

MCSHANE ON THE TRANSFORMATION OF BOTANY
An Outline for a Dissertation

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In November of 2009 I stayed four days with Phil and Sally McShane in Halifax. We had just met for the first time that Tuesday. While driving home from the airport, Phil stress-tested topics I was considering for my PhD dissertation, with his charm offensive in full swing. The next morning I found a note: “Good Morning Daniel—Go listen to the Sunflowers silently shouting! (I append a suggested 5-month ‘revolutionary’ doctorate) [with a smiley face].” That day our conversation on my decade working at *The Monkey Sanctuary* got into full swing.

Consider this problem, I said to Phil—something along these lines. A rope-climbing device about the size and weight of human fist, starting at ground level, must reach a point 3ft high and 3ft away. It must climb a rope that hangs from 20ft by setting it on an elliptical swing. In what direction must the rope be swung? From what point on the ground? At what rate must the rope be climbed? Well, he averred, this is about combined vector forces in elliptical conical movement.

An individual who easily solves for various heights, distances, lengths of rope, rates of displacement and elliptical swings, masters the math and physics involved, right? He agreed.

But the device is a baby woolly monkey. Six-month-old Louie consistently verifies his skill at these puzzles. And he is just getting started. His performance will improve dramatically and with increasingly complex problems. Given his rate of practice (~8hrs a day) he will be a world-class expert when he is 4, having by then put in his 10K hours.¹ He is not unique. Such mastery is the norm in his community. This incident, a mere instance in monkey locomotion, is one of dozens of events we witnessed every day over years. Louie was idly half-hanging from a rope by hand and tail when he glanced up at a nearby shelf. After some morsel, he pulled the rope, taking a few steps back to then push off the ground in a trajectory parallel to his object. Climbing the rope as it swung through two-and-a-half loops, he alighted on the shelf with a graceful downward

¹ Herbert Simon and William Chase, cited in Daniel Coyle, *The Talent Code*, 53.

skip. An impeccable performance without a moment's hesitation while chewing on a bit of grass.

Knowing I was addressing one of, if not *the* disciple of Bernard Lonergan, I staked my claim: Louie *knows* what he is doing. I myself had accumulated 10,000 hours relating to monkeys, body to body, face to face; plus another 10,000 observing them at very close range. *Knowing* is the highest conjugate form for inquiry into primatology, and, therefore, properly defined, zoology generally. Yet it is systematically left out. Phil agreed. This led to an outline of topics to study in preparation for writing the thesis:²

Thesis

- 0. Major Displacement ('conversion' vs. Anxiety) <<1%
- 1. Balloon and growth
- 2. Flower-crisis
Re-cognizing animal form(s) autonomy in the "chemical amoeba"
("Patterns of auto-Nomy") Contra: reductionisms and anthropomorphism
- 3. Core Initial Mastery
Intussuscepting *Insight* 431-467 (intussuscepting: initial meaning and minimal illustrated comprehension)
- 4. Lengthy self-searching on p. 464

Then you are ready to start!! ☺

You need a sound foundation in botany, Phil insisted. A six-month job tops. Don't get confused, the goal is to secure your union card. Yes, revolutionizing zoology is worth a life.

On Wednesday Sally and I went on a delightful long walk. Upon returning, Phil was a bit disgruntled. I was a truant schoolboy. There is much work to be done. On Thursday he set me the problem about couples and I began to type up my notes.

For a couple of hours each works on his own. He pokes fun at my work with his appendixes. We review them and write more. We have an

² There is an image of the Phil's handwritten outline in Appendix A below.

excellent conversation; we cover a lot of ground. Sally makes me an omelet. I furiously take notes on the computer and in the book [*Insight*]. Today is really tiring. He goes to sleep. I get to work on the problem. Vicky [my wife] calls, [Phil] runs out of the bathroom. He says, "He is thinking." I start transferring on his computer. He plays the organ. ... He starts teasing, somewhat aggressive jokes, but on the other hand several times he pats me on the shoulder. ... He says good night at around 10, tells me laughingly that he is going to rest and that tomorrow he is going to abuse me again. I look at emails, keep working on the problem, finish transferring, write this.³

Either Friday or Saturday he printed out an outline.⁴ Here it is, with notes in square brackets that I penciled in or typed as Phil spoke. Certainly, the ideas and vocabulary are all his.

Genetic Method and the Sunflower
[25 pages and 30 footnotes per chapter.]

1. The Contemporary Problematic
Botany between romantic vitalism and reductionism (details)
The context of fragmentation: Aesthetics vs. "Science"
The road forward: global functional retrieval and revitalization

Botany is currently between romantic vitalism and reductionism [For details, look up book that discusses the controversy. Show that you know the names of these people. In other words, fill in to make it respectable.]

The context of fragmentation: Aesthetic vs. "Science" [Descartes, split of machine. If you try to restore the machine and give it life, you become a dualist.]

The road forward: global functional retrieval and revitalization [Nice to identify the road forward: functional specialization. What Lonergan is saying for theology, that is, showing how this fits within the larger project.]

³ From my notes.

⁴ There is an image of the typed outline in Appendix B below.

2. Contextual essentials
 - The flower as a layered growing thing
 - The key issue of “layer-illuminosity”
 - Description and explanation
 - The environmental context

The flower as layered growing thing [summary of ch. 8 of *Insight*.]

The key issue of “layer-luminosity” [Throw in the problem of systems theory. That is, what becomes evident in hierarchy theory. They do not know how to relate one level to the next. The key to my struggle is to become a hylomorphist. This is because they do not know Lonergan’s solution to the problem, which is Aristotle’s.]

Description and Explanation [This is a short essay: look at the index of *Insight*, how the distinction is refined. Explanation is given by science. The key question is, What is a form? The shortcoming of botany is that it has lost sight of form. What of the transition to the molecular? Leading to 464, how things relate to one another. Periodic table in botany is the evolutionary hypothesis, emergentist method. (“Emergentist” and not “genetic.”) Not genetic because it is not a problem of the unity of the evolutionary process. The evolutionary process does not have to explain why one thing changes into another and remains the same. (A species is not a thing, precisely in this sense.) Chardin, for example is genetic, but also optimistic and non-dialectic. For Lonergan evolution is a dynamism dominated by luck, which gives rise to emergence. In *Insight* he only uses genetic in the context of the *things* growing.]

The environmental context [If you discuss sunflowers, you need to discuss the earth. That is, the schemes of recurrence it is in, and those in it. Its location. The question of its location, of *in loco*.]

3. Lonergan’s Central Doctrinal Contribution
 - Some systematic enlargements

[This is the central chapter of the thesis. Take those ten pages and enlarge (464 circa, development.) pull out the stuff on the botanical.]

4. The challenge of *Insight* p. 464 “The study of the organism”

[Go down that page with the chemistry and the physics. Take this page in Lonergan, sentence by sentence as a score to write the thesis. There is no need to be inventive, just make sense of the text. Do so explicitly, reading

to Lonergan and what he wants one to do. This is not an exercise in summarizing. (Do as Thomas does with Aristotle.)]

5. The Chemistry of the Integrator-Operator

[This is really the end of the thesis. That involves all the work of what is involved. How they intussuscept.

Could conclude with the section in 7 “Fuller genetic systematics”]

6. Heuristics of Non-Dialectic Genetic Systems
Fuller genetic systematics

7. The issue of Dialectic readjustment
Contrary and Aberrant Recurrent-Schemes

[A further complexity. (Chapter 7 *Insight* “Linked but opposed...”
Sunflower linked to earth. Opposition—gravity? Survival of the fittest?
Grass grows up, cows munch down. Is this an instance of dialectic?
“Reverse the counter positions”

What if the dog comes along and pisses on the sunflower? This is how we expand to make it be of profound significance. This points to the chapter on Dialectic in *Method*.]

8. The Flowering of Method
A brief focused history of flower-study: toward foundations

[Method as such has a genesis, this is the philosophic effort. (This section is well beyond the bounds of duty.) If you focus on the history of flower study, which means something much broader than contemporary use, the beginning of flower study includes a much larger aesthetic presence, which you find in children. Or Proust studying a flower, when he tells a friend that he did not spend enough time with a flower. Check out the anthropology of flowers, as the primitive was gracious to flower. They apologized for killing. This can enlighten us towards our foundations. The history of botany moves from sympathetic presence to Linnean classification, to reductionist explanation, to DNA (which is attending only to the architectural plan, rather than the flower). We do not really need to lose track of the flower in order to understand. All the time we have been asking, how does it work? A distinction should not ground a separation. That is, making distinctions does not need to lead to separating. Rather, it needs to lead to explanation—Aristotle’s

hylomorphism. Distinction leading to separation is the shortcoming of the Axial period.

Emerging in the Greek drama. Euripides separates the human and the divine. The drama turns into a secular thing. A kind of James Bond *Deus Ex Machina*, whereby the hero is pulled out at the last minute.

We have produced caricatures. For this, see C.P. Snow's notion of two cultures, the artistic and the scientific.

We really do have to retrieve the past.

It is a question of realizing there has been a distortion of procedures.

As well as this, we can see the divisions of study, of interest in relation to flowers.

See books on flowers: gardener's manual, history of botany, evolutionary perspectives,

(Understanding how to integrate all this leads towards foundations.)]

9. The Flowering of Functional Systematics

[Back to chapter 1 section 3 of the thesis, *The Road Forward*. Based on the confusion shown therein, we can point to the grounds and development of functional specialization.

If we are optimistic, this should lead to the transformation of botany.

To end, see and quote "The future of the garden" Lonergan, *For a New Political Economy*, pp. 20–21.]

10. The transformation of Botany

In retrospect, so many years later, the sections of *Insight* that Phil insisted on truly did provide a scaffold for key sections of my dissertation. Examples are Lonergan's notion of *thing*; successive higher viewpoints (*Insight* 431-467); Integrator-Operator (starting at 464). To my surprise, I now realize that my treatment of living beings in terms of thing for us and thing for itself may very well have originated here. That I cannot be sure itself points to what was, without question, Phil's most important influence on me. It is summarized in his beloved term *intussuscept*: to draw in from without; to receive within, to turn or fold inwards.

This is what Phil did, what he stood for, what he modelled. It underlies all his nudging to shake us out of our complacency. Phil blazes a far-reaching historical vector rooted in my adverting to myself in the present. As in all his writings, he draws us to the heart of the matter in a vortex-turned-hypertext. Brilliantly insightful, personal, and down to earth, Phil never strayed far from Joyce. His fun with words and profuse references are not for the fainthearted.

With his unnerving genius for taking up whole new fields in his books, Phil would surely have completed his outlined dissertation in 6 months. Long before, in *Plants and Pianos: Two Essays in Advanced Methodology*, he had bridged botany and zoology in the chapter “Zoology and the Future of Philosophers.”⁵ From the outset he states his lifelong method: “I am not writing a treatise: I am trying to share a search.”⁶ Intussusception—I take Phil to understand it like this: “What one investigates when one self-investigates the intelligible which is also intelligent is most fundamentally the unrestricted questing of value which each human I is.”⁷

The same is true of the investigation of aliveness, the questing about distinctions that distinguish. Phil adds: “One’s investigation, one’s questing of one’s questing, leads one slowly to some conception of the nuanced structure of one’s embodied questing with the slowness that is related to that unrestrictness [*sic*] of subject and uniqueness of object of investigation.”⁸

My own quest has been for the nuanced structure of *all* embodied questing.

Beyond the intrinsic value of his outlines, my bracketed notes capture Phil’s tone, the lively ring of his disdain for hollow academics, laced with humor, along with his deep supervening insight into method. Reflecting on Helen Keller, Phil wrote: “...you must struggle here with the reality of Helen having no words, only minded moods.”⁹ Our quests begin as wordless minded moods. How to give words to the moods of monkeys, I

⁵ Re-published as Part I of *The Shaping of the Foundations* (Washington, DC: University Press of America, 1976).

⁶ *Shaping of the Foundations*, vii.

⁷ *Shaping of the Foundations*, 12.

⁸ *Shaping of the Foundations*, 12.

⁹ *A Brief History of Tongue*, 35.

wondered? And thence to the moods of any living being? A first shot, wrote Phil, “is precisely to see it as a puzzle...”¹⁰

A blessing I shall ever cherish is Phil’s probing encouragement and his discerning scaffolding of my quest.

¹⁰ *A Brief History of Tongue*, 37.

**APPENDIX B: PHIL'S OUTLINE FOR A THESIS ON THE
TRANSFORMATION OF BOTANY**

Genetic Method and the Sunflower

1. The Contemporary Problematic

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3. Lonergeran's Central Doctrinal Contribution

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5. The Chemistry of Integrator-Operator

6. Heuristics of Non-dialectic Genetic Systems

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Contrary and Aberant Recurrence-Schemes

8. The Flowering of Method

A brief focused history of flower-study: towards foundations

9. The Flowering of Functional Systematics

10. The Transformation of Botany