Control of Consumption, Development of Human Needs

Published by Quinterna in N+1 #3 on March 2001

> *7.d. Reduction of the production volume with an "underproduction" plan that concentrates it on the most necessary fields, "authoritarian control of consumption" by fighting the advertising fashion of useless and harmful luxury goods, and by forcefully abolishing activities aimed at the propaganda of reactionary psychology. (Immediate Revolutionary Programme, 1952)*

Today

In post-war Europe the economic policy of the national-communist parties was based, needless to say, on the increase in consumption, made possible both by an increase in wages and, mainly, through a state policy of "social consumption". Even in the 1970s, on the occasion of the profound economic crisis that started from the increase in the price of oil, the three big self-styled communist parties of Europe: the Italian, the French, and the Spanish, launched the latest populist campaigns to urge a state intervention in favour of social investments. To overcome the crisis, said for example Marchais, secretary of the PCF:

> *"We need a real change of course, another policy. This policy is oriented above all toward a relaunch of popular and social consumption. A revival of popular consumption is the condition for the effective use of the industrial apparatus"*

In the same period, and on the same basis, the secretary of the PCI, Berlinguer, initiated that policy of co-responsibility towards economic and political stability which took the name of *historical compromise*.

Proudhon, and then Dühring, were the ancestors of this petty populism.

> *"The inadequacy of popular consumption, the artificially produced underconsumption, the obstacle encountered by the social need in its natural growth, is what makes the critically vast chasm between supply and sale"*

This is the cause of crises for Dühring. We will not stop here to take up Engels' response, just think that about fifty years later Keynes encouraged private and social consumption as his strong point:

"Public works, even if of dubious utility, can yield several times more than their cost. Pyramid building, earthquakes, and even war can bring wealth if the education of statesmen in the principles of classical economics is opposed to a better solution"

Contrary to what he believed, however, the proposal to find better substitutes for pyramids and earthquakes did not in itself constitute an overcoming of the classical economy

People privately consume objects, energy, telephone, and television services (this, is obvious, even in the context of "popular" consumption), and socially consume roads, parks, various infrastructures, etc. Postwar national-communism, especially Italian national-communism, which was less troglodytic, i.e., more modernly bourgeois than that of the various sister parties, was distinguished by its markedly Keynesian character, i.e., by its theorization of social rather than popular consumption, emphasizing the difference between the two terms. The reformist reasoning can be summarised as follows: if the consumption function predicts national income as the Keynesian independent variable and consumption as the dependent variable, and if moreover, the marginal propensity to consume is the higher the lower the income (i.e., a worker spends all of any increase in wages, while for a bourgeois the increase in income in equal proportion is almost indifferent), then wages can be considered as an independent variable, on a par with the national income of which they are a part. In practice: by forcing the distribution of income, wages rise, consumption grows and profit grows more, hence national income.

State support for production and consumption

While certain ultra-leftist trade unionism constructed demagogic theories about the wage as an independent variable and the Confindustria pretended to be frightened and took advantage, as usual, to demand benefits from the state, the ICP drew far-sighted political conclusions from this, as did the less stupid bourgeoisie: 1) the wage has a deferred part (i.e., not in the paycheck, such as social security, environmental protection, the political price of transportation, medical care, etc.) and that is the one that needs to be taken care of more than the visible figure at the end of the month; 2) consumption and production interact, so their level depends on the ability of the state to support the production system at the source (i.e., Marx would say, support investment in the sphere of the means of production). This explains, for example, the origins of the infamous July 1993 protocol, the outrider and model for the politics of all the bourgeoisies of Europe.

In modern society, labor is highly socialized; therefore, the strengthening of the productive apparatus, achieved with the contribution of all social components through the state, has an impact not only on individual subjects but on society as a whole, allowing for an expansion of possibilities of consumption. And since this has largely happened already, precisely with the application of Keynesian policies from the 1930s onward, current interventions are no longer stimulus but rescue. Since the commodity production-consumption system is a premise for the expanded reproduction of Capital, that is, for its very survival, any

intervention in this regard is all oxygen for the asphyxiated current mode of production, which thus survives in a continuous resuscitation chamber.

Like drugs, economic stimulants are addictive. The system needs more and more matter and energy, thus consuming more and more natural resources in comparison to the human resources it requires. Therefore, the gap between production and consumption grows, rather than decreases; or rather: between production and consumption for production itself, and consumption of humans.

The infernal cycle, in which matter and energy in the production process are constantly being transformed to enhance capital and not to satisfy human needs, has catastrophic consequences for the environment. It is consequently impossible to talk about consumption without talking about the production that enables it and the relationship of both to the environment itself.

"Private" consumption has pronounced qualitative and quantitative class characteristics, while "social" consumption should involve all classes, favoring, in the intentions of populists, those less "well-off." But since in capitalism social consumption is everything that contributes to strengthening the production of means of production, the natural tendency of all defenders of capitalism is to put economic policies at the service of production itself, that is, to create a suitable environment for it, from credit to the factory, from the infrastructure around it to housing for those who work there.

The production that makes possible inordinate private consumption and even more inhumane "social" consumption cannot be directed to anything other than to magnify both incessantly, whereby production and consumption interact in a global input-output system into which energy and matter enter and products and waste leave; and since products upon their renewal also become waste, the system expands with disastrous consequences to the entire biosphere in which all classes live. It in this way is not only altered but is an integral part of the production cycle, just as the individual factory (input) is integrated with the individual drain (output). It is no accident that the bourgeoisie (flanked by the remnants of the vanished nobility) was the first to discover the "defence" of the environment in which it lives: the latter ends up being too similar to that in which the proletarians live, but more importantly, without control, it ends up being altered to such an extent that its degeneration is harmful even to the survival of capitalism itself.

Bourgeois ecologism (one could remove the adjective since there can be no counterpart "communist" ecologism) is nonsense, and the proof comes from the scientific environment of the bourgeoisie itself. The scientist, relying on the laws of energy dissipation (the second principle of thermodynamics, entropy), makes no secret of the material impossibility of capitalism's survival:

> *"The vision of a blissful world in which population and capital remain constant after having been expounded with customary skill by John Stuart Mill (1848), has*

remained in oblivion until recently. Given the spectacular revival of this ecological salvation myth, it is good to point out its many logical and factual flaws. The crucial error consists in not seeing that, "in a finite environment, not only growth, but not even a state of zero growth, indeed, not even a state of contraction that does not converge to annihilation, can exist indefinitely" (Georgescu-Roegen).

Even on physical grounds, therefore, it is shown that the dynamics of capitalism possess inherent elements of "automatism" concerning its overcoming; concerning Marxism these ideological capitulations of the bourgeoisie in the face of it are devoid of the social element, but we shall see later how communism (which is not an idea or a "policy" but a material fact) will be able to solve the problems of the political transition to the future society and its practical achievements in harmony with the laws of physics.

Criticisms of consumerism from within

By introducing the concept of entropy even the bourgeoisie, therefore, admits that the problem of need-consumption (let us always use the terms in a non-moralistic sense) is closely related not only to that of the environment and classes but to invariant laws of nature that govern all phenomena in the universe. Such statements may seem exaggerated to some, but in the meantime, such laws oblige the bourgeoisie to produce ponderous studies which, even if they do not all go to the cited extreme, were born and are born to show nonetheless that consumption and needs should be scaled down and that a balance should be found by ceasing to idolize capitalist growth. The fact is that exaggerated production requires equally exaggerated consumption, with the reflections we know it has on the environment, bourgeois studies against consumerism prove to be an agonizing rush against the onset of social reactions due to the potentially self-destructive processes of capitalism.

Now, none of the anti-consumerist currents have ever exited the cycle of consumption-production: they have only ever proposed to regulate it. There are particularly obvious aspects of the traps that mannerist anti-consumerism can set for even the most willing champions of a "better society." Paradigmatic in this sense is the commitment of one Beppe Grillo, who is very good and engaging in flogging the fashions and wastefulness of this society, but always from within: for him, for example, the automobile is a commodity that must exist, certainly only with a hydrogen engine, a fuel that can be produced with photovoltaic cells ("but can you imagine the traffic, city life, with these cars," he said breathing steam from the exhaust pipe). His anti-consumerist ecological verve, which also appeals to many leftists politically, finds its scientific basis in the writings of Marco Morosini, an environmental analyst working in Stuttgart who militates among the proponents of so-called sustainable development, that is, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

But the expression "sustainable development" - with the attached explanation - turns out to be a blatant contradiction in terms, since no economic, i.e., quantitative, development is in principle sustainable without alternating development and crisis; therefore, no satisfaction of present needs is compatible with future human needs, since present development is - and cannot be otherwise - accumulation of very serious problems for the future. Morosini's statement has its political implication in a motto that has the merit of summarising in a few words what ecologists, anti-consumerists, and anti-globalizers are theorizing on thousands of printed or electronic pages: "After Seattle, it will no longer be enough to defend consumers. It will be necessary to defend the consumed as well" (quoted on Peacelink's website in the article Free fox in free henhouse; the other quotes are also noted from the Web). To defend the consumer, "to increase welfare," it is necessary, again according to Morosini, to "reduce consumption." Sennonché's defense of the consumed, that is, of the one who today is impoverished by the system of others' consumption, means improvement of his "standard of living,'' thus of his consumption.

Consumers and consumed

So defend consumers in every way and always. But man is not a consumer of goods by innate disposition or divine law; if in capitalism he does not consume, that is, he does not run factories, he dies unemployed. The only "welfare" capitalism knows is production for production's sake; consumption is a consequence and human needs are not taken into account. Therefore, to defend from "someone" the consumers of goods to make the consumed become consumers, in turn, is not only to accept the present society but even to make an unbridled apologia for it. We should all become "moderate consumers." How moderate? By all reaching, for example, half the consumption of an average American? According to official figures, we should then triple today's world production at constant population. The other proposition dear to this parapolitical milieu, and logically connected to what has already been said, is fair trade. Farewell objective laws of society: trade is the sphere of circulation of goods, where surplus value is realised, where the law of the jungle reigns, where therefore no crime is too heinous to fight competition; who and what will make it the place of fairness and solidarity? Of good intentions?

In Seattle there were the consumers in the streets and the consumed sitting at the table of international bodies. Paradoxically, the consumed were asking the powerful prevaricators to be accepted and integrated into the system as "equals," to be more consumed still: more capital needs to be borrowed at fair interest to build the infrastructure needed to attract international capital. In short, they were asking to be palatable in the markets just as any commodity with good use value is. To be used rationally and not with the current anarchy. It is no accident that specialized banks are involved in international equity operations.

There is even a local one called "Banca Etica." It is not a joke. It is not a specialized bank for the Third World: it acts here at home, is based in Padua, and on its bylaws is written a program that parallels Morosini's: "Ethically oriented finance is sensitive to the non-economic consequences of economic actions; credit, in all its forms, is a human right; efficiency and sobriety are components of ethical responsibility; profit obtained from the possession and exchange of money must be the consequence of activities oriented to the common good and must be equally distributed among all those who contribute to its realisation; participation in the choices of the enterprise, not only by Shareholders, but also by savers, must be encouraged."

"Common good" from the handling of money? To comment critically on such assumptions would be like shooting on the Red Cross; let us therefore simply note that the bourgeois, capitalist world has its own eco-moralistic ramification that is not at all alternative, indeed, it is so well integrated that it includes instruments-symbols of capitalism, such as banks. The ethics and the lexicon are entirely consequential. When in Arabia the revolution of the austere desert shepherds clashed with the corrupt urban civilization of the merchants, the Quran was certainly more "ethical" by forbidding credit at interest. Moral inferiority of the civilised!

The protests that have been going on since Seattle, and will be repeated in the future, are actually in defense of this consumerist world, not against it; by asking for its mechanisms to be improved, they are implicitly asking for it to be more efficient and durable. For our part, we are always careful not to fall into indifferentism, not to underestimate the social repercussions of the underlying economic mechanism, but one cannot fail to register that the epidermal violence expressed by the anti-globalization movement is more consonant with the society of spectacle than with genuine social anger. It therefore turns out to be wholly inadequate not only to achieve the goals set by the various movements, but also to explain the material malaise of populations and classes. Statistics on crime, suicides and Prozac use also give us an index of social malaise, but that is not why it would make sense to take to the streets with interclass demonstrations.

The trade of the likes of Morosini and even Grillo results, whether intended or not, in channelling attention to projects of compatibility within the system, which is presented as reformable, and the whole thing is ultimately traced back to a single major problem: that of development and compatible consumption, the same problem that underlies countless United Nations commissions with their studies signed by the world's top economists. The capitalist world as never before.

The criticism generally concerns the inability to limit the excessive power of multinational corporations by global or local administrations; it is accused of acting as their spokesperson and paving the way for them toward world

domination. It is a critique within political economy, given that it concerns the use of resources in relation to the results that are obtained, therefore it is a reference to efficiency, to the return on capital invested, as in a respectable company. It doesn't just target usage of resources compared to needs, but also their allocation is at a territorial and national scale as well as on a global scale. *"Delete the debt"*, sang Jovanotti last year in San Remo addressing the President of the D'Alema Council. A singer is a singer, but that appeal is a policy followed by thousands of people who believe they are very radical. Instead, it is not even reformism: it resembles little more than a policy to the philanthropic activity of associations against serious illnesses. In some cases the debts were cancelled, not due to political pressure neo-missionary, but because the debtor, who, despite everything, is part of an integrated production-consumption system must remain on the market. Without considering that the old debts, especially the long-term ones, had already been practically honored by the mass of interest paid by bleeding whole populations. And not to mention, moreover, the creditor generally uses debt renegotiation to take out a new debt, when it is convenient for local investment rather than the return *tout court* of capital to the country of origin.

Impotent reformism

After all, these good people who want the free market should know, that the highest level reached by bourgeois science in this regard, precisely concerning the theory of resource distribution, is represented by the engineer Vilfredo Pareto who, in 1906, demonstrated with mathematical elegance Smith's assumption of the "invisible hand"; And that is: in an environment of perfect competition it is impossible to reallocate resources "justly". In short: according to strict rules demonstrations of capitalists, it is not mathematically possible, in capitalism, to increase the well-being of one consumer without decreasing that of another (the Pareto optimum was then also demonstrated with sophisticated computer modelling).

Of course, there could be a forced distribution compared to the "natural" curve; this, however, must be in favor of "affluent" countries or "poor" ones, it is not called a "free market" (a situation of freedom which by the way has never existed) but *fascism*. The action of Capital on the executive apparatus at service of him can very well produce a policy of relocation of resources, but only when there is an immediate benefit to their accumulation. Therefore governments will be able to indifferently launch policies of "oppression" as well as humanitarian "liberalisation", always deploying, however, apparatuses of totalitarian centralization, better if they are multinational corporations. We cannot expect that the movement of "compatible consumption" is not as it is, but certainly, the analysis of the degenerative phenomena of the global system is at a lower level than that official. If the political economy had scientific foundations and was solely distorted by particular interests, intervention of governments would be sufficient to put things back on track, with the use of science today, which

already provides abundant knowledge and means for limiting the damage of consumerism and therefore of exasperated negative change of the environment.

There is no technical limit to the amount of goods that can be produced: volcanic production is capable of satisfying unlimited needs; but there is a social limit, that is, related to the capitalist mode of production and the environment in which it manifests itself. Today's man already knows how to artificially regenerate destroyed environments, and has known for millennia how to intervene by transforming fallow land into vegetable gardens. The "hydraulic" civilizations of Asia and the agriculture of mediaeval European abbeys profoundly transformed the landscape. Today's Israelis are very adept at propagating dry farming, and desert agriculture, which is an art as old as Middle Eastern civilizations. The Sahara is dotted with millennia-old oases that represent entirely artificial environments in which a climatic balance is stabilised that allows for agriculture that is in itself very natural. They were admirably cultivated, and to some extent still are, in the mountains of Peru, Arabia Felix, India, and China, and the resulting production was by no means poor compared to the needs of the meager local populations. Man today has infinitely superior means, but instead of using them, he forgets even the ancient ones, abandoning millennial works to ruin, devoting himself to the gluttony of possession and consumption or at least cultivating the mirage of it with unedifying universalized envy.

Also in this way, it is demonstrated that Capital is the truth limit of capitalism: the law of modern rent tells us that it is the worst cultivated land that establishes the basis for the share of value that goes to the owner, but it is capitalist productivity obtained on the best land (investment) that determines whether the worst land should still be cultivated or abandoned. The world still offers extractive resources and land for agriculture in considerable quantities, and agricultural science today, would allow them to manage this availability more than ecologists are willing to admit; but this depends on the capital that may exist being invested profitably. The bourgeois knows how to make precise calculations on rationality and the convenience of its production programs, and this has also been reflected in the less controllable aspects of the economy. His science would allow it to replace many of the raw materials used today when these should become too scarce and expensive due to the law of rent. For all these reasons, with a limited horizon, the optimism of the bourgeois has its objective justification, especially today when the class threat appears under control. But the social question will explode long before the technical problem of the finiteness of the world and the quantity of raw materials becomes acute because consumerism is more dynamic than the limited-time cycles the earth can allow: the agricultural cycle almost everywhere is a year-long and raw materials are increasingly inaccessible.

Unlimited needs are functional to optimistic capitalism, which could not even exist as a mode of production without recreating ever new and artificial ones. If the technical limitlessness of production were accompanied - more so than it is at present - by a limitlessness of needs, capitalism would not survive a month by itself. In capitalism, every need exists as a function of production, and only advertising is based on the lying assumption that the production of a given commodity exists as a function of need. Therefore need must always be stimulated, to the point of absurdity, regardless of its physical and social harmfulness.

Ecological business, a new need-consumption

The problems caused by the costs of extracting primary materials are for now overcome thanks to the fact that more and more surplus value goes to income, which by definition is transformed, through the banking system, into credit capital that the industry uses (at a high cost) to reinvest in the further cycle of production of surplus value. Since every productive activity is a transformation of matter and dissipation of energy with the relative residue to be disposed of, there are limits due to the social costs of hyper-production-consumption, normally called *externalities* to production (Marx gives the example of the civilization of the steam engine which fouls the water at the same time as it needs to have it purer than before). These externalities are temporarily exorcised with appropriate investment measures aimed at avoiding environmental collapse.

Since capitalism knows only the way of money and any intervention cannot preclude it, ecologism can only become the object of investment and profit. This is a perverse cycle because the economic balance sheet does not correspond to the energy-social balance sheet, which in this case is always passive. But the capitalist does not see what the scientist sees; on the contrary, capitalism has the power to "buy" the vast majority of scientists themselves, not so much with their vulgar wallets as with their ideology, so that they sing its praises and sing its immortality.

This is not self-aggrandizement due to mere class vanity. The bourgeoisie has long realized that the rationality of the enterprise system clashes with the anarchy of the environmental system and seeks to remedy what it calls negative externalities. The bourgeoisie, as long as it had the opportunity to expand production from the point of view of the socially productive force of labor and the point of view of territory, was not at all concerned with the external effects caused by this expansion. An elementary system of growing needs and consumption was sufficient as a moral basis for development. But beginning with the crisis of 1929 in the United States, a need dictated by practical considerations, a business ethic which later spread to European countries enterprises also had to take into account social repercussions and environmental impact. During the Great Crisis capitalism discovered, through Keynesianism and

ultimately fascism, that production, hence needs and consumption, could be stimulated, i.e., be artificially maintained at a high level through government spending: the state became an instrument to improve the mobility of Capital in the market and, at the same time, to prevent the natural formation of overly powerful monopolies. With state stimulus drugging the productive system, the conditions for the adoption of justificatory theories of unbridled capitalist activity were expanded. Thus was born the "social balance sheet," a system of reporting that, flanking the traditional statutory financial statements, illustrates the social merits of the enterprise to its privileged stakeholders, that is, to those who can claim both capital interests and other connections (the stakeholders, those who participate in the enterprise but are also trustees, political appointees, lobbyists).

The more unacceptable capitalism becomes from a human point of view, the more it devises ways to gain acceptance by even finding trendy admirers. In 1962, economist Friedman said that corporate executives should have a social responsibility in addition to their responsibility to their shareholders. And how not: all multinational corporations are advertising in international business journals by putting the focus of their attention on ... the Man with a capital letter. One example among all, Shell, responsible for an ecological and ethnic disaster in Nigeria, announcing over a multi-ethnic panorama of smiling faces, "Human rights, not a normal priority in business," but as far as it is concerned: "It's part of our commitment to sustainable development to balance economic progress with environmental care and social responsibility," then, at the bottom of the page, in very small print, disclaiming responsibility: "Each Shell company is a distinct entity [...] terms like 'we', 'our' refer to the group and not to specific companies." This public relations activity thus does not detract from the fact that such companies devastate entire regions and bribe governments, just as it is not excluded that they commit their capital to legalitarian and environmentalist campaigns when it serves their profit. The need for ecology can only be the consumption of ecology.

The legislative and executive systems of the world's bourgeoisie address the problem of hyper-consumption-production and ecology exactly with the criterion of ecologists, that is, from the point of view of capitalism. Since they must try to solve problems instead of just talking about them, they must also accommodate the money-capital system to obtain practical effects on the mechanism of individual and social needs, viz on factories, on consumers, and society as a whole. Now, the system of exchange, capitalist or otherwise, functions on the basis of value differentials, value is expressed in money as long as it exists: production incentives can only be in money and also disincentives. We will then have a system based on a flow of value and in the case of a differential positive (profit) and in the opposite case, negative (loss).

It cannot be otherwise, because, if at a primitive level the exchange can only take place when there is a mutual surplus of use values, with the development of

production, the engine of exchange is the value, *the monetary excess*. In Marx's scheme, every surplus of capital is always, at the same time, a surplus of commodities: M (money) becomes M’ (money in greater quantity) thanks to the fact that a commodity C, in the process of production P, becomes C’ (commodity with greater value content) in the general production process. All capitalism is then based on an uninterrupted flow of goods and capitals renewing themselves within the cycle of production and in the market:

M → C → P → C’ → M’ etc.

Being a cyclical process, it is indifferent to depict it starting from M, C, or P, but the capitalist can't tear himself off from his mercantile spirit, therefore he only sees the process as M to M’, the one that responds to his immediate perception of a capital investor aiming for a profit.

This vision, limited to the power of money that everything resolves around, is the only one that can be embraced by legislators and bourgeois governments called to regulate activities regarding the ruin of the environment to remedy possible damage to the entire system of hyper-production-consumption. They will then devise some expedient way to add or remove a share of M through those C steps that involve danger for the capitalist system as a whole: that is, trivially, they will provide incentives or tax those goods. The legislator, by authoritatively decreasing or increasing the purchase price, and making more or less convenient their use, actually has the possibility of intervening at particular moments in the production-consumption cycle, to modify its nature in favour of environmental protection. He can use money to solve a full range of production and market problems because it is the only *universal equivalent*. The mentioned Marco Morosini is, for example, one of the supporters of "European taxation ecology" to stimulate the adaptation of industrial production to the needs of the environment and consumers (if petrol costs more, companies would design better-performing cars that consume less fuel and poison, etc.).

Four unreformable contradictions

Such a "fiscal" model has the defect of working at the local level, that is, in the particular sphere in which it is used, while it has irremediable contradictions at the global level. It is obvious from the latter point of view that everything that affects humans as a species should be observed dynamically over time: just as today we have what our predecessors left us, we should be concerned about what we leave to our successors, in a chain from which existential selfishness should be banished. Political economy cannot even remotely dream of solving this problem, because Capital wants profit or interest with an ever-shorter maturity. That is why only the extinction of economics will give way to true ecology, that natural metabolism that takes into account the human species and its production-reproduction as a whole with the biosphere.

To exchange economics for ecology is a typical ideological error; to hope that the former has even contingent answers for the latter is a pious illusion belied by the physical law of matter-energy transformation, which requires a virtuous cycle of qualitative transformation and not a deadly one of quantitative dissipation. This is the fundamental contradiction between capitalists, legislators, economists, and ecologists on the one hand and, on the other hand, the very few bourgeois scientists such as Georgescu-Roegen quoted at the beginning: one cannot treat a closed, limited system, globally sensitive to local shifts in energy dissipation as if it were an open system, capable of not dissipating any at all. In nature, energy creation does not exist; there is only its transformation and loss into forms that can no longer be used. Even the use of wind, solar, marine, etc. energy has implications in a final dissipation of energy greater than the useful energy that is derived locally from nature. Unless we come to the elimination of "consumption" as such, as we shall see, and stay within the framework of the open system, that is the Earth and the energy it receives from the Sun, cancelling the use of its transformation from minerals. But in capitalism, however long reserves may last, no such calculations can be made: as long as it is accessible, every raw material is also immediately consumable; a conscious government of the needs and consumption of the species over time is, in terms of valorization, an absurdity.

The contradictions of fiscal ecology are insurmountable. First, the price of commodities that the legislature is supposed to influence is not set by the individual capitalist but is derived from the state of production in a particular branch throughout the world. If a branch of production is successful in transforming M into M’, then there will be entrepreneurs enticed by this result, and they will enter that branch with the sole result of further lowering, by their competition, the price of the relevant commodities automatically causing their diffusion, therefore, consumption to increase. If a government acted on authority to raise the price of those goods through taxation for ecological or anti-consumerist reasons, it might simply find itself in the position of killing a domestic industry, which would be overwhelmed by competition. It could raise customs protections, but it would contradict the free market system and its institutions, which it must adhere to precisely in order not to be cut off.

On the other hand, a worldwide agreement would clash, as it does, with the different development of different countries. Preaching ecological respect to those who are only now going down the road of capitalist consumption makes no sense; and, every time, those concerned respond in kind, as, for example, China, India and Brazil have been clamouring to do.

Second, the purpose of production is not the satisfaction of human needs. Every commodity that leaves the factory and enters the market leaves it at the moment it is purchased by a consumer, who pays its exchange value and benefits from its use value, which consists of satisfying a need. If the latter were always the same, the model would no longer be dynamic but static, since an equilibrium of replacement of goods, always the same for the same people,

would arise, and there would be no growth. Nor does it make sense to claim to reduce the overconsumption of certain populations to obviate the underconsumption of others: in order to be a consumer, one must have value, either one's own, or derived from the labour of others, i.e., have an income. It is only possible to justify the overall movement of commodity production on the assumption that production needs to expand, and this is a huge contradiction: it can only grow with the creation of new needs among those who have too much income (and already too many needs), so the legislator can only prove powerless in the face of consumerism and the related harm to the environment.

The third contradiction that ties the hands of the legislature is the impossibility for the bourgeoisie to determine the value of commodities a priori. In the price system these are detectable a posteriori, when everything has already happened in an extremely complex world system which each individual capitalist cannot influence; he must look at what everyone else is doing to set the price of his own goods. To do science would instead require a priori knowledge, having measurable quantities, starting data on which to apply algorithms of proven and established use. Any entrepreneur can analyse his or her own production cycle and derive very precise partial data from it, but action on consumption and the environment would require knowledge of the entire world system by a body of the whole of humanity for the whole of humanity, and not by competing nations and firms for selfish national and class interests.

A further contradiction arises from the fact that the exchange-value system works when a product or service is compared with money and vice versa, or even compares product with product; however, the comparison becomes absurd in the case of the regulation of consumption and the pollution due to it. A commodity is exchanged when there is a buyer, and the average price is set through millions of interactions; but one cannot, capitalistically, set the price of a non-thing, that is, pay for not having consumerism and pollution. Economic calculations, even very accurate ones, are always possible, mind you. For example, environmental damages can be assessed by calculating how much would need to be invested to restore initial conditions. So post-hoc it is possible for the bourgeoisie to quantify the aforementioned negative externalities. But these are interventions that are possible after the damage is done, patches on which to trigger accountancy operations, unable to touch the real root of the problem.

Tomorrow

In the capitalist mode of production, each producer seeks to differentiate itself from other producers by building its own market niche, that is, by attracting new consumers with the promise of satisfying new needs, which can only happen with new commodities. Since its purpose is not the satisfaction of human needs but the realisation of profit, the commodity must at all costs attract attention, create a need and then satisfy it with a use value, no matter how much it is

derived from pure fantasy. In a society in which socialised production is free from such a qualm, all human activity will be directed toward the pursuit of the satisfaction of human needs, which will change by the simple fact that the cycle M → M′ will at first be reversed into C → C′, where C′ will no longer be an expression of value but of qualitative change, as is now the case within production before the commodity becomes such in the marketplace.

Therefore, while in this society the more new types of commodities increase the more new needs to be satisfied, in the new one it will be the products that will adapt to the needs, which will arise not from the needs of valorization but from the relations between men. While today the commodity becomes an object increasingly foreign to the individual, who needs at the same time more and more money to buy it in quantity, tomorrow the negation of it and its metamorphosis into a useful good will eliminate the quantitative problem and accentuate the qualitative one.

In fact, a man is not "poor" in relation to what he possesses, but in relation to unmet needs, which have no quantitative reference with the possession of objects or money. One can possess much and be dissatisfied with what one does not yet possess, but one cannot possess everything. While today the production of commodities that satisfy artificial needs is closely linked to the increasing valorization of Capital, whose need is satisfied in pure accumulation, in the future society satisfaction will be unrelated to possession, because everyone will be able to enjoy everything without owning anything. In this society, among other things, the worker's capacity for possession collides with the law of increasing misery: in proportion to the mass of surplus value he produces, his consumption decreases.

Disposable needs and goods

Today, the more money acquires power, that is, a generalised ability to exchange for equivalent goods, the more the individual loses control over his needs. As he is unable to obtain goods in sufficient quantity relative to the needs induced by consumerist fashions, his frustration grows. The capitalist productive volcano must supply money to the consumer so that the factory never stops and profit never stops fueling the accumulation of Capital, but the increase in labour productivity causes production to increase more than wages increase. We have already seen that the system grows and is dynamic because C increases, and only so allows M to increase. The flow is circular but oriented, has one direction and is irreversible. It is production, the continuous valorization of products that adds value to C; it is there that the transformation of the use value of the partial commodities that go to form the final one takes place, which in turn, in the market, will be sold at exchange value. But we have seen that valorized C is transformed into increased M at the expense of wages, and, since the capitalist's profit rate also tends to fall, the increased value will not so much benefit average consumption as it will benefit the infernal production cycle.

Tomorrow, the transitional society to communism by eliminating the market and thus the commodity category, will also drastically lower consumption because it will no longer have any interest in the irreversibility of the capitalist production process, which must produce goods that do not last too long, that are disposable. When the absurd division between life time and work time disappears, the utilitarian objects will be designed and engineered in such a way that they meet the need to last efficiently and rationally over time, not the need to break down according to the times set by marketing. And they will enjoy careful and efficient maintenance until new needs intervene to make the need for more evolved objects felt.

This is not as trivial as it might seem at first glance to our waste-addicted eye. Truly human production will metabolise objects of use, so there will be no such thing as fashion, no such thing as the difference between old and new as a mental reflection of the material need for production, between the old patched up and the new blazing. Everything will be immersed in a single process, where objects and the environment will recall the continuous work of men, and the obsolete will give way to the new in an organic succession. Economic cycles, where manufacturing, "warranty" maintenance, obsolescence, repair and replacement are discretized, will disappear. Then the disposable criterion, now indispensable to achieve a short and direct cycle from manufacture to senseless destruction, will no longer make sense.

Therefore, while sophisticated capitalist commodities are of increasing relative coarseness, in the sense of little value content compared to the scientific knowledge attained (Marx), the products of future society will have a very high use-value content, that is, they will be of increasing relative perfection, and will be cared for exclusively as useful goods.

It is absolutely untrue that care for the existing will cause technological progress to stall by preventing the emergence of the new: human need will drive technical and scientific innovation more than it does now, since it is precisely now that reasons of investment, depreciation, monopoly or other reasons related to the exchange-value cycle prevent true technological revolutions in certain cases. One can give a thousand examples of technologies that have remained in the drawer for economic convenience, patents purchased for the sole purpose of preventing their use, etc. One example among all: millions of children have to buy, in the entire school cycle, more than a quintal of expensive books each. What's more, they have to carry around ten kilos of paper to school every day. For years, all this would be perfectly obviated by adopting a trivial purpose-designed laptop computer, weighing the weight of a book, costing next to nothing, capable of loading entire libraries into memory and lasting for the entire school life and beyond. To remain in the most technological field there is, that of computers, it is well known that a large part of innovation does not come from programmed industry-market choices, but from the spontaneous research and application of thousands of enthusiasts who put their individual energies at the disposal of all

and who are enraged against the multinational corporations in the field, which are objectively in the way of potential development.

When the rate of profit (value ratio between profit and anticipated capital) is lowered, it means that the final value of C' slightly exceeds the value of C. Then the capitalist, unable to act freely on the value of C, that is, on his cost of production (the materials he buys from others and the labour-power), will try, through the factory system, to increase the number of goods produced, so as to compensate with the increase in the mass of profit for the decreased rate. It will try to "produce" goods in which the reduced value of the object is more than compensated for by services that can accompany the object, as in the case of cell phones, which in themselves are worth little but are vehicles of value. Future society will have no need to worry about quantitative phenomena of this kind because they, abundantly abetted by the revolutionary politics of the transitional period, will no longer have any material reason to exist.

The hole-patch economy and its opposite

Let's focus on the central part of the cyclical sequence first pointed out, the one relating to production (C-M-C'). Inside the factory, as long as there is no connection with the market, there is no exchange of goods but only that of products, and these therefore do not have exchange value but only use value. In the production flow there is no money, there is no market, there is no competition, there is no *exchange* but, precisely, *flow*. There is cooperation between men who have to achieve a result. The limitation of waste is guaranteed by the finalisation of existing resources in a rational production plan according to the project. There is therefore no anarchy.

A factory, unlike capitalist society, is not a system of non-communicating and competing parts. In it the possible unwanted phenomena caused by the production flow are not at all comparable to those "negative externalities" mentioned, the only ones intellectually accessible to the various tinkerers of Capital, those monetizable through the interventions of the legislator. Environmental phenomena in a factory can be addressed as an integral part of the process productive, they are a component of it and therefore, contrary to what we have seen, they are not known *a posteriori* but foreseen in the general project, treated as phenomena under control and as not harbingers of anxious *tacòn* which are, as we know, worse than *buso*. Harming of the environment in the factory, accidents and danger arise *exclusively* from savings on the capital advanced by the capitalist: if he disappeared, their elimination becomes a routine technical problem.

"'"Negative externalities" exist because the system has islands of production separated by a mercantile sea that renders them incommunicable; this requires an "external" entity to put a price on the inconveniences. The capitalist and his environmentalist flanker cannot understand that the whole system can be

reduced to a single unit of production such as the factory and thus the very concept of a monetized "externality" can be eliminated. From the point of view of the future society, there is not the environment on one side and the factory polluting it on the other: there is only a single complex system that is self-organising according to rational and not anarchic criteria.

The immediate program of revolution has many more possibilities today than could be glimpsed in the 1950s, as shown by the still distinctly "political" emphasis of the quotations we place at the opening of this series of articles. It is not that every revolution does not need political authority and decisive totalitarian features, but, as Lenin also observes about the October Revolution, the less economically mature a revolution is, the more proletarian power needs coercive force; the more mature it is, the less it needs to be defended politically, the task of pandering to and liberating the elements of the new society already present in the old one and responsible for its passing being made easier. The possible revolution is thus already capable of immediately directing the real qualitative transformation.

In mature capitalism, the need-product-consumption-need relationship has reached its limit, and the examples are clear for all to see: broken-down, in Italy there are 60 million radios, 50 million television sets, 29 million cars, 70 million telephones, 80 percent home ownership, etc. These are figures that also accompany the highest average saving capacity in the world and show that further consumption of goods without frantic replacement of existing ones is problematic. This is why capitalism continually affects the mutual influence between production and consumption.

Production puts itself in relation to consumption, says Marx (Introduction '57), it creates the material premise for it by providing it with the object that justifies its dynamics. But, he adds, consumption in turn mediates production by making available to it the subject that can give meaning to the product. A railroad on which carts full of passengers do not run would be only a railroad in name and not an actual reality. Therefore, the product of human labour, unlike objects found in nature, is affirmed and multiplied through a thousand forms only insofar as it is consumed: without need there is no production, but without consumption there is no reproduction of need. This is true of any society based on labour and production, since in "every organic whole there is a reciprocal action between all the different moments." That in general consumption is also immediately production and vice versa is a fact: in nature when a plant consumes the combination of elements that enable it to live, Marx again observes, it produces itself, it grows, just as man does when he consumes food. To produce in an industry is immediately to consume or vice versa, since production transforms matter and energy, and this transformation can only be called production when there is the further consumable result.

However, it is one thing to talk in general, quite another to talk related to types of societies, Marx continued. The invariant is clear: in any subject, individual or factory, production and consumption appear as moments of a single act. Every commodity purchased has been produced by others and is consumed to produce other commodities for other markets (M - C - P - M’ - C’ - M’...). The same scheme also includes the commodity labour-power, which is a part of man, and is used in production, is "consumed" and must be regenerated with wages. Isolating the individual moments, it is indifferent to start from production or consumption, it depends on what one wants to describe: if we look at production as the central element it is a factor not only of commodities but of a need for consumption; if we fix the attention on need, it claims production as the means of its satisfaction through consumption; if we privilege consumption in a Keynesian manner, need and production are passive elements and must be stimulated. The observing subject, especially in capitalism, has perception of the whole as a movement gravitating around its own particular interests, so it indifferently posits one moment or the other as the actual starting point.

Towards a truly organic society

Capitalist society is not just any society: it, more than any of its predecessors, has made production its main factor and separated it from distribution by exacerbating the social division of labour: now the subject of need is more than ever in the condition of not having a specific need until a commodity is produced that arouses it with obsessive publicity and drive to emulation. The commodity precedes the need, and the individual does not take possession of it immediately but through a generalised exchange for money. Between the producer and the products, between the need and its satisfaction by consumption, stands distribution, which, among other things, establishes according to social laws how much product should be distributed to "producers" and to which ones.

Since the historical process is irreversible, in the future society the mechanism of need satisfaction, and thus of production-consumption, cannot be a return to primitive indifference (as pure ecologists would like). Nor can it be a compromise based on equitable distribution and reform of the mechanism because, as we have shown, capitalist accumulation (production for production's sake) is synonymous with indifference to human needs. Therefore, the future society will do away with the social division of labour and keep the production plan, which has proved so efficient within the production units, and extend the program, the project, to the entire social structure. Only when the present separation into compartments that communicate exclusively through value categories disappears will the dialectical (i.e., relational) unity between need, production and consumption be truly achieved. The order in which individual moments are arranged (and expounded in description) in society will no longer make sense: it will encompass them in an effective "organic whole" in which "mutual action is exercised" between the parts. Thus, there will be no exchange of commodities,

but rather a unidirectional chain of use-value passages, just as there is in a normal production plan.

When we refer to a complex system such as a society, a full explanation of "organic whole" includes not only generic relations but above all relations which, recorded in the meanderings of the society itself, are capable of modifying it as a system, that is, of producing an increase in self-consciousness, with respect to its origin and becoming, of allowing an accumulation of such knowledge in order to make use of it when the time comes, using its set of differentiated cells, its network of sensitive nerves, made up of men, organisations, memory, experience. It is said in this case that the system produces less entropy, or that it produces neg-entropy, that is, less dissipation, that is, new information. No such complex system can remain indefinitely the same, it must change, and the more capitalism matures the more it produces the elements of its own overcoming.

The necessities of accumulation have made capitalist society the least organic mode of production there has ever been from the point of view of relations between men, separated as they are by the division of labour and the necessity of mediation through exchange; but they have also made it the most organic from the point of view of the social production that has long since enveloped the world. By breaking up capitalist relations humanity will be able to fully liberate organic potentialities by welding social production with the whole range of human relations, including man's relations with the nature around him; and then all current proposals for a more livable capitalism from the standpoint of needs, consumption and relations with the environment will seem ridiculous.

The transition is mature

It is not a matter of simplistically determining that we will "make" fewer cars because public transportation will be favoured over individual transportation and the new need will be to ride the bus; or that we will "make" safer petrochemical plants because we will use less plastic and synthetic fertilisers in our ecology-friendly existence; or that we will "make" no more concrete boxes per dwelling but distribute (oh, sure, "as Marx says") the population over the earth's surface (perhaps each in his own cottage!); or that we will use "renewable resources'' for energy. These are idiocies that spring, out of mental laziness and adaptation to the prevailing trend, from a context that draws, at least for the past seventy-five years, from the heritage of Stalinism. Stalinism was, like and more than its Western counterparts, a worshipper of productive quantitativism, and it left its mark even on the devotees of mere quantity decrease. The problem of transition is not solved with quantitative categories of value in the lead: they make it insoluble, while instead the solution is simple when we eliminate them.

First of all, among humanity's needs will be that of not becoming extinct too quickly due to processes set in motion by class societies. Excessive as the concern seems, no one today knows the future fate of mankind, not when the coupons of a stock market investment expire, but a few centuries down the road. The new society will finally begin, for the first time, to worry about the future of the species. It will not be so much a contingent need, dictated by immediate alarm situations, as the *normal interaction* with the world of which it is a part, as every other species does. Only man will do so according to a rational design.

While there is no specific knowledge in this field today, there are some certainties that have the value of scientific axiom: first, mankind is not eternal as no species is, if only because the Sun is not eternal, since it will give some discomfort long before the four or five billion years calculated for its end; second, the natural resources from which society derives its energy and production for now are not eternal (in this case, time is measured in decades, not thousands of millennia); third, every productive system based on growth is doomed to perish of "entropic" death (loss of energy and order, and in this case the decades are surely few); fourth, even if it were not based on growth, that is, if it were stationary, every productive system is equally doomed to die for the same reason (and even in the latter case the years are counted in tens, not thousands).

Marx, both in the Manifesto and in the Critique of the Gotha Program, is still compelled to sketch the revolutionary transition as a phase of growth and speaks of an increase in the "mass of the productive forces," of a "multiplication of national factories and instruments of production," whereas today the problem is the opposite. From the Lassallian collective "income," that is, from the total social product that would be to be distributed, he deducts among other things "an additional part for the extension of production." In the text he logically destroys the notion that "income" and "entitlement" to its equitable distribution would survive, because "these inconveniences are inevitable [only] in the first phase of communist society," but at this stage he still takes for granted both the quantitative increase, the insurance provisions against man-made or natural disasters, and the "administrative expenses, what is intended for the collective satisfaction of needs such as schools and a fund for the incapacitated," all measures that are already solved by the exuberance of the social productive force, without the need for special provisions, even in capitalism (the extreme development of credit and the systematic distribution of surplus value within society is more than sufficient).

During the rise of capitalism the steady state dreamed of for example by the aforementioned J. St. Mill, a contemporary of Marx, was a reactionary utopia that recalled feudal immobility, while the theories of equilibrium without growth, typical of the imperialist phase, are simply nonsense. The advance of the social productive force of the time of steam had not yet stopped, electricity had not yet

conquered production and quantitative growth was *revolutionary*. Today nothing more needs to be "built", as they claimed builders of socialism with Stalin in the lead. The future society will not have to any longer even go through the steady state, which is a version sweetened by productive quantitativism that is dead forever, at least potentially. The current low global growth per capita, due to the average between the high growth in limited areas and stagnation in all the others, is the demonstration that the search for balance is not only in vain but it is counter revolutionary because the stationary state coexists very well with the unbridled accumulation of modern capitalism, with the hyper-consumerism of a few and with the hunger of many.

Economic balance versus organicity

Capitalism in equilibrium is impossible. In other words, capitalist equilibrium is based on the periodic wiping out of capital by uncontrollable crises, acute or creeping. But a society that enters into a special relationship with nature and in this relationship finds its equilibrium is not absurd at all. History shows us both examples of expansionist societies and examples of stability and balance. The Roman Empire was a much more balanced society than capitalism but, like the latter, it shows a direct relationship between expansion, the destruction of resources and thus the need for further expansion: a whole forest was needed for a fleet, legions needed grain and money, the maintenance of the Urbe alone made the hoarding of immense resources necessary, etc. Territorial growth, the only possible growth at the time, was therefore an obligation and a limitation. But pre-class societies existed that were configured as systems in equilibrium. They were open systems from the point of view of energy exchange, because they benefited both from natural energy inputs (rivers, favourable climates) and from exchanges with other peoples, although not of a mercantile nature. Ancient Egypt, for example, was relatively stable and the same for more than three millennia due to the peculiarity of the regular cycle associated with the floods of the Nile, which, by releasing fertile, moist silt at fixed intervals, allowed multiple harvests per year, making a very limited territory a very special high-yielding bio-system. In addition, staggered nilometers along the river measured quality and quantity of silt offering the possibility of harvest forecasting and thus an early form of rational planning and stockpiling, as the Bible also records. Still exempt from property, exploitative slave labour and money, this society could not accumulate and remained virtually identical over time in an organic as well as exclusive relationship with nature. It could discharge its social exuberance into constructions and activities that we today cannot even comprehend, conditioned as we are, in comparison, by our concept of productive exuberance, that is, waste. Speaking of waste, Egypt now blocks all the silt from the Nile with the Aswan Dam and buys chemical fertilisers to replace it; it probably does not derive as much value in electricity as the fertilisers cost it, and it mineralizes, sterilising it, a soil that was fertile for 5,000 years.

Today a high-yielding organic bio-system could no longer be given by nature. But it could very well be consciously designed worldwide by a humanity that has far more means than the ancient Egyptian one. A humanity that has already discovered the antithesis between economic balance and organicity, but for now treats this discovery as a scientific curiosity that no one knows what to do with.

End of "productive" systems

The potential for change is there. Not with capitalism, however. Within this system, there can be no organic or open solutions, despite the wishful thinking of Popper and his student Soros. Not only because the system is definitely developed and has reached the limits of the globe, becoming a closed system, but mainly because it needs to accumulate and therefore abhors balance. Even if we were to listen to the devotees of space baloney to make it open again by looking for living space on other planets, the energy balance for leaving Earth or even the solar system can only be negative: it would take more energy than would be obtained from any resource that would go that far. Any sci-fi space evasion is denied.

Humanity will not, as now, make its calculations based on "navigation by sight," that is, it will not improvise existential solutions for today without thinking about tomorrow, nor will it limit itself to the time of a couple of generations. Therefore, the first "need" of tomorrow's humanity will be to seriously consider what its future may be both immediate and distant. Since it is already established that the existence of any productive system has a limit, this first basic need will be to adjust the species' existence to a new system that is not "productive" but produces according to other criteria. From here will descend the new needs, the new consumption, and the new way of life of humanity in harmony with the biosphere.

This process is not simply "hypothesizable," we are not talking about yet another utopia, we are talking about a science that today is improperly called "Marxism" but which is one among many elements of knowledge that humanity has accumulated, despite its class misuse (as well as the misuse of Marxism by the proletariat, of course).

We would attribute to the new humanity a remarkable degree of stupidity if we thought that it would proceed more or less as it does now, only by issuing decrees to prohibit certain activities or direct others, overseeing with special bodies the elimination of wage labour and money.

The tenacity and force with which communism has criticised bourgeois science were not aroused by its paucity, since it would be foolish not to recognize its great achievements: the attacks have always been directed against the impossibility of this science, despite its grandiose achievements ("grandiose, inedible civilization"), to predict the future of the human species, since it uses

every discovery to make apologia for itself, unfortunately polluting the brains of many pseudo-communists as well.

The immediate program of the revolution contemplates the end of the productive system and the initiation of the organic system in the cybernetic sense (cybernetics, literally = art of steering; in the modern sense = art of obtaining results according to a program). Since, more than in the past, no individual or group of the kind that exists will be able to be the repository of such a vast program, humanity will have to give birth to an organism of a new kind that represents its becoming and anticipates it in itself. This is the reason why the "Italian" Communist Left began as early as the 1920s to speak of the party as an organic compage in the biological-cybernetic sense, endeavoured to realise its premises and demanded that the whole International do likewise. Applying biological and cybernetic adjectives to the party may seem a daring novelty, but the concept is classic Marxism. We shall never tire of repeating that continuity consists above all in identifying invariants and handling them according to the transformations that have taken place, and even the class organ does not escape this criterion.

Modern biology originated in the second half of the 1800s and only recently became integrated with chemistry, and especially physics, allowing us to use it to reinforce the concept of organicity. The term cybernetics originated even earlier, with Ampère, in the first half of the 1800s, and was transformed from a concept into a science around World War II: every living organism is born, grows and reproduces according to a program recorded at the molecular level, which determines what the differentiated contributions of the parts integrating into the whole should be. As we can see, not only is there a general correspondence between physics, cybernetics and biology, but the organic conception of the future society and the party that represents it in advance - peculiar to communism and recorded precisely only by the Communist Left - also collides quite consequently with the specific discourse we are making about future humanity.

From the production of goods to human needs

If, therefore, every productive system is dissipative and has physical limits not only in terms of its growth but also in terms of its durability even without growth, then what is the biological-cybernetic system that will characterise future society? In what will its production-reproduction, its needs, and its consumption consist?

In the Grundrisse Marx notes that under capitalism, science was integrated into the means of production and was the major contributor to the development of the social productive force. With this development also came increased knowledge of the physical world and its laws, so at the time the process had characteristics of exponential growth. Today, all major scholars of economic

models based on growth phenomena value the contribution of science, but they all agree that there is a "law of diminishing returns to technology." The reason for this unanimous position is quite clear: technology is powerless to solve the problem of the need for growth related to the capitalist production-consumption cycle. We can have the best scientific discoveries, but if new commodities, produced by new methods, fail to create new needs and thus an additional specific market, these discoveries will be of no use. For science to have a chance to fully manifest its power of innovation, the capitalist cycle must be broken.

Just as biology, chemistry, and physics are being integrated into a single body of knowledge, so political economy is being integrated, or rather, replaced by ecology, the latter understood in its original sense, as the science of the relations between the living and the environment of which it is a part, and not as a particular environmental "policy." Since, as we have seen, there is a physical limit to any kind of quantitative productive economy, these transitions in knowledge must necessarily also entail over time the consequent transition at the level of the social system. Even if we catch a glimpse of it in theory, it means that it is already taking place in praxis, since thought for now is formed on this. Whatever the lifespan of the Earth's mineral reserves, it will therefore be necessary to move away from the use of mined matter and energy to disposable and to tend toward a cycle in which increasingly every resource is derived from a periodic renewal of what is consumed. And this cannot happen in a "production system," but only in a bio-cybernetic process, that is, in a process guided by a conscious program of harmonization between the living and its habitat, based on a deep knowledge of all the parameters of biological reproduction of most resources. This process should by no means be understood as an impossible and by no means desirable "return to nature," but as the utmost application of science to the life cycle of the species. Only in this way will humanity be able to take into account, at the same time, past generations and acquired knowledge, present generations and future generations, in an authentic life of species.

Instead, in capitalist society there is nothing to do but to account for exchange values in a contingent sense, to toil between production, market and consumption so that these values increase. And every economic and political body that Capital has given itself can do nothing but strive to make men bend by good or bad to the demands of valorization. Needs are totally dependent on the mode of production and not vice versa. To give an example: in general, if a man lives in Alaska or Siberia, his need is not to suffer from the cold. But if previously he used to simply try not to freeze to death by putting on a fur coat, lighting some wood and building a hut, now he will need to live in a warm and comfortable house. He will live like his fellow humans all over the world, abandoning reconstitutable materials and instead using oil, coal, electricity, bricks, steel, concrete, glass, etc. All in large quantities, because of the adverse climate, with further drilling of the Earth, construction of pipelines and high-voltage lines, steel mills and other industries, which will need more raw

materials, etc. A similar argument applies to red-hot deserts and wet, swampy tropical areas.

But it should be obvious that living in uninhabitable places has not been ordered by a perverse god or an infamous law of men: it has occurred according to uncontrollable material drives over millennia, following food animals, fleeing dangers, seeking new spaces over lands that have become insufficient and inhospitable. The same push for urbanisation was an effect of production and the search for better environmental conditions for the survival of the first more complex social nuclei of the clan and tribe. It goes without saying that in a system characterised by a planet-wide species plan, human cores will also distribute themselves in the most efficient manner consistent with the new social arrangement. Once humans control their own existence they may well decide not to live in places 50 degrees below and above zero, in swamps or in total aridity, or even in energy-dissipating structures such as isolated houses or metropolises. The communist critique of the theory of "socialism in one country", however vast it may be like Stalin's Russia, is particularly apt in these examples, but since the affirmation of revolutionary power in only a small area is unthinkable, the contraction of consumption in general can also be obtained starting from the optimal distribution of the population on the territory with the resetting of the entire housing structure.

Energy from the Sun

If we consider the general energy need of a capitalist and consumerist man in his production-reproduction we are faced with another phenomenon of enormous magnitude, and no photovoltaic cell, no wind generator, no hydraulic turbine, no biological fuel, no tidal gimmick will be able to quench the thirst for energy of his steel mills, his manufactures, his means of transportation, his megacities always "on" in every season, at every hour of the day. But this monstrous amount of energy is indispensable only because capitalism has created for itself such a quantitative world, and this is not the only possible model.

Man today has not even begun to think seriously about what it means, in engineering terms, to make full use of the solar cycle (including the activity of the bio-mass existing on Earth). No one today knows exactly how to calculate the energy balance of wind generators or photovoltaic cell systems, that is, how much in the total cycle is the difference between the energy dissipated in their construction and the energy yielded. One would have to include in the calculation the whole system, with the processing of the raw material, the transportation, the construction of the generator and cell factories, of the infrastructure necessary for it, the workers involved in all this, and their usual consumption, their housing, their transfers, etc. Everyone knows, however, that recycling of materials is completely deficient in terms of energy and recovered matter, i.e., it is one of the lowest-yielding industrial cycles, which, however, cannot be dispensed with because one no longer knows where to put the waste.

Very few, on the other hand, believe it is possible to have a society in which there is no longer any talk of "saving energy," but simply no need to produce energy and inorganic waste in the monstrous quantities that exist today.

Mankind will therefore sooner or later have to develop a thorough understanding of the biological-solar cycle and move to the rational use of the energy it can offer since it is the only source available for a few billion years yet and will come to Earth continuously and without surprises throughout that time. The Sun sends an immense amount of energy into space, and even though very little of it reaches Earth, and of that little amount, a part is reflected by the atmosphere, that which reaches the ground each year is still 6.5 times greater than the total reserves of fuels of any kind known and conceivable as existing on our planet. And it is constant, while raw materials are subject to depletion and it is necessary to go and extract them in increasingly inaccessible places. This type of energy can be used directly or through its effects on biomass, which produces both raw materials such as lumber, fiber and additional sources of energy, such as fuels of various types.

Nuclear energy obtained through self-fertilizing plants would be a longer usable source of energy than fuels, but it poses enormous problems of safety and waste disposal, a problem that capitalism has failed to solve and which, regardless of cost, is perhaps not solvable at all. Nuclear fusion energy is for now a hypothesis, and even if the equipment that has achieved it for very short times should one day be perfected and give more energy than it requires to operate, there still remains the practical problem of the container in which to imprison plasma at temperatures similar to that of the solar core, that is, 100,000 times higher than the strength of the strongest materials.

The need of a man immersed in the system of individual consumption, whose social foundation remains the nucleus of the restricted family, is to possess goods in quantities appropriate to the needs of that individual and that type of family. Such a possessor with a family is also a ravenous consumer of energy. But it would suffice to break the isolation in which such a man and such a family live (by quite naturally overcoming even this institution, which is useless to a non-possessing society) and place them in a human community where the interest is not in objects but in other men. Thus the morbid focus on individual possession which presupposes the possession of money and thus the ways to obtain it, would be overcome by the use of appropriate structures where objects are simply available and not hoarded selfishly. Here, too, humanity is not taking completely unfamiliar paths: it has in the past and continually experiences situations in which individual possession is seriously challenged, in which the simple common use of goods available to all is realized.

Need for communism

Engels analyzed the American "communist" experiments of the 1800s by pointing out how in the communities of goods a collective economy is realized quite naturally, without the availability and enjoyment of each person being affected as a result. Dealing with the practical aspects of these communities, glossing over the ideology or religious beliefs that moved them, he noted exclusively the advantages concerning the amount of labor provided, consumption, and availability of time for non-productive activities. These were generally short-lived communities, and only a few of them passed through time unscathed. Those few that have succeeded have now all, indiscriminately, used the advantages of shared resource use to become true economic powers. It is not at all strange that the world today is witnessing a new proliferation of them and that, especially in the United States, they gather millions of people. Analyzing today's communities, one observes with regular invariance how the characteristics already noted by Engels are perpetuated or renewed over time, especially with regard to the disappearance of the need for individual possession when sufficient community goods are available. Individuals willingly dispense with the preoccupation of possession as soon as they have an alternative.

It will be interesting to address in the near future, the difficult connection between this need for communism and the revolutionary party in human history. For now, in conclusion, it suffices to note that at present in the United States even ordinary social facts, such as the so-called flexibility of labor and the fall in the value of wages, force men to face, albeit indirectly, the twin problems of communism and consumerism. Practical reasons for survival increasingly lead Americans toward the practice of co-housing, where private spaces alternate with collective spaces and where, for reasons of mere savings and without special theorizing, a partial community of goods is realized. This fact is so widespread and seemingly without implication that only with effort do we realize the importance of what ultra-capitalist society shows us: those who practice co-housing often do so because they are forced to, given the great "economic" advantage of living more rationally, and thus with less expenditure than the average American; they often do so mainly because society is so unlivable that the coalition of people with common community interests is an escape valve. But this kind of life is not always simply coped with because of a lack of alternatives: it is interesting to observe how renunciation is overtaken, in millions of men, by the frequent rejection of possession, whose distressing concept of necessity is easily lost.

There are, of course, cases of sheer property speculation and cases, at the opposite end, of sectarian fanaticism; but in most experiences, there is a conscious escape from a vampirical society that absorbs all energy to run after consumption; and in fact, more and more of these experiences are called intentional communities, to differentiate themselves from the sets of people who are aggregated by the mechanisms of society without having precise awareness of them. In many of these communities (and there are thousands of them) the

common access to goods allows each of their members to dispose of them in greater quantities and, at the same time, to be indifferent to consumerist fashions. Competition among individuals on the terrain of the race for the latest model is eliminated at the root in that everyone participates in collective activities by taking advantage of everything available; no one is "deprived" of the use of some good, no one has individual needs different from those that each member of the entire community may have, and for this very reason, because he or she is not homologated to mass consumption, can better cultivate passions, emotions, diverse interests.

Recommended readings

- International Communist Party, *Forlì Meeting* , "Il immediate revolutionary program", now in *For the organic arrangement of communist principles* , Internationalist Notebooks.
- Karl Marx, *Introduction to the Critique of Political Economy* (*Introduction* of 1857); *Economic-philosophical manuscripts of 1844*
- Partito Comunista Internazionale, "The revival of consumption popular or the elixir of Doctor Marchais", *Communist program* not. 68 of December 1975.
- Quaderni Internazionalisti, "Like a yellow logarithm", *Letter to comrades* n. 29.
- Nicholas Georgescu-Roegen, *Energy and economic myths*
- Jeremy Rifkin, *Entropy*
- Orio Giarini and Henri Loubergé, *Technological disappointment*
- Beppe Grillo, *Economy and politics from Switzerland* , at the Internet address: Beppe Grillo On-Line, http://www.mpnet.it/Beppe_Grillo/
- F. Engels, *Description of the communist colonies that arose in recent times times and still existing*
- List of 540 *intentional communities*: http://www.ic.org/ *("Ma we estimate there are several thousand more"* , we read in the statement presentation of the site).