

# CAN THE HUMANITIES PREVAIL IN A BIOTECH REGIME?

-- Thomas Fitzgerald

*I propose to argue here that the humanities, including its disciplines resident at universities, faces further decline, already well along, in relevance, public esteem, and influence. Among the sources of that devolution in recent years has been ascendancy of the cognitive methods and substantial achievements of the physical sciences, over the foundational orientations and collected works of the humanities. In the past two decades, moreover, the life sciences have emerged as a new antagonist, to present novel problems, dilemmas and anomalies for both individuals and governance, yet seemingly beyond the reach of the humanities' wisdom. Observational methods, findings, and theory building in biological research, along with their material realization as impressive technology, are also invading canonical assumptions and diminishing conviction within the humanities. Its situation is reminiscent of the late nineteenth century when cosmological and environmental discoveries challenged religious faith and doctrinal beliefs, spoken of as "Deus absconditus," and post-Christian mood.*

Looking backward, we see that secularization as part of a larger, many-sided movement in Western history which was carried forward by the epistemic orientation of the science professions, reductionist empiricism, dramatic reach of astronomy, cosmopolitan culture welcoming progress, development of laboratory instruments for patient, detailed observation, and mechanistic-particulate models of explanation (despite contradictions with the quantum) expressed in an austere, value-free terminology. Language changed as well; results of scientific research for this or that project are conveyed not only by visible demonstration, but by the language of measurement, statistical analysis, and number, which by their apparent facticity asserts credibility above other types of knowing or experience. Not to be overlooked is its own dogma of a polished mirror which alone reflects accurately and evenly. References to results of analytical procedures and objects of study often imply a comprehensive "nothing more than . . ." spoken as the final vocabulary by a punctualist, disengaged observer of decontextualized units.

Physicalist redescriptions along with cognitive imitators in positivist social science have been crowding out older categories of individual agency, meaning, relevance, subjectivity, valuing, and in effect, repress evidence from other sources that may offer rival interpretation. Practical success, everywhere on display, has permitted colonizing of the media so that instrumental outlooks and techno-sci talk become the habitual and quasi-official form for naming and describing events and things, not only in the physical environment, but in political economy and interpersonal exchange. In those circumstances, the humanities

maintain a public presence as occasions of diversion and distraction, but as ward of major publishing firms and packaged corporate entertainment, another quarry for half-minute advert themes and stereotypes. Declared reverence for “masterpieces” that accompanies costly stage or TV productions of well-known works and blockbuster museum shows joins the civic religion of mainline denominations invited to official ceremonies. Less reliably do they speak directly to persons as edification and unapologetic truth.

Added to epistemic shifts is the enlargement (as well as deformation) of communications, by the flexibility and reach of electronic devices for exchanging, collecting, distributing or otherwise “processing” information digitally transcribed. That in turn tends to alter existing forms and content of talk, what can be said and heard, and the comportment and cadence of actual speech between persons. Information technology becomes both model and computational metaphor, applied to humans and their cognitive exchanges, to promote (without seeming to) the metaphysical notion that all things can be represented by digital units, as if reality might just as well be so. One minor example of number becoming the thing in itself: in typical public opinion surveys, all of a respondent’s replies to an interview call about a political question, expressing his or her mingled beliefs, hopes, worries, judgments, are compressed into a Likert five-point scale, (strongly agree to strongly disagree) each recorded as a single number, shorn of qualitative distinctions, then summed with a thousand other disconnected responders, to comprise a purported national opinion on a controversial topic. With the same technology, “consumer confidence,” or citizen “approval” of the President, otherwise floating in cyberspace, can be known, but only *as* a number.

Large historical shifts in practices for acquiring and confirming knowledge have been most recently paralleled by dramatic advances in technological expertise for doing genetic and other biological research. Because that extensive research investigates not only the biology of plant and animal life, but of human life, it has serious implications for ontology, that is to say, the irreducible characteristics and fundamental nature of being and existence of those whom we know as humans in all their essential *humanity*.

One of the ontological muddles where we find ourselves grows with current research into the human brain. Neuroscience seems to have concluded (if we look in either the journals or the everyday press) that mind is really brain and brain is a cellular, neurological, and chemical entity, a protein super-computer. Although admitting to great complexity, no “mind,” no sequestered homonculus, has been found in there by researchers, even after hollowing out the body shell, and closely inspecting . . . nothing but cells, neural circuits, dopamine receptors, serotonin, norepinephrine, and so forth. So too with certain literary themes. Expressed in theology and religious belief, and eloquently by the Romantics (poets, novelists, essayists) was their apprehending, beneath the surface and facts of physical nature, of another realm of spirit and mystical presence. All that, of course, repeatedly dismissed in late modernity, and ruthlessly by evolutionary biologists.

To raise questions about how the humanities ensemble (including performance arts and theatre), will be affected by such developments might suggest assured pointing, as if it were another place or country, just there for all to visit and report upon. Well, some of it is: the great holdings housed in academic and institutional settings, where its custodians look after

treasures from the past. Substantial “cultural” organizations, with their own humanistic clergy and full-time advocates, conserve expressions of aesthetic and artistic value by teaching, studying, enlarging, displaying and performing, while outside the gates are camped crowds of free-lance artists of all stripes, talents, and reputation, who carry on as roving, free-lance, self-conscious partisans.

In camera, however, worries are exchanged by tenured insiders about substantive academic changes in economic investment, scale, curricula, demographics, vocational choices, and academic standards, as well as gross politicizing of scholarship . . . topics repeatedly explored in this journal.

[One wide-ranging and pessimistic collection of observations about those problems: “Whatever Happened to the Humanities?” Alvin Kernan, editor].

Hard perhaps to grasp, nonetheless, on any particular day, that epistemic foundations - the assumptive beliefs -- built into the humanities, are more exposed to erosion, as religious doctrines long have been, by secular and scientific dismissal, or abuse, as inherited “stories.” Depletion of sensibilities following upon undermining of aesthetic and artistic coherence also continues, usually unremarked. Its things and ways, once compelling, and absorbing of self, can be counted as one more loss; remnants dressed as Art or Creative Spirit are summoned, but their presence, quick to take flight again, requires attention (close reading, listening), also distracted by other claims on it. Inhibited willingness to make evaluative judgments accumulates not only from the worm of post-structuralism, or the relentless dissection of the human creature by molecular and other clinical research, or gradual encirclement by integrated physical theory, or the autonomous spread of naturalistic description as final vocabulary, but by shared practices and contagious attitudes accumulated in populations simply living day by day in the dense and ubiquitous technological condition in our time.

When the Human Genome Project got underway, substantial government funding was also budgeted to identify and study the “ethical, legal, and social implications” of that research. While the larger effort was eminently successful, the work done on the ELSI side did not come to much, even though funds were spent, educational materials prepared, and conferences convened at attractive locations. [Philip Kitcher, who served on the working committee there, documents those failures in *Science, Truth, and Democracy*.] Nonetheless, it called attention of both publics and professions to certain prominent issues of genetic research and biotechnology, and legitimized those concerns within science-based institutions and some legislatures.

The University with which I have a continued association and interest is heavily invested in biological and other science research facilities, with funding grants totaling \$749 million this year. Its Biomedical Engineering Project is especially relevant to the issues raised here, in that it has developed, and is using recent engineering and medical research, equipment, and devices (including nanotechnology) installed in the human body for diagnosis, medication, correction or amelioration of disabilities. But once again, it raises the *Qui Bono?* questions, as well as others about potential for misuse and harms. The University recognized that present and planned work here in molecular biology, genomics, and cognitive neuroscience, as well as research done elsewhere, will have serious implications for societal values and practices,

beyond the scope of separate projects. It therefore supports conferences, lectures, forums and other activities during the academic year. Some of these are sponsored by its staffed Life Sciences, Values and Society Program the School of Public Health, and the Medical School. The School of Public Policy announced earlier this year that it had received a substantial gift which will help future study of a series of life sciences policy questions relating to legislation and public administration.

The University has also established an Office of Technology Transfer, to assist and promote the utilization by corporations, “venture capital” and other groups of the discoveries of its many-sided scientific research, hence to facilitate further development and realization of benefits for the State’s economy, public health, and the school. While I am well aware of demurrers about commercialization and marketing of educational resources in the new amalgam, or truncating intellect’s critical distance, I only cite these organizational arrangements to point to similar extensions taking place elsewhere at major research universities, and the substantial activity of the life sciences and biotechnology as a national -- and academic -- force.

Initiatives here to promote discussion of the social, legal, political and ethical issues emerging from life sciences research are laudable, including the beginnings of outreach to publics and University stakeholders, to help prepare them for participating in decisions on critical issues. In addition, some of us are encouraged by a changed academic posture toward scientific research, offering hope for anticipating problems and better planning. Still, many of the speakers who have appeared in such events are themselves educated in science and are employed as specialists in one or another biological profession, which may explain why they seldom examine certain substantial concerns, or avoid expressing the pessimism felt by serious people elsewhere about revolutionary advances in the life sciences and their consequences, intricately dispersed.

The less visited problems are not only about particular technologies -- although people who defend civil liberties and privacy find the new surveillance equipment intrinsically objectionable. Instead, skepticism and resistance look to a mentality associated with large and inaccessible corporate-academic-institutional consortia of which laboratory research is but a part, where control, manipulation, and transformation of living materials comprise the governing disposition. “Value” and worth are objectified, calculable in utilitarian, cost-benefit terms, expressed in market exchange price. As that rationalist orientation of complex systems invades previously exempt and sequestered areas of life, by mastering and reshaping the endlessly defective human creature, we see the Enlightenment promise of reason once more turned against us, to impose radically different and uninvited redefinitions of what we essentially are or ought to be, and how we can think about ourselves. Nonetheless, its techniques and products are regularly welcomed by media and marketing agents as progress, and later promoted in the schools, as if to grant final authority to research epistemology: “Science says . . .” (whatever its deeper uncertainties).

One source of support for what may otherwise sound like an extreme individual view here can be found in the titles of recent critiques of bio-technology: *Our Posthuman Future* by

Francis Fukuyama; *The Future of Human Nature* by Jurgen Habermas; *Staying Human in an Engineered Age* by B. McKibben, *At the End of an Age*, by John Lukacs. Then there is the signifying juxtaposition in the Report of the President's Council on Bioethics, *Human Cloning and Human Dignity*. These and other studies attempt to convince us of the gravity of our collective future, but specifically what are they telling us? Three merit comment here.

**1. Fukuyama examines four bio-research directions which he sees as especially worrisome:**

**positive eugenics for redesign and reproductive selection of superior human products;**

**biomedical science greatly extending life spans: “the immortality project”;**

**cognitive neuroscience redefining consciousness and mind in naturalism's versions as functional physical processes;**

**neuropharmacology**

Bio-tech capabilities gain everyday acceptance not so much by legislation, but by cumulative actions (and habituation) of very many individuals who utilize specific services, such as pre-emptive screening of the fetus. Once routinized, however, medical techniques and procedures, along with professional outlooks, and scientific explanations, attract little critical attention, even though they gradually affect the special status and character of human life.

Long held beliefs and unspoken assumptions about an underlying human nature which exists apart from contingent cultural or accidental personal characteristics, have historically been embedded in vernacular language, as well as laws recognizing and protecting human rights and dignity. If that human nature then comes to be seen as a mythic or theological illusion, hence irrelevant to medical and therapeutic success, fundamental notions a common humanity, of equality and justice are disturbed. Less visibly, that cognitive shift diminishes confidence in moral choices and ethical judgments, to promote moral relativism and its unfortunate politics.

He also discusses the wider consequences of advances in pharma to supplement widely used Ritalin, Zoloft, and Prozac (among others). These products can provide reliability and capacity tailored to troubled individuals, to escape sadness or melancholy or loneliness or ordinary unhappiness (now medicalized as “depression”) and replace such feelings with confidence and optimism. With further legitimation, more people will be routinely advised by trusted medical personnel to accept such calming, and be free from anxiety or regret. Emotional and spiritual suffering, expressed in literature and theatre since the pre-Socratics, can increasingly be seen as disorders, unnecessary, a matter of genetic vulnerability, chemical imbalances, faulty synapses, and so forth.

“Attention Deficit Hyperactivity Disorder” and “Bipolar Disorder” already in everyday parlance, afflict children and adults who welcome the daily pill. Fukuyama notes the APA's quasi-official *Diagnostic and Statistical Manual of Mental Disorders* has been granted legal status for state agencies to diagnose and act upon wide ranges of behavioral difference as pathology. Accordingly, an impressive buffet of psychotropic drugs offers new possibilities

for managing aggressive or disruptive citizens, especially those being confined, or other involuntary clientele . . . an example of how major technologies, offering increased security or other popular benefits, also contain a concealed ideology.

**2. A detailed and well-documented statement about anticipated consequences of genetic bioengineering, especially embryonic “cloning,” was made by members of the President’s Commission.**

That term has been puzzling to the public, but is used as a sort of portmanteau for a variety of present and anticipated practices. Central among the Commission’s concerns are the breeding and cultivation of embryos for the purpose of harvesting stem cells which are capable of differentiation into more specialized cells in particular organs, claimed in turn by some scientists as having potential to help cure many diseases and disabilities.

If embryos from whatever source are allowed to grow for longer periods (i.e., weeks) in a laboratory setting, they not only can provide more cellular material, but intact organs for transplantation. Laboratories have also demonstrated that headless mice can be grown, which opens up experimental possibilities of using similarly altered fetuses to provide a supply of needed body parts. Experimental work has shown animal organs can be transplanted to humans from specially grown animals, and human organs can be grown for similar use in peritoneal cavities of mammals. Moreover, genetic manipulations have resulted in successful experiments in inter-species asexual reproduction of domestic animals--chimeras--which leads to scientific curiosity about producing a creature with mingled human and primate *anima*.

The Commission was aware of such possibilities and therefore opposed not only cloning for reproductive implantation to produce a child, but doing so with the sole intention of later using the resulting embryos in experimental or extractive processes. The emphatic language of their report is most relevant in the present context: new biomedical technologies now on the horizon raise profound challenges to privacy, equality, dignity, and human self-understanding. Lines must be drawn that none may cross; transforming of nascent human life into a commodity -- nothing more than a tool -- coarsens our moral sensibilities. Reducing that life to mere “thingness” predisposes us to ruthless utilitarianism. Deliberations about all this are not over, and after the cloning moratorium expires, will resume, especially as pictures and claims of the needy poster child are pressed forward to trump all argument.

**3. Jurgen Habermas offers an important commentary on the work being done in reproductive genetic science, and outlines consequences for values, understandings, and emancipatory interests, cultivated in the humanities and elsewhere.** As with much of his larger body of progressive work on social and political theory -- better known among intellectual circles on the Continent --

*The Future of Human Nature* seems not to have become part of the debates about bio-sci technology in this country. This neglect is surprising, in that his reservations, doubts and warnings about those technologies are expressed from a “post-metaphysical” position, and do not rely on theological convictions or reference to transcendental spirit, which are ordinarily dismissed, even scorned by many academics as holdovers of oppressive religions . . .

Nietzsche, Marx, Freud, Foucault, Rorty, ready at hand.

Instead, Habermas locates biotechnology within the larger framework of instrumental rationality, and the well-known Enlightenment critique by his predecessors (Adorno, Horkheimer, Heidegger, Gadamer, etc.) as a source of tensions built into late modernity. Instrumental reason, embodied in technology, brings, with its obvious material benefits, a pervasive mentality and orientation of rational calculation that displaces participative exchange and problem solving, once guided by the sedimented practices of existing social orders. Long since adopted by governing bureaucracies and abstract economic entities, “systems logic” has escaped organizational boundaries to colonize life worlds. Objectification--instrumentalizing - of mind and its processes, and depersonalization and commodification of nature, also foster insidious entropy of the now-scarce resource of shared public meaning and moral conviction. Stephen Toulmin similarly argues that one-sided, obsessive Rationality has been driving away Reasonableness, to crowd out everyday practical understanding, disrupt reflection, and undermine cohesive traditions.

As science, technology, and investment economics expand with an internal dynamic, they outstrip normative arrangements in the slower moving public sphere. Elaborate and precise procedures for reproductive and fertility services become established through performative practice, (notably the wide and rapid utilization of prenatal testing), and engrained through distributed precedent; public acceptance follows as shown by nation-wide growth of commercial clinics for a variety of fertility interventions.

One result however, has been to blur the distinction between spontaneous conception and child-as-project, between the grown and the made, to medicalize in antiseptic -- “sterile”! - laboratory circumstances the erotic bonding and felt consanguinity between generations, celebrated not only in vernacular narratives, but in literature and art. Boundaries once asserted for “positive enhancement” (*i.e.*, improving upon) biological characteristics in contrast to negative eugenics of prevention, become fluid as intervention techniques overlap, while professional habits of cost-benefit analysis bypass moral misgivings. During the clinical process of in-vitro fertilization and implantation, for example, often more embryos successfully “take” than are wanted, which later presents parents with the choice of selecting two (or one) while disposing of the others. “Embryo reduction” as it’s called, can also deposit ambiguities for the fortunate survivor later in life.

Going beyond cultural shifts noted by other commentators, Habermas explores certain existential anomalies of genetic modification and engineered redesign. Some technologies, for example, imply crucial difference for enhanced subjects as selves. Instrumental molecular intervention at early reproductive stages may at first be considered improvement, but it creates irreversible limits to a young person’s autonomy. Her capacity for being herself, for realizing the integrity of self-creation and self-understanding, is permanently restricted, because of the narcissistic intentions (we might say, imperial will) of a third party. She learns of a program installed inside herself to which she did not consent yet cannot remove, and may wonder about its diffusion throughout her consciousness, and if it also changes the way others regard her, or she, them. Of course, this consequence, for one, will in actuality be multiplied into many, as eugenic improvement becomes commonplace among the

competitive affluent.

In calling attention to these and other delayed effects of moves (whether from individual choice, or “blank slate” ideologies of Left or Right) toward engineered breeding and reprogramming for better humans, Habermas raises questions which involve special difficulties in a post-metaphysical age, and for philosophy itself. These include possibilities of diminished status of and civil respect due to human creatures, a less convincing construal of a distinctive or enduring human nature, and therefore a less persuasive condition of intrinsic human dignity that stands in contrast with other life forms.

If that is the case, might not the same be said for the humanities? In the past, its disciplines have served secular elites as a place to learn discriminating restraint and expectation, as *Bildung* and cultivated mentalities, independent of religion’s historic scope, yes, even as consolation for lost faith in religious transcendence. But many others who regard themselves as secular are drawn these days to the Church of the Humanities as a source of edification, inspiration, and in a time of total contingency, courage to go on, since they no longer look to organized religion for those affirmations. In confronting the ethical and personal choices put before them by biological research, they do so without the confidence and confirmed obligations for right actions they once enjoyed from metaphysically derived guidance -- whether persuasive or coercive -- a disarmed posture that suggests further strains on invested civic notions of justice, equality, rights and responsibilities, as well as the politics built upon them.

Besides critical examination of the issues cited above are two others which should be of particular concern to life sciences research. Richard Lewontin, Stuart Newman, David Berlinski, and other critics have been pointing out that the life sciences, and biology itself, are studying and attempt to comprehend a complex, fully interactive, non-linear and co-determining system, characterized by randomness, novelty, self-organizing potential, unpredicted emergence, but few singular causal roles. This in turn means a quite different model for investigation than the older standard account of mechanistic, “material,” and mathematically calculable non-life sciences, and therefore quite different conclusions and recommendations for the public weal.

As such, this approach parallels a recent academic appreciation, well expressed in the cultural psychology of Jerome Bruner, and the intersubjectivity of cultural consciousness studied by Clifford Geertz, for getting beyond behaviorist, utilitarian, and rationalist psychological theories built upon confined experimental laboratory procedures. And Philip Kitcher, in his comprehensive study noted earlier, expresses his opposition to the piety of scientists who want to “pursue truth for its own sake,” whatever the exterior consequences and foreseeable harms. He further argues against any scientific theology that insulates its inquiries against moral and political critique, which, in “a well ordered science” would include people outside the disciplines.

Indeed, there are serious questions and public concerns with the work -- often beneficial -- of molecular biology, genetic mapping, and the technological intentions which follow from them. In the continued debates about that extensive work, disciplines comprising

the humanities, especially those lodged at the universities, can contribute from their confluent orientations. Surely they merit a voice in the discussion, a place at the table, not only as a community of ardent interest, but one with interests of its own. Its scholars need not leave value-laden issues to medical-genetic counselors and bioethicists, also resident at the universities, whose replies (for media interviewers, at least) too often imply a go-along, get-along *deformation professionelle*.

And inasmuch as biological science enjoys ascendancy (hopes, worries) among the public which funds the institutional humanities, one might also expect the academy to confront and dispute reductionist explanations--the preemptive biologizing--of the human subject. The humanities will also need to come to terms with its own past ambivalence about biological aspects of human nature and culture, while admitting that the many costumes historically fitted over our inherited scaffolding do not all deserve applause as "diversity."

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My argument here is that the extensive work being done in human genetics, molecular biology, and cognitive neuroscience, along with entrained biotechnology, have diffuse implications, already observed, for the outlooks, cultivated sensibilities, sifted beliefs (whatever) "we" in the humanities value. Those persisting remnants are not only admirable and worthy in themselves, but serve as recompense for, and distraction from the chaotic conditions just outside our bunker.

Not yet apparent to many, however, is new vulnerability to depletion, to loss of nerve. One can imagine theatrical possibilities in an enacted allegory of succession, where eloquent Appreciation honoring human presence in its rounded, immanent being, steps aside and withdraws in deference to exacting Illustration, the cut-away, color-coded diagrams of medical textbooks. Might we be witnessing the successful thingification of humans, the abolition of their particularity? Not quite yet perhaps, but shouldn't we be talking about that available future?

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