GOD VERSUS TECHNOLOGY? SCIENCE, SECULARITY, AND THE THEOLOGY OF TECHNOLOGY

by Alan G. Padgett

Abstract.   In debate with John Caiazza, we clarify the meaning of the terms *technology* and *secular*, arguing that technology is not really secular. Only when combined with antireligious secularism do we get the modern techno-secular worldview. Science is not secular in the strong sense, nor does its practice automatically lead to the techno-secular. As a complete worldview, techno-secularism is antireligious, but it also is dehumanizing and destructive of our environment. Religion may provide a transcendent source for a humanizing morality that might move technology in a more ecofriendly, humane direction. The alternative is not a happy one for our posthuman technological future.

Keywords: John Caiazza; ethics of technology; Martin Heidegger; secularism; technology; *techno sapiens*; worldview.

I appreciate the essay by John Caiazza (2005) that started the conversation in this symposium regarding technology, secularity, and religious faith. It focuses our thinking on the important topic of technology, which is too often ignored in discussions regarding theology and science. The history, philosophy, and theology of technology are fascinating and complex topics that can enrich our reflections on religion and science. So I welcome this opportunity to enter into the conversation begun by Caiazza.

I was struck by an Associated Press article published a few days after the tsunami disaster in the Indian Ocean last December (Misra 2005, A1). It happens that there are several isolated islands in the Indian Ocean inhabited by five indigenous tribes with very ancient ways of life who have lived there for thousands of years in the most ancient, nomadic culture known to anthropologists today. Living close to the land and the sea, and paying

Alan G. Padgett is Professor of Systematic Theology, Luther Seminary, St. Paul, MN 55108; e-mail apadgett@luthersem.edu.

attention to the animals, these tribal peoples did well in surviving the devastation wrought by the giant waves of water. They could tell somehow that the wave was coming, and most made it to high ground. A local environmentalist remarked concerning these people: "They can smell the wind. They can gauge the depth of the sea with the sound of their oars. They have a sixth sense which we don't possess." How did they know? What makes these people so different from ourselves? Is it not our modern technology?

Modern technology is a great blessing, but, as many scholars have rightly remarked, it also creates serious problems. It isolates us from the world around us, probably increasing the death and suffering brought about by this recent natural disaster. We are very different from the tribal peoples, and the stark contrast gives a small degree of plausibility to the notion that we are now (or may soon become) a new species: *homo technicus*, or *techno sapiens*.[1] Such a notion may be overly speculative, but it does give us pause. It raises the question, What is technology? How has technology changed our worldview, our culture, our very way of life? Once technology begins to dominate our culture and lifestyle, can we ever control or manage it toward good ends, that is, to the betterment of humanity and the life-world around us?

In any multidisciplinary conversation it is important to clarify the key terms and concepts being discussed. In the present context of discussion with Caiazza, the use of the term *techno-secular* requires thinking about the words *technology* and *secular*. A simple understanding of technology sees it as the use of tools by human beings to manipulate their environment toward some purpose or end. In this very simple sense, technology is far older than modern science. Hunting, agriculture, and writing are all examples of technologies that are vastly older than any science. What is often not appreciated in discussions of science and technology is not only that technology is older than science but that technology actually made much of what we now call science possible. The telescope was invented before Galileo used it to study the heavens, for example, and medical techniques were used long before the science of human biology was developed in its modern form. The relationships between science and technology, therefore, are complex and symbiotic. Science has indeed enhanced our technological power, but humans were technological beings hundreds of thousands of years before the rise of modern science. Of course, modern technology is quite different from ancient technology in many ways, but the point about the antiquity of technology plain and simple should not be overlooked.

Technology in its basic sense, therefore, is not really "secular." Of course, by "secular" one might mean nothing more than simply "of this world," which is the root meaning of the term in Latin. In this original sense of the word we can agree that any science or technology is "secular" in the

sense that it focuses our attention on matters of this age and this world. Something can be fully secular in this original or innocent sense *and still be fully religious.* This point must be driven home against the general thrust of Caiazza's essay. For the evangelical theological tradition represented by Martin Luther, for example, the secular calling or vocation of everyday work is just as religious, just as full of faith in Christ, as is any so-called religious vocation in a monastery or convent. In this innocent sense we can agree with Philip Hefner's aphorism "Technology is itself a sacred space."[2]

Both science and technology are "secular" in the innocent and original sense of this term, because they focus our attention on this age rather than the age to come. Because the secular or earthly can also be fully religious and faithful, however, there was no conflict in principle between technology, science, and religion before the Enlightenment. Technologies were invented and used for hundreds of thousands of years by very religious people who never thought that there was any inherent conflict between technology and faith. The first working wooden clocks in Europe, for example, were crafted by monks seeking to keep the hours of prayer in the night. Theology and religious faith were instrumental in the development of the empirical, mathematical rationality of modern science during the later medieval and Renaissance periods, providing the background to the work of scientists in the fifteenth and sixteenth centuries. That is why early scientists such as Copernicus, Galileo, Kepler, and Newton were also theists. So when Caiazza remarks that "science traditionally has tended to deny the legitimacy of the perception of purpose in the universe and to pursue a reductive agenda that attempted to delegitimize revealed knowledge" (2005, 12), this tradition can be traced back only to the Enlightenment. As a matter of fact, for most of Western history science and theology have not been in conflict in this way. But Caiazza's remark is nevertheless valid, once we begin to appreciate the larger point he is making. To see his point we need to think more about the secular.

The word *secular* has a much stronger meaning in current American English: the secular is opposed to the religious as something over against religion, faith, and theology. This seems to be the sense in which Caiazza is using the term—that is, as something that is antireligious. I argue that *technology in a simple sense is not secular* when by *secular* we mean opposed to religious faith and theological wisdom. But a more developed sense of technology is secular in the strong sense.

Technology has a larger, more philosophical, meaning for many who write about it. We notice this in the work of the German philosopher Martin Heidegger. In his essay "The Question concerning Technology" Heidegger refused to think of technology as simply a collection of tools. "[T]he essence of technology is by no means something technological," he argued (1977, 4). Instead, he saw technology as a way of thinking, as a

way of approaching being (all of reality)—a way that reduced the creatures around us to mere instruments. The essence of technology lies in a way of approaching and disclosing being, which Heidegger names "Enframing" [*Ge-stell* in German]. We might say, therefore, that the larger, philosophical, sense of technology sees it as a way of seeing everything, as an approach to life, the universe, everything. Building in some ways upon the same issues that Heidegger raised, the sociologists-cum-philosophers Jacques Ellul and Herbert Marcuse continued this larger understanding of technology (with its attendant bureaucratic mindset) as a kind of rationality or way of seeing everything.[3] Both Ellul and Marcuse warned about the dangers of turning everything into a technique, that is, the dangers of our technological way of life when it comes to dominate our entire worldview. It is as a worldview, therefore, that I understand Caiazza to be using the term *techno-secular*. He combines a philosophical concept of technology with a strong, antireligious sense of secular. It is only in these senses of the terms—understanding the techno-secular as an entire worldview—that I can agree with his comments. As a worldview the techno-secular *is* opposed to religious faith and, in the minds of many people, has replaced religion.

If my analysis is correct, two points flow from it that can further our reflections on science, technology, and religion.

1. Science itself is not techno-secular. Science can be understood perfectly well in a larger religious framework, as Caiazza himself remarks in his essay. Science is opposed to religion only when it is combined with a secular worldview. It follows from this that there is not now, and never has been, a "triumph of science over religion." Instead, there has been a triumph of the secular over the religious in the intellectual centers of Western culture, out of which we now interpret and develop scientific knowledge and technological advances.

2. Science does not automatically lead to the techno-secular. Here I have to oppose an assumption that Caiazza makes in his essay. While I agree with him that secularism has come to dominate the intellectual heart of the West, I believe that the rise of science in the strict sense is the occasion, not the cause, of this secularity. Rather, it was the wars of religion in Europe that gave rise to an Enlightenment project to base philosophy, politics, and society on a "scientific" basis. It is this Enlightenment prejudice against authority, tradition, and religious faith as a source of public truth, and not science per se, that has developed into our modern techno-secular worldview. As a worldview, therefore, the techno-secular finds its home in the rabid anti-Catholic rhetoric of the French Revolution, including the influential scientific atheism of the French *Encyclopédie*. "And with the guts of the last priest, let us strangle the last king" (Diderot). Here are the origins of the techno-secular: not in the period of early modern science, but a century later in the appeal to "scientific" thinking by those seeking to

destroy the political authority of the church in Europe. I cannot agree with Caiazza, therefore, when he writes, "The triumph of the secular in our culture is largely the result of the triumph of empirical science" (p. 13). Rather, the triumph of the secular among Western intellectuals is a result of the self-destruction of religious authority in mutual hatred, polemics, and violence during the period we now call the "wars of religion."

TECHNOLOGY: BLESSING OR BANE?

We have cleared up some ambiguities surrounding the meaning of *secular* and *technology* and along the way made some points for and against the essay by Caiazza. At the heart of the discussion, however, is our eschatological ambiguity regarding technology. Is technology opposed to the sacred and finally destructive of science (not to mention human or ecological well-being)? This much is suggested by him at the end of his essay when he notes that the "cash value" or technological approach to science undermines the epistemic value of science as a quest for knowledge for its own sake. Or is technology something in which religious faith, vocation, and imagination can and should be at work, making technology into a sacred space (Hefner 2003; Schuurman 2003)? Will technology destroy humanity and the ecosystem of our little planet or save us from the many problems we face as a species?

These deep and abiding questions provide us with ample material for further reflection, argument, and conversation. Here I want to explore a smaller question within these larger ones. Does the widespread use of technology (simple) inevitably lead to technology as a dominant worldview? Is our technological age destined to turn everything into an instrumental, bureaucratic, and utilitarian McWorld? Here I do believe that religion—and perhaps only religion—can fulfill a central function in human societies. In his important book *Our Posthuman Future* (2002) Francis Fukuyama argues that a philosophical concept of human nature can provide our culture with a basis for making universal ethical claims and thus provide also an ethical guide to the politics of technological choices. I am not at all sure that the philosophical concept of the human by itself (given the great diversity of philosophical perspectives on human nature alive in our culture today) can bear the weight he wants it to, apart from a larger theological vision supplied by a specific religion. In other words, divorced from theology, can philosophy alone provide humanity with universal ethical principles on the basis of which we can agree upon our technological future?

Caiazza notes that the techno-secular cannot provide us with a basis for ethics beyond a utilitarian calculus. Whose "greatest good" do we have in mind, and how do we know what is the greatest good? How can we calculate it within a techno-secular worldview? In contrast, Christian faith points humans toward a God who is beyond this world and a promise of eschato-

logical hope that lies beyond the power of human science and technology to bring about (the "kingdom of God"). At the same time, the Christian God is not a "god of the gaps," because the Creator is at work in all reality, including human technological creativity (as Hefner [2003] rightly asserts). The good news about Jesus Christ comes deep into this world, with all of its problems and earthiness. The biblical God does not abandon the earth or its creatures but works within history and creation to redeem them. That is the essence of Incarnation. But the work and word of Christ come from God, who is also beyond anything finite and created. As the eternal fount of all being and the source of a promise greater than death itself, God provides Christian thought with a nontechnological truth, a spiritual vision, which can call the techno-secular into question, perhaps even provide an alternative ethic of love and *shalom* to oppose the bureaucratic rationality of a totalizing technological worldview.[4] I claim only that such a future is possible. In other words, the Christian faith (and, by extension, other world religions) could work to overcome the dark side of techno-secularism in our world today, providing a basis for the ethical use of science and technology. Whether or not this happens lies within our hands, even now, as we work together toward our technological future.

An alternative that some might label as pessimistic but others label realistic assumes the eventual triumph of the techno-secular. We might even see a move from the technological society to the technological Self. Humans might become nothing more than machines in the growing dominance of global capitalism, techno-bureaucratic rationality, and ethical relativism. Perhaps humans will begin to engineer themselves, both biologically and through nanotechnology and robotics.

It seems to me obvious that such a vast, world-encompassing system will inevitably destroy itself. Why? Because such advances in technology come at great cost to the rest of humanity and to the earth's resources. Even in the brief history of modern technology we have consumed the limited resources of our planet at a rate that cannot be projected long into the future. The dream of a happy and harmonious techno-secular future is based on false hopes in infinite energy, infinite human potential, infinite human progress, and complete human good will. Such a techno-secular dream, even if it comes about, will self-destruct after a few centuries, inevitably smashing on the rocks of our finitude and sin. Whether in energy riots or anti-robot revolution, biotechnic warfare or worldwide pollution, or some terrible disaster we cannot now envisage, a totally techno-secular world will eventually destroy itself.

Yet, even in this pessimistic scenario, religious faith could provide a small counterculture with an alternative vision that could provide humanity with hope for a future beyond the self-extinction of *homo technicus*. We may find ourselves in a few short centuries looking back again to the "primitive" tribes of the Indian Ocean for wisdom in human survival during a

time of disaster. On the other side of *homo technicus* there might be a more earth-friendly technology with proper limits and ethical frameworks guiding it toward the welfare of all living things. I hope, for all our sakes, that the hard lessons can be avoided. Perhaps we can control our techno-secular culture before it is too late. Religious faith will play an important role in either scenario.

Technology as a totalizing worldview is inherently dehumanizing and also therefore secular in the strong sense. Whether modern science and technology (in the simple sense) can be harnessed toward a better future for all is an open question, one that we are even now working out as a species in an unplanned global experiment. It is no exaggeration to say that the answer to this question will shape the foreseeable future of life on our planet.

If my argument is even close to being on target, there is an important corollary. We face an ongoing need for science, technology, ethics, and theology to come together in various ways as we work toward our technological future. At its largest expanse this dialogue and synthesis will include various religions and worldviews, multiple scientific disciplines, and all of the great world cultures. No single perspective or discipline will suffice. For forty years *Zygon*, its publishers, editors, and authors, have created a prominent social space for the religion-and-science dialogue. Such a conversation must not stop with only science and religion. Our world needs us to include in this public and pluralistic debate both technology and ethics. The need for such thoughtful and reflective conversation will only increase as the intersection of science, technology, ethics, and religion grows in cultural prominence in the twenty-first century. I hope that *Zygon*, as a leader in the religion-and-science discussion, will grow to include this larger complex of issues.

NOTES

1. See Kurzweil 1999, for example. For further discussion see the booklet by Philip Hefner (2003). Equally optimistic about the future of technology is Egbert Schuurman (2003). More critical of technology is Murray Jardine (2004).

2. This comment comes at the end of Hefner's booklet (2003, 88). He goes on to claim, "Technology is itself a medium of divine action, because technology is about the freedom of imagination that constitutes our self-transcendence."

3. Among their many works on this subject are two early and influential books: Ellul 1964 and Marcuse 1964.

4. This is the main thesis of Jardine 2004.

REFERENCES

Caiazza, John C. 2005.   "Athens, Jerusalem, and the Arrival of Techno-Secularism." *Zygon: Journal of Religion and Science* 40 (March): 9–21.
Ellul, Jacques. 1964.   *The Technological Society*. New York: Knopf.
Fukuyama, Francis. 2002.   *Our Posthuman Future*. New York: Farrar, Straus, and Giroux.
Hefner, Philip. 2003.   *Technology and Human Becoming*. Minneapolis: Fortress.
Heidegger, Martin. 1977.   *The Question concerning Technology and Other Essays*. Trans. W. Lovitt. New York: Harper and Row.
Jardine, Murray. 2004.   *The Making and Unmaking of Technological Society*. Grand Rapids, Mich.: Brazos.
Kurzweil, Ray. 1999.   *The Age of Spiritual Machines*. New York: Viking.
Marcuse, Herbert. 1964.   *One-Dimensional Man*. Boston: Beacon.
Misra, Neelesh. 2005.   "Surviving the Tsunami with Stone Age Instincts." Associated Press. *Star Tribune*, Minneapolis, 5 January.
Schuurman, Egbert. 2003.   *Faith and Hope in Technology*. Toronto: Clements.