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**Accelerationism and the Limits of Technological Determinism**

When the social movement Occupy declared “The system is broken” it meant that a global order supposedly devoted to equitable growth no longer provided a fair distribution of goods or access to opportunities. This analysis was partially correct: economists are declaring a new Gilded Age, in which wealth is concentrated at the very top of society in levels not seen for over a century.¹ However, more thorough-going critics, who thought inequality and crisis were endemic to capitalism, recognized that another break was needed. They proposed accelerationism: speeding up processes and potentialities immanent within capitalism to transcend rather than repair it.

Accelerationist writing has tended to focus on aesthetics and technology rather than capitalism’s tendencies of motion.² This partiality may be because of accelerationism’s catastrophic implications: in an era of generalized social crisis, speeding up capitalism appears counter-intuitive. An alternate perspective, left-accelerationism, has defined it as using technological potentialities for social, rather than private ends.³ As Wolfendale suggests, “[w]hatever is being accelerated, and there are severe and significant disagreements about this, it is

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not contradictions.”4 However, to break with the death spiral of neoliberalism’s stagnant profit rates, it is necessary to bring a critique of political economy to bear on accelerationism. This can be best formulated using Marx’s study of capitalism’s central dynamic: the conflict between the forces and relations of production, which drives the crisis-ridden expansion of the system as a whole.

Efforts to show that capitalism develops solely on the basis of technological progress cannot be maintained theoretically or empirically. This was most clearly shown by Bill Warren, whose attempt to build a historically progressive role for imperialism failed to account for macro-trajectories of development in the Global South. This suggests that an accelerationist political economy must begin from the conflict between the forces and relations of production, rather than an ahistorical, additive account of development factors. An anti-determinist accelerationism remains possible, providing capitalist development is understood as a political struggle over the creation of value.

How does the critique of political economy contribute to accelerationism?

Marxism is an attempt to understand capital’s laws of motion, making accelerationism’s goal of appropriating “the very material infrastructure of capitalism itself, to universally emancipatory ends” a firmly Marxian endeavour.5 The Communist Manifesto sees the role of a successful revolutionary proletariat as “increas[ing] the total productive forces as rapidly as possible.”6 In this vein, the Accelerationist Reader chooses Marx’s “Fragment on Machines” as a representative accelerationist statement. In it, Marx suggests that due to dramatic improvements in the technologies of production, “[t]he surplus labour of the mass has ceased to be the condition for the development of general wealth”.

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5 M. Gardiner, “Critique of Accelerationism”, p. 31.
The capitalist system produces a tremendous amount of social surplus, which could be generated by machines rather than human labour.

Yet Marx was not a technological fetishist; rather, he identified capital’s logic as growth driven by crises. Human labour power is the only commodity that produces more value than the energy required for its creation. The commodities produced with human labour power have a dual character: a use-value, the material qualities of the item, and an exchange-value, an abstract quantity of labour time. The latter is what enables commodities to be brought to market and sold. To raise profits, capitalists must continually improve how production is organized, raising labour’s productivity, lowering production costs and thus raising the amount of surplus value going to capital. By re-organizing work and, when necessary, replacing humans with machines, technology makes production faster and removes its control from workers. As capitalism expands, it equalizes: individual capitals move from lower-profit sectors to new sources of surplus value, nationally and internationally, while destroying older, less efficient productive forces.8

What drives capital’s expansion?

This search for equalization is accelerationist, driving the ever-faster adoption of new technologies and territories for capital’s expansion. The conflict between the forces of production, which are the technologies of capitalist growth, and the relations of production, which include who owns and controls that technology, is what drives the system’s crisis-ridden growth. This creates the world market, but the impact is far greater than development, understood in its narrow political-economic sense. Capitalism actively destroys or radically reshapes prior social formations. In Promethean terms, Marx describes how capital’s quest for new use-values drives the “all-round exploration of the earth to discover both new useful objects and new uses for old objects, such as their use as raw materials, etc.; hence the development of the natural sciences to their highest point; the discovery, creation and satisfaction of new needs aris-

This progress, in new discoveries and the needs they create, is intrinsic to capitalism: “it is only capital which creates bourgeois society and the universal appropriation of nature and of the social nexus itself by the members of society.” The natural world outside us is no longer an independent power: “capital drive[s] beyond national boundaries and prejudices and, equally, beyond nature worship, as well as beyond the traditional satisfaction of existing needs and the reproduction of old ways of life confined within long-established and complacently accepted limits.” This includes subsuming “the exploitation and exchange of all natural and spiritual powers.”

It is tempting to read this as a tale of the rise of capitalist factories, but when Marx speaks of “industry” he means the production of an entire society. The conflict between forces and relations is at once a conflict about ownership and control, and thus which class has the power to expropriate and which must be expropriated. Calling this “labour relations” would do a disservice to his far-reaching analysis; rather, the capital-labour nexus is the lens through which all development must be analysed. When modes of production change, the relation of capital and labour posits itself in a new form. Hence exploration of all of nature in order to discover new, useful qualities in things; universal exchange of the products of all alien climates and lands; new (artificial) preparation of natural objects, by which they are given new use values. The exploration of the earth in all directions, to discover new things of use as well as new useful qualities of the old... the cultivation of all the qualities of the social human being, production of the same in a form as rich as possible in needs, because rich in qualities and relations—production of this being as the most total and universal possible social product.

Although Marx talks of the search for raw materials, this is secondary: there is nothing in this passage about the traditional concerns of political economy. Rather, Marx’s gaze is at the horizon: the push to find new use-values and colonize them with exchange-values drives all the forces that have shaped the modern world, both external—colonialism, imperialism and the sciences that

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10 Ibid., p. 581; italics in original.
serve those processes—and internal, the sense of our needs shaped by society. Capitalism is revolutionary in shaping our relationship with the world around us, and not just the tools we use:

Hence the great civilizing influence of capital; its production of a stage of society in comparison to which all earlier ones appear as mere local developments of humanity and as nature-idolatry. For the first time, nature becomes purely an object for humankind, purely a matter of utility; ceases to be recognized as a power for itself; ... capital drives beyond national barriers and prejudices as much as beyond nature worship, as well as all traditional, confined, complacent, encrusted satisfactions of present needs, and reproductions of old ways of life.11

Capital breaks the link we have to the natural world and then reforms it as a relationship of domination. The logic of capital destroys all alternatives to the markets in actuality and in our minds (our “spiritual powers”). Our own pleasures are not immune; at stake is our “long-established and complacently accepted limits.” This is Marxian accelerationism at its most fundamental, allowing us to understand both capital’s awesome reach and how that reach destroys everything it touches.

To read this as an uncritical stagism is to miss how the conflict between social and technical relations drives expansion. The production of value is driven by blockages to production and circulation. The “unlimited extension of production... [and] unconditional development of the social productivity of labour” soon reaches a secular limit: the rising proportion of machines, or dead labour, compared to workers, living labour, which Marx called the Organic Composition of Capital (OCC).12 As machines replace workers, less surplus value is available relative to overall production, the OCC rises and profit rates fall. In a system driven by use-values, this would not be a problem: society could rationally determine what is necessary to produce and in what quantity. In one driven by exchange, the decline in value production provokes a crisis of profit realization. This can be resolved through unemployment that lowers the cost of labour, an attempt by individual capitals to evade crisis by shifting value production through space, or the destruction of older fixed capitals through

11 Ibid., p. 583; italics in original.
12 Ibid., p. 249.
recessions and wars. In other words, the conflicts between the forces and relations of production are what cause the growth and destruction of capitalist production. Understanding this dynamic has led the brisk Marxian debate on the relationship between capital and space.

In Lenin’s early work, crises in local markets pushed national capital to seek foreign markets. Even something as prosaic as overproduction in the local watermelon industry drove capitalists to build railroads, seeking extra-local markets to compensate for saturated ones. For Rosa Luxemburg it was the search for buyers of excess capitalist production from non-capitalist markets that drove expansion and war. When German socialist Karl Kautsky predicted a seamless integration of global markets under an alliance of finance capitals, Lenin answered him with a crisis-ridden accelerationism, in which dominating a local market brings monopolizers into conflict with others who have cornered their own markets. Thus “the tendency towards monopoly... cannot realise itself in a smooth, linear fashion but must proceed... by the creation and progressive surmounting of a whole series of violent antagonisms.” Bukharin linked the growth of global capitalism to that of productive forces, expressing a perfectly accelerationist view of global development in which the movement of commodities creates a world economy. Yet this was not a smooth transition: he agreed with Lenin that, as monopoly capitalists chafed under their national constraints, they solved their disputes by war. This was not an argument for deceleration; Bukharin was simply outlining classical Marxism’s point about the historical motion of both development and its contradictions.

The fullest expression of this problematic came in Trotsky’s theory of uneven and combined development (UCD). It described development as grafting new techniques and relations onto and among old ones. He called “historical back-

14 Ibid. p. 309.
18 Ibid. 106.
wardness” a “privilege” because it allowed certain countries to skip stages. He used nineteenth century Russia’s example of introducing advanced, large-scale factory production into its peasant-based, Tsarist society, compressing the centuries of capitalist development England underwent into decades. Yet the introduction of factory labour also prolonged Tsarism and he called this “the law of combined development... a combining of the separate steps, an amalgam of archaic with more contemporary forms”\(^{19}\). The competitive advantages of established capitalist states could be overcome through the transfer of technologies to newer ones, but this did not necessarily mean political renovation of the latter regimes.

Since UCD created pockets of highly-advanced production amidst general non-capitalist relations, this raised the prospect of widespread social conflict and, with that, hope for revolutionary movements. But the development of the forces of production alone did not guarantee any progressive result: their impact was “limited by class relations and the revolutionary struggle that arises from them”.\(^{20}\) The Marxian problematic moved through contradiction: the extraction of surplus value came from the application of the forces of production to alienated labour, forcing any change to come from the alienated labourers themselves.

This problematic would expand into whole schools of thought after World War Two, with the rise of dependency theory and its critics. Put over-simply, the dependency thesis was anti-accelerationist, seeing capitalist development reinforce already-unequal hierarchies by cementing developing economies as a source of labour and materials for developed ones. Brewer contrasts dependency theory with the classical tradition outlined above, which suggested that capitalism implanted itself across the globe by generating economic development characterised by extreme inequality.\(^{21}\)

Despite vast differences of emphasis, all of the approaches discussed above analyzed how the conflict between the forces and relations of production drove


accelerated development. This problematic would be a valid place to ground a new accelerationism, as the necessity of empirical work removes any danger of catastrophism. The theory is a new way to emphasize the inner dynamics of capitalism itself, rather than advocating its growth.

**Stagist accelerationism**

However, accelerationism’s lack of engagement with a classical Marxian problematic may give the impression of a normative underpinning, a progressive slant to the objections that accelerationism wants, as Wolfendale says, to “speed the system to its inevitable doom”. It is true that Stalinism had a determinist theory of development, in which the forces of production dictated the relations of production. As a result, development would happen through linear stages: productive forces would develop to erase the vestiges of feudalism, creating capitalist social relations with a critical mass of industry and a modern working class, which would go on to create socialism. This thesis was adopted by Stalin in the 1920s, who argued that the prime mover for this productivity-socialism nexus was the Soviet state, which meant that national working classes across the globe had to subordinate their communist goals to that of Soviet industrialization. Noys thus finds an apocalyptic accelerationism in the Soviet poets who eulogized the melding of worker and machine and foreshadowed forced industrialization.

A mechanistic reading of Marx is possible, particularly based on the “Preface” to the *Contribution to the Critique of Political Economy*, which posited an economic foundation undergirding a political superstructure; as the former developed, it would create inevitable conflicts in the latter. Yet the idea that technology is a fixed, ahistorical factor structuring development externally is alien to Marxism. Mandel warned against a reification of technology that erases its embeddedness in social relationships of production: “theorists of the omnipotence of technology elevate it into a mechanism completely independent of all human objectives and decisions, which proceeds independently of class struc-

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22 P. Wolfendale, “So, Accelerationism, What’s All That About?”.
Marx thought capitalism was unique for how its technical changes and social changes proceeded in lockstep: this forms “the specificity of capitalism and its distinctive ‘laws of motion’.” The mode of production has a “special need and capacity to revolutionize productive forces”, by lowering the cost of commodities through the reduction of the paid labour power needed to make them. The accelerating pace of technological development is not autonomous: it depends on the precise way capital expands its sources of surplus value, breaking down technical and geographical barriers in the process, and it can be reversed when the OCC rises high enough to lower profit rates too far below other regions or historical expectations. This denial of teleology reinforces a dynamic in which—in Wood’s interpretation—the development of technology plays such a key role:

It is specifically in capitalism that the dynamic impulse of productive forces can be regarded as a primary mechanism of social change. Capitalism is also unique in its particular systemic contradictions between forces and relations of production: its unprecedented drive to develop and socialize the forces of production—not least in the form of the working class—constantly comes up against the limits of its primary purpose, the self-expansion of capital, which is sometimes impelled even to destroy productive capacities.

Marx had to identify the “dynamic impulse of productive forces” historically specific to capitalism, which is the systemic contradiction he unfolded in three volumes of *Capital*. This is how Wood, writing against what she calls “Technological-determinist Marxism”, can reconcile a central role for technology in Marx’s method, while claiming it opposes “the forced acceleration of economic development... at the expense of working people.” The apparent paradox resolves itself once the agency of working people themselves are considered both subject and object of technology. As Trotsky put it, “the laws of history have nothing in common with a pedantic schematism”.

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27 Ibid., p.140; italics added.
28 Ibid. 141.
depends directly not upon the level attained by the productive forces but upon the relations in the class struggle, upon the international situation and finally, upon a number of subjective factors: the traditions, the initiative, readiness to fight of the workers... To imagine that the dictatorship of the proletariat is in some way dependent upon the technical development and resources of a country is a prejudice of ‘economic’ materialism simplified to absurdity.30

Trotsky paraphrases a political opponent who uses right-accelerationism to slander his concept of revolutionary change: “Lev Davidovich [Trotsky] decided that the proletariat must maintain a permanent revolution in Russia that is, fight for the greatest possible results until the fiery sparks of this conflagration should blow up the entire world powder-magazine.”31 Here, accelerationism is an excess of revolutionary nihilism. It is also a caricature of permanent revolution, which is more properly the concept that revolutionary movements must spread between centres and peripheries of the world economy if they are to survive; what Bensaïd calls a “hypothetical and conditional link between a revolution circumscribed within a determinate space-time, and its spatial (“world revolution”) and temporal (it “necessarily develops over decades”) extension.”32 But it does show what happens when a fetish of stages, development or technology is substituted for a careful political analysis.

A stagist accelerationism echoes Marx’s critique of Proudhon, who built an idealist metaphysic of political economy based on categories of his choosing and then simply contrasted good with bad.33 This meant substituting his own concept of right and wrong for careful social investigation. There is a long tradition of using idealist moral codes to justify socialisms-from-above that avoid the chaos of social revolution, from the Fabian’s orderly reformism to Stalinist collectivism, which justifies a stagist, unilinear view of capitalist development.34 Yet the classical tradition did not share this view: the “systemic contradiction” is only deterministic in designating the object of investigation: how the con-

30 L. Trotsky, The Permanent Revolution and Results and Prospects, p. 63.
31 Ibid. 186.
Conflict between many capitals speeds-up the circuits of capital, creating potential agents of change. The potential pitfall of this approach is when the line blurs between describing the historical movement of capital and advocating its intensification. This trap most famously waylaid Bill Warren and his critical defence of imperialism.

**Accelerationism in capitalist development**

Warren made one of the most accelerationist arguments against dependency theory, arguing that poor countries have achieved industrialization, and through this, are on the path towards mature capitalist social relations. In doing so, he demonstrated the possibilities for accelerationist political economy, along with the dangers of assigning too much power to the forces of production. For Warren, the growth of post-war industrialization showed that the Least Developed Countries (LDCs) had a growing proportion of world manufacturing output, indicating higher living standards and rising financial reserves. LDCs would industrialize as they appropriated imported technologies and developed their own, spending more on education and research as a result. Post-colonial states would lose their subordinate status and enter inter-capitalist competition, creating working classes and revolutionary subjectivity.

The strength of his analysis is how it pinpointed the real, not just formal subsumption to the law of value in territories brought within capitalism’s orbit. Some critics of Warren focused less on his data than what he concluded from it: if capitalism developed LDCs, then imperialism is a force for progress. For Warren, the catastrophic consequences of capitalist development were secondary to its goals of removing barriers to the creation of independent capitalist powers in the Global South. At one point Warren even called for force to destroy older social formations, echoing earlier Stalinist stagisms. This was the reason Lipietz denounced him for practicing a “mechanistic, economist, productivist

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and ultimately cynical Marxism... which still sees the ‘development of the productive forces’ as the index of historical progress”.37

Others praised Warren’s work for critiquing the utopian anti-capitalism of dependency theory, while criticizing his developmentalist errors: using aggregate statistics about gross amounts of production and flows that confused size with control hid ownership relations in the Global North.38 While accepting that countries must industrialize to develop, the authors researched secondary effects instead: for example, government spending on education and research, and wider, fairer distributions of social wealth. Emmanuel articulated an accelerationist premise: “what we seek to discover is whether future development of the Third World is possible along the capitalist road... or whether this road is, in fact, blocked”.39 Yet he disputed Warren’s premises, arguing that industrialization is a means to development, not an end.40

Since this debate, major development indicators such as real GDP growth, energy consumption and research spending show that LDCs have not achieved the dramatic growth Warren expected of them. Some newly industrializing countries are growing: their productive capacity, spending power, energy consumption and research spending are evidence that the globalization of production is having some impact on national development.41 However, this does not mean a linear progression through stages of growth: new literatures have grappled with how interstate competition has been re-oriented in the globalization era.42 Kiely argues that LDCs are integrated into the global economy solely as centres of low-wage labour, lower-value assembling and manufacturing, while wealthy

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40 Ibid. 64.
countries continue to dominate higher-value exports.\textsuperscript{43} There is little LDC investment in research or income redistribution, with slow progress in health and wellbeing indicators. Wealth has accrued to the ruling class to such an extent that, in 2016, the richest 1% control more than the bottom 99\%.\textsuperscript{44} This is not an aberration, but a structural consequence of a system that cannot expand the forces of production without intensifying exploitative social relations.

**Conclusion: from a problematic to a programme**

Warren’s failure to differentiate the drive of capital from its contradictions fell into a stagist accelerationism, but it also confirms the grounded accelerationism of Marx’s own method: capitalism’s speed is driven by crises, which themselves arise inevitably from the conflict between the forces and relations of production. This creates potentialities for a break. The system has drawn previous hinterlands into an unevenly-articulated global system, with some newly-industrializing regions as Marx’s satanic mills writ large, and with that, a massive working class beyond capitalism’s historical centre. An accelerationism that investigates this movement can show the contradiction between the development of the forces of production and the limits placed upon them by the relations of production. This is where accelerationism returns as a viable problematic: instead of a simplistic invocation for or against speed, it is more useful as a study of the blockages to speed, which are the contradictory motor forces of development itself.

Wolfendale’s warning that “accelerationism is not about accelerating the contradictions of capitalism in any sense” is well-taken.\textsuperscript{45} There is nothing in Marxism that dictates a single, economic or technological mechanism for social change. Perhaps for fear of appearing reductionist, the politics to move accelerationism from a problematic to a programme remain underdeveloped. Power suggests, “Accelerationism as a whole yet lacks an understanding of the order or sequence of the relationship between technology, the temporalities engen-

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\textsuperscript{45} P. Wolfendale, “So, Accelerationism, What’s All That About?”; italics in original.
dered by technology, and the post-capitalist horizon.” Building a path to the post-capitalist horizon means harnessing beneficial technology and programmatic solutions to meet people’s needs, not using technology to find temporary fixes to the declining rate of profit. For example, Srnicek and Williams call for a universal basic income (UBI) to replace the working hours and wages lost to automation. However, while labour-saving technology and the levers of regulatory state power remain in the hands of capitalists, UBI can just as easily be used to replace more comprehensive social welfare programs and put downward pressure on wages, lowering overall costs for capital.

This demonstrates how any accelerationist social policy must be accompanied by a recognition of technology’s social context. It need not be about machines; social reforms themselves can be accelerationist. “Pro-poor development” includes restricting capital flows, pro-development industrial and financial policies, progressive taxation and universal social programs. A sped-up programme for equitable development—what Trotsky called a transitional method—poses demands too costly to the capitalist class, showing in practice the necessity for democratic self-government. Sadly, today this simply means accelerating what was common sense in pre-neoliberal developmental nationalism: productive capacity could be redirected to provide low-carbon power, free medicine, vastly upgraded public transit and meaningful, creative labour for all. Just spreading the benefits of technology under capitalism fairly would require a vast acceleration of productive capacity and, crucially, eliminating the pursuit of value in production.

This paper has placed accelerationism within the classical Marxian analysis of the conflict between the forces and relations of production. It suggests that accelerationism need not succumb to a deterministic stagism if it focuses on analyzing how that central contradiction drives development and crises. This cannot fall into a simplistic invocation of speed, as both Stalinist stagism and Warren’s attempt to contextualize imperialism did, by breaking the link between technology and its social organization. However, when it analyzes how that contradiction stops capitalist development from fulfilling the potentialities it creates, accelerationism can lead to a political programme. Broadening its focus beyond technologies can pose demands that elites are unwilling to meet. The task of accelerationists is to help normalize breaks in the social relations of production, making accelerated social change just as politically viable as technological change.