

Contributions of Christian Thought to Assessments of Synthetic Biology: Testimony for the Presidential Commission for the Study of Bioethical Issues

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Religion in Democratic Discourse

In recent decades, under the influence of certain prominent political philosophers, it has become common to argue, or even simply to presuppose, that democracy requires bracketing all appeals to religious language or convictions in public debate and deliberation. These are eschewed in favor of what are called “public reasons” alone: reasons that are intelligible and persuasive to persons apart from any particular commitments, traditions or communities to which they might adhere, even from any highly developed notions of the good they might hold. On this view, as citizens we should aspire to speak a kind of moral Esperanto. Our overarching commitment to free speech keeps us from actually constraining other appeals, of course, but in many quarters it is regarded as something between bad manners and bad political ethics to indulge in them. At the very least, the use of explicitly theological language in civic contexts makes us uneasy, and indeed no one who reads the paper can fail to appreciate good reasons for that unease.

Nevertheless, the presidential letter which asked the Commission to take up synthetic biology for consideration specifies that you are to consult the views of faith communities, and this panel was convened to that end. And unless we are prepared to speak in our own voices, out of the gathered wisdom of our faith traditions, it is hard to see what of distinctive value we can contribute to the conversation. Fortunately, you are not likely to confront an immediate impasse. There are no explicit religious rules about synthetic biology for the same reason there are no

rules about airplanes and automobiles: the formation of our canons is far older than the invention of these technologies. But there is a rich body of reflection, observation, and conviction about what sort of thing a human being is, what kind of world we inhabit, and how we can foster its flourishing rather than its devastation. This is not neutral discourse, of course: I would argue as a moral philosopher that once one goes beyond the banalities of kindergarten ethics (be nice) or the empty formalism of “good is to be done and evil avoided”, there is no such thing. Even those moral truisms we commonly take for granted have foundations which are contestable, as Nietzsche demonstrated in the 19th century. But since that is a larger argument than my remaining 12 minutes allows for, I will simply offer a few observations rooted in explicit Christian theological convictions that may nevertheless prove to be generally illuminating. At the least they may help those without religious commitments sympathetically to understand the thinking of those who have them. And insofar as they represent insights grounded in millennia of shared and recognizable human experience, they may also help us to avoid moral and practical errors to which we are prone.

Humans as Creatures and Creators

As we speak of the ethical issues raised by what at least some in this field call “the creation of new forms of life”, I observe that for a theist creation is a theological term of great weight and profound implications. There is a difference between fabrication from parts (even molecular parts) and what tradition has called creation *ex nihilo*. In the understanding of God as Creator which Christian thought has insisted upon, God is the source not only of life but of matter itself, and of time and space as its framework. In classical Christian theology, God is also the very cradle of being, the one who sustains the universe in existence by active attention. Humans are part of this creation, occupying a place within it rather than above it or on some

other plane of being: they too are creatures whose existence is contingent. However, their place is distinctive. To use the language of Genesis upon which so many generations of thinkers have extrapolated, they are said to be made “in the image of God”, and in that capacity to exercise dominion over the creation they inhabit.

This language of dominion has a long and not altogether happy history, having occasionally been used to justify arrogant and destructive – not to mention short-sighted-- indifference toward the earth and non-human life. But there is an internal check on such exploitative readings. It is the fact that humans are made in God’s image *in order that* they might exercise a dominion that is modeled on God’s own. And God’s dominion is exercised in the establishment of contexts in which life flourishes, proliferates and diversifies and is nurtured and prized in its own right, and not merely as an instrument. The pinnacle of divine creativity on the earth is precisely the creation of human beings who are also creative, gifted with reason and imagination and ingenuity, who are makers in their own right, dazzling in their daring and their cleverness. Art, science, engineering, the whole astonishing human enterprise is evidence of their capacities. And topping them all is the human capacity freely to choose what to do with those abilities. Seen in this way, the vast and growing powers of humankind are at once a divine gift, and a sort of test. And the long sorry evidence of history is that it is a test we often fail, as every form of human power – strength, speed, knowledge, political authority, intelligence, technological prowess from better spears to better rockets – has been turned to do harm as often as to do good. This is not dogma, but observable fact. As an 18th century theologian observed, the human propensity for evil is the only Christian doctrine for which the empirical evidence is overwhelming.

Christian Anthropology is Ambivalent

So it is fair to say that Christian theological anthropology, its appraisal of what sort of beings we are and what we are capable of, is profoundly ambivalent. And that ambivalence is the richest contribution of Christian thought to moral reflection about science and technology, in the area of synthetic biology as elsewhere. Christian tradition holds that by God's work of creation and redemption we are made to share some measure of divine wisdom and goodness so that, to borrow once more the language of Genesis, we might be fitted to care for and keep the garden of creation. This makes it natural to affirm and delight in all we are and can do. Human capacities for analysis and investigation that enable us to figure out how things work; the ingenuity and inventiveness that allow us to use that knowledge to our benefit; the imagination and ability to extrapolate that make innovation possible; and the empathy and nobility of purpose that have turned these to the amelioration of human suffering and environmental degradation: all these are real, and real cause for celebration and gratitude. The present achievements and incalculable potential of the infant science of synthetic biology is a breath-taking example of all these human abilities.

But they are not the whole picture, and insofar as we allow ourselves to stop with these self-characterizations, to think about or to govern our scientific pursuits as if they were the whole truth, we are naïve at best and willfully self-deceived at worst. For alongside them and just as perennial and undeniable are the other realities about human beings: their familiar capacity to ignore the long term consequences of their acts, their deeply rooted preference for themselves in all calculations of goods and harms, their susceptibility to errors of judgment and fatigue, and their capacity for self-deception and venality and corruption outright: these are not theological commitments so much as observable facts, observable among scientists as among any other

group of human beings. Judging wisely how and to what ends to use the new forms of human power conferred by exponentially growing biotechnical knowledge will require us to look at ourselves with an unblinking gaze, and to recognize that scientific knowledge and technical virtuosity are not the same as moral wisdom, nor do they somehow confer goodness.

The Nature of Human Flourishing

The last aspect of Christian theological anthropology to bring to bear on your ongoing reflection is the inherent sociality of human beings, and the social and communal nature of human flourishing. A secular study of human development will tell you that we are born in human bodies, but we become human persons, bearers of language and culture and a sense of self, only over time and in relation to others. Human survival and well-being is a group undertaking, and we realize our own good in connection with others. What Christian tradition contributes here is the conviction that this is not merely a concession to practical necessity, a grudging tolerance for the presence and demands of other people constrained by the fact that “solitary life is nasty, brutish and short”, as Hobbes famously put it. Our need for each other is a gift and not merely a regrettable limit. But it is also a form of vulnerability. You all have experience of this, for nothing is more intrinsically collaborative than the life of the academy or the process of research. We learn and advance partly in competition, certainly, but also in cooperation and in mutual dependence on one another’s work, and likewise are harmed by the errors or outright deceptions of our colleagues.

But if human flourishing is social and relational, the nature of human evil is deeply corrosive, destructive of the connections between us in favor of the pursuit of individual or group advantage at others’ expense. At its extremes, in the case of megalomania and sociopathy, it is

wildly isolationist, so that the actor becomes the only real person in his or her world, with everyone and everything else reduced to either a tool or an obstacle. Both insights were put succinctly by a North African bishop 1600 years ago: “Nothing is so social by nature, so unsocial by corruption, as the human being.” (Augustine, *Civitas Dei*)

Conclusions

Separable from their particular and confessional foundations are the fundamental insights about human beings that Christian tradition maintains, many of which have empirical warrants as well. These include insights into their capacities and their vulnerabilities, the reach of their achievements but also the depths of their failures, and the permanent susceptibility to error, misjudgment and moral failure they all share. Commitments to the social nature of human progress and well-being point us toward norms of human solidarity, respect for fundamental equality, and particular attention to the vulnerable. Our appreciation for the complex interdependence of life forms and the environments that sustain them point us toward norms of non-instrumental regard for the earth and its creatures. Human power insofar as it puts these values at risk confers fiduciary responsibility. It is a kind of trust. The greater the potency of the technology, the greater the disparity of power it creates, the more difficulty in entering the ranks of those exercising such power, the greater the moral burden, and the more stringent the demand that our power be not merely power *over* other beings, human and non-human, but power *for* them.

We cannot think about how to protect and promote the goods we aim at only in the abstract and idealized world of imagination: the one where science is altogether noble and unselfish and competition for status and profit and pride of place have no role and no impact on

what we do, where human beings and human communities seek only to defend themselves and never to dominate others. We have to think and plan and decide in the actual world we inhabit among the actual people we know ourselves to be. If we take for granted that humans are fallible, subject to mistakes and to failures of care, if we take seriously that they are capable of sustained self-deception as to their own motives, susceptible to corruption that proceeds subtly, insidiously, by unrecognized degrees so that we may find ourselves in places we never thought to be, as people we never imagined we might become – if we take this ambivalent anthropology to heart, then many practical things follow, contributions to ethics as an activity of practical reason.

It should appear from all of the above that we will continue to need rules, actual limits on what is permitted that stand as barriers against the human tendency for over-reaching, and for over-estimating our capacity to control the effects of our technology. But, at the level of legislation, these can only be quite general, practically self-evident, like “don’t prematurely let the products of biological engineering or re-engineering loose into natural ecosystems unadapted to respond to them.” Legislation is too blunt an instrument, and too clumsy, to do all that needs to be done. It makes sense for such obvious general aims to be filled out at the regulatory level, by levels of biosecurity suited to particular risks, in ways analogous to the biocontainment requirements voluntarily subscribed to in the case of recombinant DNA research 35 years ago. Self-regulation will necessarily form the foundation of that apparatus, for the science is too potent and too fast-moving to be regulated successfully entirely from without. Self-imposed limits may also, as in the example given, be taken up into federal funding and oversight requirements, as well as informing external surveillance of potentially dual use information and resources.

But the wise use of biosynthetic powers, like all forms of human power, will require other practices beyond rule-making, self-regulation, and oversight. For these to be effective and adequate will require also the inculcation and sustenance of certain dispositions, attitudes, and habits of mind: in short, for controls to work will require the intentional formation of character as an indispensable part of scientific education and research mentoring. If we are to take into our hands the capacity to reengineer living things, to synthesize working copies of organisms or novel organisms that will take on life and reproductive capacities of their own, we will need to cultivate prudence as well as technical optimism. If we are even to entertain the possibility of re-engineering ourselves and designing our offspring, as some enthusiasts have happily envisioned, we will have to educate affect as well as intellect, cultivate humility as well as ambition, nurture healthy self-distrust as well as self-confidence. A morally wise scientist will not seek or want power for whose use and effect they are not accountable, not even for the sake of expediting research or maximizing the rate of scientific progress.

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