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William Gillis
Anarchy and Transhumanism
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that a great diversity of experiences can be lived without oppression. At the same time, it's also important to provide people with the tools to exercise control over their bodies, minds, and life conditions. It should be up to all people *individually* to determine what factors might constitute oppressive impairments in their own lives, and which factors are elements of their identities and unique life experiences.

Ultimately transhumanism is a queering of the distinction between "impairment" and "augmentation" as well as between "want" and "need." No "baseline" should be oppressively normalized. Instead, individuals should be free to grow in whatever directions they see fit.

to liberate and empower all the potential Einsteins currently trapped in slums, *favelas*, open mines, and fields around our planet.

Transhumanism has historically distinguished itself from other celebratory approaches to high technology precisely in its focus on self-alteration. If you want something done, you should do it yourself. If you're worried about what values an alien mind ripped into existence from scratch might develop, you should instead start with humans interested in expanding their own capacities. And while we might reasonably anticipate rapid improvements in our individual cognitive speed and memory, it is how we communicate and collaborate with one another that has served as a real bottleneck on advancement. Instead of a race to create an artificial generalized intelligence, many anarcho-transhumanists have argued that we should instead focus on the benefits of technologies that improve or deepen our connection with one another, so that collectively we can race ahead of any AI.

It's rather terrifying that the default question about AI has largely been: "How can we most effectively control/enslave it?" As anarchists our position is obvious: If we are to develop such minds, they deserve compassion and liberty. All too often, those in AI-focused communities that have spun off from transhumanist circles abandon the ethical dimension of their research. This paradigm is profoundly un-transhumanist because it privileges some kind of static humanity with static values and desires, and then enslaves non-human minds to serve those ends. The entire point of transhumanism is to *embrace* the fluidity and transitory nature of the "human," not to cling to humanness in its current form.

As you would expect when it comes to non-neurotypicals and differently abled people already alive, the transhumanist and anarcho-transhumanist position is to let a billion physical and cognitive architectures bloom! It's important to radically attack and remove stigmas and constraining social norms so

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normal cheese.[4] (To do this, just put yeast in a warm vat with sugar and let it fall out!) Others have, for example, worked on custom algae production that yields useful protein and carbs from sunlight much more efficiently than conventional agriculture—while raising the possibility of dramatically reducing or even entirely eliminating the death toll from tractor operation.

A small fraction of environmentalists have played with ideas of a more ethically engaged stewardship, positing a future in which, after rewilding the majority of the planet and restoring its ecology, we might make tweaks that reduce net suffering among non-human species. Animal liberationists have long criticized the slavery of animal "ownership" and the injustice of breeding certain animals to serve us. But what would assisting animals in their own self-improvement look like? This is a so-far speculative field called "uplifting," and the anarchist take on it is as always to center the subject's perspectives, to try to find ways of communicating and bridging the cultural and phenomenological gap with conscious persons (e.g. cetaceans, elephants, octopi, primates).

The animal-liberationist tendencies at the heart of modern anarchism also come to expression in our responses to the possibility of artificial general intelligence. There's a noteworthy current in non-anarchist transhumanist circles that focuses on the development of AI, with the goal of solving the problem of how to control a mind smarter than your own. Many transhumanists are convinced that AI will unleash an explosion of feedbacking intelligence that can remake the world.[5] To anarchists, this focus is silly given the billions of minds already on this planet and criminally underutilized. If we want an explosion of intelligence then the surer and quicker path would be

[4] Real Vegan Cheese. n.d. What's vegan cheese? https://realvegancheese.org/.

[5] Bostrom, N. 2014. *Superintelligence: Paths, Dangers, Strategies*. Oxford: Oxford University Press.

impossible as anarchists to accept the Left Accelerationists' prescription of "verticalism"—their embrace of organizational hierarchies. Left accelerationists like Nick Srnicek and Alex Williams have critiqued the mainstream left for an embrace of short-sighted immediatism,[3] but anarchists still find in the details of their "strategy" many of the same old Marxist penchants for the establishment of an elite whose members will run the revolution/society. This allegiance leads them to sympathize with and misidentify aspects of our world, suggesting that certain corporate and state structures reflect necessary hierarchies rather than wasteful cancers propped up by systemic violence and actively suppressing scientific and technological development.

More broadly, Marxism shares a troubling tendency with its ideological offshoot primitivism to speak in highly abstract and macroscopic terms like "capitalism" or "civilization." In Marxist analyses, these entities are imbued with a kind of agency or purposefulness and all their elements are seen as constituent dynamics serving a greater whole, rather than as conflicting and capable of being rearranged. Marxists and primitivists are thus both frequently blinded to the aspects of better world now growing within the shell of the old, as well as opportunities for meaningful resistance and positive change that aren't necessarily cataclysmic total breaks.

VII. Other Topics

Vegans have been among the strongest partisans of anarcho-transhumanism, knowing very well that what is "natural" may not be ethical. Biohackers have worked on projects like getting yeast to produce the critical milk enzymes in

[3] Srnicek, N., and Williams, A. 2015. *Inventing the Future: Postcapitalism and a World Without Work*. New York: Verso.

I. Introduction

The term "anarcho-transhumanism" is a relatively recently one, barely mentioned in the 1980s, publicly adopted in the early 2000s and only really popularized in the last decade. But it represents a current of thought that has been present in anarchist circles and theory since William Godwin tied the drive to perpetually improve and perfect our social relations with the drive to perpetually improve and perfect ourselves, our material conditions, and our bodies.

The idea behind anarcho-transhumanism is a simple one:

> *We should seek to expand our physical freedom just as we seek to expand our social freedom.*

Anarcho-transhumanists see their position as the logical extension or deepening of anarchism's existing commitment to maximizing freedom. And the term "morphological freedom" is widely used by transhumanists of many varieties as a label for the positive freedom to alter one's body or material conditions.

Transhumanism is often shallowly characterized in the media in terms of the desire to live forever, the desire to upload one's mind to a computer, or a fantasy in which a self-improving artificial intelligence (AI) suddenly arrives and transforms the world into a paradise. And, of course, some people are attracted to these goals. But the only defining precept of transhumanism is that we should have more freedom to change ourselves and our environment.

Transhumanism thus challenges essentialist definitions of the "human" and is sometimes framed as part of a wider discourse in feminist and queer theory concerned with cyborg identities and "inhumanisms." Transhumanism can be seen as either an aggressive critique of humanism, or alternatively as an extension of specific humanist values beyond the arbitrary

species category of "human." Transhumanism demands that we interrogate our desires and values beyond the happenstance of What Is, accepting neither the authority of arbitrary social constructs like gender nor a blind fealty to how our bodies presently function.

As one would expect, transgender issues have been at the core of transhumanism from the start. But transhumanism radically expands on trans liberation to situate it as part of a much wider array of struggles for freedom in the construction and operation of our bodies and the surrounding world. A number of anarcho-transhumanists work on immediately practical projects that give people more control over their bodies—the operation of abortion clinics, the distribution of naloxone, or the 3D printing of open-source prosthetics for children. But transhumanists also ask radical questions like: *Why is it not only the case that our society is okay with the involuntary decay and death of the elderly but also that it moralizes in support of their perpetual extermination?*

The struggle for life extension is certainly not the entirety of transhumanism, but it is an important example of the kind of campaign transhumanists initiated and continue, shockingly, to fight largely alone. The notion that an objectively "good life" extends to seventy or a hundred years but no further is clearly arbitrary, and yet the opinion that it does is both nearly universally held and violently defended. Many early transhumanists were shocked by this response, but it illustrates how people can easily become staunch defenders of existing catastrophes for fear of otherwise having to reconsider standing assumptions in their own lives. In the same way that people will defend mandatory military service or murdering animals for food, the arguments for death are clearly defensive rationalizations—and rational responses are easy to formulate:

- "Death gives life its meaning." Yet how is death at seventy years old more meaningful than death at five years

support serious resistance efforts—efforts intended both to attack oppressors' centralized infrastructure and to liberate their research and tools for everyone.

Further to the left, the legacy of Cosmism has continued in state socialist and state communist circles. There is a distinct tradition of Left Accelerationism and more diffuse but widely popular political positions often referred to collectively as Fully Automated Luxury Communism. These traditions are broadly Marxist rather than anarchist, and don't always identify as transhumanist, but they have been in close dialogue with anarcho-transhumanists. And traditions like Xenofeminism are in many ways situated at the intersection of pro-technology Marxist and anarchist currents.

It's certainly true that there's much overlap between the political and economic aspirations of anarcho-transhumanists and those Marxist traditions likewise set on radically expanding the wealth available to everyone. Many have commented on the convergence of anarchism and Marxism when the "means of production" shrink from large-scale mechanisms necessarily operated and overseen by large groups to techniques and devices controllable by individuals (as when factories are replaced by 3D printers). Yet significant differences remain.

The divide between Marxism and anarchism has been often referred to as a divide between political philosophy and ethical philosophy. Anarchists focus on tackling domination and constraint on every level, not just the macroscopic or institutional. And anarchists want more than a merely classless society: they want a world without power relations, and thus their ethical analysis necessarily extends to challenging interpersonal dynamics of power, including more complex, subtle, informal, or even mutual relationships of domination and constraint.

While anarchists share their aspirations for a world in which the efficiencies of technologies lead to a world of abundance and liberate people from the drudgery of work it's

enabling (small-scale) nationalistic identity, social hierarchy, and traditionalism. Others envision small corporate fiefdoms and some kind of AI god that will help them maintain their desired authority structures by stopping oppressed groups from gaining, understanding, or developing technology.

Anarcho-transhumanists are glad such currents have departed the broader transhumanist movement. At the same time, it must be admitted that a majority of transhumanists still presently identify with liberalism, state socialism, social democracy, and similar technocratic cults of power.

Non-anarchist transhumanists are politically naive at best and dangerous at worst; transhumanism without anarchism is totally untenable.

A world in which everyone has increased physical agency is a world in which individuals are super-empowered and are thus obliged to solve disagreements through consensus as though everyone has a veto rather than through the coercion of majoritarian democracy.

To provide people with tools but also to try somehow to restrict from the top down what they can do with those tools or what they can invent is impossible absent an extreme authoritarian system that suppresses almost all the functions of those tools. Consider the struggle to impose and enforce "intellectual property" on the Internet, or the war against general-purpose computing. In this sense, all statist transhumanists fall short of transhumanist ideals because of their lingering fear of liberty and super-empowered proletarians.

On a philosophical level, it's impossible to reconcile transhumanism's embrace of greater agency in our bodies and environment with simultaneous advocacy of oppressive social institutions that broadly *constrain* our agency.

This difference of values is manifested in a number of ways. Anarcho-transhumanists are obviously a lot less sanguine than statist transhumanists about letting states and capitalists monopolize the control or development of new technologies. They

old or at two hundred years old? If an eighty-year-old woman gets to live and work on her poetry for another five decades, does that really undermine your capacity to find meaning so badly that you'd prefer to see her murdered?

- "We would get bored."This seems nothing more than a call to build a world that isn't boring! Never mind the wild possibilities embedded in both anarchism and transhumanism; it would take almost three hundred thousand years to read every book in existence today. There are already 100 million recorded songs in the world. There are thousands of languages with their own conceptual ecosystems and their own poetry. There are hundreds of fields of inquiry, rich and fascinating, in which to immerse yourself. There are vast arrays of experiences and novel kinds of relationships to explore. Surely we can do with a few more centuries at least.

- "Old, static perspectives would clog up the world." It's a pretty absurd and horrifying to instinctively appeal to genocide as the best means to solve the problem of the rigidity of people' perspectives or identities. Over a hundred billion humans have died since the arrival of *Homo sapiens* on the scene. At best they were only able to convey the tiniest sliver of their subjective experiences, their insights and dreams, before everything else inside them was abruptly snuffed out. People say that every time an elder dies it's like a library's being burned to the ground. *We've already lost 100 billion libraries!* There are no doubt infinite myriad ways we might live and change, but it would be strange indeed if the sharp binary of sudden, massive, and irreversible loss that is currently standard were universally ideal.

Life extension is an illustrative example that gets to the heart of what transhumanism offers as a continuation of anarchism's radicalism: the capacity to demand that unexamined norms or conventions justify themselves, to challenge things otherwise accepted.

Anarcho-transhumanism breaks down many other common operating assumptions about the world, just as it seeks to expand and explore the scope of what is possible. Radicalism is all about pressing assumptions and models into alien contexts and seeing what breaks down in order to better clarify what dynamics are more fundamentally rooted. Anarcho-transhumanism seeks to advance anarchism through this kind of clarification—to get it into better fighting shape so it can deal more effectively with the future, to make it capable of fighting in all situations, not just those specific to particular contexts.

It's easy to say "*all this talk of distant science fiction possibilities is an irrelevant distraction.*" Anarchotranshumanists certainly don't advocate abandoning the day-to-day of anarchist struggles and infrastructure-building. But it is forward thinking that has often won anarchism its biggest advances. Indeed, it's arguable that a great deal of anarchism's potency has historically derived from its correct predictions. And this is a widespread pattern. While the Internet is obviously the site of major conflicts today, many of the freedoms still provided by it were won decades ago by radicals who were tracing out the ramifications and importance of social phenomena and institutions long before the state and capitalism caught up or grasped the ramifications of certain battles.

On the other hand, if there's one takeaway from the last two centuries of struggle, it should be that it often takes radicals a really long time to field responses to new developments. Anarchists have adapted very slowly to changing conditions. It's frequently taken a decade or more for anarchists to try out various approaches, settle on the good ones, and proceed to popularize

bly inefficient infrastructure because the maintenance of this infrastructure is beneficial to centralized, large-scale economic entities. Similarly, much of our energy consumption presently goes towards war and frivolities, supply and demand are aggressively distorted, and the environmental costs have been systematically shifted away from certain companies and industries.

It doesn't have to be this way. Technological development innately expands options, so it should come as no surprise that technological innovation isn't underwriting massive, centralized, ham-fisted structures but is instead encouraging organic, decentralized, and reconfigurable approaches along the lines of 3D-printing and open-source technologies.

VI. Other Transhumanist and Promethean Political Traditions

Transhumanism is a quite simple position, and so there's a wide array of people who've been attracted to it and a variety of ways people have spun off from it. Inevitably some of them are short-sighted or reactionary, and in many people's minds "transhumanism" conjures up images of far-right ideologues in Silicon Valley.

Fortunately, many reactionaries abandoned transhumanism when they recognized its liberatory implications regarding gender, race, and class, instead embracing a fascism-for-nerds movement called "neoreaction"—an early predecessor and eventual component of the alt-right. In an amusing reversal, a number now hope for and advocate the collapse of civilization. They expect that this will lead to a post-apocalyptic landscape in which their notions of biological essentialism reign supreme—in which "Real Alpha Men" rule as warlords and the rest of us are used for raping, slaving, or hunting. Or in which we are forced back to tribal-scale relations, better

has leapt past every supposed barrier; and the materials needed to make effective use of this technology have been dramatically diversified. Options now on the table include quite simple approaches featuring tiny ecological footprints. The energy return on solar is close to 12 times and is rocketing upward. The efficiency of solar technology has reached the point at which governments like Spain have required solar power users to pay steep taxes to keep fossil fuels and centralized grids competitive.

While nuclear energy still carries many extremely negative associations among the 1980s ecopunk set, many of these concerns are only valid in the context of Cold War-style reactors—ones built to be highly centralized, to be state-run, and to work only with material capable of producing weaponizable byproducts. On the other hand, many liquid fluoride thorium reactor designs have literally no capacity to melt down, run on a radioactive material already naturally in poisonous abundance on the Earth's surface, and leave remains with relatively low half-lives.

Similarly, while some specious reporting about "cold fusion" and overenthusiastic claims about normal fusion in the 1980s turned fusion into a laughing stock on late-night television, it remains a reasonable and known source of incredible clean energy only limited by engineering challenges rather than any issues of basic science. And recent history has been littered with a chain of incremental successes achieved and benchmarks transcended.

While all these may provide cheap energy, the only safe way to reverse global warming at this point is with carbon-negative technologies that leave behind solid carbon as a byproduct. Proven technologies that do just this—from ancient gassification technologies to an array of algae-farming approaches—are already available.

That none of these have been widely adopted is a matter of politics, not science. State violence subsidizes our incredi-

them. Today, radical leftists have an increasing tendency to dismiss futurism and instead just shrug and say, "We'll solve that problem through praxis." But what that dismissal often boils down to is: "We'll figure it out through trial and error when the shit hits the fan and we don't really have time for years of error and stumbling."

Theorists and activists are finally coming around in large numbers to the realization that the simplicity of radicals' responses and their slow adaptation times have often left them predictable to those in power, their instinctual responses already integrated into rulers' and bosses' plans, with the result that their struggles effectively serve as pressure valves for society—inadvertently helping to sustain existing institutions and practices rather than undermining or transforming them.

It might seem bizarre and disconnected to try to determine exactly what anarchists really means by "freedom" in a technological context in which "selves" and "individuals" are not clearly defined and conventional appeals to autonomy fall short. One might seek to dismiss the relevance of various contemporary phenomena to the project of rethinking the nature of humanness and human connection—of twins conjoined at the brain who use pronouns unconventionally. It might seem easy to treat multicameral minds as "irrelevant" or "marginal" or to treat the possibility of brain-to-brain empathic technologies as too remote to be worth even considering (never mind the couples who've already utilized limited prototypes). But dismissing anything beyond one's present, particular experience serves to confine anarchism to a parochial context, leaving it a superficial and soon-to-be-antiquated historical tendency—incapable of speaking more broadly or claiming any depth or rootedness in our ethical positions.

It's important to be clear, however: Proactive consideration of the possible is not the same thing as small-minded prefiguration. Anarcho-transhumanists are not making the mistake of demanding a single specific future—of laying out a blueprint

and demanding that the world comply. Rather, they advocate the enabling of a multiplicity of futures.

II. Historical Antecedents

William Godwin is frequently identified as the first prominent anarchist in modern times, although Pierre-Joseph Proudhon would later be the first person to use the term "anarchist." Godwin was a prominent utilitarian philosopher and novelist, but was eclipsed by his partner Mary Wollstonecraft (often identified as the first modern feminist), and their daughter Mary Shelley (often identified as the first science fiction novelist). Godwin called for the abolition of the state, capitalism, and many other forms of oppression, but also linked his emancipatory agenda with farseeing calls for the radical extension of technological capacity, considering possibilities including life extension and the defeat of death.

Godwin was just one of many historical anarchists who spoke in sharply transhumanist terms. Voltairine de Cleyre, for instance, praised the development of greater technological freedoms and saw the end goal as "an ideal life, in which men and women will be as gods, with a god's power to enjoy and to suffer."[1] And talk of the gradual transformation of both humanity and our environment has been common throughout anarchist ranks historically. One of the most prominent popularizers of anarchism, Errico Malatesta, framed anarchism as a never-ending march towards greater freedom: What matters, he declared, "is not whether we accomplish Anarchism today, tomorrow, or within ten centuries, but that we walk towards Anarchism today, tomorrow, and always."[2]

[1] Interview with Voltairine de Cleyre. 1894. *The Sun* (March 4). Center for a Stateless Society. https://c4ss.org/content/45277.

[2] Malatesta, E. n.d. "Towards Anarchism." Anarchy Archives. http://dwardmac.pitzer.edu/Anarchist_Archives/malatesta/towardsanarchy.html.

short palindromic repeats) was an amazing advance in gene therapy but it was amazing only in virtue of the suddenness of the breakthrough; gene editing had never seemed strictly infeasible.

Estimates of how long it will be until a given technological development occurs are naturally subjective. But it requires conspiratorial science-denialism to pretend that creating and using mining robots to mine will somehow prove impossibly hard—or require so much human labor that their arrival on the scene won't represent any sort of efficiency gain.

It's very common in radical leftist circles to hear that green technologies are mythical. This is deeply inaccurate, but it's understandable given all the corporate greenwashing and media misrepresentation of technologies. It's thus easy to do a little critical research and assume that scientists have systemically overlooked things like life-cycle analyses. In fact, however, reductions in footprint by a factor of one hundred times or one thousand times would constitute a monumental difference, not some trivial reform—and such reductions are in some cases highly probable.

Humans have always had an effect on their environment, and the Earth's ecosystems have never been static. Our goal should not be some unchanging and sharply constrained lifestyle with literally zero footprint; instead, we should seek to enable our ingenuity and exploration in ways that don't bulldoze the Earth.

If we put a small fraction of the energy unlocked by hydrocarbons into solar energy technologies, we'll have enough power to render hydrocarbon energy obsolete. While hydrocarbons were unquestionably a world-changing source of dense energy, it's possible to get incredibly high power returns from solar technologies using even 1800s technology of mirrors and steam pipes. There are a great many condensed battery options, and more are being developed—for instance, in high-density biochemical storage. Meanwhile, photovoltaic cell technology

the Earth's albedo (from darker forests) cause it to absorb *more* energy from the sun.

No matter the odds, we must fight against the unfathomable holocaust of a collapse. We have an ethical obligation to struggle, to have some agency with respect to our future and our environment, and to take some responsibility for our destiny. Only with science and technology will we be able to repair ancient disasters like the desertification of the Sahara, manage the decommissioning of horrors, and rewild most of the Earth.

V. Pessimism about Technological Possibilities

One of the most common concerns with transhumanism derives from a misunderstanding of the distinction between "physically doable but not yet engineered" and "who knows."

Much of this stems from ignorance of the relevant fields. Most people wouldn't have to argue over whether or not an "upside down treehouse" would be possible to build; it would just require a bit of work.

While some ideas are highly speculative, many of the things transhumanists talk about fall very far to the doable side of the spectrum—there's no chance they're ruled out by physics, mathematics, chemistry, or the like; they don't require the existence or use of wormholes, for example. The problems that stand in the way of our reaching these transhumanist goals are merely *engineering* problems, albeit challenging ones—problems on which plenty of experts are working, problems that the established consensus is confident we can solve. Asteroid mining, for example, is no more unimaginable or impossible today than placing satellites in Earth orbit was in the 1940s. We know we can do it; we know it will pay off; we just have to complete the mounds of fucking busywork in our way first. CRISPR (clustered regularly interspaced

Anarchists as early as Joseph Déjacque dabbled in wild science fiction, describing future worlds with machines that automated doing the laundry, washing the dishes, etc., and many pressed further still. In particular, Russian anarchists and socialists just prior to the Bolshevik revolution embraced a wide variety of avant-garde movements with extreme technoscientific aspirations. Most striking among these was the Cosmist movement. Cosmist thinkers advocated radical life extension, the merging of human and machine, and the spread of consciousness beyond Earth. While many Cosmists were socialists rather than anarchists and were eventually consumed by the USSR, influencing both the space race and Soviet culture, their slogans like "Storm the Heavens and Conquer Death" have been widely adopted by anarcho-transhumanists today.

Though the sweeping term "cybernetics" is less used today by scientists, a self-conscious "cybernetics" movement attracted considerable attention and intellectual energy from the 1950s through to the 1970s. This movement was often seen as split between the military-industrial complex camp and the radical socialist or anti-authoritarian camp. But the political divide was in practice more messy. For instance, the anarchist Walter Pitts, a homeless runaway who raised money for the fight against Franco, became one of the founders of cognitive science. Many of the themes of cybernetics, like feedback and self-organizing complex systems, were obviously directly in line with anarchist thinking and have been cited and referenced by anarchists within the more mainstream activist milieu.

Those in the open-source and free-software movements have often derived transhumanist implications from their ideals. What if the kind of freedom exemplified by free software were applied to everything? What if our bodies and environmental conditions were made as opensource and reconfigurable as we'd like our computers to be? Many

anarcho-transhumanists today see their transhumanism as simply an extension of the values of openness and user agency that drive the free-software (and free-hardware) movement.

There are of course a number of broad transhumanist themes in the broader society that have influenced different lineages of anarcho-transhumanists. They range from common notions of "Prometheanism" to interpretations of Nietzsche to Afrofuturism to countless sub-currents of feminist and queer thought.

III. Practicality

The majority of anarchists around the world are activists who work in immediate struggles from feeding the homeless to resisting immigration-restriction regimes. It is unsurprising, then, that their foci are primarily practical. The most common objection made by many anarchist activists to anarcho-transhumanism is that focusing on the future takes away from transformative practice in the present. This is often bundled with critiques common on the modern left of the "abstract" and calls to center political practice and theory on "everyday life."

Yet it's worth considering the ultimate conclusion of such an orientation. If we lived directly in the present with no reflection, we wouldn't be self-aware. Mental recursion—modeling ourselves, others, and our world—is central to consciousness itself. What defines a mind *as a mind* is its capacity proactively to think a few steps ahead—to avoid rolling immediately down the steepest slope like a rock, but instead to grasp our context, the landscape of our choices and possible paths, and sometimes to choose ones that don't immediately satiate.

There is always the danger of becoming ungrounded; but futurism in no way obliges a disconnect with the struggles of the present. It does, however, have implications for what we

This may not be in keeping with our biology as Stone Age creatures, whose physical evolution has been incapable of keeping up with our cultural evolution, but so what?

Of course, many primitivists may well enjoy and acknowledge the benefits offered by the fruits of civilization. They may even feel an affinity for the aspirations of anarcho-transhumanism, but nevertheless believe that transhumanist aspirations are pointless because a permanent civilizational collapse is inevitable.

It's true that our present infrastructure and economy are incredibly brittle, destructive, and unsustainable—in many ways serving and intertwined with oppressive social systems. But so many other forms remain possible. Our global civilization is not some magical whole, but a vast and complex battlefield of competing forces and tendencies.

The "inevitability" of the supposedly coming collapse is in fact *itself* quite brittle. Any number of single developments could massively derail it. An abundance of cheap, clean energy, for example, or an abundance of cheap, rare metals. Each would lead to the other, because cheap energy means more cost-effective metals recycling, and the availability of cheap metals means cheaper batteries and expanded access to energy sources like wind. The Earth is not a closed system, and, for example, several major corporations are now racing to seize nearby asteroids so rich in rare metals that successful asteroid mining could crash the metals markets and shutter nearly every mine on Earth.

And let's note that it is highly unlikely that a civilizational collapse would return us to an idyllic Eden. Many centers of power would likely survive, almost no society would fall below Iron Age technology, billions would die horrifically, and the sudden burst of ecological destruction would be incredible. It even turns out that the spread of forests in northern latitudes would perversely end up making global warming worse because trees are ultimately poor carbon sinks and changes to

This does not remotely fit an account of cities as solely runaway concentrations of wealth and power—of urban life as a cancerous mistake. If the establishment of cities were such a bad idea, why do people with other options keep voluntarily choosing them?

The answer, of course, is that living in large numbers increases the social options available to individuals, opening up a much greater diversity of possible relationships to choose from.

Instead of being confined to tribes of one hundred or two hundred people, while perhaps enjoying opportunities to interact with the members of limited numbers of nearby tribes, people living in cities can form affinities not limited by the happenstance of birth, to organically form their own distinct networks *by choice*. Better than tribes, they can shed the limiting insularity of closed social clusters entirely. There's no good reason your friends should all be forced to be friends with each other as well. Cities enable individuals to form vast panoplies of relationships linking them with far larger and richer networks.

Such cosmopolitanism enables and encourages the empathy necessary to transcend tribal or national othering. It expands our horizons, enabling mutual aid on incredible scales, and helping far richer cultural and cognitive ecosystems than would otherwise be possible to flourish. If there is any single defining characteristic "culture of cities" (otherwise known as "civilization"), it is thus one of wild anarchy, of unleashed complexity and possibility.

And, of course, large-scale cooperation enables technological developments that expand the possible scope of our material conditions.

What we want is a world with the teeming connectedness of cosmopolitanism, but without the centralization and sedentary characteristics of many "civilizations." We want to fulfill the promise and radical potential of cities that have led humans to form them voluntarily again and again throughout history.

prioritize in the present; for example, refusing to accept a reform that might improve our lot in the short term but seriously impede our capacity to struggle in the future. Liberals are famous for their dismissal of the future, an attitude which they use to justify short-sighted actions like ecological devastation and granting the state ever more power over our lives. There's a sense in which we sometimes need to improve our lot in the short term just to keep fighting, but we must always be aware of what we're trading away.

A democratic socialist utopia might immediately improve most people's lives. And perhaps we might be able to realize such a utopia if we all really worked hard to achieve it. But there's a limit on the improvements a state-based solution could achieve. And, once such a putative utopia was in place, its authoritarian tendencies might deepen, with the result that it becomes even harder for future generations to overthrow.

In addition to illuminating challenges on the road ahead, anarcho-transhumanism offers direct insights into our daily struggles and our continuing resistance against the state.

If fascism is so powerful, why hasn't it totally triumphed? Our world could be so much worse than it is. Despite all the sources of contemporary elites' power—all the vast wealth and coercive force they've accumulated, all the ideological and infrastructural control, all the systemic planning and surveillance, all the ways humans are by default inclined to cognitive fallacies, cruelty, and tribalism—they have clearly been massively impeded on every front. And those societies or movements that have sought to embrace the strengths of authoritarianism more directly have failed. Anti-authoritarians—despite myriad shortcomings and imperfections—have won time and time again. The host of those in fealty to absolute power, to mindless surrender and violent simplicity, are legion. And yet grassroots activists have crippled their ambitions, outflanked their worldviews, bogged down their campaigns,

sabotaged their projects, creatively struck back, preempted them—and changed the landscape out from under their feet.

Free people are better inventors, better strategists, better hackers, and better scientists, exhibiting the very tendencies transhumanism embraces—tendencies of abstraction, reflection, and churn. The ideology of power fails because of its necessary weakness at leveraging complexity. Philosophies of control innately seek to constrain the possible; freedom is about unleashing it.

Having more tools means having more ways to approach a problem. The "choices" some tools provide can be superficial and can exert limited impact. Choosing certain tools can shrink the range of available choices in other ways. But, at the end of the day, it's not possible to maximize freedom without also continuously expanding one's toolset.

Expanded degrees of freedom in technics typically empower attackers over defenders. When there are more avenues by which to attack and defend, the attackers only need to choose one, while the defenders need to defend all, with the result that the defense of rigid, extended institutions and infrastructure proves harder and harder.

Thus, in the broadest lens, technological development ultimately bends towards empowering minorities to resist domination and makes cultural habits of consensus and autonomy increasingly necessary—because in some sense everyone gets a veto.

Similarly, information technologies unleash positive feedback loops and increase sociocultural complexity. While early, crude information technologies, like radio and television, were seized and controlled by the state and capital to form a monopolistic infrastructure promoting monolithic culture, the wild array of technologies we've blurred together as "the Internet" has empowered people to resist this tendency and promoted an increasing complexity of fluid discourses and subcultures.

in almost every aspect of our society, our culture, our interpersonal relations, and our material infrastructures. But if in using the term "civilization" we mean to speak of some kind of characteristic or fundamental "culture of cities," it's begging the question to write domination in from the start.

There have always been constraining power dynamics in every human society from huntergatherers on up. While larger-scale societies have naturally made possible more showy expressions of domination, domination is not inherent in the structures of such societies.

Throughout the historical record, cities have been quite diverse in their degrees of internal hierarchy and relations with surrounding societies and environments. A number of city cultures left no traces of hierarchy or violence. More egalitarian and anarchistic urban societies didn't waste energy building giant monuments or waging wars, and thus are thus less prominent in the historical records available to us. Further, because we currently live under an oppressive global regime, it goes without saying that at some point any more libertarian societies had to be conquered—and victors often intentionally destroy the records of those they subjugate. Similarly, non-anarchist historians have leapt to assume that the presence of any social coordination or technological invention in egalitarian and peaceful city cultures like Harappa proves the presence of some state-like authority—even when there's zero sign of any such authority and there are, indeed, strong indications to the contrary.

Urban concentrations arose in a number of places prior to agriculture. Indeed, in many places around the globe where the land could not support permanent cities, people nevertheless struggled to come together in greater numbers whenever and for however long they could manage to do so. Frequently, the members of early societies would be both temporary hunter-gatherers and temporary city dwellers, transitioning back and forth with the seasons.

But many of the industries and commodity forms that are standardized in our existing society would be unsustainable and undesirable in a liberated world.

For instance: There are many ways to make photovoltaic solar panels, but when the People's Republic of China reportedly uses slave labor and eminent domain to seize, strip, and poison vast swathes of land, such actions could lower the cost of certain rare earth minerals—and thus steer more money more towards research focused on photovoltaic approaches that use these artificially cheap minerals rather than towards alternative viable research branches that use more common materials. Military forces in the Congo allegedly allow for the replacement of Canadian coltan miners with slaves working in horrific conditions. Or consider another example: two centuries ago, employing not much more than simple mirrors, Augustin Mouchot demonstrated a fully functional and (at the time) cost-efficient solar steam engine at the world's fair. It would have gone into mass production had the British not won battles in India enabling them to effectively enslave large populations and put them to work in coal extraction, thus dramatically driving down coal prices.

It is a simple fact that institutional violence frequently alters the immediate profitability of certain lines of research.

Primitivism oversimplifies the situation, saying that what exists must necessarily be the only way to enable certain technologies. It also frequently implies a single linear arc of development such that everything is dependent upon everything else, ignoring the often enormous latitude and diversity of options along the way and failing to investigate the vast potential for reconfiguration.

Any discussion of "civilization," for example, is necessarily going to involve sweeping and over-simplistic narratives. Our actual history is far more rich and complicated than any tale of simple historical forces can account for. Systems of power have been with us for a long time and are deeply enmeshed

This provides an amazing source of resistance because it makes mass-control harder and harder. What is hip moves so fast and is so diverse and contingent that politicians and businesses stumble more and more when trying to exploit it.

Anarcho-transhumanists have argued that this feedbacking sociocultural complexity constitutes a Social Singularity, a reflection of the Technological Singularity—a process in virtue of which collaboratively feedbacking technological insights and inventions grow too fast to be predicted or controlled.

Silicon Valley is desperately trying to avoid the reality that the net profitability of the entire advertising industry is in decline. Since the advent of the Internet, people have begun wising up and, on the whole, advertisers are exerting less and less impact. All that remains marginally effective with the younger generations are more individually-targeted outreach campaigns—think businesses trying to get in the meme game or paying popular Instagram teens to reference their products. But these approaches are clearly yielding diminishing returns. When a hypercomplex teen fashion subculture comprises thirty people it's no longer worth the energy for corporations to try to target them.

Those anarchists skeptical of prediction and strategy, who instead focus on "everyday life" and the immediate, often frame their hostility to abstractions as part of a wider rejection of "mediation." Yet it's worth emphasizing that all causal interactions are "mediated." The air mediates the sounds of our voices. The electromagnetic field and any intervening material mediate our capacity to see. Culture and language mediate the concepts we seek to express. This may seem like a trivial point, but it's a deep one. It's hard to provide an objective metric of just what counts as "more" or "less" mediation, and it's harder still to try and claim that such a metric *means* something.

There is no such thing as "direct experience." To see anything requires an immense amount of processing as raw signals are transformed by neural columns in our visual cortices into

ever more abstract signals. Artifacts from this processing can be found in optical illusions and patterned hallucinations. And in turn our experiences shape what pattern recognition circuits form with what strengths. To experience "directly" without mediation would be to not experience or think at all.

One can certainly try to distinguish between "human created" mediation and other varieties, but such a distinction has no fundamental correlation with how viscerally or accurately we experience things. While there's a different flavor of danger to someone tapping or censoring your community mesh Wi-Fi network, such interference or sabotage applies in various ways to *all* our means of communication, including cultural and linguistic constructs.

It's nonsensical to talk of "more" mediation rather than different flavors with different contextual benefits and drawbacks. Even an anarcho-primitivist like John Zerzan wears eye glasses to improve his overall capacity to visually experience and engage with the world around him. In this respect he's a transhumanist. In many ways modern technologies can be used to expand the depth and richness of our engagement with nature and each other.

IV. *Contra* Primitivism

For the most part, anarcho-transhumanism emerged as an explicit response to anarchoprimitivism; many anarcho-transhumanists in the early aughts were former primitivists. As a result, unlike the broader transhumanist movement, which tends to engage minimally or not at all with primitivist critiques, anarcho-transhumanism was *founded* in many ways as a response to primitivist concerns.

Anarcho-transhumanism emphasizes that transhumanism isn't a claim that all tools and applications of them are—in all contexts—totally wonderful and without problematic aspects

to be considered, navigated, rejected, challenged, or changed. Nor is transhumanism an embrace of all the infrastructure or norms of tool use that currently exist. Transhumanists hardly imagine that all technologies are positive in every specific situation, that tools never have biases or inclinations, or that some arbitrary, specific set of "higher" technologies should be imposed on everyone. Rather, transhumanists merely argue that people should have more agency and choices with regard to the ways in which they engage with the world.

Being more informed and having a wider array of tools to choose from is critical. In the broadest sense, "technology" is just any means of doing things, and freedom is the availability of more options or means.

While they recognize there will inevitably be a lot of contextual complications in practice, at the end of the day transhumanists want more options in life and in the universe, In much the same way that anarchists have argued for the availability of as many different tactics as possible. Sometimes one tactic or tool will be better for a job, sometimes not. But expanding freedom ultimately necessitates expanding technological options.

What's deplorable about our current condition is the way in which technologies are suppressed until all we are allowed is a single technological monoculture, often with some very sharp biases. On the one hand, more simple or primitive technologies are suppressed or erased. On the other, technological development is viciously slowed or curtailed thanks to intellectual property laws and myriad other injustices. Similarly, the conditions of capitalism and imperialism distort what technologies are more profitable and thus what lines of research are pursued.

That does not mean that technological inventions under capitalism are innately corrupted or useless. And it certainly doesn't mean that we should start entirely from fresh cloth, ignoring all discoveries and knowledge accumulated along our trajectory.