



EMORY
LIBRARIES &
INFORMATION
TECHNOLOGY

OpenEmory

The patient as person in an increasingly gene-centric universe: How healthcare professionals should think about genomics and evolution

[Timothy P. Jackson](#), *Emory University*

Journal Title: American Journal of Medical Genetics Part C: Seminars in Medical Genetics

Volume: Volume 151C, Number 1

Publisher: Wiley: 12 months | 2009-02-15, Pages 89-94

Type of Work: Article | Post-print: After Peer Review

Publisher DOI: 10.1002/ajmg.c.30198

Permanent URL: <http://pid.emory.edu/ark:/25593/fhs4d>

Final published version:

<http://onlinelibrary.wiley.com/doi/10.1002/ajmg.c.30198/abstract>

Copyright information:

© 2009 Wiley-Liss, Inc.

Accessed December 6, 2021 5:43 AM EST



Published in final edited form as:

Am J Med Genet C Semin Med Genet. 2009 February 15; 151C(1): 89–94. doi:10.1002/ajmg.c.30198.

THE PATIENT AS PERSON IN AN INCREASINGLY GENE-CENTRIC UNIVERSE: HOW HEALTHCARE PROFESSIONALS SHOULD THINK ABOUT GENOMICS AND EVOLUTION

Timothy P. Jackson

Emory University

Abstract

In the past, the primary threat to the patient as person was a medical utilitarianism that would sacrifice the individual for the collective, that would coercively (ab)use a person for the sake of an in-group's health or happiness. Today, the threat is not only from vainglorious social groups but also from valorized genes and genomes. An over-valuation of genes risks making persons seem epiphenomenal. A central thesis of this paper is that religious healthcare professionals have unique resources to combat this.

Keywords

Charity; disease; evolution; gene; health; patient; selectionism; species

INTRODUCTION

Who is the patient in the increasingly gene-centric universe of medical practice and biotechnology? To whom or what do we ascribe “health” and “disease,” “wellness” and “illness,” and to whom or what do doctors, nurses, biomedical researchers, and hospital chaplains owe first allegiance? Is our reference to particular genes, the individual organism, a population group (a.k.a. deme), the entire species, an even larger clade, etc.? Relatedly, how do we integrate the descriptive language of natural science, concerning what is, with the prescriptive language of ethics and/or supernatural religion, concerning what ought to be? Is it possible that the various taxonomic levels and interpretive discourses finally conflict, such that persons must be sacrificed at times for the sake of the wider gene pool, or such that biochemistry might show the theological (and medical) virtue of charity simply to be mistaken?

It is my contention in this paper that a false view of evolution and genomics has clouded our answers to these important questions. Put more positively, only a non-reductive (and non-inflationary) account of both biological and cultural evolution can suggest how the virtues of love and justice emerged and how they rightly bear on genetic screening and manipulation. Only when a hierarchical view of the units of natural selection is wedded to a holistic view

Contact Info: Timothy P. Jackson, Bishops Hall, Emory University, Atlanta GA 30322, 404-727-0818 (office), Email: tjack05@emory.edu.

Timothy P. Jackson is Professor of Christian Ethics at The Candler School of Theology at Emory University in Atlanta, Georgia, and a Senior Fellow at The Center for the Study of Law and Religion at Emory. A native of Louisville, Kentucky, Jackson is the author of *Love Disconsolated: Meditations on Christian Charity* and *The Priority of Love: Christian Charity and Social Justice*. His current research and teaching interests are in biomedical ethics and political theory; his present book project is entitled, *Political Agape: Christian Charity and Liberal Democracy*.

¹I mean my use of this phrase to pay homage to Paul Ramsey's early groundbreaking work in medical ethics [see Ramsey, 1970].

of morality can we identify the patient as person1 and thus stem the tide of genetic reductionism (and expansionism) that is evident in much contemporary neo-Darwinism. A purely gene-centered view, in contrast, leads at best to a conceptual confusion in which persons (and communities) cannot think coherently about their own genetic diagnosis and treatment. It leads, at worst, to an old-fashioned Social Darwinism in which persons feel compelled to surrender their best interests or impelled to trample the best interests of others, all in the name of eugenics or scientific progress.

Reference to “Social Darwinism” may sound alarmist, or merely fantastic, but consider the famous 1982 Baby Doe case, in which a Bloomington, Indiana newborn with a tracheoesophageal fistula and a duodenal atresia was intentionally starved to death by hospital staff. This lingering death was not prompted by any untreatability of the fistula or atresia but by the baby’s also having Down syndrome (trisomy 21). This was judged by many to be an instance in which familial concerns, both eugenic and financial, overrode what was medically indicated for the individual patient.² Consider, more generally, the practical tension that exists between public health officials (who tend to look at populations), biomedical researchers (who often focus on genes), and clinicians (who are still sworn to treat whole persons). Is it alarmist to ask what will happen if newborn screening is expanded to include the entire genome? In that case, every child will have a health profile – noting carrier status, genetic disease, genetic risks – which will be used by the primary care physician but which may also be available for wider purposes. Even without violations of confidentiality, the aggregate of these profiles would almost certainly be used to institute public health initiatives.³ The best interests of the “public,” to which we ascribe “health,” may substantially overlap with those of individuals, but they may not. Who or what, then, has priority?

Equally importantly, when we implicitly accept a genetic determinism in which segments of DNA (rather than people) cause (and suffer) ignorance, poverty, ill health, etc., then we have spared ourselves the hard work of formulating just social policy and caring medical and nursing practice. Claims to have found “the obesity gene,” “the criminality gene,” or “the happiness gene” capture headlines, and they quietly deliver us from the need to recognize the sanctity of all persons and to extend equal regard and opportunity to them as emerging moral agents [Lewontin, 1992b and 2000].

UNITS OF SELECTION AND INTENSIVE CARE UNITS

In a biomedical world moved by goals of evolutionary progress, to ask what is the chief unit of selection is to ask who is the patient. The unit of selection is one of the most contested issues in evolutionary biology, however. Darwin, unaware of modern genetics, located the primary unit in the organism, but he made an exception and allowed that group selection could be responsible for the emergence of altruism as a behavioral trait. (He noted, that is, that groups with individuals willing to sacrifice for the common good would reproductively out-compete groups made up of purely self-interested members.) Few today doubt that adaptations may benefit groups in some sense, but key figures (e.g., Richard Dawkins, Daniel Dennett, Michael Ruse, and Mark Ridley) hold that, nonetheless, the unit of *selection* is solely the gene-as-replicator. Stephen Jay Gould, Niles Eldridge, Elliott Sober, David

²Largely as a result of the Indiana case, and after several iterations, the federal government issued The Child Abuse Prevention and Treatment Act (1985). The oft-amended Act stipulated that in order for states to qualify for basic grants they must have in place a system for “responding to reports of medical neglect, including instances of the withholding of medically indicated treatment.” Withholding of medically indicated treatment was defined as “failure to respond to an infant’s life-threatening conditions by providing treatment (including appropriate nutrition, hydration, and medication), which, in the treating physician’s reasonable medical judgment, will be most likely to be effective in ameliorating or correcting all such conditions.” [See *Federal Register*, 1985]

³I am grateful to an anonymous reviewer for this clarification of my concerns.

Sloan Wilson, et al. argue, in contrast, for a hierarchy of selection individuals. For them, genes, cells, organisms, demes, species, and clades all interact with their environments and are subject to natural selection. For Gould, for example, genes-as-replicators are not (usually) the causal agents of evolution but rather a handy means of “bookkeeping” to document reproductive success. I shall call the view of Dawkins *et al.* “exclusive gene selectionism” and the view of Gould et al. “hierarchical selectionism.”

The ability to identify the patient and to clarify levels of proper language (and causation) is crucial if we are to understand the implications of genetic research, therapy, and enhancement. My thesis is that if exclusive gene selectionism is true, then so-called “higher” tiers of organization (e.g., those organisms known as “human persons”) are epiphenomenal to their genes. In this case, as Dawkins [1990, p.19] maintains, a person is merely a “survival machine” constructed by “the selfish gene” to make more copies of itself.⁴ In turn, the genotype is the real patient: the fundamental bearer of health and disease, and, most importantly, of wellness and illness. Here the gene becomes the socio-biological centerpiece: that for whose good everything acts. Making the gene or genotype causally and axiologically basic in this way means that common moral notions such as love of neighbor (Jesus) and respect for persons (Kant) are finally erroneous, since they treat as ends (inviolable values) what are in fact only means (vehicles for something else). As Michael Ruse [1986, p. 253] has put it, morality (on this view) is “an invention of the genes rather than humans”; indeed, “morality is a collective illusion foisted on us by our genes.”

If gene selection is all there is behind the evolution of life, then it is hard to see how we can keep success in genetic terms from dictating success in cultural terms. More specifically, it is hard to see how we can keep “the patient as person” from degenerating into “the patient as gene.” Let me put my position bluntly: If the gene is the sole unit of natural selection, then there is no reason why we should flinch from extreme forms of eugenics, no reason not to take genetic engineering beyond therapy for the organism to enhancement of the genome at the expense of the organism. In fact, if gene replication is the *summum* (even the *solum*) *bonum*, then bad, old-fashioned Social Darwinism is the order of the day. We ought to weed out the genetically weak and anomalous individuals, and we ought to enhance the will to power in terms of reproductive success for the few. Dawkins, Ridley, *et al.* deny this, of course, but they leave themselves no logical or empirical basis on which to do so. To refuse to admit the implications of their reductionism is what I call “the naturalistic evasion.”

For reductive naturalists, millions of years of Malthusian scarcity and Darwinian selection have made the human animal irredeemably exploitative and amoral, so there is only temporary expediency, bolstered perhaps by a thoroughgoing delusion. Hence the soliloquy of the selfish gene: “I’ll get my person to help others, if they will help him, and I’ll move him to cultivate a personal reputation for reliability to help ensure such a return from others, but I’ll also move my person to cheat with impunity if he can, though I won’t permit him to know this consciously, lest he give me away.” If the person is merely the gene’s way of making more genes like itself, a “survival machine,” then ethics becomes a kind of façade to keep the mechanism distracted without really affecting the underlying system, the real patient (and agent).

If, on the other hand, hierarchical selectionism is the case, then that for the good of which everything acts need not be the gene or genome. If emergent properties such as consciousness, intentionality, and compassion eventually appear only at the organismic

⁴Even for the most committed genetic reductionist, genes do not typically act alone or determine major traits in isolation; it is collections of genes, finally the genotype as a whole, that governs the personality in interaction with the environment. I sometimes use the singular term “gene,” nevertheless, for convenience sake and because Dawkins has popularized the phrase “the selfish gene.”

level, and these properties bear in turn on evolution, then both personal well-being and group progress can and should be governed by these psychological powers and moral attributes. The person need not be tyrannized by the selfish gene.

That said, hierarchical selection raises its own set of moral and theological problems. The key question here is how to balance the goods of the organism with those of the deme, species, and clade. Once hierarchical evolution is granted, it is not the genotype of a person that threatens to become overbearing, but rather the gene pool of a population. If the gene pool of the species, say, is a common good that is worthy of respect and in need of protection and/or enhancement, then how do we keep from sacrificing the individual organism to this collective? How do we avoid, in the words of Lisa Cahill [2005, p.119–120], “a utilitarian perspective that would deny that individual rights or autonomy can override what is decided (by whom?) to be in the best genetic interests of the whole of humanity”? Such utilitarianism would be a genetic inflationism embraced in the name of the selfish species, correlative to the genetic reductionism some defend in the name of the selfish gene.

To avoid the extremes of inflationism (and reductionism), I propose that medicine and biotechnology look to an analogy with U.S. law. In the American adversarial system, a lawyer stands between his or her client and the state and offers the client “zealous advocacy.” The legal profession is part of the justice system, and the lawyer remains an officer of the court, but the lawyer is employed by the individual client and is to promote his or her best interests. The lawyer is bound by a professional code of conduct and may not suborn perjury or knowingly lie or obstruct justice, but the lawyer is to bracket the question of truth (and perhaps even of justice) as the preserve of the judge and the jury. The assumption is that this division of labor will protect the private citizen against the larger collectives of local and federal governments and actually foster just outcomes better than alternatives (such as a tribunal system).

Similarly, a healthcare professional should see his or her client as the individual organism. The patient is the person resting in the bed, lying on the operating table, or sitting in the office, rather than the deme, the species, or the clade. The genetic well-being of larger groups is not altogether irrelevant, but this is not the concern of doctors, nurses, biotechnologists, genetic counselors, or hospital chaplains as such. Healthcare workers, like lawyers, are bound by both moral and professional codes, as well as subject to positive laws, so they are not merely the “hired guns” of clients. But they should bracket the broader issues of population genetics and species evolution, even as lawyers prescind from the broader issues of truth and justice. (Even as attorneys don’t decide legal guilt or innocence, so physicians shouldn’t decide biological guilt or innocence, so to speak.) The state may attend to various negative genetic matters, such as prohibiting the intermarriage and interbreeding of close kin or the cloning of individuals, but the healthcare professional should be an advocate for the individual patient over against any larger group – whether family, nation, race, species, or clade.

The biomedical analogue of zealous advocacy in law is intensive care, and in intensive care units the unit of care is the person, not the wider population. By insisting on this, the patient is protected against violation by collectives, and, arguably, both biological and cultural evolution are better served in the long run. For reasons previously given as well as others too complex to explore here, I believe that nobody should engage in positive eugenic enhancement,⁵ and keeping the patient as person will offer democratic checks against the overweening designs of both eugenic enhancement and negative genetic control. I grant that U.S. law recognizes collective entities, like business corporations and civic organizations, as “persons” and “clients.” But this is primarily true of civil law, not criminal law. Corporate

criminality is possible – where the whole corporation is punished by fine, by restrictions on activities, more stringent licensing and regulatory demands, and sometimes by “deincorporation” by the state in extreme cases. (Ask Exxon who got whacked for the oil spill.) But corporations usually pay fines for tort, and you can’t send a corporation per se to jail. A CEO may be imprisoned for malfeasance, but he or she is individually liable for the crime in a way the collective cannot be: direct loss of personal liberty. Even as law upholds individual criminal liability, so biomedicine should uphold individual organismal indemnity. A person is a viable unity of body and soul, or, if you prefer, of mental and physical predicates [cf. Strawson, 1999]. And the well-being of the person as patient is the first loyalty of healthcare professionals.

“HEALTH” AND “DISEASE”

Consider the definition of “health” and “disease” and the realities to which they are attributed. Christopher Boorse [1975] has argued for a “functional” account of health and disease: health is not a matter of statistical normality (unusual strength or eye color are not unhealthy) but of conformity to the natural functional organization of one’s species. That is, health is a matter of possessing in good working order the equipment that allows one to carry on those activities typical of one’s nature as an organism. It is a notion very much like meeting the specifications of a set design. And thus disease is the opposite, i.e., deviation from the natural functional organization. These definitions have the result, Boorse contends, that “health” and “disease” are descriptive (i.e., non-evaluative) terms. Good working order is not a matter of worth of the design: one can have a perfect lemon. Biological normality is an instrumental rather than an intrinsic good; it is conceivable that for some purposes, moreover, a different design would be better both instrumentally and intrinsically. Requests to justify the value of health are always in order, and sometimes the unnatural and the deviant will be desirable (e.g., a sixth sense, an angelic nature, or flat feet).

For Boorse, “health” and “disease” are not synonymous with the terms “wellness” and “illness,” which are normative. Wellness is a subset of health, and illness is a subset of disease; and again, neither is a matter of statistical norms. (Tooth decay is a nearly universal disease but only in some cases an illness.) To call something an illness is to make a negative evaluative judgment. A disease is an illness only if it is serious enough to be incapacitating, and therefore is: (1) undesirable for its bearer, (2) a title to special treatment, and (3) a valid excuse for normally criticizable behavior. To repeat the moral, for Boorse [1975, p. 61], “there is not the slightest warrant for the recurrent fantasy that what society or its professionals (morally) disapprove of is ipso facto unhealthy,” or that what they decide is healthy is worthy of (moral) approval.

Can a gene or genes be healthy or diseased, well or ill? I am inclined to say that they can be healthy or diseased, but not that they can literally be well or ill. The latter normative evaluations presume more of a self-conscious, integrated system than one has at the genomic

⁵Few people object anymore to somatic gene therapy designed to prevent or correct hereditary diseases that cause illness in extant individuals. In this case, the motive is to remedy a problem or potential problem for a person who already exists. The technique may involve gene mapping, diagnosis, manipulation, and even manufacture, but the patient (or his or her surrogate) can give informed consent and the aim is recognizably “medicinal” for the individual. Intervention into human germ-lines, in contrast, is more controversial, because this involves mixing technology and sexuality to alter the genetic makeup of future generations not yet with us. When the manipulation of human germ-cells crosses the line into eugenic *enhancement*, that is, more profound moral and spiritual misgivings emerge. In this scenario, parents may seek to select their offspring’s sex, intelligence level, physical strength, facial appearance, etc. in order either to increase the child’s familial utility or to improve his social prospects – a so-called “designer baby.” Still more troublingly, a state may do the same for the sake of furthering national interest (as in contemporary China), or a researcher may do the same for the sake of augmenting human nature – what might be called a “designer deme or species.” Some dispute the distinction between genetic therapy and enhancement, arguing that, over time, therapy for individuals becomes enhancement of the species. But it remains debatable, to say the least, whether we have the moral warrant, the technical skill, or the historical wisdom to carry off the direct and intentional augmentation of the human genome.

level. Animal organisms, what I have called “patients as persons,” can be both healthy or diseased and well or ill, in contrast, precisely because they possess the requisite intentionality and extensionality. Animal organisms – at least those beyond the single-cell level – have needs and interests and can desire certain conditions while rejecting others as undesirable. One can plausibly refer to “a genetic disease,” but to attribute illness to a gene as such would be logically odd – as odd, finally, as calling a gene “selfish.” Aristotle [1998 and 1994] noted that one might call urine “healthy,” but that this usage is derivative. We call urine “healthy” because it is produced by a healthy body and is indicative of health in the organism.⁶ The same holds for calling a gene “healthy,” but calling a gene “well” is not intelligible even as a case of paronymy. In short, judgments of genetic wellness and illness are relative to the complex organism possessing the relevant genotype, even if health and disease can be derivatively attributed to genes.

What about demes, species, and clades? Can they be healthy or diseased, well or ill? I believe that higher human evolutionary units can be characterized in all four ways, because they are composed of organisms that are self-aware and capable of having interests. This is not to say that the human species is reducible, without remainder, to the features of its member organisms. (The notorious fallacy of composition is to think that a wall made of two-by-four-inch bricks must itself be two inches by four inches.) The self-organizing and structural properties of complex wholes can neither be built up additively nor reduced down subtractively, one part at a time. (The nature of emergent features is one of the most fascinating dimensions of contemporary evolutionary theory.) *Homo sapiens* is made up of individuals who may or may not be healthy and may or not be well, but when we speak of the “health” or “wellness” of a species we mean more than that the health of the species is a sign of health in its members or that its discrete members are well. We mean that the dynamics of the group as such are sound, i.e., that it has an adequate habitat, that it has a sufficient breeding population, that it is not suffering from an epidemic, and so on. An endangered species, on the other hand, may have ten members all of whom are healthy and well, but ten may not be a sufficient number for long-term survivability. Because demes and species can be well or ill, in a non-derivative sense, it makes sense to promote their normative ends. It is reasonable, more specifically, to permit governmental entities to practice negative population genetics, as well as to regulate genetic therapy, but only under strong biomedical checks that safeguard individual patients (as described above).

Why this priority of the patient as person over the group? The first reason is taxonomical: the well-being of individual organisms is a necessary, though not a sufficient, condition for the well-being of the species. No *particular* individual is essential to the wellness of the species, but no well individuals ... no well species. The reverse is not true, however. A species can be unwell and yet all its members be well, as when the last few Giant Pandas are cared for in zoos because their habitats are gone and their breeding prospects slim. The second and more important reason is theological: although a species’ attributes and interests are not (entirely) reducible to those of its members, human individuals possess an inviolability due to their bearing the *imago Dei*. I have argued elsewhere [Jackson, 2005] that to be made in the image of the God who is agapic love is to have the need or ability to give or receive such love. Evolution first cast up beings with this need or ability with the emergence of “humanity,” whether one identifies this with *homo sapiens* or some earlier big-brained ancestor.

The *imago Dei* is not a necessary condition for having worth – sunsets, caves, the lilies of the field, and the birds of the air all have great value – and it may be that other higher

⁶Aristotle (1998:Bk. IX, Chap. 4) also observes that “health and the doctor are not in the same way the cause of a man’s being healthy,” thus he drives home the salient distinction between patient and physician, if not between physician and God.

mammals like chimps and porpoises bear the image of God. But the *imago* is a sufficient condition for having a sanctity that ought not to be mortgaged to any other temporal good, including demes, species, and clades. To put it another way, to destroy the human species would be no greater a moral wrong than to take directly one innocent human life. And to enhance the human species would be no moral good at all if it meant the non-voluntary sacrifice of one individual person.

ON THE ORIGIN OF SPECIES AND THE SPECIES OF OUR ORIGIN

The questions with which I began my Introduction ask nothing less than how cultural evolution, in which moral and religious terms are currently central, relates to genetic evolution, including the possible intentional alteration of human nature by scientists and physicians. Can we or ought we to seek to further cultural evolution via enhancement of the individual genotype or the human species? Or might such alterations evacuate culture of recognizable moral and religious content? Might they mistake means for ends and thus sacrifice the patient on the very operating table where she was to be saved?

It is well known that Charles Darwin was reading Thomas Malthus and other economists while formulating his theory of the origin of species and that he self-consciously adapted Adam Smith's notion of an "invisible hand" guiding a free market economy and applied it to the biological processes within a crowded ecology [see Gould, 2002, p. 122–125]. Just as Smith had argued that no central planner (no omniscient state) was needed to guarantee the efficiency of a competitive economic system in which individuals are permitted to pursue their financial advantage, so Darwin argued that no central planner (no omnipotent God) was needed to ensure the evolution of a competitive biotic system in which individuals pursue their reproductive advantage. The prosperity and growth cast up by *laissez faire* economics, Darwin reasoned, are analogous to the richness and diversity generated by natural selection in ecologies. In both cases, (apparent) design emerges without a designer. The rub, of course, is that even in a highly successful capitalist system there are still a large number of poor and vulnerable people, whose needy condition is not primarily (or even partially) their own fault. (Leaving aside things like stock market crashes, OPEC price increases, and simple thefts and swindles, think of the ravages of cancer and AIDS for some entrepreneurs, the destructiveness of droughts and hail storms for some farmers, the tragedy of a car accident or plane crash for some working families, and so on.) Similarly, for all its beauty and complexity, "nature is red in tooth and claw" (Tennyson), and the vector of biological progress, if it exists at all [cf. Gould, 2002, p. 1316–1317], leaves many behind. The vast majority of organisms and species that ever lived are now dead, and where is the evolutionary consolation for their widows and orphans?

The above may seem a brief in favor of tempering both capitalist economies (culture) and human heredity (biology), to bring them under some sort of rational and/or moral direction. And so it is, after a fashion. But the question is how? My Friedmanesque hunch is that the state's intervening to script eugenics will tend to be just as harmful as the state's intervening to script economics. Neither the biology of National Socialism nor the political economy of Soviet communism is the answer. The variables are too numerous, multi-layered, and unpredictable to allow for centralized control of specie(s)—both taxonomic ranks and coined money [on the latter, see Friedman and Schwartz, 1963].⁷ If Lewontin [1992a] is correct, governmental efforts at positive and negative eugenics (injecting genes into or extracting genes out of persons or populations) will always be ill-timed and counter-productive.

⁷The intriguing parallels between how money and genes move and replicate are worth exploring in more detail than is possible in this paper.

I am not recommending that we place all genetic decision making in the hands of parents or private individuals, since these too, as I have contended, can be deeply coercive and objectifying. In- or non-voluntary eugenics is a bad idea, no matter who practices it. The solution, I believe, is not to try to master biology by explicitly genetic means. We must appeal to something higher and better than increasing or redistributing specie(s) if we are to let marriages (like markets) be the bearers of partly contingent and partly constrained fruit. This something higher and better is, for Jews, Christians, and Muslims, the love of God, a.k.a. charity. Charity affirms genetic therapy, I believe, but it endorses neither Shaker celibacy, on the one hand, nor eugenic enhancement, on the other. (There is Christian Science, and there is Christian science.) The mistake is in looking to biology for salvation in the first place, a version of idolatry that theologians call “immanentizing the eschaton” – looking within history for a consummation that actually transcends history. Neither biological evolution nor cultural evolution can “save” us, since both of these processes are time-bound rather than eternal.

CONCLUSION

At the risk of sounding sectarian, I consider faith, hope, and love to be crucial correctives to genetic reductionism and determinism. The three theological virtues keep genes in their place, so to speak, by referring all things back to their beginning in a divine kenosis and forward to their ending in a divine consummation. Biological evolution is not a self-created and self-contained system, that is, but rather a finite order with its first cause and final end in a personal God. History is “a vale of soul-making,” to borrow Keats’s phrase,⁸ in which genes are means rather than ends. God uses the cosmos and physical laws, including genetics and natural selection, to cast up sentient beings – or, if you prefer, to have them cast themselves up. As Arthur Peacocke (2004, p. 63) avers, “God has been creating all the time through eliciting all the possibilities of the matter which he brought into existence endowed with certain potentialities and governed by the laws of its transformations.”

No doctor, nurse, biotech, or chaplain can be truly healing if he or she wills the disappearance of the patient, for whatever reason. In the past, the primary threat to the patient as person was a medical utilitarianism that would sacrifice the individual for the collective, that would coercively (ab)use a person for the sake of an in-group’s health or happiness. Today, the threat is not only from vainglorious social groups but also from valorized genes and genomes. It is a central thesis of this paper that religious healthcare professionals have unique resources to combat this unjust tendency. Ideally, believing caretakers trust in God and offer suffering service to all sentient beings – a.k.a. neighbors – along the way. This means both refusing to equate humanity with Deity and refusing to equate some subset of humanity (species, race, class, sex, or genotype) with the *imago Dei*. For Christians, Christ on the cross is the truest picture of the neighbor as vulnerable patient, and God did not eschew that Passion but lived it. A third sense of “species” preponderates in this connection: the consecrated elements of the Eucharist. It is *this* species – the voluntarily sacrifice of the strong for the weak – that reminds Christians of their origin and end and thus of the proper ends and means of medicine, nursing, research, and counseling.

Acknowledgments

I am grateful to the National Human Genome Research Institute for their support of the 2008 conference at Vanderbilt University, at which I first presented this paper (conference grant 1 R13 HG004689-01).

⁸John Hick popularized this notion in our own day [see Hick, 1978].

References

- David, Ross, translator. Aristotle. *Nicomachean Ethics*. Oxford: Oxford University Press; 1998.
- Jonathan, Barnes, translator. Aristotle. *Posterior Analytics*. Oxford: Oxford University Press; 1994.
- Boorse, Christopher. On the Distinction Between Disease and Illness. *Philosophy and Public Affairs*. 1975; 5(1):49–68.
- Cahill, Lisa. Genetics, Theology, Common Good. In: Lisa, Sole Cahill, editor. *Genetics, Theology, and Ethics: An Interdisciplinary Conversation*. New York: Crossroad; 2005.
- Dawkins, Richard. *The Selfish Gene*. Oxford: Oxford University Press; 1990.
- Federal Register. 1985; 50(72):14878–14901. [PubMed: 10270565]
- Friedman, Milton; Schwartz, Anna J. *A Monetary History of the United States: 1867–1960*. Princeton: Princeton University Press; 1963.
- Gould, Stephen Jay. *The Structure of Evolutionary Theory*. Cambridge: Belknap/Harvard University Press; 2002.
- Hick, John. *Evil and the God of Love*. San Francisco: Harper and Row; 1978.
- Jackson, Timothy P. The Image of God and the Soul of Humanity. In: Terence, Cuneo, editor. *Religion in the Liberal Polity*. Notre Dame: University of Notre Dame Press; 2005.
- Lewontin, Richard. It Ain't Necessarily So: The Dream of the Human Genome Project and Other Illusions. New York: The New York Review of Books; 2000.
- Lewontin, Richard. *The New York Review of Books*. Vol. 34. 1992a. Doubts about the Human Genome Project; p. 19-24.
- Lewontin, Richard. *Biology as Ideology: The Doctrine of DNA*. New York: Harper and Row; 1992b.
- Peacocke, Arthur. *Evolution: The Disguised Friend of Faith*. Philadelphia and London: Templeton Foundation Press; 2004.
- Ramsey, Paul. *The Patient as Person*. New Haven: Yale University Press; 1970.
- Ruse, Michael. *Taking Darwin Seriously*. Oxford: Blackwell; 1986.
- Strawson, PF. *Individuals: An Essay in Descriptive Metaphysics*. New York: Routledge; 1999.