

**NEW GENES, BLUE JEANS, AND HUMAN BEINGS:  
JACQUES MARITAIN AND THE POSSIBILITY OF FREEDOM**

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In early 1998, the scientists who composed the publicly funded Human Genome Project (HGP) announced that, within the next seven years, they would succeed at mapping and reading the entire human genome. When completed, as science author Matt Ridley writes in his popular book, *Genome*, this would be “the first time in the story of life on earth that a species [would] read its own recipe. For the human genome is nothing less than the instructions for how to build and run a human body.”<sup>1</sup>

Around the same time as the HGP announcement, a privately funded American scientist, Craig Venter, declared that he would accomplish the same task in half the time. And thus, the gauntlet was thrown and the race was on. Amazingly, by late June 2000, the rough draft was completed, and the great achievement that culminated the twentieth century would become the signal event that would define the many biological and bioethical challenges of the twenty-first century. From human cloning and embryonic stem cell research, to the various medical and bioethical applications of these technologies, genetic engineering issues are serious and timely. Moreover, in the years since the announcement of the completion of the human genome map, scientists have made remarkable claims for the genetic origins of many human behaviors that, formerly, were considered the province of free will and moral responsibility; examples include criminal and violent behavior, alcoholism, obesity, and sexual orientation. These claims point to a very serious philosophical issue: If the explanations of genetic determinism are true, what becomes of moral freedom and responsibility?

Fundamentally, this question concerns the ontological and ethical meaning of human life, freedom, and free will; the possible answers to

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<sup>1</sup> Matt Ridley, *Genome: The Autobiography of A Species in 23 Chapters* (New York: Harper Collins, 2000), 2.

it constitute the subject of this essay. Ridley makes clear that he understands this problem also. The genome, he writes, “contains clues to ancient philosophical conundrums, not least the question of whether and how our actions are determined and what is this curious sensation called free will.”<sup>2</sup>

The exploration of this claim climaxes in the last chapter of Ridley’s book, when he announces what appears to be the most disturbing discovery of all:

As the first draft of [my] book was being completed, a few months before the end of the millennium, there came news of a momentous announcement. At the Sanger Centre, near Cambridge, the complete sequence of chromosome 22 had been finished, the first human chromosome to be read from beginning to end. All 11 million ‘words’....

Near the tip of the long arm of chromosome 22 there lies a massive and complicated gene, pregnant with significance, known as *HFW*. It has fourteen exons, which together spell out a text of more than 6,000 letters long. That text is severely edited after transcription by the strange process of RNA splicing to produce a highly complicated protein that is expressed only in a small part of the prefrontal cortex of the brain. The function of the protein is ... to endow human beings with free will. Without *HFW*, we would have no free will.<sup>3</sup>

It would appear that here is a “new gene” of extraordinary philosophical significance. Fortunately for the persevering reader, however, Ridley promptly reveals his rather droll sense of humor: it is all pure fiction! Of course, there is “no *HFW* gene on chromosome 22 nor on any other. After twenty-two chapters of relentless truth, I just felt like deceiving you ... and I could no longer resist the temptation to make something up.”<sup>4</sup> But, humor aside, Ridley then goes on to inquire after the “I” who “decided to write a fictional paragraph?” Who is this “I?” His answer: “I am a biological creature put together by my genes.”<sup>5</sup> In other words, in addition to defining all of the unique physiological

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<sup>2</sup> Ibid.

<sup>3</sup> Ibid., 301-02.

<sup>4</sup> Ibid., 302.

<sup>5</sup> Ibid.

characteristics of one's body, Ridley also contends that these genes additionally account for one's brain, memory, and intelligence. And yet, for all of his overt materialist genetic explanation of human nature, Ridley is not quite willing to surrender his free will. In fact, he revisits the classical philosophical debate of free will vs. determinism when he acknowledges that free will "could not have come from my genes, or else it would not be free will."<sup>6</sup> And so we grow thoughtful and ask: Is it possible for a strict geneticist or materialist to preserve *authentic* human freedom and free will?

#### I. FOUR EXPLANATIONS OF HUMAN FREEDOM

The first explanation of freedom comes from those who see it as a delusion, an expression of one's society, culture, and nurture: "freedom equals the parts of our natures not determined by our genes, a sort of flower that blooms after our genes have done their tyrannical worst."<sup>7</sup> This of course is not really freedom. It is little more than a delusional *feeling of freedom*. Against this position, Ridley articulates a second explanation of freedom that is a synthesis between genetic determinism and our nurtural feelings of freedom. Ridley does not endorse this position either. He makes plain that "the crude distinction between genes as implacable programmers of a Calvinist predestination and the environment as the home of liberal free will is a fallacy."<sup>8</sup> It is the classic "genotype vs. phenotype debate" and it rests on a false dichotomy of endogeny (the strict inevitability of genetic determinism—"New Genes") vs. exogeny (the nurtural, cultural, environmental inexorability of social determinism—"Blue Jeans"). Although this synthesis suggests a tidy solution, Ridley acknowledges that it does not get at the heart of the philosophical problem, which Ridley sees as resting squarely on the prongs of Hume's fork: either our actions are strictly determined or they are random; in either case, we are not responsible for them.<sup>9</sup> Although, as we shall soon see, some will reject both of these alternatives as not representative of the true philosophical issue concerning human freedom, they are nonetheless perfectly consistent with Ridley's materialist hypothesis.

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<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid., 309.

Accordingly, chaos theory provides a third explanation of human freedom and it provides Ridley's preferred way out of the endo-geny/exogeny impasse: while "chaotic systems ... are determined, not random," they also show that "even if you know all of the determining factors in a system, you may not be able to predict the course it will take, because of the way different causes can interact with each other. Even simply determined systems can behave chaotically," and thus the interaction "of genetic and external influences makes my behavior unpredictable, but not undetermined. In the gap between those words lies freedom."<sup>10</sup> Ignorant of all the antecedent causes that account for the *appearance* of freedom and free will, and despite chaos theory's high-minded intention of explaining that illusion away, for materialists and genetic reductionists like Ridley, freedom remains nothing more than an illusion.

Avoiding the dilemma of Hume's fork altogether, the French Catholic philosopher Jacques Maritain offers a fourth explanation of human freedom. He accomplishes this in his little-known, hard to find, but extremely important essay, "Reflections on Necessity and Contingency."<sup>11</sup> By rightly shifting the discussion from philosophical psychology (the philosophy of human nature) to metaphysics, Maritain's essay goes beyond the narrow confines of a reductionist, scientific hermeneutic of human nature that succumbs to what Maritain rather floridly describes as the "pernicious habit of purely mechanistic imagery."<sup>12</sup> Instead, he argues for a spiritual, intellectual human nature that alone supports the notions of authentic freedom and free will.

The following three points that pertain to the discussion of freedom summarize succinctly the essentials of Maritain's essay:

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<sup>10</sup> *Ibid.*, 311-12.

<sup>11</sup> Jacques Maritain, "Reflections on Necessity and Contingency," in *Essays in Thomism*, edited by Robert E. Brennan (New York: Sheed and Ward, 1942), 27-37. (This article first appeared as "Refléxions sur la nécessité et la contingence," *Angelicum* 14 (1937): 281-95; as the editors of the *Oeuvres Complètes* make clear, this reproduces his earlier work for a *Grand Logique* that remained unfinished and was never published, save for this one excerpt: see Jacques and Raïssa Maritain, *Oeuvres Complètes*, vol. 2 [Éditions Universitaires/Éditions Saint-Paul, Fribourg Suisse/Paris: 1987], 706-22.)

<sup>12</sup> *Ibid.*, 37.

(1) Maritain begins his essay by defining the terms “necessary” and “contingent.” He shows that they are metaphysical principles applied to the philosophy of nature primarily and only secondarily to the philosophy of human nature. “Necessity” refers to that which *cannot* not-be, while “contingency” refers to that which *can* not-be; the former cannot be prevented or cannot be otherwise than it is, while the latter can be prevented or can be other than it is.<sup>13</sup>

(2) Maritain next shows that there are two kinds of necessity:

i. The first is a necessity *by right or essence (de droit or de jure)*. This type of necessity may be either absolute, i.e., “nothing can prevent it from being” (Maritain uses the example of a geometrical sphere and its radii), or it may be hypothetical, i.e., “nothing can prevent it from being *on the supposition* of certain conditions” (his example: a particular metal sphere and its radii require that the metal sphere must in fact exist in concrete reality). Note that, in this kind of necessity, “the *sufficient* reason for the positing of an effect is the exigency of an essence.”<sup>14</sup>

ii. The second kind of necessity is a necessity *in actual fact*. This type of necessity occurs on account of the factual antecedents that preceded an event or occurrence; in other words, it is factually determined. In this type of necessity, however, the event or occurrence that has been determined or necessitated in actual fact by its antecedents could have been otherwise. Water freezes at 32 degrees Fahrenheit, but for all that, a pond need never freeze over. Maritain makes clear that, while the “simple contingency of an event is inconsistent with the first type of necessity,” it is “compatible with the second.”<sup>15</sup>

(3) Recalling the distinction between “necessity” and “contingency,” Maritain then identifies three kinds of contingent events:

i. When a necessity in fact (for example, an apple detaches from a tree) combines with a necessity by essence (e.g., gravity causes the apple to fall);

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<sup>13</sup> Ibid., 27.

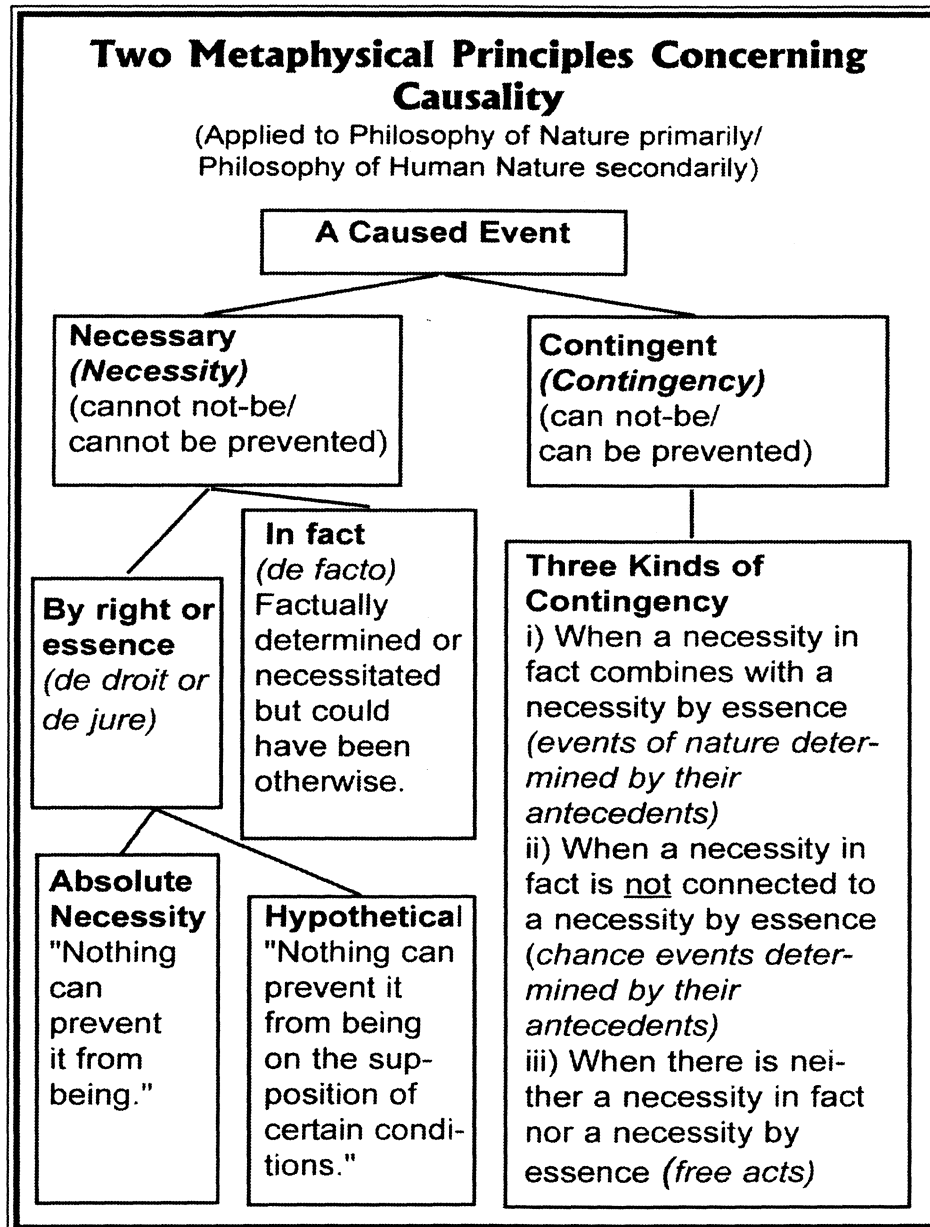
<sup>14</sup> Ibid., 27-28.

<sup>15</sup> Ibid., 27.

ii. When a necessity in fact is not connected to any necessity by essence, as in chance events (e.g., the falling apple just happens to hit a sleeping rabbit below); and

iii. When there is neither a necessity by essence nor any necessity in fact. This is the context for the meaning of free acts.

All of these distinctions may be diagrammed:



Concerning the three kinds of contingency, Maritain says, "the existence or the positing of such and such elements of determination, by virtue of which the effect is brought into being, is itself only a fact and could have been different from what it was."<sup>16</sup> For this reason, all free acts are contingent, but not all contingent acts or events are free. Events like the apple falling from the tree are necessitated "on the supposition of all their antecedents," but "the antecedents themselves, not having derived from a cause or an essential structure which by itself required them, could have been different from what they actually were."<sup>17</sup> Consequently, they are contingent events that are "never anything but facts," that is, they fall into the category of necessary in fact.<sup>18</sup> Up to this point, Maritain's explanation is compatible with Ridley's contention that we ought not confuse caused or determined events with predictability.

But finally, when discussing freedom itself, Maritain points out that a truly free act is not determined by its antecedents nor is it ever necessary in fact. Rather, free acts have for their cause "a *faculty* which, in its dominating indetermination towards every particular motive, is itself the determining agent that brings the volitional event into existence. Such an event is not only contingent, but free."<sup>19</sup> Maritain's example: "when a man makes up his mind to profit by an opportunity of revenge, or, conversely, decides to let the occasion go by."<sup>20</sup>

## II. THE SOLUTION TO THE PROBLEM OF FREEDOM

As a materialist, Ridley attempts to explain our feeling *or* experience of freedom and free will by chaos theory. Since the underlying complexity and interplay of endogenous *and* exogenous causes prevent us from predicting the outcome of a choice or decision in advance, we *experience* our ignorance and this Ridley calls "freedom." And yet, while he may call it whatever he likes, doing so does not make it true; the reality is that he has confused the experience of "unpredictability" with freedom. Chaos theory explains how unpredictable choices and

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<sup>16</sup> *Ibid.*, 28.

<sup>17</sup> *Ibid.*

<sup>18</sup> *Ibid.*

<sup>19</sup> *Ibid.*, 31. Emphasis added.

<sup>20</sup> *Ibid.*

decisions may be called "freedom," but, according to genetic materialism, these actions remain causally determined nonetheless.

By contrast, Maritain and others in the tradition of St. Thomas Aquinas, while affirming all of the neurological causes that are necessary for the explanation of human action, simply claim that an entirely materialist explanation of human nature alone can never be a sufficient explanation of authentic human freedom. The crux of this issue turns on the debate concerning the two alternative explanations of human nature. On the one hand, if our human nature consists entirely of matter and the functions of matter, then our actions, even if unpredictable, are determined and, no matter what one's experience, authentic freedom would be merely an illusion. This criticism, of course, applies to Ridley's position.

On the other hand, if our human nature has matter and the functions of matter as a necessary but not sufficient explanation of unique human behaviors, so that something additional is needed, then that "something" must be, by definition, not material but immaterial or spiritual. For Maritain, the spiritual faculties of human nature (i.e., the intellect and the will) are the only possible foundation for genuine freedom. Ridley's objection to this, of course, would be simple: he would not accept Maritain's ontological foundation; he would not accept a spiritual dimension of human nature, since materialists claim that spirituality is not empirically verifiable.

The reply to Ridley's objection appeals to the positive application of the principle of parsimony—namely, that when a simpler causal, empirical explanation does not suffice, one is justified *inferentially* in going to a higher or more complex explanation. In this way, the argument for a spiritual dimension of human nature becomes logically possible, particularly when viewed in the context of Maritain's discussion of necessity and contingency. The existence of the immateriality of the intellect's volitional dimension (traditionally called the intellectual appetite or will) would preserve authentic freedom in a way that the materialist's *illusion* cannot.

In his book, *Freedom In The Modern World*, Maritain shows that the key to the solution of the problem of freedom lies in the truth about the spiritual nature of the will itself. "The order of Freedom," Maritain



writes, “necessarily presupposes the order of Nature.”<sup>21</sup> For Maritain, the will “is itself a kind of nature,” one that “has a necessary end or determination: there is something it desires by *virtue of what it is*: this something is the Good *as such*.”<sup>22</sup> Here is Maritain’s argument:

If the will is *necessarily* directed to a good without limit, it follows that any good which is not a good without limit cannot bind the will by its necessity. It is because the will has by nature a capacity for the infinite and because it tends by nature and necessarily to an infinite Good which shall fulfill its aspiration that the will is free in [the] face of every particular and partial good....<sup>23</sup>

Thus, the will is not bound by the causal necessity that would result should it be confronted by Goodness Itself; were that the case, its every choice would be a necessity by essence. Similarly, the intellect, too, is not bound by the causal necessity that would result were it confronted by Being or Truth Itself; in that case, its every assent, too, would be a necessity by essence. Rather—and absent these causal necessities by essence—we can see how the multiple genetic, physiological, and spiritual-intellectual factors that combine to influence our free choices and actions are often inscrutable and unknowable. And yet the epistemological uncertainty of this mystery should not lead us to the erroneous conclusion that they are explained by chaos theory or any entirely materialist explanation. To do so is to fail to recognize a mystery of another kind: the mysterious dynamics of the infinite depths of our created and creative spirit-incarnate selves. And, so, forget the “new genes” (genetic determination), forget the “blue jeans” (social determination). Indeed, forget any “pernicious habit of a purely mechanistic imagery.” Rather, to borrow from another of Maritain’s essays, “The Majesty and Poverty of Metaphysics,” this mystery of the spiritual nature of our intellect and will constitutes the very “majesty and poverty” of our human nature: our poverty lies in the limitations of our knowledge and freedom, while our majesty consists in the limitless heights to which our nature is preordained, enabling us, as Maritain

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<sup>21</sup> Jacques Maritain, *Freedom In The Modern World*, translated by Richard O’Sullivan (New York: Gordian Press, 1971), 5.

<sup>22</sup> *Ibid.*, 7.

<sup>23</sup> *Ibid.*

poetically observes, to “gravitate, head first, to the midst of the stars....”<sup>24</sup>

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<sup>24</sup> Jacques Maritain, “The Majesty and Poverty of Metaphysics,” in *Distinguish to Unite or The Degrees of Knowledge*, translated from the fourth French edition under the supervision of Gerald B. Phelan (Notre Dame, Indiana: University of Notre Dame Press, 1995), 1-19.