

Working Paper 5/2016

der DFG-Kollegforscher_innengruppe Postwachstumsgesellschaften

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Growth and Over-accumulation in Advanced Capitalism: Some Critical Reflections on the Political Economy and Ecological Econom- ics of Degrowth

ISSN 2194-136X

Eric Pineault: Growth and Overaccumulation in Advanced Capitalism: Some Critical Reflections on the Political Economy and Ecological Economics of Degrowth. Working Paper der DFG-Kollegforscher_innengruppe Postwachstumsgesellschaften, Nr. 5/2016, Jena 2016.

Impressum

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DFG-Kollegforscher_innengruppe
Postwachstumsgesellschaften

Humboldtstraße 34
07743 Jena

Internet:

www.kolleg-postwachstum.de

Redaktion/Lektorat/Layout: Christine Schickert

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Die DFG-KollegforscherInnengruppe „Landnahme, Beschleunigung, Aktivierung. Dynamik und (De-) Stabilisierung moderner Wachstumsgesellschaften“ – kurz: „Kolleg Postwachstumsgesellschaften“ – setzt an der soziologischen Diagnose multipler gesellschaftlicher Umbruchs- und Krisenphänomene an, die in ihrer Gesamtheit das überkommene Wachstumsregime moderner Gesellschaften in Frage stellen. Die strukturellen Dynamisierungsimperative der kapitalistischen Moderne stehen heute selbst zur Disposition: Die Steigerungslogik fortwährender Landnahmen, Beschleunigungen und Aktivierungen bringt weltweit historisch neuartige Gefährdungen der ökonomischen, ökologischen und sozialen Reproduktion hervor. Einen Gegenstand in Veränderung – die moderne Wachstumsgesellschaft – vor Augen, zielt das Kolleg auf die Entwicklung von wissenschaftlichen Arbeitsweisen und auf eine Praxis des kritischen Dialogs, mittels derer der übliche Rahmen hochgradig individualisierter oder aber projektförmig beschränkter Forschung überschritten werden kann. Fellows aus dem In- und Ausland suchen gemeinsam mit der Jenaer Kolleggruppe nach einem Verständnis gegenwärtiger Transformationsprozesse, um soziologische Expertise in jene gesellschaftliche Frage einzubringen, die nicht nur die europäische Öffentlichkeit in den nächsten Jahren bewegen wird: Lassen sich moderne Gesellschaften auch anders stabilisieren als über wirtschaftliches Wachstum?



Friedrich-Schiller-Universität Jena

Die Kolleg-ForscherInnengruppe zum Thema
Landnahme, Beschleunigung, Aktivierung und
(De-)Stabilisierung moderner Wachstums-
gesellschaften wird gefördert von der

DFG Deutsche
Forschungsgemeinschaft

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Growth and Over-accumulation in Advanced Capitalism: Some Critical Reflections on the Political Economy and Ecological Economics of Degrowth*

Zusammenfassung

Das Papier zielt darauf, die Wachstumstreiber des fortgeschrittenen Kapitalismus besser zu verstehen indem es auf theoretische Erkenntnisse der radikalen politischen Ökonomie und der ökologischen Ökonomik zurückgreift. Durch eine Institutionenanalyse der Struktur des fortgeschrittenen Kapitalismus als eine Geldproduktionswirtschaft ist es möglich eine Theorie der Akkumulation vorzuschlagen, die den engen Zusammenhang zwischen Überproduktion und Überkonsumption erklärt, auf der seine Reproduktion als soziale Form ruht. Von Pionieren wie Veblen und Baran und Sweezy ist argumentiert worden, dass in solch einer Wirtschaft ‚Abfall‘ nicht ein Nebenprodukt metabolischer Aktivität ist sondern ein gewünschter und geplanter Modus der Überschussabsorption. Dies hat wichtige Implikationen für jede Theorie eines ökologischen Übergangs. Diese strukturelle Analyse wird ergänzt durch eine Konjunkturanalyse, die einige wichtige Widersprüche der aktuellen Phase des fortgeschrittenen Kapitalismus, den Spätneoliberalismus, hervorhebt, in der Stagnationstendenzen die institutionellen Formen und Dynamiken umgestalten auf denen die Verbindung der Überproduktion und der Überkonsumption im globalen Norden beruht.

Abstract

The paper aims to deepen our understanding of advanced capitalism's drivers of growth by drawing on some theoretical insights from radical political economy and ecological economics. Through an institutional analysis of the structure of advanced capitalism as a monetary production economy, it is possible to propose a theory of accumulation that explains the tight coupling of overproduction and overconsumption on which rests its reproduction as a social form. It has been argued by pioneering figures such as Veblen and Baran and Sweezy that in such an economy 'waste' is not a byproduct of metabolic activity, it is a desired and planned mode of surplus absorption. This has important implications for any theory of ecological transition. This structural analysis will be complemented by a conjunctural analysis that will highlight some important contradictions of the current phase of advanced capitalism, late neoliberalism, where stagnationist tendencies are reworking the institutional forms and dynamics on which the coupling of overproduction and overconsumption rest in the global North.

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* This paper is for the most part a simplified version of a draft presented in 2015 in Jena at the Kolleg Postwachstumsgesellschaften, with some original material in the second part of the paper. A first and preliminary version was presented at the Leipzig Degrowth Conference in 2014. A long section on economic versus material growth has been left out, so has data that illustrates the theoretical model of over-accumulation. This is an ongoing project which will take on a book form eventually, and most probably generate some journal articles in forms that still have to be determined.

Introduction

Degrowth, both as a research perspective and as an ensemble of social movements, is participating in a profound and radical renewal of the critique of present day capitalism. It is a pluralistic endeavour, where a diversity of theories, methods and practices co-exist and enrich themselves through ongoing dialogue. A recent and very positive contribution to this dialogue has been the publication of *Degrowth, a Vocabulary for a New Era* (D'Alisa et al. 2014) by scholars and researchers associated with the Barcelona school of political ecology and ecological economics at ICTA. The volume contains an entry on capitalism and the appraisal of this contribution as the basis for a specifically degrowth oriented critique of capitalism will be the point of departure of my presentation. I will build on the insights and limitations of this entry to propose a wider analysis of the nature and trajectory of the capitalist economy through the categories and concepts developed by the political economy of “over-accumulation”. As a defining feature of advanced capitalism, I hope to show how the dynamics of capitalist over-accumulation contribute to the historical process that environmental historians such as Will Steffen have named “The Great Acceleration” (Steffen et al. 2015)¹, the explosion of the environmental impact of human activities on the planet's ecosystems and resources since the 1950s and the speeding up the processes that cause these impacts. Material growth – as throughput – is at the heart of the Great Acceleration – be it in the form of extracted, used and disposed of matter, life forms or the mobilization and dissipation of energy. I will try and convince the reader of the fruitfulness of the political economy of over-accumulation as a tool to identify and analyze the drivers of this growth as a complex of social relations instead of as a subjective predisposition of individuals. My overall objective is to help degrowth move beyond moral and cultural condemnations of waste, overconsumption and overwork and take into account structural instituted socioeconomic forces at play, structures and institutions that can be changed through praxis. The throughput of modern or advanced capitalism as a metabolic process will be presented as the result of a structural coupling of overproduction and overconsumption with strong and deep cultural and political relays. It will be argued that this coupling organized the economic process of contemporary societies in the advanced capitalist core around the problem of surplus absorption, the answer to this problem according to the theory of over-accumulation is “waste”, as a systemic product of advanced capitalism. I will conclude this paper with a short survey of some implications of this theoretical outlook for the conjunctural problem of social practice and social change towards a post-growth society in the context of late neoliberalism.

Part 1: Accumulation, Capitalism and Degrowth

1.1. Degrowth defines “capitalism”

Degrowth, a Vocabulary for a New Era, defines capitalism as “a historically specific mode of social and economic organization” (D'Alisa et al. 2014: 59), as a social form it distinguishes itself from other socio-economic systems through the institution of five essential features:

- Private ownership of the means of production concentrated in the hands of a dominating class;
- A majority condemned to freely sell their labour power in exchange for money wages to subsist;

¹ For an extensive review and original critical theory built on the premises of the Great Acceleration which also shaped my own thoughts see Angus 2016.

- Productive relations geared towards commodity production;
- Money and markets as central coordinating institutions and competition as a central feature of this coordination;
- The centrality of the profit motive as a determinant of production

Authors Andreucci and McDonough furthermore consider accumulation to be the fundamental dynamic aspect of this socio-economic system, insisting on its “processual” nature, and define growth as the outcome of capital accumulation. Growth here is understood as that which the GDP measures: the size of the monetary production economy – and not directly that of the material throughput implied in this economy's reproduction. The authors also insist on the importance of a social definition of capital, capital is not first and foremost a collection of physical or a stock of monetary assets, but is their “mobilization in production with the expectation of increased monetary profits”. This leads the authors to adopt the standard marxian definition of capital as “value which aspires to valorize itself”. Such a definition, on the one hand is very useful for a critical theory of growth since it highlights the self-expansory tendency of capitalist production – on the other hand it is problematic in the sense that “value” here appears as a self-directed entity, a social subject with the attribute of agency. (Andreucci/McDonough 2014)

The positive and negative aspects of the definition of capital in *Degrowth, A vocabulary*, will structure my discussion in each section of this paper. My objective here is not to refute or object to the excellent work by Andreucci and McDonough, but rather to complete and push further the analysis of capitalism on this basis of their preliminary definition.

As they point out, once capitalism's inner logic is defined as an accumulation process, and that accumulation is theorized in social terms and not solely in material terms – as the expansion of social relations of production and consumption, not only as growth of a physical stock of productive assets, then the question that immediately follows is: in what do these capitalist social relations expand? The answer given by the authors who follow here de Angelis (2010), is that accumulation implies the “colonization of society through commodification”, but this process is never complete, capital is always confronted by and contained in an otherness in the form of a wider system of social relations, institutions and living nature outside its grasp. This immediately opens up a sociological controversy concerning the nature of capitalism as a social form, as well as the statute of capitalism's 'others'. Is capitalism a “form of society”, or an economy *in* a society? If capitalism is a society then what is the mode of being of the social relations that it does not produce and in which it grows, residual? marginal? oppositional? My own, very un-marxian position differs slightly from that of the authors in *Degrowth*. On sociological grounds, I would argue that capitalism is a form of the monetary production economy which dominates the reproduction of modern societies without entirely saturating the economic process². In modern societies other instituted forms of monetary production co-exist with capitalism and social reproduction implies forms of non-monetized domestic and communal production, mostly resting on the labour

² Modern society exists in orders of totality wider than the economic process which is but a partial system in a greater social whole. In accordance with the sociology of Michel Freitag two such orders form the larger social matrix in which a capitalist economy can reproduce itself, modern societies totalize themselves at the “infrastructural level” of culture and they reflexively totalize themselves in a “politico-institutional superstructure”, and these more general orders are “relatively autonomous” from the economic process, to use a marxist expression. Capitalism's capacity of reproduction rests and depends on institutions and habits that are formed and reproduced in a more general social totality. This is not to say that capitalism can't mold, change or determine culture and the state or societies institutional framework, on the contrary its development has had a profound impact on these social orders.

of women (Biesecker/Hofmeister 2010). Modern economies are often hybrid in nature, with substantial public and not for profit sectors existing side by side with a fully developed capitalist business sector.

Nevertheless – in agreement with the authors – it would seem that in the long run capitalist logic has prevailed over these other economic logics, when they have not been marginalized growth has absorbed and subsumed them to capital's specific mode of development. And thus capitalist accumulation has tended to shape the historicity of modern societies, the growth logic of modern society is not a *sui generis* tendency, but a product of this subsumption.

Economically, accumulation is the expanded reproduction of capital through the investment of profits. In Marx's world of competitive markets, populated by cost cutting and price taking firms owned and managed directly by individual or closely associated capitalists, this reinvestment is an imperative. As argued by the authors in *Degrowth*:

“capitalists compete for access to money, labour, raw materials and markets. This competition is conducted through the reinvestment of profits. Thus to survive, firms must strive to maximize profitability. This is achieved through the more effective extraction of 'surplus value' driving the intensification of work, the investment in technological improvements and expanding the scale of operations. This draws ever more areas of social activity, ever larger areas of the globe and ever greater quantities of resources into the ambit of capitalist relations of production.”

When Marx, in his mature economic writings, examines the “expansion” of capital inside society through investment, he carefully distinguishes two logical forms of accumulation: a purely quantitative form of expansion and deeper qualitative mode of expansion. This distinction takes on various guises, formal versus real subsumption of labour to capital in some passages, and throughout most of *Capital*, in the difference between the production of absolute and relative surplus value. Marxian economics has fruitfully used this distinction to understand changes in accumulation regimes³ and analyze differences in investment cycles as well as forms of competition⁴. In the above citation the distinctive patterns and socioecological effects of these forms of accumulation are grouped together in an overall theory of capitalist expansion. I think that using the marxian distinction between forms of accumulation can be especially useful for Degrowth's critical understanding of capitalism's growth drivers and their effects in contemporary society as well as their ecological implications.

1.2. *Forms of accumulation, some further marxian insights*

To capture the distinction between two logics of capitalist expansion, one materializing primarily as quantitative change, and one materializing as qualitative change, I will use the categories of 'extensive' and 'intensive' forms of accumulation⁵.

³ On the canonical and contested French regulation school's distinction between “intensive and extensive accumulation regimes”, see Aglietta 1979 and more recently Boyer 2004. For a critique on the use of this distinction by this school as historically distinct phases of capitalism see Brenner/Glick 1991.

⁴ On this see the seminal paper by James Crotty (Crotty 1993).

⁵ This way of expressing different logics of accumulation was mostly developed by the French regulation school, in the works of Aglietta, Boyer and Lipietz. Though as the reader will see I've borrowed from Robert Boyer (Boyer 2004) a definition of the specific economic logics that characterize each form. I've taken care of not, at this point, qualifying these forms of accumulation as “regimes”, simply because in empirical capitalist economies, these forms of accumulation are always present and intertwined

Extensive accumulation is the quantitative expansion of the system – in economic terms, investment in pre-existing productive capacity, mobilizing known and institutionalized forms of the labour process, harnessing “use values” (as resources or intermediary products) and producing use values (as consumer products) as they exist either in a capitalist or non-capitalist context. Extensive accumulation can be summarized as 'more of the same', knowing that the 'same there is more of' is subsumed to the reproduction of capital, and is commodified. There are two typical expressions of this purely quantitative process of expansion. Extensive accumulation can refer to the system's growth towards an outside through dispossession, commodification and appropriation of labour time, social space and objects (as means of production or of consumption) that were not incorporated in capitalist social relations⁶. Often these entities are commodified as they exist in non-capitalist contexts, without going through a process of qualitative change⁷. When discussing the effect of extensive accumulation on the exploitation of labour, Marx used the expression “formal subsumption” meaning that the exploitative relation concerns primarily the outer form of the labour process without changing its content⁸.

Extensive accumulation also refers to investment in the expansion of existing productive capacity. Technically it can be defined as “capital widening” “accumulation takes place without any change in the technical composition of capital⁹” (Kronenberg 2010: 1490) as well as within a “given organizational structure of the labour process” (Crotty 1993: 4) - and one could add of the consumptive and reproductive economic processes as well. Capitalists invest to keep up with the expansion of markets and the growth of demand, as though this expansion and growth was an external process on which they individually had no grasp or influence¹⁰. Which may be economically true, but is socially untrue¹¹, as Marx lengthily exposes in his discussion of 'formal subsumption'. As a class, capitalists, are busily 'opening up' markets through colonization, imperialism, expropriation and incorporation of new swathes of population into wage labour and commodity based consumption, growth in this first sense always occurs in an 'outside'.

Intensive accumulation on the other hand refers to an expansion process that qualitatively changes the system. In economic terms investment that purposefully changes production relations, technologies and eventually consumption patterns. The initial impetus of intensive accumulation is the search of profit through enhanced

one with the other. One cannot not empirically distinguish historical phases of capitalism where one logic would in some way define the times, while the other would remain marginal. On this see Robert Brenner and Mark Glick's critique of the regulation school cited above. It is specifically the way they are articulated together that I find fruitful in my research.

- ⁶ More recently Landnahme theory developed by political economist Klaus Doerre has also shown that this process of incorporation is iterative, neoliberalism implies the creation of an extensive growth frontier inside advanced capitalist societies through the incorporation of previously decommodified social relations.
- ⁷ Marx also uses the category of “formal subsumption” to describe this process of incorporation.
- ⁸ The notion of formal subsumption can also be fruitfully used to analyze the specific way capitalism will appropriate nature in the current ecological crisis.
- ⁹ And a given material and energy coefficient the ecological economist would add.
- ¹⁰ And this refers specifically to the institutional setting that Marx saw as characteristic of capitalist enterprise in the 19th century, in his 'price taker model' no firm is large enough to influence the market that validates its production.
- ¹¹ The exception being growth in population, which can in certain circumstances act as a growth 'puller', but in Marx's model this is a complex issue involving labour living standards, real wage dynamics and his theory of the reserve army of labour (Crotty 2004). It will suffice to say that in Marx's world demographics are caught up tightly in capitalist relations and do not act as an independent variable spurring growth. For a general discussion of demographics and growth in critical perspective see Angus/Butler 2011.

productivity that lowers cost and thus gives the 'innovative' capitalist a temporary edge over his competitors¹². Other firms are forced to invest in changed production relations to effectively compete the new lower cost producer, and thus intensive accumulation acquires a systemic character. As James Crotty remarks, in this mode of accumulation, investment is “coerced”¹³. For our purposes it is important to note that intensive accumulation implies a growth pattern that appears contained inside the system, capitalism grows on itself so to speak, by qualitatively changing its constitutive social relations so as to intensify the accumulation process¹⁴. Put another way, intensive accumulation implies that the investment process takes as its object capitalist productive and consumptive relations themselves. Marx's concept of 'real subsumption' captures the essence of this relation, where the object of exploitation – be it living labour, nature or social relations – is no longer incorporated as it is in a process of valorization, but the process of valorization actively and purposefully transforms the appropriated object's nature. In the early twentieth century, Schumpeter coined the phrase “creative destruction”, to figuratively capture the essence of this mode of accumulation. Positively cast as 'innovation', the expression does capture the processes negative aspect, intensive accumulation destroys existing forms of fixed capital through devaluation. Technologies and 'given organizational structures of the labour process' become obsolete.

The degree to which capital depends on a 'social' outside relative to its capacity to grow 'on itself' through intensive accumulation was and still is the subject of much controversy in marxian economics. Rosa Luxemburg famously outlined a theory of the structural dependence of capitalism on an outside for continued accumulation: extensive forms were considered to predominate over intensive forms, this was the cornerstone of her theory of imperialism and eventual capitalist crisis and breakdown. On the other hand Polish economist Michal Kalecki defended a theory of accumulation where internal transformation predominated as long as capitalists maintained effective demand through high investment and high consumption (Kalecki 2009 [1984]). Baran and Sweezy as well as other “post Kaleckian” (Joan Robinson) or rebel Schumpeterians (Sylos Labini, Joseph Steindl and Hyman Minsky) added that - as also established by Keynes - wage earner consumption could act as a growth absorber internal to capitalist social relations, as long as real wages rose with productivity. Capitalism could in a sense grow on itself, and this has had profound 'metabolic' implications that are now recorded by environmental historians as the “Great Acceleration”, more on this further down. This also meant that the automatic breakdown of capitalism through a realization crisis (glut of unsold commodities) or valorization crisis (stagnant investment because of a lack of profitable investment opportunities 'outside' the system) was not anymore on the horizon¹⁵.

Most of twentieth century radical political economy sided with Kalecki, but allowed for 'extension' to play a significant role in accumulation dynamics (see Doerre 2015) as in Crotty's model of investment regimes. The

¹² In Marx's *Capital* this is described as 'extra surplus' value that arises in the quest for relative surplus value. For a pedagogical exposé of the general dynamic accumulation based on the search for relative surplus value see Harvey's lessons on Volume 1 here.

¹³ James Crotty (1993) refers to this process as 'capital deepening', investment in labour saving technology and thus a transformation of the technical composition of capital, the term intensive accumulation in my mind captures more thoroughly the breadth of the social effects of this form of investment.

¹⁴ We shall see further down that from a metabolic standpoint this is false, intensification has substantial material-throughput effects that remained veiled by the analytical apparatus of classical and neoclassical economics that have been uncovered by ecological economics.

¹⁵ For those marxists fascinated by the eschatological tone of Marx's critique of capitalism, that left one last option for the theory of an automatic full blown capitalist crisis, the possibility of a crisis of an internal valorization through the tendency of the profit rate to fall. On this see Michael Heinrich's brilliant essay (Heinrich 2013).

question thus becomes, how these forms are intertwined in what the Jena 'postgrowth' school names a process of “dynamic stabilization” (Doerre/Lessenich/Rosa 2015).

1.3. Implications for Degrowth

By untwining the two modes of accumulation that the authors of the entry on capitalism grouped together in the *Degrowth, Vocabulary for a new Era* book, we obtain the following result as summarized in table 1 below¹⁶:

Social relations of accumulation

Instituted social relations	Extensive	Intensive
<u>Productive norm</u> : socially organized relations of production that condition the articulation of labour power with means of production	Expansion of labour force, expansion of means of production in proportion of labour force, incorporation of new pools of labour through expropriation	Revolution of productive practices, growth of constant capital more rapid than variable capital (change in organic composition), destruction of fixed capital through obsolescence
<u>Consumption norm</u> : socially organized relations of consumption of subsistence and expressive goods and services	Quantitative growth of commodified use values, eviction of non-commodified means of subsistence	Appearance of new commodities at ever lower cost, creation of new wants and interlocking needs
<u>Metabolic foundation</u> : throughput of organized matter, living biomass and available energy	Volume of throughput grows in proportion with investment in productive capacity	Acceleration of throughput and qualitative change in composition

Understanding accumulation implies a prior distinction in a given capitalist monetary production economy between an instituted production norm and an instituted consumption norm, these are obviously highly complex and multifaceted social relations, implying in particular modes of class based subjectification, they vary extensively from one society to another and one period to another. An accumulation regime takes form through the articulation of these 2 norms in a specific complex of institutionalized social relations. Extensive and intensive logics organize these social relations and their articulation in economically specific ways, as well interact and articulate each other, giving the institutional system a processual-dynamic nature. Capitalist investment is the initial social practice which fixes these logics of accumulation in a defined form. It is in this

¹⁶ The table leaves out the dimension of reproduction, which would require a distinct line, examining how reproductive practices are devalued and revalued as well as interwoven with forms of accumulation. It also leaves aside the complex of macroeconomic relations that are normally used by regulation school theorists such as the form competition, financial relations, state to market relations, etc. The first omission is because of a lack of space, incorporating these aspects would require a much more developed paper. The second omission is more for the purposes of keeping our argument – at this point at least – simple.

sense that we could state, at the beginning of this section that capitalist accumulation imprints on modern society a specific form of historicity, in the form of “growth” and capitalist investment¹⁷ is the cornerstone of this dynamic process.

Finally, as the last line of the table shows, growth, and thus accumulation, is also a material-biophysical process, even though most of marxian economics has tended to ignore, at least in its formal analytical apparatus, this dimension of the economic process¹⁸. Extracted organized matter, captured living biomass and energy are the necessary material forms of the economic process, they are caught up in the throughput inherent to capitalist production and consumption, and how they flow will be determined by the accumulation regime's structure. The throughput of extensive accumulation expands quantitatively (in volume and in the diversity of inputs), whereas the throughput of intensive accumulation will either accelerate as more energy/matter/living biomass units are needed per unit of labour, and more importantly these entities will be caught up in a process of “artificialisation” as capital deepens its determination on these inputs¹⁹. Extensive accumulation widens the net of appropriation (and expropriation, commodification and colonization) and grows in a linear fashion the volume of the throughput, intensive accumulation accelerates the throughput, lengthens the flow of its constitutive elements and changes its composition (Smil 2014).

To conclude this first part on capitalism and Degrowth, I'd like to share one last observation concerning the metabolic dimension of accumulation in a marxian theoretical perspective²⁰. I've shown that accumulation is the outcome of investment as a socio-economic practice, in Marx's day monopolized by a narrow entrepreneurial bourgeoisie, and investment²¹ – though it does fix in time and space a metabolic complex - is first and foremost a monetary phenomenon. In capitalism, the social surplus appears not directly as material wealth, but as monetary rights on material wealth, the social relation to material wealth is shaped both by private appropriation and commodification of the means of production and consumption. Capitalist accumulation is not the hoarding of these rights²², but rather their expenditure, the expenditure of the surplus again in a monetary form. These expenses generate income flows that have important macro-economic effects, but more importantly for Marx, they imply the transformation of capital into particularized forms. Or put another way, monetary profits can only become capital by taking on two distinct non-monetary forms – material forms that have a biophysical existence²³. Marx calls these forms constant and variable capital.

A word on these forms from a degrowth perspective: Variable capital is the conversion of money into living labour, constant capital, of money into means of production that can be further divided into the more mundane categories of fixed and circulating capital. Both variable and constant capital exist as material throughputs, and thus capital accumulation driven growth is the growth – extensive or intensive - of these material throughputs. But more importantly for our purposes is the idea that accumulation implies the unification of these forms of

¹⁷ Obviously other forms of investment – public-social non-profit – in the monetary production economy can have similar impacts.

¹⁸ Exceptions being the ecological Marxism of John Bellamy Foster, Paul Burkett, as well as Andreas Malam and Alf Hornborg.

¹⁹ The economics of ecomodernism are based on a trade-off between extensive and intensive accumulation, moving rapidly away from the former (shrinking our spatial grasp, intensifying a circular self-contained economy) and moving metabolically to the latter (geo-engineering an optimal world climate for example).

²⁰ For a much more complete treatment of this question, I suggest the reader consult Burkett 2014.

²¹ In passing, this changes the way we define the capitalist in a monetary production economy, he is not first and foremost the agent that owns the means of production, he is the agent who can – through an act of expenditure either acquire them or have them produced. We move from a static to dynamic and from a material to a social definition of the capitalist.

²² Typical of precapitalist economies, such as tributary systems of domination.

²³ This section draws extensively on Hornborg 2014.

capital in the productive process (and we should add in the consumptive process as commodities). Marx examines various ways by which this unity is achieved during the history of classical capitalism in modernity. Now whether it be in the 'putting out' system, or in the early capitalist manufactures and workshops, throughput depended essentially on human expenditure of energy – living labour as variable capital uses (under the direction of the capitalist obviously) dead labour – constant capital, in the form of tools and materials to produce commodities.

But remarks Marx, in large industry, which he considered to be the highest point of capitalist development in his day, the machinery based production process implied a revolutionary change – an inversion between dead and living labour, between variable and constant capital. In this burgeoning machine system constant capital actually uses variable capital to reproduce itself. This inversion will have profound implications for the development of capital and for the socioecological future of modernity. The system's limit ceases to be in material and throughput terms, the limits of human effort which is based on the capacity to convert solar produced biomass into labour as the physiocrats had theorized, the system's limit is now dictated by the "prime mover" of the machine system. In Marx's time prime movers had morphed from limited and localized sources such as windmills and waterwheels to hydrocarbons – carriers of appropriable, divisible, polymorphous and uprooted – in a word abstract - energy.

The productivity on which the intensive accumulation of capital rested depended evermore - as the machinery principle was generalized (extended) in productive relations - on sources of abstract energy, coal, gas and oil. Through their extraction and combustion, the growth rate was tied inexorably to a burn rate. Accumulation, both intensive and extensive, became dependant on fossil fuels as the source of the abstract energy that drove the productive process. This productive process used this energy to unite variable capital – living labouring subjects – to the fixed constant capital that became the driving force of the accumulation process. This complex of forces²⁴ and its inverted world between subject and machine was to become the central growth driver of industrial capital and modern society that lead to the Great Acceleration.

Part 2: Advanced Capitalism, Over-accumulation and Degrowth

2.1 Capital's subject, from person to corporation

Rather than retrace in a scholarly fashion how the theories of over-accumulation develop during the 20th century as an attempt to overcome some limits of Marx's economics²⁵, I will start abruptly by examining how this theoretical corpus provides an answer to the problem raised earlier concerning the reification of value as a subject and the attribution of agency to capital in the abstract by many strands of contemporary critical thought, including degrowth.

²⁴ Brilliantly described in Malm 2015.

²⁵ In particular his treatment of the consequences of the process of concentration and centralization of capital in the course of expanded reproduction and of the development of the machinery based industrial production. For an excellent overview and study of the development of the theory of monopoly capital and of the problem of over-accumulation see Foster 2014. This section is based on this work as well as further developments in the 'postkaleckian' theory of the corporation and capitalist investment by Marc Lavoie (Lavoie 2014). Finally for an overview of the reception of over-accumulation theory among left economists after the publication of *Monopoly Capital* see Foster 2016.

Marx's idealtypical capitalist is the bourgeois entrepreneur, direct owner (or co-owner) of the means of production and direct employer of labourers, both brought together under the aegis of his business enterprise. It is he personally who invests money as capital in his business, it is he personally who decides on the form and volume of investment and on the level of production. He is part of a wider class and collectively these individuated subjects are constrained by competition and the race to cut costs through productivity gains to act economically in a determined manner. When Marx states that "value aspires" to valorization he is referring to the way this system of economic determinations orients the subjective activity of members of the capitalist class.

Advanced capitalism and the phenomenon of over-accumulation appears with a radical change in the nature of the capitalist as the subject which "as value aspires to valorize itself". In a nutshell capital – at the turn of the 20th century – and today in even wider forms – becomes embodied in an organization: the business corporation. It leaves, so to speak, the wallets, pockets and purses of the bourgeois and takes form as large and complex organizations that have a socially objective – instituted existence as capitalist subjects, constrained to aim for profitability, able to transact, accumulate, employ and borrow, they become the holders of the means of production. These new capitalist property relations, where the organization is subjectivised and attributed by law agency, do not imply the disappearance of a class of individuals who define themselves through their relation to capital accumulation, new mediations structure these relations and the capitalist elite²⁶ presents itself either as the holder of a financial title ("shares") with some attributes of property or as an employee who controls the organization on a daily basis as an executive manager, or a mix of both. Either way, the relation to capital is not immediate, it is now mediated by the social structures – financial or managerial - constitutive of the corporation, and it is the organization that is the new locus of accumulation. These corporations emerge from a process of concentration and centralization of capital examined by Marx, but having a radically different outcome than the one he foresaw in his discussion of joint stock companies in book 3 of *Capital*. Instead of being a stage on the road to socialism, corporations have revolutionized capitalist accumulation all the while conserving its inner logic as "value which aspires to valorization". Their emergence has many multifaceted implications²⁷, the table below summarizes some of the more salient features of this new dynamic of accumulation as analyzed by Kaleckian political economy and Monopoly capital theory: business corporations are monopolistic firms that make prices, manage competition, control the impact of disruptive innovations to protect their fixed capital and invest a considerable fraction of their profits in the conditioning of demand for their products.

²⁶ Those who Baran and Sweezy identified as the "Company Men" in *Monopoly Capital*.

²⁷ In a mature advanced capitalist economy there still exist a myriad of smaller businesses organized along the lines of classical bourgeois property relations, moreover it is habitual to refer to these firms as the 'competitive' sector of the economy, distinguished from the monopolistic sector of big businesses. The size and economic weight of the sector is subject of much debate, neoliberal economists tend to see it as the norm and consider the monopolistic sector as an exception. They will use data that divides the number of registered business by size – in terms of capitalization or number of employees - to prove this, disregarding the fact that many of this 'registered business' are merely a legal form used by independent contract labour. Though there is a significant amount of competition between small businesses the markets in which they compete are largely the managed creation of big businesses. Many of the business that produce intermediate products or producer services depend entirely on monopsonic relations with larger firms. Small businesses in the final consumer goods and services sector for their part depend on monopolistic suppliers, compete against the Walmarts and Walgreens of this world, when they are not themselves franchises. Over-accumulation theory does not contest the existence of these businesses, but recognizes the structural power of the large monopolistic corporations over the economy and the overbearing importance of this sector in terms of output, employment, investment and profit share.

Table 2

Economic determinations of corporate capital	
<ul style="list-style-type: none"> • Monopolistic firms seek to <ul style="list-style-type: none"> – Limit market forces and « manage markets » – Limit impact of disruptive innovations – Centralize and concentrate investment through credit relations – Prolong fixed capital to reap quasi rents – Schedule depreciation – Condition demand • By accumulating organizational capacity 	<ul style="list-style-type: none"> • Overall effects are <ul style="list-style-type: none"> – Shift away from effective market enforced devalorization of fixed capital to managed devalorization by planning process – Tendency to overcome separation of circulation and production by their interpenetration – Shift from valorization crisis to latent and overt realization crisis, importance of effective demand

For the purposes of the argument here, the decisive element is the inversion between profits and growth implied in the new corporate rules of accumulation. Whereas in Marx's day a capitalist would target a maximum profit rate and growth of his capital – in both fixed and monetary form – would result from the investment of profits, business corporations actively target a maximum growth rate and profits result in as well provide the means for – as retained earnings – further growth²⁸. What does the corporation seek 'to grow' as its objective? Corporate growth is not first and foremost a biophysical or material phenomenon, though it does materialize itself as biophysical throughput. It is a social phenomenon; growth manifests itself as the expansion of organizational power over the economic relations that govern corporate capital's existence as an accumulation process. The more a given corporation grows, the more it controls its environment, including those other businesses that are included in its field of activity. All large corporations pursue this same objective, all seek to maximize their capacity to centralize and concentrate capital as organizational power over the economy, in this capitalism growth becomes an imperative more compelling than profitability which is relegated to a means to an end. This is what 20th century political economy understood as 'monopoly power' in the wide sense given to the term in Baran and Sweezy's seminal work.

Organizational capacity or power is admittedly a vague concept²⁹. It refers more precisely to two new forms taken on by capital in the course of its embodiment in the corporate form: fixed capital in tangible and in intangible assets. Corporate capital materializes itself on the one hand as a mass of fixed capital with very

²⁸ For a more technical analysis see Lavoie 2014:132-155.

²⁹ For an in-depth sociological study see Perrow 2002.

long turnover rates, in accordance with the machinery principle outlined above. The physical capital typical of advanced capitalism is not only illiquid, its typical period of amortization is very long, spanning over many business cycles, there is thus an inducement to protect this fixed capital from the forces of devalorization that where the typical determinants of capital accumulation in earlier forms of competitive capitalism. Capital is also fixed in intangible assets, be they patents, brands and other forms of “goodwill”, as well as in the routines, rules, habits and knowledge that come together and form the productive organization’s structure and through which it reproduces itself as a whole. This includes the organization’s bureaucratic hierarchy and the social identities that employees and labourers have constructed as its subjects. The expanded reproduction of intangible capital implies massive investment in specific forms of fixed tangible assets usually considered by classical marxian economics as ‘unproductive’ such as means of communication, information collection and treatment capacity, the vertically organized information processing office building is thus the necessary complement of the sprawling taylorized industrial complex (Martin 2003). Just as the existence of fixed tangible capital will spur the development of intangible assets, their development will require specific forms of fixed capital, be it vacuum propelled internal mail systems in the office buildings of the 1930’s or today’s intranets³⁰.

Growth then refers to these aspects of organizational capacity. Again, these assets are long-lived – one could even say that they are the ‘life stuff’ of the business corporation³¹ This new growth takes on the forms delineated in the previous section as forms of accumulation: corporate growth can thus be extensive: as measured in growing sales, output or capacity as well as market share or number of employees; or intensive: as organizational structure (measured in size of intangible assets), innovation, R&D, introduction of new products to the market, higher productivity, all are difficult to measure directly. As with intensive and extensive accumulation dynamics, these forms of growth are always articulated and combined, they materialize as organizational power the production and consumption norms as well as over markets³².

2.2. A theory of capitalist over-accumulation and the surplus

According to the 20th century political economy it is this corporate objective of maximizing growth all the while protecting capital fixed in productive and organizational capacity which leads to a situation of over-accumulation. Over-accumulation can be theorized in two different manners, and this will lead to a distinct diagnostic on where advanced capitalism is headed and the nature of the limits it faces. On the one hand over-accumulation can be understood in the tradition of Rosa Luxemburg as a situation where there is a glut of capitalist savings confronted with low return investment opportunities in the productive business sector of the economy. This will lead to a diversion of “value aspiring to valorization” towards speculative forms of investment, financial and eventually real estate, landed or built property. Value will valorize itself as, in the words of David Harvey (2010), “fictitious capital” and eventually will be destroyed in the wake of a financial crisis³³. We can turn to Hyman Minsky as one of the economists who theorized this process as the financial

³⁰ The interpenetration effect between production and circulation uncovered by Baran and Sweezy and considered typical of 20th century advanced capitalism implies that ‘informational accumulation’ has always been at the centre of this economy’s development. On this see Duhaime 2015.

³¹ This becomes obvious during mergers and acquisitions where the identity of the organizations is at stake.

³² One of the important outcomes of this development is what Baran and Sweezy refer to as the interpenetration of production and circulation, they lose the distinction on which much of classical and neoclassical economics is founded.

³³ After such a crisis capitalist savings will tend to shy away from being invested all together and a period of stagnation will ensue. We are probably in such a period since 2008.

cycle of advanced capitalism. Though important conjuncturally this remains a surface phenomenon in the long term.

Another approach is to understand over-accumulation as a structural feature inherent to corporate dominated capitalist economies. This was the approach developed by Paul Baran and Paul Sweezy in *Monopoly Capital*, building on a theoretical perspective pioneered by Thorstein Veblen's *Theory of Business Enterprise* and later developed into a systematic theory by followers of Kalecki, Sylos Labini and Joseph Steindl. For these authors, over-accumulation was a "latent crisis form". Instead of examining the episodic bouts of violent capital devaluation that marked advanced capitalism's trajectory, attention was focused on a longer secular trend: how corporations have to constantly find ways to productively absorb the *economic surplus*³⁴ they generate. Baran and Sweezy actually considered the "tendency of the surplus to rise" as a distinct "law" or immanent property of advanced capitalism, and the source of over-accumulation (Baran/Sweezy 1966:8-9). The surplus tended to rise for a number of reasons: because at the micro level each corporation searches for ever greater productivity, but at the macro level these productivity gains are not transformed into the mobilization of less labour time, labour is transferred from the directly productive to the organizational functions through the interpenetration effect. Since price cutting is the exceptional outcome of cost reduction, heightened productivity is either captured by worker wages and implies expanded consumption, internalized in the corporation as overhead in the form of top management income, or as retained earnings which must be invested either as fixed tangible or intangible capital. Both these channels imply expanded production. The objective of the corporation being a maximized growth rate, investment will also be funded, on top of retained earnings, by bank credit and other forms of finance, the surplus will thus rise through the development of these financial relations.

Over-accumulation can be defined as the constraint to absorb the rising surplus. The absorption of the rising surplus is directly dependent on the specific way investment is materialized as extensive and intensive accumulation. In extensive accumulation productive capacity always oversteps existing demand, but the situation of overproduction has to be managed in such a way as to avoid the destruction of value locked in mass produced commodities. In intensive accumulation existing fixed capital has to be protected from the devaluating impact of rising productivity, at the same time as investment is directed towards improving productivity. Both these forms of management of the devaluation of fixed and intangible capital necessitate the development of organizational capacity in demand management – marketing research, branding, advertisement, consumer credit – and technological innovation management – R-D, patenting, planned obsolescence - these activities are further means by which the rising surplus is absorbed through the labour process and consumption of employees in these sectors (white collar and pink collars). Paradoxically the economic practices that develop at the firm level as an answer to over-accumulation contribute to the tendency

³⁴ There is much debate since Baran and Sweezy's *Monopoly Capital* concerning the form of this economic surplus. It is obviously first and foremost a monetary phenomenon, as reminds us John Bellamy Foster its simplest definition is the "difference between the costs of production and the price of the actual (or potential) output generated". This ex post definition can be contrasted with an ex ante definition where the economic surplus manifests itself in a monetary form as profits (retained earnings) that must be invested. And, given the existence of growth maximizing corporations who will fund their investment through the access to credit, the surplus also refers to the overall investment rate of the economy. Added to this is the existing stock of fixed capital as well as those intangible assets whose devaluation process is being actively managed by corporations. Baran and Sweezy include public expenditure in their model, following the circuit/postkeynesian school we consider these to be autonomous forms of expenses instead of captured income streams. Following initial insights by Paul Baran in his *Political Economy of Growth*, the surplus concept was transformed by Ron Stanfeild, Henryk Szlajfer and later John Bellamy Foster into a normative concept. This issue of the nature of the surplus will be taken up in further research. On this question see the July 2016 issue of *Monthly Review*, in particular articles by Mary V. Wrenn, Jan Toporowski and John Bellamy Foster.

of the surplus to rise and to the growth imperative imposed by monopolistic competition on capitalist corporations. Surplus absorption is the answer to the ever larger surplus production and produces an ever greater surplus to be absorbed, this is over-accumulation in a latent and secular form.

The economic dynamic of the twentieth century, especially of the advanced capitalist core after the Second World War, can be understood as determined by the constraint of surplus absorption, and this can help explain the economic forces behind what environmental historians have called the Great Acceleration.

The monopoly capital theory of over-accumulation argues that there are basically two ways the surplus of advanced capitalism can be produced and absorbed in a situation where corporations seek to maximize their growth and thus the growth of the economy.

1. The surplus can be absorbed through the existence of excess capacity. Aggregate investment in the capacity to produce always oversteps existing demand, this excess capacity will lead to either overproduction and the inclusion of wasted output as a cost of production – as is the norm in the garment and food industry, or it will lead to the strategic under-utilization of productive capacity, as is the norm in the extractive industries.

Though this has been an important dimension of growth since the advent of advanced capitalism in the 20th century, even more important has been:

2. The planned absorption of the surplus at the corporate level, through waste based consumption, collective and individual. This was a central and key aspect of 20th century economic growth, and has survived and developed even further into the 21st.

Waste based consumption implies at the onset a change in the socio-economic mode of existence of wage labour. From producers of output, they must be socialized as 'consumers' (see: Ewen 1976; Cohen 2004), and their income in the form of wages, from costs to be controlled, become major sources of spending power needed to validate the 'quantitative growth' in productive capacity. Put another way, as corporations expand their productive capacity, consumption norms³⁵ have to follow so as to absorb these new commodities, and this further implies – if price cutting is not an option – that labour income has to rise. In certain progressive circles this is the nice and comforting story of Fordism as capitalism's Golden Age³⁶, a narrative still prevalent today³⁷, where high growth rates – in GDP terms – are accompanied by rising real labour income, high employment rates, high investment rates and rising affluence and economic security for those living in the capitalist core that are not racialized or otherwise structurally marginalized. One must not underestimate the profound transformation this brought about among the wage earning majority in the capitalist core and its

³⁵ Paradoxically just as at the macro-economic level consumption and production norms had to be reflexively articulated – and this was the stuff of investment in organizational capacity, what Baran and Sweezy conceptualized as the 'sales effort', at the individual level of daily existence of workers/wage earners, they became deeply estranged from another. The wage earning subject is defined as a being that cannot produce what he directly consumes and cannot consume what he directly produces. This specifically fordist/postfordist form of alienation feeds the growth of the 'do it yourself' sector of the economy. The wider and deeper is this rift between consumption and production, the more 'producing for consumption' in the household will be commodified in the DIY form. This might explain why the proliferation of frozen meals and 'just-eat' accompanies the rise of cooking show hosts to stardom status.

³⁶ For a synthesis of classical works behind this narrative see Marglin/Schor 2007.

³⁷ One can turn to the discussion of 'wage-based growth' scenarios as an alternative to neoliberalism and the stagnationist effect of austerity policies in the advanced capitalist core. The ILO has sponsored a major research effort on this issue coordinated by two prominent postkeynesian/kaleckian economists Marc Lavoie and Englebert Stockhammer.
http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_218886/lang-en/index.htm

impact on the social and political institutions of the western working classes. Growth became in these societies – to cut things short – a way of life (Schmelzer 2015).

It would be a mistake to focus solely on the extensive dynamics that molded the consumption norm of 20th century advanced capitalism. Doing so leads us to contemplate the Great Acceleration as necessary trade off between the material comforts and the security that are embedded in the fordist/postfordist consumption norm and the ecological impacts of this affluence. Surplus absorption rested on a less progressive – one could even add 'darker side' of accumulation dynamics.

2.3. The articulation of overproduction to overconsumption as surplus absorption

If the economic symptoms of over-accumulation manifest themselves in unused productive capacity, unsold and wasted output, under-utilized technologies and purposefully discarded 'disruptive' innovations, which all revolve around the dynamics of production, they also rapidly found an expression in the dynamics of consumption. This concerned not only the quantitative but also the qualitative aspect of the commodities absorbed by the mass of wage-earners – as well as more generally the mass of commodities or total goods and services through which modern societies of the advanced capitalist core reproduce themselves. Investment in intensive accumulation imprinted at the onset of advanced capitalism a specific commodity form. As conceptualized by John Bellamy Foster who himself extended this category from initial insights by Paul Baran, if Marx's classical capitalism contented itself with the production of use values able to carry exchange value, at its inception advanced capitalism asked more of the mass of commodities it produced, they had to be “specifically capitalist use-values” (see Foster 2014, 2011). Use values whose very form answers to the imperative of over-accumulation: absorb the surplus. A light bulb that can shine on for decades, a nylon sock that is virtually indestructible through normal use, household appliances that can be easily repaired, electronic devices that can be upgraded, all these use values where and still are technically feasible forms of output, but they are also all equally economically disastrous to monopolistic corporations – and bad for growth.

A specifically capitalist use value has a planned useful life cycle that locally and specifically accelerates the productive capacity of over-accumulated fixed capital, the design and sales process in and of itself also mobilizes expanded organizational capacity. A specifically capitalist use value accelerates biophysical throughput. Monopolistic corporations seeking to remain competitive will attempt to cut costs all the while inflating the surplus content of their output, the end result being that they will become ever more efficient producers of waste laced commodities. Moreover it accelerates the 'burn rate' of fossil fuels to power the productive process according to the machinery principle outlined earlier. The burn rate is further accelerated as capitalist use-values are produced that integrate directly the machinery principle of abstract energy based inversion between subject and object. The car, household appliances, power tools as ridiculous as the leaf blower, and then eventually electronic communication devices progressively enrap and redefine the material object world of daily life all the while accelerating the combustion rate of fossil fuels needed to power modern society. Energy waste, material waste and ecosystem waste are all embedded in modern society's object world.

This is the darker side of fordist and postfordist affluence. And of course, according to the principle of interpenetration, producing these new surplus absorbing capitalist use values is a complex and intensive process which absorbs, on its own, a significant amount of labour as well as energy, whether it be in material design, engineering of new materials or research in marketing, branding and communication strategies.

We can conveniently divide this new form of intensive accumulation or rather intensive 'over-accumulation' in two economic sectors – investment in the management of cultural change and investment in the material infrastructure of society; both come together as the central determinant of the consumption norms typical of advanced capitalism. Both concur to form a specific mode of life in the advanced capitalist core, where affluence is a synonym of newness, high object churn rates and intense abstract energy use. The classical environmentalist concept of over-consumption in this light means something new, it is not a moral phenomenon, it signifies the constrained and determined consumption of use values that have a significant and planned waste dimension. This pattern of overconsumption validates a dynamic of over-production – which in passing implies the existence of over-work. Marx states in the *German Ideology* that a 'mode of production' is not defined by its capacity to physically reproduce individuals according to a norm of mere subsistence, rather it manifests a certain mode of living – expresses a way of life in modern terms (Marx/Engels 1998: 37). Advanced capitalism expresses a mode of life built around the constraints of surplus absorption, not affluence, nor the progressive emancipation from want and need, but rather the obligation to waste, to dutifully overconsume what our mode of production over-produces.

The table 3 below summarizes these findings.

Over accumulation and growth

- **Intensive accumulation and the consumption norm**
 - Production of specifically capitalist use values
 - Form incorporates « waste » as a surplus absorption mechanism
 - Accelerates throughput and validates overproduction
- **Overconsumption**
 - Structural feature of advanced capitalism, not moral evaluation of consumer hubris
 - Material dimension: accelerate throughput
 - Cultural dimension: consolidate value of newness and disposable object norm

It is in this very specific sense that the trajectory of advanced capitalist development is marked by a metabolism that has taken the form of the Great Acceleration. This biophysical phenomenon is the product of

both the extensive and intensive logics of over-accumulation, dependent on an ever greater and accelerating throughput of abstract energy, living biomass and inert materials.

From a degrowth perspective this theory of advanced capitalism has two important political and historical implications.

1. Following an initial insight by Juliet Schor, we can move the critique of overconsumption from the terrain of morals and psychology to that of structural causes dependent on objective social relations, as well as from a simplistic condemnation of the quantitative accumulation of 'more stuff', to nature – social as well as biophysical – of the stuff accumulated.

2. We can safely predict how monopolistic and now global corporations will try and adapt to any form of ecological imperative that could limit/constrain their activities, they will do so through new extensive and intensive forms of 'over-accumulation';

- extensive: appropriating, buying and selling existing life forms, ecosystems, carbon or land;

- intensive accumulation that will 'sustainabilize' in a superficial manner a further acceleration of the biophysical throughput, this could mean more recycling, more intense use of engineered biomaterials, the temptation of geoengineering to keep a growing burn rate, more high technology, etc.

Conclusion: Neoliberalism, the Tendency towards Stagnation and the Degrowth Conundrum

I will conclude with a look into the current conjuncture which represents a real political conundrum for degrowth as a social movement. What happens when globally, capitalist corporations shift from a high growth to a high profit objective? High profit in the specific sense that they wish to generate stable, predictable and relatively high earnings to satisfy a financial norm of return that implies high dividends and a significant transfer of profits to financial investors through share buybacks. When furthermore these same financial investors (who can be as diverse as top wealth owners, pension fund managers, investment bank based traders and stock optioned executives of industrial corporations) impose on these same corporations a liquidity management convention that valorizes high corporate savings retained as cash to be able to keep dividend and share buy back rates stable in the case of an economic downturn or pressure on earnings? For profits to rise relative to growth, some growth will be sacrificed, costs will be squeezed which eventually will impact wage rates which will have to grow at a slower rate than productivity, and thus final demand will be dampened. Furthermore, the dual pressures on earnings of financial accumulation of industrial profits through dividends and share buybacks, and a high corporate savings rate will dampen investment capacity as well as force businesses to rely more on credit. In this climate, risky long term commitment of organizational capacity for the development of new products, materials and productive processes will be shunned in favour of short term investments that deliver cost savings primarily through wage repression. In this context we can expect a partial shift in the constraint to absorb the surplus from the mass of wage earners towards the smaller elite of financial accumulators. We obtain with this mix of economic determinations typical of late neoliberalism an economy that delivers low growth rates and has a built-in tendency to stagnate.

In the cultural and political structures of advanced capitalism, this will transform the wage-earning class as a political agent into a 'growth demander'. The political and social institutions of wage-earners as an organized class – unions and progressive political movements – will see in the return to the social arrangements of a

fetishized capitalist golden age of growth the solution to the social question of the times. A very bad political conjuncture for degrowth as a social project, unless it can convincingly develop a post-capitalist vision of the economy and of modern society. As long as capitalism remains the horizon in which humanity's future is envisaged, good 'inclusive' growth will be the fetish behind which the forces of the Great Acceleration outlined above will continue to drive the history of the planet and of its peoples.

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