

Ethics, Emergent Probability and Freedom

Thermo-dynamic miracles...events with odds against so astronomical they're effectively impossible, like oxygen spontaneously becoming gold. I long to observe such a thing. And yet, in each human coupling, a thousand million sperm vie for a single egg. Multiply those odds by countless generations, against the odds of your ancestors being alive; meeting; siring this precise son; that exact daughter...Until your mother loves a man she has every reason to hate, and of that union, of the thousand million children competing for fertilization, it was you, *only you*, that emerged. To distill so specific a form from that chaos of improbability, like turning air to gold...that is the crowning unlikelihood. The thermo-dynamic miracle. But the world is so full of people, so crowded with these miracles that they become commonplace and we forget...We gaze continually at the world and it grows dull in our perceptions. Yet seen from another's vantage point, as if new, it may still take the breath away. Come...dry your eyes, for you are life, rarer than a quark and unpredictable beyond the dreams of Heisenberg; the clay in which the forces that shape all things leave their fingerprints most clearly. Dry your eyes... and let's go home.¹

What does *Watchmen* have to do with Kant and Lonergan? The thermodynamic miracle is in accord with Lonergan's worldview, emergent probability. Kant's universe is not the one in the movie – there are no thermodynamic miracles in his system of ethics, which is built upon and in response to the determinism he inherits from Newtonian physics. But in reality, our universe is ripe with thermodynamic miracles and everything we do contributes to the human story, good and bad alike. The question is whether we will take up our historical vocation and value the powerful gift of our unique existence or leave the human story to chance.

I took a course on Kant and Lonergan's ethics last spring with Professor Pat Byrne in which I realized how crucial Lonergan's worldview is to his ethics. In short, Lonergan and Kant come to divergent ethical conclusions because of two prior fundamental differences: On the one hand, their opposing views on the natural sciences, and on the other hand, their respective positions on human knowing. Thus, Lonergan's ethics differs from Kant's because he has a fundamentally different account of the natural sciences, and this is so because he differs from Kant on human knowing.

I would like to focus on the first mentioned fundamental difference. I argue that it is crucial for ethics to have both a correct worldview and a proper understanding the role of human

freedom within the universe. For both Lonergan and Kant, their views on natural science are intimately connected to human freedom.

FROM A DETERMINISTIC UNIVERSE TO AN EMERGENT UNIVERSE

While Kant is not a determinist, he accepted the determinism of the Newtonian science of his times. Newton's genius discovery was that gravity had to operate according to the inverse square law. This explained all the motions of the planets, their effects on each other and the motion of the moons around the planets. In effect, he had given a complete account of the entire system.ⁱⁱ The next generation of scientists began applying Newtonian physics to a myriad of things. This is what ultimately troubled Kant. If everything could be explained by Newtonian physics, what place was left for human dignity? Moreover, what room was there for human freedom in a world completely explained laws, which for Kant are universal and necessary? Thus, Kant undertook a task of reconciling the world of necessity with the world of freedom.ⁱⁱⁱ Lonergan, however, did not need to embark on any such task because he maintains that there is not an inherent determinism in natural science to begin with. Thus, no escape route is required.

I would like to turn to Dr. Byrne's essay, "God and the Statistical Universe," in order to explain how Lonergan's understanding of natural science leads to emergent probability. He goes to the roots of science to discover what scientists are doing when they are doing science. This method is intentionality analysis.^{iv} He realized that much of what is taken to be the result of modern science is really the result of *extra-scientific* opinions.^v One of Lonergan's great insights was that classical laws do not *determine* anything – they explain how things relate to each other. They do not carry the Kantian universality and necessity. On the contrary: laws have conditions.

Byrne first deals with classical laws. While classical scientists were rather explicit about their goal of explaining empirical data, what they actually *did* was less obvious. Lonergan discovered three activities, which led to a fourth very important insight. First, these scientists

only sought to explain certain differences of empirical data while neglecting others; they *abstracted*. What they abstracted from is the “empirical residue,” that is, particular times and places.^{vi} It is incomprehensible for anyone to ask why this place is not that place, why this hydrogen atom is not that hydrogen atom – it is simply a matter of fact into which a direct insight cannot grasp any intelligibility. Secondly, they restricted themselves to certain kinds of explanation. They sought only to understand the relations among the data *at hand*, and did not seek any further ulterior purpose. “They seek to understand the ‘immanent intelligibility’ of the universe.”^{vii} That classical investigators abstract from the empirical residue and seek only the immanent intelligibility led Lonergan to conclude that there is a corresponding abstractness in classical laws taken as a whole.^{viii} This is crucial because their abstractness bears witness to the insufficiency of classical laws to “provide a complete account of the novelties and particularities of the *concrete* details of events as they actually occur.”^{ix}

This leads to the next insight of Lonergan’s intentionality analysis, in which explains the third procedure of classical investigators – they combine known laws to formulate “ideal or typical processes.”^x He refers to these as “systematic processes” because of their “regularity and simplicity.”^{xi} This is where one of Lonergan’s brilliant insights enters the scene. He discovered what he calls an “oversight of insight.”^{xii} What he means is that classical scientists overlooked the fact that they were actually employing an additional and *distinct* type of insight in their formulation of ideal processes: insight into *concrete* situations.

Lonergan explains the remarkable ramification of this oversight of insight: they failed to recognize that the need for concrete insights opens up the possibility of another kind of ideal construction, *nonsystematic processes*.^{*} In other words, by virtue of their oversight of the complementary concrete insights, they also failed to understand that “the concrete insights that select, combine and particularize classical laws need only be concrete; they need not be

unified.”^{xiii} Thus, this oversight of insight ultimately led to the oversight of nonsystematic processes. The result was that both they *and* philosophers (like Kant) tended to believe that classical laws automatically imply systematic processes, and that the totality of the universe is a systematic process.^{xiv}

A *systematic* process is a series of events during time which possess a single intelligibility, while a *nonsystematic* process is a series of events during a span of time which possess no single intelligibility.^{xv} Yet, there is nothing incomplete about nonsystematic processes. Rather, what defines them is not incompleteness, but the lack of unity to the concrete insights completely explaining the process. It was the systematic process from which Kant endeavored to save human dignity. However, Kant did not realize, as Lonergan did, that it is *the world itself* that must be saved from determinism.

While Lonergan came to nonsystematic processes via his analysis of classical laws, he maintains that they are the objects of *statistical* investigations. In short, while classical inquirers seek to know the “nature of...” statistical inquirers seek to know the “state of...”^{xvi} Statistics answers the questions, “how many, how frequently?”^{xvii} Classical laws and statistical laws are not opposed but complementary. And so “classical laws tell what would happen if conditions were fulfilled; statistical laws tell how often conditions are fulfilled.”^{xviii} This complementarity is essential for emergent probability.

Classical laws have conditions, and these must be taken into account due to their inherent abstractness: “An event Z can be concluded from prior circumstances Y, provided some P, Q, R,..continue to occur and provided some U, V, W,..do not intervene.”^{xix} Classical laws are limited by what Lonergan calls “a concrete pattern of a diverging series of conditions.” By *diverging series*, Lonergan means that while Z can be concluded from prior circumstances, each of these prior circumstances also has its conditions. Moreover, the concrete patterns of a

diverging series of conditions are coincidental aggregates, meaning they have some unity based on spatial juxtaposition, temporal succession or both, *but* there is no corresponding unity on the level of insight and intelligible relation.^{xx} Thus, P, Q, R,..., are conditions for event Z and its prior circumstances, Y, but they are not intelligibly related. They only have space and/or time in common. In explaining the complementarity between classical and statistical formulations, Lonergan refers to *statistical residues*, which are not only important in this context, but also play an integral role in Lonergan's discussion of freedom with regards to ethics.

STATISTICAL RESIDUES

Professor Byrne explains what Lonergan means by residue: "He always means aspects of the data that are left over after all the resources of a certain type of understanding have been exhausted."^{xxi} Thus, statistical residues are the data left over after systematic understanding has run dry. They are roughly equivalent to the coincidental aggregate explained above. Classical investigations abstract from place and time, but with statistics, place and time become significant. Due to interferences, actual events deviate from the classical explanations. These deviations constitute the statistical residue, which "defy all systematic attempts at understanding." Statistical investigations then step in to give us an intelligible understanding of these deviations. This is a distinct type of intelligibility – ideal frequencies.

The rule of statistical residue states that there will *always* be such left over data, which means that the universe cannot be explained by systematic processes alone. Thus, classical and statistical laws are complementary. And so systematic and nonsystematic processes come together to give us an explanatory account of the universe: emergent probability.

EMERGENT PROBABILITY

The key to Lonergan's worldview is its openness and dynamism. He understands the universe as a *process* – not as a thing – and this process is still developing.^{xxii} The general notion

of emergent probability “results from the combination of the conditioned series of schemes with their respective probabilities of emergence and survival.”^{xxiii} This definition reveals that emergent probability takes both statistical and classical laws into account. A scheme of recurrence can be represented by the series of conditionals, “If A occurs, then B will occur; if B occurs, then C will occur; if C occurs, ...A will recur.”^{xxiv} What is really of interest is the conditioned *series* of schemes of recurrence in which we understand schemes of recurrence in relation to each other: “Schemes can be arranged in a conditioned series, such that the earlier can function without the emergence of the later, but the later cannot emerge or function unless the earlier already are functioning.”^{xxv} E.g., carnivores need herbivores but not vice versa.^{xxvi} To move into understanding conditioned series of schemes of recurrence is to move into an explanatory understanding of the universe, as we begin to see how everything within it is interrelated. Just as Lonergan offers us an explanatory universe, so does he offer us an explanatory ethics.

THE HUMAN PERSON’S DISCOVERY OF EMERGENT PROBABILITY

What is really of interest for us in the context of ethics is the role of emergent probability in human history, which is in accord with emergent probability.^{xxvii} The difference between the human person and any other evolving species (or even electrons, etc.) is profound. The human person remains under emergent probability, but not in the same way that other evolving animals do: not only does she not have to wait for the conditions she needs to arise, but also, she can *discover* emergent probability. She discovers how her current insights and decisions will affect the emergence of later insights and decisions. In effect, she has unlocked the key to the immanent intelligibility of the universe in such a way that she can now assume greater responsibility in its dynamic unfolding. As we uncover complex conditioned series of schemes of recurrence, we realize how intricately related the present is to the past and future. We thereby

recognize our ability *and responsibility* to direct human history. This is the historical vocation of which Lonergan speaks.

The human person's historical vocation must be exercised in harmony with emergent probability. Let us say that a person has an insight into a good, Z. After reflecting, she judges that Z is valuable and decides to pursue it and share it. However, this good is not immediate and practical and therefore is not appealing to the shortsightedness of others. It also *appears* unintelligible to them because it does not correspond to the concrete facts of their lives, which *actually* carry with them elements unintelligibility. Thus, in order to effectively contribute to the control of human history by making her fruitful insight operable, the human person must understand emergent probability.^{xxviii} What is needed is "a heightened grasp of historical origins."^{xxix} If we understand why it is difficult for certain insights to emerge and for various decisions to be made, then we can go back and set the conditions to make such emergence possible, probable and eventually, actual.

This is more difficult than it may sound, however, because there are complex conditioned series of schemes of recurrence involved in every person's life, and we must compete with them. Moreover, we may be confronted with a long cycle of decline. But knowing that there is an entire story behind each and every human person often inspires people to act more charitably. This charity consequently sets the conditions for better stories to emerge out broken stories, for a good and meaningful world to emerge from a broken world – understanding each other can inspire us to participate in the mutual healing of one another and of our world. In other words, there is the transformative and redemptive power of love, which is one of the most powerful conditions we can offer for the emergence of ethical-decision making.

THE STATISTICAL RESIDUE AND FREEDOM

As Lonergan writes, “the existence of statistical residues is the possibility of *higher integrations*.”^{xxx} This means that a higher level systematizes the statistical residue that makes up the coincidental manifold of the lower level, regulating what the lower level left as merely coincidental. Thus, the significance of the canon of statistical *residues* is that the lower cannot *determine* the higher because the lower is the coincidental manifold. While the canon of statistical residue does not imply the freedom of our choices, it does amount to saying that the universe cannot be explained by systematic processes. Kant neither recognized nor affirmed statistical residues, and thus Lonergan has a distinct advantage. For in excluding determinism through this appeal to the canon of statistical residues, Lonergan circumvents the need for reconciliation between human freedom and the universality and necessity of the laws of nature.^{xxxi}

However, Lonergan still has to give a positive account of freedom. Briefly, Lonergan appeals to the experience we have of knowing what the right thing to do is and neglecting to choose it. Freedom is that act of choosing. It is not “the rational subject as *imposing* an obligation upon himself”^{xxxii} for in so doing, the subject is still only a knower. This is freedom for Kant – the autonomy of the will in which it self-legislates the moral law. Lonergan continues, “But the rational subject as *carrying out* an obligation is not just a knower but also a doer.”^{xxxiii} This is the locus of freedom for Lonergan. Kant’s freedom is antecedent to Lonergan’s. Kant was primarily concerned with what Lonergan calls “essential freedom,” while Lonergan was concerned with “effective freedom.”

It is important to note why this difference in concern may exist. Kant is concerned with essential freedom because he has to defend the human person’s freedom from determinism, and therefore it is crucial that he prove their compatibility. Lonergan has no such worry. He nevertheless needs to give a positive account of freedom because a lack of determinism in nature

does not allow us to de facto conclude human freedom. However, precisely because our world is not deterministic but emergent, what is crucial is *effective* freedom. In other words, *because* our world is radically open and dynamic, what is of the utmost importance is that we take on an ever greater responsibility in directing this world. We are able to do this to the extent that we become more effectively free. It makes no difference if we are essentially free and leave our history up to fate. It will still unfold dynamically according to emergent probability, but just as there are successive higher integrations, so too there are successive *lower* integrations.*

ESSENTIAL AND EFFECTIVE FREEDOM

Essential freedom is what allows for us to become more and more effectively free. Without essential freedom, there is no such thing as effective freedom, but without effective freedom, essential freedom is meaningless. Lonergan identifies four conditions of effective freedom: “(1) external circumstances, (2) the subject as sensitive, (3) the subject as intelligent, and (4) the subject as antecedently willing.”^{xxxiv} The third and fourth conditions of effective freedom are the most crucial. The former has to do with the limitations of intellectual development, the latter with limitations of antecedent willingness. Basically, “the greater the development of one’s practical intelligence, the greater the range of *possible* courses of action one can grasp and consider.”^{xxxv} And just as learning takes time, so too does persuasion. Just as a lack of insights into possible courses of action limits our effective freedom, so does a lack of willingness close off possible courses of action. Thus, the less intelligence and willingness are developed, the fewer possible courses of action there. And this is the case because the person’s dynamic structure is less open to grasping and/or choosing these possibilities. Therefore, the more conditioned the person’s effective freedom is.

Our unrestricted desire to know can discover emergent probability and affirm that we are agents of it and it can lead to possible courses of action. Yet, unless our doing follows upon this

knowledge, we have not really won effective freedom, for we have not been persuaded to universal willingness. We may have the long-view in terms of our knowledge, but if our willingness does not match up to that and remains within a limited horizon, all of our knowledge amounts to nothing – the possible courses of action we have grasped remain mere possibilities.

Meanwhile, the universe and human history move on without our direction. We are still essentially free, but our effective freedom becomes all the more conditioned. As Lonergan writes, “Change succeeds change...The actors in the drama of living become stagehands; the setting is magnificent; the lighting superb; the costumes gorgeous; *but there is no play.*”^{xxxvi} We can decide to not take up our historical vocation. Insofar as we do this, we simply let the universe go on. And without the higher integration that human intelligence and willing provide, the vast expanse of the universe remains a coincidental manifold. That is, the setting, the lighting, and even the people in the play are simply things that are in the same place at the same time. This is what happens to our universe when we do not take up our historical vocation – *there is no play.* Our historical vocation is to *write* the play, the *good* play, the play in which *every* human person has agency and is related to other human persons in meaningful and dignifying ways, the play in which *nobody* is forgotten, no role is rendered meaningless, the play in which nobody is merely an “extra” – a coincidence that was never integrated.

Our historical vocation is to systematize what otherwise is a coincidental manifold – different cultures, different eras – into the good human story. If we choose to not write the play, we are left with people that are related spatially and temporally, but who are not intelligibly unified into the one human community. A higher viewpoint is needed and this is emergent probability, in which we understand interrelatedness of the entire human race and of the human race with the universe. We must become our own and make history our own.

THE PROBLEM OF LIBERATION

The problem we encounter is how to become liberated, how to win our effective freedom. As Lonergan writes, “Essentially the problem [of liberation] lies in an incapacity for sustained development.”^{xxxvii} This problem is radical and permanent. It permeates every issue. How can such a complex problem ever be solved? Lonergan argues, “The solution has to be a still *higher integration of human living*.”^{xxxviii}

There exists the supernatural solution to the human problem of evil – God’s redemptive love, in which evil is returned with an even greater love. Yet, as far as the specifically human solution goes, it has to do with a knowing and deciding to direct human history. It is to realize that all human persons across the globe and throughout time are related to each other – that we are all members of one global, historical community. This involves the two-fold affirmation of emergent probability and our agency in it, and our subsequent value judgment in our choosing of them. Once again, a correct worldview is integral to ethics because without it, we misunderstand the human solution to the problem evil – we are essentially free to strive for Kant’s Kingdom of Ends, but without winning our effective freedom we will never reach it.

Before continuing, we must return to Kant. As noted, one of his major problems was that he did not recognize statistical residues. His acceptance of determinism excluded higher integrations, for which statistical residues make room. Without higher integrations, ethics becomes static and the human race simply rides the waves of the universe’s flow. Moreover, the fact is that the immanent intelligibility of our universe *is* emergent probability, and therefore, while a static ethics could theoretically work in a static universe, a static ethics in a universe on the move will amount to nothing. Although Kant would probably not approve of bureaucracies as we now know them (nor were they his purpose), they provide an image of the danger of stagnancy and how duties can become obsolete and do not meet the problems of the times.

Lonergan is able to offer us an ethics and a human solution to the human problem of evil based on his understand of the immanent intelligibility of the universe (and his account of human knowing). Again, the solution has to be a still *higher integration of human living*. But ultimately there is the *supernatural* solution to *human's* problem of evil.^{xxxix} The solution to the problem of evil is *not* its elimination. Rather, it involves the triumph over evil in such a way that good emerges. This bears witness to the radical openness and dynamism of our universe and to the solution's keeping with emergent probability. We see an example of this in Tolkien's *The Silmarillion*. God is speaking to the fallen Melkor, who had interfered with heaven's symphony: "And thou, Melkor, shall see that no theme may be played that has not its uttermost source in me, nor can any alter the music in my despite. For he that attempteth this shall prove but mine instrument in the devising of things *more wonderful*, which he himself hath not imagined."^{xl} In its final form, this meeting of evil with good becomes the self-sacrificing love of God.^{xli}

While the human person can affirm that the universe is emergent and that she is an agent of emergent probability, she can fail to choose it. This can be because she begins to doubt her affirmation, she begins to question the meaningfulness of this universe, of her existence and of her actions. Again, "The thermo-dynamic miracle. But the world is so full of people, so crowded with these miracles that they become commonplace and we forget...We gaze continually at the world and it grows dull in our perceptions."^{xlii} Not only does the supernatural return evil with an even greater love, but God's grace also provides the human person with the theological virtues of hope and faith. These are essential for the human person; she cannot carry out her historical vocation without them. For the world can become bleak and grey, our existence can become dense and weighty and our actions can appear insignificant. We can be tempted to despair and thus what we once affirmed as true now seems to be nothing but naïve idealism. Such is the battle we fight. "Yet seen from another's vantage point, as if new, it may still take the breath

away. Come...dry your eyes, for you are life, rarer than a quark and unpredictable beyond the dreams of Heisenberg.^{»xliii} With the graces of hope and faith, we are given another's vantage point – the vantage point of God. We see ourselves, our existence and our universe in a different light and take up our historical vocation with newfound passion. And we begin to write the human story inspired by God.

ⁱ Alan Moore (author) and Dave Gibbons (illustrator), *Watchmen* (New York: DC Comics, 1986), Ch. IX, 26-28.

ⁱⁱ The above paragraph and the following information regarding what Kant understood to be the inherent determinism of natural science are as explained by Professor Byrne in class on January 15, 2009.

ⁱⁱⁱ Frederick Copleston, *A History of Philosophy: Volume VI, Wolff to Kant* (New York: Image Books Doubleday, 1985) 186.

^{iv} Patrick H. Byrne, "God and the Statistical Universe," *Zygon: Journal of Religion and Science*, Vol. 16, Issue 4, 345-363, (Chicago, 1981), 347.

^v Byrne, class lecture: "Insight," February 7, 2008.

^{vi} *Ibid.*, 51.

^{vii} Byrne, "God and the Statistical Universe," 348.

^{viii} *Ibid.*, 349.

^{ix} *Ibid.*

^x *Ibid.*

^{xi} *Ibid.*

^{xii} *Ibid.*, 350; *Insight*, 70.

* This construction, as it turns out, it is not actually the work of classical investigators

^{xiii} Byrne, "God and the Statistical Universe," 350, emphasis added.

^{xiv} *Ibid.*

^{xv} Byrne, Class Lecture Power Point (Insight), January 31, 2009.

^{xvi} *Insight*, 86.

^{xvii} Byrne, Class Lecture Power Point, "Insight," January 24, 2008.

^{xviii} *Insight*, 131.

^{xix} *Ibid.*, 117.

^{xx} *Ibid.*, 73.

^{xxi} Byrne, e-mail correspondence, April 28, 2009.

^{xxii} Charles Onyango Oduke, S.J., *Loneragan's Notion of Cosmopolis: a Study of Higher Viewpoint and a Creative Framework for Engaging Individual and Social 'Biases' with Special Relevance to Socio-Political Challenges of Kenya and the Continent of Africa* (A Dissertation: Boston College, Department of Philosophy, 2005), 14.

^{xxiii} *Insight*, 145.

^{xxiv} *Ibid.*, 141.

^{xxv} *Ibid.*, 148.

^{xxvi} *Ibid.*, 142.

^{xxvii} *Ibid.*, 252.

^{xxviii} She need not have explicit familiarity with Lonergan's philosophy and technical terminology because emergent probability is the immanent intelligibility of the universe and was thus at work long before Lonergan explicated it.

^{xxix} *Insight*, 266.

^{xxx} *Ibid.*, emphasis added.

^{xxxi} Byrne, Class Lecture, "Kant and Lonergan," April 16, 2009.

^{xxxii} *Ibid.*, 638.

^{xxxiii} *Ibid.*

* As noted in “Emergent Probability” the direction of our universe is nonetheless upward. The reason successive lower integrations do not win out in the end is because of redemption – God is the third integral in the equation, and therefore, the longer cycle of decline is not the end of the human story or of the entire story of our universe.

^{xxxiv} *Ibid.*, 645.

^{xxxv} *Ibid.*, 646.

^{xxxvi} *Insight*, 262, emphasis added.

^{xxxvii} *Insight*, 653.

^{xxxviii} *Ibid.*, 655.

^{xxxix} Oduke, 206, emphasis added.

^{xl} J.R.R. Tolkien, *The Silmarillion* (Boston, New York: Houghton Mifflin Company, 1977), 17.

^{xli} *Insight.*, 721-722.

^{xlii} *Watchmen*.

^{xliii} *Ibid.*