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Why are we growth-addicted? The hard way towards degrowth in the involutionary western development path

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ABSTRACT

By questioning the origins of the inertia facing the degrowth movement, this contribution identifies property as the constitutive institution of capitalism, and property expansion as the dominant socioeconomic process leading world societies to economic path dependence, techno-institutional lock-in and eco-social impasse. Demonstrating why and how property-based economic rationality subordinates ecological and social considerations to capitalist requirements, this paper stresses both the need for an inversion in the hierarchy of social norms and the systemic opposition to such an inversion, which emanates from the capitalist/industrial expansion. The text also brings to light some disregarded processes underlying the current economic crisis, by pointing out the institutional and technological locked-in situation into which the western development path has led our societies.

Every scientist interested in the degrowth debate has noticed the strong inertia which impedes any attempt to orientate the world development path towards ecological sustainability and social equity. The Meadows Report [1] insisted on *The Limits to Growth* as early as 1972, with Nicholas Georgescu-Roegen [2] presenting his bioeconomic program that very same year. Thirty-seven years have passed, but the economic system is far from having decoupled itself from its material throughput, even progressively. Quite the contrary, it has become more than ever dependent upon the exploitation of natural and human resources, reinforcing both ecological degradation and social inequities to the point that the human viability of the Biosphere is in peril.

Why is this so? When most social and ecological indicators indicate that our growth-based development path has led our societies close to a general collapse, why do our self-proclaimed "developed" societies prove unable to get rid of "growthmania" [3] and initiate the necessary reorientation? While answers lie in the causal role of ideology, economic theory, competition or vested interests' strategies, we will investigate here the specific economic rationale of capitalist expansion that induces and forces the economic system to persistently realise a process of economic growth. Such an analysis will help identify the institutional and technological obstacles that prevent the socioeconomic system from entering into the physical degrowth process.

1. Property as the constitutive institution of capitalist economies

In order to understand the particular manner in which the capitalist mode of development orientates the evolution of the socioeconomic system, a close examination of the institution of property is required. Such an examination was recently carried out by two German economists, Gunnar Heinsohn and Otto Steiger [4–7], and was elaborated further by Steppacher [8–11] and van Griethuysen [12–15], who integrated property economics findings into the analytical framework of critical institutional and ecological economics. We summarise their argument here and elaborate on some of their findings, adopting an evolutionary perspective much in the same vein as the precursory analysis of capital developed by Thorstein Veblen in the early 20th century [16–18].

Property economics identify two different potentials in the institution of property: (1) The first potential, which Steppacher [11] called the *possession aspect of property*, refers to different levels of use rights, such as access, withdrawal, management, exclusion and transfer, provided by property rights to their holder (e.g. Refs. [19,20]); (2) The second potential, the *property aspect of property* [11], refers to the possibility of engaging the security

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associated with the legal property title[1] in a capitalisation process,[2] the most elementary one being the *credit relation*.

Following Heinsohn and Steiger [4–7] in identifying the credit relation as the capitalisation of the property premium,[3] Steppacher [8,10] points out four essential phenomena that emerge from the credit relation: (1) creation of *money* as a transferable anonymous property title; for to be exchanged, quantified and somewhat materialised, the value of property's immaterial security needs to be expressed through an *ad hoc* medium[4]; (2) *interest* as compensation for the creditor's loss of property premium[5]; (3) *indebtedness* as a counterpart of money disposal for investment and (4) creation of a monetary valuation *standard*, defined by the creditor, and diffused by financed activities throughout the economic system. As the recourse to credit becomes economic common practice, such phenomena spread in the economic system as economic agents actualise specific potentials of property.

2. The potentials and constraints of the credit relation

Through the credit relation, an economic agent can expand his economic activities (*growth*) or invest in new activities (*development*). This possibility is made feasible by pledging the property's immaterial yield (actualisation of the property aspect of property) and affects neither the physical features of resources nor their material yield (actualisation of the possession aspect of property).[6] Thus not only can both potentials of property be simultaneously engaged, but the earning capacity of engaging property in a capitalisation process comes *in addition* to the income stream that can be earned from the concrete, material exploitation of the property. Such a dual actualisation allows for the *cumulative enrichment of proprietors* since a higher material yield usually implies a higher earning-capacity through capitalisation which can itself be invested in increasing material productivity, and so on.[7]

The possibility of engaging simultaneously both property potentials and the possibility of cumulative enrichment of proprietors makes explicit two characteristics of property-based economies: (1) Economic growth through expansion and development through innovation are phenomena that are spontaneously impelled in a property economy: once emitted, money can be invested by the debtor in productive capital formation and new market activities or be used to finance any other type of innovations. Conversely, this explains why economic growth and development are so difficult to achieve in economic systems with no formalised property system, as pointed out by Hernando de Soto [21]. It further makes explicit the particular power and competitive advantage property regimes present over possession regimes; (2) A general socio-cultural trend towards the increasing reinforcement of proprietors' social status, and more fundamentally, towards the cumulative reinforcement of the institutional status of property as the cornerstone institution of capitalist economies.

For, as pointed out by Steppacher [8–11], capitalisation not only allows for growth: *it imposes it*. This results from the contractual obligations debtors must fulfil once they have engaged property as collateral in a credit contract: *refund the loan* and *pay the interest in due time*. Altogether these obligations impose the following requirements for the debtor [8–15]:

(1) *solvency*, which requires the valuation in monetary terms of economic activities according to the standard defined by the creditor;
(2) *profitability* of productive activities, which results in making the cost-benefit analysis routine or systematic;
(3) *time pressure* for income realisation, which permanently pressures the economic system to accelerate both production and consumption.

The role of such requirements in the orientation of the capitalist economy cannot be overemphasised. Debtors who fail to meet those constraints will be eliminated from the property-based economy (through the seizure, foreclosure or acquisition of their property). This also means that any economic behaviour motivated by alternative criteria will be discouraged, even eliminated by the capitalist requirements. Proposals for the physical degrowth of the economic system or a less consumerist society may be directly affected by the particular nature of that property-based cultural selection.

3. The capitalist economic rationality and the subordination of eco-social considerations

By deciding which activities to finance, the creditor gives the primary impulse towards the capitalisation process and the expansion of the capitalist economic system. Therefore, economic rationality in a property-based economy is primarily defined from the point of view of the property of the creditor.[8] This general orientation towards the monetary value of property, which imposes the solvency of economic agents, the monetisation of economic activities and the profitability of economic activities, constitutes the *specific rationality of a capitalist, property-based economy*.

In order to meet the specific requirements associated with capitalisation, business entrepreneurs develop three main types of economic strategies: commercial strategies, institutional strategies, and profit-driven innovations. *Commercial strategies* ensue from the profitability requirement that constantly pressures entrepreneurs to reduce the monetary costs they are accountable for and to increase the revenues to which they are entitled [22]. This results in various commercial strategies among which we may cite labour-saving technical progress, lay-offs, substitution in favour of the

[1] Heinsohn and Steiger [4–7] regarded this security as the immaterial yield of property titles and called it the *property premium*.

[2] "capitalization is an appraisement of a pecuniary "income-stream" in terms of the vendible objects to the ownership of which the income is assume to inure. To what object the capitalized value of the "income-stream" shall be imputed is a question of what object of ownership secures to the owner an effectual claim on this "income-stream." [18:122].

[3] In a credit relationship, the creditor temporarily loses his property premium by *burdening* his property while the debtor loses his by *encumbering* his property as collateral [4–7].

[4] Identifying in the immaterial yield of property titles the origin of *money creation*, Heinsohn and Steiger's property theory of money contrasts with Keynes's state theory of money, where central banks create money *ex nihilo*, on the basis of state's fiscal authority (the state being able to refund his debts by raising taxes). As derivatives of de jure claims, property money, or creditor's money, demonstrates a remarkable stability in value, while the value of state money, or debtor's money, is subject to much higher volatility.

[5] In Heinsohn & Steiger's theory, the interest compensates the loss of property premium suffered by the creditor who burdens its capital. Without a positive interest rate, there is no compensation for such loss, and therefore no issuing of genuine money by the burdening of a creditor's property.

[6] "During the period of the loan, lender and borrower continue the physical use of the possessory side of their burdened assets." [6:187]. This was already noticed by Veblen [16:163ff].

[7] "... any increase of the aggregate money values (...) will afford a basis for an extension of loans (...). The extension of loans on collateral (...) has therefore in the nature of things a cumulative character." [16:105–6].

[8] "All economic decisions and evaluations are hierarchically differentiated, integrated, balanced and centred according to the impact they are likely to have with regard to the security, quantity, quality and value of property." [11:336].

cheapest natural resources, delocalisation, marketing and advertising.

If economic agents must constantly improve their cost-benefit ratio, one must remember that "institutional arrangements define who must bear which costs, and who may reap which benefits" [23:57]. This also means that "the structure of institutions provides the theoretical (as well as the legal and political) rationale for the disregard of certain costs that attend particular economic activities" [23:57]. Therefore, it is incumbent on any business agent acting in a property-based economy not only to favour institutional arrangements that secure and increase the monetary value of the property, but also to pursue *institutional strategies* aimed at the privatisation of monetary benefits and the socialisation of the costs, even when this ends in the transfer of negative impacts of economic activities to third parties [22].

In a property-based economy, most *economic innovations are profit-driven*. This not only refers to conventional economic innovations, as defined in 1934 by Schumpeter [24], but includes all kind of institutional strategies that aim to favourably affect the monetary results of economic agents. In such interpretation of innovations, profit relates not only to the short term positive difference between monetary benefits and costs (a basic survival requirement in the property economy), but to a value of capital which includes both actual and future return,[9] evaluated according to the capitalisation of both tangible and intangible assets.[10]

Since innovations are orientated towards profit, it is worth noting that the so-called *rebound effect*, which characterises a situation where the higher energy efficiency per unit of output that results from technical improvements in the production of goods is more than compensated for by an increase in the number of units produced and sold [25], is no paradox whatsoever, but the expected outcome of a profit-driven investment.

In the capitalist rationale, considerations of an ecological and social nature are relegated to the background. Not that they are in themselves incompatible with a property regime's rationale, but they can only be considered by economic agents insofar as they are compatible with the property's specific requirements. Restraining competitors by institutionalising ecological and/or social regulations, establishing voluntary labels to increase sales income, establishing new property titles granting exclusivity over "free" resources (as illustrated in the climate change international regime by the creation of a carbon market resting on exclusive rights to emit) are among the situations where eco-social considerations comply with the property's specific requirements. However, from an eco-social point of view, those so-called « *win–win solutions* » are often problematic, not least because they usually result in further economic growth, increased entropic degradation and widened social inequality.[11]

4. Materialising growth, eco-social repercussions and the need for social hierarchy inversion

The economic pressures imposed by the self-expansion of the property-based economy through capitalisation are exponential monetary growth, time pressure, monetary cost efficiency and favourable institutional conditions [11]. In the past, property-based economies have responded to such imperatives through territorial expansion, property concentration and over-exploitation of renewable resources (e.g. Refs. [4,26,27]). With the advent of the *thermo-industrial revolution* [28,29] and the invention of technologies allowing the exploitation of fossil energy, technological innovation became the main method for materialising economic growth. Based on mineral resources,[12] industrial innovations have appeared particularly well suited to the capitalist goals of producing more, faster and newer. In return, industrial development has imposed new constraints on economic activities, such as mechanisation, standardisation and planning, reinforcing economic and political power concentration [32]. Such an industrialising path has reinforced the *dependency of the capitalist expansion on mineral resources*, increasing the scarcity of these resources together with their strategic character.

The physical growth process on which property-based industrial expansion ultimately rests affects the natural environment in many, interrelated ways: over-exploitation of local biotic resources leading to a global biodiversity crisis, expansive depletion of mineral resources, lowering of ecosystem resilience and disruption of the global ecosystem, the Biosphere. Altogether, such human-induced phenomena affect natural processes up to the point that both the Biosphere and humanity are said to be entering a new geological era called the *Anthropocene* by eminent scientists [33], where the evolution of the Earth System is for the very first time dominantly shaped by the activities of one single species, humans.

Resting on the exclusive privileges of the proprietors and the exclusion of non-proprietors, the expansion of the property-based economy contributes to widening social inequality, the reinforcement of a capitalist elite together with an increasing underclass of excluded non-proprietors. In the absence of significant redistribution policies (which most members of the elite oppose) such socio-cultural evolution spontaneously locks itself into a recurrent social crisis. Moreover, the widening of social inequality reinforces environmental disruption, as both extreme poverty and opulence are causal factors of ecological degradation [22,34,35].

In order to avoid such an eco-social collapse, a radical reorientation of social decision criteria needs to be implemented. Conceptually, such a reorientation would imply the shift from the property-based hierarchy where social and ecological considerations are subordinated to the capitalist economic rationality towards an *eco-social rationale* [36], where economic activities are subordinated to social and ecological imperatives.[13] Movements

[9] "The value of any given block of capital (…) turns on its earning-capacity (…) not of its prime cost or of its mechanical efficiency. (…) But the earning-capacity which in this way affords ground for the valuation of marketable capital (or for the market capitalization of the securities bought and sold) is not its past or actual earning-capacity, but its presumptive future earning-capacity." [16:152–3].

[10] Intangible resources, such as customary business relations, reputation for upright dealing, franchises and privileges, trademarks, brands, patent rights, copyrights, exclusive use of special processes guarded by law or by secrecy, exclusive control of particular sources of materials, all immaterial assets that Veblen (16:139) associates with the notion of *good-will*, have turned out to be "*the nucleus of capitalization in modern corporation finance.*" [16:117].

[11] Win–win solutions should be encouraged as long as economic, ecological and social objectives truly converge, which does happen in some cases. In situations where economic, ecological and social objective diverge, which corresponds to the general case, the capitalist rationale is of no help and must be subordinated to an eco-social rationale.

[12] Contrary to biotic resources, whose growth potential is naturally limited, mineral resources are capable of inducing a process of exponential growth: the stocked energy-matter can be used to develop machines and motors that allow an even quicker exploitation of the stocks [30]. The process is therefore circular and cumulative. However, because of their finite nature, mineral resources (and fossil fuels in particular) will allow the fuelling of exponential economic growth only for a historically limited time and with grave environmental consequences [30,31].

[13] An eco-social rationale could subordinate property capitalist expansion through the following, interrelated ways: (1) delineating the scope of the exclusive sphere of property, notably in excluding economic domains from property's logic of exclusiveness; (2) setting the frontiers of property capitalist expansion, by both regulating capitalisation practices and confining the expansion path within ecological and social limits, and (3) defining the modalities of an equitable distribution of wealth, at both the intra- and intergenerational level.

such as ecodevelopment in the 70s, alterglobalisation and degrowth nowadays, rest on such an eco-social rationale.

A radical *inversion* in the hierarchy of decision-making is thus required. But what could be the chances for success of such a transition phase when property criteria play an ever more dominant role in the cultural evolution? Besides the systematic opposition coming from interest-groups that take advantage of the capitalist expansion (Veblen's vested interests) and the huge technical difficulties involved in concretely shifting from an industrialised, mineral-based development path to a sustainable one, we want to point out here that the very particular nature of the western development path *acts in itself* as a systemic obstacle to such a reorientation.

5. The self-expansion of the property economy

Because of the control it confers on both material and financial flows, as well as the cumulative enrichment and increasing power it induces, the institution of property, its institutional status and the conditions of its expansion are at the centre of proprietors' preoccupations. Consequently, proprietors will constantly favour and seek the means to secure and expand the property regime. In most cases, creditors will support a secure capital market that provides them with a stable source of revenue assuring their long term cumulative enrichment. However, because of the finite nature of money as a derivative of property,[14] and with the advent of managers whose interest diverges from both the society's and the proprietors',[15] competition enters the capital market. In particular, in order to get access to and engross the most profitable technology with the best pecuniary conditions in the shortest term, capital managers will promote a competitive credit market in which business entrepreneurs have to compete with one another to access external capital.

For the entrepreneur acting in the competitive business context, having recourse to external capital through the engagement of property as collateral turns out to be a decisive advantage. However, as Veblen [16:96] put it, "under the regime of competitive business whatever is generally advantageous becomes a necessity for all competitors. Those who take advantage of the opportunities afforded by credit are in a position to undersell any others who are similarly placed in all but this respect". For this reason, after earlier entrepreneurs had benefited from initial advantages provided by collateral-based external capital, other economic agents had no choice but to have recourse to credit in order to avoid economic elimination. The recourse to credit, which first appeared as a competitive advantage, soon became a condition for economic survival in a competitive business environment [16]. Several lessons can be drawn from this.

Firstly, in a competitive property economy, recourse to external capital is not a matter of choice, but obligation: "… under modern conditions business cannot profitably be done by any one of the competitors without the customary resort to credit." [16:97]. Economic agents do not take recourse in credit only because they want to get richer, but because they have to: not having recourse to external capital means economic elimination.

Secondly, the conjunction of competition and capitalist expansion make the capitalist selection criteria ever more stringent: while the rationale of credit requires *absolute profitability*, competitiveness imposes *relative profitability*: only the concerns with the highest profitability will get access to the finite stock of capital. As credit practices and capitalisation spread into the economic system, not only insolvent agents and unprofitable economic activities, but also profitable economic activities that prove unable to generate a competitive monetary return get eliminated.[16]

Thirdly, creditors are the major beneficiaries of the expansion of property. The reason for this is twofold: (1) as noticed by Veblen [16:97], under the competitive employment of credit, "the aggregate earnings of an enterprise resting on a given initial capital will be but slightly larger than it might have been if such a general recourse to credit to swell the volume of business did not prevail"; (2) creditors, who do not support the risk associated with the realisation of productive activities (which are borne by the debtor), are frequently in the position of buying insolvent agents' property after their nominal value has dropped below their real one. This leads to property and wealth concentration, one of the most characteristic traits of the property-based economies [27].

Fourthly, property capitalisation and competition interact in a circular and cumulative manner: while capitalisation defines solvability, profitability and temporal pressure as competitive criteria, competition weeds out uncompetitive activities and reinvigorates the potential of capitalisation through property concentration. Such an institutional web, in which property self-expansion, competition and managers' vested interest interplay, is self-reinforcing.[17]

The fifth lesson is that entrepreneurs acting in the competitive business context of a property economy face a *double bind* situation: either they join the capitalistic competitive race towards profit which subordinates ecological and social considerations to economic exploitation, with the permanent risk of being excluded whenever insolvent or insufficiently profitable, or they do not join in and allow other agents to appropriate every available resource and exploit them for their own exclusive interests. Only two options are available for choice and, while each excludes the other, both are problematic, individually or collectively.[18]

By entering the competitive race to future profit (which they are forced to do in order to avoid economic elimination) economic agents condemn themselves to adopt the particular economic rationality of capitalism, where ecological and social considerations are subordinated to the quest of increasing property value. In doing so, they join and reinforce a very problematic development path, for it results in the general diffusion of the capitalist rationality together with the expansion of the property economy, the widening of social inequities and ecological degradation.

[14] Contrary to monetary Keynesianism that assumes no scarcity of state debtor's money, property economics considers that property-based creditor's money, as a derivative of assets, is necessarily limited.

[15] "Veblen (1904:158) distinguishes several organisational levels of interests in decision-making: (i) the interest of the community, (ii) that of the corporation, and (iii) that of the corporation's directorate. While the interest of communities "demands that there should be a favourable difference between the material cost and the material serviceability of the output", the corporation looks for "a favourable pecuniary difference between … cost and sale price of the output", and the directorate is interested in "a discrepancy … between the actual and the putative earning-capacity of the corporation's capital." [11:337].

[16] However, unprofitable businesses do not get eliminated if they are too big to fail, as US government bailouts for banks and car industry have recently illustrated. This illustrates the lock-in situation into which the capitalist/industrial mode of development has led western societies.

[17] This systemic interrelation, present in Veblen's work, was raised to us by an anonymous reviewer.

[18] According to Steppacher [11], the double bind was firstly pointed out by Garrett Hardin [37] in his description of the competitive race for natural resources in the absence of institutional arrangements, a context of free access which the biologist confused with the common regime [38].

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6. Global capital and the pecuniary magnate

Credit is the primary form of capitalisation. Its causal analysis allows for an adequate description for the early stages of capitalism only. Considering the generalisation of credit as a special case of the general diffusion of any competitive advantage in a competitive context, Veblen presents in his *Theory of Business Entreprise* [16] a deep analysis of the subsequent stages of capitalism, where property and capital merge in different economic organisation such as joint stock companies and corporations, which "start with a fully organized capital and debt, the owners of the concern being also its creditors" [16:119].

In a subsequent work, Veblen [17,18] depicts the emergence of a new capitalistic organisation out of the cumulative process of property concentration, and refers to it as the *pecuniary magnate*. Contrary to the conventional "capitalistic employer" [18] who looks for the most profitable investments the industrial system has to offer, the pecuniary magnate's core business consists of buying and selling capital goods. As ways of expanding capital, the pecuniary magnate systematises the capitalisation of already existing tangible and intangible assets through the mergers, acquisition and reorganisation of corporations.

At the abstract, purely monetary level where pecuniary magnates are competing, the volume of credit is the decisive point [16]: property with the highest value is the most powerful in attracting external capital, others run the risk of elimination through acquisition. Moreover, since the institutional framework establishes what mergers, acquisitions and coalitions are possible, pecuniary magnates invest all their power and influence in shaping institutional conditions that favour their strategies.

At this later stage of capitalism, the pecuniary magnate influences the orientation of the economic system as a whole.[19] The abstract reasoning of the proprietor is systematised in and by the global capital market, increasing the path dependence of property-based development. Ever more social situations are analysed according to the capitalist perspective and rationality, with options being evaluated solely with regard to their impact on property. Moreover, with the globalisation of capital market, the double bind has shifted to the global level: pecuniary magnates have no choice but to increase property by capitalisation, market organisation and corporate coalitions. Global property expansion not only diffuses, but also imposes its specific rationale on every context that presents an opportunity for economic value, and no single actor can either reverse or even slow down the process. The involutionary path, which both reinforces property internal selection criteria and discriminates alternatives, is self-reinforcing.

In such a cumulative path dependence, the capitalist development mode gets locked into its own internal functioning and turns out to be incapable of adapting to external evolution. Unable to perceive the ecological or social repercussions of capitalist expansion unless it affects property rights and privileges, the property economic rationale proves unable to conceive any institutional response that goes beyond property-based rationality, as the international regime on climate change has shown.

Incapable of apprehending external phenomena, locked into its own internal rationale, the contemporaneous property economy has become so blind as to neglect even the sound principles of banking,[20] as the subprime crisis has recently illustrated. Competing with one another in a race for higher monetary return, "higher plane capitalists" [18] have granted loans to economic agents without any security to engage as collateral, without making adequate reserves and by capitalising and disseminating risks through derived financial products. Observing such unwise capitalisation practices, one might understand Veblen's 1904 statement [16:106] that the "cumulative extension of credit through the enhancement of prices goes on, if otherwise undisturbed, so long as non adverse price phenomenon obtrudes itself with sufficient force to convict this cumulative enhancement of capitalized values of imbecility."

7. Conclusion

The institutionalisation of property title as *de jure* claims on economic resources makes the economic system enter into a specific economic rationale, where property specific security can be actualised in relations that are inexperienced in non-property, possession based societies. Emerging from the self-organised actualisation of property specific potential (property premium contractual engagement), credit relations create and diffuse the monetary dimension as the one against which every property and economic activity must be assessed. Expanding the earning-capacity of assets, credit relations induce a process of circular and cumulative enrichment of proprietors, both creditors and solvent debtors, resulting in the self-expansion of property-based economy. Credit expansion requires the reinforcement of a property regime through *ad hoc* institutional arrangements and organisations that aims to secure and increase the value of existing property. In such a process, any resource or instrument that presents a potential economic value is rapidly integrated into the dynamics of exclusive appropriation and control. This includes natural and human resources, technology and know-how, as well as other intangible elements of political and economic power.

In this circular and cumulative process of property expansion, no internal criterion acts as a limiting factor. On the contrary, as the actualisation of property specific potential requires a capitalisation process, the functioning of a property-based economy seems condemned to expand and to capture into its rationale of exclusivity, accumulation and exploitation, any valuable resource that might ease this expansion. Any limit can thus only come from outside the realm of the property-based economy. It must emanate from the institutional conditions that define the legal frontiers of the economic system. However, as proprietors accumulate more and more wealth (the self-enrichment of proprietors being a spontaneous consequence of property expansion) and non-proprietors get caught in an ever increasing poverty trap by being excluded from wealth creation (when not dispossessed from their own goods through enclosure, foreclosure and other appropriation processes), the institutional framework becomes ever more influenced by proprietors and inclined to favour their vested interests.

As the property economy expands through capitalisation and competition, the specific selection criteria of property (solvability, profitability and time pressure) spreads throughout society, reinforcing the role of property as the selective criteria of economic competitiveness and, more broadly as a central institution in the organisation of society. Such an institutional path-dependency has been strengthened and further accelerated by the industrial mode of

[19] "In the measure, therefore, in which this relatively new-found serviceability of extraordinary large wealth is effective for its peculiar business function, the old-fashioned capitalist-employer loses his discretionary initiative and becomes a mediator, an instrumentality of extraction and transmission, a collector and conveyer of revenue from the community at large to the pecuniary magnate, who, in the ideal case, should leave him only such an allowance out of the gross earnings collected and transmitted as will induce him to continue in business." [18:133–4].

[20] *i.e.*, issuing money "… not only against interest but also against good securities and with sufficient capital of the issuing bank." [6:188].

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development, which provided unprecedented responses to the particular pressures of property, along with industrial society's fundamental dependence on mineral resources. In such a process, every option that shows incompatibility with property requirements is discriminated against, and every proposition for alternative development paths is eluded. Aiming at the reduction of the economic throughput and promoting responsible consumption and voluntary simplicity as demand-side alternatives to consumerism, degrowth proposals are unsurprisingly confronted by systematic and systemic discrimination. While the current financial crisis might appear to be a possible ally in the quest for challenging the dominancy of normative capitalist hierarchy, the deepest roots of the crisis would need to be identified, analysed and vocalised. Therefore, understanding the institutional and technological locked-in situation into which the western path of economic development, both capitalist and industrial, has led our societies seems to be a prerequisite for any socioeconomic reorientation towards a world sustainable development path.

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