

INSIGHT

Chapter 4, section 2.5

Consequences of Emergent Probability

After summarizing the features of emergent probability in the first part of 2.5, Lonergan then draws out characteristics of world process. This generates the beginning of a general “world view” that includes everything from the rocks and trees to human history and civilizations. It is not yet quite complete, because, as was noted in the last session, a few more elements need to be clarified, such as the nature of development, and then the unique characteristic of human beings to violate development, which causes dialectic.

Characteristics:

1. “There is a succession of world situations.”
 - a. By “situation” Lonergan is referring to the entire universe as we know it. Hence, it is not merely just a local situation, such as Washington, D.C., or Fort Wayne, Indiana. It is all of the actual events and schemes of recurrence that are actually taking place. Yet, even though it refers to the whole of world process, it also is relevant for each local situation – we just have to remember that each local situation can be effected and related to other local situations and to the whole of world process.
 - i. One might raise the question about the meaning of “taking place,” because that raises a question about time and simultaneity, which Lonergan begins to address in chapter 5. For now, just assume it means any event and scheme that can be verified as actually occurring which thus sets the stage for new possibilities to arise. Notice how this is simply a cognitive definition of an event and scheme, and it by-passes some of these difficult physics (and meta-physics) problems.
 - b. Hence, the occurrence of particular events and schemes opens the doors to new possibilities of events and schemes in this universe. If a planetary system around a star occurs, this in turn sets the stage for a number of possibilities of new kinds of events on and in these planets. These planets can be recurrently influenced by the energy emitted by this star. They can now recurrently influence each other. And this energy influence can then allow for the emergence of new schemes and events on the planets themselves.
 - c. World situation thus has a “schedule of probabilities for survival for existing schemes and of probabilities of emergence for concretely possible schemes.” Thus, each situation not only opens the doors for new possibilities, but it sets and shifts probabilities for emergence and survival. The particular spatio-temporal arrangement of the planetary system sets up probabilities for the ongoing survival of the system itself and for the emergence of new schemes within this system and on each of the planets involved. Likewise, the emergence of various schemes on a planet, such as planet earth, changes the probabilities for survival and emergence of

new schemes. For example, when oxygen producing cells increase the amount of oxygen in the atmosphere, this reduced the number of those cells, because it was toxic to them. However, it also shift the probabilities for the emergence of cells that not only could endure oxygen, but even make use of it as a “fuel.” This emergence of oxygen, along with a number of other factors, also shifts the probability for the emergence of more complex multi-cellular systems.

- d. This also applies to the human world. The emergence of the railroad system shifts the modes for economic and social changes in a region. It shifts the probabilities of survival of canal systems of exchange, and it shifts the probabilities of the emergence of new types of goods that can be created and distributed throughout larger territories. It also shifts how resources are managed and distributed. It also shifts the probabilities of the emergence and survival of new townships and even cities.

2. “World process is open.”

- a. It is neither deterministic nor completely chaotic. Hence neither mechanist determinist nor absolute chaos world views are likely to be true.
- b. ***It involves some chaos.*** Notice that a world situation has an element of the random in it. Actual events and schemes diverge non-systematically from probabilities of events and schemes. This has roots in the empirical residue of particular places and times and coincidental aggregates of events (which are not related to each other in schemes). Thus, there is a bit of randomness in which sets of genes get passed on from parents to children. There is a bit of randomness in the way that voters vote and elections are won. There is a bit of randomness in the way that the economy operates, in the way production takes place, retailers sell goods, and buyers purchase the goods.
- c. ***Yet, it does have some order.*** The existence of a scheme is an ordering based on correlations that are interdependent. Events can become related to each other into a scheme hence they no longer are coincidental aggregates, but actually interdependent in their occurrence. Thus, though heredity of genes has a random element to it, it also have an order. The process of meiosis is a recurrent pattern, as is the process of reproduction and the conception of the young. These processes build in some of the non-systematic within the context of adaptability and stability. The process of voting is a system with a certain order to it designed to allow both for variations of voting and designed to uphold as much as possible degrees of fairness (hence it is always being questioned on these grounds as well). And the economy also creates schemes to allow both for a stability of goods and services that are wanted as well as innovation. Hence, these orders include the random, but none the less are orders.
- d. ***Hence, what actually emerges from one situation into the next has this element of openness to it.*** Which events and schemes actually emerge and survive in the future are not systematically determined by the initial world situation or by any subsequent unfolding situation. In fact, latter schemes of recurrence never fully systematize former schemes and events.

Sometimes, these even incorporate the “random” into themselves in order to enhance adaptability. For example, meiosis builds into itself a bit of the random in terms of how chromosomes are distributed. This enhances the probabilities for future progeny to be adaptable to different environment. Our immune system has a built in random element. The formation of antibodies, for example, includes a type of randomness in how the antibody gets formed. This has the purpose of generating thousands of different possibilities in order to have a better probability of responding to variations of infections into the body (which themselves have both an ordered and random character).