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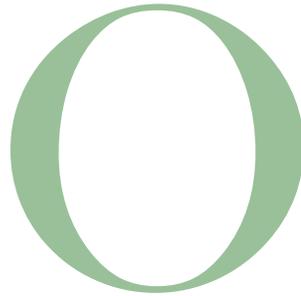
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# Transforming the Active Orientation

Technology should help cultivate social and moral progress, rather than endless growth and consumerism.



Our ambitions are high. We have a long list of desiderata that, in effect, entail re-engineering much of the physical and social world around us, even the self. We Americans are keen to prevent the alarming deterioration of the environment, to attain higher rates of economic growth, to reduce inequality, to curtail the number of people incarcerated for nonviolent offenses while simultaneously reducing drug abuse, to end war and genocide, to foster human rights, to reform campaign finance, and to improve our knowledge, skills, and self-awareness (most recently through “mindfulness”). When then-President Bill Clinton was asked, on the eve of a new year, what he wished for his fellow Americans in the year to come, he responded: “Have all your dreams come true.”

Sadly, a deep gap exists between our aspirations and our capabilities. We aspire to re-engineer much of the world, but we are often buffeted by forces we neither understand nor control. Revisit the list of desiderata introduced above; it soon becomes clear that we have made little progress on most of these fronts, and we actually have fallen back on quite a few of them. All too often, we do not even agree about how to tackle these issues, nor do we command the know-how, resources, political will, or personal dedication to proceed successfully.

After conducting a review of the history of how we acquired these ambitions, and the role of science and technology in fostering them, I ask where we go from here. It seems obvious that either we must greatly scale back our ambitions, or we must double down and find more effective ways to proceed. Actually, it is likely that we will have to do both. Science and technology are seen by some as the most promising sources for finding ways to catch up, for controlling history rather than being subject to its vicissitudes. Others see science and technology as exacerbating the problem. Here, too, there might be a third way.

## **A brief history of the active orientation**

At the beginning, humans were passive. They largely accepted nature around them as a given, rather than seeking to recast it. They accepted their place in the social world as fixed rather than seeking to move up within or change their social structures or themselves. The Stoics of Ancient Greece, for example, held that our actions were orchestrated by forces beyond humans’ control and that all events followed inherently from prior events dating back to the beginning of the universe. The philosophers Democritus, Heraclitus, and Aristotle held that “everything occurred by fate.” People accepted changes or lack thereof as God-given, or as being the result of spirits. True, passivity was not complete. People did make sacrifices and prayed, appealing to deities to intervene against natural disasters, illness, and war, but they did not believe that human beings could marshal the powers necessary to change the future.

When facing the social world, first Aristotle and then the Church told people to be the best they could be in whatever role they found themselves playing. Aristotle's virtue ethics dismissed hedonism and instead held that the good life was one that fully achieved or "perfected" the "final cause" or purpose inherent in one's nature. This purpose he referred to as a "telos." For example, the telos of the flute is to be played well, not to be used as a knife. Each person should work to serve his or her assigned role rather than seek to serve in some other capacity—that is, people should not strive to be socially mobile or a change agent. Passivity was the order of day—for centuries.

The Catholic Church substantially incorporated Aristotelian teleology into its theology. Thomas Aquinas stated, "The Church [was] to teach the truth of God and to assist the faithful in fulfilling their God-given *telos*, individually and collectively." Thus, the nobleman should strive to be the best of his kind, and the serf should be the best possible serf. There was no place here for an active orientation toward the self or toward society by seeking reform.

This position dominated political thinking in Western societies in the Middle Ages, but it was not limited to the West. The Indian caste system, too, reflected a passive orientation toward society, what sociologists referred to as "status acceptance." Thus, Hinduism holds that: "If an individual respectfully accepts and carries out the duties of his or her caste, then he or she will live the next life in an elevated caste of society." Many other societies embraced similar values that promoted social and political passivity.

The active orientation, or the presumption that humans can re-engineer the world, was born as part of the Age of Reason, which originated in the 1600s and was characterized by according high value to rationality, science, and technology. (Some locate the origins of the relationship between ideas of progress and technology earlier, in the Renaissance.) Rationality presumed that individuals have clear ends; are able to collect, process, and interpret information about ways of achieving these ends in an empirical and logical manner; and then act according to those means they judge to be the most efficient. The "rational man" was free of the bondage of the superstition, prejudices, biases, and social status that dominated earlier ages. Bigotry, belief, magic, and religion were treated by rational people as if they were one obsolete burden to be replaced by rational thinking and science, which were held to be the mainstays of an enlightened society. The era is widely

credited with the birth of the modern approach to natural sciences, which, in turn, opened the world to be marshaled and used, allowing humanity to understand its place in the solar system, harvest electricity and radio waves, and create a host of innovations that enabled the Industrial Revolution. At the same time, technological breakthroughs and feats of engineering, such as the power loom and the steam engine, often played a much greater role than science, and science itself benefited from technological developments such as the microscope, the telescope, and (eventually) computers. This article treats science and engineering as two forces that together empowered human beings to marshal nature and make it work for us. From here on, references to technology should be read as if referring to technology and science. Initially, the shift from a passive to an active orientation was associated with great benefit: the rise of affluence, the advent of modern health care and education, and the free flow of information—essential for democratic politics, and celebrated by America's founders and by nineteenth-century Americans who typically viewed technical, human, and moral progress as strongly aligned.

Francis Bacon was one of the first philosophers to postulate that human beings could re-engineer the world around them and achieve mastery over nature. In his *The New Atlantis*, he foresaw a utopia in which technology would make life much less taxing and would empower humans to overcome natural limitations. Henry Brooks Adams, though famously ambivalent about technology, nevertheless stated in 1906 that "the new American—the child of incalculable coal power, chemical power, electric power, and radiating energy, as well as new forces yet undetermined—must be a sort of God compared with any former creation of nature. At the rate of progress since 1800, every American who lived in the year 2000 would know how to control unlimited power." A thread of "technological utopianism," of which Edward Bellamy and Horatio Alger Jr. were perhaps the greatest proponents, ran through much of public culture from the late 1800s to the early 1900s.

Karl Marx extended the active orientation to re-engineering society. He envisioned a "classless society" brought about by the establishment of full communism, which would be characterized by "a cooperative union of free producers, who would be both owners of the means of production and workers." All people would labor together equally to satisfy the economic needs of all of the members of the community. Such a classless society would represent the fulfillment of what Marx saw as human-

ity's "capacity for harmonious society with others and the capacity for free, conscious, and universal labor." Technology developments were key to this societal transformation and to the achievement of a future utopia.

Sigmund Freud extended the active orientation to re-engineering ourselves. Freud (and other psychoanalysts) held that man is able, if only with great effort and pain, not only to understand himself but also to transform himself, to free himself from his own past, and to chart a new course of his life. One's natural urges could be sublimated in favor of a more civilized social world.

The idea that humanity was progressing dominated. Robert Nisbet, a leading sociologist, observed, "it is a notion of the European Enlightenment that thanks to scientific advances, [in the future] all people would be united in an egalitarian commonwealth, freed by machines from poverty and the necessity of toil, from disease and even death by scientific medicine, and ennobled by the heights of civilizational achievement." The idea that "civilization has moved, is moving, and will move in a desirable direction" also was incorporated into major segments of the social sciences. Their core assumption is that we can recast the social world in line with our values and ambitions. Thus, according to Keynesian economics, if one correctly sets interest rates and the rates at which people spend and save, one can achieve high economic growth. Sociologists in the post-World War II era held that Head Start, Medicaid, negative income tax, Social Security, and half a dozen other such federal programs will allow us to close the gap between the races and the classes. These were indeed heady, optimistic ages, captured in such mottos as "where there is a will there is a way" and in assertions that "the richest nation of the world should be able" to accomplish whatever was needed.

### Rising doubts

Historians of technology disagree about when people first noted that the active orientation had serious, negative side effects that people neither anticipated nor could handle readily. Some hold that the idea that humanity inexorably progressed was "dethroned" by the Great Depression and two world wars, which, as described by historian Dorothy Ross, collectively "destroyed the sense of cumulative gain in civilization on which progress depended." Others point to the dropping of the atomic bomb on Hiroshima and Nagasaki as a major turning point. Literary scholar M. K. Booker finds that "the atomic bombing of Hiroshima and Nagasaki was not an

entirely new departure so much as it was a final straw that finally broke the back of the American national narrative [about the merits of technology]." The world had to face the fact that technological developments brought about a tool that incinerated cities along with their hundreds of thousands of inhabitants and that threatened the whole world. Many, but far from all, scientists soon recognized the danger of the monster they had helped create. President Dwight Eisenhower used his farewell address to warn of the existential and political dangers created by the military-industrial complex. But there was no way to turn back. Once knowledge was forged it could not be unmade.

Soon, other developments gave the champions of reason, science, and technology additional pause. Malthusian fears were awakened by the prospect that improvements in health care could lead to overpopulation and then to mass starvation. The invention of the birth control pill raised fears of sexual promiscuity. And there are very familiar, growing concerns that humans' expanding economic activities will exhaust the world's resources; that the degradation of the environment will threaten human survival; and that climate change will subject us to a whole series of calamities.

In the social realm, there are growing doubts that we can actually manage the economy and an increasing sense that we are instead doomed to suffer recurring major recessions beyond our control. Grave doubts emerged about the effectiveness of the talk therapy championed by Freud and other psychotherapy gurus. Marxian ideas about fashioning a better social world through central planning and command-and-control economies, and of reordering political life through a working class revolution, have been discredited.

A debate erupted in the United States in the late 1960s over the expansion of liberal social programs based on social science. It turned out that many of these programs failed to achieve their transformational goals, as neoconservatives stressed, while liberals held that given more money and more time, these programs could succeed. Most recently, the rise of artificial intelligence and robots has raised great concerns about massive human unemployment and machines' domination of people.

Meanwhile, social scientists began to recognize that human beings are much less capable of the kind of rational thought that active orientation takes for granted. In contrast to the innate rationality of behavior assumed by economics, other social sciences have demonstrated the limits of rationality for individuals and for organizations. Decision scientists

showed that more information did not add up to better decisions. Psychologists have demonstrated that human beings are constrained by innate, hard-wired cognitive biases and that human intellectual capabilities are much more limited than they were previously assumed to be.

“Muddling through” characterizes much of public policy, while failure at “encompassing planning,” especially of the central command-and-control kind, is well established. We increasingly give up on finding basic solutions for many of the major challenges we face, and instead seek to cope with the latest crisis—a much less active orientation. The terms arrogance and hubris versus humility begin to capture the difference between the sanguine active approach and the more accepting passive one. The political systems of most nations seem unable to cope with the growing list of problems societies and the international system face, raising the question of whether our aspirations are hyperactive and completely out of line with what we can achieve.

In short, it has become clear that active orientation is not the panacea it once seemed to be—and, indeed, some hold that our hubris will destroy us. Increasingly, the whole idea of progress, which was a reflection of active orientation, has been cast into doubt.

### **A fork in the road?**

Nowhere is the question of whether humans should greatly scale back their ambitions more acute than in the debate between the advocates of greater economic growth (and the affluent society) and those advocating for scaling back economic activities and reliance on most technologies. The slow growth (“less is more”) camp holds that without scaling back our activities, the world will run out of resources; the environment will be degraded; and climate change will endanger humanity. The growth and antigrowth positions come in radical and moderate versions, accompanied by very different views on the role of technologies in our future. The pro-growth champions hold that technological developments can empower humans to deal with the challenges that face humanity on the path to ever higher levels of affluence; the anti- (or at least slower-) growth champions hold that focusing on technological solutions exacerbates the challenges humans face rather than offering a cure.

I turn to discuss a bit more the differences between the techno-optimists and the techno-pessimists. Given that these positions are familiar, I treat them briefly, and close by outlining a third way.

According to a host of scientists and public leaders, technological progress can help us to end the ills that plague the human condition. For example, Bill Gates is convinced that “technology can fix everything.” Gates thus announced plans to spend up to \$2 billion on green technologies in the next five years. Strong technological optimists believe technology “paves a clear and unyielding path to progress and the good life,” and technology is “the means of bringing about utopia.” Historian of technology Carroll Pursell describes as very widespread “the notion ... that a kind of invisible hand guides technology ever onward and upward, using individuals and organizations as vessels for its purposes but guided by a sort of divine plan for bringing the greatest good to the greatest number.”

Technological optimists differ in how strongly they hold this position. Many recognize the magnitude of the challenges humanity faces and our resource limitations, including those on funding and political will. Some, though, are quite optimistic, believing that technology could make energy “free, much like unmetered air” (John von Neumann) and eliminate the need for human labor (Jeremy Rifkin). Other optimists claim that technological innovation itself is speeding up and becoming less costly, which will usher in a new era of prosperity and innovation. Technological utopians even hold that society itself is akin to a large, exceptionally complex machine that scientists can engineer into perfection. Others are less sanguine about technology as a total panacea. Nonetheless, all technological optimists hold that the main way forward is to increase our investments in technology. This optimism is embraced by two-thirds of Americans who, polls show, believe that technology will bring about a future in which people’s lives are better than they are today.

Technological optimism takes continued economic growth as a sacred cow. University of Oregon political scientist Ronald B. Mitchell notes, “Mainstream policy and scholarly discussions of climate change accept growth in population and affluence as a given and view *technological innovation as the only available policy lever*.” Such optimists point to technological “fixes” such as geoengineering, seeding the ocean with iron to stimulate phytoplankton, or even “sending a fleet of planes into the sky and spraying the atmosphere with sulfate-based aerosols” to cool the planet.

Technological pessimists, by contrast, refer to “the sense of disappointment, anxiety, even menace” engendered by technology. According to them, technology frequently, if not always, has unintended

negative side effects that are worse than its contributions to dealing with the problem it purports to solve. The negative consequences of technology may be delayed, but never avoided. Other scholars hold that such negative effects are inherent to the very nature of technology. Economist Robert Gordon argues that most, if not all, truly revolutionary technological innovations have already been made. Scholars such as Nick Carr, Jonathan Zittrain, Sherry Turkle, and Jaron Lanier hold that technology—especially technology associated with the media and with the Internet—has had negative impacts on the ways human beings think and interact with each other.

Techno-pessimists rarely see a technological fix that passes muster. For instance, they fear that geoengineering will increase acid rain, and is likely to reduce the urgency that is critical to mustering the political will to permanently address climate change. (Early critics of geoengineering were so vehemently opposed to the idea that they left death threats on the answering machine of one of its most notable advocates, David Keith.) Others point out that although “only nuclear power can satisfy humanity’s long-term energy needs while preserving the environment,” nuclear reactors generate highly radioactive waste that is dangerous if not stored with the utmost care, and reprocessing this waste is expensive and increases the possibility of the waste being accessed and used for malicious purposes.

Radical techno-pessimists urge us to leave the high-growth pathway needed for the affluent society, a path that presumes ever-greater reliance on technological innovation, in favor of returning to a simpler life. Such a life would entail adapting to nature rather than seeking to exploit it. Less radical technological pessimists instead believe that we should focus on activities that add *less* to the triple challenge discussed below. Technological innovation, these moderate techno-pessimists point out, has its place—as long as it first and foremost helps to ameliorate the harms already inflicted upon the earth by humans. For some, this entails greatly increased reliance on “alternative” sources of energy such as solar and wind; for others, it means increasing the energy efficiency of our buildings and cars. All, in effect, favor a less active, more adaptive world.

### **The post-affluent society: a third way**

I see great merit in shifting the focus of our actions from seeking ever-greater wealth to investing more of our time and resources in social lives, public action, and spiritual and intellectual activities—in communitarian pursuits. Shifting to what

we consider a good society leapfrogs the growth/antigrowth debate by suggesting that a slow- or no-growth society is not merely one with a greatly reduced environmental footprint, but also one that redefines well-being. It is a society in which those who have their basic material needs well sated find contentment in nonmaterialistic activities—and in helping others to catch up. We will be active but our activity will not be labor- or capital-intensive, but socially and spiritually rich. Before I spell out this argument further, I note that those who think that such a vision is utopian should note some version of it is found in all major religions. The preponderance of the relevant evidence shows that as societies grow more affluent, the contentment of their members does not much increase. For example, between 1962 and 1987, the Japanese per capita income more than tripled, yet Japan’s overall happiness remained constant over that period. Similarly, in 1970, the average American income could buy over 60% more than it could in the 1940s, yet average happiness did not increase. Gaining a good life through ever-higher levels of consumption is a Sisyphean activity. Only finding new sources of meaning in social and spiritual life can bring higher levels of contentment. A person who meditates does not feel that she is not sated unless she meditates more than someone else, or must find each year a new or richer way to meditate. The same is true of those who enjoy a sunset, a walk on the beach, or making pottery (not as a business but as a form of self-expression). A person who volunteers for one kind of community service or another may feel that he wished he could find more time for service, but does not feel flawed if he merely gives as much as last year and the year before. A person who makes ceramics, paints, joins a book club, keeps a journal, or spends more time with his or her children, spouse, and friends (and less time at work)—evidence shows—leads a longer, healthier, and happier life (as well as one that taxes the world around us less) than those seeking ever more wealth. This is what I mean by being active in a communitarian way, in “working” for a more communitarian society.

At first blush such a major cultural shift is hard to imagine, but one needs to recall that for most of history, work and commerce were not valorized; instead, devotion, learning, chivalry, and being involved in public affairs were. True, these were often historically accessible to only a sliver of the population, while the poor were shut out from such things and forced to work for those who led the chosen life. However, we can recognize that even though

technology has created our global environmental challenges, it has also created the capacity on a global basis to eliminate degrading toil and generate enough wealth so that all can participate in the pursuit of fuller lives as citizens and individuals: Self-capping consumption now makes it possible for all the population to lead a less active economic life and a more active social, communal, and spiritual life—a communitarian life.

Abraham Maslow pointed out that humans have a hierarchy of needs. At the bottom are basic human necessities; once these are sated, affection and self-esteem are next in line, leading finally to “self-actualization.” It follows that as long as the acquisition and consumption of goods satisfy basic creature comforts—safety, shelter, food, clothing, health care, and education—expanding the reach of those goods contributes to genuine human contentment. However, once consumption is used to satisfy Maslow’s higher needs, it turns into consumerism—and consumerism becomes a social disease. Indeed, more and more consumption in affluent societies serves artificial needs manufactured by those who market the products in question. For instance, first women and then men were taught that they smelled bad and needed to purchase deodorants. Men, who used to wear white shirts and grey flannel suits, learned that they “had to” purchase a variety of shirts and suits, and that last year’s clothing was not proper in the year that followed. Soon, it was not just suits but also cars, ties, handbags, sunglasses, watches, and numerous other products that had to be constantly replaced to keep up with the latest trends. The new post-affluence society would liberate people from these obsessions and encourage them to fulfill their higher needs once their baser needs have been satisfied. None of this entails dropping wholly out of the economic or technological world. The shift to a less consumeristic society and a more communitarian one should not be used to call on the poor to enjoy their misery; everyone is entitled to a secure provision of their basic needs. Instead, those who have already “made it” would cap their focus on economic activities.

### **The triple challenge and social justice**

A society in which people combine capping their consumption and work with dedication to communitarian pursuits would obviously be much less taxing on the environment and material resources than consumerism and the level of work that paying for it requires. Social activities (such as spending more time with one’s children) require time and

personal energy, but do not mandate large material or financial outlays. The same holds true for cultural and spiritual activities such as prayer, meditation, enjoying and making music and art, playing sports, and adult education. Playing chess with plastic pieces is as enjoyable as playing it with mahogany pieces. Reading Shakespeare in a paperbound edition made of recycled paper is as enlightening as reading his work in a leather-bound edition. And the Lord does not listen more to prayers from those who wear expensive garments than from those who wear a sack.

Less obvious are the ways a socially active society is more likely to advance social justice than the affluent society. Social justice entails transferring wealth from those disproportionately endowed to those who are underprivileged. A major reason such reallocation of wealth has been very limited in affluent societies is that those who command the “extra” assets tend also to be those who are politically powerful. Promoting social justice by organizing those with less and forcing those in power to yield has had limited success in democratic countries and led to massive bloodshed in others. However, if those in power embrace the capped culture and economy, they will have less reason to refuse to share their “surplus.” This thesis is supported by the behavior of people who are committed to the values of giving and attending to the least among us—values prescribed by many religions. The same holds for secular liberalism. Many of my students are white and middle class. Their economic interests might well be considered in looking for lower taxes and less government regulation and spending. But of those students who are liberal, most are very agitated about social injustice and inequality. True, as they grow older, they are likely to focus more on their careers, but billions Americans donate whenever there is a crisis (in New Orleans, Haiti, or some other faraway place), and the very large amounts of time they spend volunteering show that doing good as a major source of meaning is far from a naïve vision.

### **Technology policy for the communitarian society**

In shifting the active orientation from a society that seeks ever more affluence to one whose members cap their economic ambitions but is socially (in a communitarian sense) more active, technologies have three roles to play.

First, keep the economy humming at a level that makes it possible to satisfy all the members’ basic needs, for instance by making health care safer, higher quality, and lower cost. Many of the greatest

advances in health care have been achieved by the provision of public goods with population-wide benefits, such as clean water and air, or by relatively cheap technologies, such as vaccines. We do not need speed trading on Wall Street, and can do without trivial redesign of medications to extend the period corporations can charge high prices for them. More generally, what is essential versus what is not requires an ongoing societal discussion that puts the quality of life, and what makes a good society rather than growth, at the center of our agenda.

Second, ameliorate the environmental consequences of industrialism. Although often divisive and painful, the debates over climate and energy are slowly putting societies on a technological path toward cleaner, affordable energy. A much less-polluting economy is a critical element of a post-affluent world, and there is much to be learned from our continuing experience in moving toward this goal through the selection of technological innovations. As one very simple example that will stand for all the others, the Nest Learning Thermostat first observes the preferred settings of those who live in the residence. It then uses a sensor to determine if anyone is home. It lowers the setting until it senses movement. And it provides a green leaf display for those who adjust their setting by two degrees or more away from their initial comfort zone, to save energy. Such technology is not merely environmentally friendly, but it also provides a new and wholesome source of pride and self-esteem. The post-affluence society needs scores of these, on a much larger scale. It can play a major role as we shift to using ever more smart instruments, and as we shift to the “Internet of Things.”

Third, allow for a more active communitarian life, for instance through technologies that facilitate group interactions versus those that isolate people, through technologies that make voting easier while helping to prevent fraud, and through technologies that enable parents to monitor the whereabouts of young children. We are all familiar with these technologies—conference calling and telecommuting that reduces the need for travel, email instead of home delivery of mail, and nanny cams. Most measures that are making various commonly used technologies, from refrigerators to cars, smarter by the use of artificial intelligence, the coming Internet of Things, qualify. True, each of these technologies can be abused. Children can become addicted to screen time and avoid the outdoors and face-to-face social life. The Internet of Things can make us delegate too many choices to algorithms. But my argument is that

we can and must assess the social and human impact of such technologies, and seek to modify them to serve the shift to the post-affluence society. Indeed, these and many other technologies will achieve their full potential only when we embrace a major culture shift that recognizes not merely the contributions of innovation to reducing our environmental footprint, but also to fostering a better life measured by other goals than working more and consuming more.

In the words of Pope Francis during his 2015 visit to Washington, DC, “we have the freedom needed to limit and direct technology to devise intelligent ways of developing and limiting our power, and to put technology at the service of another type of progress, one which is healthier, more human, more social, more integral.”

#### *Recommended reading*

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