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## On the ecology of capitalism

*The growth of production has been entirely verified until now as the realization of political economy: the growth of poverty, which has invaded and laid waste to the very fabric of life... In the society of the over-developed economy, everything has entered the sphere of economic goods, even spring water and the air of towns, that is to say, everything has become the economic ill, that "complete denial of man"...*

Guy Debord, *The sick planet*

The process of the expansion of the capitalist mode of production on a world scale in the previous century was at the same time a process of transformation of the biosphere as a whole. This process resulted in the disturbance of the ecological balance of the planet, a balance which lasted for the past 10.000 years, which is known as the Holocene geological period. According to recent scientific studies the main aspects of this planetary ecological transformation are the following:<sup>1</sup>

- **Increase of the average temperature of the planet** due to the increase of the atmospheric concentration of carbon dioxide and of other greenhouse gases. This increase is caused both by the burning of fossil fuels for supplying energy to capitalist production and reproduction and by the emissions originating in the capitalist mode of agricultural production.<sup>2</sup>
- **Great loss of biodiversity** mainly due to the conversion of forest ecosystems into zones of agricultural production or into parts of the urban fabric. It is predicted that within the 21<sup>st</sup> century up to 30% of all mammal, bird and amphibian species will be threatened with extinction.
- **Perturbation of the cycles of nitrogen and phosphorus** which are transferred with increasing rates from the atmosphere to the oceans and the lake systems of the planet due to the use of huge quantities of fertilizers in capitalist agriculture. The pollution of oceans has even led to local anoxic events (e.g. in the Baltic sea) during which the oxygen levels in the sea were significantly reduced.
- In addition to the phenomena described above, the **depletion of atmospheric ozone** and the **level of ocean acidification** have reached a critical point.

All these environmental changes are consequently manifested on a more local geographic scale in various ways: great increase in hurricane frequency, desertification of large areas in various parts of the world, deforestation, increase in the frequency of extreme weather phenomena such as floods and long droughts, emergence of new diseases transmitted in an unpredictable manner and so on. At the same time, the productivity of

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<sup>1</sup> J. Rockström et. al., A safe operating space for humanity, *Nature* 461(24), 2009.

<sup>2</sup> Capital-intensive agricultural production contributed by 80% to the increase of greenhouse emissions between 1997 and 2002 (Referred to in the book by J. W. Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*, Verso, 2015).

agriculture has been significantly slowed down due to soil exhaustion. Further, new biotechnological methods of cultivation based on genetically modified plants failed to reverse this slowdown due to the rise of the so-called superweeds. Between 1980 and 2008 the global production of wheat and maize had been reduced by 5.5% and 3.8% respectively compared to a counterfactual without climate trends.<sup>3</sup> These phenomena have negative effects on the living conditions of the global proletariat. The weaker and most poor parts of the proletariat are affected in a more extreme way by having to face even shortages in food and drinking water.

According to the apologetic ideology of “environmental economics” the disturbance of the ecological balance of the planet, the accumulation of pollutants and toxic substances, i.e. the destruction of the natural preconditions for the satisfaction of human social needs, is a result of the inherent conflict between humanity and extra-human nature.<sup>4</sup> The origin of these changes in the capitalist mode of production is not recognized. Extra-human natures, i.e. the natural conditions and resources that cannot be (re)produced by capitalist production are considered to be “gifts of nature” usurped by capitalists free of charge. When environmental degradation puts obstacles to the expanded reproduction of capital because it leads, for example, either to a slowdown of agricultural productivity or to an increase of spending on combating pollution-related diseases and, therefore, to an increase of the value of labour power, the phenomena of environmental degradation are characterized as “environmental externalities” or “external economies”.<sup>5</sup>

Before proceeding to a more detailed critique of the “solutions” proposed by “environmental economics”, which mainly revolve around the monetization of nature, i.e. the “internalization” of natural resources and conditions into the capitalist market, we will attempt, through the use of the weapons of the Marxian critique of political economy, to show why the domination of the capitalist mode of production is interwoven with the permanent devaluation of both human and extra-human nature. In the last part of the text we will try to critically present some dimensions of the social struggles that have erupted against the devaluation of nature and to exercise critique on the ideologies that have emerged and impede their development.

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<sup>3</sup> See J. W. Moore, *op.cit.*

<sup>4</sup> E. Apostolopoulou, A critique of the dominant developmental ideology for the relationship between society and nature, *Outopia* 91, 2010 (in Greek).

<sup>5</sup> A. Vlachou, Nature and Value Theory, *Science and Society* 66(2), 2002.

## 1. The law of value and nature as non-value

*Labour is, first of all, a process between man and nature, a process by which man, through his own actions, mediates, regulates and controls the metabolism between himself and nature.*

K. Marx, *Capital*<sup>6</sup>

*Labour is **not** the **source** of all wealth. **Nature** is just as much the source of use values (and it is surely of such that material wealth consists!) as labour, which itself is only the manifestation of a force of nature, human labour power.*

K. Marx, *Critique of the Gotha Programme*<sup>7</sup>

The capitalist production of commodities rests both on human labour and on nature. However, the value of commodities is determined only by the socially necessary abstract labour time which is required for their production. The expression of the value of social wealth in money, which is the necessary form of appearance of abstract labour, entails in this respect the devaluation of non-human nature.<sup>8</sup> And this devaluation is nothing more than an expression of the contradiction between use value and value which is hidden in the commodity form. As Marx wrote in *Capital*, «*as exchange-values [the commodities] do not contain an atom of use-value*» and, therefore, nor an atom of non-human nature.<sup>9</sup>

The homogeneous, divisible, mobile and quantitatively unlimited character of the value form is directly opposed to the qualitative diversity, the local specificity, the quantitative limits and the unitary and indivisible character of the use values produced by nature.

The natural distinctness of commodities must come into contradiction with their economic equivalence, and because both can exist together only if the commodity achieves a double existence, not only a natural but also a purely economic existence, in which latter it is a mere symbol, a cipher for a relation of production, a mere symbol for its own value. As a value, every commodity is equally divisible; in its natural existence this is not the case.<sup>10</sup>

Moreover, the tendency of capital towards an uninterrupted and unlimited expansion as self-valorizing value comes into conflict with the naturally determined material and temporal preconditions of (primarily) agricultural production, e.g, the biological

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<sup>6</sup> K. Marx, *Capital vol. I*, Penguin Books, 1976, p. 284.

<sup>7</sup> K. Marx, *Critique of the Gotha Programme*, *Marx/Engels Selected Works vol. 3*, Progress Publishers.

<sup>8</sup> In fact, to the extent that natural resources and natural conditions are not commodities produced by human labour they have no value although they may be use values. This clarification is necessary here because the concept of the devaluation of nature could be mistaken as the loss of a substance a priori inherent in natural use values, an error made by parts of the Marxist feminist current with regard to housework. As we will show in the following sections, the non-value of nature and of female housework plays, however, a key role in the cheapening of constant and variable capital and, therefore, to the increase of capitalist profitability.

<sup>9</sup> K. Marx, *Capital vol. I*, Penguin Books, 1976, p. 128.

<sup>10</sup> K. Marx, *Grundrisse*, Vintage Books, 1973, p. 141.

reproduction cycles of animals and plants. This conflict is specifically connected with the need of capital to continuously reduce its turnover time (i.e. the sum of its time of production and its time of circulation) so that the value and surplus-value produced within an economic year will be multiplied. This “time-space compression”, as David Harvey<sup>11</sup> has called it, has led to a peculiar and ghastly acceleration of the production of nature: fisheries producing faster-growing transgenic salmons, faster-milking, hormone-injected cows, and, even more spectacularly, transition from the 73-day chicken in 1955 to the 42-day chicken in 2005.<sup>12</sup>

## 2. The estrangement of society from nature

As Marx makes clear in *Theories of Surplus Value*, value production in capitalism presupposes the alienation of labour:

*Capital is productive of value only as a **relation**, in so far as it is a coercive force on wage-labour, compelling it to perform surplus-labour, or spurring on the productive power of labour to produce relative surplus-value. In both cases it only produces value as the power of labour’s own material conditions over labour when these are **alienated** from labour; only as one of the forms of wage-labour itself, as a condition of wage-labour. But in the sense commonly used by economists, as stored up labour existing in money or commodities, capital –like all conditions of labour, even the **unpaid natural forces**– functions productively in the labour-process, in the production of use-values, but it is never a source of value.*<sup>13</sup>

And after some hundred pages:

*Ricardo’s mistake is that he is concerned only with the **magnitude** of value. Consequently his attention is concentrated on the **relative quantities of labour** which the different commodities represent, or which the commodities as values embody. But the labour embodied in them must be represented as **social** labour, as alienated individual labour.*<sup>14</sup>

In *Economic and Philosophic Manuscripts of 1844* Marx argues that the alienation of labour in capitalism is at the same time an alienation of nature from man [sic]:

*We have considered the act of estranging practical human activity, labour... the relation of the worker to the **product of labour** as an alien object exercising power over him. This relation is at the same time the relation to the sensuous external world, to the objects of nature, as an alien world inimically opposed to him... Nature is man’s **inorganic** body —nature, that is, insofar as it is not itself human body. Man **lives** on nature — means that nature is his **body**, with which he must remain in continuous interchange if he is not to die. That man’s physical and spiritual life is linked to nature means simply that nature is linked to itself, for man is a part of*

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<sup>11</sup> D. Harvey, *The Limits to Capital*, Verso, 1982.

<sup>12</sup> J. W. Moore, Transcending the metabolic rift: a theory of crises in the capitalist world-ecology, *The Journal of Peasant Studies* 38(1), 2011.

<sup>13</sup> K. Marx, *Theories of Surplus Value Part I*, Progress Publishers, 1969, p. 93 (some emphases ours).

<sup>14</sup> K. Marx, *Theories of Surplus Value Part III*, Progress Publishers, 1971, p. 131.

*nature... In estranging from man nature... estranged labour... turns thus: **Man's species-being**, both nature and his spiritual species-property, into a being **alien** to him, into a **means** for his **individual existence**.*<sup>15</sup>

This idea was further developed in *Grundrisse* where Marx presented for the first time the historical process through which it would be possible to explain the rupture of the unity of living and active humanity with the natural conditions of its metabolic exchange with nature, «*the **separation** between these inorganic conditions of human existence and this active existence, a separation which is completely posited only in the relation of wage labour and capital*»<sup>16</sup>, that is the historical process which ultimately leads to the separation of producers from the means of production: the historical process of the so-called primitive accumulation.

As he characteristically writes: “*the relation of labour to capital, or to the objective conditions of labour as capital, presupposes a process of history which dissolves the various forms in which the worker is a proprietor, or in which the proprietor works. Thus above all [it presupposes] the dissolution of the relation to the earth –land and soil– as natural condition of production - to which he relates as to his own inorganic being*”.<sup>17</sup>

In this very context,

*for the first time nature becomes purely an object for humankind, purely a matter of utility; ceases to be recognized as a power for itself; and the theoretical discovery of its autonomous laws appears merely as a ruse so as to subjugate it under human needs, whether as an object of consumption or as a means of production. In accord with this tendency, capital drives beyond national barriers and prejudices as much as beyond nature worship, as well as all traditional, confined, complacent, encrusted satisfactions of present needs, and reproductions of old ways of life... But from the fact that capital posits every such limit as a barrier and hence gets ideally beyond it, it does not by any means follow that it has really overcome it, and, since every such barrier contradicts its character its production moves in contradictions which are constantly overcome but just as constantly posited.*<sup>18</sup>

This is precisely where the possibility of both catastrophic changes in local and peripheral ecosystems and of a more all-encompassing disturbance of the planetary ecological balance originates. However, in order to answer to the question how this possibility of the “ecological crisis” becomes actuality, it is necessary to study and concretely analyze the history of capitalist development. The answer to such a question cannot be directly drawn from the abstract dialectic of the contradictions of capitalist commodity production.

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<sup>15</sup> K. Marx, F. Engels, *Marx Engels Collected Works vol. 3*, International Publishers, 1975, p. 275-277.

<sup>16</sup> K. Marx, *Grundrisse*, Vintage Books, 1973, p. 489.

<sup>17</sup> K. Marx, *op.cit.*, p. 497.

<sup>18</sup> K. Marx, *op.cit.*, p. 410.

### 3. The metabolic rift

The estrangement of society from nature is concretized by Marx in terms of its material dimension in the first and the third volume of *Capital*. There, Marx introduces the concept of the “metabolic rift”: the rift in the metabolism between society and nature. This rift stems from the deepening of the antithesis between town and country, i.e. the geographical division of capitalist production with the concentration of industries in urban areas and of agriculture in the countryside. According to this approach, since a small part of the working class is employed in capitalist agriculture, the greatest part of the population is concentrated in cities. In this way, the nutrients and the elements which are extracted from the earth to produce food, clothing and housing for the population are not recycled and are converted into pollutants in the cities. It is evident that contemporary ecological disturbance phenomena such as the perturbation of the cycles of nitrogen and phosphorus and the acidification of seas which were mentioned in the introductory section can be expounded on the basis of the concept of the “metabolic rift” which was introduced by Marx 150 years ago. In this context, Marx writes the following in the third volume:

*In both forms [small and large-scale agriculture], instead of a conscious and rational treatment of the land as permanent communal property, as the inalienable condition for the existence and reproduction of the chain of human generations, we have the exploitation and the squandering of the powers of the earth... On the other hand, large landed property reduces the agricultural population to an ever decreasing minimum and confronts it with an ever growing industrial population crammed together in large towns; in this way it produces conditions that provoke an **irreparable rift** in the interdependent process of social metabolism, a metabolism prescribed by the natural laws of life itself. The result of this is a squandering of the vitality of the soil, which is' carried by trade far beyond the bounds of a single country... Large-scale industry and industrially pursued large-scale agriculture have the same effect. If they are originally distinguished by the fact that the former lays waste and ruins labour-power and thus the natural power of man, whereas the latter does the same to the natural power of the soil, they link up in the later course of development, since the industrial system applied to agriculture also enervates the workers there, while industry and trade for their part provide - agriculture with the means of exhausting the soil.<sup>19</sup>*

The rift in the metabolism between society and nature is, therefore, accompanied by the squandering and destruction of labour power, the natural power of humans, as the production of surplus value is based on the greatest possible exploitation of labour power up to the point of its ruin and deformation through the increase of the working time and of the intensity of labour but also because of the destruction of workers' health as an effect of pollution. These two complementary aspects of the destruction of the natural powers of humans and earth are presented with even greater clarity in the first volume of *Capital*:

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<sup>19</sup> K. Marx, *Capital vol. III*, Penguin Books, 1981, p. 948-950 (our emphasis).

*Capitalist production... causes the urban population to achieve an ever-growing preponderance... [As a result it] disturbs the metabolic interaction between man and the earth, i.e. it prevents the return to the soil of the constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural condition for the lasting fertility of the soil. Thus it destroys at the same time the physical health of the urban worker, and the intellectual life of the rural worker... All progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is a progress towards ruining the more long-lasting sources of that fertility... Capitalist production, therefore, only develops the techniques and the degree of combination of the social process of production by simultaneously undermining the original sources of all wealth – the soil and the worker.<sup>20</sup>*

*Capital asks no questions about the length of life of labour-power. What interests it is purely and simply the maximum of labour-power that can be set in motion in a working day. It attains this objective by shortening the life of labour-power, in the same way as a greedy farmer snatches more produce from the soil by robbing it of its fertility.<sup>21</sup>*

Of course, when Marx made the above observations the capitalist welfare state had not been formed yet. Contrary to the myopia and greed of individual capitalists, the capitalist welfare state attempts to manage the exploitation of labour power and of nature in a more rational way in order to facilitate a smoother course of the expanded reproduction of total social capital. The welfare-state capitalism raises in its turn new contradictions and antagonisms which it seeks to lift through the politics of “sustainable development” which will be presented and critiqued in the following sections.

For Marx, the broadening of social needs does not necessarily need to the deepening of the metabolic rift and to the exhaustion of natural resources a la Malthus:

*This realm of natural necessity expands with his[man’s (sic)] development, because his needs do too; but the productive forces to satisfy these expand at the same time. Freedom, in this sphere, can consist only in this, that socialized man, the associated producers, govern the human metabolism with nature in a rational way, bringing it under their collective control instead of being dominated by it as a blind power; accomplishing it with the least expenditure of energy and in conditions most worthy and appropriate for their human nature.<sup>22</sup>*

In other words, the estrangement of society from nature will be overcome in communism through the rational regulation of the metabolism with nature, through the satisfaction of rich and diverse human needs with the least expenditure of energy and with the development of new productive forces that will not deplete the fertility of nature. Jason

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<sup>20</sup> K. Marx, *Capital vol. I.*, Penguin Books, 1976, p. 637-8.

<sup>21</sup> K. Marx, *op.cit.*, p. 376.

<sup>22</sup> K. Marx, *Capital vol. III*, Penguin Books, 1981, p. 959.

Moore mentions “permacultures” and the “rice intensification system” as examples on the direction that should be taken by agricultural production in a communist society.<sup>23</sup>

In any case, Marx was clear that not only capitalist but not even the whole human society is the owner of earth:

*From the standpoint of a higher socioeconomic formation, the private property of particular individuals in the earth will appear just as absurd as the private property of one man in other men. Even an entire society, a nation, or all simultaneously existing societies taken together, are not the owners of the earth. They are simply its possessors, its beneficiaries, and have to bequeath it in an **improved** state to succeeding generations, as boni patres familias.*<sup>24</sup>

#### **4. Free appropriation (plunder) of the elements of natural wealth**

In the second part of this text we showed why capitalist value production and accumulation is at the same time a relation of devaluation of non-human nature. The cheapest possible or even free appropriation of all the elements of natural and social wealth contributes to economizing on constant and variable capital and serves, therefore, the increase both of the rate of surplus values and of the rate of profit.

*It is thus strikingly clear that means of production never transfer more value to the product than they themselves lose during the labour process by the destruction of their own use-value. If an instrument of production has no value to lose, i.e. if it is not the product of human labour, it transfers no value to the product. It helps to create use-value without contributing to the formation of exchange-value. This is true of all those means of production supplied by nature without human assistance, such as land, wind, water, metals in the form of ore, and timber in virgin forests.*<sup>25</sup>  
[...] *We saw that the productive forces resulting from co-operation and the division of labour cost capital nothing. They are natural forces of social labour. Other natural forces appropriated to productive processes, such as steam, water, etc., also cost nothing.*<sup>26</sup>

*The manufacturer who operates with the steam engine also applies natural forces which cost him nothing but which make labour more productive, and, in so far as they cheapen the production of the means of subsistence the workers require, increase surplus-value and hence profit; which are therefore just as much*

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<sup>23</sup> See J. W. Moore, *op. cit.* In any case, it is dangerous to present particular production methods and innovations as “solutions” to the plundering of earth from capital since it is possible that these “solutions” will be ultimately incorporated into the overall system of capitalist exploitation of labour and nature without, in essence, changing its character. Besides, such a development has already taken place with the so-called Renewable Energy Sources (e.g. the wind power generators). Not only did such technologies not lead to a reduction of greenhouse gases, but they also created new problems such as, for example, the destruction of local ecosystems where they have been installed and the killing of thousand birds threatened with extinction.

<sup>24</sup> K. Marx, *op. cit.*, p. 911 (our emphasis).

<sup>25</sup> K. Marx, *Capital vol. I*, Penguin Books, 1976, p. 312.

<sup>26</sup> K. Marx, *op. cit.*, p. 508.

*monopolized by capital as are the natural social forces of labour that arise from cooperation, division of labour, etc. The manufacturer pays for the coal, but not for the ability of water to change its aggregate state and transform itself into steam nor for the elasticity of steam, etc. This monopolization of natural forces, i.e. of the increase productivity that they bring about... may increase the part of the product of labour that represents surplus value as against the part that is transformed into wages.*<sup>27</sup>

Moreover, the free appropriation of natural wealth, whenever possible, cheapens the means of production, namely constant capital, and functions, thus, as a counteracting factor to the increase of the value composition of capital and, therefore, to the tendency of the rate of profit to fall.

We can argue that capitalism is on the one hand the command over the unpaid labour of the working class in capitalist commodity production, in the sense that the value represented by wages is lower than the value produced by labour<sup>28</sup> and that, on the other hand, it is the command over both the unpaid housework (which due to the prevalent gender division of labour is performed mainly by women) and the “labour” provided freely by the natural sources of wealth. In the first case, the **exploitation** of wage labour produces value and surplus value. In the second case, the free **appropriation** of the use values produced by the unpaid “labour” of nature and the unpaid housework contributes to the cheapening of constant and variable capital and, therefore, to the increase of surplus value and profit. Thus, we can argue, following the analysis of Jason Moore, that capitalism is based on the fragmentation of the relations of capitalist society with nature: the natural forces of wage labourers are **internalized** in capitalist production and circulation in the form of the commodity labour power while the productive forces of non-human nature and the natural forces of wageless houseworkers are transformed into “**externalities**”, to use a term of bourgeois economics.

It is possible that an objection to the above analysis could be raised with regard to the fact that often natural use values have a price, i.e. that they can be sold and bought or they can be rented for a certain amount of money. Marx explains this phenomenon on the basis of the fact that, as mentioned in the previous passage from the third volume of *Capital*, natural forces provide costless use values which belong to the means of production and

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<sup>27</sup> K. Marx, *Capital vol. III*, Penguin Books, 1981, p. 782.

<sup>28</sup> Also, capital freely appropriates the productive forces resulting from cooperation, the division of labour, the progress of science and technology. «*Like the increased exploitation of natural wealth resulting from the simple act of increasing the pressure under which labour-power has to operate, science and technology give capital a power of expansion which is independent of the given magnitude of the capital actually functioning... This [part of capital], in passing into its new shape, incorporates, free of charge, the social advances made while its old shape was being used up.*» (K. Marx, *Capital vol. I*, Penguin Books, 1976, p. 754). Furthermore, capital appropriates free of charge the productive forces of previous labour which has been objectified into the means of labour in the same proportion as they are wholly employed but only partly consumed, i.e. to the degree that they serve as agencies in the formation of the products without adding value to those products (K. Marx, *op. cit.*, p. 757).

increase the productivity of labour.<sup>29</sup> Marx uses the example of a waterfall providing energy to a plant.

*The determination of value by socially necessary labour-time leads to the cheapening of commodities and the compulsion to produce commodities under the same favourable conditions. Things take a different form with the surplus profit of the manufacturer who makes use of the waterfall. The increased productivity of the labour he applies arises neither from the capital and labour themselves nor from the simple application of a natural force distinct from capital and labour but incorporated into the capital. It arises from the greater natural productivity of a labour linked with the use of a natural force, but a natural force that is not available to all capital in the same sphere of production, as is for example the elasticity of steam; its use therefore does not automatically occur as soon as capital is invested in this sphere. What is used is rather a monopolizable natural force which, like the waterfall, is available only to those who have at their disposal particular pieces of the earth's surface and their appurtenances.<sup>30</sup>*

*The waterfall, like the earth in general and every natural force, has no value, since it represents no objectified labour and hence no price, this being in the normal case nothing but value expressed in money. Where there is no value, there is eo ipso nothing to be expressed in money. This price is nothing but capitalized rent. Landed property enables the proprietor to lay hold of the difference between the individual profit and the average profit; the profit captured in this way, which is renewed every year, can be capitalized and then appears as the price of the natural force itself.<sup>31</sup>*

Based on Marx's analysis, we have come to the point where we can explain what happens when the capitalist exploitation of natural forces leads to their destruction, as in the cases of the exhaustion of cultivated land, of deforestation, of water pollution or of the depletion of cheaply extracted fossil fuels. Then, according to Marx, an increased expenditure of capital is needed in order to achieve the same production output. Therefore, production becomes more expensive and profitability falls.

*If a natural power of this kind, therefore, which originally cost nothing, goes into production, it does not count in determining prices as long as the product supplied with its aid is sufficient to meet the demand. But if a greater product has to be supplied in the course of development than can be produced with the aid of this natural power, so that this additional product must be produced without the aid of this natural power or with human assistance, human labour, a new and additional element goes into the capital. A relatively greater capital investment is thus needed*

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<sup>29</sup> When natural use values do not increase the productivity of labour, as for example in the case of a piece of land on which a factory is built, the price of land stems from the monopoly of the landowners to dispose the particular piece of land exclusively, a legal entitlement that permits them, as Marx vividly describes in the third volume of *Capital*, to extract "a certain monetary tax" from industrial capitalists, which is captured from the total amount of the produced surplus value.

<sup>30</sup> K. Marx, *Capital vol. III*, Penguin Books, 1981, p. 783-4.

<sup>31</sup> K. Marx, *op. cit.*, p. 787.

*to obtain the same product. All other circumstances remaining the same, production becomes more expensive.*<sup>32</sup>

Obviously, the same consequences apply when the productivity of natural forces is reduced due to their squandering as a result of capitalist production. At such times, the capitalists remember that a “rational management of natural resources” must be enforced, supposedly because resources were squandered due to the lack of property rights, as a consequence of the notorious “tragedy of the commons”, a concept according to which “*common resources are depleted because their users are not charged for the damage they inflict on them*”. Certainly, these theorems of “environmental economics” are apologetic whims that have no other goal than **to transfer the increased cost of capital to proletarians through the imposition of consumption taxes and the provision of subsidies to capitalist enterprises for the adoption of “eco-friendly technologies”**.

With this starting point, we will then proceed to a more detailed critique of the “solutions” which are proposed by “environmental economics” to the so-called “ecological crisis”.

##### **5. On the “limits to growth”, the “steady-state economy”, the concept of “sustainable development” and other capitalist ideologies**

By the mid-1980s, the assumption that “human-made capital” can completely substitute for “natural capital” was prevalent in the “science of economics” (or, more accurately, the bourgeois apologetic ideology).<sup>33</sup> However, the first critical positions towards such an assumption had already started appearing in the 1970s within capitalist academic circles. The starting point was the publication of Forrester’s study on “urban and global dynamics” in 1971. This study used mathematical models in order to prove that economic growth leads to the exhaustion of natural resources and, therefore, to prove that the industrialization of “developing” countries is infeasible and undesirable because it de facto leads to the spread of diseases, to the rise of social conflicts and so on.<sup>34</sup> Based on this study, the report *Limits to Growth*, which reached similar conclusions, was published in 1972 by the *Club of Rome*<sup>35</sup>, was funded by Volkswagen and sold 30 million copies. Finally, the economist Herman Daly proposed in 1977 the creation of a “steady-state economy”. According to this proposal, the capitalist economy must attain a steady-state equilibrium state, in which the exchange of matter and energy with nature will be carried out at low rates, by analogy with living organisms. The particular apologist of capitalism supported the position that it is not possible for the whole planet to have the standard of living of the developed countries and

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<sup>32</sup> K. Marx, *op. cit.*, p. 879.

<sup>33</sup> P. Psarreas, Capitalism, ecological crisis, ecology and the eco-socialist perspective, *Theseis 105*, 2008 (in Greek).

<sup>34</sup> J. W. Forrester, *World Dynamics*, Wright-Allen Press, 1971.

<sup>35</sup> D.H Meadows, D.L Meadows, J. Randers, *The Limits to Growth*, Pan Books, 1974. The *Club of Rome* is an international think tank whose members include members of royal families, “eminent” economists and scientists, members of the political personnel from various capitalist states, owners of big capitalist enterprises, etc.

that limits should be set on the global population so that the “natural limits for the survival of humanity will not be violated”.

It is no coincidence that these ideologies appeared amid the profound crisis of reproduction of capitalist social relations that broke out in the 1970s after the outbreak of social and class struggles in every sphere of production and everyday life. At that time, the crisis was encountered through monetarism, a politics of broad devaluation of constant and variable capital. The following passage from Forrester is characteristic of the capitalist mindset of those times: *“As the poor begin to dominate, their political power is felt. Their short-term interest increasingly dominates their own long-term welfare and that of the city. (...) If this political power is too great, the rising taxes and the accelerating decline can continue to the point where the urban area begins to collapse economically and all population classes decline”*.<sup>36</sup> Further, the report of the *Club Of Rome* claimed that the *“promise that a continuation of our present patterns of growth will lead to human equality”* is a myth. Therefore, it clear that the aim of these ideologues of capital was the promotion of a strategy that would negate the social-democratic promise of social prosperity through “economic growth”, as such a promise had come at a deep crisis at that point in time.<sup>37</sup>

If the ideology of the “steady state”, i.e. of economic stagnation, corresponded to the monetarist politics combatting inflation which was imposed at the second half of the 1970s, it could not, however, be equally useful during the upswings of the capitalist cycle of accumulation. At the end of the 1980s, a new strategy for capitalist accumulation was drawn which attempted to overcome the “ecological contradictions” of capitalism. We’re referring to the strategy of “sustainable development” which was presented for the first time in 1987 in the report *Our Common Future* which was written by the UN World Commission on Environment and Development.<sup>38</sup> According to this report, *“sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs”*.<sup>39</sup> In a speech given the next year by the president of the commission and prime minister of Norway at that time Gro Harlem Brundtland, the need to develop *“a new holistic ethic in which economic growth and environmental protection go hand-in-hand around the world”* was asserted.

As we mentioned in the previous section, the discourse of “sustainable development” attributed the squandering and the reduction of the productivity of natural resources to the lack of property rights over them. The proposed “solution” was based on the “environmental economics” theorem which was introduced by the Nobel laureate economist R. H. Coase according to which *“when a common-pool resource is polluted, if the property right over the resource is granted to one of the involved parties, i.e. to the polluter*

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<sup>36</sup> This passage is excerpted from the article by Maria Markantonatou, From The Limits to Growth to “Degrowth”: Discourses of Critique of Growth in the Crises of the 1970s and 2008, *Working Paper 05/2013*, DFG-KollegforscherInnengruppe Postwachstumsgesellschaften.

<sup>37</sup> The relation of these ideologies with the current “degrowth” discourse will be examined in the following sections.

<sup>38</sup> See P. Psarreas, *op.cit.*

<sup>39</sup> It is truly astonishing that the definition of “sustainable development” given by this capitalist think tank is essentially a misappropriation of the related position of Marx which was mentioned above (see fn. 24). Of course, the critique of capitalist property has been completely eliminated.

*or to the recipient of the pollution, a transaction mechanism will develop automatically leading to the optimal level of pollution and to the maximization of the net social benefit... resulting in the optimal allocation of available resources".<sup>40</sup>*

### **The apologetic character of the neoclassical theory for the environment**

In order to better understand the context of the formulation of the theorem mentioned above it is necessary to make a brief digression to discuss the mainstream capitalist economic ideology, the neoclassical economic theory. The object of neoclassical economic theory is the study of the optimal allocation and use of "scarce resources" available for the satisfaction of the needs and desires of economic subjects. The basic assumptions of neoclassical theory are the following: a) society consists of independent economic subjects (individuals and enterprises) who b) make rational decisions according to their preferences aiming at the maximization of their individual utility (utilitarianism); c) the prices of goods are indexes of their scarcity in relation to the preferences of all the economic subjects.

This description shows by itself the false and ideological character of neoclassical theory: capitalist relations of power and dependency disappear since it is taken for granted that the economic subjects (individuals and enterprises) make decisions independently of one another, society is transformed into a sum of individuals and enterprises without social subjects and classes being recognized, historic social relations of production and intercourse are transformed into an ahistorical and eternal natural order of things and so on. Besides the general critique that can be exercised on neoclassical theory, the question of the squandering of natural resources and forces reveals its inherent logical contradictions. Since these "goods" were wasted and became "scarce", according to the neoclassical theory prices should have been attributed to them by the "economic subjects". However, this is not happening. To justify the complete failure of neoclassical theory, the bourgeois economists have introduced the ad hoc concept of the "market failure", which actually undermines its own methodological foundations.

The Coase Theorem is essentially an attempt to save neoclassical theory since it attributes "market failures" to the lack of explicit property rights attribution (transferability, exclusivity, etc.) over natural resources. If we examine, for example, the case of a polluting enterprise and a local community that suffers its pollution, according to the Coase Theorem the property right to the resource being polluted should be granted to one of the involved parties so that a negotiation process will subsequently start, which will eventually lead to the optimal allocation of the resources (if transaction costs are zero). Interventions by national states and supranational organisations about the "pricing" of "environmental externalities" and the granting of rights over pollution, e.g. over greenhouse emissions, was founded on this ideological basis.

To show how ridiculous the Coase Theorem is, we will use the, much used in economics textbooks, example of the chemical plant which pollutes a lake in which the fishermen of a village lying on its banks are fishing. Let's say, for example, that the chemical plant makes a profit of 130 euros per day if a waste filter is not installed. The profit of the

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<sup>40</sup> See P. Psarreas, *op. cit.*

plant falls to 100 euros per day otherwise. Let's say that fishermen make a profit of 100 euros per day if the lake is clean and 50 euros per day otherwise. If the property right (over polluting the lake) is granted to the plant, according to the Coase Theorem fishermen would pay the plant 40 euros per day so that it would filter the waste. In this way, they would make 60 euros profit per day and the plant would make 140 euros profit per day. Hence, both parties would gain 10 euros per day and the "net social welfare" would be 200 euros. If the property right was granted to the fishermen, the factory would have to compensate for the 50 euros per day they lose. Then, according to the theorem, the plant would prefer to filter the waste losing 30 instead of 50 euros per day. Therefore, both the plant and the fishermen would make 100 euros profit per day and the "net social welfare" would be also 200 euros.

The most serious arbitrariness of the neoclassical discussion of the pollution of the lake lies in the economic evaluation of pollution in terms of the loss of fishermen revenue and, most importantly, in the **equation of social welfare with capitalist profit**. The equation of social welfare with profit conceals and justifies capitalist exploitation and is an expression not only of indifference towards social needs but also of the capitalist devaluation of labour, as we showed above. The natural reconstruction of such a good as a lake may take decades or centuries (or not even be possible if e.g. the death of all living organisms in the lake occurs). Therefore, the evaluation of such a catastrophe in money terms is a proof of the extreme estrangement of society from nature and can in no way be measured by the short-term loss of fishermen income. All the more so if we examined a natural resource of a larger geographical scale: the oceans, the atmospheric air or the biodiversity.<sup>41</sup> The optimal economic equilibrium with respect to the neoclassical "social welfare" which is evaluated in money terms may well correspond to the most extreme pollution scenario if the number in the previous example had been differently (and equally arbitrarily) chosen.

Furthermore, this neoclassical model excludes any relationship of humanity with nature that is not related to capitalist accumulation and the production of profit, since it is completely neutral with regard to the consequences that the destruction of a natural resource could have to those who enjoy it and use it outside from this economic context. Finally, even if we accepted, for the sake of discussion, the economic assessment of pollution, the neoclassical discussion treats both parties as equal in terms of economic power. There is nothing further from the truth: it would be impossible, for example, for the people who struggle against gold mining in Skouries (Chalkidiki, Greece) to collect an amount of money that would be enough to bribe Eldorado not to expand its mining activities (and it's ridiculous even to think of such a scenario).

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<sup>41</sup> We have shown in the previous sections why non-human nature does not have a value in capitalism as well as the way in which the monopolization of natural resources in the framework of capitalist property relations assigns price to them.

## The strategy of “sustainable development”

*In its state-run and regulated form, the so-called “fight against pollution” is bound, at first, to mean no more than new specializations, ministries, jobs for the boys and promotions within the bureaucracy. The fight's effectiveness will be perfectly consonant with that approach. It will never amount to a real will for change until the present system of production is transformed root and branch.*

Guy Debord, *The sick planet*

Against this background, the “sustainable development” strategy, which attempts to “internalize external environmental economies”, was articulated. The main instruments used towards that aim by the capitalist state and the supranational capitalist organizations are the following:

- **Payment of subsidies to polluting enterprises to adopt technologies limiting pollution.** These subsidies come either from the direct taxation of wage labourers or from indirect taxation on consumption. A typical example of such taxation in Greece is the high fee for renewable energy charged to the electricity bills. As mentioned above, in this way, the state passes on the increased cost of constant capital, stemming from the decline in the productivity of natural forces or the exhaustion of natural resources, to the working class, which pays most of the direct and indirect taxation. In this fashion the rate of surplus value is increased and the decline of the rate of profit is restrained.
- **Sale of pollution permits and creation of international carbon emission trading systems.**<sup>42</sup> The creation of the carbon markets was instituted in 1997 with the Kyoto Protocol. Under this protocol, ceilings on carbon emissions for each country are set. If a country exceeds the emission limit, it will have to buy a license for more carbon emissions from another country that has not overcome it. Within each country, carbon dioxide emissions are allocated to the larger companies that create them. If a company exceeds the threshold, it will have to buy an emission license from another company to avoid the payment of a high fine. Supposedly, in this way if a company invests in “green technology” through which it can reduce carbon dioxide emissions then it will be able to sell the corresponding license on the market and thus generate revenue that will cover the cost of the investment. Moreover, the Kyoto Protocol includes the **Clean Development Mechanism (CDM)** according to which developed countries and companies operating in them can buy “emission credits” through the implementation of “clean development” projects in countries of the South, which have low emissions which they are not obliged to reduce. Apart from the CDM market which is supervised by the UN there is also the Voluntary Offset Market (VOM) which is not part of the formal emission reduction system and is not based to the licenses and the imposition of fines set out in the Kyoto protocol.

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<sup>42</sup> S. Böhm, M.C. Misoczky, S. Moog, Greening Capitalism? A Marxist Critique of Carbon Markets, *Organization Studies* 33(11), 2012.

In practice, the carbon dioxide emission allowances originally granted to developed countries were very high, and then many large companies of the North instead of cutting carbon dioxide emissions to achieve the Kyoto targets made (and continue to make) investments in supposedly “clean development” projects in the countries of the South to buy “emission credits”. Some companies, such as Land Rover, even promote the deceit that they do not emit carbon dioxide because they have invested in wind turbines or biofuels in less developed countries, offsetting and “exporting” in this fashion their own emissions. The same applies to whole countries that appear to comply with the Kyoto targets because they buy “emission credits. Rather than working then towards a reduction in carbon dioxide emissions, emissions markets promote capitalist investment by developed countries in countries of the South and constitute another profitable enterprise. When the so-called “clean development” projects in the South do not increase global carbon dioxide emissions on the planet due to the expansion of industrial activity, they create additional environmental problems, such as the depletion of soil fertility due to investments in biofuels which leads to an increase of food prices,<sup>43</sup> the increase of the use of chemical fertilizers because farmers in the “developing” countries are deprived of natural fertilizers which are now used as biofuels, the loss of biodiversity due to the destruction of whole wildlife habitats and the extermination of large bird populations due to the installation of wind farms and so on.

- **Development of the green consumer market and of ecotourism.** This tactic attempts to recuperate concerns over the issue of the squandering and destruction of natural resources into the so-called green consumption which is recognized as a promising niche market. Especially ecotourism has led to the touristic overexploitation of regions of the underdeveloped world. Environmental protection programs in countries of the South often lead to the violent expulsion of local populations that lose their access to the earth and natural resources, a phenomenon that is part of the ongoing processes of primitive accumulation in the capitalist periphery.<sup>44</sup>
- **Promotion of the ideology of “consumer responsibility” and “ecological behavior”.** This ideology serves to transfer responsibility from capitalist social relations to individual attitudes and is an obstacle to the development of collective mobilizations against the squandering of natural resources.

Therefore, as we have tried to show, as a matter of fact, capitalist environmental politics is directed against nature and against the satisfaction of social needs by reproducing the separation and alienation of society from nature. Apart from transferring the cost of the environmental degradation to the proletarians, they also aim at the creation of new avenues for profitable capital investments.

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<sup>43</sup> Even technocrats of United Nations have denounced the production of biofuels as a “crime against humanity” due to its contribution to the global food crisis (cf. P. Psarreas, *op. cit.*).

<sup>44</sup> E. Apostolopoulou, *op. cit.* Apostolopoulou writes in this article about the first ever “protected region” in the world, the Yellowstone National Park in USA which was established in 1872. The establishment of the Yellowstone Park aimed the expulsion of the indigenous population and led to the death of hundreds of American Indians.

## 6. Struggles against the capitalist plunder of nature<sup>45</sup>

Since the 1970s, social struggles have broken out against capitalist exploitation, plunder, and devaluation of nature across the globe, the consequences of which are mainly suffered, on the one hand, by the most downtrodden parts of the working class<sup>46</sup> and, on the other hand, by indigenous populations who lose access to their means of subsistence in the context of the ongoing process of primitive accumulation, i.e. the destruction of pre-capitalist indigenous communities, the expansion of capitalist relations in every corner of the world and the proletarianization of indigenous peoples. These struggles break out along the entire chain of capitalist commodity production, from the extraction of natural resources and their industrial processing to the transport and disposal of scraps and wastes, as the struggling communities defend the natural environment and their lives. Despite initially having a local character, they often evolve into national or even international events in terms of their organization and impact.

### Some statistics about the struggles

The “Atlas of Environmental Justice” (EJAtlas) contains Table I, which presents the main axes around which social environmental struggles have erupted over the last 40 years. The first column lists the more general categories, which are further analyzed in the second column. As far as their frequency is concerned, most struggles have erupted around ore mining (21%), fossil fuel extraction (19%), land claims (17%) and water management (14%), especially around the construction of hydroelectric dams. Hence, most struggles are located in the stage of the extraction of the natural resources which are necessary for capitalist production. Regarding their geographical location, most struggles are located in rural areas (63%), while only 17% are located in urban areas and the rest in “semi-urban” areas. The struggles in rural areas mainly concern the enclosure of natural wealth by the state or capitalist enterprises and the dispossession of local populations from the resources which are necessary for their survival. They also concern the disposal of waste and scrap of capitalist production (such as ship breaking) and projects related to the “Clean Development Mechanism”, which are supposedly part of the reduction of carbon dioxide emissions.

Struggles in urban and semi-urban areas mainly revolve around infrastructure and development projects such as the expansion of ports and airports, gentrification processes and redevelopment of historic neighbourhoods (see, for example, the mobilizations around the destruction of the Gezi Park in Istanbul which triggered a generalized revolt), the expansion of industrial zones and the management and disposal of household and industrial waste.

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<sup>45</sup> The data and the table presented in this section are derived from the article by J. Martinez-Alier, L. Temper, D. Del Bene and A. Scheidel, Is there a global environmental justice movement?, *The Journal of Peasant Studies* 43(3), 2016 unless otherwise noted.

<sup>46</sup> Usually, toxic wastes are disposed near areas where poor proletarians live. During the 1980s, many mobilizations of African American proletarians had broken out in USA against the selectively disproportionate dumping of toxic waste near their neighborhoods. These struggles are known as struggles for “environmental justice”.

First-level categories (mutually exclusive)	Second-level classification (multiple selection across categories), some examples
Nuclear energy	e.g. uranium extraction, nuclear power plants, nuclear waste storage
Mineral ores and building materials extraction	e.g. mineral extraction, mineral processing, tailings, building material extraction
Waste management	e.g. e-waste and other waste import zones, ship-breaking, waste privatization, waste-pickers, incinerators, landfills, uncontrolled dump sites, industrial, municipal waste
Biomass and land conflicts	e.g. land acquisition, tree plantations, logging, non-timber products, deforestation, agro-toxics, genetically modified organisms (GMOs), agro-fuels, mangroves vs. shrimps, bio-piracy and bio-prospection, intensive food production (monoculture and livestock), fisheries
Fossil fuels and climate justice/energy	e.g. oil and gas extraction, oil spills, gas flaring, coal extraction, climate change-related conflicts (glaciers and small islands), reduced emissions from deforestation and forest degradation (REDD), clean development mechanism (CDM), windmills, gas fracking
Infrastructure and built environment	e.g. megaprojects, high speed trains, airports, urban development
Water management	e.g. dams, water transfers, aquifers, hydro-ways, desalination
Biodiversity conservation conflicts	e.g. invasive species, damage to nature, conservation conflicts
Industrial and utilities conflicts	e.g. factory emissions, industrial pollution
Tourism recreation conflicts	e.g. establishment of tourism facilities

**Table 1. Conflict classifications in the Atlas of Environmental Justice**

As far as the social composition of the struggles against the capitalist plunder of nature is concerned, the struggles are waged, by a very large proportion (over one third of cases), by indigenous communities in the countries of the global South. Indigenous populations suffer the expansion of the capitalist mode of production in areas that have not yet been touched for the appropriation of the untapped natural wealth and for the promotion of new processes of primitive accumulation.<sup>47</sup> Even more often, struggles are waged by locally organized and residents' groups and by farmers. In some cases the

<sup>47</sup> These processes of primitive accumulation often take advantage of the pre-existing gender division of labour and of the patriarchal property relations to impose the dispossession of communities from their means of subsistence. For example, in the indigenous Bantu communities living in Africa, women were mainly responsible for harvesting fruits, making medicines and cooking food, and men for hunting and cultivating. Men have exclusive rights to the use of iron tools and to clear forest areas for cultivation. With the introduction of commodified capitalist forestry, it is more likely for indigenous men to accept the cutting of trees in exchange for money while women are more likely to resist because they lose access to the resources necessary to make medicines and food and at the same time do not earn income from the sale of wood because men have the exclusive "ownership" of the trees. For this reason, women are much more involved in the mobilizations against capitalist logging and deforestation. See. S. Deuthey, J.-F. Gerber, Logging conflicts in Southern Cameroon: A feminist ecological economics perspective, *Ecological Economics* 70(2), 2010.

participation of industrial workers and, more rarely, of informal workers and wastepickers has been reported.

The forms assumed by the mobilizations are varied: from complaint letters, petitions and lawsuits to street protests, blockades and occupations of public spaces and buildings. Rarely, more dynamic forms of mobilization are adopted such as sabotage, arsons and attacks on capitalist property or even extreme ones, such as hunger strikes and self-immolation. At any rate, the institutional path is chosen more often than direct action practices. However, the blockade of roads is a practice which is used very often due to its effectiveness, especially in cases when the access to the mines, the forests and the mountain peaks to be exploited is difficult and few access roads exist.

According to the statistical data of EJAtlas, usually the outcome of the conflicts is not successful. Tourism and waste management projects are those most often stopped (more than 30% of cases) are stopped. Fossil fuels (e.g. oil explorations) and water management (e.g. hydroelectric dams) projects are those that most rarely have been stopped (in less than 15 percent of cases). The participants in the mobilizations themselves identified 49% of the cases as failed and only in 17% of the cases as successful. In many cases, mobilizations are followed by compensations.

As far as the language which is articulated within this struggles is concerned, while criticism of big capitalist enterprises may be exercised, reference may be made to the enclosure of “common goods” and the unequal burden to the poorest populations of the global South may be castigated, there is rarely a comprehensive critique on class relations of capitalist exploitation and domination or on the state-form. In many cases, the struggles put forward demands for the constitutional recognition of the rights of indigenous peoples, for the extension of human rights to include, for example, the “right to water” and the “rights of nature”, for corporate accountability, for the so-called “ecological debt” of “North” to “South” (in contrast to the financial debt of the latter to the former) as well as for the imposition of taxation and restrictions to the polluting business operations. Although such demands are de facto directed to the capitalist states and to the supranational organisms of global capitalism, the struggles could contribute to the revolutionary rupture of the circuit of reproduction of total social capital if they were radically transformed and became an organic part of a comprehensive movement against the capitalist exploitation of human and non-human nature through their connection with other struggles erupting within the different spheres of capitalist production and reproduction.

The evolution of the struggles towards such a revolutionary direction is impeded by the obstacles put by newborn reformist ideologies. We can exercise here our critique only on one of them: the “degrowth” ideology, which has become particularly popular in recent years among groups and organizations which participate in the struggles against the plunder of nature.

### **On the “degrowth” ideology**

The “degrowth ideology” is nothing more than a new more (spuriously) radical version of the “limits to growth” and the “steady-state economy” doctrines which were presented in Section 5. Besides, it is no coincidence that it also appears at a time when deflationary capital devaluation politics are again in the foreground. According to the definition given by

Schneider, Kallis and Martinez-Allier, “degrowth” is “*an equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions at the local and global level, in the short and long term*”.<sup>48</sup> In an attempt to separate “degrowth” from the current capitalist policy, they are quick to point out that it should be distinguished from “unsustainable recession”. In order to judge this claim we will first examine the writings of Serge Latouche who is the most important theorist of the “degrowth” current.

According to Latouche,<sup>49</sup> “degrowth” entails the decolonization of life from economy and consumption, the liberation of the “social imaginary” from the prevalent faith in the domination over nature and an “autonomous society” (whatever that means). The definition given to growth by Latouche is identical with the one given by Marx for the limitless expansion of capital. However, for Latouche, money, the market and wage labour are not forms of the relation between capital and labour but they have to be understood as autonomous and distinct institutions that can be embedded in a “post-development society”! It is indicative that Latouche considers impossible even a policy of taxing companies that create pollution or destroy natural resources, so that they would be forced to pay the full cost of the damage and risks they inflict on society, since such a “solution” would “*bring us up against the real power of the plutocratic oligarchy that rules the world*” and would immediately fail if “*a change in the imaginary*” has not preceded it.

Latouche is therefore explicitly opposed to communist revolution as the abolition of money and wage labour. As he writes in an article published in *Le Monde Diplomatique*: “*A society based on economic contraction cannot exist under capitalism. But capitalism is a deceptively simple word for a long, complex history. Getting rid of the capitalists and banning wage labour, currency and private ownership of the means of production would plunge society into chaos. It would bring large-scale terrorism. It would still not be enough to destroy the market mentality. We need to find another way out of development, economism (a belief in the primacy of economic causes or factors) and growth: one that does not mean forsaking the social institutions that have been annexed by the economy (currency, markets, even wages) but reframes them according to different principles*”.<sup>50</sup> Instead of a revolutionary change he proposes the adoption of a reformist program for the “*internalization of external diseconomies*” incurred by polluting companies to society, which “*would clear the way towards a degrowth society*”, following the line of orthodox economic theory. In the same article he proposed the following measures:

- Reduce our ecological footprint so that it is equal to or less than the sum of Earth’s resources. That means bringing material production back down to the levels of the 1960s and 1970s.
- Internalise transport costs.
- Relocalise all forms of activity.
- Return to small-scale farming.

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<sup>48</sup> F. Schneider, G. Kallis and J. Martinez-Allier, Crisis or Opportunity? *Journal of Cleaner Production* 18, 2010. Referred to in M. Markantonatou, *op. cit.*

<sup>49</sup> S. Latouche, *Farewell to Growth*, Polity Press, 2009. Referred to in M. Markantonatou, Growth Critique in the 1970s Crisis and Today: Malthusianism, Social Mechanics, and Labor Discipline, *New Political Science* 38 (1), 2017.

<sup>50</sup> S. Latouche, The Globe Downshifted, *Le Monde Diplomatique* January, 2006.

- Reduce energy waste by three-quarters.
- Heavily tax advertising expenditure.
- Decree a moratorium on technological innovation.

In this fashion, according to Latouche, society can be reoriented towards the “virtuous path of eco-capitalism”!

Apart from such a clear counter-revolutionary position, there is a plethora of highly problematic points in the Latouchian gospel of degrowth theory also known as *Farewell to Growth*. For example, the author openly supports nationalist protectionist policies and argues for a “*rediscovery of local roots*” (this goal has been codified with the term “relocalize”). Further, Latouche writes positively about temp labour agencies on the basis that they contribute to the “*shortening of the working week*” and they offer “*a variety of jobs*”, i.e. he is highly commending precarious labour! He specifically writes that “*represent a step in the right direction. We just have to see them in a different light*”.<sup>51</sup>

In addition, it is clear that Castoriadis’ concept of the “imaginary” is used by Latouche in way that facilitates the transfer of the responsibility for the devaluation and the plunder of nature to the individual who is urged to change his/her consumption habits and lifestyle.

But not only Latouche holds reformist views. Another “degrowth” theorist, Joan Martinez-Allier, proposed the implementation of a “Green New Deal” after the Great Recession of 2008-9, that would limit the rise of unemployment through public investment in “green technologies and infrastructure”. This theorist claimed that if “Green Keynesianism” was not transformed into a doctrine of “continuous economic growth” it wouldn’t be incompatible with the “degrowth” project.

Last but not least, Carlos Taibo, an anarchist devotee of “degrowth” supports with fervor the views of Latouche on the supposed example provided by indigenous communities in modern Africa with respect to “degrowth”. As he characteristically writes: “*Africa, which manages to organize itself amid deprivation and to call into being a real joy of life, is probably the best background to appreciate the misery of growth and development*”.<sup>52</sup> It is truly outrageous that Africa’s poverty and misery are portrayed by an anarchist as a model for social life, not the mention, also, the idealization of the patriarchal pre-capitalist relations of indigenous communities. Taibo shares the neo-Malthusian views of the “degrowth” current around the so-called overpopulation problem. When Taibo discusses this “problem”, he follows the position of Albert Jacquard that the “*answer to the question ‘how many people can Earth support’ depends on the kind of people we’re talking about. If we’re talking about farmers in Mali or Bangladesh, fifteen, twenty or even thirty billion could survive without great difficulty. If we’re talking about the average Parisian, who drives his car every day and spends his vacations in Seychelles, the current five billion people are already insupportable: they would deplete the resources of the planet*”.<sup>53</sup> In other words, Taibo supports the reduction of the standard of living of proletarians in developed countries down

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<sup>51</sup> S. Latouche, *Farewell to Growth*, Polity Press, 2009, σ. 40.

<sup>52</sup> C. Taibo, *En defensa del decrecimiento. Sobre capitalismo, crisis y barbarie*, Los libros de la CATARATA, 2009.

<sup>53</sup> *Ibid.*

to the level of the poor countries of the South. Moreover, such a position promotes guilt mongering and the individualization of the social issue of the devaluation of nature.

### **The question of “overpopulation”<sup>54</sup>**

In this section we will examine in greater detail the ideology of overpopulation in order to show its apologetic character.

Robert Malthus introduced for the first time in 1798 the concept of overpopulation in his work *An Essay on the Principle of Population*.<sup>55</sup> According to Malthus, poverty, hunger, disease and war do not arise due to the dominant social relations but they are an inevitable result of the supposed “natural law” according to which the population increases geometrically whereas the means of subsistence increase arithmetically, a law which functions “*absolutely independent of all human regulation*”. The theory of Malthus was directed from the outset against the declarations of equality that had been expressed in the French Revolution and had a clear class character. In particular, Malthus was directed against the provision of welfare to the poor by the state, arguing that it would lead to an increase of their number and to a decline in the incentive to work result in a gradual reduction in their standard of living and, more importantly, to a diminution of “*the shares [of wealth] that would otherwise belong to more industrious and worthy members of society*” [i.e., to the bourgeois and the landowning classes]. His theory was extremely contradictory because in his work *Principles of political economy* he recognized that the lack of social demand for the products of capitalist production is something usual. Regarding this lack he proposed a “solution” through the increased consumption of the non-productive upper social strata (landlords, state functionaries, aristocrats, clergy, rentiers, etc.). Recognizing this contradiction he attempted to overcome it by arguing that the upper strata do not increase their numbers according to natural law but regulate their numbers by prudent habits generated out of a fear of decline in their station in life, in contrast to the “lower classes” that imprudently breed. Moreover, he was honest to admit that demand could not be covered by the working class, because: “*no one will ever employ capital merely for the sake of the demand occasioned by those who work for him*”, indirectly acknowledging that profits are created necessarily from the exploitation of the working class.

For Malthus, the insufficiency of workers’ wages can either be produced by an unequal distribution of social wealth or it can gradually arrive due to the exhaustion of the soil if wages and working class consumption are higher than what the earth can support. Therefore, the creation of artificial scarcity for the workers by the ruling classes prevents the immiseration of all the sectors of the society and “*secures to a portion of society the leisure necessary for the progress of the arts and sciences*”.

Marx attacked the Malthusian ideology of overpopulation and natural resource scarcity: he showed why the poverty of the working class is not caused by an ostensible “natural law of population” and by the scarcity of natural resources but by the internal

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<sup>54</sup> This section is based on the chapter “Ecoscarcity and natural limits: The Malthusian tradition” of David Harvey’s book, *Justice, Nature and the Geography of Difference*, Blackwell, 1996.

<sup>55</sup> More accurately, Malthus plagiarized Defoe, James Stuart, Wallace and Townsend as Marx notes in the first volume of *Capital* (p. 766).

dynamics of the capitalist mode of production. For Marx, the accumulation of capital necessitates the increase of the population so that an industrial reserve army will be available for its needs of expansion. In addition, as he stresses, the law of population is *“peculiar to the capitalist mode of production; and in fact every particular historical mode of production has its own special laws of population, which are historically valid within that particular sphere. An abstract law of population exists only for plants and animals, and even then only in the absence of any historical intervention by man. But if a surplus population of workers is a necessary product of accumulation or of the development of wealth on a capitalist basis, this surplus population also becomes, conversely, the lever of capitalist accumulation; indeed it becomes a condition for the existence of the capitalist mode of production. It forms a disposable industrial reserve army... Independently of the limits of the actual increase of population, it creates a mass of human material always ready for exploitation by capital in the interests of capital's own changing valorization requirements”*.<sup>56</sup> This does not mean that Marx did not recognize the plunder of nature and the rift in the metabolism between society and nature as we have shown in the first sections of this text. The difference is that for Marx scarcity is produced socially in the course of history and the so-called **“natural limits”** are a **social relation within nature** and not a necessity which is externally imposed.

The turn of many theorists, even Marxist ones, within the “ecologic movement” towards Malthusian ideas can be explained on the basis of the extreme plunder of nature which occurred in the state-capitalist countries which referred to Marx’s theory. However, they ended up to uncritically accept and adopt the capitalist argument about “natural limits” and the “natural law of population”. The starting point of a real critique on the ecology of capitalism should be different. David Harvey has argued that what is socially considered as a “natural resource” comes about through a *“cultural, technical and economic appraisal of elements and processes in nature that can be applied to fulfill social objectives and goals through specific material practices”*.<sup>57</sup> Therefore, the definition itself of what is a “natural resource” involves specific social processes:

- The **appraisal** of the natural elements and processes always refers to a particular state of knowledge, understanding and communication which varies historically and geographically.
- The **technical, economic** and **cultural** dimensions of such an appraisal may rapidly change and this makes for a great fluidity in the definition of natural resources.
- **Social goals and objectives** vary greatly depending upon the subjects that articulate them and in correspondence with the manner with which human desires are institutionalized, expressed and organized.
- The **elements** and the **processes** of nature do not change only because of the constant natural processes of change but also because social practices are always activities transforming nature and society with all sorts of intended and unintended consequences. *“What exists ‘in nature’ is in a constant state of transformation”*.

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<sup>56</sup> K. Marx, *Capital vol. I*, Penguin Books, 1976, p. 783-4. Marx’s discussion of the relative surplus population in *Capital* is very rich but for reasons of brevity we will not review it here.

<sup>57</sup> D. Harvey, *op. cit.*, p. 147.

To invoke natural limits on population and on natural resources without reference to the need to **abolish capitalist social / production relations** is, in essence, equivalent to **accepting the current state of affairs**.<sup>58</sup> Such a position expresses nothing more than the fact that there is no will or capacity to change our state of knowledge, to radically change social goals, cultural ways of life and the technological configuration of production. It also does not express, to a much greater degree, the will to abolish economy as a separate sphere, taking on the contrary for granted that we do not have the power to collectively change the dominant social practices. In other words, a revolutionary change of society and the corresponding transformation of its relation with non-human nature cannot be conceived in the context of the ideology of “overpopulation” and “natural limits”. As David Harvey correctly notes in the same book: *«all debate about eco-scarcity, natural limits, overpopulation, and sustainability is a debate about the preservation of a particular social order, rather than a debate about the preservation of nature per se»*.<sup>59</sup>

In the current global conjuncture, when the dominant capitalist strategy in Europe is an austerity politics of capital devaluation, the “degrowth” theory may well act as an ideology for the legitimization of the politics of devaluation and for the management of the global surplus population.

## 7. In place of an Epilogue

Capital is not only a class relation of exploitation and domination but also a relation of alienation of society from nature in which both the producers of social wealth and non-human nature as an autonomous productive force are transformed into objects that are dominated and plundered by it. Nevertheless, the process of the subsumption of nature and of labour under capital is conflictual and contradictory. On the one hand, the subsumption of labour under capital encompasses an actual antithesis: as long as capitalism exists, proletarians are forced to sell their labor power to capital; their reproduction is based on their objectification as variable capital. At the same time, the objectification of labour is an experience of dispossession and alienation. This antithesis is the basis of class struggle which can develop towards a radical practice of contesting and negating capital, tearing aside the veil of fetishism and revealing its content, that it is a class relation of domination. *«There comes the realisation that the ‘objective’ power of capital is produced by our labour, thus capital is not omnipotent, and we can dismantle it. That value cannot exist as ‘objective’ without our compliance with the laws of exchange and wage work»*.<sup>60</sup> On the other hand, nature “reacts” against the process of its subsumption under capital through the occurrence

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<sup>58</sup> Certainly, ecological limits will exist under communist social relations. In this context, the revolutionary process necessarily includes the transformation of social needs and of the way they are satisfied, i.e. what we produce and consume and how we produce it, so that we will manage to overcome the alienation of society from nature.

<sup>59</sup> D. Harvey, *op. cit.*, p. 148. David Harvey aptly mentions in the same chapter the political use that could be made of the ideology of absolute limits on natural resources and population. *“Whenever a theory of overpopulation seizes hold in a society ruled by a dominant class, then the subservient classes invariably experience some form of material, political, economic, and social repression”*. (p. 149)

<sup>60</sup> Aufheben, Review: Moishe Postone's Time, labour and social domination - capital beyond class struggle?, *Aufheben* 15, 2007.

of phenomena such as global warming, the emergence of superweeds, the slowdown of agricultural productivity and so on which function as limits to capitalist accumulation. And if capital posits every limit put by labour and nature as a barrier and gets ideally beyond it, it does not by any means follow that it has really overcome it.

Against the fear that is being cultivated around the symptoms of the capitalist ecological crisis, we must respond by addressing the “illness” itself. *We will only leave the fear behind by trusting in our own forces, in our own capacity to destroy all existing alienation and all images of the power that escapes us.* (Guy Debord)

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