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There is a perception among some today that science is necessarily equated with progress because it is dedicated to advancing knowledge; but ethics is mostly about applying abstract ideals to questions whose answers should be clear to most people, and mostly just results leads to red tape and process-driven institutional review boards. If anything, for people who hold this view, the real purpose of "ethics" seems to be to impede science, progress and human flourishing.

Consider, for example, a recent op-ed by noted Harvard psychology Professor Steven Pinker. Arguing for accelerating research employing the CRISPR-Cas9 gene-editing technique in research on the human species, he writes:

"Biomedical research… promises vast increases in life, health, and flourishing. Just imagine how much happier you would be in a prematurely deceased loved one were alive, or a debilitated one were vigorous—and multiply that good by several billion, in perpetuity. Given this potential bonanza, the primary moral goal for today's bioethics can be summarized in a single sentence.

Get out of the way."[1]

According to Pinker, a "truly ethical bioethics" should not "bog down" research "based on nebulous but sweeping principles such as 'dignity,' 'sacredness,' or 'social justice.'" For Pinker, ethicists and bioethicists who stand in the way of scientific progress are not simply a nuisance—they are morally culpable for untold amounts suffering and harm.[2]

The fear that ethics will impede scientific progress is not new. In the 1970s, with society still reeling from the revelation of the government sponsored Tuskegee Syphilis Study, Harvard Professor Leon Eisenberg protested against increased regulations and ethical codes: the dangers of research, he warned, must be weighed on the "very same scales as the dangers of not doing research… Not to act is to act."[3]

For their part, some ethicists may understand their work in opposition to scientific progress. The unquestionable imperative of science is to increase human knowledge. Knowledge is presumed to be good, but sometimes its pursuit comes at an unacceptable cost. Lacking internal resources for distinguishing between "can" and "should," science (and technology) will necessarily ignore these costs unless others stand in prophetic opposition to its relentless expansion.[4] Science, being amoral (not immoral), needs moralists to say when it is prudent to tap the breaks.

I think this is a flawed way of understanding the relationship between science and ethics. At least since Francis Bacon, science has been understood as always already existing for the benefit of humanity: "Knowledge is power," he declared—power to bring nature under human dominion in

order to eliminate “misery and necessity,” and, thereby, “to relieve and benefit the condition of man.”[5]

The humanitarian purposes of science are acknowledged by the predominant ethical frameworks for clinical research. In an influential article Ezekiel Emanuel and colleagues place the ethical requirements of “value” and “validity” before others, like informed consent and fair subject selection. Their reason: research with human subjects is justified not by its contribution to knowledge in general, but rather by its contribution to “health or well-being.” Pinker seems to assume as much in his assertion of “vast increases in life, health, and flourishing” which are sure to arise, of not with each and every scientific study, then at least with “the biomedical research enterprise as a *whole*.”[6]

Of course, ethicists, and particularly theological ethicists, seek to promote the use of science for the goals Pinker himself cites—enhancing human well-being and flourishing—in theological terms, shalom. A better understanding of the relationship between science and ethics would see each as collaborating in the shared project of enhancing shalom.

So what is the role of ethics and ethicists?

For one, the study of ethics *expands the scope* of consideration of the relevant social goods needed for ensuring that science achieves genuine progress and human flourishing. For example, for all its considerable benevolence, the view of human flourishing espoused by Pinker basically boils down one thing: disability-free-life-years. The more, the better. Not only does Pinker lump all forms of disability together as if each inhibits flourishing in the same way, his rejection of the significance of dignity, sacredness, and social justice reveal his belief that eradication of disease and disability is all that is at stake, and all that is sufficient, for flourishing. By insisting on the importance of dignity, sacredness and social justice, ethicists place biological health within the context of a more comprehensive view of human flourishing. Exemplary, in this regard, is the notion “authentic human development” championed in the encyclicals of the Roman Catholic social teaching.[7]

A second and related task is to *highlight potential conflicts* that can arise and skew our notions of what constitutes progress and human flourishing. Consider, for example, the effects of the rapid development and wide implementation of life-saving and life-extending technologies among older adults. If we only consider “disability free life-years,” such technologies are unquestionably good. In the experience of many at the end of life, however, that very assumption creates the conditions for increasing anxiety, suffering, and anguish as people struggle to free themselves from the very technologies that were developed to save them.[8] Consider also the idea, common in environmental studies, of a “progress trap,” which occurs when a society’s pursuit of progress “inadvertently introduce problems they do not have the resources or political will to solve, for fear of short-term losses in status, stability or quality of life.”[9] Such examples seem to pit ethics against science, but in reality they merely remind us that the value of scientific progress is not absolute, but rather relative to its contribution to the overall common good.

Despite the image of the lone scientist in her lab, we should think of science as an essentially social and political endeavor involving all members of society. By articulating the social goods

that must be considered, and by identifying conflicts between them, ethics facilitates a healthy democratic conversation about the pursuit of scientific progress.[10] Pinker may claim this "bogs down" research; in reality, the trust and transparency which results is essential to the flourishing of the scientific pursuit itself.

1. Steven Pinker, "The moral imperative for bioethics," *Boston Globe*, August 1, 2015.
2. Citing the Global Burden of Disease Project, which reported that in 2010 a total of 2.5 billion life-years were lost to "premature death or compromised by disability," he concludes that "about a third of potential human life and flourishing ." In a later interview, Pinker endorses the view of Julian Savulescu: "To delay by 1 year the development of a treatment that cures a lethal disease that kills 100,000 people per year is to be responsible for the deaths of those 100,000 people, even if you never see them." See "Steven Pinker interview; case against bioethocrats & CRISPR germline ban."
3. Leon Eisenberg, "The Social Imperatives of Medical Research," *Science*, Vol. 198, No. 4322. (Dec. 16, 1977), pp. 1105-110.
4. There is something of this ethos in Wendell Berry's essay, "Why I am Not Going to Buy a Computer," *Harper's Magazine*, 1988.
5. The goal of science, according to Bacon, is not "Truth" but its "operation" and "practical enablements." See *Valerius Terminus*, quoted in Taylor, *Sources of the Self*, 213.
6. Pinker, "Steven Pinker interview."
7. See, e.g., Pope Paul VI, *Populorum Progressio*, paragraph 14 (1967).
8. Sharon Kaufman, for example, has argued that a "chain of health care drivers," including the biomedical research industry and the Medicare reimbursement schedule, conspires to burden families with "heavy sense of responsibility for making the 'right' choice" about their use, while also stacking the deck in favor of implementation. The result, for an increasing number of people, is a death marked by more, not less, suffering and anguish. This leads Kaufman to the conclusion that U.S. health care has reached a moment of "postprogress," in which individuals and families feel pressured to accept a course of treatment where "the value of life prolongation has come up against the dilemma of extending the life span past a point that people want." See Sharon R. Kaufman, *Ordinary Medicine: Extraordinary Treatments, Longer Lives, and Where to Draw the Line*. Durham: Duke University Press, 2015.
9. See Wikipedia.org: Progress Trap. See, also, Ronald Wright, *A Short History of Progress.* New York: Carroll & Graf Publishers, 2005; and Jared M. Diamond, *Collapse: How Societies Choose to Fail Or Succeed.* New York: Viking, 2005. Ironically, Pinker uses a similar argument based on "unintended consequences" against his opponents, by noting

that projected fears can be just as deluded as projected optimism. In light of this, the only way to deal with future harms and benefits, according to Pinker, is to proceed and react: “Biomedical advances will always be incremental and hard-won, and foreseeable harms can be dealt with as they arise.” But this fails to take into account the critical element of the “progress trap”: namely, that progress may, at times, introduce “wicked problems” that a society has no adequate resources for addressing.