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## Geometrical Possibilities

Even if we only attended to the original article<sup>1</sup> from which the title comes, this is a massively difficult topic. My first appeal is that it be digested, ingested, by the foundational community - and this, through cycling and re-cycling by the Tower Community - into a presence in The Standard Model. This is going to involve the hard work of a change of self-tasting pace in this coming century.<sup>2</sup> I recall now a strategy that I used in commenting, in my Cantower series,

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<sup>1</sup>“A Note on Geometrical Possibility” is chapter 6 of *Collection*. See the note on the article in the new edition of *Collection*, p. 271.

<sup>2</sup>As I mentioned in the second note of the previous chapter, these two notes should be linked up in your fantasy towards glimpsing the later operations of the Standard Model. What might we fantasize about geometric possibilities? The Oval team is to reach way beyond such muddling as is intimated by such a title - and work - as *The Life of the Cosmos* by Lee Smolin (Oxford University Press, 1997). “Beyond the Anthropic Principle” is the title of his chapter 14, but the **beyond** we must reach towards is a lift out of the shabby mythologies of contemporary popular physics and of descriptive theology. (on anthropic principles, see *Lack in the Beingstalk*, the conclusion of section 3.5. The entire chapter, however, is a context for our **beyond**). In a full heuristic of geometric possibilities, are we not reaching for the Eschaton? But the full heuristic is to be acquired by a slow collaborative climb of the Tower Community (useful here: my “Elevating *Insight*. Spacetime as Paradigm Problem”, *Method. Journal of Lonergan Studies*, **19** (2001), 203-229). I suspect, for instance, that it would take a lengthy book to get the initial lift going by dealing, in meta-physics, both with the determination of centres of thing-affirmation and with ranges of primary and secondary determinations of real geometries that would place chapter 5 of *Insight* in the context of chapter 16, so providing a more adequate take-off zone for eschatological geometry. But proximately it would yield a subtler chromodynamics within a luminous relativity theory.

The previous paragraph represents the mood of this book and this short chapter, but the book asks for beginnings. I cannot repeat regularly this asking, this doctrine of patient climbing. But perhaps the strategy - already noted in the Preface - of underlaying in Part Two the question, What is description?, will help you sniff the mood and the hope of a shift out of descriptive theology? The mood can be helped further by a regular return to the final four sections of chapter 14.

on different chapters of *Insight*.<sup>3</sup> Sometimes, as in *Cantower* 18, I would have the same number of sections and the same content-focus in them as the corresponding chapter, here Chapter 18, of *Insight*.<sup>4</sup> Sometimes, I would focus on a paragraph or two; sometimes I would take up an illustrative topic, as I did with Kuhn's stuff in *Cantower* 16, which parallels *Insight* 16.

But what might I do here to be helpful? It seems best just to contextualize my appeal and your possible effort. First, then, notice a curious paralleling of chapters 2-5 here with what you are probably familiar with as levels of consciousness. Chapter 2 is obviously a focus on the level of the is-question. In the present chapter the focus is on the what-question. But in "What sense"? Here I recall a favorite move of mine e.g. regarding, guarding, the what-question. Arjuna asks Krishna, "What is man?" and in my twist on the Bhagavad Gita, the answer is Yes!: **What** is man, or woman. So, here you have an enlargement of issues of chapter 1 above. A terrible pun may help: you are to find yourself spaced-out. That spacing out is on the road to the **come-about** of the second frontispiece text. But there is an urgency about the spacing-out, or spacing-in that we meet in the next chapter, an urgency within the shocking simple muddles of 19<sup>th</sup> and 20<sup>th</sup> century physics, an urgency that I would associate with the meaning of *complete* in the Canon of

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<sup>3</sup>The effort there is, of course, meshed with the effort here. The chapters of *Insight* paralleled at that stage in the Cantowers were chapters 14 to the Epilogue with parallels 14 to 21 in the Cantowers. I would suggest, however, that the ones immediately relevant to an effort to shift the culture of reading *Insight* that the present book is about are the five Cantowers 27-31, which parallel *Insight*'s chapters 1 to 5. I would consider these to be a good reintroduction to *Insight*, an introduction at present that might be regarded as graduate work, but in a hundred years or so will be taken for granted as an obvious way of reading, self-reading, the text.

<sup>4</sup>I take the opportunity to note that the third section of that Cantower 18, paralleling the third section of Lonergan's chapter 18, "The Problem of Liberation," moves more positively than Lonergan's section in that "The Possibility of Ethics" (the chapters title) is meshed into the solution to the problem of cosmopolis through what in present terms would be an ethics of The Standard Model. The possibility of dealing luminously with geometrical possibilities has to be dealt with within that ethics. This is a topic in *Lack in the Beingstalk* chapter 5 and in chapter 3 of *Pastkeynes Pastmodern Economics: A Fresh Pragmatism*, where I show Husserl's essay, "The Origins of Geometry" as gasping for such a division of labour. Husserl's essay is available as Appendix VI (353- 378) of his *The Crisis of European Sciences and Transcendental Phenomenology*, Northwestern University Press, 1970.

Complete Explanation.<sup>5</sup>

In a sense this odd little book is all about images - keep the two frontispiece quotations together - those neurodynamic patternings of our psychic skin by which we are controlled, with which we can control.<sup>6</sup> We can control in so far as we stand for something, and that stand lifts our imagings to larger, even cosmic, intendings: they have virtualities that mesh with the fundamental exigence of the human **what**. “The privilege of using virtual and symbolic images cannot be granted to Euclid and denied to other geometers. Moreover, it is a broad privilege; what cannot be imagined formally often can be imagined virtually; and what cannot be imagined virtually always can be imagined symbolically, for symbols stand for whatever one assigns them to stand for.”<sup>7</sup>

Notice how I am pulling you towards a strange fresh self-reading here. You are another geometer for which images are heart-strings, intertwinings of you with your cosmic- caul. Brood over that final phrase: **whatever one assigns them to stand for**. What, you may ask now of your self - what an odd self-asking that is! - do I stand for? The stand that interests in this book is the stand on foundations of global inquiry, the Stand- hard and -fast Model. In the previous chapter we moved towards listing the set of seven symbols  $W_i$ .<sup>8</sup> They and we stand for the 4 million-year reach of humanity into the mists of future matter-energy. In them, indeed, you have a beginning of an expression of an assigning, an assignation, a destiny, which is an ultimate in geometric possibilities.

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<sup>5</sup>See my essay “The Meaning of *complete* in the canon of complete explanation,” *Journal of Macrodynamical Analysis* 4(2005).

<sup>6</sup>See P.McShane, “Obstacles to Metaphysical Control”, *Method. Journal of Lonergan Studies*, 23 (2005).

<sup>7</sup>**Collection**, 104.

<sup>8</sup>I repeat here note 8 of the Introduction.

There is nothing sacred about these symbols or metagrams. They anticipate a future of symbolic control - a massively transposed fundamental logic quite beyond present work in logic - of explanatory methodology. The seven are distributed strategically throughout this book:  $W_0$  and  $W_4k$  in chapter 2;  $W_1$  and  $W_2$  in chapter 4;  $W_3$ ,  $W_5$  and  $W_6$  in chapter 7;  $W_4d$  in chapter 8.

Those symbols, and this little early essay, invite us to make an adequate beginning of “the question of foundations.”<sup>9</sup> This particular little essay can help in a very unique way our discovery of a misreading of the book *Insight*. It was part of Lonergan’s preparation to write the book; might it not be part of our preparation to read or re-read the book? The book asks us to travel a difficult road towards a bridge, “a natural bridge over which we may advance from our examination of science to an examination of common sense.”<sup>10</sup> The difficult road is made more obvious in its difficulty by chapter one of this book. It is, perhaps, made more discomfortingly obvious by this essay of the late 1940s by Lonergan. Might I help you on the way? Only by turning those 16 pages into a series of classes that might be echoed in a hundred other pages.

Take a single sentence from the top of the fifteenth page.. “What the infallibility of insight secures for the representationally imagined, the technique of reduction secures for the symbolically imagined.”<sup>11</sup> What do you make of it? What might I do to help you? Unless you are exceptional, the Existential Gap<sup>12</sup> in our present culture is just too large. Not even a week-long pedagogical venture would get your there. Yet control of that meaning has to become Standard Model stuff in this millennium. Has to? Not just that we may have some control of complex expression, but that we should reach, each of our descendants, a sense of what we are. That was the main drive of chapter one here.<sup>13</sup> You twisted round the symbolically imagined, if you were

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<sup>9</sup>The title of section 3 of the fourth chapter of *Phenomenology and Logic*. I am recalling here that this chapter also parallels that chapter of the Logic Lectures. So you may add now as context the issues raised, for example, by the concluding sentences of each of the first three paragraphs of that section: the problem of a choice of system; the basis from which larger problems are attacked; “a complexity that is the source of difficulties just as serious in the concrete domain of fact as the difficulties you have in arithmetic”, or geometry. In a profound sense the concrete domain of matters of fact is a domain of layered geometries.

<sup>10</sup>The conclusion of the first paragraph of chapter 5 of *Insight*, the topic of which is “geometrical possibilities”. Note 2, above, gives a larger context.

<sup>11</sup>**Collection**, 106.

<sup>12</sup>On this, see the index of *Phenomenology and Logic*, under *Existential*.

<sup>13</sup>It is, of course, the main drive of chapter 1 of *Insight*. Helps to re-reading chapter 1 of *Insight* are Cantower 27 and *A Brief History of Tongue*, chapter 5.

wise and lucky enough to find a week: - (x) Dem (x, sub, (y,n,y) ): what did you make of it? What did it make of you? You had 'before' you the within of a strange geometrical possibility, Goedel-generated in the coiling of the universe's energy. Like Proust's cup of tea, it invites tasting and self-tasting. Proust, after all, was not primarily talking about the tea.

This little essay of Lonergan is centrally about you and me. Without us being about - indeed (about)<sup>3</sup> - ourselves we will continue to muddle along e.g. in the simplest of sciences, physics. Continue to muddle? But are we not moving magnificently? One of the problems of tackling John Bell's problem of Speakables and Unspeakables<sup>14</sup> is that there are unspeakable elementary muddles blocking the beginnings of enlightenment regarding elementary quantum mechanics. Einstein's muddles manifest themselves most evidently in his stand on the twin paradox,<sup>15</sup> and Roger Penrose putters along in the same darkness.<sup>16</sup> It is a darkness regarding geometrical possibilities. What darkness? And so we edge towards the task of bringing into the Standard Model a subtle meshing of *Insight*'s chapters 5, 10, and 16<sup>17</sup> that seems quite beyond our present capacities-for-performance.<sup>18</sup>

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<sup>14</sup>J.S.Bell, *Speakable and Unspeakable in Quantum Mechanics*, Cambridge University Press, Cambridge, 1987.

<sup>15</sup>See *Die Naturwissenschaften* 6, (29 Nov 1918), 697-702: "Dialog uber Einwände gegen die Relativitätstheorie", von Prof. Dr.A.Einstein, Berlin. Die Naturwissenschaften was a weekly scientific paper produced by Drs.Arnold Berliner and August Putter. I don't know if there was an English version produced, but I can always share my German version.

<sup>16</sup>*The Emperor's New Mind*, 197-8.

<sup>17</sup>Add the treatment of "Relations" in the Appendix of Lonergan, *De Deo Trino II*. The central problem seems to me to be the controlled move from thinking and thinking of primary relations to thinking of secondary determinations without muddling around in naivete. Here, at the conclusion of this brutally short refusal to go pedagogic, seems a good place to recall my own struggle with this problem in the absence of a guide (In the later stage of meaning there are to be communal structures of symbolizations and education). In the Autumn of 1960, when I suppose I should have been getting into the mysteries of first year theology, I spent a month dealing with the problem of two pencils equal in length: I break one, does the other suffer?!

<sup>18</sup>Here I manage to end on a discomfoting word. What, you might ask - though I doubt it - is the metaphysical equivalent of "capacity-for-performance"? Asking that question seriously is stepping out of the range of contemporary scholasticisms: our next topic.