The incarnation and the challenge of transhumanism

If we become godlike, what god will we be like?

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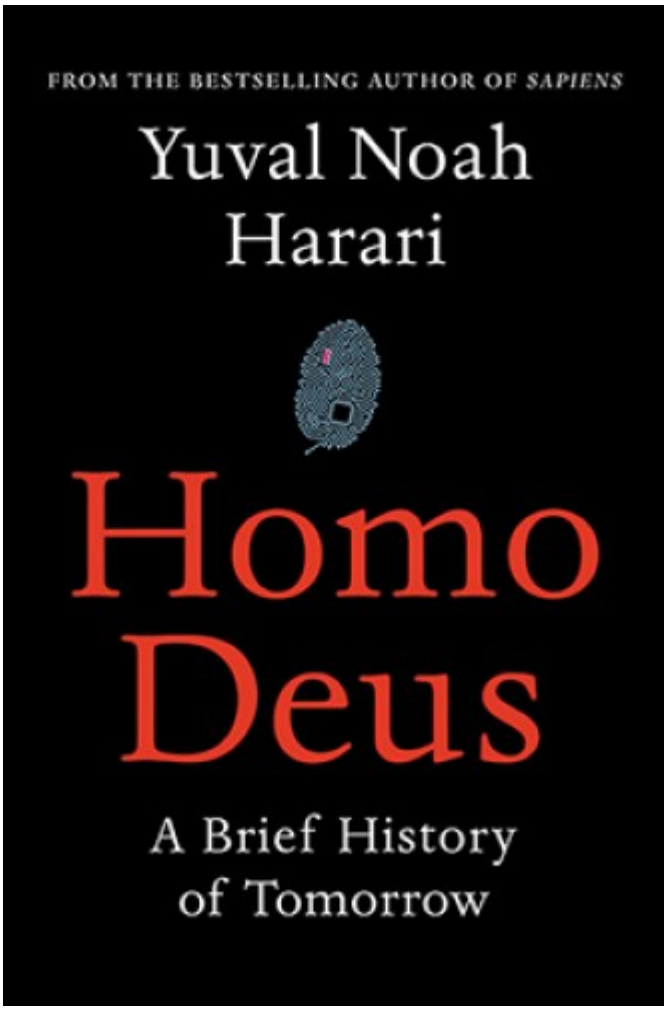
In Review



Homo Deus

A Brief History of Tomorrow

By Yuval Noah Harari
Harper

Many of the great theologians in the Christian tradition, particularly in the East, have used the language of deification (*theosis* in Greek) to describe human spiritual progress toward God. Some verses in scripture suggest this possibility. Psalm 82, for example, includes the statement, “You are gods, children of the Most High, all of you” (Ps. 82: 6). The author of the second letter of Peter writes that God’s revelation in Christ “has given us everything needed for life and godliness” so that we might “become participants of the divine nature” (2 Pet. 1:3–4). The writings of Paul, while not explicitly mentioning deification, describe the Christian life as participation in Christ’s cross and resurrection, identify believers with the divine Christ through their sharing in his life, his mystical body, and his sovereignty over the world, and speak of a future existence as one of freedom from corruption in a glorified, immortal body.

But the primary justification for the idea of deification in early Christian theology is the doctrine of the incarnation. Christ’s assumption of a human form in the incarnation effects the radical transformation of human nature so that it might become divine. In the oft-quoted words of Athanasius, “God became human to make humans divine.” The Christian spiritual journey, classically portrayed as involving stages of purification, illumination, and union, may therefore be conceived as a gradual process of deification that enables believers to participate in the divine reality and transcend at least some of the limits of ordinary human experience.

The spread of scientific rationalism in the modern period has no doubt made the notion of human deification incredible to many people, but there are exceptions. The French philosopher Henri Bergson conceived of the history of life on earth as a process of spiritual evolution and the universe itself as “a machine for the making of gods.” Even a triumphant atheist like the German philosopher Friedrich Nietzsche, who boldly proclaimed the death of God, celebrated the coming of a godlike *Übermensch*, or “Overman,” in God’s place.

In our own time, the movement in secular philosophy that most closely reflects the perennial human quest for godhood is transhumanism. Transhumanists are confirmed children of the Enlightenment, with its optimistic view of human progress. They believe that developments in science and technology will soon make possible the radical transcendence of human biological, cognitive, and emotional limitations and the evolution of a posthuman race, even the attainment of immortality.

Yoval Noah Harari is an Israeli historian who teaches at the Hebrew University of Jerusalem and is the author of the best-selling *Sapiens*, a sweeping history of the world from the Stone Age to the present. *Homo Deus* is a sequel to that volume. Looking forward rather than backward in time, it addresses the prognostications of the transhumanists and offers a preview of the promises and perils that await us in the coming decades as the result of developments in regenerative medicine, biotechnology, nanotechnology, and artificial intelligence.

As Harari demonstrates, the cumulative effect of medical advances, economic prosperity, and international cooperation over the last 50 years has led to a sharp decline in deaths resulting from hunger and malnutrition, infectious diseases, and war. While the struggle against starvation, disease, and violence will continue, he contends that the great scientific project of the 21st century will be the attempt to overcome aging and death, as well as biological barriers to psychological well-being and happiness.

Through techniques like genetic engineering, pharmaceutical drugs, bionic replacements for aging or defective body parts, and cybernetic enhancements to our physical, emotional, and cognitive makeup, scientists in the near future will seek to reengineer the human race and transform us into an entirely new species. And we will become seemingly immortal, whether through improvements to our existing, organic bodies, replacements of these bodies with less corruptible artificial ones, or, in the most speculative scenario, by having our minds uploaded to a virtual medium.

While some may raise moral scruples about scientists “playing God” with human life, Harari argues that the dependence of modern economies on constant growth, coupled with the inherent insatiability of our desires and our innate fear of death, makes the technological quest for bliss and immortality an inevitability. “Having raised humanity above the beastly level of survival struggles,” Harari predicts, “we will now aim to upgrade humans into gods, and turn *Homo sapiens* into *Homo deus*.”

Harari’s writing is both immensely intellectually stimulating and, at least at times, maddeningly obtuse. His vision of deification, as he gladly acknowledges, is pagan rather than Christian in inspiration. *Homo deus* will not try to channel the almighty power, love, and justice of the God of the Abrahamic faith traditions but will strive instead to be like the superhuman but fallible gods of the ancient Greek pantheon. Modern science and technology have made powers once attributed to these gods, such as the ability to create and design life, read minds, communicate at great

distances, control the environment, travel at high speeds, and live forever, within the collective grasp of human beings. Thus, Harari predicts that, sometime in the future, “you might buy for yourself the strength of Hercules, the sensuality of Aphrodite, the wisdom of Athena or the madness of Dionysius if that is what you are into.” *Homo deus* will display the powers of gods but not necessarily possess the virtues of saints.

The privileged modes of thought in our present world are scientific rationality in the domain of knowledge and liberal humanism in the realm of values. The current scientific picture of the world, according to Harari, explains all of reality as the physical manifestation of information or data. This includes everything from subatomic particles, atoms, molecules, and the elementary building blocks of life to more complex living beings, social and economic systems, computer networks, and the sensations, emotions, and cognitions of individual human beings.

Transhumanists see science reengineering humanity, forging a new species.

Harari’s crudely reductionistic account of modern science—which banishes even the suggestion that a transcendent God or eternal human souls could exist and writes off the freedom of the will as an outdated illusion—is captured by his repeated mantra, “organisms are algorithms.” Modern science has confirmed with Nietzsche that God is dead (though Harari does not quite explain how this could possibly be empirically demonstrated, nor why there are still a great many scientists who believe in God). The universe is devoid of meaning or purpose for Harari. We are all merely the superficial expressions of complex mathematical equations being performed by our biochemistries.

The bright side to this utterly flattened description of the beauty and mystery of the living world is our seeming empowerment. Modern people exchange meaning for power, giving up faith in God to become gods ourselves. The godless religion of modernity is humanism, which celebrates individual freedom, replaces a stuffy divine authority with the authority of the inner self, and aims for the accumulation of “a wide variety of intellectual, emotional and physical experiences.” Yet Harari expects that humanism, after replacing traditional religion, will likely be replaced itself in the 21st century by new “techno-religions” that he dubs “techno-humanism” and “dataism.”

Techno-humanism, which is for the most part synonymous with the philosophy of transhumanism, seeks to replace *Homo sapiens* with *Homo deus* through "upgraded physical and mental abilities that will enable it to hold its own even against the most sophisticated non-conscious algorithms." While Harari acknowledges that the nature of human consciousness (especially rare forms like mystical awareness) remains beyond the comprehension of current scientists, he believes that we may soon, through technological enhancements of our brains, discover mental states that no organism has as yet experienced. We may also be able to make human beings—whose sensory and psychological apparatus is the result of evolutionary adaptations to now-obsolete environmental pressures—much better equipped for life in an advanced technological civilization than they are now. For example, psychiatrists may one day use drugs not only to treat mental ailments but to foster psychological powers that far surpass those of current *Homo sapiens*.

Harari is himself not necessarily sold on this prospect. He fashions himself as a detached historian, assessing broad social trends and forecasting future possibilities rather than championing the arguments of techno enthusiasts. He observes, for example, that radical life extension would be disruptive to traditional patterns of marriage and family life, challenge the transition of power and influence from one generation to the next, change the nature of professional careers, and possibly embolden political tyrants, who might cement their grip on power for centuries rather than decades.

He also sounds a warning about the potential conflicts between the development of new technologies and the enduring values of liberal democracies. Artificial intelligence threatens to replace most human labor (including white-collar professions like law and medicine) with robotic substitutes. The integration of human beings and artificial intelligence may also make us increasingly reliant on computer algorithms for our decisions, including important life choices about our health, our careers, or our romantic partners, and even render unnecessary essential democratic institutions like free elections (since things like voting, Harari suggests, may be more reliable if left to machines).

Technologies of enhancement, moreover, might be made available only to a small minority of extravagantly wealthy and powerful human beings, who will then be capable of exerting ruthless control over the inferior, nonenhanced masses. The combination of superintelligent computers and an elite caste of modified superhumans may be the perfect formula for the dissolution of democracies and the

rise of a global, dystopian police state.

The risks that techno-humanism may pose to the cultural values and political arrangements of contemporary Western democracies, however, pale in comparison to the nihilistic potential of the more radical techno-religion of dataism. Dataism, as Harari explains, combines the scientific claim that reality consists of data with the ethical claim that the value of anything depends on “its contribution to data processing.”

The human race is thus viewed as a single data-processing network, and its historical progress is measured in terms of the efficiency by which it increases the number and variety of its processors, the connections between them, and the freedom of movement along these connections. The ultimate reality is data flow, and the greatest commandment in the cult of dataism is to “deepen and broaden the flow of information in the universe.” The mathematical rules that determine the biochemical algorithms of organisms and the electronic algorithms of computers are interchangeable, and humanity is destined to be replaced by a more efficient data-processing system, a global, superintelligent information network that Harari names “the Internet-of-All-Things.” If techno-humanism promises the deification of humanity, dataism guarantees its obsolescence.

The most well-known exponent of dataism is the inventor, computer scientist, and futurist Ray Kurzweil, author of *The Age of Spiritual Machines* and *The Singularity Is Near*. Kurzweil thinks cosmic, biological, and human evolution is progressive, and the next stage of evolutionary progress is an imminent “singularity,” a technological fusion of human consciousness and artificial intelligence that will become a virtual equivalent of God. Channeling Kurzweil, Harari writes that “humans are merely tools for creating the Internet-of-All-Things which may eventually spread out from planet Earth to pervade the whole galaxy and even the whole universe. The cosmic data-processing system would be like God. It will be everywhere and will control everything, and humans are destined to merge into it.” For Harari, there is no deity who created the world, but there may be one who consummates it.

Neither of these quasi-religious visions of our technological future seems, on the surface, to have much to recommend itself to Christian eyes and ears. Dataism proffers something like a biblical picture of cosmic salvation, but without any human beings left in the picture to save. It also renders unintelligible why God would ever incarnate as a human being. Why not wait for the rise of the machines?

The human race can be seen as a vast network for processing data.

While the Christian tradition does share with techno-humanism a vision of deification as integral to the human story, its understanding of the source, means, and ultimate end of this radical transformation of human beings is substantially different. For Christians, deification is the work of the Christian deity. While we may cooperate with God in God's work of bringing about individual, social, and even planetary salvation, we are not the principal actors in the cosmic drama. Deification is only possible because Christ deifies human nature in the incarnation and the Spirit sanctifies human persons in the common life of the church and in our engagements in the wider world.

Deification does not transform us into independent deities but rather frees us from our pretensions to autonomy so that we may participate in the blessed, communal life of the triune God. We do not participate in that life merely by living longer, becoming smarter, looking sexier, acquiring more power, or improving our gene pool, but rather through the graced effort to live as holy people. We are upgraded from sinners to saints as we struggle to overcome our vices, to embody virtues like faith, hope, and love, and to practice the worship and contemplation of God. While Christian deification contains the promise of incorruption and immortality at our journey's end, our share in the eternal life of Christ requires that we pass with the human Jesus through the dark road of the cross and the inevitable death of the physical body.

For these reasons, as well as from a sense of reverence for divinely sanctioned creaturely limitations, a concern for social equality, justice, and the sustainability of an already overpopulated and resource-depleted planet, and fear of a technological apocalypse (think *The Matrix*), many Christians are dead set against the attempts of scientists to extend human life beyond its natural term (a maximum of about 120 years) or to modify the genetic and biological makeup of the human species. If Harari is right that the scientific and technological breakthroughs envisioned by transhumanists are worldly inevitabilities, the prophetic Christian response may simply be refusing to abandon ourselves to the ways of the world. In a future, technologically advanced age, Christians may become a peculiar people whose primary mark of identity and means of witness is that we freely choose to live mortal lives, grow old in Christ, and die. In a world of endless virtual connections, we may choose to disconnect, knowing that our ultimate connection is with the reality of God.

The world that techno-humanists and dataists seek to transform into a cybernetic utopia, however, can never be anything other than God's world. While it is unrealistic to expect that Christians will be able to control every decision that is made about how to use emerging new technologies, our faith in the coming reign of Christ demands that we seek to save humanity from its worst impulses. Christians must urge those employed in the fields of genetics, artificial intelligence, nanotechnology, and biotechnology to subordinate their research to ethical norms and spiritual aims, putting their discoveries in the service of the common good rather than the power of an elite few. We can work with other like-minded religious and secular people in doing so. We will certainly oppose the use of technology to foster social injustice, threaten the dignity of human persons (such as designer babies), or attempt to free human beings from biological limitations and bodily death (such as mind uploading).

But we might support modifications of the human person that increase spiritual awareness, foster religious affections such as joy, awe, wonder, and love, and contribute to the participation of the human person in the life of God. For some people, this is already happening with psychiatric medication. Technologies of human enhancement can serve the same purpose as Christian sacraments, acting as material instruments by which God redeems, sanctifies, and deifies human beings. While the notion of absolute physical immortality contradicts Christian teaching about our ultimate destiny, some forms of life extension might be defensible to the extent that they afford us a longer duration of time to be divinized. Technologies that strengthen rather than destroy family ties, communal bonds, and local and global networks of cooperation, as well as those which contribute to the spread of love, justice, and human flourishing, are not necessarily incompatible with Christian convictions. Yet, whatever the future may be, the church must continue to confess that the future of *Homo deus* is only possible because of the eternal *Deus homo*, who is Jesus Christ.

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