



Futurological Discourses and Posthuman Terrains

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Abstract: Seven basic distinctions seem to me key to grasping futurology as both a discursive and a sub-cultural phenomenon: (1) technologies and technology: the actual constellation of artifacts and techniques in the diversity of their stakes and specificities as against technology as a de-politicizing myth disavowing these specificities; (2) progress and destiny: techno-developmental social struggles in the service of avowed political ends in a material historical frame as against a paradoxical naturalization of progress into destiny, autonomy, convergence, and/or accelerationist momentum; (3) mainstream futurology and superlative futurism: hyperbolic techno-fixated norms and forms that suffuse popular marketing, promotional, consumer discourses as well as neoliberal administrative, developmentalist discourses as against the futurist amplification of this speculativeness, reductiveness, and hyperbole into faith-based, techno-transcendental, putatively scientific but in fact pseudo-scientific, quasi-theological aspirations toward superintelligence, supercapacitation and superabundance; (4) superlativity and supernativity: posthuman/transhuman against bioconservative/naturalizing futurisms, highlighting continuities and inter-dependencies of the two, as distinguished in turn from legible democratizing technodevelopmental social struggle, consensus science and sustainable public investment; (5) posthumanism and transhumanism: post-humanisms as variations of superlative futurology against post-humanisms as variations of the critique of humanism, amounting to a distinction of moralizing prevalence as against ethical reconciliation; (6) futurist discourses and subcultures: material differences in the objects and archives of discursive as against subcultural formations; (7) futurity and The Future: distinguishing between the political openness inhering in the present in the presence of ineradicable stakeholder diversity as against instrumentalizing projections of parochial fears, fantasies, and stakes that would disavow and so foreclose futurity.

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In this essay I propose some preliminary distinctions for the discussion of technoscientific questions and for the facilitation of progressive technodevelopmental social struggle in general, but also as a way to engage critically with mainstream neoliberal and extreme transhumanist futurological discourses and subcultures in particular. Please note, I am far from claiming that these distinctions of mine are particularly original

or provocative: most of all, their critical power arises from their ready intelligibility and on the subsequent recognition of their regular denial.

Some discourses I would describe as futurological nonetheless attend selectively, at least occasionally, to some of the distinctions that follow. Accordingly, my modest ambition in this piece is to provide in these distinctions a set of criteria on the basis of the

application of which we can mine the archive of futurological arguments, proposals, figures, and frames to find analytic and documentary insights that might still be useful for study of the substance and stakes of technoscientific change in the world. However, futurological discourses properly so-called could not sustain their apparent coherence or real force were they to attend in a conscious and consistent way to all of these distinctions at once. This essay undermines futurological discourses through the recommendation that we keep such distinctions always in the forefront of our minds as we contemplate technodevelopmental struggles. To use the viral imagery futurologists have taught us to prefer to the rhetorical terms that better describe the character of the contests at hand, I hope that this effort can provide readers with a measure of immunization from what seem to me to be reactionary futurological mystifications and mischief-making.

Technologies and Technology

The first distinction I want to propose is between the plurality of actual technologies and a fanciful something called "technology" as such. It is of course a commonplace to hear people declare that they are afraid of technology, or excited by technology, or even that they love technology. Bestselling pop science, tech journalism, and commercial imagery are all filled with claims that technology is monolithically advancing, threatening, empowering, disrupting, converging, accelerating. Futurologists in corporate-military think-tanks and in public relations firms, but also many others, declare themselves to be champions of technology and we are meant to understand, it seems, that this championing arrays them against fearful, befuddled, or even villainous others—usually described as Luddites or as technophobes—who oppose technology with a deadly ferocity equal to the passion of its champions. The stakes of this confrontation are, to all appearances, enormously high for those who are invested in talking this way. And it is true enough, one can hear anyone from gizmo-harassed consumers to environmental activists declaring in frustration that technology causes more problems than it solves and that, therefore, more technology is the last thing we need right about now.

The difficulty in all this is that there is, after all, no such thing as technology. There is no such thing as technology in general or technology as such: There are always instead constellations of artifacts and techniques, actually-existing and also imagined. Technologies

are in use, misused, consumed, consigned to landfill, repaired, maintained, creatively reappropriated, under development, seeking venture capital, subject to regulation, promoted, marketed, misunderstood, repackaged, mistaken for novelties. Some artifacts and techniques are useful to some, some not so useful to others, some not yet put to the uses that might make them useful to still others.

Some artifacts and techniques seem to arrive from nowhere, dazzling us with promises and threats, usually to disappoint us soon enough, or at any rate until the next distraction fills the pop-tech press and screen. And still more of the artifice besetting us is simply the setting for us, now so familiar these events no longer seem to be "technologies" at all, like the clothes we wear, like the ground we have cultivated, like the languages we deploy—very much including our gait, posture, and bearing—the very body language at the site of a selfhood so intimate, so incontrovertible, so indispensable we tend to posit it as not only not technological but as altogether prediscursive, ahistorical.

Needless to say, one cannot properly or sensibly speak of an acceleration of technology, let alone of the acceleration of that so-called acceleration. But of course such claims utterly suffuse the technofixated imaginary of our professional futurologists as well as the mass-memberships of consumer fandoms for everything from Apple handhelds to anti-aging informercial products. This is not to deny that there certainly are technoscientific research programs and developmental pathways that seem to be accelerating for now, but to recognize that others at once are slowing and stalling, while still others buttress one another or ramify into applications and subdisciplines, and others vanish altogether from the scene as theoretical paradigms and consumer enthusiasms shift.

One can speak of logics or rhetorics or discourses of technology, as Martin Heidegger famously did when he proposed the technological as the assumption of a vantage upon the world which fundamentally articulates our attention and produces our experience of it—framing the environment as a readily available, indefinitely resourceful, utterly instrumentalizable answer to our willfulness, but at once rendering the world uncommunicative, noncompanionable, remote from our sympathies, less apt to arouse our sublimities. One California futurist, Jamais Cascio jokes that, "'Technology' is anything invented since

you turned 13,"¹ which amounts to the proposal that the technological adjudicates attributions of the familiar and the unfamiliar. I have sometimes proposed myself that the technological is best conceived as our collective elaboration of inter-personal agency, and that it is ongoing, discursive, and performative, as well as prosthetic. Indeed, I would say that all culture is prosthetic, and that all prostheses are culture: and since the historical reality of culture is always multicultural, since all living cultures are dynamic and not static, and since our cultural identifications and performances are always at once partial, imperfect, and multiple, then any substantial grasp of technologies as the cultural phenomena they are, any proper reading of technological events, will require their historical contextualization and will foreground the diversity of their stakeholders in their differences.

Whether a discourse of the technological reproduces the space of geography and possibility as an alienated field of resources awaiting exploitation, or as a territory of familiar and unfamiliar landmarks compelling our exploration, or as a site for political contestation and collaboration, peer to peer, even in this more general delineation it is, again, always only in the specification of the historical terms and political stakes of its participants that we discern the sense and substance of what passes for the technological from moment to moment.

Whenever we fail to pluralize technologies into their diverse expressions, whenever we fail to narrativize technologies as produced, maintained, and applied by their diverse protagonists, whenever we fail to politicize technologies from the vantage of their diverse stakeholders, the technological imaginary is a specifically fetishistic one in the sense familiar from *Ideologiekritik*: in David Harvey's accounting such discourse invests technology with agency in ways that disavow the agency of the human beings who struggle to create and appropriate these technologies in the first place and who, through such technologies, struggle to rewrite history as they are written by it.²

¹ Jamais Cascio, "Twelve Things Journalists Need To Know to be Good Futurist/Foresight Reporters," *Open the Future*, June 12, 2006. http://www.openthefuture.com/2006/06/twelve_things_journalists_need.html. Last accessed 12-20-2013.

² David Harvey, "The Fetish of Technology: Causes and Consequences," *Macalester International* 13/1 (2003), Article 7.

Although nothing is more commonplace than the framing of the politics of technology, so-called, as a matter of an antagonism between those who embrace it and those who reject it, any kind of useful specificity is truly difficult to grasp in just what one is really claiming to be for or against when one declares oneself to be pro-technology or convicts another of being anti-technology. It would be better to understand such political formulations of technodevelopmental struggle as anti-political, as they function either to evacuate or to distract us from the actual politics at hand. The politics of technology-in-general or technology-as-such seem to me to be mythological in Roland Barthes' sense of the term, and as in Barthes the anti-politics of technology-as-myth will tend in turn to conduce to conservative political ends.

If we understand mythology as Barthes put it, as a mode of de-politicized speech³ – that is to say, if myth is our speaking of a world that has been otherwise than it is now and still could be otherwise than it is now instead as if it were a natural world that is as it must be or is the best it can hope to be or is on an inevitable pathway to the best of all possible worlds – then there is no more forceful mythology than one which naturalizes our sense of what will count as technologies, of what technologies are good for, of what kind of progress technologies can be counted on to bring to the faithful. It is myth that makes technology in general where there is none, and it is myth that naturalizes and renders uncritical and hence more amenable to incumbency the politics of familiarization and de-familiarization through which we invest some, but never all, of our artifacts and techniques with the force of the technological.

Progress and Destiny

In *The Abolition of Man*, C. S. Lewis worried that we speak too loosely of developments in applied science as a matter of "Man's conquest of Nature" or as a gaining of "increasing power over Nature," and he warned that, "What we call Man's power is, in reality, a power possessed by some men which they may, or may not, allow other men to profit by."⁴ Apart from the misogyny of these formulations, his insistence was much the same as my own; namely, that to grasp the

³ Roland Barthes, *Mythologies*, trans. Annette Lavers. New York: Hill and Wang 1972, pp. 142-5.

⁴ Clive Staples Lewis, *The Abolition of Man*, New York: Harper Collins 1944, p. 54. [Henceforth cited as AM]

real substance of technoscientific changes we must always recognize the diversity of their actual stakes to the diversity of their actual stakeholders. But Lewis' insistent re-politicization of technoscientific change did not simply resist the attribution of specific benefits of specific technological changes to some generalized technology, he was especially concerned to resist the subsumption of specific benefits into a general narrative of technological beneficence or a specifically techno-triumphalist account of universal progress, empowerment, or transcendence.

Lewis' concern brings me to my second distinction. For just as I would insist that there is no such thing as technology-in-general, so too I would insist that there is no such thing as progress-as-such. But whereas the generalization from technologies into technology-as-such enables a de-politicizing evacuation of factual substance, the generalization from technoscientific changes into progress-as-such enables a de-politicizing evacuation of normative substance. All progress is progress toward an end, but there can be no progress in the formation, expression, and evaluation of ends themselves, only either their circumscription or proliferation. I do not deny that once we are committed to ends we can discuss their facilitation through specific applications of technoscientific knowledge, neither do I deny that we can be committed to ends for what we take to be good reasons that others can come to agree are good reasons, too. My point is that to treat progress as an end-in-itself is usually to disavow actual ends—whether for equity, for diversity, for increasing gross domestic product, for more reported satisfactions on the happiness index, whatever the end may be—and by so disavowing them so too to relinquish the terms without which any notion of progress at all is finally unintelligible. Once again, just as the apparent de-politicization effected through the generalization of technologies into technology-as-such tends to conduce to the benefit of conservative politics more often than not, so too the apparent de-politicization effected through the disavowal of specific constituencies with specific stakes in technoscientific outcomes tends to conduce to the benefit of just those constituencies and just those ends that require stealth because they are extreme, unpopular, or preferentially benefit minorities rather than or even to the cost of majorities.

These disavowals tend to be couched as either neutralities or as inevitabilities. *The Abolition of Man* was written in England in the midst of an earlier epoch of eugenic futurological enthusiasm defined as much

by J. B. S. Haldane as it was by Adolf Hitler, but before the Manhattan Project and postwar petro-politics inaugurated a different, indicatively American, epoch of petrochemical, computational, mass-mediated mass-consumption in Tomorrowland, and long before our own epoch of neoliberal eugenics, digital utopianism, global finance and globalized development. Today bioethicists, politicians, journalists, CEOs, and everyday citizens alike speak glibly of prosthetic, pedagogical, therapeutic, and managerial enhancement, either forgetting or refusing to recognize that enhancement is always qualified: for whom, to facilitate what outcomes, in the service of which values, at what cost, with what risks?

There is no general optimization for every outcome, there is no universal training for every profession, but always only enablements freighted with disablements. To say the least, every pursuit has among its costs the other pursuits we might have tried instead. When we speak of the straightforward enhancement of athletes through training, doping, and even surgeries, for example, it is bad enough that our assured pronouncements so often fail to account for palpable risks of damage to health and reputation, but they also fail to account for the fact that few aspire to be and fewer succeed in becoming successful athletes and none remain athletes for life and possibly for quite good reasons. Perhaps the circumscription of character through discipline, the idealization of a competitive preeminence rarely accomplished and never sustained is a human catastrophe rather than a triumph. Can one sensibly speak of enhancement in the service of such a catastrophe? My point is not to denigrate organized sports but to insist that contestation over its fundamental value is and deserves to be ongoing, and yet that the discourse of enhancement here both depends on a pretense of agreement that does not and should not exist, but also performs a circumvention of that contestation producing the effect of agreement nonetheless.

It is surely possible and even plausible to characterize as enhancement a pedagogy that facilitates optimal performance on certain compulsory examinations at the expense of inculcating instead a critical, convivial temper. It is no less plausible to characterize as enhancement a cosmetic surgical procedure that approximates the conventional attractiveness of currently popular celebrities at the expense of a loss of distinctive physical features. Again, it is perfectly plausible to characterize as enhancement

the undergoing of intensive, transformational training or therapeutic interventions to facilitate performance in highly competitive business or military environments at the expense of an openness to unexpected calls to service, to occasions for collaborations as ends-in-themselves whatever their initial expectations of success, for playful improvisation, and so on. But in every instance the plausibility of the enhancement in question relies for its intelligibility and force on the denial most of all of the fact that it is in question at all. The plausibility of an account of enhancement will tend to be as much an effect of the denial of its contestation through a conjuration of false and facile neutrality about its results as it is an effect of any amplification of particular capacities at particular costs in which it also happens to result.

It is not only by stealthfully denying anybody does or even possibly could disagree with them about the ends they take to be the good ones for assessing particular technoscientific changes, but often futurologists will declare such assessments of value as altogether irrelevant in the face of the supposed inevitability of the extraordinary technodevelopmental outcomes that preoccupy them. It does not matter, for example, that the champions of artificial intelligence have always only failed in their expectation of an imminent arrival of AI; it does not matter that these champions seem so often to celebrate and promulgate a distressingly reductive understanding of intelligence rendering many of them insensitive to intuitive, social, bodily incarnated, historically situated dimensions of intelligence as it is distinctively exhibited in actual human beings; it does not matter that the brain is much more like a gland than it is like a computer — none of this matters, come what may, because of a curious destiny engine denominated by futurists as Moore's Law.⁵

Because of the observation of Gordon Moore that the number of transistors on an integrated circuit had been roughly doubling every two years, and the paraphrase of that observation into a law-like generalization that chip performance more or less doubles every two years, for many futurists this means that an AI will inevitably appear and a human-equivalent AI soon enough and a superhuman AI soon after, whether we like it or not, whatever the coherence or not, whatever the desirability or not, of the underlying assumptions,

prevailing conceits, or guiding aspirations of those who advocate for that artificial intelligence. Now, I would argue that if the underlying assumptions, prevailing conceits, and guiding aspirations of AI's advocates are as wrongheaded as they seem to be, we should no more expect Moore's Law to spit out a superintelligent AI any time soon than we should expect an accumulating pile of sand or even of abacuses to spit out a superintelligent AI.

Likewise, it does not matter, for example, that the redemptive promise of the inevitable arrival of nuclear energy too cheap to meter left us in a world of prohibitively costly boondoggles, at best horrifically dangerous to the communities they serve and always producing toxic wastes nobody honestly knows how to dispose of safely for as long as they remain a threat, and at worst, as at Three Mile Island, Chernobyl, and Fukushima, reducing whole regions to irradiated wastelands. It does not matter that the promise of the inevitable arrival of the paperless office was drowned soon enough in a flood of computer printouts, or that the dream of internet democracy became a nightmare of surveillance, targeted marketing harassment, unpaid crowdsourced content provision, and zero comments. It does not matter that the promise of inevitable mass-prosperity and expanding leisure from productivity gains yielded by improvements in automated production and integrated storage and transportation of manufactured goods eventuated instead, in the absence of robust collective bargaining or progressive taxation, in more than a generation of unprecedented wealth concentration at the summit of the income distribution and lowered expectations, diminished buying power, and increasing insecurity for burgeoning majorities. It does not matter that the average global temperature is ominously rising and catastrophic climate change already costing prohibitively more and more, still the CEO of Exxon-Mobile after a generation of public climate change denialism and quietism has assured us just last year that catastrophic anthropogenic climate change is merely "an engineering problem" for which there will inevitably be "an engineering solution,"⁶ even if the details are at best fanciful cartoons of megascale

⁵ Gordon E. Moore, "Cramming More Components onto Integrated Circuits," *Electronics* 38/8 (1965, April 19), pp. 114-7.

⁶ Rex W. Tillerson, "The New North American Energy Paradigm: Reshaping the Future," *Transcript, Council on Foreign Relations* (2012, June 27), <http://www.cfr.org/north-america/new-north-american-energy-paradigm-reshaping-future/p28630>. Last accessed 12-20-2013.

geo-engineering pseudo-proposals or at worst are not forthcoming at all. It does not matter that the life expectancy at retirement age of people who work for a living isn't increasing even remotely the way pampered US Senators quoting futurologists say they must be and surely will be, and on the basis of which they mean nevertheless to raise the age of retirement and of eligibility for Medicare for our long-laboring seniors, US Senators who live as long and as well as, but rarely much longer or much better than, the Senators of Ancient Rome.

None of these disappointments, failures, qualifications much matter to the futurologists, because they say medical knowledge is increasing exponentially and so inevitably all diseases will be cured, including aging as a disease—because they say competition is inherently optimizing and so inevitably the prices of all goods and all services will drop until superabundance is available to all—because they say we are gaining ever greater control over matter and so inevitably all things that are logically possible or at any rate logically possible and also desirable will also be practically possible in the fullness of time. Why should we concern ourselves with apparent contradictions, conspicuous incoherencies, defiance of evidence and experience, problematic assumptions, skewed priorities, ethical dilemmas, when the forces of technodevelopmental amplification are so undeniable in their logic, so irresistible in their seduction?

Even though it makes little sense to say that technology is accelerating when we recall that there is no such thing as technology in general in the first place to so accelerate, and even though in our everyday lives we depend on continuity as much as we attend to disruption, even though we testify to diminished capacities as much as we hope for their improvement, even though we are beset on all sides by governmental paralysis, developmental impasses, infrastructural failure, unsustainable growth, still we hear the think-tank futurologists and tech-journalists and the online consumer commentariat declaring that we live in an age of exponential growth, disruptive development, accelerating change, acceleration of acceleration, escape velocity, etc.

Metaphorical though it may be, the sheer momentum conjured through this ubiquitous rhetoric of acceleration yields an impression of inevitability in the face of the starkest implausibility. Given the assertively ecstatic embrace by self-identified transhumanists, posthumanists, digital-utopians, techno-immortalists,

extreme futurists, and so on of the artifactual, the cyborgic, and the unnatural, it is paradoxical to say the least to grasp the extent to which the rhetoric of accelerating change and techno-triumphalist inevitability essentially naturalizes progressive outcomes that depend in fact, to the extent that they are realizable at all, on profoundly contingent political struggles among diverse and contentious stakeholders, costly, risky, qualified, error-prone, utterly uncertain processes of discovery, funding, testing, publication, education, regulation, maintenance, and equitable distribution.

"The future is a process, not a destination,"⁷ science fiction writer Bruce Sterling has offered up in a famous aphorism. But when aspirational instrumentalities would interminably translate already given causes into effects and would endlessly amplify already wanted capacities, this process is all too readily refigured as a progress unfolding in a likewise logical even teleological linearity, and hence the destination is not so much refused after all as refigured itself, as a progressive destining, a susceptibility already announced in the conjuration in Sterling's aphorism itself of an open futurity refigured as the siren singularity of The Future. About this tendency, I will have more to say later.

Mainstream Futurology and Superlative Futurism

Although futurism may seem to represent a rather rarefied intellectual discipline, and futurists a rather specialized professional cohort, I would propose that the futurological is in fact the prevailing discourse of neoliberal public life, and futurologists the quintessential intellectuals propping up the neoliberal order. This leads me to my third distinction, between mainstream futurology and what I would describe as superlative futurism.

The mainstream futurology that issues forth from World Bank reports and think-tank white papers, in corporate boardroom presentations and TED talks, purports to discern developmental trends and to provide guidance by sketching speculative scenarios. But whatever their present ubiquity, there is good reason to question the trend as a legitimate analytic

⁷ Bruce Sterling in an interview with Paul D. Miller, "Bruce Sterling: Notes From the Near Future," *Origin Magazine* (2012, May 10), <http://www.originmagazine.com/2012/05/10/bruce-sterling-notes-from-the-near-future>. Last accessed 12-20-2013.

object or useful methodological recourse. Whenever I hear the word trend, I reach for my brain. Certainly there is no such thing as an historically agentic or otherwise autonomously forceful trend. Trends, let us say, are retroactive narrative constructions, and usually their retroactivity is falsely projected as if from the vantage of a non-existing superior height (as with fashion trends announced by fashion authorities) or from the future (which does not exist and is inhabited by no one at all) in which case they are always prescriptions masquerading as descriptions. Every legibly constituted discipline produces models of phenomena, and hence every legibly constituted discipline has a foresight dimension. This is because knowing better how phenomena behave under various conditions facilitates more practically useful interactions with them, and leads us to form expectations and make plans accordingly. But once again trends are narratives more than models, strictly speaking, and it is not scientists but literary scholars and rhetoricians who are probably best situated to explain how they operate: As narratives, mainly they solicit identification; as promotional genres, they do so the better to peddle forms of consumption.

The connection of the futurological future to market futures is hardly incidental to its logic, nor is the connection via the term speculation between stock market tips and science fiction. Futurological scenarios are best understood as an impoverished genre of science fiction literature, one drained of the complexities of ingenious plotting, plausible characterization, thematic richness, and reduced to the delineation of scenery (hence, scenario), the provision of a stage setting which the reader is left to populate through imaginative identification. What the genre lacks in fictional force is compensated by its pretense to predictive scientificity. Futurological scenarios inevitably circumvent historically situated social, cultural, and political dynamisms while purporting to model these dynamisms in relation to physically prominent phenomena. Scenario spinning superficially skims without the least mastery the objects of a host of disciplines from the qualified results of advanced scientific research to complex questions of stakeholder policy to the radical contingencies of historical struggle in a kind of anti-disciplinarian parody of inter-disciplinarity. Such scenarios are scarcely improved (except, sometimes, as a sales pitch) in more sophisticated variations entertaining, say, four alternative futures at once rather than the usual one. The conjuration of a counterfeit complexity, scenarios

circumscribe political possibility into a handful of choices on a menu provided by already established actors, usually with a promise of profits or as an offer of consolation. Some of these difficulties beset all forms of social science, especially to the extent that they try to measure their value in the image of reliable engineering. But in futurology these limitations constitute a kind of crisis, and a crisis conjoined to another that besets our shared present.

Far from marginal or incidental, futurology seems to me to be the authoritative expression of neoliberalism, and the persistent, monologic testament to its prevalence. The Market and The Future are co-dependent and even co-extensive imaginaries. But in the endlessly fascinating, actually marginal discourses and defensive subcultural movements of transhumanism, singularitarianism, techno-immortalism, and the like we encounter essential and symptomatic expressions of the mainstream futurological imaginary and better discern the pathologies driving our unsustainable techno-triumphalism, our immiserating consumer-fetishization, our scientific reductionism, and our austere global developmentalism. We encounter in these extremities a *reductio ad absurdum* of our conventional wisdom and expose its narcissism, cruelty, and profligacy to scrutiny—as well, one hopes, to its indispensable critique.

It is crucial to grasp the considerable and conspicuous overlap between these mainstream and superlative futurological modes. Both share a tendency to reductionism (from the facile simplifications of market fundamentalist pieties to the sexist, racist, bio-reductionist just-so stories of evolutionary psychology) conjoined to a possibly compensatory hyperbole bordering on arrant fraud, promising easy encyclopedic syntheses of knowledge, usually via biological or computational metaphors, often via the perplexing collapse of biological and computational metaphors into one another, not to mention promising self-esteem, easy money, sexual zeal and appeal, and the return of youth, what C. S. Lewis lampooned as the guns and gold and girls that are the shared drivers of magical and technoutopian projects behind their loudly proclaimed quests for truth.

To this I would add, only apparently paradoxically, that both mainstream and superlative futurology dependably express an anxious hostility to the actual materiality of the furniture of the world, whether this takes the form of a neoliberal preference for fraudulent financialization over sustainable production, or for the

digital over the real. There is an absolute continuity between the reality of globalization asserted in Gayatri Spivak's declaration that "the globe is on our computers. No one lives there,"⁸ and the reality asserted by those flabbergasting futurologists who earnestly mean to upload their info-selves, very possibly first disinterred by swarms of billions of superintelligent nanobots from their long deceased, frozen, hamburgerized brains, and live eternally thereafter as cyberangels in a kind of better than real Holodeck Heaven.

There is an absolute continuity between, on the one hand, the ubiquitous late-nite infomercial imagery of teen-age models surrounded by pastel-hued CGI-rendered DNA helices and slathering anti-aging crèmes under their eyes, of superannuated Boomers injecting Botox, popping herbal supplements, and grinning like blissed-out tweens, of Air Force recruitment ads of exploding orbital space stations defiantly declaring "It's not science fiction!" and, on the other hand, subcultures of the futurological faithful now living who expect to be resurrected and live on as ideal avatars in the cyberspatial sprawl or in comic-book capacitated robot bodies or who expect scientists to deliver warp drives, transporters, or nanobotic superabundance that grows on trees.

What I take to be the characteristic gesture of superlative, as against mainstream, futurological discourses will be their commandeering of worldly concerns like basic healthcare, education, economic, or security policy, say, and their redirection of these concerns (in what amounts to a radically amplified variation on conventional marketing and promotional hyperbole) into literally faith-based discourses, often connected to actual membership organizations lead by priestly elites or venerated guru figures marginal outside the relevant subcultural formations, peddling not just the usual quick profits or youthful skin but promising a personal techno-transcendence modeled in its basic contours and relying for much of its intuitive plausibility on the disavowed theological omnipredicates of judeochrislamic divinity (omniscience, omnipotence, and omnibenevolence) translated instead into the pseudo-scientific terms of superintelligence, supercapacitation—often including a nearly-immortalizing superlongevity—and superabundance.

The translations I am proposing can be quite

⁸ Gayatri Chakravorty Spivak, *Death of a Discipline*, New York: Columbia University Press, 2003, p. 72.

straightforward: Substantive questions of network security and user friendly software, say, are abducted and hyperbolized by superlative futurists into techno-transcendental projects of superintelligence (singularity, Friendly AI) evoking omniscient divinity; substantive questions of medical research and healthcare access, say, are abducted and hyperbolized by superlative futurists into techno-transcendental projects of supercapacitation (enhancement, immortalism, uploading) evoking omnipotent divinity; substantive questions of general welfare administration are abducted and hyperbolized by superlative futurists into techno-transcendental projects of superabundance, circumventing the impasse of stakeholder politics in scarcity (energy too cheap to meter, plastic, digitization, ubicomp, fabbing, nanotech), evoking omnibenevolent divinity.

Futurology is caught up in and constitutive of the logic of techno-fixated market futures, while futurisms are technoscience fandoms and sub(cult)ures materializing imagined futures in the fervency of shared belief. Successful mainstream futurology amplifies irrational consumption through marketing hyperbole and makes profitable short term predictions for the benefit of investors, the only finally reliable source for which is insider information. Successful superlative futurism amplifies irrational terror of finitude and mortality through the conjuration of a techno-transcendent vision of The Future peddled as long-term predictions the faithful in which provide unearned attention and money for the benefit of gurus and pseudo-experts, the source for which is science fiction mistaken for science practice and science policy. Something suspiciously akin to fraud would appear to be the common denominator of futurology in both its mainstream and superlative modes. As against the dreary dream-engineering ad-men of mainstream futurology the adherents of superlative futurism are indulging in outright, and often organized, faith-based initiatives. More than consumers eating up the usual pastry-puff progress, they are infantile wish-fulfillment fantasists who fancy that they will quite literally arrive at a personally techno-transcendentalizing destination denominated The Future.

Superlativity and Supernativity

"Bioconservative" is a term some transhumanists have long used to deride political and cultural arguments that oppose medical enhancements and other techno-transcendental outcomes in the name of a defense of

the natural deployed as a moral category. While there are obviously differences that make a difference in the arguments arising from these ideological vantages, what I will emphasize instead is that this endlessly asserted antagonism of bioconservative with transhumanist advocacy conceals a mutually enabling partnership in futurist hyperbole between the two—in much the same way that the related antagonism between technophobic and technophilic attitudes more generally, real though it is, also distracts from what can be a more significant parochialism and undercriticality toward matters of technodevelopmental social struggle they often share and to which they contribute more or less equally.

Here we arrive at a fourth distinction, between what I will call Supernative and what I have called Superlative futurological formations and figurations, an antagonism yielding mirror image retro-futurisms. The apparent paradox of identifying a reactionary defense of nature as any kind of futurism at all vanishes once we grasp that any abiding substance or Golden Age bioconservative positions equate with nature and seek to impose on the eventual present has no more existed in historical reality than does the Glorious Future toward which the insistently anti-nature transhumanists aspire through their imagined participation in a techno-triumphalist, and thus also naturalized, narrative of progress.

Consider the regularity with which environmentalist rhetorics of protection of nature misidentify the preservation of the living world as such with the preservation of the way of life of a minute minority of profoundly dissatisfied and disinterested consumers in extractive-industrial societies representative neither of the majority of humans now living, nor the comparatively sustainable lifeways of thousands of years of human settlement otherwise, nor the manifold varieties of nonhuman lifeway flourishing on earth. Selective appropriations and racist exoticizations of posited indigenous lifeways—which are no less dynamic and prostheticized than industrial technocultures are, we should remember—that so often freight bourgeois boutique environmentalisms likewise recall the shared etymology of the natural and the native. The "natural" no less than the "technological" is a construction, indeed they are co-constitutive constructions, and like the technological the natural, too, must be pluralized, narrativized, and politicized else it is apt to be fetishized in the service of reaction.

It is commonplace (but still urgently important, even so) to point out that what I would call superlative

discourses of biomedical enhancement inevitably presume that incumbent interests or self-appointed biomoralist elites are authorized to designate what constitutes an enhanced human capacity, morphology, or lifeway, whatever the expressed wants of informed, nondressed consenting persons might say to the contrary. This clearly constitutes in my view either an actual or aspirational eugenic outlook. So-called transhumanists, who would engineer an optimal idealized postulated *homo superior* with which they presently identify at the cost of a dis-identification with the diverse and dynamic humanity with whom they actually share the world, are advocating a *de facto* eugenicist politics.

But notice that what I am calling supernative discourses of biomedical preservationism inevitably presume as well that incumbent interests or certain self-appointed biomoralist elites are authorized to designate what constitutes a normal or natural human capacity, morphology, or lifeway that must be protected and insulated from change, whatever the expressed wants of informed, nondressed consenting persons might say to the contrary. This also constitutes an actual or aspirational eugenic outlook. So-called bioconservatives, who would ban safe, wanted, but non-normalizing therapies in an effort to preserve a static idealized postulated *homo naturalis* with which they presently identify at the cost of a dis-identification with the diverse and dynamic humanity with whom they actually share the world are also advocating a *de facto* eugenicist politics.

Not to put too fine a point on it, patriarchy itself can be usefully viewed as the inculcation of a set of arbitrary norms driving a selective eugenic breeding program many centuries old, and so the natural default status into which neoliberal eugenicists (to update Nicholas Agar's eerily celebratory phrase⁹) like the transhumanists fancy themselves to be intervening so radically is just as well regarded as a position taken up in a longstanding clash of reactionary eugenic parochialisms. When we recall that in *The Abolition of Man*, a piece I have been citing more or less sympathetically so far, C. S. Lewis identified contraception with the eugenic supercession of human dignity we realize that superlative/supernative confusions are far from idle.

Supernative futurists have a curious tendency to accept at face value the rather extraordinary claims of

⁹ Nicholas Agar, *Liberal Eugenics: In Defense of Human Enhancement*, Oxford: Blackwell, 2004.

mastery as well as the resulting triumphalist prophecies of the superlative futurists, despite the serial failure of so many of these claims when it comes to it. Lewis is no exception. Recoiling from the apparent ascension of omni-competent Conditioners who are presumably well on the way to implementing a technoscientific mastery of all nature, including human nature, engineering perfectly capacitated subjects in a field of objects engineered to perfect responsiveness to their will, Lewis warns:

If the fully planned and conditioned world (with its Tao a mere product of the planning) comes into existence, Nature will be troubled no more by the restive species that rose in revolt against her so many millions of years ago, will be vexed no longer by its chatter of truth and mercy and beauty and happiness. *Ferum victorem cepit*: and if the eugenics are efficient enough there will be no second revolt, but all snug beneath the Conditioners, and the Conditioners beneath her, till the moon falls or the sun grows cold. [AM 68]

The danger, Lewis insists, is that "if man chooses to treat himself as raw material, raw material he will be" (AM 72) and as such already enslaved however he seeks emancipation on these material terms. This is because, to return to elementary philosophy, there is a difference between what is and what ought to be, and no amount of knowledge about what is can accumulate high enough to reach the ought through which we judge the meaning of what is, or what we should do about what is, or even whether it is worth knowing what we do rather than discovering other things about what is instead.

Lewis' proposal in the face of this quandary is his notion of the Tao (which makes a neglected parenthetical appearance in the quotation above): In one sense, the Tao is Lewis' shorthand for a collection of wisdom that is presumably generally continuous across cultures—in an appendix Lewis provides a host of illustrations, "don't kill," "do unto others," "take care of the vulnerable," "keep your promises," "death before dishonor"—while in another sense the Tao names the rule that those who teach and apply norms should themselves be subject to those norms. In both senses Lewis seeks to provide some more objective ground for norms, since a clash of subjective oughts seems to him scarcely better than the denial of ought altogether. But even Lewis seems to concede that his empirical compendium of ethical chestnuts is not in fact so universal as it may seem—and presumably in both its

parochialism and its generality his Tao would still give rise to an interminable clash of different applications, emphases, and interpretations. Neither is it entirely clear how the demand that norms apply to all who apply them would also imply that all norms so applied will be compatible with one another, and so avert such clashes any better. Lewis finally contents himself with the assumption of a Tao he recognizes might be deemed arbitrary from other standpoints but which nonetheless renders his own judgments meaningful. Although *The Abolition of Man* is suffused throughout with a tonality of melancholy resignation in the face of what seems a techno-triumphalist brutalization of human values, Lewis reveals an undercurrent of triumphalism of his own in his contentment with the righteous universalizing force of his Tao, arbitrary though it may be. It would be wrong to forget that Lewis is not merely defending the role of value judgments to infuse the materialist moonscape of the Conditioners with human meaning, he is defending his own values in the piece, and these are very much the values of an Englishman, a rather comfortably legibly hegemonic elite, educated, privileged white, male, Christian in a nation still making a go at global Empire: When it comes to ambitions of universalizability, arbitrary value systems hardly can be said to compete on an even playing field.

If Lewis' argument represents a classic bioconservative formulation, and one offered in response to proto-transhumanistic Conditioners, I want to turn now to an essay written years later but in comparable perplexity by Hannah Arendt which proposes neither supernative nor superlative judgments on these questions. In the famous Prologue to *The Human Condition*, Arendt had already meditated at length on the occasion of the recent launch of Sputnik, analogizing emerging bioengineering and automation techniques aspiring at the techno-transcendence of humanity's species-being and social servitude to that artificial satellite's escape from the earth into the celestial sphere of the ancient philosophers, calling for citizen-philosophers in the extremity of that novelty to "think what we are doing."¹⁰ But I want to concentrate my attention on an essay Arendt published five years later, "The Conquest of Space and the Stature of Man." In it, Arendt insists that questions of the stature or significance of technoscientific achievements are not themselves scientific questions, and that it is only in

¹⁰ Hannah Arendt, *The Human Condition*, Chicago: University of Chicago Press 1958, p. 5.

their shared citizenship with the rest of us that scientists properly contribute to urgently necessary deliberations about such questions. The difficulty, she writes, is that science

has changed and reconstructed the world we live in so radically that... the layman and the humanist, still trusting their common sense and communicating in everyday language, are out of touch with reality... [T]heir questions and anxieties are simply caused by ignorance and therefore are irrelevant. How can anyone doubt that a science enabling man to conquer space and to go to the moon has increased his stature?¹¹

Arendt will come to reveal how very extraordinary it really is to describe as the intuitively obvious, quintessential expression of human emancipation and mastery what is in fact the scene of a solitary astronaut in the icy cold, irradiated waste of outer space, tethered by a thin, fragile airline to the cramped, incomprehensibly complex machinery of an orbiting vehicle, when all the while we are all of us fit to flourish so well and with such ease in company on earth.

But the difficulty remains that technoscientific knowledges confront human societies with the most conspicuous promises and problems that beset us, while these knowledges arise out of the mastery of abstruse technical vocabularies that render them inaccessible to the vast majority of those who are affected by them and hence unavailable to the deliberation without which they can be rendered meaningful to us. Arendt's problem anticipates well the present quandary of policy-making undertaken in our names and to which we are made subject arising from the aggregation of disseminated data traces into profiles and frames that are susceptible of computability as Big Data in legal, commercial, medical, military databases but incomprehensible on the actual political terms of privacy, security, liberty, and rights in which we seek to cope with their implications.

Arendt was fond of quoting in this connection the Kafka parable in which a man is said to have "found the Archimedean point, but he used it against himself; it seems he was permitted to find it only under this condition." It is a comment quite as apt for Lewis, who declared that it would be in the moment that humanity finally conquers nature that we would inevitably find nature had conclusively conquered humanity.

Lewis retreats in the face of this danger into arbitrary dogmatism: "Either we are... obliged for ever to obey the absolute values of the Tao, or else we are mere nature to be kneaded and cut into new shapes for the pleasures of masters [and] their own 'natural' impulses" (AM 73). Arendt insists instead on the confinement of technoscientific change within the bounds of political contestation: its questions "must be answered in terms of common sense and in everyday language" (CS 266). However difficult or even impossible it might seem, however its exactions might slow the bulldozer of brute capacitation, technoscientific knowledges simply must be rendered sufficiently intelligible by scientists and science educators that their stakes and significance can be weighed by those who are affected by them. Where interpretations and aspirations over technoscientific changes clash, political compromises must be adjudicated by the stakeholders themselves, the better to ensure that their costs, risks, and benefits are equitably distributed by their lights and on their terms.

Arendt clearly shares Lewis' view that science itself cannot provide the terms on the basis of which applications of science are to be judged good or ill, but she is far from sharing Lewis' assertion that a "dogmatic belief in objective value is necessary to the very idea of a rule that is not tyranny or an obedience that is not slavery" (AM 73). The key term in Lewis' formulation is dogmatic, but this is not because I think Lewis retreats from the clash of subjective impulses through dogma while Arendt, say, embraces that clash as the substance of politics. I do indeed think the difference between their perspectives is captured in the distinction of dogma from democracy, but I think it is important to grasp that this is more specifically the distinction of a moralizing anti-politics that would prevail over difference (and in a way that has more in common with the march of instrumental reductionism it combats than it might initially appear to do) from a politics with an ethical dimension.

I will return to this distinction of morality and ethics in the next section. For now, let me simply point out that democracy in my understanding is the effort to provide non-violent alternatives for the adjudication of disputes as part of the experimental implementation of the idea that people should have a say in the decisions that affect them. Because the determination of just what will count as violence is among the disputes democracy seeks to adjudicate, and because the determination of just what will count as a say is among the decisions

¹¹ Hannah Arendt, "The Conquest of Space and the Stature of Man," *Between Past and Future: Eight Exercises in Political Thought*, New York: Penguin Books 1968, pp. 265-82, here p. 268. [Henceforth cited as CS]

democracy seeks experimentally to implement I would describe democracy in this construal (and here I stray from the specificity but adhere to the spirit of Arendtian formulations, as I understand them) as ethical, however provisionally. This is not because it applies its norms to itself, but because it aspires to reconcile rather than prevail over all differences, in part through a contestation of the meaning of its norms. It is not the closure of internal consistency but openness to external plurality that invests democratic valuation with the objectivity that both Lewis and Arendt seem to be seeking in their separate essays.

Needless to say, there may be endlessly many good reasons to oppose particular medical or technoscientific outcomes on their merits, apart from bioconservative worries about their unnaturalness or our playing God (which we surely already did in inventing her). Opposition on the merits is not what I mean by supernativity, and neither usually should it be declared bioconservative or luddite by my lights, as far too many futurological cheerleaders would have it. (The question whether luddite is rightly a term of opprobrium at all given that the historical Luddites were masterly users of activist tools and techniques, defending lifeways mediated by tools and techniques, and perfectly correct in their actual fears that certain tools and techniques were being deliberately deployed by plutocrats to concentrate wealth and authority catastrophically at their expense, is another question.) But it is also true that many critiques of the furniture and preoccupations of our so-called technological society which raise legitimate questions of safety, inequity, misinformation, and misplaced priorities are readily commandeered into the service of bioconservative rhetorics and projects of anti-democratizing naturalizations in the service of elite-incumbent interests and parochial concerns. It remains important to find ways of disarticulating these strands in assessing the force of any particular technodevelopmental critique. This is so not least because whatever the appeal of their simplification, distraction, and drama, between the deranging extremities of superlative and supernative futurologies that attract so much of our attention there remains in fact the whole incomparably rich field of legible technodevelopmental struggle, consensus science, sustainable public investment, public education, activist organization, legislative reform, and stakeholder politics.

Posthumanism and Transhumanism

Let me propose that when Aristotle defined human beings as political animals, his formulation constituted a fledgling kind of cyborg manifesto written many centuries before Donna Haraway's. What if, after all, Aristotle's definition amounts to the claim that human (and possibly other) animals have become the beings they are because they have come to live together in cities? On such a view, this Aristotelian formulation is not a replacement but a complement to his more commonplace definition of humanity as the rational animal. For Aristotle as for most of the Greek philosophers reason is dialogic, and there is a real sense in which one cannot claim to know a thing until one is capable of communicating that knowledge successfully to one's peers. For Aristotle's political animal, then, to be rational is always to be able to communicate intelligibly to others, to testify to one's experience in public, to convey one's desires and intentions successfully, to be responsive in the face of failure with one's peers, to facilitate acting in concert. Taken together these definitive political characterizations make humanity prostheticized (or cultural) through and through, they understand human animals as beings constituted in conversation and in collaboration, sustained by ritual and infrastructural artifice as surely as we are by food and air.

Human bodies are crucially maintained in both their biological continence and their social legibility in the company of others. Our bodies are exposed not only to the elements but to scrutiny, vulnerable to criticism, open to change, needy for connection, practically interdependent, eager for the pleasure and danger and the unpredictable novelty of public contact no less than for the security and support and quotidian routine of intimacy. And so, for Aristotle as for us all, our embodied selves do not decisively end in our skins, but spread out into and are definitively impinged upon by the world, by artifice and by the artifice of material and normative cultures. This panurban prostheticization of Aristotle's political/rational animal does not and did not make human animals into some kind of posthuman species, of all things. Rather, it names the abiding material reality of humanity such as it is: raced, gendered, aged, enraged, desiring, desirable, promising, calculating, skilled, scarred—in a shared world of technodevelopmental social struggle among a plurality of stakeholders who are our peers.

Clothed in the language of accomplished

universality, the entitlements of the humanity proclaimed by humanists have never extended to more than a fraction of actual human beings. Assured of its location on a natural progressive trajectory attaining inevitably toward universal emancipation, humanism too readily accommodated contemporary injustices as temporary and, hence, somehow tolerable—especially to those humanists who didn't happen to suffer them. And, further, as the ethics of a questionably construed human race and of the universal civilization problematically connected to this race, it grows ever more difficult to shake the troubling analogies between humanism and its debased technoscientific companion discourse: the race science that legitimized every brutal imperial, colonial, globalizing, ghettoizing, apartheid regime in modern memory. The putative neutrality of the optimal human to which transhumanist enhancement genuflects is obviously another vestige of this parochially raced universal human, post-human though it may be.

Needless to say, these painful recognitions demand painful reckonings. It is this crisis of humanist conscience—which is not really one crisis, so much as many different crises, arising out of a variety of concrete situations and taking a proliferating variety of consequential forms—that more properly goes by the name post-humanism. The philosopher Judith Butler has proposed "that we have not yet become human. Or, I might say, in a different way, that the category of the human is in the process of becoming." She goes on to elaborate: "What constitutes the human is a site of contestation ... every time you assert human rights, you are also adding to the meaning of what the human is."¹² Crucial to Butler's formulation is a contestation arising out of inadequacy, incompleteness, exclusion but still very much in the form of ethical assertions of right soliciting universal affirmation. On this view, the crisis of humanism may be more than a recognition of and response to the many failures of humanism, but may also be the constitutive crisis in which humanism's humanities are produced and managed, in some substantial measure, to succeed (if only to interminably succeed themselves).

Surely it is the whole terrain of ongoing technodevelopmental social struggle that defines

post-humanist strategies and sensibilities, rather than any particular post-human personage, tribe, or social formation thrown up in any one moment of that world-historical technodevelopmental storm-churn. The post-human need not be a singular imaginary prostheticized personhood eliciting asymptotic approximation via successive enhancements, neither need it be a singular response to a particular experience of prostheticized personhood, whether involving digital network immersion, post-Pill feminism, transsexual queerness, post-disability differently-enabling prostheses, or what have you—let alone the more symptomatic robots, superheros, AIs, and aliens that seem to come up so often when post-humanism is discussed. Such identifications (and, crucially, their attendant dis-identifications) are moralistic in form, not ethical. And whatever else we may say of it, the ongoing and upcoming crises of humanism—no less than its emergence with the appearance of the political/rational animal—are profoundly ethical: Post-humanism, properly so-called, names the ethical encounters of humanism with itself, the provocative confrontations of a universalism with its historical and practical limits and contradictions. One might discern in these confrontations the best impulses that have animated humanism in its emancipatory aspect, the demand that universality live up to its self image enabling equities rather than rationalizing exclusions.

The technoscientific dislocations that have exposed the pretensions and limitations of humanism have not rid us of the need for a more general normativity than moralist identification, even if candidate-vocabularies for ethical universality inevitably come to be viewed as contingent or strategic, and freighted with qualification. While the Latin *mores* was a more or less straightforward translation of the Greek *ethos*, morality and ethics are no longer synonymous, in yet another normative variation of the *querelle des anciens et des modernes*. *Ethos* is also, of course, a classical appeal in Aristotelian rhetoric, in which an orator projects a compelling character to solicit identification from his audience. In the differently prostheticized occasions of speech written for posterity, broadcast to mass-media audiences, scrolling along twitter feeds, the audiences into which character is projected have transformed and with it character as well.

Ethics at any rate provisionally and strategically aspires to an imagined audience from which no one might be excluded. Even if these aspirations are exposed retroactively in their parochialism, there

¹² Kerry Chance, "Free Press Interview with Judith Butler," *LBO-Talk Archives* (2002, December 8), <http://mailman.lbo-talk.org/2002/2002-December/028577.html>. Last accessed 12-20-2013.

remains a difference that makes a difference in an ethical normativity soliciting universal assent, as against moral normativities—from mores, "we-intentions" in Wilfred Sellars' parlance—which imply and require the exclusion of theys in the constitution of we. Among the differences arising from this distinction is a different responsiveness to the plurality out of which politics emerges: let us say, the political we under ethical construction, interminably reconciling differences, as against the moralizing anti-political we that would prevail over difference in a rage for order.

The eclipse of humanist pretensions has coincided with the organization of a host of variously and curiously technoscientifically-competent compensatory fundamentalist formations—among them superficially anti-religious scientisms and reductionist design discourses. These fundamentalisms are in fact moralisms re-engineered as bloody-minded pseudo-ethics, each one aiming to achieve universality by denying history and prevailing over living plurality. In such an historical moment, especially, it seems to me disastrous to conceive post-humanism as a moralizing identification with some tribe defined in its fetishization of idiosyncratic artifacts or techniques, real or imagined. Rather, we should think post-humanism as an ethical recognition of the limits of humanism provoked by an understanding of the terms of ongoing technodevelopmental social struggle as well as an ethical demand that this struggle always materialize equity-in-diversity.

Futurist Discourses and Subcultures

No one who devotes scholarly attention to transhumanist medical enhancement discourse or singularitarian accounts of artificial intelligence for any length of time can fail to notice that these are not just ideas to be weighed on their merits, or read closely, or situated within historical, topical, logical, tropological contexts. Transhumanists and Singularitarians are also kinds of people, people who identify as such and signal these identifications through the arguments they make. Transhumanists and Singularitarians do not just make claims, they often declare themselves members of movements, indeed they are often paying dues to literal membership organizations. Hence, in reading futurological texts, the conceptual and citational substance of textual analysis must sometimes be supplemented with institutional histories, connections to key funders, relations of political affiliation, attention

to the vicissitudes of science fiction media spectacles and celebrity memes, questions of membership demographics, and so on.

I have proposed in this essay that superlative futurological discourse is a hyperbolization of consumer marketing and promotion and of global developmental policy tropes. I have proposed that superlative futurological discourse derives its intuitive plausibility in part from these more prevalent commercial norms and forms but also from an evocation of the omni-predicates of theological divinity. I have proposed elsewhere that strains of futurological reductionism, instrumentalism, functionalism, computationism, Social Darwinism, progressive triumphalism, rugged individualism, True Belief, and market spontaneism have deep social, cultural, intellectual antecedents as well, many of them competing in ways that play out in futurological quandaries that are otherwise inexplicable. I might also offer that futurological rhetoric often derives its force by way of compelling citational recourse to a deeply disseminated figurative archive populated by Eden, Excalibur, Faust, Frankenstein, the Fountain of Youth, the golem, invincible armor, invisibility cloaks, love potions, the Rapture, the Sorcerer's Apprentice and so much more.

It is difficult to avoid making such claims when one reads the writings of the futurologists. That many of the writers themselves disagree with or even disdain altogether these claims is usually neither here nor there. One does not expect readings of interesting texts to converge, after all. One does not expect everybody to agree with what one takes to be logical entailments of a writer's views. One does not expect people to agree in advance on the best stipulative definitions. One does not expect all readers to be interested in the same emphases, the same contexts, the same citational relations, the same idiosyncrasies of style. One does not really expect every writer to grasp as fully as they might the different reasons from their own for which others might find their arguments compelling. One cannot even entirely sensibly expect writers to know themselves why they say all the things they do.

As I say, all of this is perfectly normal and expected. But I do think these expectations are complicated by the fact that futurisms are not only discourses but subcultures in ways that demand scrutiny and care. What looks like close reading of futurological discourse to a critic, may feel like hate speech to a member of a futurist subculture. While I might find it perfectly fascinating and illuminating to discuss Jeffrey Herf's

research¹³ in connection with transhumanist debates about children with Aspergers or doping among Olympic athletes, it is not exactly difficult to see why this interpretive gesture raises special quandaries for transhumanists who are not merely delineating accounts of medical enhancement in the abstract but also seeking to achieve academic respectability for their ideological movements or to attract a broader membership for their organizations. Think how much more fraught such considerations become once we realize that plenty of transhumanist-identified people explicitly champion the rehabilitation of the "eugenic" term, and that among the many transhumanists who disdain that term there are nonetheless non-negligible numbers who still like stridently to defend books like *The Bell Curve* in public places.¹⁴

When one is not simply offering up futurological arguments to public scrutiny but declaring oneself to be an idiosyncratic sort of futurIST advocating an idiosyncratic futurISM, to what extent is one beholden not only to the claims to one makes, but to claims that are representative of the other -ists with whom you are identifying? What about the relevance of canonical texts for your subculture about which you have said little in depth but have clearly read? What about the relevance of declarations of principle associated with organizations in which you are a member? Even if it is obviously best to analyze arguments on their merits and read texts as performances on their own terms, it is hard to deny that texts arise in contexts and that making sense of texts is often facilitated by taking into account the contexts in which they are made.

Nick Bostrom is a philosopher who has written hundreds of academic papers, the overabundant majority of these on topics of special interest to futurologists and transhumanists in particular. He was a co-founder of The World Transhumanist Association (that organization has since changed its name to "humanity-plus," and chances are that if you cannot see why humanity-plus is a more appealing moniker than The World Transhumanist Association its members are likely to find you to be humanity-minus), and a few years later he co-founded the Institute for Ethics

and Emerging Technologies, and after that he was made Director of another newly founded organization, Oxford University's Future of Humanity Institute. Although each of these institutional affiliations has taken a greater measure of distance from the movement transhumanism with which Bostrom was initially conspicuously identified, it remains the case that the intellectual preoccupations of each of these institutions are more or less continuous (advocacy of medical enhancement, concerns with existential risks like superintelligent AI, and so on), and that many explicitly transhumanist-identified people participate in each of these efforts. However interesting Bostrom's writings may be in philosophical terms or considered as provocative thought-experiments (and quite a lot of it is), is it not relevant to consider them as pieces of ideology, as expressions of subcultural signaling, as forms of organizational promotion as well?

Max More is also a philosopher (as well as a fellow contributor to this volume). He founded the transhumanist Extropy Institute, explicitly devoted to a free market techno-immortalist transhumanist philosophy he named Extropianism ("No death! No taxes!"), which became for a time one of the unquestionably more influential sects of organized transhumanist political and cultural movement. He has recently edited a volume of writings entitled *The Transhumanist Reader*,¹⁵ an act of canon formation that tends to be indispensable to disciplinary legibility and philosophical respectability. And he is president and CEO of the Alcor Life Extension Foundation, a superlative techno-immortalist organization providing, among other things, cryonic corpse disposal as an alternative to the more usual burial or cremation. Although there are obvious continuities in these roles, it is interesting again to contemplate the ways in which More's different responsibilities in each shape both his discursive productions and, perhaps more importantly, his responses to criticism of these productions.

Written futurological discourse is merely a facet of the creative expressivity and material practice of futurological subcultures, and the reading of the written discourse is subsumed, as the writing itself is subsumed, within the ramifying relations and performances of enthusiasm, free association, formal organization,

¹³ Jeffrey Herf, *Reactionary Modernism: Technology, Culture, and Politics in Weimar and the Third Reich*, Cambridge: Cambridge University Press, 1984.

¹⁴ Richard J. Herrnstein and Charles Murray, *The Bell Curve: Intelligence and Class Structure in American Life*, New York: The Free Press, 1994.

¹⁵ Max More and Natasha Vita-More, eds, *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*, Oxford: Wiley-Blackwell, 2013.

citation, subversive mis-citation, and resistance of which living subcultures always consist. Futurological discourse is often transfigured and usually invigorated once it is read in its subcultural contexts, but these contexts are more than usually difficult to control or to characterize coherently, and introduce quandaries both for those who write and read texts that are articulated in the fraught energies of marginal, often defensive, movements and subcultures like these.

Futurity and "The Future"

Eugene O'Neil reminded us that "[t]he past is the present... It's the future too."¹⁶ And yet the palpable plurality of stakeholders contesting the present in one another's presence re-opens that present unpredictably onto the emerging present, onto another presence that is never The Future, whatever the weight of our memories, debts, errors, and crimes.

And so, a final distinction: Futurity is a register of freedom, while The Future is another prison-house built to confine it. I describe as futurity the openness in the present arising out of the ineradicable diversity of calculating, contending, and collaborating stakeholders who struggle to make and remake the shared world, peer to peer. Futurity cannot be delineated but only lived, in serial presents attesting always unpredictably to struggle, collaboration, and expression. The Future, to the contrary, brandishing the shackle of its definite article, is always described from a parochial present and is always a funhouse mirror reflecting a parochial present back to itself, amplifying its desires and fears, confirming its prejudices, reassuring its True Believers that the Key to History is in their hands.

By the term futurity I mean to capture something of Hannah Arendt's notion of natality, a quality of openness inhering in critical reflection but especially in the political present, in the presence of stakeholder diversity. Arendt considered the Western political imaginary to be weighted down by mortal preoccupations with insecurity, mistrust, scarcity, as well as with literal threats of death. Against these preoccupations, she proposed a countervailing political figuration, drawn not from the universal prospect of a departure from the world in biological death but from the no less universal arrival into the world in biological birth. For Arendt, every act in history, every effort

undertaken in the world, every judgment offered up to the scrutiny of the public, every testament to our hopes and our histories is a re-enactment of the original event of birth in which we are introduced into the ongoing struggles of humanity with what eventual consequences nobody can know in advance. Far from denying the force of human limits, Arendt recognized that the fundamental unknowability of the consequences of human acts, including the unknowability of the impacts of our actions on what we take to be our limits, does not destine humanity to transcend all limits but imposes another and ineradicable limit on humanity's knowledge of what it is capable of and what it might come to find meaningful. Against the natality of this open futurity are the instrumentalizing projections and circumscriptions of The Future, parochialisms that seek violently to foreclose futurity in the service of morbid projects of defensive reassurance and profit-taking. I fear that the bright, brittle declarations we have grown accustomed to hearing from the futurists that there are No Limits! usually ultimately amount to the customary conviction of very pampered and irresponsible people that there will always be other folks on hand to clean up their messes for them.

I have described the foreclosure of futurity by The Future as a kind of violence, and the point, again, is an Arendtian one. In her extended reflections "On Violence" Arendt not only refuses the conventional identification of political power with violent force, but proposes that power and violence are in fact antithetical, each obliterative of the other, and hence that the evocative phrase "the power of non-violence" is in her sense a redundancy.¹⁷ Indispensable to her case is Arendt's citation of the claim by Friedrich Engels that violence always needs instruments, an observation which she amplifies into the case that violence is quintessentially a matter of de-politicizing instrumentalization (OV 106). "Power corresponds to the human ability not just to act but to act in concert," writes Arendt, and the "moment the group from which power originate[s]... disappears... 'power' also vanishes." Certainly, it can be the introduction into a scene of public deliberation of an instrument of violence like a gun that can cause this disappearance, but their arrival at an unquestioning consensus would yield the same result for as long as it lasted. Violence is not merely the interruption of political

¹⁶ Eugene O'Neill, *Long Day's Journey Into Night, Act II, Scene ii*, New Haven: Yale University Press 1956, p. 87.

¹⁷ Hannah Arendt, "On Violence," in *Crises of the Republic*, San Diego: Harcourt Brace Jovanovich 1972, pp. 103-98, here p. 155. [Henceforth cited as OV]

power by instrumental force, but the reduction through the introduction of instruments into this scene of those who would be politically powerful into instruments themselves. This is an effect produced as well when we misconstrue historical struggles in instrumental terms that promise predictability and control. It is far from a digression when "On Violence" turns to what might seem an unexpected line of critique:

[T]here are, indeed, few things that are more frightening than the steadily increasing prestige of scientifically minded brain trusters in the councils of government during the last decades. The trouble is not that they are cold-blooded enough to "think the unthinkable," but that they do not think. [OV 108]

For Arendt, power is an end in itself, a field in which humans to say the least attain to a "public happiness" the richness of which is otherwise unavailable to them. To treat the terms violence and power as synonyms rather than antonyms "not only indicates a certain deafness to linguistic meanings, which would be serious enough," she worries, "but it has also resulted in a kind of blindness to the realities they correspond to," a blindness that risks the loss of experiences indispensable to fully free human lives (OV 142).

Let me elaborate my own understanding of Arendt's account rather schematically and in a way that extends it explicitly to the consideration of the futurological discourses that preoccupy me in this essay. In her work, Arendt distinguishes power construed as the experience of possibility or potential from power misconstrued as an amplification of capacities. Arendt's conception of power implies a political rationality and an open futurity ineradicably inhering in the present, in the presence of a diversity of peers who contend over its terms. This conception elaborates history as an ongoing, interminable, importantly unpredictable social struggle, and would be prone to emphasize the political dimensions of scientific research and technological application and embed developmental claims in social and historical specificities.

Arrayed against the Arendtian conception is power misconstrued as force amplification (which I would extend to include transhumanist enhancement and posthumanist ascension), a conception that implies instead an instrumental rationality aiming at

The Future figured as a destination. This conception elaborates history as the playing out of causal forces, usually superhuman ones (dialectical, evolutionary, environmental, or market forces, say), and would be prone to technological determinisms and naturalized progressivisms that recast difference from parochial norms as atavisms.

In Arendt's political conception of power, collaboration and contestation are matters of improvisation within contingent and enabling constraints, while the instrumental misconception of power involves prediction and control warranted by scientific beliefs that attract consensus after being put to test. The two conceptions yield constitutive paradoxes in an intriguing mimesis: the presence of political power is exhibited essentially through the expression of public dissensus and depends on the exercise of consent, while the presence of instrumental capacitation is exhibited essentially through the arrival at public consensus and depends on the exercise of dissent.

Notice, by the way, that neither Arendt's nor my own point in all this is to denigrate the usefulness of instrumental capacitation on scientific, sustainable, and equitable terms, but only to resist the expansion of instrumental rationality beyond its proper precinct and the consequent misconstrual of freedom as an instrumental rather than a political phenomenon. For me, the distinction of open futurity from the foreclosing future, of the political rationality of contestation and reconciliation from the anti-political implementations of instrumental rationality, connects to another distinction in contemporary conceptions of theory that has not yet found its decisive formulation, between, on the one hand, an interminable coming to terms with the plural present, especially in grasping the meaning of what has taken us by surprise, through which we seek to understand and so become understanding and, on the other hand, predicting the future, especially in extrapolating trends that work as spells to dispel being taken by surprise, what seems to me a fundamental bad faith through which we become ever more susceptible to fraud and risk becoming frauds. This comes, I believe, to a distinction, where thinking is concerned, between investment and speculation, between having thoughts and making bets.