Technoprogressivism: Beyond Technophilia and Technophobia

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Part I. Technocentrism, Technophilia, and Technophobia

A **technophile** is a person to whom we attribute a naïve or uncritical enthusiasm for technology, while a **technophobe** is a person to whom we attribute a no less uncritical dread of or hostility to technology. But what does it tell us that there is no comparably familiar word to simply describe a person who is focused on the impact of technology in a critical way that is attentive both to its promises and its dangers?

Why is it that any **technocentric** perspective on cultural, historical, political, and social questions is always imagined to be either uncritically **technophilic** or **technophobic**? Is it really so impossible to conceive of a critical **technocentrism** equally alive to real promises and alert to real dangers?

I think the lack of such a word ready to hand bespeaks profound and in fact dangerous limitations in the way we understand the role of technological developments in our lives, in the hopes and fears with which we invest them, and in our capacity to take up these developments and actively shape them in ways that better reflect our hopes.

Because I believe that technological development is the last remaining historical force abroad in the world that could plausibly be described as potentially revolutionary, and because I believe that we might make of technological development our most tangible hope that humanity might truly and finally eliminate poverty, needless suffering, illiteracy, exploitation, inequality before the law, and social injustice for everyone on earth I am often mistaken for a **technophile**.

And because I believe that whenever technological development fails to be governed by legitimate democratic processes, whenever it is driven instead by parochial national, economic, or ideological interests, that it will almost always be a profoundly dangerous and often devastating force, exacerbating existing inequalities, facilitating exploitation, exaggerating legitimate discontent and thereby encouraging dangerous social instabilities, threatening unprecedented risks and inflicting unprecedented harms on individuals, societies, species, and the environment as a whole I am often mistaken for a **technophobe**.

Within the lifetimes of many millions of human beings now living, emerging genetic, prosthetic, and cognitive medical technologies will likely provide us the means with which to eliminate many diseases and renegotiate lifespans, as well as to render traits of basic morphology and temperament radically more discretionary. With proper support, new renewable energy technologies could provide abundant, clean, and inex-

pensive alternatives to fossil fuels for developed and developing societies, while new biotechnologies could reinvent agriculture to feed burgeoning populations or to engineer microorganisms to help reverse the damage of primitive industries on the planet's ecosystem. Emerging digital networked information and communication technologies are already reshaping global cultures and economies, and are providing new tools to facilitate collaboration and proliferate intelligence, invention, and criticism. With these tools we could expand the reach and force of democracy, support more representative and accountable global institutions, and help secure the rights of humanity around the world.

I regularly distinguish between two broadly **technocentric** contemporary sensibilities that seem inevitably to arise in response to the prospect of such developments or to the appearance on the scene of their precursors today: **technoprogressivism** and **bioconservatism**.

Technoprogressivism and Bioconservatism

Technoprogressivism assumes that technoscientific developments can be empowering and emancipatory so long as they are regulated by legitimate democratic and accountable authorities to ensure that their costs, risks and benefits are all fairly shared by the actual stakeholders to those developments. **Technoprogressivism** is a stance of support for such technological development in general, and for consensual human practices of genetic, prosthetic, and cognitive modification in particular.

Bioconservatism on the other hand, is a stance of hesitancy about technological development in general and tends to maintain a strong opposition to the genetic, prosthetic or cognitive modification of human beings in particular. Whether arising from a conventionally right-leaning politics of religious/cultural conservatism or from a conventionally left-leaning politics of environmentalism, **bioconservative** positions oppose medical and other technological interventions into what are broadly perceived as current human and cultural limits in the name of a defense of "the natural" deployed as a moral category.

At its heart **technoprogressivism** is simply the insistence that whenever we talk about "progress" we must always keep equally in mind and in hand both its scientific/ instrumental dimensions but also its political/moral ones. From a **technoprogressive** perspective, then, technological progress without progress toward a more just distribution of the costs, risks, and benefits of that technological development will not be regarded as true "progress" at all. And at the same time, for most **technoprogressive** critics and advocates progress toward better democracy, greater fairness, less violence, a wider rights culture, and such are all desirable but inadequate in themselves to confront the now inescapable technoconstituted quandaries of contemporary life unless they are accompanied by progress in science and technology to support and implement these values.

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In their more reasonable versions, both **technoprogressivisms** and **bioconservatisms** will oppose unsafe, unfair, undemocratic, undeliberative forms of technological development, and both recognize that such developmental modes can facilitate unacceptable recklessness and exploitation, exacerbate injustice and incubate dangerous social discontent. Almost everyone will feel the compelling tug of reasonableness in particular formulations arising from either broader sensibility from time to time, according to their own personal experiences and hopes. These two sensibilities, often deeply at odds in particular campaigns of advocacy, activism, policymaking, meaning-making and education, will nevertheless usually share at least enough common ground for productive dialogue to be possible among their adherents.

It is also crucial to recognize that both **bioconservative** and **technoprogressive** sensibilities, rhetorics, and politics have arisen and exert their force uniquely in consequence of what I would describe as the ongoing **denaturalization** of human life in this historical moment.

This **denaturalization** is a broad social and cultural tendency, roughly analogous to and structurally related to other broad tendencies like, say, **secularization** and **industrialization**. It consists essentially of two trends: *First,* denaturalization names a growing suspicion (one that can provoke either fear or hopefulness, sometimes in hyperbolic forms) of the normative and ideological force of claims made in the name of "nature" and especially "human nature," inspired by a recognition of the destabilizing impact of technological developments on given capacities and social norms. *Second,* denaturalization consists of an awareness of the extent to which the terms and pace of technological development, and the distribution of its costs, risks, and benefits, is emerging ever more conspicuously as the primary space of social struggle around the globe.

It is a truism that the technical means to eliminate poverty and illiteracy for every human being on earth have existed since the eighteenth century, but that social forms and political will have consistently frustrated these ends. The focus for most technoprogressives remains to use emerging technologies to transform the administration of social needs, to provide shelter, nutrition, healthcare, and education for all. To this end, a deepening and widening of democratic participation in and accountability of governance, administration, and developmental deliberation through emerging networked information and communication technologies is crucial. For technoprogressive the imperative is always: *Using Technology to Deepen Democracy, Using Democracy to Ensure Technology Benefits Us All.*

Part II. Live Long and Prosper: A Program of Technoprogressive Social Democracy

The most legitimate concern of some sensible bioconservatives (and of those who tend to sympathize with their arguments for now), and certainly of most technoprogressives, is that the rich and powerful will enjoy medical "enhancement" and longevity long before the rest of us do, or that powerful elites will control digital surveillance technologies or unprecedented nanotechnological capacities that will consolidate their power in unimaginable ways.

The NBIC convergence of nanoscale technologies, biomedical technologies, information technologies, and cognitive/neuroceutical technologies promises unprecedented human emancipation but threatens no less than the literal rewriting of social injustice as a form of dreadful speciation.

I want to propose the following initial, provisional programmatic redress of social injustice as an indispensable part of a properly technoprogressive politics of radical, disruptive technodevelopmental social struggle. Comparably technoprogressive alternative recommendations are welcome and even necessary, of course, and quite likely to be abundant soon enough:

A First Technoprogressive Campaign

Technoprogressives must demand a basic income guarantee as an indispensable complement to any general championing of disruptive technological developments. This would effectively eliminate poverty from social life and sustain every citizen as a stakeholder with enough freedom to contract the terms of their participation in society as they see fit. This income (together with a life-long stakeholder grant in education and retraining) would foreground the value of citizen participation in a properly technoprogressive democratic civilization, empowering citizens to contribute free creative content, including technoscientific research and development, to participate in new collaborative forms of media oversight and policy deliberation, in addition to voting on policy-measures and representatives for public office.

The public provision of a basic life-long guaranteed income should be thought of first of all as the implementation of safeguards against arbitrary misuses of authority

in peoples' workplaces. It would provide everybody with the means to "opt out" of the current circumstances in which they attain their livelihoods. Thus, it would provide a constant check on misuses of power in the workplace by institutionalizing a permanent position of security from which workers could renegotiate the terms of their employment and demand redress for abuses without fear of unjust reprisals. It would also encourage people to grow and take chances, try new things, learn new skills, invest in new enterprises to the benefit of all, and all without the threat of utter devastation to bedevil and constrain them. A world with a basic income guarantee would still be a world in which many worked for profit, surely, and in which many more would work voluntarily in projects that are especially important or satisfying to them, or provided unique benefits for them.

These entitlements would enlist world citizens in incomparable peer-to-peer projects to establish justice, ensure local tranquility, provide global security, and promote general welfare both as *citizen-critics* on global networks, providing media oversight, problem-solving, free creative content, participatory sousveillence, developmental policy deliberation as well as compensating us (and sustantiating our capacity for real consent) as we assume more and more risks and lose a real measure of customary privacy in our emerging role as experimental *citizen-subjects,* as indispensable "data-points" in global experimental projects to hasten and regulate emerging longevity and modification medicine.

It is crucial to remember that media have always been publicly subsidized. Even in relatively "minarchist" Founding-Era America the architects of the republic recognized the indispensability of media to working continental-scaled democracy: hence, the establishment of a postal service and roadways, and later the subsidization and regulation of every media form as it emerged on the scene right up to the recent creation and support of the internet. A basic income guarantee can be defended as a comparable subsidization of peer-to-peer networks and media (including collaborative forms of in-depth security and surveillance/sousveillance) on this view, quite apart from its many other justifications.

Progressives defend basic income guarantees as the deferred fulfillment of the emancipatory promise of struggles against slavery and conscription by eliminating at last the economic duress that compels so many today into wage slavery and voluntary armies doing the bloody-minded business of corporate-military elites. To these defences, technoprogressives add that basic income guarantees also provide ways to empower resistence to techodevelopmental outcomes favored exclusively by elites, as well as to ameliorate conspicuous anti-democratic concentrations of wealth faciliated by automation. I describe such pernicious technoconstituted wealth concentration, together with the technodevelopmental dislocations faciliated by sophisticated communications and transportation networks as *technodevelopmental abjection* (discussions of the "outsourcing" of jobs can often be usefully translated into these terms).

A Second Technoprogressive Campaign

Technoprogressives must demand universal basic health care provision as well as a stakeholder grant to support some lifelong consensual recourse to modification medicine as an indispensable complement to any general championing of research, development, and the support of genetic, prosthetic, and cognitive medicine. This effectively eliminates the greatest threat to the lives of the relatively less powerful (unecessary suffering, the burdens of untreated illness, as well as powerful pressures to engage in any unwanted treatments and modifications) and enlists every citizen as a participant in a civilization-wide peer-to-peer experiment in better-than-well health-care provision and rejuvination medicine. This stakeholder grant in healthcare and enhancement would foreground the value of morphological freedom (more on this term in a moment) in our democratic civilization, empowering citizens to enage in proliferating projects of self-creation, as peers celebrating a prostheticized reimagination of embodied lifeway multiculture.

For democrats and technoprogressives social justice cannot tolerate unequal distributions of authority beyond a certain point (we are, I fear, well past that point at present in the precarious North Atlantic democracies) —- but it is just as true that our sense of justice demands the preservation and celebration of inequality in its forms as distinction and diversity. For me, the key here is to champion what I describe as a Culture of Consent.

So long as a trait does not render the scene of consent illegible – the expressed need for sexual reassignment, valuing deafness, or the exhibition of mild autism, among countless other things, all seem to me clear examples of such traits – then it seems to me that advocates of a culture of consent cannot properly deny any citizens who incarnate such a trait as a part of their own personhood either

(a) the validity of any of their performances of consent on that basis or

(b) the consensual recourse to modification medicine to come to exhibit that trait or the consensual restraint from modification so as to maintain the trait.

It is crucial to realize that legibility of consent is a weaker standard than, say, "optimality" (on whatever construal) would be – and that it is a weaker standard for a reason: Too restrictive a standard will likely skew the difficult balance between the democratic value of informed, nonduressed consent (which, to be substantial rather than vacuous has to be propped up with universal standards on contentious questions of basic health and general welfare), and the no less democratic value of diversity.

People of good will can argue about the extent to which an "optimal" scene of consent might properly be encouraged or discouraged via strategies of subsidization and such, whether in the name of administrative economies, general welfare, or what have you. But the simple fact is that anybody who advocates both a substantive vision of the general welfare as well as for the value of diversity is eventually going to stumble onto fraught moments when they have to figure out how to reconcile these values on the ground.

I do personally think the legible, informed, nonduressed consent of citizens is the key to work through some of these difficulties, but it has to involve a substantive rather than vacuous commitment to consent. That is to say, to be legitimate, the scene of consent needs to be shored up with all sorts of assurances against misinformation, ignorance, force, and duress that don't presently prevail for the most part. Also, the standard of legible consent must be a standard weak enough to incubate a real proliferation of consensual performances rather than a standard so strong that it imposes conformity... and yet the standard must be strong enough to ensure that "consent" doesn't become an alibi for violation, exploitation, or neglect.

A Third Technoprogressive Campaign

Technoprogressives must demand the implementation of democratic world federalism, recognizing that planetary problems demand planetary governance and that democratic governance is no less legitimate on a global scale than it is on national or local scales.

Technodevelopmental social struggle takes place on a planetary stage and its proper stakeholders are not confined to any nation, culture, region, class, race, gender, or faith. All human beings inhabit and impact the same indispensable biosphere and environment, just as all are threatened by its vulnerability to human recklessness. All human beings produce, consume, collaborate, and trade through a globe-girdling ritual artifice of norms, laws, and protocols, all of us ineradicably interdependent, beholden to a common inheritance of creative intelligence and accomplishment, just as we are all threatened by exceptionalist interpretations of norms, selective applications of law, or unfair protocols articulating production and trade. All human beings benefit from the security of their planetary fellows in their rights, the legitimacy of their governments, their general commonwealth and shared stake in an open future, just as all of us are threatened by the violation of rights, the decay of democractic legitimacy, and the abjection of poverty, stigma, violence, or hopelessness anywhere else on earth.

Of course, there are already various progressive campaigns afoot to implement basic income guarantees, universal healthcare, global education, and democratic world federalism (whether through the democratic reform and strengthening of existing institutions like the United Nations, the International Criminal Court, the International Labor Organization, through direct action by way of global people's movements for peace, human rights, fair trade, sustainability, transparency, or through a combination of these and similar campaigns). Technoprogressive critique, education, agitation, and organizing identifies new connections among these familiar radical democratic struggles and hence promises to reinvigorate them. Technoprogressive perspectives are sensitive to different historical stakes amidst the unprecedented dangers and promises of disruptive technoscience, and also recognize different strategic opportunities across the dynamic technodevelopmental terrain on which these struggles are unfolding. But

those who imagine that "technoprogressive" politics will amount to an endless indulgence in pet "futurist" utopias and dystopias, the substitution of proximate planning with far-flung fixations on medical immortalization, robot armies, nanogoo, traversible wormholes, and such will be, I fear, rather disappointed by my own understanding of the term and by the rather familiar radical democratic priorities that arise from that understanding.

For me, it is crucial to grasp that the main distinction between technoprogressive and bioconservative political orientations is not a matter of whether one's politics are "tech-positive" or "tech-negative," since "technology" really has no interesting political existence at that level of generality. What is wanted are technodevelopmental outcomes that are democratizing, consensual, sustainable, emancipatory, and fair. What is resisted are technodevelopmental outcomes that consolidate elites, are nonconsensual, unsustainable, exploitative, and unfair. A global basic income guarantee, universal healthcare and education, and democratic world federalism seem to me to provide the context most likely to facilitate progressive, democratic, sustainable technodevelopmental outcomes.

Part III. The Politics of Morphological Freedom

Morphological freedom designates a right of human beings either to maintain or to modify their own bodies, on their own terms, through informed, nonduressed, consensual recourse to, or refusal of, available remedial or modification medicine.

Morphological freedom fighters today are battling the racist War on (some) Drugs (by means of other drugs), they are psychedelic experimentalists, they are sex radicals, queers, transsexuals and advocates for intersex people, body-modders, feminists fighting to keep abortion safe, legal, and universally available as well as people fighting to expand access to assistive reproductive technologies (ARTs), people fighting for the standing, rights, and lives of the differently enabled, including both advocates whose emphasis is to secure the rights of the differently enabled as citizens whatever their differences, as well as those whose emphasis is to secure access to transformative genetic, prosthetic, and cognitive therapies – whether these therapies are "normalizing" *or not*, activists struggling to secure the right of people to end their lives on their own terms as well as advocates who seek to ensure that the suffering and vulnerable are not callously consigned to a social irrelevance that encourages them to suicide.

And so, the politics of morphological freedom weaves together many struggles that share a common commitment to the value, standing, and social legibility of the widest possible (and an ever-expanding) variety of desired morphologies and lifeways. More specifically, morphological freedom is an expression of traditional liberal pluralism, secular progressive cosmopolitanism, or humanist and posthumanist multiculturalisms, but applied to an era of disruptive planetary technoscientific change, and especially to the ongoing and palpably upcoming transformation of the understanding of medical practice from one of conventional remedy to one of consensual self-creation, via genetic, prosthetic, and cognitive modification.

I first encountered the term "morphological freedom" in a short paper by neuroscientist Anders Sandberg, who defines it quite simply as "the right to modify oneself according to one's desires." In Sandberg's formulation, the right to morphological freedom derives from a conventional liberal doctrine of bodily self-ownership and amounts, more or less, to a straightforward application of negative liberty to the situation of modification medicine. The political force of such a commitment under contemporary conditions of disruptive technoscientific change is quite clear: It appeals to widely affirmed liberal intuitions about individual liberty, choice, and autonomy in order to trump bioconservative agendas that seek to slow, limit, or altogether prohibit poten-

tially desirable medical research and individually valued therapeutic practices, usually because they are taken to threaten established social and cultural norms.

But I worry that this formulation of morphological freedom, however initially appealing and sensible it may be, is fraught with the quandaries that bedevil all exclusively negative libertarian accounts of freedom. Because any universal intuitions about the indubitability of bodily "self-ownership" will radically underdetermine the specific entitlements and protocols that will claim to be derived from them, such foundational gestures will always mobilize compensatory projects to deny and disavow possible alternate formations. These projects to "naturalize" and hence depoliticize what are in fact historically contingent and vulnerable conventions will inevitably privilege certain established constituencies over others and so will just as inevitably eventuate in some form or other of conservative politics. In my own understanding of the term, on the contrary, the commitment to morphological freedom derives primarily and equally from commitments to both diversity and to consent.

The force of the commitment to diversity seems to me to imply that the politics of morphological freedom will properly apply equally to those who would make consensual recourse to desired remedial or modification medicine, as well as to those who would refrain from such medicine. I disapprove of the strong bias in favor of intervention and modification at the heart of many current formulations of the principle of morphological freedom. While this bias is quite understandable given the precisely contrary bias of the bioconservative politics the principle is intended to combat, I worry that an interventionist bias will threaten to circumscribe the range of morphological and lifeway diversity supported by the politics of morphological freedom. I suspect that some will take my own foregrounding of the commitment to diversity as an effort to hijack the politics of morphological freedom with the politics of "postmodern relativism" or some such nonsense. But the simple truth is that any understanding of "morphological freedom" that prioritizes intervention over diversity will threaten to underwrite eugenicist projects prone to imagine themselves emancipatory even when they are nonconsensual, and will police desired variation into a conformity that calls itself "optimal health," stress management, or the most "efficient" possible allocation of scarce resources (whatever wealth disparities happen to prevail at the time).

The force of the commitment to consent seems to me to imply that the politics of morphological freedom are of a piece with democratic left politics. I disapprove of the strong bias in favor of negative libertarian formulations of freedom at the heart of many current formulations of the principle of morphological freedom. Although neoliberal, neoconservative, and market libertarian formulations often appear content to describe any "contractual" or so-called "market" outcome as consensual by definition it is quite clear that in actuality such outcomes are regularly and conspicuously duressed by the threat or fact of physical force, by fraud, and by unfairness. And so, whenever I speak of my own commitment to a culture of consent I mean to indicate very specifically a commitment to what I call substantiated rather than what I would reject as vacuous consent. A commitment to substantiated consent demands universal access

to trustworthy information, to a basic guaranteed income, and to universal healthcare (actually, democratically-minded people of good will may well offer up competing bundles of entitlements to satisfy the commitment to substantiated consent, just as I have offered up a simplified version of my own here), all to ensure that socially legible performances of consent are always both as informed and nonduressed as may be. I suspect that some will take my own foregrounding of the commitment to substantiated consent as an effort to hijack the politics of morphological freedom with the politics of social democracy. But the simple truth is that any understanding of "morphological freedom" that demands anything less than democratically accountable and socially substantiated scenes of informed, nonduressed consent will threaten to underwrite authoritarian moralists with unprecedented technological powers at their disposal who would impose their parochial perspectives on a planetary scale, quite satisfied to retroactively rationalize the righteousness of even mass slaughters and mass capitulations.

Part IV. The Proportionate Precautionary Principle (PPP) as a Democratizing Framework for Developmental Deliberation

In the 20th century, some humans acquired through technological development the hitherto unprecedented capacity to destroy all human civilization, the whole human race and indeed all life on Earth. Symbolized in the detonation in 1945 of the first atom bomb, the subsequent decades of the last century witnessed an awesome proliferation of weapons of mass destruction, bioengineered pathogens, and other potentially apocalyptic technologies. There also emerged new dilemmas of global industrialization, characterized by unprecedented complexity, diffuse causes and deeply worrisome but ill-understood results. Among these were the rise of waste gases such as carbon dioxide and methane in the atmosphere, the possibly catastrophic rapid depletion of inexpensive fossil fuel resources, the widespread introduction of toxins into soil and groundwater, the overuse and diminished effectiveness of antibiotics and the planetary loss of biodiversity.

Although the standards of prudence have always had to reckon with the difficulties of estimating best outcomes in the face of future uncertainty, imperfect knowledge and unintended consequences, these standards have never yet managed to stretch enough to accommodate comfortably the new stakes of uncertainty in an era of potentially apocalyptic technologies. One effort to delineate such standards has come to be called the "Precautionary Principle."

Many technoprogressives champion what might be called a Proportionate Precautionary Principle (or, "PPP"), a version which advocates that:

1. We should always be cautious in the face of possible harm;

2. As assessments of risk and harm grow more severe according to the consensus of relevant science, the burden of their justification rightly falls ever more conspicuously onto those who propose either to impose them or to refrain from ameliorating them; and

3. The processes through which these justifications and their assessments properly take place must be open, evidence-based, and involve all the actual stakeholders to the question at issue.

Technophiles who value speedier technological development in the expectation that it will deliver sooner *for some* goods of incomparable value, sometimes like to imply that *all* advocates of Precaution are indifferent to the risks that sometimes arise from *refraining* to act, or assess actual risks unnecessarily stringently, or exhibit a kind of blanket hostility to the attainments of medical-industrial technocultures (on which, of course, the Precautious depend themselves for their own standards of living).

While all of this is certainly true of some **bioconservative** advocates of Precaution —- and partisans on both sides can of course always find photogenic specimens to trot out in the support of their prejudices -– these accusations ignore the extent to which the Precautionary Principle was introduced precisely in response to damaging corporate-friendly government or self-sponsored research that selectively framed and published its results, and in response to the deployment of impossibly high standards of certainty to create the false impression that widely held, well-founded suspicions and concerns were in fact too controversial to provide a justification for regulation.

Such critics of Precaution also tend to ignore that many of the most influential formulations of the Precautionary Principle (which has as yet no definitive or canonical expression) confine their attention to cases of (1) likely nonreversible harm to the health of individuals or (2) to environmental harms that are likely to impose remediation costs higher than the benefits they generate or finally (3) to existential or extinction-level threats.

In *proportionate* formulations of precaution the stringency of the justificatory burden on actors is weighted in proportion to the sweep, scope, character, and intensity of the developmental consequences anticipated by stakeholders to that development and warranted by shared ethical and evidenciary standards.

As it happens, few formulations of the Principle are in fact oblivious to the ineradicable dimension of risk that inheres in all human conduct, including decisions to "refrain" from action. (It is crucial to remember that the *status-quo* rarely arises indifferently out of *inaction* but must itself be actively *reproduced* by those who have or imagine themselves to have a stake in its maintenance.) And while I will grant that it has not yet often been mobilized in arguments of this kind, the Precautionary Principle would seem to me to *impel* the development and deployment of emerging technologies and techniques to more effectively address global harms, malnutrition and ill-health, certain existential risks that have not hitherto been susceptible of effective response (for example, a defense against asteroid impacts, or a global warning system to inform vulnerable populations of tsunamis and the like, the tracking of weapons proliferation or global pandemics).

For its technoprogressive adherents, PPP is a democratizing deliberative framework for sustainable development, at once impelling a fairer distribution of the costs, risks,

and benefits of technological development onto all of its stakeholders, while likewise enlisting the wider collaboration of these stakeholders in the actual process of research and the assessment of its results.

Regulation Between Relinquishment and Resignation (RRR)

In our own era, technological development poses a host of unprecedented quandaries for which anxious contemporary debates about genetic medicine, ubiquitous surveillance and widespread automation are faint premonitions. Confronted with the horrifying reality or prospect of new technological threats the first impulse of the North Atlantic democracies is almost certain to involve misguided compensatory expansions of state surveillance and control.

Bill Joy, among others, points out that probably-immanent technologies could exploit capacities for self-recursion (for example, software that could program ever more sophisticated versions of itself without direct human intervention or understanding) and self-replication (for example, biotechnologies or molecular nanotechnologies that could reproduce versions of themselves that spread exponentially) that will make them at once incredibly powerful and difficult to control.

Joy is so horrified at the destructive potential of these technologies that he notoriously proposes to ban their development altogether. The typical technophiliac rejoinder to Joy's proposal of a principled **relinquishment** in the face of unprecedented risk is that it is unenforceable, and would simply shift the development and use of these technologies to less scrupulous people and less regulated conditions. This would, of course, exacerbate the very risks relinquishment would be enacted to reduce.

Most technoprogressives concede the force this rejoinder, but are leery of facile misreadings of its implications. The fact that laws prohibiting murder don't *eliminate* the practice certainly doesn't imply we should strike them off the books. If Joy's technological relinquishment *were* in fact the best or only hope for humanity's survival, then we would of course be obliged to pursue it whatever the challenges.

But surely the stronger reason to question relinquishment is simply that it would deny us the extraordinary benefits of emerging technologies -— spectacularly safe, strong, cheap nanoscale-engineered materials and manufactured goods; abundant bio-engineered foodstuffs; new renewable energy technologies; and incomparably effective medical interventions.

Corporate futurists and neoliberal technocrats often seem altogether too eager to claim that technological regulation is laways and absolutely unenforceable, or that developmental outcomes they desire happen to be "inevitable." But of course the shape that development will take -— its pace, distribution, applications -— is anything but inevitable. And all technological development is obviously and absolutely susceptible

to regulation, for good or ill, by legitimate laws backed by force, as well as moral norms, market signals, and structural limits.

Market libertarian technophiles often like to suggest that *any* effort to regulate technological development at all is essentially the same as bioconservative efforts to ban it altogether. Many declare their faith that scientific research and investment on its own is best able to defend against the threats that science itself unleashes. This is a faith many technoprogressives largely share with them, but only to the extent that we recognize how much of what makes science "robust" is produced and maintained in the context of well-supported research traditions, stable institutions, steady funding and rigorous oversight, most of which looks quite like the "regulation" that libertarians otherwise abhor. For me (and this is a topic on which technoprogressives have many differing views), consensus scientific culture itself is an expression, accomplishment, and implementation of the democratic idea, and certainly not any kind of "spontaneous order."

Neoliberal, neoconservative, and market fundamentalist ideologues often advocate a kind of "market" **resignation** that seems to me exactly as disastrous in its consequences as any bioconservative's recommendation of **relinquishment**. In fact, the consequence of both policies seems precisely the same -— to abandon technological development to the least scrupulous, least deliberative, least accountable forces on offer. In saying this, the point is not to demonize commerce, of course, but simply to recognize that good governance encourages good and discourages antisocial business practices, while a climate of fair trade and general prosperity is likewise the best buttress to good democratic governance.

Part V. Humanist and Post-Humanist Humanitarianism

Above all, it is difficult in my view to see how **bioconservative** defenses of what provincially passes at the moment for "human nature" could finally help us much in these worthy democratizing projects. I do not mean to be dismissive of humanism, but it seems to me that historically speaking the so-called universal accomplishments celebrated under the banner of humanism from the Renaissance to the present day have rarely been available to more than a privileged group of males, and occasionally a few females, within strictly limited socioeconomic strata. Even at its most capacious, any anthropocentric human-racist grounding of ethics will stand perplexed in the face of the demand of Great Apes, dolphins, and other nonhuman animals for standing and respect. Further, the category of "humanity" seems rarely to have provided much protective cover for even fully sane, mature, "exemplary" human beings caught up in the genocidal technoconstituted dislocations of the modern era.

A number of **post-humanist** discourses have emerged to register these dissatisfactions with the limitations of the traditional humanist project. It is important to recognize that the "post-human" does not have to conjure up the possibly frightening or tragic spectacle of a *posthumous* humanity, an end to the best aspirations of human civilization, or even a repudiation of humanism itself, so much as a new effort *emerging out of* humanism, a *moving on from* humanism as a point of departure, a demanding of something new from it, perhaps the demand that humanism live up to its universalizing self-image for once.

Bioconservatives often express a general fear that new technologies will "rob" us of our *humanity.* But for me the essence of our humanity, if there could be such a thing, is simply our capacity to explore together what it means to be human. No sect, no tribe, no system of belief owns what it means to be human. I believe our personal and collective prosthetic practices are contributions to the conversation we are having about what humanity is capable of, and that those who want to freeze that conversation in the image of their pet platitudes risk violating that "humanity" just as surely as any reckless experimentalism would.

Technoprogressives understand that we have all grown too queer and too prostheticized to be much seduced by the language of innocent "nature," or sweet bioconservative paeans to the so-called "human dignity" or to the "deeper meaning" to be found in pain and suffering from potentially treatable diseases. **Technoprogressives** believe that we can demand fairness, sustainability, responsibility, and freedom from

the forces of technological development in which we are all immersed and in which we are all collaborating, and that this demand is the contribution of this living generation to the ongoing conversation of humankind.

The Politics Are Prior to the Toypile

Despair is as destructive to our democratic hopes as is the arrogance or nostalgia of elites. Neither the hype-notized dreams of our technophiles nor the disasterbatory nightmares of our technophobes tell us where we should build the next bit of road together (although both occasionally helpfully let us know when we've gotten off track altogether).

I believe that much of what people really mean when they either praise or excoriate something they call, in some general way, "technology" is to speak instead about the political values and concrete practices that drive technodevelopmental social struggle from moment to moment on the ground.

The very same corporate-militarism in America that has devastated independent media, co-opted our elections, debauched our representatives, fueled the drumbeat of deregulation without end that presided over the vast looting of our supportive infrastructure, and dismantled our civil liberties is of course the very same corporate-militarism that would enclose the creative and now, too, the genetic commons, that bolsters primitive extractive petrochemical industries while constraining the emergence and implementation of networked renewable alternatives, fights a puritanical war on re-creational drugs by means of corporate-approved drugs of docility and distraction, arms the diabolical machineries that drench the world in blood and violence.

In the hands of elites and in the service of elite agendas technologies too often exacerbate inequity and exploitation. While in more democratic societies, technologies have the best hope of serving emancipatory ends instead: Regulated by legitimate democratic authorities to ensure they are as safe as may be. And regulated as well to best ensure that their costs, risks, and benefits are shared by all of their stakeholders. And all of this in the context of a culture of informed nonduressed consent – that is, with open access to consensus scientific knowledge and in the absence of the duress of physical force, financial ruin, or conspicuous humiliation.

Current democratic formations have demonstrated their extreme vulnerability to the depredations of corporate-militarism, as have the world's most vulnerable people by the millions. We must take up emerging peer-to-peer digital networked media and social software to reclaim and reshape our democracies just as we must take up emerging renewable technologies to lighten the human bootprint on our earth even as we welcome ever more human minds and lives into the community of full democratic citizenship. Both of these efforts are indispensable to any realizable globalization of the promise of democracy as well as any serious effort to turn the global anti-democratic corporate-military tide.

Further, I believe we must facilitate the fuller flowering of diversity and freedom made possible when the resources of culture expand to encompass the informed, non-duressed, consensual genetic, prosthetic, and cognitive modification of human lifeways in the image of our diverse values.

Without democratic accountability, answerability, responsibility corporate-military technodevelopment will leave the earth a charred cinder, but so too without the emerging tools of peer-to-peer digital networks, sustainable energy technologies, better-than-well medicine (and, one hopes, soon enough, replicative nanoscale manufacturing), the social formations of democratic governance progressives and technoprogressives advocate will little likely command the material and rhetorical resources to fight the vast established interests that drive corporate-militarism today, nor to mobilize humanity imaginatively today and tomorrow to establish a global democratic, sustainable order and culture of universal informed, nonduressed consent in an open future.

What is wanted instead in this unprecedented historical moment of technoconstituted quandary and confusion are new progressive, sustainable, democratizing **technocriticisms.** What is wanted are new critical **technocentric** discourses and practices attentive to the complex and competing costs, risks, benefits, promises, pleasures, and dangers of disruptive and intimate technological developments and prosthetic practices.

Technology Needs Democracy, Democracy Needs Technology

Over the years of my lifetime, conservative ideologues have seemed to frame their usual corporatist, militarist, deregulatory schemes more and more in apparently revolutionary terms. They seem to hyperventilate ever more conspicuously and insistently about their customary money-grabs and power-grabs in the faux-revolutionary cadences of "freedom on the march" and with faux-revolutionary visions of "free markets" surging, swarming, crystallizing, and well-nigh ejaculating the whole world over. And over these same years of my lifetime, the democratic left—already demoralized, perhaps, by the failures of long-privileged revolutionary vocabularies—seemed almost to sleepwalk into the rather uninspiring position of defending the fragile institutional attainments of imperfectly representative, imperfectly functional welfare states in apparently conservative terms. They have struggled reasonably but too-often ineffectually, spellbound with worry over the real harms to real people that have accompanied the long but apparently irresistable dismantlement of the social democratic status quo, such as it was.

This was and somewhat remains a problem for the radical democratic left. On the one hand, there appears to be an ongoing failure to take seriously the vast resources and breathtaking organizational discipline that can be mobilized by the real desperation of religious and market fundamentalist elites panic-stricken by global secularization and

its threats to the traditional, parochial, and "natural" vocabularies that have legitimized hitherto their otherwise unearned privileges and authority. And on the other hand, there has simply been a failure of nerve and, worse, imagination in the fraught efforts to formulate an appealing post-marxist revolutionary democratic vocabulary that could inspire people to struggle for long-term general emancipation rather than short-term personal gain.

For me, of course, such a new revolutionary vocabulary would need to be a palpably technoprogressive one. It would consist of the faith and demand that global technological development be beholden to the interests of all its stakeholders as they themselves express these interests, that existing technological powers be deployed to redress injustice, ameliorate suffering, diminish danger, remediate the damage of prior and ongoing technological development (especially the legacies of unsustainable extractive and petrochemical industrialization), and finally that new technologies be developed to incomparably emancipate, empower, and democratize the world.

Conservatism cannot appropriate a technoprogressive vision, since any conception of progress that insists on both its technical and social dimensions will indisputably threaten established powers. But there is no question that conservatives will take up technodevelopmental politics for their own ends. Indeed, conservative military-industrial technophiles, neoliberal technocrats, and global corporate futurists already largely define the terms in which technodevelopmental politics are playing out in the contemporary world. Conservative technodevelopmental politics in its corporate-conservative mode will continue to insist that "progress" is a matter of the socially-indifferent accumulation of useful inventions to be enjoyed first and most by the elites with whom particular conservatives identify. And in its bioconservative modes conservative technodevelopmental politics will continue to indulge in daydreams of un-enforceable bans on scientific research and of blanket disinventions of late modernity (trying all the while not to think too much about the genocidal die-offs entailed in such pastoral fantasies) on the part of deep ecologists and anti-choice activists.

Not to put too fine a point on it, I believe that without democracy technology will likely destroy the living world, and that without technology democracy will likely wither into irrelevance and so destroy the human world. But I believe no less that a radical democratic politics of global technological development will likely emancipate humanity at last. Radical democracy needs to take up its revolutionary stance again, to gain and remake the world for us all before the world is utterly lost to us all.

Beyond technophilia and technophobia? There are whole worlds of new responses, new responsivenesses, and new responsibilities.

Let's find out what we are capable of.

The Ted K Archive

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Technoprogressivism: Beyond Technophilia and Technophobia
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<technoprogressive.blogspot.com/2006/08/technoprogressivism-beyond.html>

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