

Canon of Parsimony

“It is at once obvious and difficult. It is obvious inasmuch as it forbids the empirical scientist to affirm what, as an empirical scientist, he does not know. It is difficult inasmuch as knowing exactly what one knows and what one does not know has been reputed, since the days of Socrates, a rare achievement.”

What is this canon?

“This canon excludes from scientific affirmation all statements that are unverified and, still more so, all that are unverifiable.”

The canon of relevance identifies the particular types of insights sought in science, the canon of parsimony highlights the need to verify those insights. Many times good ideas excite us and it is easy to make a leap that such good ideas must be true, however, Lonergan notes here that science requires that good insights be ground in evidence if the insight is going to be validly affirmed as true.

Later, Lonergan will be able to develop this canon in an explanatory manner after he has examined the nature of judgment.

Experiential Conjugates: Some notes

In descriptive types of insight, the “terms” are experiential, and these experiential terms are validated by experiences that fulfill them. These experiential terms identify the conditions that allow one to verify, and when such experiences are obtained, then these experiential terms (or conjugates) are fulfilled.

For example, if I ask, do you know what “red” means? Now this is raising the question about a correct nominal (not explanatory definition of red) understanding of the word red. Note that this word is based on having had a variety of correct experiences, usually highlighted by someone, that resulted in an insight into a particular feature of material objects (namely their color, and specifically this color). If a parent or teacher wants to see if a child understands the meaning of red correctly, the parent or teacher might hold up a variety of red objects, and ask what is seen. Notice, that even in using further words to get at “red” can be problematic. Saying “what color is this” is using another term that is a bit more abstract even than red (namely color).

There is something I would like to point out that is more fundamental here than the word “red” as used in our language. The experiential conjugate may not yet have been linked to a word used in our language, and having the linguistic word is not primordial. What has to happen first is an interior apprehension which is more primordially. Interiorly a person “knows” what is meant, but not with a word learned from the local culture. Learning the cultural language allows one to speak of this inner “this” (or inner word), yet, if that inner word does not emerge, the outer word would not be used properly. So,

for example, if someone had an inner apprehension of a “this” which referred to round or tall but not one for color or for red, then when a teacher points to a red object and says red, this person might at first think it means the shape or the height. But then when the teacher points to an object with a different shape or height, and says red, the attentive student will realize that he or she does not understand, and a question should arise as to what might be meant. The answer to the question would require examining a variety of objects with variations in all features save “redness”, and eventually that inner apprehension of “red” will arise. So, in the verification of the correct usage of the term “red” linguistically requires a more primordial verification of an experiential conjugate apprehended as an inner word.

Pure or explanatory conjugates:

A pure conjugate is a term implicitly defined. Notice how these terms likewise need to be grounded in experiential conjugates, however it might involve correlations of experiential conjugates and correlations of correlations, and correlations of correlations of correlations of conjugates.

If we think for instance of the moon. Seeing it once, naming it, identifying it as an object, then noticing it pass through the night sky, then perhaps once in a while noticing it in the day sky. Naming it different states (full moon, half moon, etc.), leads to further recognitions, and if one begins to note the days on which various states are grasped, then after a some time, one might begin to notice periodical recurrences of these states of the moon. One can go further to try and explain these periodical states. Notice how much of this all remains within complex experiential conjugates (at least in the mode of definition), however it sets the stage for questions that need to be explained. Eventually, one might come to recognize a few further features of the moon, such as that it is spherical, and as it moves in relation to the earth and sun, it will then have the different phases. Even further removed from immediate experiential conjugates however is to turn to the more explanatory accounts of planetary motion, such as one finds with Newton. The moon is a mass. The earth is a mass. And now these become explanatory conjugates related in a gravitational equation. Behind all of this are massive collections of data and even analysis of the data (eg. Brahe and Kepler), along with various mathematical insights (eg. Power rule). Verification in this case requires large correlations of correlations of correlations of data (times and distances of movements between objects).

The point is, that in the end, these correlations of correlations still return to human beings through experiential conjugates just as they had emerged from those experiential conjugates in the first place. Verification in a sense returns from the pure conjugates back through all the measurements and correlations to the basic correlations of experiential conjugates.

Now, this verification as Lonergan notes will take a slightly different route when we turn from the physical universe to cognitional theory, though it is the same in the sense that this canon is applicable. Cognitional theory has its conjugates (data of sense/data of consciousness, questions, insights, definitions, etc.), and Lonergan has slowly been

defining these terms in their mutual relations to each other. Data, for example, is anything that can be questioned (questions for understanding), and when formed into the proper image, leads to insight. These explanatory conjugates of acts of the mind can be verified more directly than the explanatory conjugates that try to explain the physical universe. These can be rooted in the direct experiential conjugates of one's own interiority, of the experience of one's own conscious activities (data of consciousness).

Statistical laws

“The law of nature, then, is one thing. The event of its illustration is another. And such events are subject to laws of a different type which is named statistical.”

1. The verification of statistical laws is rooted in “events”, hence Lonergan adds a few comments here about the meaning of “event.”
2. The analogy used to explain the meaning of event:

Questions for Reflection (Yes/No)	Events
↑↑	↑↑
Questions for intelligence (Defines)	Conjugates

Events are actually existing conjugates.

3. How statistics is parsimonious: Recall that questions like, “How often?” regard events, specifically such questions seek ideal frequencies which can be verified by actual frequencies that diverge non-systematically from the ideal.

[One area the Lonergan wants to delay for a bit is the application of this canon to the notion of a thing. It will be applicable to that as well, however due to some difficulties in the notion of a thing, Lonergan wants to examine more carefully the nature of the insight into the meaning of “thing” first, then return to verification of “things” later.]