

After peak capitalism: the livelihood challenge¹.

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Summary

The former industrial towns of the global North have already seen capitalism peak locally. Globally we may be living through a similar peaking as the system exhausts both its options to fix its internal contradictions, and more critically, the capacity of the planetary systems that sustain it. This essay begins with the first sense of peak capitalism and moves on to the second. Strategies, mainstream and alternative for economic and social restoration, are criticised the context of the relentless expansion of global capitalism that, having created these places in conjunction with colonial pillage, has now moved on. It is suggested that the reform strategies, whether proposed by mainstream or critically inclined bodies and campaigners, is inadequate to scale of the challenge posed by footloose capital. Moreover, such strategies, insofar as they require growth in the material scale of the economy, are ecologically illiterate and will both hasten and be rendered powerless by the coming resource and climate crisis and catastrophe. Given this picture, the counsel of the degrowth and similar movements, North and South, to live better with less, makes sense, as practice and as policy. Given that a global economic and social collapse will happen, the only policy and practice approaches that make sense today are those that provide scalable resources that will aid (but not guarantee) communities to make a livelihood under turbulent and harsh conditions. Helpful guidance can be found from permacultural thinking on materially and socially retrofitting urban and suburban human settlements.

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Introduction

Make a daytime visit to a post-industrial, peripheral town, like Bolton or Oldham in Greater Manchester, or for that matter some of the suburbs of relatively prosperous cities (such as Moston in Manchester). What do you see? Young men sitting around. Empty shops, betting shops, bargain shops and charity shops³. Those businesses that are prospering are either those providing essential goods and services (food, telecoms, clothing, pharmacy products), or the legal drugs, nicotine and alcohol. It doesn't look prosperous. It doesn't look hopeful. Even compared to some years ago, these places look depressed, despite low unemployment and “respectable” GDP growth rates nationally and regionally over recent years and notwithstanding the efforts of local government to improve these places despite vicious central government-imposed cuts to their budgets.

It is instructive to compare statements from different quarters:

“Almost all (Greater Manchester) boroughs had higher unemployment rates than England as a whole, with Manchester, Rochdale, Salford and Oldham having the highest.”

“In 2013/2014, the proportion of households receiving Working Tax Credit or Child Tax Credit while in work was higher in Greater Manchester (at 14.1%) than England as a whole (11.6%). The three boroughs with the highest proportion of claimant households were Bolton, Oldham and Rochdale.”

“In 2013, Manchester has 14.9% of households in fuel poverty, a 4% higher fuel poverty ratio than the Greater Manchester average of 10.9%. The Greater Manchester rate of fuel poverty (10.9%) remained above that of the national

³ Shortly after the first draft of this paper was published, this appeared on the particularly stark case of Bolton: <https://amp.theguardian.com/cities/2017/aug/22/bolton-decline-northern-town-centre-slump>

average (10.4%). The three boroughs with the highest levels of fuel poverty were Manchester, Oldham and Bury.”

Greater Manchester Poverty Monitor⁴

“The region’s growth rate – as measured by Gross Value Added) – exceeded that of South East England (4.6% compared to 2.8% for 2012–13, the most recent available figures.)”⁵

“Our vision is that, by 2035, the Greater Manchester city region will be one of the world’s leading regions, driving sustainable growth across a thriving North of England. It will be ever more productive, innovative, creative, known for the excellent quality of life enjoyed by our residents who are able to contribute to and benefit from the prosperity that growth brings.”⁶

Greater Manchester Combined Authority

“Manchester has established itself as a premier league European city with a diversified economy.

“We’ve now been ranked a top 10 global city for FDI Strategy by fDi Global Cities of the Future, and in Lonely Planet’s ‘best in travel’

“The city’s profile has now never been stronger, with significant developments in key sectors, workforce skills, and quality of life to name a few. Our infrastructure is seeing remarkable development with Metrolink continuing its expansion across the region and Manchester Airport, which connects Manchester to over 200 destinations worldwide, recently reporting its 38th month of consecutive passenger growth.

“Greater Manchester is also finding itself at the centre of some seismic shifts in the political landscape to which it must respond. With Brexit likely to significantly change the way the UK deals with the rest of the world in terms of trade, FDI, and research, it’s vital that we make clear our continuing international ambitions.”

Councillor Sir Richard Leese, leader, Manchester City Council⁷

To be fair, this mismatch is acknowledged by those promoting a “boosterist” strategy to the region, but the strategy implicit in the dominant narrative is at worst that of extractivist trickle-down, and at best the promotion of growth coupled with a *post hoc* redistribution. As I will argue, even the more radical alternative proposals fall short of the challenge imposed on the localities it once constructed, by the capitalist system in its endless global evolution.

To seek an explanatory perspective, I will try to stand back and sketch the broad canvas of economic and social change, putting the emphasis on what I

4 <http://www.gmpovertyaction.org/poverty-monitor/>

5 <http://gmlep.com/performance-report-charts-progress-towards-greater-manchesters-goals/>

6 http://www.greatermanchester-ca.gov.uk/download/downloads/id/201/gm_work_and_skills_strategy_and_priorities_2016_to_2019_executive_summary.pdf

7 <http://gmlep.com/manchester-leaders-launch-strategy-take-city-region-global/>

shall call the *livelihoods challenge* – how can urban centres “earn their living” and find meaning and purpose for their communities and the lives of their members? In doing this, I will also widen the horizon to consider the absolute limits that confront not just the present extraction-expropriation-accumulation regime but all of humanity.

I use the example of Greater Manchester's less favoured areas but the analysis is also relevant to other post-industrial peripheral towns, neighbourhoods, and secondary cities.

What capitalism delivered, capitalism takes away.

The towns and cities of England's now post-industrial regions grew as a result of the capitalist-industrial revolution. Moving into urban centres from the countryside, the accumulation regime we call capitalism opened factories, mined coal, established transport links and a service infrastructure (legal, financial, educational). A mass of former peasants, expelled from the land as the result of capitalist appropriation (enclosures) and capitalisation (mechanisation) filled the cities, first from the English countryside, later from the Celtic lands and ultimately from the colonies and ex-colonies of the global South, places already violently enrolled into the early world system of extraction-expropriation-accumulation⁸. As industrial and political struggles led to improvements in living standards⁹, housing spread beyond the limits of the walkable city, enabled by cheap hydrocarbons, first coal and the railway, later petrol and the car. A commercial and service sector increased in scale, with governmental support becoming semi-autonomous from, though reciprocally tied to, the accumulation regime, especially during and after the 1939-45 war. By the late 1960s, the landscape of Greater Manchester had assumed the overall shape we recognise today. More than a basis for livelihoods, however harsh, the industrial city also offered a pattern of life – a structure for living where most people had a place, a role, a meaning. I do not mean to idealise or romanticise this: in many ways it was a less tolerant environment than the present one, with women as usual facing additional exploitation, often of the double shift, industrial and domestic. However, at the same time, through one of the contradictions of capitalist production, the social nature of production, it did witness the upsurge of a distinctive working class culture that at its peak had a richness of educational and cultural institutions and resources that so impressed the likes of Engels and Morris¹⁰. From the late 60s onwards the great moderation – the truce between capital and labour, began to falter and fracture (there are various competing

8 Beckert, S. (2015). *Empire of cotton: a global history* (First Vintage Books edition). New York, NY: Vintage. A good summary is that by Cushion, S. (2016). Review of “Empire of Cotton: A Global History.” *Reviews in History*. <https://doi.org/10.14296/RiH/2014/1873>

9 Noted by Engels in the 1892 preface to the *Condition of the Working Class in England*, <https://www.marxists.org/archive/marx/works/1892/01/11.htm>

10 We discuss this in our report *In Place of Growth* (2012) Historical memory and lived culture, pp. 39-40 https://steadystatemanchester.files.wordpress.com/2012/11/inplaceofgrowth_ipog_-content_final.pdf

explanations, including the cumulative effects of the falling rate of profit and the erosion of financial regulation). Factories closed and jobs in the industrial sector were lost (see Figure 1). By 2015, Greater Manchester had only the same proportion (10.2%) of manufacturing industry in its economy as the UK as a whole (10.1%)¹¹. Capital continued to invest and accumulate, exploiting labour as it did, but increasingly this was happening in other places. As the Bolshevik model of socialism collapsed (in the former Soviet bloc) or was reformed (in the Far East), production shifted there – either by firms moving production to new plant or subcontractors there, or by being out-competed by new arrivals. Unlike German firms that had benefited from free post-war modernisation, British industry, in large part, did not adapt by diversification and specialisation.

11 ONS (2017) *Combined Authority Economic Indicators*.
<https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/combinedauthorityeconomicindicators/2017-03-14#greater-manchester-combined-authority>

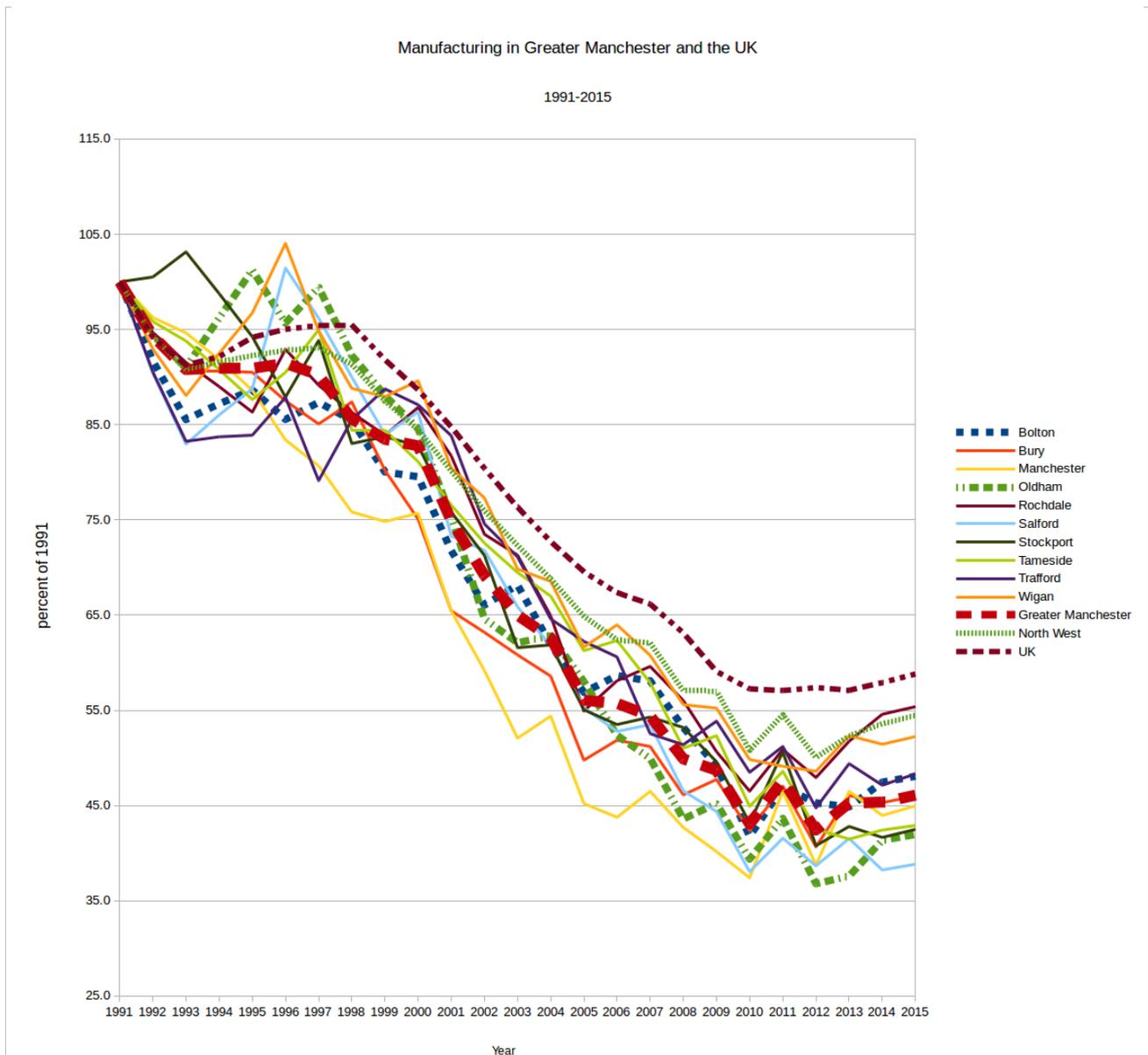


Figure 1: Decline in manufacturing jobs in Greater Manchester since 1991. Note that the decline set in long before 1991. Source: New Economy Manchester: Greater Manchester Forecasting Model¹².

These shifts were for a time mitigated by two factors. Firstly by the expansion of State-funded, but now less frequently State-provided, public services. Secondly, by the growth of other service industries, especially in the fields of entertainment, retail, and finance. This had divergent effects on the workforce. While there was an expansion of professional and managerial posts, supported by the expansion of one of the public services, Higher Education, there was also the expansion of the low wage, privatised, contracted-out and eventually zero-hours, precarious but employed workforce. And for many of the former industrial centres there were few jobs, with unemployment becoming a shared experience across generations. If it is bad in Greater Manchester, there are areas of the country where there has

¹² <http://www.neweconomymanchester.com/publications/greater-manchester-forecasting-model>

been even less opportunity to diversify following the collapse of the industrial monocultures in those places. Yet the illusion (and in some ways the reality) of prosperity was sustained through several mechanisms: i) the rise of in-work welfare benefits, ii) through readily available, but expensive credit, iii) through the continuing government policy of cheap food, and iv) via the astonishing flow of cheap consumer goods from the global South, whose sale in the global North at prices that although low by prior standards are inflated from the production costs in the South, boosted reported levels of GDP¹³.

I will come back to the historical perspective because I want to use it in arguing for the limits of economic renewal strategies of every ilk. But first let's turn to consider those strategies on offer to confront the problem of post-industrial decline.

Strategies on offer

The dominant mainstream approach has been described by one group of critics as follows.

“At present, cities and city regions in Europe and North America pursue fairly standard policy mixes of disclosed and undisclosed policies. The explicit public policy is to boost skills through education and invest in infrastructure to extend the area of agglomeration

. This common focus on improving skills and infrastructure is backed by a supplicant posture towards foreign firms and investors bringing inward investment.

...

In parallel there are the undeclared city and regional planning policies which privilege private developers of ... flats, leisure, offices and retail - through planning permissions, land deals and financial sweeteners, with no questions asked about tax avoidance, financial engineering or long term sustainability.¹⁴

It should be added that this mix is leavened by the almost magical incantation of phrases like “stimulating growth to ensure that the jobs are created and safeguarded”, “create a second growth pole”, “deliver our ambitious growth agenda”, “seizing the growth potential of..”, “A high level of economic growth is being planned..”, “driving growth within the North”¹⁵. Wherein a largely untheorised notion of “economic growth” becomes both goal and means by which the local economy will be restored to health. In addition to the ecological illiteracy of such talk, the constant repetition of the largely content-

13 Smith, J. (2016). *Imperialism in the twenty-first century: globalization, super-exploitation, and capitalism's final crisis*. New York: Monthly Review Press; Smith, J. (2012). The GDP Illusion: Value Added versus Value Capture. *Monthly Review*, 64(3), 86–102.

14 Engelen, E., Froud, J., Johal, S., Salento, A., & Williams, K. (2016). *How Cities Work: a policy agenda for the grounded city*. Manchester: University of Manchester, CRESC. Retrieved from <http://www.cresc.ac.uk/medialibrary/workingpapers/wp141.pdf> pp. 23-24.

15 Sources for all these phrases can be found in my previous working paper *So What Would You Do? An Alternative Strategy for the City Region*. November, 2016 <https://steadystatemanchester.files.wordpress.com/2016/11/so-what-would-you-do-v2-0.pdf>

free growth mantra demonstrates the lack of realism about the driving forces for the shift of livelihood away from these places, and the prospects for regaining a local accumulation regime that shares its gains with the deprived places and populations that are our concerns here.

If that is the hegemonic approach, what alternatives are on offer? Here the concern is with those critical voices that are engaging both with the limitations of the dominant approach while at the same time making pragmatic proposals for another way. These alternatives can be found in the place-focussed work of the CRESC¹⁶ collective of critical Manchester academics (quoted above), the Centre for Local Economic Strategies¹⁷ and their associates in local governments such as Preston¹⁸, and in the more broadly nationally focussed work of the New Economics Foundation¹⁹ and Keynesian groups such as PRIME²⁰. I will do a little violence to them by treating them as a family of approaches, recognising that this means glossing over the differences in their approaches, and indeed functions, as policy-focussed bodies²¹. To this mix could be added the more orthodox, broadly centre-left bodies like IPPR²² and the flurry of broadly “National Welfarist²³” and Keynesian policy-making that has been undertaken by the resurgent Labour Party under the Corbyn-McDonnell leadership²⁴.

The key ideas (not necessarily shared by all of them) are:

- Use government spending to boost the stalling economy, investing in the sectors that will make the most difference for the most people, especially via infrastructure and housing.
- Reduce the strength of the financial sector / City of London / speculative casino finance, relative to other sectors and make banking serve the rest of the economy through effective reform and creation of new institutions.

16 <http://www.cresc.ac.uk/publications/>

17 <https://cles.org.uk/>

18 <https://www.theguardian.com/cities/2017/apr/11/preston-cleveland-model-lessons-recovery-rust-belt>

19 <http://neweconomics.org/>

20 <http://www.primeeconomics.org/>

21 Again, see “So What Would You Do?” for more detail:

<https://steadystatemanchester.files.wordpress.com/2016/11/so-what-would-you-do-v2-0.pdf>

22 <http://www.ippr.org/north>

23 See Norfield, T. “Corbyn’s National Welfarism”

<https://economicsofimperialism.blogspot.co.uk/2016/11/corbys-national-welfarism.html?m=1>

24 e.g. <http://www.labour.org.uk/index.php/manifesto2017> and

http://www.labour.org.uk/page/-/PDFs/9472_Alternative%20Models%20of%20Ownership%20all_v4.pdf

also <http://www.burnhamformayor.co.uk/andy-burnham-manifesto-for-a-greater-manchester>

- Shift forms of company ownership from shareholder-centred to co-operative / mutual / stakeholder-orientated forms.
- Build on those elements of the local/regional economies that are place-based and resilient (anchor institutions; foundational services and goods), harnessing their economic power to strengthen the rest of the local economy, especially small and medium businesses, plugging the leakage of money out of the locality.
- Reform welfare, now little more than a residual “deserving poor” model providing both a minimal safety net for those displaced by voracious capitalist expropriation and accumulation while incentivising them as free independent sellers of labour power. Reform it so it provides a secure base from which citizens can innovate, contribute to community life and prosperity-creating business.
- Tackle low pay via legislation, exhortation, charters, and public sector policy and procurement.
- Constitutional and democratic reform, returning real power to local government and communities.

Our own work²⁵, and that of other ecologically-inspired critics²⁶ also has a similar flavour, the main difference being in the emphasis on reducing the material scale of the economy (energy, material flows, emissions)²⁷ and a more radical (though still relative) re-localisation of production and supply²⁸. All these alternative approaches make valuable contributions, so far as they go, but it is arguable that, like the mainstream approach identified above, neither alone, nor together, do they overcome the fundamental problem imposed by the nature of capitalist expansion and succession.

Footloose capital

To understand that, let's broaden the historical perspective already sketched. I deliberately presented it initially in restricted – Britain-centric terms. Capitalism, however, knows no boundaries and cannot be understood as a system without a recognition of its imperialist-global dimension. Capitalism,

25 See our policy interventions here: <https://steadystatemanchester.net/treading-lightly-for-shared-prosperity-policies-for-greater-manchester/>

26 E.g. LocaliseWM <http://localisewestmidlands.org.uk/> , Feasta <http://www.feasta.org/> , Greenhouse think tank <http://www.greenhousethinktank.org/>

27 Kallis, G. (2017). Radical dematerialization and degrowth. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 375(2095), 20160383. <https://doi.org/10.1098/rsta.2016.0383>, Kosoy, N., Brown, P. G., Bosselmann, K., Duraiappah, A., Mackey, B., Martinez-Alier, J., ... Thomson, R. (2012). Pillars for a flourishing Earth: planetary boundaries, economic growth delusion and green economy. *Current Opinion in Environmental Sustainability*, 4(1), 74–79. http://degrowth.org/wp-content/uploads/2012/11/Kosoy_2012_Pillars-for-a-flourishing-Earth.pdf, Jackson, T. (2017). *Prosperity without growth: foundations for the economy of tomorrow* (Second Edition). London ; New York: Routledge, Taylor & Francis Group.

28 We offer a comparative analysis of four alternative policy interventions in the context of the Greater Manchester devolved powers and Mayoral election <https://steadystatemanchester.net/2017/07/19/policies-policies-but-are-they-any-good/>

unlike other systems that have markets and private ownership, acts as if designed to endlessly accumulate more and more capital. This works through the formula elucidated by Marx, of M-C-M' where money capital (M) is invested in the production process, making commodities (C), sold at a profit so that more money capital (M') is then available for investment. This rests on the expropriation of surplus labour, effectively the defrauding of workers by retaining the difference between the value realised in exchange and the value of the socially necessary labour time, i.e. of labour power, expended in the production. The process is greatly facilitated by the subsidies of cheap energy, cheap food and cheap materials. In Jason Moore's formulation²⁹, capitalism in all epochs³⁰ resolves its contradictions of over and under production via searching for the "four cheaps": labour, energy, food and materials. It was the search for these that ultimately left the industrial regions of the UK as surplus to requirements: beached economies and communities. In expanding then, capitalism has moved on, situating its main points of value extraction in the new industrial zones of the majority world (though its relentless appropriation outside the global North has always been a feature³¹), while devastating enormous tracts in the extraction of energy, materials and food by the combination of expropriation and capitalisation (primitive and capitalist accumulation).

To re-iterate, this means that the economic *raison d'être* for the Boltons and Oldhams, has, if not entirely disappeared (a point to return to), severely diminished. Even in those post-industrial cities that are (in their own terms) more successful (e.g. Cleveland, Pittsburgh) "success" has involved an exodus of the lower waged workforce, as the city focussed on new, high skill, industry that has no need for the former industrial proletariat³². The specifics of each situation differ, from the Welsh valleys to the Lancashire mill towns, to the former steel towns of the North East, to the North American rust belt or

29 Moore, J. W. (2015). *Capitalism in the web of life: ecology and the accumulation of capital* (1st Edition). New York: Verso; Moore, J. W. (2017). *World Accumulation and Planetary Life*. Audio recording, London. Retrieved from https://soundcloud.com/goldsmithsuol/jason_moore

30 Which, like Dussel, he dates to around 1492 and the colonisation of the Americas.

31 "For every Amsterdam there is a Vistula Basin. For every Manchester, a Mississippi Delta." Moore, J. W. (2015). *Capitalism in the web of life: ecology and the accumulation of capital* (1st Edition). New York: Verso. p. 154. Also, Chapter 13, Dussel, E. (2001). *Towards an unknown Marx: a commentary on the manuscripts of 1861-63*. London: Routledge. http://enriquedussel.com/txt/Textos_Libros/43.Towards_an_Unknown_Marx.pdf

32 R. Piiiparinen, Population growth as the cure for the incredible shrinking city? *Newgeography*, 17/5/2014. <http://www.newgeography.com/content/004316-population-growth-cure-incredible-shrinking-city>

the northern French coal and rust belt, but in each case the overall logic is that of capital moving on, pulling the carpet from under the feet of the former working class communities³³. What new industry gets established tends to require a smaller and different workforce: hence what a cynic might identify in Manchester's leaders' meta-text – “We have the wrong population for economic success, so we'll attract a different set of people with our developer sweetheart deals that exclude affordable and social housing”³⁴.

What's wrong with the strategies on offer?

So these post-industrial settlements have been left behind by the very system that created them. Bearing in mind this broad canvas, both the mainstream and the alternative strategies seem flawed in the following five ways.

1) *A dependence on “growth”*

Reliance on economic “growth”³⁵ is characteristic of all but the ecologically radical alternatives. Economic growth is pretty much a code word for capitalist accumulation but whether it is understood in conventional bourgeois terms, or critically, its continual pursuit is ever more implausible. Growth rates across the OECD countries have been in decline since the late 1990s. And indeed, the peaks of that time, or of the previous peak in the mid 1980s were lower than the rate in 1972, just before the first big commodity price shock. This experience of “secular stagnation” has been mitigated by the injection of billions of fiat money by the commercial and central banks, a response to the lack of demand for the extraordinary production of the global economy in the context of falling real wages, this latter itself a (neoliberal) policy choice to fix the twin problems of labour militancy and falling profits³⁶. Just as capital ran out of our towns, so it is running out of road on a global scale as Moore's “four cheaps” get less cheap and new markets harder to find. Technological optimism (or “technolatriy”) also seems misplaced: the boosts to accumulation that came from the great technological leaps of the public utilities, the railways, the internal combustion engine and digitalisation seem unlikely to be repeated – the last of these is now faltering as miniaturisation reaches its limits and it produced smaller productivity leaps than the previous industrial revolutions³⁷. Likewise, the privatisation boost to capital's profits (favoured by the orthodox approach) is a one-off: once you've sold everything, what do you do next?

33 For a review of the salient trends in the UK context, in the wake of recent electoral upsets see Tom Hazeldine, The revolt of the rustbelt. *New Left Review* 105, May-June 2017.

<https://newleftreview.org/II/105/tom-hazeldine-revolt-of-the-rustbelt>

34 <https://steadystatemanchester.net/2017/02/23/what-kind-of-a-city-and-region-do-we-want/>

35 I always write “growth” in inverted commas when it is qualified by the adjective “economic”, to indicate that the growth is problematic, or, it has been said malignant.

36 W Streeck, How will capitalism end. *New Left Review*. 87, May-June 2014

<https://newleftreview.org/II/87/wolfgang-streeck-how-will-capitalism-end>

37 R. Gordon, 'Is US Economic Growth Over? Faltering innovation confronts the six headwinds', NBER Working Paper no. 18315, August 2012. <http://www.nber.org/papers/w18315>

The bigger problem is that capitalism is hitting the limits imposed by the finite nature of the planet. This is such a fundamental, existential problem that it will be reviewed below as the fifth strategic flaw of the proffered remedies.

2) *The requirement for a surplus, and scale.*

Perhaps, however, some of the alternative strategies do not require growth/accumulation in the aggregate but only local profitability; that is, the redistribution of profit from other places to the locality, municipality or region. But the question remains: beyond relatively marginal shifts (for example by utility companies letting maintenance contracts to local firms³⁸, or anchor institutions purchasing from local suppliers³⁹), where is this to come from? That is to say, when the centres of value creation are elsewhere, what kinds of production can replace those that provided livelihoods for the hundreds of thousands who worked in each industrial zone? Many of the alternative strategies focus on the circuits of exchange and distribution rather than on value creation. The potential “replacement economies”, on the other hand, whether high end technology companies, the “green services economy” (now employing approx 3% of Greater Manchester's workforce), the media sector, for example – none of these would appear to have the necessary scale, neither individually nor together. The scale of the challenge is illustrated by considering the historical dimensions of industrial Bolton; see Appendix 1. There manufacturing now contributes just 15.17% to the local economy (as measured by GVA), while the unproductive sectors (i.e. those that do not generate value in themselves) of real estate (14.89%), wholesale and retail trade (12.45%), and health and social work (9.42%), together account for 36.76%⁴⁰. Does this look like a basis for a livelihood for the town when there is no attempt being made to step outside the parameters of the capitalist circuits?

3) **The limits of radical monetary theory.** Couldn't the government just invest to stimulate those elements of the economy that enable a region to make a livelihood? This is the argument increasingly heard on the Keynesian left. There is also the argument that, with adequate regulation and control, the private financial sector can also make these investments⁴¹. The idea is fine, so far as it goes, and is actually welcome since it is an effective counter to the austerity orthodoxy that assumes national budgets operate like household budgets⁴². However, credit cannot be increased indefinitely: it has

38 Sitkin, A. (2013). Enfield: new directions with big business. *Soundings*, (55), 124–134.

39 Brown, M., & O'Neill, M. (2016). The Road to Socialism is the A59: The Preston Model. *Renewal*, 24(2), 69–78. https://www.lwbooks.co.uk/sites/default/files/ren24.2_08interview_brown.pdf

40 From data in <http://www.neweconomymanchester.com/publications/greater-manchester-forecasting-model>

41 Pettifor, A. (2017). *The production of money: how to break the power of bankers*. London: Verso.

42 I have written about this: Burton, M. (2015). Debt dynamics in the UK and beyond: how propaganda impedes effective political action. In S. M. Değirmencioglu & C. Walker (Eds.), *Social and psychological dimensions of personal debt and the debt industry* (pp. 123–127). Basingstoke, Hampshire: Palgrave Macmillan. Draft freely available at

to be repaid and under capitalism, that repayment is ultimately on the basis of profits made in the industrial sector (see Appendix 2: The labour foundation of interest). It is true that the government can create jobs by, for example, investing in infrastructure and that creation is not just in the work that has to be done to build, but via the so called multiplier, it extends to other sectors of the economy⁴³. Nevertheless, the circulation of money that this investment generates cannot float above the real economy – but it has to feed into the local M-C-M' circuit and be backed by the generation of value there. If this does not happen, the purchases will be of (enough) goods and services produced elsewhere to build up international debt, something that is already with us as the balance of payments deficit: the UK current account deficit was £16.9 billion in the first quarter of 2017⁴⁴. The same goes for bank credit – credit is an advance on the returns that ultimately rest on the expropriation of surplus value. The phenomenon of financialisation has led to the expansion of the other circuit that bypasses commodity production altogether M-M'. But when capitalism moves into this phase, of hypertrophic financialisation, the result is always the same, a crash and the destruction of value.

The alternative is for the government to step outside the capitalist frame and run a socialist economy. That would mean direct control and public ownership of the strategic sectors and sectors of the economy needed for social and environmental good, and strict control of private profits, capping them and redistributing any excess to the workforce and community once necessary re-investment has been covered. However, actually working socialist economies at scale are hard to find⁴⁵, and it seems unlikely that we will witness such a profound and extensive shift in social forces and relations necessary for this before the other crises of late capitalist “civilisation” (explored in the next section) catch up with us.

Yet piecemeal solutions that only accomplish a little of this transformation are unlikely to work. Consider as an example the neo-Keynesian proposal of the “Job Guarantee” or “State as employer of last resort”. Once the likely opposition to its establishment was overcome⁴⁶, the State would pay people the minimum (or living) wage to work to fulfil community needs. There could be collective, community-led determination over the content, or people could

https://www.academia.edu/14883651/Debt_dynamics_in_the_UK_and_beyond_how_propaganda_impedes_effective_political_action

43 Although the impact of Keynesian demand stimulation is questionable for today's Western economies: <https://thenextrecession.wordpress.com/2017/07/13/will-reversing-austerity-end-the-depression/> See also Norfield's critique of the multiplier and Keynesian demand stimulation policies

<https://economicsofimperialism.blogspot.co.uk/2011/09/capitalist-crisis-keynesian-delusions.html?m=0>

44 Office of National Statistics

<https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/bulletins/balanceofpayments/januar2017>

45 “...among all the errors we may have committed, the greatest of them all was that we believed that someone really knew something about socialism, or that someone actually knew how to build socialism.” Fidel Castro, speech at the University of Havana, 17/11/2005. <http://www.walterlippmann.com/fc-11-17-2005.html>

46 Guinan, J. (2014). Modern money and the escape from austerity. *Renewal*, 22(3–4), 6–21.

identify their own projects. Their incomes would increase demand in the economy, creating further jobs (let's for now ignore the impact of this in a country with a significant trade deficit), building their own skills and confidence. As the economy recovers, they leave this government-funded employment and move into the “normal” economy. As such it is a self-adjusting model, responding to fluctuations in the capitalist business cycle⁴⁷. But suppose the deep structural factors causing secular stagnation (discussed above) are too strong for this intervention and many people end up on these schemes for a long time. Once you've done up the local community centre, built a cycle track, weeded the park, you would begin to run out of things to do. Would this really provide the scale of meaningful activity needed in the more depressed local economies? Would it enable a local economy to earn its livelihood. Or would it be vulnerable to the next right wing government's round of cuts? What would people actually do all day? It is hard to say, but it does seem like a relatively feeble intervention for the scale of the problem. The problem is that this, like other such interventions, is unlikely to change the fundamental dynamic of footloose capital's trail of destruction - construction – destruction that caused the problems we've identified.

4) National welfarism and imperialism.

Despite the parlous state of the post-industrial areas, there is a paradox: the global North, including its disadvantaged sectors, continues to benefit from exploitation and appropriation in the global South⁴⁸. Much policy of both right and left is “National Welfarist”, exploiting and defending that privileged position. Capturing wealth and keeping it local leaves this problem untouched. As such these policy frameworks tend to have an imperialist component, usually but not always⁴⁹ hidden, something that is ethically reprehensible.

5) Limits to growth.

It is the environment of a finite planet, however, that places absolute constraint and limits on strategies for economic revival, both orthodox and alternative⁵⁰. To understand this problem there is no better place to start than

47 Tcherneva, P. R. (2012). The Job Guarantee: Delivering the Benefits That Basic Income Only Promises – A Response to Guy Standing. *Basic Income Studies*, 7(2). <https://doi.org/10.1515/bis-2013-0010>

48 Smith, J. (2016). *Imperialism in the twenty-first century: globalization, super-exploitation, and capitalism's final crisis*. New York: Monthly Review Press; Norfield, T. (2017). *The City: London and the global power of finance*. Chapter 7, The Imperial Web. London: Verso; Amin, S. (2010). *The law of worldwide value*. New York: Monthly Review Press; Evans, T L. (2011). *Understanding the Political Economy of Enforced Dependency in the Globalized World: A Springboard for Sustainability-oriented Action*. FEASTA. Retrieved from http://www.feasta.org/documents/enforced_dependency/enforced-dependency.pdf

49 See this critique of the imperialist militarism of a prominent Left Labour commentator, <https://libcom.org/blog/paul-masons-workers-bombers-13102017>

50 The following paragraphs draw on a talk I gave in May, 2017 on “Living within Limits to Growth” <https://steadystatemanchester.files.wordpress.com/2017/05/newcastle-talk-outline-notes-with-graphics.pdf> which drew on a number of sources, especially Jackson, T., & Webster, R. (2016). *LIMITS*

the classic study, *The Limits to Growth*⁵¹ conducted by a team of systems scientists led by Donella Meadows at Massachusetts Institute of Technology and published in 1972⁵². They used Systems Dynamics⁵³ to model trends in the relationship between five major areas: population and industrialisation, pollution, resource depletion and land availability for food. There were 12 scenarios, each with a different pattern of world development from 1900 to 2100. Every component in the model was represented in mathematical equations informed by the laws of physics and populated with empirical data up to 1970. The 12 scenarios were arranged into three broad groups. The 'standard run' or business-as-usual scenario assumed the same economic, social and physical patterns observed to date. Six 'technological scenarios' started with the same basic pattern, but assumed new advances in technology or that society would increase the amount of resources available, increase agricultural productivity, reduce pollution, or limit population growth. The final set of five 'stabilisation' scenarios looked at what would happen if either population growth, or industrial output, were stabilised.

Only four scenarios managed to avoid overshoot and collapse. These scenarios involved stabilising population with restrictions on industrial output. They also utilised technological measures such as recycling and controlling pollution. Technical solutions on their own merely postponed the overshoot and collapse. The 'standard run' scenario led to a collapse as a result of resource depletion which led to a recession in industrial growth from around 2015.

Why? As more and more people achieve higher and higher levels of affluence, they consume more and more of the world's resources.

Consumption increases each year and population, industrialisation, pollution, food production and resource depletion all follow an exponential growth curve. Material growth cannot continue indefinitely because the earth is physically limited. Eventually, the scale of activity exceeds the carrying capacity of the environment, resulting in a sudden contraction - controlled or uncontrolled. First, the resources supporting humanity – food, minerals, industrial output – begin to decline. This is followed by a collapse in population.

It is important to understand that contraction or collapse happen, not because physical resources disappear entirely, but because the quality of a resource

REVISITED A review of the limits to growth debate (p. 24). London: ALL-PARTY PARLIAMENTARY GROUP ON LIMITS TO GROWTH. Retrieved from <http://limits2growth.org.uk/revisited>

51 Meadows, D. H., Meadows, D. L., Randers, J., & Behrens, W. W. (1974). *The Limits to growth: a report for the Club of Rome's project on the predicament of mankind*. London: Pan Books. Available online at <http://www.donellameadows.org/wp-content/userfiles/Limits-to-Growth-digital-scan-version.pdf>

52 An excellent recent summary and discussion on which I've drawn here is Jackson, T., & Webster, R. (2016). *LIMITS REVISITED A review of the limits to growth debate* (p. 24). London: ALL-PARTY PARLIAMENTARY GROUP ON LIMITS TO GROWTH. Retrieved from <http://limits2growth.org.uk/revisited>

53 <http://www.systemdynamics.org/what-is-s/>

declines as more and more of it is extracted. It therefore requires more and more energy and investment to extract usable high-quality resources from raw materials (the key concept here is *diminishing Energy Return on Investment*⁵⁴). This diverts resources away from productive industry and agriculture and eventually the process, and hence the system, becomes unsustainable. Recent studies⁵⁵ suggest that, for the USA, as energy expenditure rises above about 5.5% of national income (it was 5% in 2014), recession becomes likely.

Limits to Growth's thirty year update, published by the Club of Rome in 2004⁵⁶, and two modelling studies in 2008 and 2014 from the University of Melbourne⁵⁷ concluded that the world is pretty much following Limits to Growth's 'standard run' projection. Historical data show that the global population and economy have developed broadly in the way Meadows et al. modelled them in 1972. As Hall and Day note, "We are not aware of any model made by economists that is as accurate over such a long time span."⁵⁸

More recent work on the concept of Planetary Boundaries has helped improve our understanding of the limits to human impact on the earth's systems. A large cross-disciplinary team led by Johan Rockström of the Stockholm Resilience Centre identified a set of nine ecological processes that regulate the land, ocean and atmosphere⁵⁹. For each process they identified a series of thresholds beyond which human activity would cause unacceptable environmental change. Building on this they also defined a set of 'planetary boundaries' which taken together represent a 'safe operating space' for humanity.

The nine planetary boundaries relate respectively to: climate change, ocean acidification, biodiversity loss, interference with global nitrogen and phosphorous cycles, ozone depletion, global freshwater use, land system change, atmospheric aerosol loading and chemical pollution. For each

54 Or Energy Return on Energy Invested (EROEI). Howard Odum's concept of "emergy" or net energy yielded is also relevant. Conventional oil has a very high EROEI (a ratio per unit invested of between 6 and 17, depending on source) while unconventional oil and gas have far lower EROEI (not much greater than 1) and first generation biofuels, e.g. maize ethanol, have very low EROEI (around 1). However, these calculations depend a lot on the assumptions and data sources.

55 Murphy, D.J.; Hall, C.A. Energy return on investment, peak oil, and the end of economic growth. *N. Y. Acad. Sci.* 2011, 1219, 52–72.

Aucott, M., & Hall, C. (2014). Does a Change in Price of Fuel Affect GDP Growth? An Examination of the U.S. Data from 1950–2013. *Energies*, 7(10), 6558–6570.

https://www.researchgate.net/publication/270904271_Does_a_Change_in_Price_of_Fuel_Affect_GDP_Growth_An_Examination_of_the_US_Data_from_1950-2013

56 Meadows, D. H., Randers, J., & Meadows, D. L. (2005). *Limits to Growth : the 30-Year Update*. London: Earthscan.

57 Turner, G. (2014) 'Is Global Collapse Imminent?', MSSI Research Paper No. 4, Melbourne Sustainable Society Institute, The University of Melbourne. ISBN: 978 0 7340 4940

https://www.researchgate.net/publication/267751719_Is_Global_Collapse_Imminent_An_Updated_Comparison_of_The_Limits_to_Growth_with_Historical_Data

58 Hall, C., & Day, J. (2009). Revisiting the Limits to Growth after peak oil. *American Scientist*, 97, 230–237. <http://www.esf.edu/efb/hall/2009-05Hall0327.pdf>

59 Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E. F., ... Foley, J. A. (2009). A safe operating space for humanity. *Nature*, 461(7263), 472–475. <https://doi.org/10.1038/461472a>

process, the team identified a 'zone of uncertainty' and a 'danger zone'. Crossing over these thresholds could mean "non-linear, possibly abrupt and irreversible earth system responses" with disastrous consequences for society. In 2015 the team found that four of these planetary boundaries had already been crossed. Biodiversity loss, damage to phosphorous and nitrogen cycles, climate change and land use were now all in or beyond the 'uncertainty zone'.

Further work from the Stockholm team identifies the problem of multiple simultaneous systemic stresses and shocks. They present worked examples for both the global financial crash and the global food crisis of 2008. "In both cases the global energy system, in particular the global conventional-oil system, played a central role. The causal role of the global energy system therefore deserves special attention. *Only enormous inputs of inexpensive high-quality energy can create and sustain the unprecedented connectivity and complexity of human civilization*⁶⁰." They note that "Global adjustment to worsening energy scarcity is unlikely to be smooth. The rising cost of energy stimulates boom-bust investment cycles and alternating episodes of glut and scarcity."⁶¹ In other words, much the same scenario that Limits to Growth presented.

So far I've hardly mentioned climate change. The nature of Greenhouse Gas pollution, global warming and climate change was poorly understood in the 1970s. Now we know much more. The situation is dire:

- Average temperatures are now some 1.3 degrees above the pre-industrial level.
- Atmospheric levels of carbon dioxide have passed the 410 ppm level.
- Annual global fossil fuel emissions have increased more five fold since I was born.
- There is only about 4 years left of the global carbon budget that can be used if we are to have a 2/3 chance of keeping temperature rise to below 1.5 degrees⁶² (the aspiration of the Paris agreement).
- Studies are now indicating that even the 2 degree target has only of 5 per cent chance of being kept to⁶³.
- Positive feedback effects include warming causing the release of GHGs by tropical forests so they change from being carbon sinks to carbon emitters, release of stored GHGs from the Arctic tundra and seas,

60 My emphasis.

61 Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., ... Sorlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, 347(6223), 1259855–1259855. <https://doi.org/10.1126/science.1259855>

62 See summary from Carbon Brief https://www.carbonbrief.org/analysis-four-years-left-one-point-five-carbon-budget?utm_content=buffer56a18&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

63 Raftery, A. E., Zimmer, A., Frierson, D. M. W., Startz, R., & Liu, P. (2017). Less than 2 °C warming by 2100 unlikely. *Nature Climate Change*. <https://doi.org/10.1038/nclimate3352>

reduction in reflectivity of polar regions as the ice cover reduces, and ocean acidification reducing the capacity for future carbon buffering⁶⁴.

The causes are clear: The respectably cautious International Panel on Climate Change, in its summary for policy-makers, said:

“Globally, economic and population growth continue to be the most important drivers of increases in CO₂ emissions from fossil fuel combustion. The contribution of population growth between 2000 and 2010 remained roughly identical to the previous three decades, while the contribution of economic growth has risen sharply (high confidence). Between 2000 and 2010, both drivers outpaced emission reductions from improvements in energy intensity” IPCC, 2013⁶⁵

The mechanisms most responsible are the burning of fossil fuels (releasing pre-historically sequestered carbon) and the change in land use identified in the Rockström work (reduced uptake and additional release of carbon); the impacts of both are then amplified by the positive feedback loops of the planetary systems.

Limits to Growth didn't frame the problem in terms of *economic* growth but we need to. Standard economic theories and models treat the economy in isolation from the society in which it is embedded, and crucially from the physical and biological environment on which it depends⁶⁶. The laws of physics are actually suspended in conventional economic theory⁶⁷: they alone should make it clear that expansion of the economy cannot go on indefinitely. Endless growth is inherent in the M-C-M' circuit: M' is bigger than M by definition while in each cycle there is more C. In general this means that there are more materials and energy flowing through the system and although the correlations between money, commodities, energy and materials are not perfect, in general the bigger the economy in either M or C terms, the larger in terms of the physical flows of energy and materials⁶⁸.

64 For a summary of the main feedbacks: https://climate.nasa.gov/nasa_science/science/

65 IPCC. (2014). Summary for Policymakers. In Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group to the *Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press,. Retrieved from http://report.mitigation2014.org/spm/ipcc_wg3_ar5_summary-for-policymakers_approved.pdf

66 For an entertaining discussion see <https://www.kateraworth.com/2012/07/23/why-its-time-to-vandalize-the-economic-textbooks/> Or as Moore puts it, “capitalism as *world-ecology*, joining capital, power and nature in a [to quote Marx in the Grundrisse] “rich totality of many determinations”. Moore (2015: 45) see note 19 on page 10.

67 Video that explains this from Clive Spash: <https://vimeo.com/95454471>

68 Burton, M. (2009). Sustainability: Utopian and Scientific. Retrieved July 9, 2014, from <http://greendeamanchester.wordpress.com/sustainability-utopian-and-scientific/>; Burton, M. (2014, September 21). Less levity Professor Stern! Economic growth, climate change and the decoupling question. Retrieved November 2, 2015, from <http://steadystatemanchester.net/2014/09/21/less-levity-professor-stern-economic-growth-climate-change-and-the-decoupling-question/>; Burton, M. (2016, April 15). New evidence on decoupling carbon emissions from GDP growth: what does it mean? Retrieved October 14, 2016, from <https://steadystatemanchester.net/2016/04/15/new-evidence-on-decoupling-carbon-emissions-from-gdp-growth-what-does-it-mean/>; Wiedmann, T. O., Schandl, H., Lenzen, M., Moran, D., Suh, S., West, J., & Kanemoto, K. (2015). The material footprint of nations. *Proceedings of the National Academy of Sciences*, 112(20), 6271–6276. <https://doi.org/10.1073/pnas.1220362110>

The limits to growth, then, fatally undermine the strategy, explicit or implicit in most of the proffered economic solutions, of making capitalism work for us.

Degrowth, or a better collapse?

Supposing it were possible to escape the likely catastrophic scenario of collapse, what alternative might actually work? What would be feasible as a credible response to the problems of places like Bolton and Collyhurst without looking to the malign system that got us here to save us⁶⁹. How can places make a living without continuing to destroy the planetary systems that make a living possible? There is no simple solution – indeed in some ways there is no answer to the question as posed. But it is possible to imagine a future that, while characterised by the collapse of livelihood and society, is not entirely bleak, that does have some possibilities for a resurgence of decent livelihoods and well-being.

To set the scene, it is helpful to recognise (to “periodise”) the capitalist epoch as an interlude characterised by the roving exploitation of labour, supported by the equally roving exploitation of cheap energy, land (food, timber, etc.), minerals and markets. We have to imagine a world without it, above all a world that is more (but not entirely) locally organised, that does without the massive expenditures of energy, yet that supports a degree of organised human society. This is the vision shared by a number of counter-hegemonic movements, both in the global North and South: degrowth⁷⁰, transition towns⁷¹, permaculture and ecological design⁷², suma qamaña / sumak kawsay / buen vivir / vivir bien⁷³, ubuntu, ecological swaraj⁷⁴, Melanesian socialism⁷⁵, post-extractivism⁷⁶. There are precedents in the work of early socialist writers such as Robert Blatchford⁷⁷ and William Morris⁷⁸, anarchists

69 Tanuro, D. (2013). *Green Capitalism: Why it Can't Work*. London: The Merlin Press Ltd.

70 D'Alisa, G., Demaria, F., & Kallis, G. (Eds.). (2014). *Degrowth: a vocabulary for a new era*. Abingdon, Oxon; New York, NY: Routledge.

Sekulova, F., Kallis, G., Rodríguez-Labajos, B., & Schneider, F. (2013). Degrowth: from theory to practice. *Journal of Cleaner Production*, 38, 1–6. <https://doi.org/10.1016/j.jclepro.2012.06.022>

71 Hopkins, R. (2008). *The Transition Handbook: From Oil Dependency to Local resilience*. Totnes: Green Books.

72 Holmgren, D. (2007). *Essence of Permaculture*. Hepburn, Australia: Holmgren Design Services. (available at http://www.holmgren.com.au/DLFiles/PDFs/Essence_of_PC_eBook.pdf).

73 http://www.boell.de/downloads/endf_buen_vivir.pdf and <https://steadystatemanchester.files.wordpress.com/2013/03/translations-buen-vivir-concepts.pdf>

74 Kothari, A., Demaria, F., & Acosta, A. (2014). Buen Vivir, Degrowth and Ecological Swaraj: Alternatives to sustainable development and the Green Economy. *Development*, 57(3–4), 362–375.

<https://doi.org/10.1057/dev.2015.24> Note that the point is not to romanticise or idealise indigenous lifestyles and cosmologies but to use aspects of them as inputs to an alternative world view and set of guidelines – what Dussel has called “transmodernity”: <http://www.enriquedussel.com/txt/Transmodernity%20and%20Interculturality.pdf>

75 <http://www.youtube.com/watch?v=jtnLl1Jp0K0>

76 Lang, M., & Mokrani, D. (Eds.). (2013). *Beyond development: alternative visions from Latin America* (1. transl. ed). Amsterdam Quito: Transnational Inst. Available at <https://www.tni.org/en/publication/beyond-development>. See especially the chapters by A Acosta, E Gudynas and M Svampa.

77 Blatchford's *The Sorcery Shop: An Impossible Romance*, London, Clarion Press, 1907, is actually set in Greater Manchester depicting a rural-urban socialist utopia.

78 <http://www.marxists.org/archive/morris/works/1890/nowhere/nowhere.htm>

like Pyotr Kropotkin⁷⁹, Colin Ward⁸⁰ and Murray Bookchin⁸¹ and thinkers from the Marxist tradition such as Raymond Williams⁸², Cornelius Castoriadis⁸³ and André Gorz⁸⁴.

These diverse approaches imply a return to a low energy, low throughput, low production, low population baseline. This is not necessarily the pre-capitalist one since, utilising the benefits of industrial capitalism's technological innovations, there would be more efficient harnessing of energy, better materials, etc., but all at a far lower level than now. Similarly, notions of the “circular economy”, at present deeply flawed by the dominant assumption that they can enable and enhance economic “growth”⁸⁵, take on a real relevance, with durability, re-usability and a zero waste philosophy paramount. Within this mix, notions of radical economic localisation, stewardship of nature and solidarity among people(s) figure strongly⁸⁶.

But how do we get to this post-capitalist future? Frankly, it will be a bumpy ride. As Streeck points out, the idea that capitalism will end with the triumph of something far better (classically socialism), seems highly unlikely⁸⁷. Meanwhile it seems unlikely that a residual or mitigated capitalism will offer those elements, missing from much of post-industrial life, of meaning, identity, the structure of life and the regulation of community living. What seems more likely is the extreme dislocation and conflict that come with, are already coming with, simultaneous climactic, energy, food and economic-financial shocks. This doesn't directly answer the question implied earlier: what is the future for people in post-industrial centres? How will they make a livelihood? It suggests that there isn't any simple prescription: there is no set of steps that, if followed, will lead to the solution. The point is that in a scenario of collapse, an entirely different approach is needed, that of strategies for survival as the capitalist world system collapses.

79 Kropotkin, P. A. (1912). *Fields, factories, and workshops; or, Industry combined with agriculture and brain work with manual work*. New York and London,: Thomas Nelson & Sons.

80 Ward, C., Wilbert, C., & White, D. F. (2011). *Autonomy, solidarity, possibility: the Colin Ward reader*. Oakland, CA: AK Press. <https://libcom.org/files/Colin-Ward-reader.pdf>

81 e.g. Bookchin, M. *Social Ecology and Communalism*. Oakland: AK Press. 2007.

82 Williams, R. (1982). *Socialism and Ecology*. London: SERA.

83 See Cattaneo, C., D'Alisa, G., Kallis, G., & Zografos, C. (2012). Degrowth futures and democracy. *Futures*, 44(6), 515–523. <https://degrowth.org/wp-content/uploads/2012/11/Introduction-Degrowth-futures-and-democracy.pdf>

84 Marcuse, H., Bosquet, Michel (André Gorz), Morin, E., Mansholt, S., & others. (1975). *Ecología y Revolución* Herbert Marcuse, Michel Bosquet (Andre Gorz), Edward Morin, Sicco Mansholt et al. (Nueva edición. First published in French by Le Nouvel Observateur, 1975). Argentina: EBOOK. Retrieved from http://www.slideshare.net/Research_and_Degrowth/ecologa-y-revolucin-herbert-marcuse-michel-bosquet-andre-gorz-edward-morin-sicco-mansholt-et-al-1975-1972-pdf-ebook-nueva-edicin-argentina

85 <https://steadystatemanchester.net/2016/10/05/the-circular-economy-is-it-the-solution-to-resource-depletion-and-pollution/>

86 For a short overview of this perspective see Steady State Manchester, (2014) *The Viable Economy*. Manchester. <https://steadystatemanchester.files.wordpress.com/2014/11/the-viable-economy-master-document-v4-final.pdf>

87 See note 23

Is there any possibility of a happy outcome? I am doubtful but the work of David Holmgren, one of the founders of permaculture⁸⁸, is helpful in suggesting a possibility. Holmgren wrote “Future Scenarios” in 2007⁸⁹. It reviewed possible futures under conditions of increasing energy scarcity (chiefly via peak oil) and climate change (though he focusses more on energy than climate). Holmgren identifies four Energy Descent Scenarios, each emerging from a combination of either fast or slow oil decline and either mild or severe climate change over the next 10-30 years.

- *Brown Tech*: Top Down Constriction, slow oil decline, fast climate change. This involves centralised energy systems, high-tech efficiency, non-conventional oil and gas, coal, nuclear power and conventional agriculture, high density cities, electric private transport, abandonment of the hinterlands and mass migration.
- *Green Tech*: Distributed Powerdown, slow oil decline, slow climate change. This involves distributed energy networks, energy conservation, gas, wind and solar power sources, forestry and organic agriculture. Settlements would prioritise compact towns, electric public transport and telecommuting.
- *Earth Steward*: Bottom Up Rebuild, fast oil decline, slow climate change. Here the energy sources would be distributed local hydro and biogas. Materials would be salvaged from the former industrial base. Forestry, organic agriculture and horticulture (“garden agriculture”) would be practised. Suburbia would be progressively ruralised and mobility minimised.
- *Lifeboats*: Civilization Triage, fast oil decline, fast climate change. Energy would be distributed and local. “Forest and rangeland hunting and harvesting become the predominant use of resources over large regions supporting nomadic bands.” Industrial salvage would provide materials and agriculture would be practised in oases. In the context of the progressive collapse of most forms of economy and social organisation, people live in hamlets and gated communities and have gang/nomadic lifestyles. Inevitably this scenario involves a substantial population crash.

The energy and climate parameters, which slot each scenario into a quadrant determined by the two dimensions, are suggestive but the scenarios are

88 Mollison, B., & Holmgren, D. (1990). Permaculture one. 5th rev. ed. (pbk). Tagari, Tyalgum, NSW.
<https://www.eco-logicbooks.com/product/permaculture-one/>

89 Available at <http://www.futurescenarios.org>

worth considering relatively independently, particularly since (as written, ten years ago), the Green Tech and Earth Steward scenarios underestimated the pace of climate change. They also represent differences of philosophy and scale: Brown Tech, for example, is associated particularly with the national scale, and Lifeboats with the family and individual level. Holmgren also suggests ways in which there could be progression between the scenarios and / or nested relationships among them: they are, after all “ideal types”. In more recent work, Holmgren discusses the idea of “retrofitting suburbia”. This is close to ideas we have discussed in *Steady State Manchester* of the “retrofit garden city”⁹⁰, “Urbalism”⁹¹ and “Continuous Productive Urban Landscapes”⁹². Holmgren makes the point that suburbia is where most people live and that there are opportunities for food production and energy / water harvesting there (so long as there is not too much retrofitted densification).

To begin to answer the question of prospects for a feasible energy descent transition to a combined Green Tech / Earth Steward scenario⁹³, it is worth looking at Holmgren's piece “*A History from the Future*”⁹⁴. The story is set in Victoria, Australia: while the detail is in some ways is specific to the ecology and settlement patterns there, the broad outline is relevant elsewhere. It is hard to summarise the narrative, but the following are key points:

- A financial crash accompanied by the bursting of the property price balloon leads to increasing fragmentation and dislocation.
- The global economic collapse leads to a radical reduction in carbon emissions but the decline in oil prices leads to a steep fall in production and a second energy crisis – an example of the extreme turbulence in the global system.
- Some lands become unusable due to climate change and the energy costs of exploiting them. Forest and scrub regrows and via biochar, becomes a resource for soil restoration elsewhere (including via exports to China) and carbon sequestration. These lands become resources for foraged food and seasonal bee fodder. Biochar and forestry provides more jobs than the former centralised energy generation system.

90 <https://steadystatemanchester.net/2017/03/07/greater-manchester-towards-a-retrofit-garden-city/>

91 http://turnstone.tv/NEW_UTV/the-urbal-fix.html

92 Viljoen, A., Bohn, K., & Howe, J. (Eds.). (2005). *Continuous productive urban landscapes: designing urban agriculture for sustainable cities*. Amsterdam: Architectural Press.
http://library.uniteddiversity.coop/Food/Continuous_Productive_Urban_Landscapes.pdf

93 Not dissimilar from my own futurist piece: “A Green Deal for the Manchester-Mersey Bioregion” (2009) <https://greendealmanchester.files.wordpress.com/2009/08/outline-for-a-green-deal-for-the-manchester-mersey-bioregion-v-4-4.pdf>

94 D. Holmgren (2016) *A History from the Future*. Excerpt from the forthcoming book, *RetroSuburbia*. <https://www.holmgren.com.au/a-history-from-the-future/>

- Low impact / high yield growing methods, practised on a garden scale become more widespread, providing food supplies.
- Cities become depopulated with people moving out to relatively self-sufficient small towns and their rural areas. Later, there is a move back to city suburbs, which become progressively refurbished on a lower density and lower intensity basis.
- People spend much less time travelling for work and for leisure. However some people work on a travelling basis in the rural environment.
- There is conflict between national level governments that try to implement a mix of brown and green tech solutions from above, and local communities and their emerging governance. Ultimately there is a reconfiguration of national entities.
- Bicycles and small scale renewable energy become dominant, although in some areas forest biomass powers retrofitted buses, lorries, etc.
- The “radical retrofiting” of personal and collective behaviour, more than retrofits to the built and biological environment account for eventually household and neighbourhood well-being.
- Complementary and community currencies become dominant along with barter and other means of exchange.

The narrative combines elements of all four future scenarios with the Green Tech and Earth Steward one dominating. It is important to recognise that Holmgren's piece does not provide a roadmap or a set of policy proposals. Rather, it suggests a way that during a collapse of capitalism, communities might reconstruct working local economies, via a dual process of, firstly building upwards from the innovative nodes of the now marginal, alternative, ecological and solidarity economy, and secondly salvaging or re-purposing elements of the current system, including its store of knowledge and positive social values (which could be seen as the up-side of the enlightenment tradition⁹⁵).

Looking at the future in this way suggests a way of returning to, and indeed salvaging from and repurposing, the alternative policy frameworks that were criticised above for being inadequate to the damage caused by capitalism. The frameworks do not represent solutions or strategies for leaving the disaster, in themselves. They do, however, identify some of the things that can be done in preparation for *a better descent*, or indeed *a better collapse*⁹⁶,

95 For there is also a downside: see Dussel, E. (2008). *Meditaciones anti-cartesianas: sobre el origen del anti-discurso filosófico de la Modernidad. Tabula Rasa.* (Bogotá - Colombia), no volume no.(No.9), 153–197. English version: *Anti-Cartesian meditations: on the origin of the philosophical anti-discourse of modernity.* <http://www.enriquedussel.com/txt/anti-cartesianmeditations.pdf>

96 A concept (actually *fracasar mejor*, to fail better) from the Spanish eco-philosopher Jorge Riechmann: Riechmann, J. (2015). *Autoconstrucción: la transformación cultural que necesitamos.* Madrid: Los Libros de la Catarata. Riechmann, J. (2013). *Fracasar mejor: fragmentos, interrogantes, notas, protopoemas y reflexiones.* Tarazona (Zaragoza), España: Olifante.

strengthening communities, developing stores of social and technical capital that will be invaluable when the collapse comes. The more localised the economy, the less leaky it is, more able to retain wealth, the more experience of localised decision-making, the more cooperative our social and economic life, the more we have begun to exercise stewardship, and the more we have empowered people to invent their own solutions – then the more prepared our populations, communities and local economies will be when the inevitable collapse comes. Note how this prioritisation of the local, within an overall model of subsidiarity, itself mimics the principles of ecological design – that is the use of properties of stable ecosystems to design human settlements⁹⁷. There is an irony here: while localisation and related strategies were criticised above for being inadequate to the scale of the challenge of *finding a solution within the context of global capitalism*, they do take on an urgent relevance *in the context of capitalism's ugly collapse*.

This gives us a political, social, economic and ecological agenda to struggle for in the face of a capitalism that has run out of road, an increasingly paranoid and desperate elite, and the mobilisation of obscurantist, divisive propaganda and movements.

For the Northern, post-industrial towns a “better collapse” might include,

- Highly intensive use of land close to the urban areas, both current poorly utilised farm land and intra-urban gardens, parks, and former industrial areas once they have been assessed for toxic residues. The new mixed model would combine elements of traditional mixed farming and hill farming (with deer, sheep, even llamas and alpacas – efficient converters of rough vegetation in the more marginal lands), horticulture/market gardening, cultivation under protection, orchards and an increase in woodland and scrub, used for biomass fuels and timber, particularly on sites unsuited for food production. Historical methods of food production (e.g. carp ponds, running pigs in forests and chickens in orchards) would be combined with newer, intensive organic methods extending perhaps to subterranean mushroom cultivation and low input hydroponics. This implies a shift in livelihoods to a closer relationship with the land, combining subsistence cultivation and specialist roles, including extension and education workers.
- A programme of technology conversion to modes requiring low energy and low material demands: for example by establishing a regional producer of cycle frame tubes and bearings using scrap steel from obsolete high energy products such as private cars. In fact everything is re-used, repurposed and recycled, most of it locally⁹⁸.

97 Odum, H. T. O. and E. C., & Odum, E. C. (2001). *A prosperous way down : principles and policies*. Univ. Press of Colorado.

Mollinson, B. (1988). *Permaculture: A designer's manual*. Tyalgum, NSW: Tagari.

98 Similar to what is already the norm in many areas of the global South.

- People work more locally as longer commutes become too costly, impractical, and possibly dangerous.
- People downsize their housing as heating costs rise, leading to greater population density and reduced energy demand. This varies from adult children delaying moving out through to co-housing schemes. Space heating relies on biomass, passive solar / heat storage, and high levels of insulation, increasingly using low energy materials such as rammed earth, cellulose, wool, and hempcrete⁹⁹.
- Out of town shopping centres become disused as what retail is left is situated in localities.. As supply chains for mass-produced goods fragment and collapse, people establish tool and equipment libraries, and exchange products from local workshops.
- An explosion of recovered and new craft and artisan know how with a great emphasis on skill sharing and co-learning.
- As fiscal support for human services collapses, co-operatives are set up combining residual government support with mutual aid and local insurance schemes, linked to complementary or substitute currencies and community financial institutions¹⁰⁰. In the best examples, the trend for closer living means greater availability, and coordination, of mutual support from family, friends and neighbours¹⁰¹. A basic range of medicines is produced locally combining a resurgence of medicinal herbalism with scientific expertise¹⁰² and personnel from the former multinationally dominated pharmaceutical and chemical industries.
- Law and order becomes highly problematic but the more successful communities reorganise their fire service, police forces and local military into people's militias, combining public order and civil defence functions.

The above is only a sketch of how a collapse might be survived through a combination of re-localisation, appropriate technology and a “social refit”. There might after all be some future for humanity outside capitalism after the general collapse of capitalism as a world system – but the window of opportunity to pass into that future will be narrow, and narrowing with extreme climate change already upon us and both global and local conflict and war increasingly likely. In the meantime, policy initiatives put into place now

99 Asdrubali, F., D'Alessandro, F., & Schiavoni, S. (2015). A review of unconventional sustainable building insulation materials. *Sustainable Materials and Technologies*, 4, 1–17.

<https://doi.org/10.1016/j.susmat.2015.05.002> For examples of the use of such materials in modern buildings see <http://info.cat.org.uk/wise/>

100The experience of Argentina during currency collapse is useful here: Dittmer, K. (2013). Local currencies for purposive degrowth? A quality check of some proposals for changing money-as-usual. *Journal of Cleaner Production*, 54, 3–13. <https://doi.org/10.1016/j.jclepro.2013.03.044>

101This recalls the example of Local Area Coordination, a way in which informal supports were combined with State funded services, originally in rural Western Australia but also in some experiments in the UK running counter to the market-consumer model of personalised care see <http://lacnetwork.org/local-area-coordination/what-is-local-area-coordination/>

102One of the strategies Cuba employed when its main trading partner disappeared in the early 1990s.

should be evaluated against criteria from the kind of extreme resilience scenarios described above¹⁰³.

¹⁰³Steady State Manchester has done some initial policy analysis using alternative criteria from its Viable Economy framework. See <https://steadystatemanchester.net/2017/07/19/policies-policies-but-are-they-any-good/> and <https://steadystatemanchester.net/2017/05/09/check-the-party-policies-with-our-viable-economy-tool/>

Appendix 1: Industrial Bolton¹⁰⁴

“By 1850, Bolton's industry comprised bleaching, calico printing, coal mining, heavy chemicals, heavy engineering, leather tanning, papermaking, rope making, textiles and many other smaller industries.

“An estimate from 1838 stated that 8,621 were working in the cotton trade.

“In 1911, there were 15,000 men and 21,000 women employed in the textile industry.

“In the 1921 census, 33,000 were employed in textiles, 7000 in commercial and financial, 4600 in transport and communications, 4000 in coal mining and quarrying, 2200 in woodworking, 2000 in building trades, 900 in paperworks, 900 in agriculture, 800 in painting, 700 in leather working, and 500 in electrical industry.

“Of the number of mills, in the 1950's there were still 103 cotton mills, in 1966 there were 34, by 1979 just 8 remained.

“In 1929, there were 247 cotton mills and 26 bleaching and dying works.

“In 1928 there were 60 miles of tramways carrying 58 million passenger – journeys per year.” [For comparison, Greater Manchester's Metrolink system has 57 miles of track and carried 37.8 million passengers in 2016–7.]

Employment in Bolton: 2015 (,000s)¹⁰⁵

A : Agriculture, forestry and fishing	0.22
B : Mining and quarrying	0.02
C : Manufacturing	10.20
D : Electricity, gas, steam and air conditioning supply	0.04
E : Water supply; sewerage, waste management and remediation activities	0.57
F : Construction	11.21
G : Wholesale and retail trade; repair of motor vehicles and motorcycles	22.02
H : Transportation and storage	7.53
I : Accommodation and food service activities	6.63
J : Information and communication	2.96
K : Financial and insurance activities	3.37
L : Real estate activities	3.56
M : Professional, scientific and technical activities	15.27
N : Administrative and support service activities	10.15
O : Public administration and defence; compulsory social security	3.17
P : Education	8.57
Q : Human health and social work activities	17.42

¹⁰⁴From <http://www.bolton.org.uk/industry.html>

¹⁰⁵<http://www.neweconomymanchester.com/publications/greater-manchester-forecasting-model>

R : Arts, entertainment and recreation	4.03
S : Other service activities	5.00
Total employment(000's)	131.93

Employment rates for the old Bolton county borough in 2011¹⁰⁶ and the larger Bolton Metropolitan Borough in 2015 were 56.6% and 50.2%, respectively.

¹⁰⁶<https://www.nomisweb.co.uk/census/2011/KS601UK/view/1946157081?cols=measures>

Appendix 2: The labour foundation of interest.

“If a proprietor of capital were to pay 5 units of salary, 5 for means of production and obtained 6 of profit (in principle in abstract terms equal to surplus labour), the value of the the product, and also in abstract terms its price, would be 16. The 6 units of profit (that are fundamentally 6 units of surplus value) could be distributed as follows: 2 as industrial profit, 2 as commercial profit and 2 as interest. The surplus value, it can be abstractly postulated, must be equal to the sum of all the profits (including the ground rent, if that applies). This is the concept of the question: it is only living labour that creates the surplus value that takes phenomenal form in differentiated forms of profit. Capitalism, on the contrary, takes the different kinds of profits as fruits of the different types of capital; these gains appear fictitiously as if they were the the reflexive creation of capital, coming from capital itself (for Marx pretensions of creation from nothing.”¹⁰⁷

Hence the bourgeois use of the term “wealth creators” not to refer to those whose toil actually creates value but for those who merely invest.

107 Dussel, E. (2014). *16 tesis de economía política: interpretación filosófica*. Mexico City: Siglo XXI. §7.27 My translation. See also Lapavitsas, C. (2013). *Profiting without producing: how finance exploits us all*. London ; New York: Verso. Norfield has a short and helpful treatment of the same question in Norfield, T. (2017). *The City: London and the global power of finance*. London: Verso (pp. 83-85).