

HUMAN ORIGINS AND HUMAN RIGHTS IN THE GENOME AGE

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A culture's anthropology and consequent social organization is largely informed by a shared story about human origins. Religions commonly offer some kind of story about how human beings came to exist, how they differ from the rest of creation, and how they are supposed to use their special powers and attributes. The implications of this origins story will influence a culture's understanding of how society should be organized and what is owed to particular human beings as a consequence of these shared origins.

The preceding three articles illustrate this connection by examining how various Christian cultures have reflected upon the implications of their shared understanding of human origins as they struggled with disputed concepts of universal human rights. Each author demonstrates how the concept of universal human rights, and the content of those rights, relies to a remarkable extent upon a shared story about the origins of human beings. First, I will briefly expound on this common thread from the three articles, and then turn to examine one contemporary answer to the question of shared human origins that is seeking to replace these earlier explanations: an origins story based largely on explorations into the human genome. While the concept of human rights emerging from the Christian story of origins may have been slow to produce an adequate defense of the fullness of human dignity, I contend that the reduction of a shared human origins story to a material biological basis is an unpromising and inadequate foundation for a theory of universal human rights.

Charles Reid has shown how theologians and canonists of the Middle Ages wrestled with the question of marital rights and duties of non-Christians.¹ In doing so, these thinkers were forced to first

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1. See generally Charles J. Reid, Jr., *Toward an Understanding of Medieval Universal Rights: The Marital Rights of Non-Christians in Early Scholastic and Canonistic Writings*, 3 AVE MARIA L. REV. 95 (2005).

determine whether non-Christians actually participated in marriage as the Church understood that concept. Saint Augustine, Hugh St. Victor, and those following their lead, began their reflection on the question of marriage among infidels with a consideration of Genesis. Since God created the world, these Christians saw His handiwork, purpose, and intentions reflected in all of nature. Therefore, they were compelled to seek the answer to disputed questions in a proper reading of His intentions, as displayed in creation, in order to maintain fidelity to His will.²

Even more directly, God's will was manifested in the human nature that marked the capstone of His creation, the human race. God directly created Adam and Eve in His image and with attributes that separate humanity from the rest of creation. All human beings are descended from this first couple, and all human beings alike received the divine mandate to be fruitful, multiply, and exercise dominion over the earth. From these shared roots, Christian theologians deduced the initial conclusion that infidels did in fact participate in marriage as the Church understood that term, and were therefore entitled to the rights and duties of marriage.³ While the advent of Christianity may have introduced an elevated conception of marriage for believers, according to these theologians, it is remarkable that Christian philosophers and canonists supported the sacramental character of even non-Christian marriages, and found in them a reflection of the universal longing of human souls for God. That these natural rights were recognized even as to groups as marginalized from Christian cultures as the Jews and Muslims is a testament to the seriousness with which these thinkers approached the concept of universal natural rights based on the implications of divine revelation.

Propositions regarding the demands of universal human rights at this time grew out of an understanding of the divine origin of all human beings, supplemented by reflections on a shared human nature. The foundation for these rights was, therefore, an unchanging, universal, and divinely ordained ground, knowable, at least in part, through reason. One would be hard-pressed to find a more secure basis on which to rest a theory of universal human rights, even granting that many fell far short of its demands for much of history. Today, although the term would not have been used at the

2. *See generally id.*

3. *Id.* at 108-10.

time, one would say that the thinkers of the Middle Ages had developed a concept of the origins and implications of “human dignity” which held out promising grounds for development. That the path of this development sometimes ran into substantial roadblocks is less surprising than its ultimate successes.

Professor Muldoon’s paper, focusing on the Church’s attitude toward slavery, overlaps to some extent the era explored in Professor Reid’s paper, and therefore offers an interesting counterpoint to its conclusions.⁴ Reid’s paper, on the one hand, illustrates how the Church used reflections on the concept of universal human rights *ad intra*, to control practices that came closer to the traditional jurisdictional sphere of the Church—the theological, canonical, and juridical status of marriages. Reid shows how the answers to these questions demonstrate the serious weight given to the concept of universal human rights by Christian thinkers as to matters within the Church’s exclusive control.⁵

On the other hand, Muldoon’s paper exploring the theological and moral status of slavery deals with a question that falls into a wider social sphere outside of the Church’s immediate jurisdiction.⁶ Was the Church more aggressive, and more successful, at eliminating practices incompatible with the natural law the closer one moves toward the center of its jurisdiction? It is interesting to note that where the status of slaves touches upon matters within the central jurisdiction of the Church, such as whether slaves could be baptized and married, one finds at least an attempt to respect certain human rights of the slaves, even as the Church failed to directly challenge the institution of slavery.

Muldoon next discusses Christian efforts to come to terms with, rather than move for the immediate elimination of, the practice of slavery, both in the ancient world and in the Spanish and Portuguese conquest of the New World. Professor Muldoon gives us a series of Christian reflections by popes, theologians, and canon lawyers that start with the theological implications of the Genesis story as presented in Professor Reid’s paper, but which add another aspect of the Christian origins story—the Fall of Mankind. The sin of our first ancestors, Adam and Eve, has made it impossible to create a society in

4. See generally James Muldoon, *Spiritual Freedom—Physical Slavery: The Medieval Church and Slavery*, 3 AVE MARIA L. REV. 69 (2005).

5. See Reid, *supra* note 1, at 120.

6. See generally Muldoon, *supra* note 4.

which the full implications of Man's divine origins are completely respected.⁷ The Christian doctrine of the Fall seems to have been used in the debate over slavery to blunt the demands implicit in Genesis and the Gospel of Jesus Christ by suggesting that their fullest social implications are impossible to achieve in this life.

Muldoon ascribes the Christian refusal to press for the outright elimination of slavery at least in part to the doctrine of the Fall, which encourages a certain resignation to the fact that the fallen state of human beings will inevitably result in such evils as war, poverty, and slavery, regardless of the more revolutionary implications of the Gospel.⁸ This suggests that since the Fall, not even a thoroughly Christianized society will be able to adequately respect the demands of the Gospel. Because the reality of human sinfulness made this goal impossible to achieve, the Church focused instead on ameliorating the conditions of the slaves, sometimes encouraging manumission, while maintaining a defense of the slaves' humanity and worthiness of the sacraments.

Professor Muldoon gives us a sense of the sixteenth- and seventeenth-century debate over the justification for slavery that continued even as the Church accepted, and even encouraged, the institution of slavery as practiced by Spanish and Portuguese conquerors of the New World.⁹ Amidst the sad story that emerges from that time period, there were some small points of light that eventually paved the way to an eventual outright condemnation of slavery. Most importantly, the Church held fast to the doctrine of the common origin of all mankind and effectively resisted the claim that Africans and Native Americans were sub-human. Indeed, several saints held up by the Church for popular devotion were slaves or the offspring of slaves.¹⁰ Secondly, the widespread acceptance of the idea

7. *See id.* at 69-71.

8. *See id.* at 75-76.

9. *See id.* at 80-91.

10. I think it would also be possible to flesh out a picture of the Catholic attitude toward slavery in this era with a consideration of the witness of the saints. How was the Catholic attitude toward slavery shaped by popular devotion to St. Peter Claver, a Spanish Jesuit of African origins known as the slave of the slaves, who ministered to the physical and spiritual needs of African slaves as they arrived in South America?

St. Benedict the Moor was born a slave in Sicily and was freed by his master before becoming the superior of an all-white chapter of Franciscans. He was known as an exceptionally holy man during his life, and upon his death in 1589, his veneration quickly spread throughout Italy, Spain, Portugal, and South America.

St. Martin de Porres was the illegitimate son of a former slave born in Peru, who was admitted to the Dominican order despite a rule denying full vows to descendants of Africans

that slaves were legitimately captured in war, even if there was no actual proof required, was at least a tacit acknowledgement of the undesirability and abnormality of slavery. The fact that slavery was considered a product of the Fall points to its sinful origins and nature. Additionally, the encouragement of manumission as praiseworthy¹¹ further pointed to a desire for the elimination of slavery. Finally, as many have noted, Christianity did provide the premises that led to a final, revolutionary, and often extremely costly rejection of slavery. On the other hand, the Roman Empire lasted for well over one thousand years without a principled rejection of slavery ever gaining hold.¹²

Turning to the third presentation by this panel, George Carey's careful taxonomy of two of the most influential phrases in the Declaration of Independence show how those phrases have their foundation in another origins story related to a social contract theory, supplemented and circumscribed by an understanding of natural law.¹³ Here the origins story relates to human beings with certain

and Indians. Although he was subject to harsh treatment because of his background, at his funeral in Lima in 1639, his coffin was carried out of church by bishops and ruling politicians of the day.

Several very popular saints had been enslaved, including St. Patrick of Ireland. One of the few remaining writings by this saint is a raw and stinging condemnation of slavery. Before he began his legendary service to the poor, St. Vincent DePaul was sold into slavery by Muslim marauders. St. Felicity, who is mentioned in the Canon of the Mass, was a slave, along with many other early martyrs of the Church, and at least two popes had been slaves.

Popular devotion to these heroes of the faith no doubt contributed to an appreciation of the inherent human dignity of slaves. It would be interesting to know whether devotion to these saints contributed to the eventual condemnation of slavery, or whether, on the contrary, they encouraged complacent acceptance of the institution. *See generally* BUTLER'S LIVES OF THE SAINTS (Herbert J. Thurston, S. J. & Donald Attwater eds., 2d ed. 1956).

11. *See* Muldoon, *supra* note 4, at 75.

12. Although all countries now formally ban the practice, one expert claims that there "are more slaves alive today than all the people stolen from Africa in the time of the transatlantic slave trade." *See* KEVIN BALES, DISPOSABLE PEOPLE: NEW SLAVERY IN THE GLOBAL ECONOMY 8-9 (1999). Current estimates of those held in slavery throughout the world range from 2.7 million to 27 million depending on how one defines the concept of slavery. *See* Anti-Slavery Society, *How Many Slaves Are There?*, at <http://www.anti-slaverysociety.addr.com/slavery3.htm> (on file with the Ave Maria Law Review). The United States Department of States has documented that 800,000 to 900,000 people are trafficked across international borders every year. OFFICE TO MONITOR AND COMBAT TRAFFICKING IN PERSONS, U.S. DEP'T OF STATE, TRAFFICKING IN PERSONS REPORT 7 (June 2003), <http://www.state.gov/documents/organization/21555.pdf> (on file with the Ave Maria Law Review). The causes of continued slavery are no doubt complex, but the theory of the Fall of Mankind is at least as compelling an explanation for believers today as it was in the sixteenth century.

13. *See generally* George W. Carey, *Natural Rights, Equality, and the Declaration of Independence*, 3 AVE MARIA L. REV. 45 (2005).

inherent natural rights living in a “state of nature,” who are governed only by the natural law. Because they are subject to mistreatment at the hands of those who disobey the natural law, they agree to enter into a social contract to give the government authority to promulgate and enforce human laws in conformity with the natural law.¹⁴ This origins story, again, provides a foundation, a justification, and an inherent limit to the rights that are thought to flow from human beings’ common origin.

Professor Carey’s paper also provides an interesting shift in focus, to include evidence of the popular acceptance and understanding of two of the key phrases from the Declaration of Independence: the equality of all men and the notion of unalienable rights. In piecing together the “sense of the people”¹⁵ that informed the meaning of these phrases, his inclusion of sermons and the actual practices of the legal and cultural institutions of the times adds an important dimension to illustrate how colonial Americans interpreted and lived out their understanding of the demands of these shared ideas. It is quite unlikely that one could find similar evidence of a widespread understanding of these concepts today, even as the phrases continue to resonate. Certainly, the idea that the natural law imposes duties and limits on natural rights is no longer as widespread as Professor Carey demonstrates they were in the colonial period. As a result, our shared understanding of natural rights has shifted in emphasis, away from a communal focus and toward an individualistic conception.

One of the few institutions that still preaches these concepts of universally valid natural law duties in conjunction with natural rights, that were widely accepted by the founding generation, is, perhaps surprisingly given its resistance to liberal democracies, the Catholic Church. In his 1963 encyclical *Pacem in Terris*, Pope John XXIII first lays out an exhaustive list of the content of human rights but then he adds this:

The natural rights with which We have been dealing are, however, inseparably connected, in the very person who is their subject, with just as many respective duties; and rights as well as duties find their source, their sustenance and their inviolability in the natural law which grants or enjoins them.

....

14. *See id.* at 51-53.

15. *See id.*

. . . . Those, therefore, who claim their own rights yet altogether forget or neglect to carry out their respective duties, are people who build with one hand and destroy with the other.¹⁶

While this view may persist in some parts of the culture, it is indisputable that our legal culture no longer accepts the founding generation's understanding of inherent limits upon natural rights arising from a full appreciation of the natural law, and from the common good arising out of our common origins.

In its discussion of human cultures, the *Catechism of the Catholic Church* asserts that no culture can ultimately evade an answer to the most fundamental questions: "Every institution is inspired, at least implicitly, by a vision of man and his destiny, from which it derives the point of reference for its judgments, its hierarchy of values, its line of conduct."¹⁷ Cultures that answer these questions incorrectly, with a faulty and usually reductive anthropology, end up creating distorted and unjust societies.

A rough outline of the Supreme Court's current implicit anthropology would have to take account of the Court's expansive reading of the liberty interests protected by the substantive due process clause of the Fourteenth Amendment. Its most sweeping annunciation of that conception is set forth in a much criticized passage in *Planned Parenthood v. Casey*¹⁸ regarding the scope of the liberty interest, with the necessary conclusion that countervailing understandings of natural law or the common good must give way when confronted with an individual interest of such a high order: "At the heart of liberty is the right to define one's own concept of existence, of meaning, of the universe, and of the mystery of human life."¹⁹ To challenge this conception of liberty requires one to equally challenge the implicit anthropology that the Court has adopted in *Casey*, and seemingly extended in *Lawrence v. Texas*,²⁰ regarding the nature of human existence and the relationship of human beings to the wider society. But our culture has no consensus or ground upon which to argue about these concepts, which have all traditionally been linked to a common story of human origins, as evidenced in

16. Pope John XXIII, *Pacem in Terris* [*Encyclical Letter on Establishing Universal Peace in Truth, Justice, Charity and Liberty*] ¶¶ 28-30 (St. Paul ed. 1963).

17. CATECHISM OF THE CATHOLIC CHURCH ¶ 2244 (2d ed. 1997).

18. 505 U.S. 833 (1992).

19. *Id.* at 851.

20. *See* 539 U.S. 558, 574 (2003).

these three papers. The absence of such an origins story weakens the ability of a culture to articulate and defend its judgments about the content and scope of universal human rights.

The danger here is that a faulty and truncated anthropology that fails to fully appreciate the depths and complexity of a universally shared human essence, or that fails to give due regard to all human beings partaking of that essence, ultimately ends up creating an unjust and unworkable culture. The twentieth century offered a smorgasbord of examples of the reality of these dangers, all of which partake of one form of reductionism or another. Nazis held that human beings do not share a universal and equal dignity, but that true human dignity is dependent on ethnic blood lines. Communism is a form of economic reductionism, in which humanity is explained in purely materialistic terms. In his encyclical *Centesimus Annus*, Pope John Paul II offers his explanation of how Marxism's reductive anthropology led to social injustice:

Socialism considers the individual person simply as an element, a molecule within the social organism, so that the good of the individual is completely subordinated to the functioning of the socio-economic mechanism. Socialism likewise maintains that the good of the individual can be realized without reference to his free choice, to the unique and exclusive responsibility which he exercises in the face of good or evil. Man is thus reduced to a series of social relationships, and the concept of the person as the autonomous subject of moral decision disappears, the very subject whose decisions build the social order. From this mistaken conception of the person there arise both a distortion of law, which defines the sphere of the exercise of freedom, and an opposition to private property. A person who is deprived of something he can call "his own," and of the possibility of earning a living through his own initiative, comes to depend on the social machine and on those who control it. This makes it much more difficult for him to recognize his dignity as a person, and hinders progress towards the building up of an authentic human community.²¹

Similarly, in today's culture, there is a serious risk created by an anthropology infected with biological reductionism, driven in no small part by the extraordinarily powerful scientific method, which seeks to break all systems into their smallest parts in order to

21. Pope John Paul II, *Centesimus Annus* [Encyclical Letter on the Hundredth Anniversary of Rerum Novarum] ¶ 13 (St. Paul ed. 1991).

determine and control their mechanisms. The scientific method, for all its manifest power in areas such as physics, chemistry, and biology, risks presenting an anthropology of biological reductionism that cannot account for the transcendent, spiritual aspects of human nature. Biological reductionism replaces the concept of the soul with the functioning or status of various biological systems or material substances, and where its premises have been applied to society, has justified the unjust treatment of the most vulnerable human beings, those who are unborn or facing the end of life.

Under pressure of various bioethical challenges, most notably the questions of abortion and end of life decisions, our law has adopted a view of human beings that excludes many humans from the privileged protection of the status of "persons." Unborn children may represent a "potential life," but they are not "human persons" deserving of legal protection because various biological systems are not sufficiently developed. In the case of the handicapped, brain-injured, or dying, again, biological reductionism declares that these human beings are not truly persons because various systems are no longer functioning in an optimal manner. While these biological premises regarding the non-personhood of some human beings most directly threatens those who do not measure up to various arbitrary biological criteria, in reality, all human beings are threatened by this approach to defining who is worthy of the full status of human personhood, and therefore of human rights. As soon as some people are deemed to fall outside of the protected community of persons, on the basis of arbitrary criteria, the possibility exists that others will be excluded on the basis of similarly arbitrary criteria. In fact, the very concept of "universal human rights" is called into question by the exclusion of any human beings.

Largely in response to legal decisions such as *Roe v. Wade*,²² various philosophical explanations of "personhood" have been proposed to justify the exclusion of wide swathes of humanity from the legal status of persons. Paradoxically, many of these definitions of personhood, which focus on the possession of various functions such as consciousness or the ability to feel pain, have been used to argue that various non-human animals are more like persons than are fetuses.²³ In this way, by sleight-of-hand, pro-abortion and pro-

22. 410 U.S. 113 (1973).

23. See PETER SINGER, *Taking Life: The Embryo and the Fetus*, in WRITINGS ON AN ETHICAL LIFE 146, 156 (2000) ("For on any fair comparison of morally relevant characteristics, like rationality, self-consciousness, awareness, autonomy, pleasure, pain, and so on, the calf, the pig,

euthanasia philosophers can maintain that they support universal human rights, but only for those who are “persons.” This trend has led to still more paradoxes. There is a legal movement seeking to establish that at least some animals are “persons” deserving constitutional and legal protections.²⁴ Animals have been afforded increasing legal protections, sometimes outpacing the rights of “nonperson” human beings. In a recently proposed bill, the Unborn Child Pain Awareness Act of 2004, Congress included findings that several federal laws require the humane and least painful methods of slaughtering animals, while there is no similar protection for unborn children who are aborted even after all pain receptors are present in the brain.²⁵ A culture that offers greater legal protections from unnecessary pain to animals than it does to its own offspring is likely a culture that lacks a strong commitment to a robust story of common human origins that takes account of and strengthens the bonds of our common humanity.

In his book *Our Posthuman Future*, Francis Fukuyama worries that our culture has failed to come up with any viable theory to take the place that the Christian notion of the human soul once occupied.²⁶ The concept of soul once provided a widely shared consensus about what it was that made all human beings fundamentally equal, valuable, and worthy of protection.²⁷ Indeed, part of the drama in the debate over justifications for slavery as described by Professor Muldoon centered on the question of whether those enslaved had human souls. This question was debated precisely because the denial of a human soul would mean that there was no need to justify the enslavement of the indigenous people of Africa or the Americas. Today, the debate has largely been conceded, at least as far as our legal culture is concerned, not only with respect to indigenous peoples, but with respect to all human beings. None of us could hope

and the much-derided chicken come out well ahead of the fetus at any stage of pregnancy”); *see also id.* at 160-61 (“If the fetus does not have the same claim to life as a person, it appears that the newborn baby does not either, and the life of a newborn baby is of less value to it than the life of a pig, a dog, or a chimpanzee is to the nonhuman animal.”).

24. *See* David Bank, *Is a Chimpanzee a “Person” With a Legal Right to a Lawyer in Court?*, WALL ST. J., Apr. 25, 2002, at A1 (quoting Laurence Tribe arguing that the Thirteenth Amendment should be interpreted to forbid animal slavery, and that the Eighth Amendment forbids cruel and unusual punishment of laboratory animals).

25. S. 2466, 108th Cong. § 2 (2004).

26. *See* FRANCIS FUKUYAMA, *OUR POSTHUMAN FUTURE: CONSEQUENCES OF THE BIOTECHNOLOGY REVOLUTION* 150-51 (2002).

27. *See id.*

to successfully appeal to our immortal souls as justification for rights claims in twenty-first century America. The philosopher Fr. Robert Sokolowski has commented on our culture's wholesale denial of the reality of the human soul:

It is an extremely curious thing that human beings spend so much energy denying their own spiritual and rational nature. No other being tries with such effort to deny that it is what it is. No dog or horse would ever try to say that it is not a dog or horse, but only a mixture of matter, force, and accident. Man's attempt to deny his own spirituality is itself a spiritual act, one that transcends space, time, and the limitations of matter. The motivations behind this self-denial are mystifying indeed.²⁸

Fukuyama explores the consequences that have followed upon a rejection of the idea of soul, by describing the function that the idea once fulfilled in Western culture. The West has a long and arduous history of establishing and protecting the idea that all human beings deserve a certain equality of recognition or respect.

What the demand for equality of recognition implies is that when we strip all of a person's contingent and accidental characteristics away, there remains some essential human quality underneath that is worthy of a certain minimal level of respect—call it Factor X. . . . [I]n the political realm we are required to respect people equally on the basis of their possession of Factor X. You can cook, eat, torture, enslave, or render the carcass of any creature lacking Factor X, but if you do the same thing to a human being, you are guilty of a "crime against humanity."²⁹

Fukuyama worries that our only shared notion of Factor X, stripped of its foundation upon Genesis and the human soul, now relies exclusively on an unsophisticated and reflexive common experience of our shared biological nature.³⁰ The problem is that at the same time we are relying on our biology as the foundation of our shared human nature, we are also entering an era when scientists are developing the capacity to alter that very genetic and biological nature. While scientists have not yet demonstrated their ability to

28. Robert Sokolowski, *Soul and the Transcendence of the Human Person*, in *WHAT IS MAN, O LORD? THE HUMAN PERSON IN A BIOTECH AGE* 49, 60 (2002).

29. FUKUYAMA, *supra* note 26, at 149-50.

30. *See id.* at 151.

alter our genetic make-up, the technological ability and motivation to do so is growing every year. If it should happen that they are successful in altering and “enhancing” the human genome of those who can afford this technology, then the biological basis for respecting equality and human rights will be seriously undermined. Fukuyama argues that we need to fight against reductionist biological views of human beings, and instead defend a view of Factor X that is “related to our very complexity and the complex interactions of uniquely human characteristics like moral choice, reason, and a broad emotional gamut.”³¹ Only a theory as broad and encompassing of uniquely human potentialities as the notion that was previously characterized in the idea of soul is sufficient to protect human dignity. However, no such widely-accepted concept has yet emerged to take the place of the human soul.

Given the risks presented by Fukuyama, it may come as a surprise that there have already been efforts to give formal legal recognition to the view that it is the material human genome itself that is the basis for human rights and equality. In 1998, on the fiftieth anniversary of the *Universal Declaration of Human Rights*,³² the United Nations General Assembly endorsed³³ the *Universal Declaration on the Human Genome and Human Rights*,³⁴ which was drafted and adopted by UNESCO the previous year.³⁵ This document is notable because it purports to set forth a theory of “Factor X.” It makes an assertion of the grounds of our common humanity and directs the governments of the world to give this view legal recognition and protection.

The fact that the diverse governments represented in the United Nations were able to agree upon a statement relating to the essential nature of human beings is itself notable. Earlier documents, such as the 1948 *Universal Declaration of Human Rights*, set forth a list of the contents of human rights without ever explaining where such rights

31. *Id.* at 172.

32. *Universal Declaration of Human Rights*, G.A. Res. 217A(III), U.N. GAOR, 3d Sess., at 71, U.N. Doc. A/810 (1948).

33. *See* G.A. Res. 152, U.N. GAOR, 53rd Sess., Agenda Item 110(b), U.N. Doc. A/RES/53/152 (1999).

34. *Universal Declaration on the Human Genome and Human Rights*, G.C. Res. 16, U.N. ESCOR, 29th Sess., 26th plen. mtg. (1997).

35. The *Universal Declaration on the Human Genome and Human Rights* was adopted unanimously at the 29th session of UNESCO’s General Conference on November 11, 1997. *See id.*

come from, or how they are discerned.³⁶ As Jacques Maritain put it “we agree on these rights, *providing we are not asked why*. With the ‘why,’ the dispute begins.”³⁷ The dispute was seemingly beyond resolution because of the multiplicity of cultures, religions, and philosophies represented in the United Nations of the late 1940s.³⁸

In the *Universal Declaration on the Human Genome and Human Rights*, by contrast, the United Nations General Assembly appears to finally endorse an explanation of “why” we have certain human rights, and the answer is based on a scientific, material explanation of human origins. The first article of this declaration reads as follows:

Article 1. The human genome underlies the fundamental unity of all members of the human family, as well as the recognition of their inherent dignity and diversity. In a symbolic sense, it is the heritage of humanity.³⁹

While the members of UNESCO adopted this document unanimously, there were some cautionary voices raised against the notion that human rights and human dignity could be adequately grounded in the human genome. During the drafting process of the *Declaration*, the Vatican offered the following critique of the document’s explanation of the foundation of human rights:

Article 1 affirms that “the human genome underlies the fundamental unity of all members of the human family, as well as the recognition of their dignity and diversity”: as formulated, the text would seem to mean that the genome is the foundation of the human being’s dignity. In reality, it is human dignity and the unity of the human family which confer value upon the human genome and require that it be protected in a special way.⁴⁰

Such critiques were unsuccessful in altering the document’s major premise.

36. See *Universal Declaration of Human Rights*, *supra* note 32.

37. JACQUES MARITAIN, *MAN AND THE STATE* 77 (1951).

38. See generally 1 EVAN LUARD, *A HISTORY OF THE UNITED NATIONS: THE YEARS OF WESTERN DOMINATION, 1945-1955* (1982).

39. See *Universal Declaration on the Human Genome and Human Rights*, *supra* note 34, art. 1.

40. *Observations on the Universal Declaration on the Human Genome and Human Rights* (Nov. 11, 1997), http://www.vatican.va/roman_curia/pontifical_academies/acdlife/documents/rc_pa_acdlife_doc_08111998_genoma_en.html (on file with the Ave Maria Law Review).

The declaration by the United Nations goes on to list certain practices with regard to the human genome, such as reproductive cloning, abusive research practices, and genetic discrimination, which should not be permitted.⁴¹ The document also lists certain rights, such as freedom of research, protection of genetic privacy, and the encouragement of scientific progress on the genetic treatment of diseases, which countries should promote and defend.⁴² Nothing in the document suggests that prenatal human beings, each of whom has a complete copy of the human genome, is entitled to any kind of protection or respect on account of the “inherent dignity” of one possessing the genome.

Since, in fact, the overwhelming majority of United Nations member countries explicitly reject such protections to prenatal human beings,⁴³ the precise meaning of Article 1 is doubtful. It cannot logically mean that each human being possessing the genome is thereby entitled to respect. Indeed, it seems to posit that the genome, an invisible and still mainly unknown substance present in all of our somatic cells, is itself entitled to dignity and respect, even if the human being possessing that unique example of the genome is not. Somehow, at least for those nonperson human beings, the material of the genome itself is raised to a higher status than the mere possessor of that matter. This paradox illustrates one aspect of the incoherence of positing a material basis for the foundation of human dignity and human rights, and this incoherence will likely be further exacerbated by continued exploration and manipulation of the human genome.

At least we can be thankful that the United Nations declaration included the *entire* human genome as the foundation of our human dignity, resisting the pressure that some scientists have felt to identify those aspects of the genome that are *unique* to human beings. Nonetheless, some uncertainty continues to exist about the number of genes present in our genome, and the estimated number has been steadily falling as the results of the Human Genome Project are analyzed. Early estimates of 100,000 genes in the human genome have been lowered dramatically. At the time the genome sequencing project was completed in 2001, estimates had been reduced to about

41. See *Universal Declaration on the Human Genome and Human Rights*, *supra* note 34.

42. See *id.*

43. See UNITED NATIONS POPULATION DIVISION, ABORTION POLICIES: A GLOBAL REVIEW (2002), available at <http://www.un.org/esa/population/publications/abortion/index.htm>.

30,000 genes.⁴⁴ In October 2004, the International Human Genome Sequencing Consortium lowered that estimate yet again to between 20,000-25,000 genes.⁴⁵ The fact that this number is not much more than the 20,000 genes present in the genome of the simple round worm, *C. elegans*, has caused some existential angst among scientists who believe that these comparatively low numbers raise “philosophical, ethical and religious questions.”⁴⁶

Rice plants, on the other hand, have an estimated 60,000 genes, leading one researcher to warn humans against genome-envy: “We all like to believe we as humans are better than anything else, and that we have more of everything. But if we pride ourselves on the number of genes in our genome, then we lose to a lowly rice plant.”⁴⁷ Unlike the notion of a human soul, which emphasized a unique attribute of the human person separate and more valuable than all other created beings, studies of the genome emphasize a continuity of human beings with other animals, and sometimes an overt disparagement of any discrimination in favor of human beings as “speciesism,” a concept likened to racism.

Other comparisons between the genomes of various forms of life are perhaps inevitable. An entire field of study, comparative genetics, seeks to discern how the human genome compares to those of other species. For instance, what to make of the fact that the human genome differs from the mouse genome by a meager 300 genes?⁴⁸ And much has been made of the fact that the human genome is nearly 99 percent identical to the genome of the chimpanzee.⁴⁹ Inevitably,

44. International Human Genome Sequencing Consortium, *Initial Sequencing and Analysis of the Human Genome*, 409 NATURE 860, 900 (2001).

45. International Human Genome Sequencing Consortium, *Finishing the Euchromatic Sequence of the Human Genome*, 431 NATURE 931, 942-43 (2004).

46. “That a mere one-third increase in gene numbers could be enough to progress from a rather unsophisticated nematode [*Caenorhabditis elegans*, with about 20,000 genes] to humans (and other mammals) is certainly quite provocative and will undoubtedly trigger scientific, philosophical, ethical, and religious questions throughout the beginning of this new century.” Jean-Michel Claverie, *What if There Are Only 30,000 Human Genes?*, 291 SCIENCE 1255, 1255 (2001) (internal citations omitted).

47. Jonathan Amos, *Puncturing the Ego Gene*, BBC NEWS (Apr. 4, 2002) (quoting Professor Gane Ka-Shu Wong), at <http://news.bbc.co.uk/2/hi/science/nature/1910949.stm> (on file with the Ave Maria Law Review).

48. Marsha Walton, *Mice, Men Share 99 Percent of Genes*, CNN (Dec. 4, 2002), at <http://archives.cnn.com/2002/TECH/science/12/04/coolsc.coolsc.mousegenome> (on file with the Ave Maria Law Review).

49. See Svante Pääbo, *The Human Genome and Our View of Ourselves*, 291 SCIENCE 1219 (2001).

the fact that so little in our genome separates us from chimps has encouraged researchers to identify “human genes,” and each new discovery leads to a small flurry of media attention.

In a 1998 article entitled *Which of Our Genes Make Us Human?*, the journal *Science* reported on the first discovery of a gene that is apparently unique to humans.⁵⁰ The first discovery of a genetically based difference between human beings and all other animals turned out to be the fact that the human genome is missing a particular genetic sequence of 92-base pairs present in chimps and other mammals.⁵¹ This missing genetic sequence results in all human cells lacking a coating of sialic acid, a kind of sugar, which is present in all other mammals.⁵² As the article’s title suggests, the absence of these genes is apparently an important part of “what makes us human” and differentiates us from non-human animals. The more obvious differences between humans and animals have yet to be genetically verified.

More recent discoveries have pinpointed additional genetic variations by systematically comparing the human genome to that of other species, including that of chimpanzees.⁵³ Such studies have been announced in the popular press as leading to the discovery of the “language gene.”⁵⁴ More recently, scientists have identified a gene that led to the evolution of larger brains.⁵⁵ In 2003, scientists at Cornell University undertook an exhaustive comparison of the human and chimpanzee genomes and turned up differences related to genes for smell, metabolism, and hearing.⁵⁶ “Specifically, two key differences are how humans and chimps perceive smells and what we eat.”⁵⁷ Those who have spent time with teenage boys might dispute these conclusions, of course, but again, the scientists involved in this

50. See Ann Gibbons, *Which of Our Genes Make Us Human?*, 281 SCIENCE 1432, 1432 (1998).

51. *Id.*

52. *Id.* at 1433.

53. “Language” Gene Identified, CBS NEWS (Aug. 15, 2002), at <http://www.cbsnews.com/stories/2002/09/17/tech/main522213.shtml> (on file with the Ave Maria Law Review).

54. *Id.*

55. Zach Zorich, *The Gene That Made Us Human*, DISCOVER MAG. (Mar. 4, 2004), at <http://www.discover.com/web-exclusives-archive/gene-made-us-human0304> (on file with the Ave Maria Law Review).

56. News Release, Cornell University News Service, DNA Analysis for Chimpanzees and Humans Reveals Striking Differences in Genes for Smell, Metabolism and Hearing (Dec. 18, 2003), at <http://www.news.cornell.edu/releases/Dec03/chimp.life.hrs.html> (on file with the Ave Maria Law Review).

57. *Id.*

study explain that the goal of their research method is to ask “What are the genes that make us human?”

Under this set of premises, our humanity rests not even on the full genetic endowment of the entire genome, but instead upon the one percent of those genes that make us “human” as opposed to being a mouse or chimpanzee. Our dignity foundation has shrunk from an estimated 100,000 genes predicted about a decade ago to the mere 300 genes that separate us from mice, and is now being further whittled down to the handful of “human genes” of recent discovery. One wonders whether these slim reeds will suffice to uphold the human dignity upon which our human rights depend. While animal rights activists have used this data to argue for greater respect for closely related animals, there is no logical reason why the same similarities could not be used to argue that human beings themselves are deserving of only the lesser respect we pay to animals. If all that separates us from chimps are a few random genes scattered amidst a strand of DNA, why are we deserving of any special recognition at all?

Furthermore, given the fact that these human genes are supposed to be the only things separating us from the status of animals, it is rather striking how quickly scientists rush to splice these uniquely human genes into other species. Often, the same article announcing the discovery of the human genes includes a report that scientists have inserted the gene into a mouse or other animal. For instance, *Discover* magazine reported that the scientist who identified a particular gene that he believes is responsible for the rapid expansion of the human brain is planning to

insert the human *ASPM* gene into mice to see what affect it has on brain development. He hopes to reconstruct the detailed story of how the human brain grew and changed as the result of natural selection, thereby creating the thing that makes each of us unique—the human mind.⁵⁸

Other scientists have produced mice with human brain cells by inserting “human neural stem cells from aborted fetuses into the brains of fetal mice,” which then continued to produce human

58. Zorich, *supra* note 55.

neurons.⁵⁹ One percent of the mice's brains was reportedly made up of human brain cells.⁶⁰ Given the premises of the underlying foundation of human dignity, one could be tempted to ask whether the human dignity and indeed the "human mind" of the aborted human being took up residence within the body of the experimental mice. The paradoxes presented by the new techniques and experiments are difficult to keep up with. In 2001, the researcher who had placed the fetal brain cells into mice fetuses discussed his next proposed research project:

Irving Weissman, a Stanford [U]niversity professor involved in the two-year research project, said the next step could be to produce mice with brains made up almost entirely of human cells—although he said there would have to be a thorough ethical review before this step is taken.

"You would want to ask the ethicist what percentage of the brain would be human cells before you start worrying, and if you start worrying, what would you start worrying about," Weissman said.⁶¹

If the mind boggles at the sixteenth-century debate over whether Africans had souls, one can only imagine the exchanges between "ethicists" as they debate how much of a mouse's brain can be human before one begins to worry (and what exactly to worry about). Apparently the ethical debate, whatever its content, was short-lived, as the *Washington Post* reported in 2004 that Dr. Weissman had resolved the ethical quandary posed by mice with brains made up of exclusively human brain cells:

He proposes keeping tabs on the mice as they develop. If the brains look as if they are taking on a distinctly human architecture—a development that could hint at a glimmer of humanness—they could be killed, he said. If they look as if they are organizing themselves in a mouse brain architecture, they could be used for research.⁶²

59. Ronald Bailey, *What is Too Human? The Ethics of Human/Animal Chimeras*, REASON ONLINE (Nov. 24, 2004), at <http://www.reason.com/rb/rb112404.shtml> (on file with the Ave Maria Law Review).

60. *Id.*

61. Andrew Quinn, *Mouse Brain Implant: Scientists Craft Mouse with Human Brain Cells*, REUTERS (Feb. 24, 2001), at <http://hdighthouse.org/see/xplant/mousebrain.htm> (on file with the Ave Maria Law Review).

62. Rick Weiss, *Of Mice, Men, and In-Between: Scientists Debate Blending of Human, Animal Forms*, WASH. POST, Nov. 20, 2004, at A1.

At a conference discussing the ethics of human-animal hybrids, such as mice with human brains, other ethical questions were raised. Not surprisingly, those pursuing this research are confident that their research is ethically acceptable. There is no need to worry, we are assured, about human DNA migrating to the sperm and egg cells of animal-human chimeras and producing a human embryo trapped in an animal's body: "What would be so dreadful?" asked Ann McLaren, a renowned developmental biologist at the University of Cambridge in England. After all, she said, no human embryo could develop successfully in a mouse womb. It would simply die, she told the academy. No harm done."⁶³ Others continue to have worries about the ethical implications of human-animal hybrids however, such as those who have argued that it would amount to cannibalism to eat "a liver composed chiefly of human liver cells grown in a sheep."⁶⁴

Given that the human neural cells in the brains of these mice, as well as the liver cells in the sheep, or the human embryos in the mouse womb would apparently each contain within themselves the entire human genome, the foundation of our human dignity according to the United Nations, one could suggest that the real threat presented by these experiments is to our own understanding of the basis of human dignity.

When the entire sequence of the human genome was finally published in February 2001, *Science* magazine, which devoted an entire issue to the event, included an introductory article entitled *The Human Genome and Our View of Ourselves*, by Svante Pääbo of the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany.⁶⁵ How would this exploration of the human genome change our view of ourselves as a species? Pääbo offered several assertions. First, it will help us to understand how humans evolved, or in the terms of this paper, it will provide further chapters in a scientific story of the material basis of human origins.⁶⁶ It will also provide a new basis for understanding the unity of the human family. What if those debating the question of the souls of Africans in the fifteenth century had known that "[f]rom a genetic perspective, all

63. *Id.*

64. Bailey, *supra* note 59.

65. Pääbo, *supra* note 49.

66. *Id.* at 1219.

humans are . . . Africans, either residing in Africa or in recent exile”⁶⁷ Pääbo believes that an understanding of the genome will foster a sense of unity among human beings, and that racist perspectives will be undermined when people understand how minor and unimportant the genetic variations are that account for race.⁶⁸ Instead, knowledge of the genome will sweep away the ignorance that fosters oppression and prejudice, and in their place will come a compassion founded on the knowledge that our gene pool is extremely mixed and that “everyone carries at least some deleterious alleles.”⁶⁹

While we are very similar to other human beings, we are not really all that different from other animals, according to Pääbo. “The major impact of such studies will be to reveal just how similar humans are to each other and to other species.”⁷⁰ After noting how similar our genome is to that of other mammals, Pääbo asserts, “No doubt the genomic view of our place in nature will be both a source of humility and a blow to the idea of human uniqueness.”⁷¹

The sense of human uniqueness will be further undermined upon comparing our genome to that of the chimpanzee. What few differences we do find will also be remarkable because they are responsible for our “overbearing domination of Earth. The realization that one or a few genetic accidents made human history possible will provide us with a whole new set of philosophical challenges to think about.”⁷² What is striking about these quasi-religious lessons regarding the nature of humanity, the need for an appreciation of humility, compassion, human solidarity, and the unity of all living creatures, is that these sentiments are inspired not by Holy Writ, but rather by a string of three billion repetitious base pairs of just four genetic “letters” represented by A, C, G, and T.⁷³

Pääbo does warn against the danger of viewing ourselves in exclusively genetic terms, and finds that the media have over-

67. *Id.* Given that those debating the ethics of slavery came to believe that those who were enslaved had immortal souls created by God, and still maintained that enslaving them was permissible, it is rather doubtful, in my opinion, that this genetic information would have swayed those in favor of slavery.

68. *Id.* at 1220.

69. *Id.*

70. *Id.* at 1219.

71. *Id.*

72. *Id.*

73. Each “letter” stands for one of four base chemicals: adenine, cytosine, guanine, and thymine.

emphasized this view. "There is an insidious tendency to look to our genes for most aspects of our 'humanness,' and to forget that the genome is but an internal scaffold for our existence."⁷⁴ Instead, to fully understand what it means to be human, "we need an approach that includes the cognitive sciences, primatology, the social sciences, and the humanities" in addition to the complete human genome sequence.⁷⁵ We do not, apparently, need a concept of the human soul to understand what it means to be human.

And now we have come almost full circle in the modern project seeking to replace the concept of the human soul with the genome, as a scientist has recently published a book claiming that he has located the "God Gene." This gene, according to Dean Hamer, Chief of Gene Structure at the National Cancer Institute, is partially responsible for our human ability to experience spiritual transcendence.⁷⁶ Instead of a theory of human nature that explains our spiritual nature with the creation by God of a unique human soul, Hamer argues that a particular sequence of genes accounts for the human characteristics that are typically expressed as religious or spiritual impulses.⁷⁷ This discovery stems from another burgeoning field called "functional genetics"—a field of study that tries to discern the functions of the human genes that have now been identified in the genome.

Hamer's new book is entitled *The God Gene: How Faith Is Hardwired into Our Genes*.⁷⁸ His claims were presented at length in a *Time* magazine cover story in October 2004.⁷⁹ Our ability to experience spiritual self-transcendence, according to Hamer, is the product of a gene called VMAT2.⁸⁰ "Our most profound feelings of spirituality, according to a literal reading of Hamer's work, may be due to little more than an occasional shot of intoxicating brain chemicals governed by our DNA."⁸¹ VMAT2 conferred an evolutionary advantage to those who possessed it by providing a sense of moral order, magnanimity, meaning, group bonding, and motivation in a hostile world.⁸² Those possessing the gene were therefore more

74. Pääbo, *supra* note 49, at 1220.

75. *Id.*

76. See Jeffrey Kluger, *Is God in Our Genes?*, *TIME*, Oct. 25, 2004, at 62, 65-66.

77. *Id.* at 65.

78. DEAN H. HAMER, *THE GOD GENE: HOW FAITH IS HARDWIRED INTO OUR GENES* (2004).

79. Kluger, *supra* note 76, at 62.

80. *Id.* at 66.

81. *Id.* at 65.

82. See *id.* at 68, 70.

likely to reproduce and pass on the genes to their offspring. This evolutionary advantage explains the near universality of the religious impulse in human beings regardless of culture or geographic isolation.

What does Hamer believe is the import of his discovery on the question of human anthropology? "I think we follow the basic law of nature, which is that we're a bunch of chemical reactions running around in a bag."⁸³ If the Western heritage of universal human rights were indeed rooted in Christian notions of a common human origin and the universality of the human soul, one wonders what theory of universal human rights would likely be brought to birth by an anthropology of human beings as "chemical reactions running around in a bag."

Hand in hand with the spread of functional genetics and the genomic reductionist view of humanity, is a reawakened debate on the ethics of eugenics, the use of genetic techniques to improve the "human stock." A practice that had been once discredited because of its blatant racism, its rejection of those who were deemed "less than perfect," and its adoption by the Nazis, eugenics is now making a comeback. Arthur Caplan, among many other bioethicists, argues that the desire to use genetic information and technique to "improve" our children is not itself immoral.⁸⁴ Eugenics was abused by those who forced it on others, or used it to justify the elimination of those deemed defective.

Today, however, the information and techniques developed by the genetic revolution can be employed ethically, according to Caplan, so long as people are permitted to make their own choices free from coercion.⁸⁵ By enhancing human autonomy, even over our biological natures, eugenics offers the hope of liberating humanity

83. *Id.* at 65. Another scientist concluded that a genetic God experience is "'a brilliant adaptation'" to enable human beings to handle the knowledge of our own mortality. *Id.* at 68 (quoting Michael Persinger). "'It's a built-in pacifier.'" *Id.* (quoting Michael Persinger).

84. Arthur L. Caplan et al., *What Is Immoral About Eugenics?*, 319 BRIT. MED. J. 1284, 1284 (1999).

85. *Id.* According to Caplan:

In so far as coercion and force are absent and individual choice is allowed to hold sway, then presuming fairness in the access to the means of enhancing our offsprings' lives it is hard to see what exactly is wrong with parents choosing to use genetic knowledge to improve the health and wellbeing of their offspring.

Id. at 1285.

from the most implacable sources of indignity—nature and its dumb forces that limit and control our destinies.

I am not aware if those advocating eugenic engineering of the genome have answered the concerns of Francis Fukuyama about eroding the remaining philosophical basis for equal human dignity by splintering our genetic link with one another. If the genome is the foundation of our human dignity and human rights, as the United Nations declares it is, could not one imagine the intentional creation of those with either “less” or “more” dignity, and therefore fewer or more human rights?⁸⁶

If we reduce the foundation of human dignity still further to that small part of the human genome that “makes us human,” then what will be the common element, the “Factor X” or the shared story of origin that will unite us after some have dramatically altered the genome of their children? Or when we share those “human genes” with human-animal chimeras?

Once we have surrendered the notion of a non-material soul or an essential human nature, what will stand in the way, asks Fukuyama, of breeding a sub-class of human creatures “with metaphorical saddles on their backs and another with boots and spurs to ride them?”⁸⁷ Aristotle’s notion of “natural slaves,” the one that seemed such an attractive notion for the slave traders of the sixteenth and seventeenth centuries, would here be realized in a stupendous fashion.⁸⁸ Think of this prospect in an era when there are currently an estimated 27 million human beings living under various forms of slavery.⁸⁹

As disappointed as we may rightfully be in the limitations that our Christian forefathers displayed in working out the fullest implications of the Genesis story, and those natural and universal rights that they took to be the necessary conclusions from that story, at least one can be comforted by the thought that those ideas led to

86. Again this possibility has been discussed widely by bioethicists. For instance, Robert Streiffer asks us to imagine the creation of a human-chimpanzee chimera “endowed with speech and enhanced potential to learn—what some have called a ‘humanzee.’ ‘There’s a knee-jerk reaction that enhancing the moral status of an animal is bad, . . . [b]ut if you did it, and you gave it the protections it deserves, how could the animal complain?’” Weiss, *supra* note 62. Other bioethicists disagree because it is likely that such animals would be used to perform menial or dangerous jobs—which struck some as objectionable. Bailey, *supra* note 59.

87. Fukuyama, *supra* note 26, at 154.

88. See ARISTOTLE, POLITICS, Book I, ch. 5 (G. P. Goold ed., H. Rackham trans., Harvard Univ. Press repr. with corr. 1944).

89. See *supra* note 12 for statistics and references.

many improvements in the legal culture that defines the lives of the least fortunate. They formed the philosophical foundation out of which the most treasured concepts of human rights have taken hold and spread throughout the world. If the emerging genetic/biological foundation of human dignity and human rights does hold similar promise, which I find to be doubtful for many reasons, it will have a very long way to go in demonstrating comparable humanistic strides and in overcoming the many dangers that lurk within its orbit.

Indeed, given the pressure toward biological reductionism inherent in the scientific method, and detailed in the ways that some current research seems determined to undermine any theory that singles out human beings as distinctively unique and valuable, it seems quite obvious that the declaration by the United Nations that our human dignity is founded upon our possession of the human genome is bound to fail. The question that remains to be answered is whether this heterogeneous post-Christian culture is capable of recapturing a broader vision of human essence that is capable of sustaining the universal human rights tradition we have inherited from those who, with all their flaws, believed that each human being is created in God's image with an immortal soul.