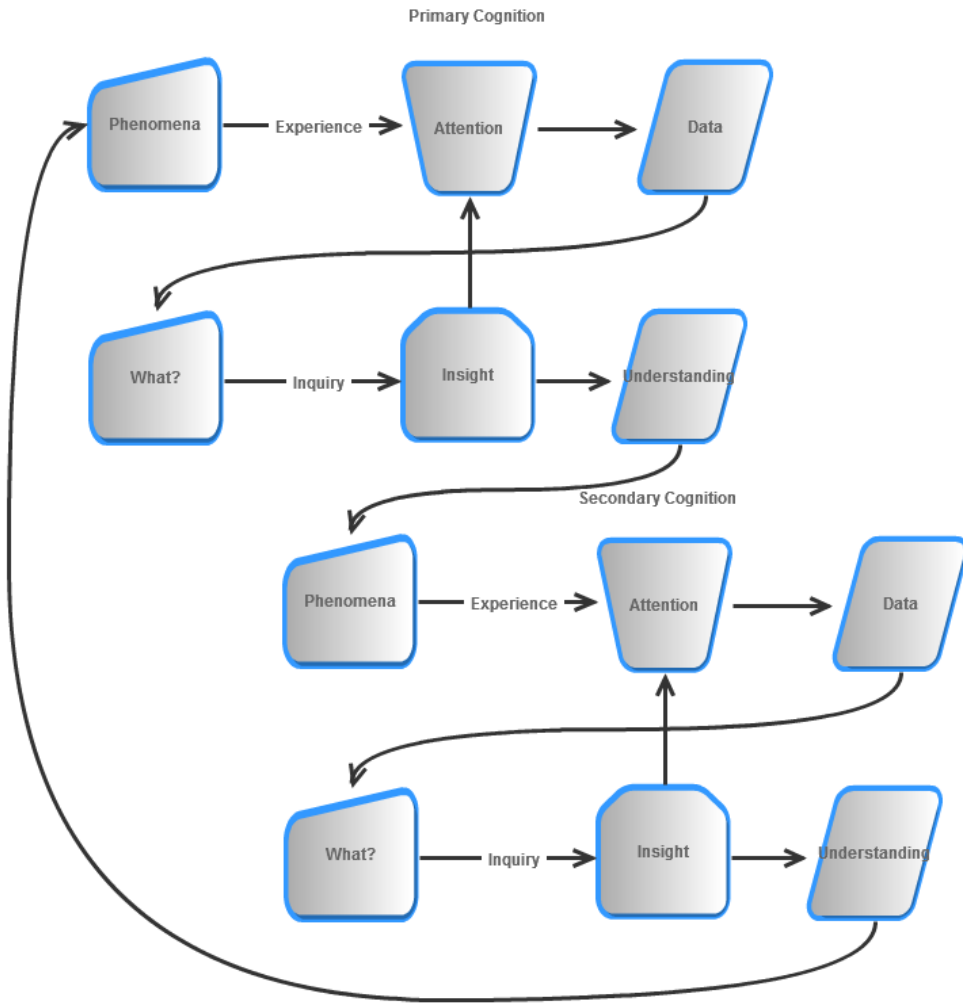
Figure 6: A Diagram of Direct Insight into Cognitional Data

So already in this simplest of cases we have a sort of compound knowing (or compound insight, as it has yet to be verified). The question of what makes the wheel round first requires that insight direct attention to the thickness of the wheel, resulting in a question of whether that is relevant, the insight that it is not, the consequent understanding of what abstraction may be used, the treating of that understanding as a phenomenon so as to attend to its detail, the re-occurrence of the original question, and the eventual insight into the meaning of a circle.
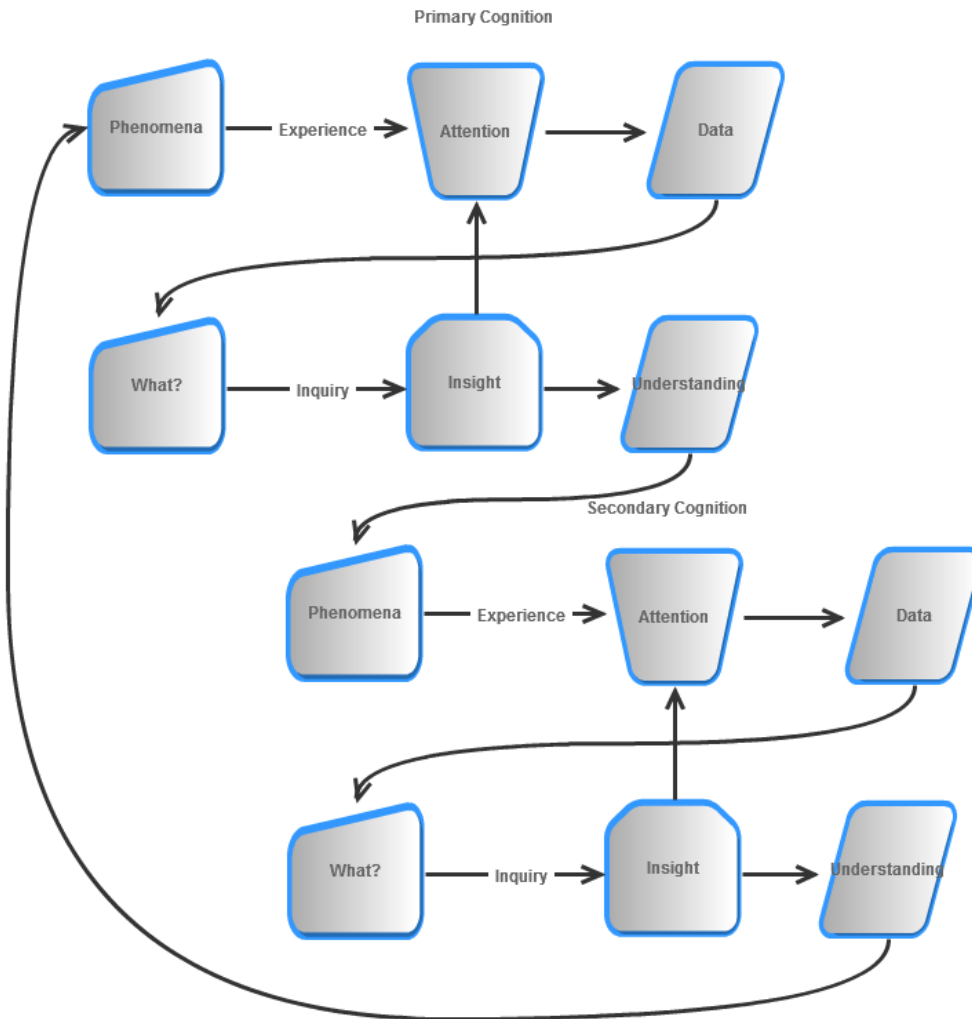
Where do reflection and judgment fit in?

Primary Cognition

Phenomena → Experience → Attention → Data

What? → Inquiry → Insight → Understanding

Secondary Cognition

Phenomena → Experience → Attention → Data

What? → Inquiry → Insight → Understanding

The elegance of this proposal is that reflective inquiry works just like direct inquiry—by varying attention, but requires the data generated by direct insight (which makes sense, since the original question is motivated by that data) and also involves *secondary* attention, which makes sense given the name "reflective insight." This implies that a certain minimal self-awareness is required in order to come to judgment, to decide what is truly pertinent. In order to maintain tight isomorphisms that lend themselves to fractal structure, let's propose

P2: Inquiry at every level works by varying attention on a prior level until insights are accumulated sufficiently to answer the original question.

Given this structure, where does the fourth level fit? As noted above, while all experiences seem to result in questions, and all insights seem to result in wonder if they are correct, many verified insights do not seem to inspire the question "is this good?" Also, per the Dublin diagrams and the account of *Method*, the question of the fourth level seems to presuppose not one but two

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kinds of data: facts (the output of the third level taken as data, per **P2**) and the data of feeling. This raises two further questions: first, how are incommensurable types of data linked to generate an insight, and second, what fundamental difference makes those types of data incommensurable such that they only meet at the fourth level? In addition to those questions, there is also the earlier conundrum about the difference between descriptive and purely explanatory insights. Somehow they, too, must make use of different data. As a first step to resolving this difficulty, I suggest

P3: Events, qualities, and feelings are all primary yet phenomenally distinct types of data.
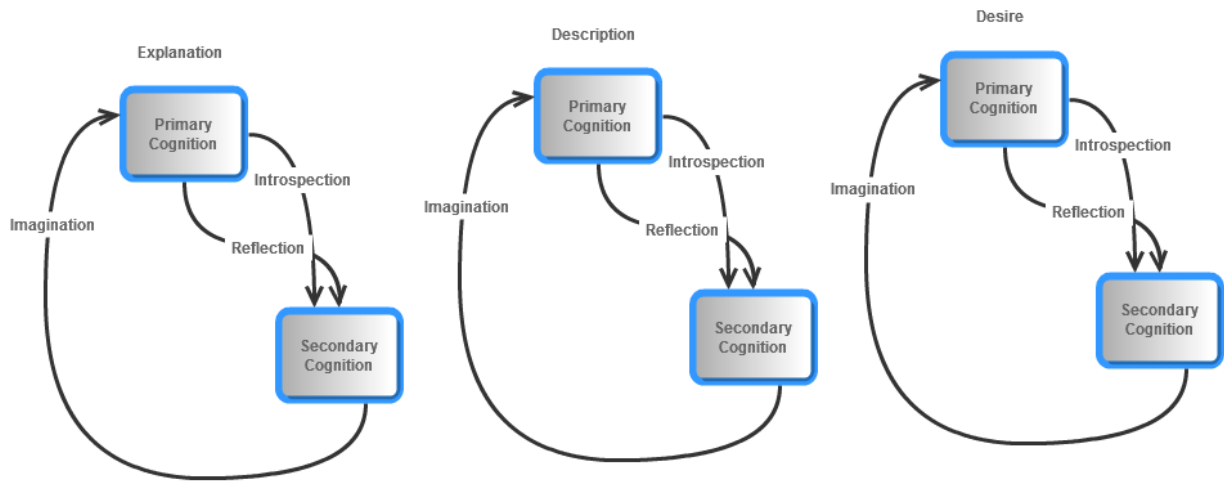

Figure 8: A Diagram of Cognition Differentiated by Data

We then have another aspect of division to work with, beyond the levels and primary/secondary distinctions that Lonergan explicitly provides. If there are three types of data, then there are three sets of questions, three kinds of insights, three pathways to verification. This, naturally, solves the problem of where different kinds of insights come from, but does it imperil Lonergan's isomorphism between the structure of cognition and that of metaphysics? Surely there are not nine metaphysical elements? Conveniently though, metaphysics is about the structure of reality as such, and therefore only corresponds to the structure of purely explanatory cognition. Purely explanatory cognition is the attention, understanding, and verification of events, which in their bare "something happened" avoid relation to the knower and elude questions of the good. How then, do facts give rise to feelings and become fodder for questions of value?

I suggest that by **P1** while events themselves are not bearers of qualities, facts (or verified understandings of events) can be attended to as qualities. To unpack: my experience of a painting in its totality may contain both events and qualities, but my experience of a particle entering a Geiger counter can be reduced to an event devoid of quality, yet special relativity (the verified understanding of that event) may itself have qualities which give rise to an aesthetic judgment of beauty. Are judgments arising from descriptive insights into qualities (I provisionally call them *meanings* vice *facts*) then the data of feeling for questions of value? I suggest not, on the grounds that meanings do not give rise to feelings absent integration into a framework of other meanings. To verify a description of someone as feminine does not imply a positive or negative feeling until there is the context of the meaning of beauty pageants and bomber pilots. This observation might seem troubling at first, since it implies that what Lonergan refers to as the fourth level is actually the fifth, with some other unknown before it, but it also finally gives a rigorous home to the Lonerganian

notion of self-appropriation. Self-appropriation cannot be merely the verification by secondary cognition of cognitional process itself, as that does not itself prevent the holding of counter-positions. Survey evidence is ample that most people hold some logically contradictory beliefs most of the time, after all. Further, the very word *self*-appropriation suggests a subcategory of some broader understanding of appropriation. Just as insights give rise to the question "is it so?" meanings give rise to the question "what does it mean *to/for me*?"—but this is precisely the question of *medidatio*, the second level of *lectio divina*. And once we have established, via appropriation, what something means *for us* we most certainly start to have feelings about it.
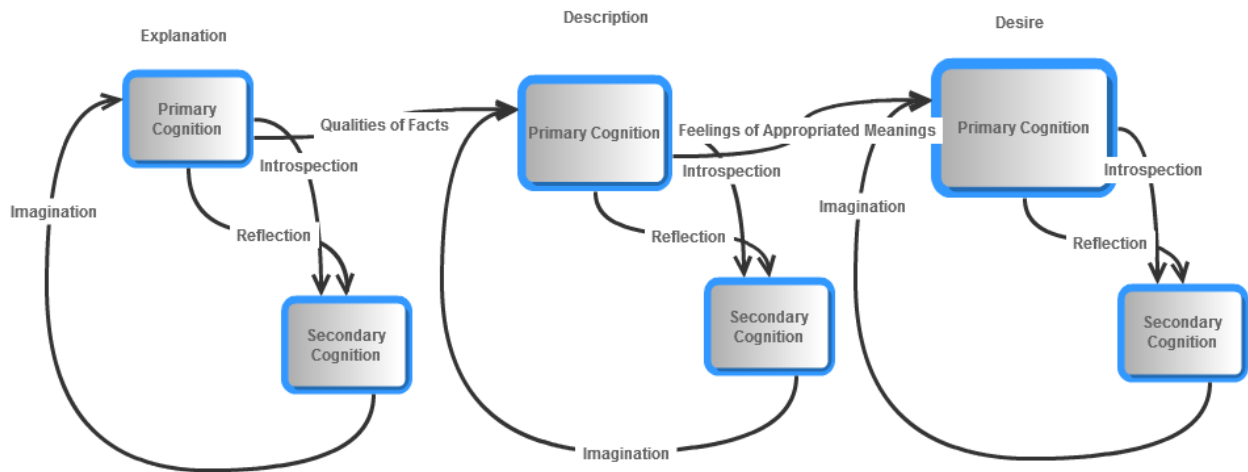

Figure 9: A Diagram of the Upward Interaction of Cognitional Activities Differentiated by Data

This solution to the difficulty, in addition to agreeing with my self-reflection on the subject and the ancient understanding of *lectio divina*, also solves an earlier difficulty in the dynamics of doing. The dynamics of doing, after all, seem like they ought to result in doing, not just judgments of value. Mainstream philosophical understandings of *action* are predicated upon precisely that—a relationship between thinking and doing that distinguishes action from mere bodily motion. And this is not merely a philosophical concern, but a moral and legal one also: if I act, then I am responsible in a way that I am not if I merely intend to act or if my body moves in some way absent any intention of mine. An act, however, is separated from a judgment of value by just that—an intention. In order to act I must not merely judge the action valuable, but aggregate it with my other judgments of value into an intention of what I will actually, immediately, intend to do. This process has all the hallmarks of, which is to say it is properly isomorphic to, that of appropriation, except that it is grounded in judgments of value rather than those of meaning. It is the answer to the question "what has most value for me right now?" I can, however, carry out or not carry out my intention (thus is the meaning of *will*) so while the data of events give rise to only three levels, culminating in facts, and the data of qualities give rise to four levels culminating in appropriated meanings, the data of feelings gives rise to five levels culminating in action. This also accords with *lectio divina* if one understands prayer as something one does, and is indeed perhaps the only way to make sense of the mystical dictum to offer one's whole life (all of one's actions) as prayer.

So what, then, of the controversial fifth level? On a merely literal level, it would now need to be the sixth level, and in accord with the pre-specification of *lectio divina*, it would terminate in *contemplatio*, or the conversion to what the Lord asks of us, which is of course love. As there is no further level to progress towards, the *contemplatio* would be constant, or veritably being-in-love. Here

the structure of *lectio divina* can be taken literally rather than analogously, with prayer being the action which gives rise to being-in-love. In order to carry this superstructure, however, there must be a new kind of primary data, namely the whispering spirit in the stillness. Perhaps it is controversial that this whispering, while we may experience it mixed in with events and qualities and feelings, is not itself an event, a quality, or a feeling, but I think I can demonstrate the point by reductio ad absurdum. First, if the spirit speaks purely in these ways, then either God is holding out on the atheists, or atheists are not engaging in authentic, integrated action, as they are acting with a scotoma towards their own feelings. Second, as converse, if there is no separate data of the spirit, then either faith is grounded on event, quality, and feeling and is thus properly a subset of (moral) reason, or faith is purely irrational, grounded on nothing at all.

Figure 10: A Diagram of All Cognitional Elements

Despite that strong argument, there are two pressing objections. First, what of the man who doubts that there is such an experience because he has not experienced it, which is to say: "Varieties of Religious Experience: None." Neatly then, that the religious is the last of the types of experience in my schema, so that we might agree on what is positional and counter-positional everywhere else. Beyond that, all that I can do is evangelize. And what is evangelization, if I am not the Spirit who speaks? It is precisely the same sharing that an artist uses to share his overwhelming experience of

qualities with a technocratic world, or that a psychoanalyst uses to help a thoroughly repressed man discover his feelings. Neither can prove to those who claim not to have experienced them that qualities or feelings exist, and this presumably accounts for their imperfect track record in convincing all persons of the existence of meaning and value, yet their talents show through, and they are successful more often than not. Second, what of those who say the fifth level is not properly a level with its own constituents but rather an upward pull shot through all cognitional actions? As philosophers, they cannot be quite right on account of the *reductio* above. As human beings reporting their experience, however, I think they are quite right, precisely on account of the fractal nature of cognition. If being-in-love is the final context, then all that we do is within that horizon. Just as research involves making judgments, and even acting responsibly so as to procure the necessary data, all of our cognition happens within the context of the final level.

V. Further Pertinent Questions

With the lacunae in Lonergan's various accounts elaborated and concrete proposals for the functioning of all of the levels laid out, how have we done against our initial criteria? In review a theory of cognition ought to be:

1. Scale invariant
2. Fully explanatory, with maximally simple elements and data flows, implicitly defined
3. Orthogonally distinct (may reduce to 2)
4. Controversial only at the edges
5. Pre-specified

Scale invariance has been maintained. Nothing said by way of explanation has rested on arguments about particular timescales or spheres of experience. The fractal nature of cognition has actually been offered as an explanation of the way our discussion of cognition works, and of the way smaller projects may be wrapped up in larger ones, particularly the final project of being-in-love. Full explanation is up to the reader to discover what further pertinent questions have been unanswered, but I think my account is sufficient to rigorously ground Lonergan's rich account in *Insight*. Certainly I have attempted to be maximally parsimonious in explaining the richness of cognition with just a few simple elements of experience, question, attention, insight, and formulation, applied across various levels and kinds of data. In that explanation, I have made sure that the distinctions I introduce (the levels, primary/secondary, and the types of experience), while they interrelate, do not overlap. It is not possible to outline all the elements of cognition discussed without recourse to all three variables. The necessary controversy of religion, while it fits well within the theory, occupies a place where purely secular discussion does not imperil the account. And finally, the theory neatly fits with the steps of *lectio divina*, which begins with judgment and proceeds through meditation and prayer to contemplative being-in-love.

The set task has thus been achieved, and even exceeded insofar as the patterns of experience were not originally envisioned as explained here, but there are a number of further questions which ought to be asked and answered if this theory is to be a success. First there is the question of what other important descriptive results from Lonergan's work or the secondary literature do not easily fit this thesis. Certainly statistical insight, genetic method, and the place of the functional specialties deserve rich descriptions on the basis of this six-level, fractal account. What accounts rely on a strict analogy to precisely four or five levels? Does my account of action pose problems in moral philosophy? Second there is the need to explicitly draw out the connections of primary and

secondary cognition across all of the levels in order to be sure that the account can remain rigorous when carried through. And surely I have ignored other, larger problems as well.

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[1] Bernard Lonergan, "The Form of Mathematical Inference*"* in *Shorter Papers*, vol. 20 CWL, eds. Robert Croken, Robert Doran S.J., H. Daniel Monsour (Toronto: University of Toronto Press, 2007), 20-21.

[2] Frederick Crowe, "*Insight*: Genesis and Ongoing Context" in Michael Vertin (ed.) *Developing the Lonergan Legacy: Historical, Theoretical, and Existential Themes* (Toronto: University of Toronto Press 2004), 35.

[3] Crowe, "*Insight*: Genesis and Ongoing Context," 51.

[4] Bernard Lonergan, *Phenomenology and Logic: The Boston College Lectures on Mathematical Logic and Existentialism*, vol. 18 CWL, ed. Philip McShane (Toronto: University of Toronto 2001), 322.

[5] Bernard Lonergan, *Insight,* vol. 3 CWL, eds. Frederick Crowe S.J., Robert Doran S.J. (Toronto: University of Toronto 1992), 299.

[6] Here I do not intend Lonergan's most famous use of "isomorphism"—that between the levels of consciousness and the metaphysical makeup of reality in the elements of metaphysics from *Insight*, but rather a broader sense of parallel structure, here, the way the structure of each level parallels the others.

[7] Lonergan, *Insight,* 299.

[8] Bernard Lonergan, *Method in Theology,* vol. 14 CWL (Toronto, ON: University of Toronto 1999), 7-27.

[9] Lonergan, *Insight,* 209.

[10] Lonergan, *Insight,* 208.

[11] Lonergan, *Insight,* 208.

[12] Lonergan, *Insight,* 212.

[13] Lonergan, *Insight,* 212.

[14] Lonergan, *Phenomenology and Logic,* 322.

[15] Lonergan, *Phenomenology and Logic,* 323.

[16] Lonergan, *Method in Theology,* 7-21 passim.

[17] Lonergan, *Method in Theology,* 13 makes it clear that Lonergan considers four to be the canonical number of levels (pace his qualifying footnote on 22), but the lists of supposedly parallel operations/intentions/consequences often have differing numbers of elements.

[18] "To know the good it must know the real, to know the real it must know the true, to know the true, it must know the intelligible, to know the intelligible it must attend to the data." Lonergan, *Method in Theology*, 16.

[19] Lonergan, *Method in Theology,* 15.

[20] Lonergan, *Insight,* index, under "Heuristic method: scissors-action of."

[21] "It will become evident in Chapter Four that the more important part of the rock has not yet been uncovered." Lonergan, *Method in Theology,* 22n12.

[22] Lonergan, *Method in Theology,* 128.

[23] Lonergan, *Insight,* Ch 3.

[24] A functional form like $y = ax^k$

[25] I use the term by analogy to the procedure of laying down statistical hypotheses in the social sciences before experimental trials commence. Here the idea is to have a well-verified set of terms and relations from the philosophical or theological tradition which will prove isomorphic to the proposed cognitional structure.

[26] *Lectio divina* is suggested by Lonergan himself as a pre-specified model for extending cognitional structure in the elaboration of functional specialties at *Method in Theology*, 128.

[27] Benedict XIV, Post-Synodal Exhortation *Verbum Domini* (Vatican City: Libreria Editrice Vaticana*,* 2010), paras. 86-87.