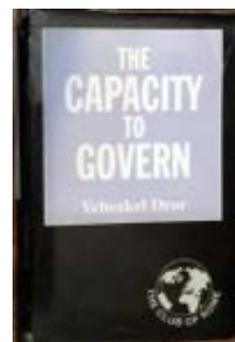
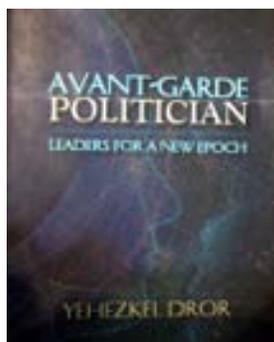
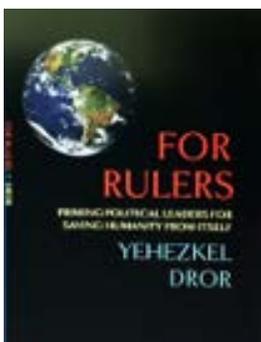




5B. Humanity's Needs

Editors' Notes: Humanity's needs have occupied philosophers, historians, scholars, and authors for millennia. A search of Amazon.com in July 2018 for "humanity" found over 60,000 books, for "world futures" over 30,000 books, and for "humanity's needs" over 1,000 books. During the 20th century, many organizations researching global resources and humanity's needs began ongoing research—like the Lifeboat Foundation, dedicated to the prevention of global catastrophe risk, the World Future Society, Jerome Glenn's Millennium Project, and the Stockholm International Peace Research Institute. The hope for harmony and peace throughout humanity has always existed in most religions, and there are United Nations organizations dedicated to their pursuit. But humanity's perceived needs, and diverse values systems, have also been the cause of much hate, intolerance, violence, greed, wars, and genocide throughout history. This article highlights an evolving aspect within that huge complex picture in which Yehezkel Dror has been a leader in identifying the dilemma of science and technology serving and impacting humanity (the good), while at the same time moral failures and incapacity to govern and regulate the risks to humanity of science and technology on Earth (the bad) progress in tandem.

Yehezkel Dror has advanced his focus for improved policymaking from national to international, then to humanity—primarily in the 21st Century—for reasons he describes and defends after detailed research and diagnosis within the following books:



This article provides readers Yehezkel Dror's "Lucifer Smiles" story, first published in May 2002 in *Technological Forecasting and Social Change*. Its message illustrates this ongoing dilemma. Nuclear weapons planning following World War II triggered this story. And Yehezkel Dror was a senior staff member of the RAND Corporation in Santa Monica, California, USA, in 1968-1970, when Daniel Ellsberg was also at RAND. Daniel Ellsberg, who became famous for the Pentagon Papers episode, was simultaneously consulting the US Administration on Nuclear War Planning. In December 2017 he authored under Bloomsbury Publishers, *The Doomsday Machine: Confessions of a Nuclear War Planner*. That is a current book by an outstanding professional that clearly foregrounds the science and technology dilemma Yehezkel Dror diagnoses. It is a striking illustration of the need

for humanity to remove the risks of huge potential threats. **Bob Krone and Gordon Arthur.**

Lucifer Smiles

By Yehezkel Dror

The Hebrew University, Jerusalem, 91905, Israel

Published, after editing, in *Technological Forecasting and Social Change*, May 2002.

Lightly updated in 2018.

Overture

Lucifer's eyes became bright on receiving the news, and his sorrowful face suddenly smiled. His hour of triumph was coming, after all the long wait. What he had expected and planned for was becoming real. Thanks to the scientific and technological ingenuity of humanity outstripping by far both moral character and capacities to govern, Earth would be his again to rule and corrupt. The date was September 11, 2001.

A Stranger Brings a Gift

Many years ago, I read a beautiful science fiction story, epitomizing the dilemma facing humanity in its relationship with science and technology.¹ A famous scientist was working on a theory that might make possible use of a new energy source that could become a blessing to humanity, but also the basis for doomsday weapons. He has a thirteen-year-old daughter. One dark evening the doorbell rings, and the daughter opens the door. A beautiful and well-dressed lady stands before the house with a package in her hand. "Here, please take the present I brought you, because you are so good and intelligent," she says in a melodic voice. The daughter opens the package when her father, interrupting with difficulty his deep thoughts on the mathematic proof of theory on which he was working on his computer, joins and sees with shock what is in the package: a primed sub-machine gun sure to fire at the lightest touch of the trigger.

"Are you mad, you murderer," shouts the father at the strange visitor. "How are you giving a small girl a killing weapon." Answers the lady, "the one who is really crazy and evil is you, who are giving to immature humanity the tools to destroy itself."

The scientist awakens from his nightmare covered with cold sweat and palpitations. He rushes to his daughter's room and finds her smiling in her sleep, as if having a beautiful dream. "What shall I do? What shall I do?" he asks himself again and again, unable to return to his computer.

The Dream and Its Nightmare

The dream of science and technology is obvious and largely realistic. Science and technology are at present the main "driver" of the future of humanity, largely for the better. Hunger is being eliminated, life expectancy is prolonged, human drudgery is reduced, lifelong learning for all is becoming a reality, distance is becoming less of a factor dividing

¹ The subtext of the story was the development of nuclear weapons. It was called "The Weapon," and it was written by Frederic Brown. I rework the story to sharpen its dramatic effect.

humanity, and so on. True, disparities continue and in some respects become worse, but the average quality of life and level of development of humanity is rising, and the worst off are also doing better than before. Given time, so the optimistic narrative goes on, science and technology will radically upgrade the situation of humanity as a whole, and it will also provide unprecedented opportunities to improve the very nature of humanity thanks to biotechnologies, while giving humanity the stars.

All this is potentially true and justified in utilitarian terms. Values of freedom and the moral significance of gaining a better understanding of the universe and of humanity itself provide further, and in some sense deeper, grounding to the conclusion that the scientific and technological endeavor should be free to unfold.

However, the nightmare side of scientific and technological progress must be recognized. Some of the apprehensions, such as on humanity displacing itself by its artifacts,² seem groundless. Others, such as on cloning and genetic rewiring of the human brain, may be no more than understandable but unjustified fears of the inconceivable – which may very well be most desirable. However, the possible and likely uses of knowledge and instruments supplied by science and technology for mass killing and perhaps enforced collective suicide require very grave attention and determined action.

In short, the clear and obvious danger – though one strangely neglected till the September 11 trauma – is one of devilish uses of the knowledge and instruments supplied by science and technology for mass killing, genocide, and doomsday initiation by actors beyond control by presently available norms, structures and tools.

Radical Novelty

Mass killings and genocide happened in the past, without the benefit of the most recent advances in science and technology. But, since the Second World War something radically novel³ has happened: humanity has got from science and technology as a gift the power of self-destruction. And, in the foreseeable future, this gift will be put at the disposal of underdeveloped states and also non-state actors, including small groups and perhaps also individuals.

The facts are too clear to require elaboration. Leaving aside the ambiguous findings on greenhouse effects, the potentials in nuclear engineering and biotechnology to make instruments of mass killing and doomsday available to an increasing range of actors are obvious, up to the specter of an individual “mad” scientist producing in his home laboratory a virus likely to wipe out most of humanity. This power of humanity to destroy itself is radically new, and it requires no less radical innovative countermeasures.

Self-Containment Will Not Work

As against this pessimistic view, there are opinions claiming that self-containment makes radical countermeasures superfluous. The relatively strongest version of this view asserts

² As postulated in B. Joy, “Why the Future Doesn’t Need Us,” *Wired*, April 2000, 238-62.

³ In the sense of Carl R. Hausman, *A Discourse on Novelty and Creation*, 2nd ed. (Albany: State University of New York Press, 1984). The growing literature on the Singularity and proliferating publications on catastrophic risks follow up on Joy’s pioneering essay.

that science and technology will eliminate the causes of evil by eradicating deprivation, help with solving conflicts by transforming them into win-win situations, and making all of humanity much too satiated to engage in self-destruction.

Regretfully, such hopeful views of the “end of history” have no basis whatsoever in human history or in what we know on the human mind. To limit myself here to the most fundamental of all counterarguments, “true believers”⁴ are an inherent, though small, part of humanity that is essential for human advancement. But some of them are sure to be committed to “evil values,” which entitle and indeed obligate them to kill others, up to the possibility of believing that collective enforced suicide is the way to salvation.

No material or educational advancement of humanity will eliminate this phenomenon, which has accompanied human history from its beginnings. But the difference is that now and even more so in the foreseeable future, such highly committed and in their view extremely moral individuals and groups are equipped with gifts of science and technology, enabling them to realize their destructive values on increasingly larger scales, up to humanity as a whole.

The crucial problem is not “rogue states” threatening to use mass-killing instruments for limited purposes, which are relatively easy to deter. Rather, it is “true believer” rulers, groups, and individuals committed to mass killing and increasingly able to realize their norms effectively that pose the really fateful problem. The paradigmatic model is one of a suicide killer well equipped with mass killing devices who believes with his whole heart and soul that his way to heaven, and often that of the sacrificed masses too, is by killing and being killed – the more the better morally.⁵

Growing Incapacity-to-Govern Deficit⁶

Put into a larger context, the problem is one of a growing incapacity-to-govern deficit. This deficit is less the result of the actual decrease in capacities to govern, as caused inter alia by the effects of mass media on politics, but it stems in the main from the increase in the minimum required qualities to govern essential for coping with crucial issues. The challenges posed to national and global governance by globalization illustrate this point. However, the main challenge to capacities to govern is posed by the potential and likely misuses of the products of science and technology for the worse, up to the absolutely evil.

Science and technology must be free to evolve, as a value in itself and as an essential condition for their flourishing and bringing benefits to humanity. But science and technology and their uses must be controlled to prevent the emergence of fatal knowledge that cannot be supervised, preclude access to potentially dangerous knowledge by persons and groups likely to use it for the worse, and inhibit and destroy those gearing to misuse the fruits of science and technology for mass killings. These contradictory

⁴ As discussed in Eric Hoffer, *The True Believer* (New York: Harper & Row, 1951).

⁵ For a theory of such behavior, developed during my two years with the RAND Corporation, see my book *Crazy States: A Counterconventional Strategic Problem*, updated ed. (Millwood, NY: Kraus Reprints, 1980).

⁶ This subject is extensively discussed in my recent book *The Capacity to Govern: A Report to the Club of Rome* (London: Frank Cass, 2001).

requirements overtax by far present capacities to govern – thus posing a life-or-death requirement for redesigning governance.

Towards a Global Leviathan

Exploration of the required restructuring of governance, including moral and cognitive core capacities, structure, and staffing, will lead to formation processes and subjection to societal control – this should be a main concern for informed discourse, sorely lacking at present. Most of the books on governance miss the main issue, concentrating on deepening democracy instead of the needed phase jump in capacities to govern.

In contrast, real needs, as I see them, are put starkly by my proposal to move towards a “Platonic Global Leviathan”⁷ as essential for coping with the fateful problem of armed evil prophets

In short, thanks to the gifts of science and technology we are moving into an epoch in which assurance of life and safety against mass-killing fanatics requires a strong global regime that takes stern measures against the diffusion of dangerous knowledge and instruments and incapacitates and destroys potentially true believer mass killers well before they can act.⁸ By-bye to national sovereignty, the fiction of the equality of states, global decision making by a majority of states, “power to the people” at global assemblies, etc. Instead, in matters concerning the advancement of science and technology and the diffusion and use of its results, authoritative global decisions and their enforcement by an oligopoly of main powers is becoming increasingly a must. It may take another major mass killing or two for the necessary steps to be taken. But the progress of science and technology together with the permanence of true believers, some of whom are sure to be “evil,” will make a mutation in human governance towards a Global Leviathan inevitable.

Finale

Lucifer’s face loses its smile. “Is it possible that humanity will preempt my triumph and move towards global coping with evil before I strike decisively?” he asks himself. “Or perhaps, with time, science and technology, together with spiritual and moral renewal, will mature humanity and rid its wiring from original sin, and thus condemn me to eternal impotence and hopelessness?” his mind continues to ponder. He makes up his mind: “I will hurry and act first. Let us see who is faster: my power of evil aided by science and technology or human coping.”

It depends on us, humans, who will be first.

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⁷ As first put forth in my book *The Capacity to Govern*, passim.

⁸ My debt to Thomas Hobbes’s *Leviathan*, published in April 1651, is obvious. A recent edition is by Richard Tuck (Cambridge: Cambridge University Press, 1991).