

## Marxist Transhumanism?

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**ABSTRACT:** The paper argues that a Marxist transhumanism is politically and ethically incoherent. While it is true that transhumanists and Marxists believe that human beings are self-determining, self-transforming, transhumanists are committed to transcending the material conditions of organic life. Their ultimate aim is to encourage the emergence of an artificial superintelligence whose self-creative capacities are not limited by the needs of organic life forms. Socialism, by contrast, is a political and ethical movement committed to ending the suffering caused by capitalism, by changing social institutions and the values according to which resources are distributed and utilized. The success of the transhumanist project would render all social and political theories and institutions obsolete. The socialist use of technology would expand human life-capacities while preserving the ties of mutual need that link us together and make human life meaningful and worthwhile.

**KEYWORDS:** transhumanism, Marxism, humanism, human nature, technotopianism

At an international conference in 1965 devoted to the prospects of socialist humanism, Marcuse added a question mark to the title of the symposium. His talk: “Socialist Humanism?” turned what the organizers of the symposium assumed to be the solution into a problem. Marcuse was not skeptical about the value of humanist values of all-round cultivation and personal development, of peace and mutuality, but rather of there being any place for those values in the world as it was presently constituted. Humanist values attained their fullest philosophical expression in the flourishing of liberalism in the nineteenth century, but the capitalist economy with which liberalism has always been bound in contradictory co-evolution negated the social conditions for the flourishing of the all-round individual. “The human reality,” he argued, is an ‘open’ system: no theory, whether Marxist or other, can impose the solution. The contingency of history, which today denies humanism, may also

one day deny the denial. Meanwhile, there are the enslaved human beings who must accomplish their own liberation. (Marcuse 1965, 109)

Marcuse’s point was that the concrete task was not to realise the exulted ideals of the liberal past but to free the victims of the collapse of those values from the violent one-dimensionality that capitalism became.

I want to pose an analogous question about the relationship between Marxism and transhumanism. Like Marcuse, I pose a question in the title of my paper. As Marcuse wondered whether a socialist revival of the ideals of humanism was the most pressing issue in 1965, so too I wonder whether Marxist sponsorship of transhumanist ideals is the most pressing issue in 2021. Marcuse thought that humanist values were anachronisms which might one day become relevant again. I will argue that transhumanist ideals are utopian projections which might one day become realities. However, helping

them become realities is not the most urgent task of Marxists today.

Moreover, if transhumanist technotopia should one day come to be, it would be a world in which all forms of political theory, indeed, all forms of social and political institution, would have become irrelevant, because the needs that they serve have been transcended. Hence there can be no Marxist transhumanism, not because there are not some compelling overlaps in their conceptions of human potentiality, but because the problems they are trying to solve are different. Transhumanism is trying to solve the problem of the finite powers and possibilities of organic life, while Marxism is trying to solve the problems of exploitation, alienation, and oppression. It is true that a transhumanist solution to the problem of the finite powers and possibilities of organic life would also solve, *a fortiori*, the problems of exploitation, alienation, and oppression. However, since there would no longer be human beings or human societies in any recognisable sense, the way in which those problems would be solved cannot be understood in terms of any existing political theory. There may indeed come a time when transhumanist goals are realised, but the realisation of those goals would not be socialist, or liberal, or capitalist, or anything conceivable in terms of theories formulated by organic beings struggling to solve problems of organic life. Meanwhile, contemporary slaves continue to toil in toxic and precarious industries feeding the technological beast towards which the transhumanists look for salvation.

Socialism, like any political theory, presupposes certain material problematics that we can call, following John Rawls (who was in turn following Hume) “the circumstances of justice” (Rawls 1999, 109). The most important circumstance of justice is the relative scarcity of need-satisfying resources. As we will see, Marx sometimes talked about socialism as a society of superabundant goods (and contemporary “fully automated luxury communists” like Aaron Bastani foresee the day when this super-abundance will have become actual) (Bastani 2019). However, Marx also worried about the principle of distribution of a socialist society, and these worries, it seems to me, suggest that he understood that life on a planet of

finite resources will always demand choices between alternatives. How these choices are made in large part determines the character of a society: democratic societies start from the universality of human needs and allow everyone to participate in the decisions about how relatively scarce resources will be allocated; class societies prioritise the interests of the ruling class in accumulating wealth for themselves. The goal of transhumanism is not to democratise allocative decisions so as to ensure comprehensive need-satisfaction, but rather to free creative intelligence from its embodied basis, thereby making all forms of social institutionalization of allocative decisions irrelevant. The “trans” in “transhumanism” means transit towards and transcendence of the “frames of finitude” that define human life and make politics, critical theory, and alternative societies relevant (Noonan 2018, 4).

I will unfold this argument in three steps. In the first I will argue that while there are more and less strident versions of transhumanism, only the maximalist program of complete transcendence of the frames of human and natural finitude should really be understood as *transhumanism*. While this claim might sound like an attempt at *reductio ad absurdum*, I in fact take the fulfillment of maximalist program as a serious possibility. The scientific possibility of something like a superintelligent computer can no longer be excluded. However, my taking the possibility seriously poses the problem of whether it is *desirable* to pursue it. My answer will be that it is not desirable to pursue it.

One might object that my answer to this question contradicts Marx’s own hopes about the liberatory potential of technology. In the second section I will address this objection by examining Marx’s complex views about the connection between liberation and technological development. There are at least three distinct (but related) positions, only one of which is at all analogous to transhumanist technotopianism. However, even where Marx seems to tie the human future most tightly to technological development, he is still concerned with human solutions to human problems.

In the third section I will thus conclude that transhumanist Marxism, while perhaps not oxy-

moronic, is not a politically coherent synthesis of traditions. Instead of transcendence of the flesh, Marxism is committed to humanist values for a finite species on a finite planet. The paper wraps up with some reflections on what the life-valuable uses of technology might be in a socialist humanism for the twenty-first century.

## I. Transhumanism and Technotopia

The term “transhumanism” was coined in 1957 by the biologist Julian Huxley (Huxley 1957, 13). He could already foresee from his vantage point just a few years after the discovery of DNA that theoretical understanding of the molecular structure of life could confer astounding practical power over its future. “Trans” thus meant, for Huxley, movement towards and beyond the human as an organism dependent, like other organisms, on nature and at the mercy of natural selection (Huxley 1957, 16). Knowledge of the genome would give future human beings the power to choose and program the traits that will define our species. Huxley could not foresee the significance of the development of computing technology and artificial intelligence for transhumanism. He hoped that genetic engineering could improve human life, but he could not yet imagine the complete transcendence of our organic nature. While neither genetic engineering nor artificial intelligence have yet fulfilled the highest hopes of their proponents, those hopes cannot be dismissed as science fiction any longer. In what follows I will assume that practically immortal, artificially intelligent life forms are possible and their creation or emergence is the ultimate goal of proponents of transhumanism.<sup>1</sup>

As James Steinhoff argues one of the first and best attempts to read Marxism through a transhumanist lens and transhumanism through a Marxist lens, transhumanists are a politically, socially, and economically diverse lot (Steinhoff 2014, 2). Social democrats like James Hughes worry about egalitarian access to enhancement technologies and look to public institutions to ensure it (Hughes 2004). According to Steinhoff’s research, a large

plurality of members of the World Transhumanist Association identify as “left” (Steinhoff 2014, 3). Most are probably not Marxists, but their “leftism” nevertheless indicates some degree of concern for democratic control over the ways in which technological development is integrated into human life. That concern is not universally shared amongst transhumanists. The best known and most utopian of them see technological development as an automatic product of capitalist markets. Thus Ray Kurzweil argues that “I believe that maintaining an open free market system ... will provide the most constructive environment for technology to embody widespread human values” (Kurzweil 2006, 420). Capitalist markets not only monetize incentives to innovate, they allow consumers “free choice” to purchase whatever enhancements come on stream. Joseph Jackson thus bookends, from the consumer perspective, Kurzweil’s argument developed from the perspective of the producers: if allowed to spend their money how they wish, the rich will provide a market for new technologies which will in turn drive innovation in an expanding virtuous circle (Jackson 2008, 6).

I am not going to focus on the political differences that distinguish transhumanists into different camps. I am concerned with the connection – asserted by Kurzweil above – between unbridled technological development and “widespread human values.” It is true that the connection between reason, science, technology, and the improvement of human life is also essential to one strand of humanist philosophy. The Enlightenment sowed the first seeds of *scientific* hope in the possibility of immortality. Condorcet anticipated transhumanist Aubrey De Grey’s idea of “longevity escape velocity” in his *Sketch for an Historical Picture of the Progress of the Human Spirit* (De Grey 2007, 330–331; Condorcet 2017). Once monarchical and colonial tyrannies had been conquered and peaceful relationships had become predominant across the globe, human energies could be turned to the crucial tasks of wealth and knowledge production. With more resources and intelligence mobilised on a global scale, health would improve and diseases would be

1 While I believe that there are significant differences between human and machine intelligence, I will not enter into those debates here. I will also not discuss the serious practical ethical problems raised by genetic engineering. For a discussion of the later see Habermas, 2003.

cured. Condorcet could see no specifiable limit to such progress:

Would it be absurd now to suppose that this improvement is capable of indefinite progress; to suppose that the time must come when death will be due only to extraordinary accidents or to the decay (slower and slower down through the generations) of the person's vital forces, and that eventually the amount of time between a person's birth and this decay will have no assignable value? (Condorcet 2017, 109)

Condorcet anticipates by two centuries the central transhumanist argument: scientific knowledge is self-ramifying *if political authorities and religious fanatics are prevented from interfering with it.*

Max More is thus fully in keeping with this adventurous version of humanist philosophy when he argues that transhumanism is a “life philosophy ... emphasizing a meaningful and ethical approach to living informed by reason, science, progress ... and on taking personal charge of creating better futures ... through reason, technology, scientific method, and human creativity” (More 2013, 4). I do not disagree with Kurzweil or More that human beings are capable of self-transformation, that science has afforded us both deep understanding of and great technological power over physical nature, or that this knowledge and power can be used to free human creativity from certain forms of oppressive limitation. If we stay at the level of these generalities, then Steinhoff is correct to argue that there is a deep affinity between the transhumanist understanding of human nature and Marx's equally “open” understanding (Steinhoff 2014, 6). To be sure, Marx argued that the “human essence” is no abstraction, but in reality the “ensemble of social relations.” (Marx 1976, 4). These relationships not only change, they can be consciously changed by human beings, and technology is the means by which we change them. Marx, like More and Kurzweil, also sees human history as an adventure (albeit one rather more fraught with domination and violence than most transhumanists discuss) and would not venture a definitive ruling on what shapes future forms of human society might take.

Steinhoff goes on to argue that the main difference between Marxism and transhumanism is that the transhumanists do not fully understand the way in which social institutions and dynamics shape decisions about which technologies are developed and to what uses they are put (Steinhoff 2014, 4-5). From his perspective, Marxists should adopt transhumanist goals so that enhancement technologies are not used to deepen alienation, exploitation, and oppression, but better contribute to all-round human freedom. Left unchallenged, the capitalist form of technological development threatens the future with a “capitalism without human beings”: a world in which a tiny ruling class controls artificially intelligent machines to satisfy their every want or whim, while the rest of humanity is rendered a miserable, dominated surplus population (Dyer-Witherford, Kjosen, and Steinhoff 2019, 111). As I will argue in the next section, Marx foresaw an analogous possible future. To be sure, such a future is one that socialists must do everything to avoid. I maintain, nevertheless, that as socialists we remain committed to a different sort of humanist ethic whose foundational value is not adventure and constant change, but care and concern for each other's well-being. I think that there is a way that adventure and care and concern can be coherently synthesised, and I will develop that synthesis in the final section. My position is that the transhumanists do not desire a synthesis, but an absorption of the human into the technology.

If one argues, as I do, that caring concern is the foundational humanist value, then it follows that we must understand the goal of transhumanism – the transcendence of the human needs that connect us to each other and form the material basis of care and concern, as *ultimately* anti-human, as tantamount to euthanasia. Nick Bostrom, amongst the most thoughtful of transhumanist philosophers, puts the point with characteristic clarity: our bodies are death traps, and so long as our sentient and creative capacities are “trapped” within them, there will be limits to the good that we can experience (Bostrom 2005, 4). The problem is, one cannot be a *human being*, and not experience the world as an embodied, social, self-conscious agent. *Living* as an embodied, social,

self-conscious agent demands wrestling against the limits our world imposes. The limits can be stretched and pushed, but so long as we are human, they will remain. Hence, the human must be destroyed in order to save the human.

That which transhumanism wants to preserve about human beings is the power – typically associated with the divine – to be able to think or wish material realities into being. The gods do not have to work in order to create the worlds that they desire: In the Beginning was the Word, and all God had to do to make it flesh was speak it. Transhumanism wants the end of the adventure without the striving, sweating, and fearing that makes human effort essential to good human lives. From their perspective, the good is the enjoyment that completes the struggle, not the struggle. I am not exaggerating when I say that the positive goal of transhumanist philosophy and science is the abolition of material reality. Kurzweil's Singularity, Bostrom's autopotent super-intelligence, and roboticist Hans Moravec's infinite virtual reality are all defined in terms of the abolition of the difference between conception and realization. This speculative superintelligence literally thinks whatever reality it desires into existence. For Kurzweil, the most rapturous of the three, the Singularity is quite literally an apotheosis.

Evolution moves towards greater complexity, greater elegance, ... greater intelligence, greater beauty, ... and greater levels of subtle attributes such as love. In every monotheistic tradition God is likewise described as all of these qualities, only without limitation ... evolution moves inexorably towards this conception of God, although never quite reaching this ideal. We can regard, therefore, the freeing of our thinking from the severe limitations of its biological form to be an essentially spiritual undertaking. (Kurzweil 2006, 389)

Should we take this projection seriously?

I think that we should. If we accept the premise of the boundless openness of the future, then it follows that there is no specifiable limit to the improvement of scientific understanding and technological power. One does not have to subscribe to this teleological misinterpretation of evolution to accept the logi-

cal and physical possibility of its terminal point: a superintelligence which is capable of simply 'thinking' the objects of its desires into existence. Why should Marxists, who share an open-ended understanding of progress, not accept this goal?

There are three interrelated reasons. The first, as I have already noted, is that the transcendence of the human means the transcendence of human society, and the transcendence of human society means that all theories and projects about the best form of society would become anachronistic. Now, it might well be the case that over the very long future something like Kurzweil's Singularity comes to be. The time scales over which that event might happen mark the second reason why Marxist goals remain distinct from transhumanist goals.

If a superintelligence were to emerge, the two centuries long conflict between capitalism and socialism would be resolved in favour of cybernetic superintelligence, not the bourgeoisie or proletariat. But the time scales we are talking about exceed the bounds within which political struggles make sense. The sort of evolution of divine superintelligence that Kurzweil predicts is not going to happen on the scale of days, years, decades, or probably even centuries. But political struggle is not for the sake of a better world 100 000 years from now, it is for the sake of tomorrow. Its aims therefore must be institutional changes that are practically realizable in the present and which prioritise the re-distribution of resources that bio-social agents need right now to live meaningful, creative lives. If our focus is on the emergence of a superintelligence at some point far, far down the road, then the priority is to ensure that technological growth proceeds uninterrupted by "noise" like class struggle.

This conclusion brings me to the third and final point, which is a synthesis of the first two. One could accept that if there are no humans there will be no human society, and that the time scales of political struggle and technological transcendence of the flesh radically differ, and yet still conclude, with Steinhoff, that the truth of both does not rule out the coherence of a synthesis of Marxism and transhumanism. If it were the case that the goal of transcendence is

agreed to be in the best interests of human beings, and that a socialist society could better marshal the intellectual resources needed to get us there, then we need a socialist (near) future to create the conditions for the transhumanist distant future.

I agree with this rejoinder in so far as it shows that even the truth of one and two alone are not sufficient grounds to reject the cogency and desirability of a Marxist-transhumanist synthesis. The third reason that distinguishes Marxist from transhumanist goals is intimately connected to the truth of one and two but adds a new consideration which allows my argument to evade the force of counter-considerations like Steinhoff's. Kurzweil thinks of his Singularity as the transition that leads to a new life form that values human goods, but is free from the limits within which humans experience them: pleasure without pain, knowledge without ignorance, achievement without effort. Yet, there are no grounds for the conclusion that a divine cybernetic superintelligence would care at all about mundane human goods and evils, any more than a (properly understood) Biblical or Quranic God would care if the wide receiver makes the game winning catch. As Bostrom and Moravec both point out, it is much more likely that such a superintelligence would, at best, be totally indifferent to the pleasures of its distant human ancestors, and at worst, would wipe us out as impediments to its fuller flourishing. As Moravec notes, referring obviously to the history of European colonialism, it is rare that the societies of less technologically advanced communities survive intact after contact with more technologically advanced ones (Moravec 1999, 189). Historical evidence thus suggests that the emerging superintelligence would simply eliminate us as a nuisance. If the good of an entity is a function of its needs, powers, and capacities, and the needs, powers and capacities of a superintelligence differ radically from our own, then it is the height of ethical and political naivete to expect that whatever the Singularity becomes will be concerned with what human beings consider good. Bostrom is likely correct when he argues that it is much more likely to be interested in calculating mathematical infinities

than freeing human pleasures from mortal limitations (Bostrom 2013, 14).

When we add this third consideration to the first two, we arrive at the full reason why Marxism is not a transhumanism in the robust definition of the term that I am using. Socialism, as a plan for a substantively equal, democratic society which satisfies its member's needs for the sake of enabling the realisation of their intellectual and creative capacities in meaningful, valuable, and valued ways is a human project, for human beings, with human purposes, values, and pleasures. A superintelligence that has evolved beyond the limits of organic life is not going to realise this goal. It is not even going to take notice of it as an interesting factoid of its ancient history. Socialism only makes sense as a near-term goal of struggle for human beings whose needs are not met in capitalist society. Transhumanism does not take the reform of human society as its goal. It is *transhumanistic* because organic life is treated as a way station on the road to something that will be fundamentally different. The interesting question, therefore, is not whether Marxism and transhumanism can be synthesised. If I am correct, they cannot be without losing sight of the temporal and material frames within which political projects make sense. The interesting question is: what is the role of technological capacity in the creation of the conditions for a transition to socialism? I will approach that problem first from a historical perspective by examining three distinct answers to that question found in Marx's works.

## II. Marx: Socialism, Humanism, Technotopia and Dystopia

As I have already admitted, one can certainly find in Marx many passages to support the speculative interpretation that had Marx lived today, he would have embraced the technotopian possibilities of advanced robotics, artificial intelligence, and genetic engineering. This section will not contest such speculative readings but rather focus on trying to systematise, albeit briefly, the different attitudes towards the relationship between technological development, the material conditions of possibility of a socialist society, and the ethical grounds of a socialist society. I will

argue that there are at least three distinct positions.

The first is his early humanist interpretation. In *The Economic and Philosophical Manuscripts of 1844* Marx reads science and technology as one expression of a holistic human creative power. Their development helps establish the conditions for socialism, but the ethical ground of socialist society, its justification and organizing value system, is the all-round emancipation of non-alienated labour from all oppressive, reified forces. The second has been typically read as a growing technological determinism according to which revolutions are products of a contradiction between the forces and relations of production. In this view, once socialism frees technological development from its capitalist “fettters” it will simultaneously free human life from most of the constraints that material reality currently exerts over it. Finally, there is what I will call the nightmare view, less fully developed but nevertheless present in his later works. In this view human labour becomes completely subsumed under a centrally organized, totally automated capitalist machine. This view is a nineteenth century version of the “inhuman power” which Dyer-Witherford, Kjosen, and Steinhoff warn awaits us if AI is not freed from its capitalist development trajectory.

The key to understanding this first position on the relationship between technology and socialism is to properly understand the view of human nature that underlies it. In 1844, Marx sees human nature as double-sided: a passive, organic side that is dependent on nature and other people, and an active, self-creative side that Marx considers our truly human species being (Marx 1975, 275). Steinhoff should be credited for acknowledging that Marx pays equal attention to both sides of human nature (Steinhoff 2014, 5). The passive side is rarely discussed by commentators on the *Manuscripts*, who tend to focus almost exclusively on human self-creativity.<sup>2</sup> However, if we ignore the passive side, we cannot understand the value that underlies human social relationships. Our lives depend upon satisfying our needs. In order to satisfy our needs, we must work collectively. In capitalist society, because we are alienated from nature and each other, we think that we are just working

for ourselves, when in fact our individual labour, mindless as it might be in the details, is in truth a contribution to the production of the resources that everyone needs.

The passive side of human nature is the spur that causes us to labour, but labour is ultimately for the sake of collective and individual life and well-being. Marx does not see science and technology as independent causal forces in 1844, but rather as *responses* to our needs. Either we work or we die: our intelligence is first of all directed to the problem of survival. However, since intelligence is active, it begins to build models of how nature works (science) which in turn becomes guides to the creation of technologies that increase the power of human labour. To repeat: nowhere in these manuscripts does Marx argue that technology is a reified power which, at a certain point becomes an independent factor guiding human history. He does not take that step, I maintain, because he is still under the influence of Feuerbach and appreciates the *value* of the passive side of our being. Nature, he argues, “exists ... as a bond with man – as his existence for the other and others existence for him – and as the life-element of human reality” (Marx 1975, 298). Although industry is the “open book” of human “essential powers” it never becomes so powerful that the passive side of our being is overcome (Marx 1975, 302). Because we are dependent and interdependent on factors beyond our control, human life involves suffering. But suffering is not a cross to be poetically or spiritually borne, it is an occasion for forging meaningful social relationships.

On the one hand, our needs are simply natural facts. On the other, they draw us together: in political struggles against alienation and intrinsically valuable social bonds. They are, in the words of John McMurtry, “felt bonds of being” which prompt us to work not only for their raw satisfaction, but in ways which are meaningful, valuable and valued, and sensuously enjoyable (McMurtry 1998, 23). The ethical foundation of socialism is non-alienated social relationships, not unbridled labour productivity. The ethical goal of socialism is the creation of the conditions for authentic social individuality, not

<sup>2</sup> The most notable exception is the eccentric but excellent work of Sebastiano Timpanaro. (See Timpanaro 1980).

the apotheosis of machines. There is no indication that Marx believes that authentic social individuality represents the transcendence of our organic being or escape from its passive side. If there were no passive side, no dependence or interdependence, there would be no social bond. The lives of authentic social individuals will be furnished with everything they need to develop affirmative and mutualistic relationships with others, but there will still be a gap between self-image and social reality. As he poignantly puts it, “if you love without evoking love in return ... then your love is impotent – a misfortune” (Marx 1975, 326). Freedom from the power of money is, then, freedom to try to make ourselves into the person we want to be, but it is no guarantee that we will succeed.

This picture changes considerably in the political economic works, but perhaps not as considerably as I have argued elsewhere (Noonan 2020, 441–456). I want to frame this second picture with two famous but schematic passages. In *The Contribution to the Critique of Political Economy* Marx gives what he claims is an overview of the basic principles of historical materialism (Marx 1999a). His focus here is not “the ensemble of social relations” but the contradiction between the forces and relations of production. Marx argues that the forces of production (including science and technology) tend towards increasing the productivity of labour, but at certain points are “fettered” by the existing relations of production (Marx 1999a). This fettering creates social crises that lead to revolutionary periods.<sup>3</sup>

Successful revolutions free the forces of production from the constraints imposed by the previous set of relations of production, but not for the sake of increased quantitative growth of commodities. Rather, the goal of social revolutions is to reduce the pull of natural necessity and correspondingly increase the scope for free human action. In *Capital Volume Three*, Marx presents human history as a struggle against the mechanical determination of human action by physical forces (Marx 1986a, 820). Human society, built

from nature, frees us from its determining forces, *to the extent that it reduces socially necessary labour time*. The less time we must spend satisfying our basic needs, the more time we have to freely realise our projects, invent and re-invent ourselves, and sensuously enjoy our lives.

Technological development thus plays an essential role in the expansion of the realm of freedom into the realm of necessity. The role of technology is most fully explored in *The Grundrisse*. Here it becomes clear that although there may be a historical tendency of the forces of production to grow, growth of productive power is never an end in itself or valuable as such. Technological development is good only when it is consciously used to free human creative capacities from natural determination or social domination. Hence the same technology could be both bad and good: bad when it intensifies the alienation or exploitation of labour and good when, in changed social circumstances, it expands connections between people, or extends our creative capacities in new directions. The ultimate trajectory of technological development is to free humanity entirely from the natural need to work for the sake of survival. Under this version of socialism, “labour in which man does what he can make things do for him has ceased” (Marx 1986b, 250). Marx could not anticipate that machines could do a great deal more than lift and push, and it is thus difficult to draw firm conclusions about what he would have thought about the emergence of artificial intelligence.

It is certainly plausible to think that he would have welcomed its emergence as potentially liberating. This second picture of technology is thus the strongest support for the existence of a transhumanist Marx. If Marx saw the horror *and* the potential of industrial technologies, why would he not also have seen the horror *and* potential of genetic engineering and artificial intelligence? Technology is just an instrument of social intentions: if those intentions are to exploit labour and increase surplus value, technology will constrict the realm of freedom. On the other hand, if the social intentions are to more comprehensively satisfy needs and free time, then technology expands the realm of freedom and becomes a crucial instrument of human liberation.

I think that Marx did indeed think of technol-

<sup>3</sup> The overview that Marx gives of his work in this Preface became the basis for G.A. Cohen’s analytic reconstruction of the basic principles of historical materialism. Despite its rigour, there are serious questions to be raised about its adequacy to Marx’s overall position. I cannot enter into those debates here. See Cohen 2000.

ogy in this instrumental way, but that nevertheless Marxism, and the Marxist understanding of socialism are better understood, still today, as a humanism and not transhumanism. Not only does Marx not envision a complete untethering of nature and humanity, necessity and freedom, he also argues that under a socialist society wealth will take the form of the “totality of human needs” (Marx 1986b, 411). Needs are forms of connection between human beings, the natural world, and each other. These connections are exactly what the transhumanists want to transcend, because a connection is a claim on our time. If someone needs me, and I feel connected to them by a bond of obligation to satisfy their need, then I must set aside my private goal in order to satisfy the other’s need. If I am an autopotent superintelligence imagining my world into being, there is no real, *i.e.*, materially compelling connection, between my self-consciousness and anything outside, *because there is no outside*.

If one rejoins that Marx did not imagine this possibility because he could not, given the undeveloped state of technology at the time, I would respond that the bare fact is true, but ignores the role that the value of needs continues to play even in his most technotopic works. He does not ultimately define wealth in terms of total freedom from necessity, but rather in terms of the *necessary* requirements of a fully human life: our needs as the mediations between ourselves as social individuals and the world of nature and other people. Although Marx’s political economic work sees an expanded role for technological development in the creation of the conditions for free human lives, he never rejects the humanist understanding of people as passive and active, dependent and interdependent, and free. Indeed, the third position on technology that one can find in his work sees total automation as a threat to human freedom.

This third position must be inferred from his scattered remarks on the “real subsumption” of labour under capitalism. Formal subsumption occurs when a particular branch of craft production is brought under the principles of the capitalist division of labour. The real subsumption occurs when the entire global working class is reduced to a function of the capitalist division of labour: “The advance of capital-

ist production develops a working class, which by education, tradition, habit, looks upon the conditions of that mode of production as self-evident laws of Nature. The organization of the capitalist process of production, once fully developed, breaks down all resistance” (Marx 1986c, 689). Keep in mind that as capitalism develops, the labour of particular individuals is more and more a mechanical function of their position within an overall division of labour that becomes increasingly mechanized and automated, a “mechanical monster,” as Marx says, “a demon power” ruling over every gesture of working people and emptying their minds of ancient craft knowledge (Marx 1986c, 36). Once labour has been fully subsumed by capital, each moment of workers’ lives would thus be programmed by capital to serve its expansion in the most efficient way. The completion of the capitalist project for the real subsumption of labour would result in the total alienation of the labourer from their human needs for meaningful, creative work and mutually rewarding social interaction. The total subsumption would not exactly be Dyer-Witherford’s, Kjøsén’s and Steinhoff’s capitalism without people, but it would be capitalism without any possibilities of human creativity and interaction (Dyer-Witherford, Kjøsén, and Steinhoff 2019, 111).

Does that not mean that socialists should do everything in their power to make the case that socialism must seize the means of technological production from capitalists and use them for the sake of emancipating labour from the demon power? On one hand, the answer is obviously “Yes.” Yes, because technology under capitalism is essentially a means for intensifying the exploitation and alienation of labour. But there are more interesting complications which must be taken into account. When we take them into account, we have to add a qualifying “no” to our “yes.” If it is the case that some forms of technological development would alienate us permanently from the passive side of our human being (the needs that link us in meaningful relationships with the world and each other), then they must be rejected by socialists in so far as socialism presupposes living human beings. If we read the real subsumption of labour not simply as a fact that Marx was describing but an ethical worry about how human

life might be destroyed via total integration with capital, we ought to conclude that it is a warning, not only about the capitalist use of technology, but about the dangers of technological development unguided by human purposes. To conclude I want to sketch an alternative conception of technological development guided by human purposes in a socialist humanism for the twenty-first century.

### III. Technology and a Socialist Humanism for the Twenty-First Century

I am not the first Marxist to interpret transhumanist technotopianism in light of Marx's fears about the real subsumption of labour. In 2000, Glenn Rikowski argued that the transition towards cyborg reality that transhumanists were predicting was already happening. However, it was not the liberation from the flesh of their dreams, but the penetration of even the molecular sequences of life by capitalism. Transhumanism was thus not a movement to an emancipated future but towards the total domination of human life by capital.

'Agency' is unrealisable in capitalist society; as we are capital, agency can only be the *struggle for agency* itself – the attempt to break free of the social force that deeply possesses us: *capital*. ... This way of visioning the social universe has important consequences for Marxist-humanism. First, the struggle to be 'human' has been lost in capitalist society; we are becoming capital on an incremental (generation-by-generation) scale. Secondly, Marxist-humanism is a struggle *against what we have become, and also against where we are headed: the posthuman as capitalist life-form*. (Rikowski 2000, 35)

Rikowski's argument has the merit of seeing that capitalism alone is not the problem. The integration of human and machine which it is bringing about is a danger to the future of humanity. Socialists must therefore be wary of adopting the machinic future that capitalism prepares for us as our own.

The basis of resistance to capitalist transhumanism is thus not an equally inhuman socialist transhumanism, but rather that which it has always been: needy human beings. Enrique Dussel has understood better and more poignantly than most

Marxists that the real contradiction of capitalism is ethical. It is not between the forces and relations of production as abstract social and technological systems, but between the inhuman forces of capital and sentient human beings who care about the quality of their lives. The critique of capital, Dussel argues, "is possible from a *practical* outside of capital ... such exteriority is the place of the *reality* of the other, the non-capital, the living labourer in his corporeality not *yet* subsumed by the capital" (Dussel 2001, 403). Socialism is thus a project of and for living, breathing, desiring, loving, creating social self-conscious human beings. In the same materialist ethical spirit, Nick Dyer-Witherford argues that socialism will "give primacy to the expanded reproduction (in the sense of the fulfilment and development of needs) of the human ... It should not therefore be identified with the development of technologies" (Dyer-Witherford 2015, 196). The emancipation of human life from capital is a matter "of ... the flesh which are not indifferently transferrable to automata of metal" (Dyer-Witherford 2015, 197). Precisely.

But there are more general implications of these claims regarding the importance of respecting limits. Real human beings are born and die. They get sick. They rightfully demand to live a good life furnished with all of the resources their lives require. However, they accept that their bodies are "death traps." They do not demand to become God. That demand stems from a phantasm of the bourgeois ego which thinks that the value of everything depends on its presence as valuing subject. That monstrous capitalist narcissism is not available to the social individuals that Marx takes us to be: social individuals care about the world outside their own skin and do not need to live forever in order to value present and future life.

My argument must once again counter the rejoinder that I am operating with a too restricted sense of transhumanism. I have already acknowledged that not all transhumanists are avowed Singularitarians, but I believe that my response to this rejoinder still stands: if they really are transhumanists, they ought to be Singularitarians, because the Singularity is the practical expression of the transcendence of humanity that they must desire, if they are in fact *transhumanists*.

Transhumanism without transcendence is, I would contend, better understood as a contemporary expression of older humanist values. To conclude, I want to address the question of what those values might teach us about the relationship between technological development and human freedom.

Let me begin by winding back to Marcuse in order to distinguish liberal and socialist forms of humanism. All forms of humanism must accept, as Marx said in 1843, that human beings are the highest beings for human beings (Marx 1975, 187). Our problems are soluble by us working together on earth or not at all. There is no divine model for how to live a human life; we learn that which our lives require from the experience of our needs and reflection on the struggles that shape our history. Humanists of all stripes understand the good life to involve the fuller realization of our sentient, intellectual, practical, and relational capacities. The good life is consummated in the sensuous enjoyment of our experiences and activities, our relationships with other people and creatures, and the beauty of nature and human creations. Humanists thus do not demand eternity but must be content with the finite pleasure of thinking themselves members of the unfolding spectacle of the universe in space and time. The key difference between liberal and socialist humanists is that the liberal sees the conditions for universal life-enjoyment already established while the socialist argues that these values cannot be realised under capitalist conditions.

Capitalism represents a decisive check to the full realization of humanist values not because it fetters the forces of production (although it might do that). It impedes the realization of humanist values because – as Rikowski and Dussel argued and Steinhoff well understands – it depends upon the systematic dehumanization of workers, (indeed, everyone, including the capitalists, in so far as they are ultimately servants of capital accumulation too). If the basis of resistance to capitalism is living, desiring, caring human social individuals, as Dussel argued, then we must understand emancipation as the freedom of the human from the inhuman forces of capitalism. That means, in turn, that no matter how open the future of human development is, the *socialist* future is comprehensible

only in human terms. The goal of socialist revolution is not to free human beings from the frames of finitude that define their lives, but rather to free our human life-capacities from their dehumanized instrumentalization by capital.

Here again, my argument seems to run into the wall of imposing false limits on the possibilities inherent in progress. Let us take a concrete example, *a propos* this time of pandemic, in order to test the soundness of my conclusion one more time. If it is true that socialism is a struggle for human beings for emancipation of their human life-capacities in the form in which these have emerged from our natural, evolutionary history, does it not follow that all technological extensions of these capacities would be “unnatural” and therefore, inhuman? And if that is the case, does it not follow that accepting the frames of finitude that define human life means accepting disease and mortality just as they happen to arise in each individual life? If those conclusions do not follow, yet I admit that human intelligence actively pursues practical knowledge and techniques that improve life, then assigning any definite limit to potential advances seems either arbitrary or misanthropic. How can it be humanist to argue that there are limits to technological developments that could cure human ailments, end human suffering, and free human lifetime to sensuously enjoy the world as it could potentially be: an unlimited field of invention, play, and delight?

The full answer would take me too far into existential considerations beyond the scope of the paper (Noonan 2018, 214-223). My concern here is the values of socialism, and so I will confine my response to that more limited aim. It is of course true that Marx understood human nature as active and self-transforming. At the same time, he equated humanism with fully developed naturalism and naturalism with fully developed humanism: it is human nature to transform raw material nature into human societies (Marx 1975, 296). Human societies create more space for exploration, agency, and interaction. Let us assume that the social impediments to exploration, agency, and interaction are overcome: would we not then rightfully set our sights on more general limitations on the goodness of life, starting with lifespan? How

could it possibly be unsocialist to cure disease and push the boundaries of death back as far as possible, indeed, to overcome them if that proved possible?

My position is not that it would be unsocialist to search for new medicines, treatments, and longer lives, but that there are fundamental differences between socialist and transhumanist motivations for doing so. The different motivations imply limits to the socialist approach that the transhumanist would find intolerable and incoherent but which are nevertheless required if socialism is to be at all ethically coherent. In his *Critique of the Gotha Program* Marx argued that after the long period of struggle against capitalism was over, and our productive capacity was fully freed from its contradictions, members of that future society would still face the question of how to distribute the social product. His answer was given in one of his most famous aphorisms: “From each according to their abilities, to each according to their needs” (Marx 1999b). This principle is ethical as much as it is economic: citizens of a fully realized socialist society will desire to contribute their talents because those expressions of their individuality help satisfy the needs of others just as the expression of those other lives help support one’s own. Reciprocity between need-satisfaction and contribution is thus paramount.

What would medicine be like in such a society? Marx believed in scientific progress, of that there can be no doubt, but he also understood that the value of technology is socially mediated. Hence it follows that socialist societies would still have to face the question of what to allow machines to do, even in a case where they could, in principle, do anything at all. If the whole point of socialist revolution was to free human life from its domination by capitalist dynamics, it would defeat the whole purpose of the revolt to then turn health and life over to equally reified powers of intelligent machines. One cannot specify in advance precise limits to any practical technological development, but I do believe that it is possible to state a general ethical limit to technological development that socialists ought to respect. The “ought” expresses at once an ethical obligation to each other and an aesthetic preference for organic life over the machinic. Any and all technological developments

are subject to the limitation that they preserve intact the human organic needs that constitute the basis of the social bond, and preserve space for self-realizing human action as the substance of meaningful, valued, valuable, and sensuously enjoyable lives that end after a certain period of time in death.

Preserving the finite organic human being does not mean that we should not create vaccines or treatments or extend life. It does mean that we have to think about these treatments as social self-conscious agents. Transhumanists sometimes worry about equity in access to enhancement technologies, but they always think of the technological solution to health first. The social determinants of health are typically ignored (Marmot 2015). *Socialists* have to start from the social determinants of health and argue that health is not the product of consuming health care commodities, but depends much more pervasively on social conditions: is the society more or less equal, are people housed or homeless, what is the education system like, what is the level of toxicity of the environment in one’s neighbourhood, is one subject to racist degradation, and so on. Health improves as social relationships are made more equal, and as health improves, so too do one’s possibilities for action and relationship expand. Life becomes more enjoyable. As Trotsky said, the ultimate goal of socialist revolution is to allow everyone to enjoy life to the fullest (Trotsky 1940). But “fullest” does not mean “fullest imaginable,” but rather the fullest possible for a bio-social being.

There is still an open limit: improvements in social hygiene have extended our average life span by decades, and there is no preset limit as to how far we might extend it in a socialist future. But no matter how far, I maintain, there must be a limit beyond which people will not desire to go, not fundamentally because they have grown bored with a long life, but because they have concluded, in a materially rational way, that they have had their just fill, and it has come time to cede the space they occupy to new generations. They will die without fear, as Marcuse says, because they have lived a good life and they know that those who come after will do so as well (Marcuse 1966, 236-237).

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