

INSIGHT-2 — PHASE 2 — EMPIRICAL HEURISTIC STRUCTURE

CHAPTER 2, SECTION 3: CONCRETE INFERENCES FROM CLASSICAL LAWS — JUNE 8TH, 2019

SYSTEMATIC VS. NON-SYSTEMATIC PROCESSES

SYSTEMATIC PROCESSES

Before advancing to a consideration of statistical heuristic structure, it will be well to ask just how far the full realization of classical anticipations would bring the scientist towards an adequate understanding of data. Accordingly, we ask about the range of concrete inferences from classical laws and we do so all the more readily because discussions of this topic seem to have suffered from an oversight of insight.

Insight (1992), p. 70

In other words, what kind of world process emerge from classical laws and does this process cover all the data revealed by empirical investigations?

The first point Lonergan makes is that any concrete inference has three conditions: it supposes a particular set of concrete data, the existence of the laws themselves, and an insight in to the data at hand as to how these laws apply in practice. It requires an insight to determine which laws are to be selected and how they are to be combined to account for the phenomena. And there are two ways to approach the problem: common sense people wait for things to happen before taking steps, while theoretical people anticipate typical or ideal cases and then work out what needs to be done. The truly interesting thing is that in the latter case such “anticipatory concrete inferences” involve a different type of insight into an ideal or typical process. This ideal anticipated process to be inferred from classical laws is systematic.

This anticipated systematic process emerges from the tendency of the theoretical mind to postulate different situations and then use one’s creative intelligence to anticipate what is likely to happen. It is from this anticipation that the inquirer works out the general features of any ideal systematic process.

The key to understanding any systematic process is that at some point all the data fall into “a single perspective, sweeping yet accurate deductions become possible, and subsequent exact predictions regularly will prove to have been correct” (p. 71). For example, Newton’s world view postulates a mechanical universe in which both past and future conditions can be deduced from a knowledge of the existing situation. If one knows the exact initial conditions on a pool table where force is applied to one ball via a cue stick, then one can predict exactly where all the balls of the table will end up once friction brings everything to a halt.

Systematic processes have three distinct properties:

1. One single insight or one single set of insights is sufficient to explain all the data; a single theory puts all into perspective.
2. It is possible to jump from one state to another without having to go through any or all of the intervening stages; there is no “historical” development.
3. Any empirical investigation of systematic processes may start off in confusion, but at some point there’s a single moment in which everything comes together. At this point any predictions become rock-solid.

NON-SYSTEMATIC PROCESSES

By violating any of these features of systematic processes one can create other “ideal” processes. However, we don’t need to create such a multitude of processes, only that which best catches the statistical. For empirical inquires involve more than the search for classical laws; they also include statistical process involving probability and correlations. The features or properties of statistical inquires can be anticipated by taking the opposite view from that of systematic process. In this way, Lonergan provides a totally opposite non-systematic process that because it is derived from the general notion of systematic processes holds the same weight.

The law of the excluded middle leaves no other option other than systematic and non-systematic processes.

Accordingly, non-systematic processes have the following properties:

1. There is no one single insight or unified set of insights that accounts for all the data. To even search for such a high level perspective is not possible when studying non-systematic processes.
2. There are radical irreversible changes that can easily take place, sudden and unexpected (unanticipated) changes that alter all that follows. Therefore, it is impossible in non-systematic processes to leap from one situation to another without taking into account all the intervening states.
3. No matter how far and how long one delves into the data, there will never occur a single moment in which everything comes together. Hence predicting the future state of any non-systematic process is a highly dubious and very tentative enterprise.

Weather is a non-systematic process. The only way to forecast future weather conditions is to start with the data at hand and carefully extrapolate future conditions hour by hour, day by day, all in sequence. As reliability drops with each iteration, the accuracy of any prediction soon drops off. This means that there is an upper limit of seven to nine days beyond which reliable forecasts cannot be made.

Furthermore, there is no one insight or one set of insights that fully accounts for all the data. While the idea of water cycles is known, as is atmospheric circulation patterns and other physical parameters, it still remains that even the set of these insights do not account for all the data.

Finally, at no point does all the weather data being collected come together in such a way to make firm and reliable predictions possible.

1. If we understand non-systematic processes then we also understand that there will always be multiple ways of understanding the data.
 2. Because different parts of the process can be understood differently, there’s no possible combination of insights that will explain what is going on.
 3. Each situation can only be understood on its own; there no way to compare different situations each with their own data sets.
 4. Coincidence abounds in any aggregate; accidents happen.
- ◆ Non-systematic processes are the source of novelty.

EMERGENT PROBABILITY

The central feature of Lonergan’s world view is that classical laws establish systematic processes known as recurring schemes of operation while statistical laws lay out the probability of any one scheme becoming operational and once operational being able to sustain itself over time. The existence of any set of schemes condition the emergence of subsequence ones, while later schemes sublate earlier ones. Higher levels of intelligibility emerge through a process of vertical rather than horizontal expansion.

This means that the universe consists of both systematic and non-systematic processes, where the systematic concerns recurring schemes of operations while the non-systematic processes within which different schemes emerge and thrive—or not.

Later on we will consider human “interference” with both processes, where new forms of recurring schemes of operation are conceived and then brought into being through human action where these human directed schemes may survive or fail to make the grade.

Take the university for example. One could build a common sense perspective on a university given multiple perspective gained from all those engaging or encountering such an institution. But all this would give us is an interlocking set of horizons where the different common sense appreciations of professors, students, administrators, and government officials all have their input.

But the “reality” of an university is only fully appreciated in the form of several interlocking schemes of occurrence, each related to the other to form a whole. Then we could consider the necessary conditions under which such an university could exist, for example as credentialing for prospective employers, as well as the sublating effects of a societal need to know and communicate that knowledge, to value and use university to express these values. A civilization’s institutional structure sublates that of any one university.

- ◆ The “form” of a university provides stability and predictability; the random elements at play create opportunities to create something new.
- ◆ The irreversible features of non-systematic processes requires forgiveness if healing is to take place.
- ◆ Systematic processes provide high levels of predictability. Yet there are cases where individuals know things that reason dictates they should not know, e.g., future events. There we have prophecy, which may well tap into the transcendental (or a collective memory, if the transcendent is to be set aside).
- ◆ The idea of election or predestination falls to the wayside within Lonergan’s world view of emergent probability, for that would require a deterministic universe. Rather we end up with the idea that man and God are co-creators of the universe, not in any general “good feeling” way or even as a matter of doctrine, but as an explanation of how things work.
- ◆ Salvation and/or redemption is not possible without acknowledging non-systematic processes. These reflect radical changes in direction.