The Human Species and the Earth's Crust

By AMADEO BORDIGA. First published in December 1952[1]

The theme of the last "filo del tempo",[2] "Public utility, private heaven", was intended to show that in the present day social economy, initiative and choice always remains with those who pursue speculative profit, not only when they carry on their private business with their own means and on their own terrain, but also in the case of "public works" where the terrain is dedicated to "motives of general interest", and removed from the old individual form of property.

Initiative, choice, the decision concerning the opportunities from such or such a project (a road, a railway, a waterway, a public construction project, the development of urban or rural areas, coastal construction etc.), as well as the priority given to one or other of these works, seem to be dictated by a centre which has a superior vision of the general interest. In reality they are, on the contrary, always planned, imagined, supported, promoted and completed or, as they say these days without euphemism, "launched" (in the real sense you launch boats, and in the economic sense you launch a classic series of financial expenditures) by a private group which makes its calculations and expects a very high profit.

What's more, while for an entirely private company the financing is onerous and carries an important risk (the possibility of an unfavourable result involving a loss rather than the gain which was hoped for), in the case of works and enterprises bearing the holy stigmata of the public good, it is much easier to obtain funds at good rates, and it is almost mathematically impossible for the profit to be limited, in never mind negative. In effect, for the interest to be paid and the expected expense to be recovered, in this case there is the means to make the eternal taxpayer responsible for the budget, so we can just as well speak of: the work of private use and public fraud.

This question doesn't only allow us to understand certain recent developments in the capitalist economy, commonly called the *controlled or managed* economy, which represents nothing new qualitatively or anything unforeseen quantitatively (even if it spreads more and more). It also leads on to the general problematic of marxism *vis-à-vis* the social process, and to the demonstration, of universal value, that within all the great things that the capitalist epoch makes a show of today, it has not had as its primary purpose or its motor force any aim other than the interest of the dominant class, of its members or its groups, and never the general good of society. The question which we are talking about, while limiting ourselves to the works which transform the great cities, always vaster and more ostentatious in the present epoch, always more celebrated and praised to the skies as the masterpieces of civilisation and wise administration, is linked to the question of the settlement of man the animal on the earth, and to the solution, not civilised and perfect but insane and monstrous, given to it by the capitalist mode of production. There we can find it in the framework of the atrocious contradictions that revolutionary marxism denounces as proper to today's bourgeois society. These contradictions do not only concern the distribution of the products of labour and the

[1] "Specie umana e crosta terrestre", *Il Programma Comunista* no. 6/1952, 18 December 1952. You are reading the first English translation

[2] Bordiga wrote a whole series of articles under the tile of "Sul filo del tempo" ("On the thread of time") which always had the same structure – a section entitled "Yesterday" and another one called "Today" - and which always emphasised the unchanging nature ("invariance") of the marxist analysis

relations which result from this among the producers, but they also apply in an indissociable manner to the territorial and geographical distribution of the instruments and equipment of production and transport, and therefore the distribution of people themselves. In no other historical period, perhaps, has this distribution presented such disastrous and appalling characteristics.

Yesterday

It is not without great delight that we quote those passages where Marx rails against and condemns the conceptions of George Hegel, while according to some eternal dilettantes he always displayed the most reverential fear towards his "master".

The subversive and radical interpretations that marxism has given to reality suppose, by their very structure, an assimilation of all the great contributions of the previous epochs. Marxism does not neglect to explain any utterance, any system transmitted by history, even those which bourgeois "culture" stupidly mocks with a presumptuous arrogance. It is rather a clique of preachers who have eliminated and swept away everything else: these are the philosophers of law and the ideologues of the human person. The reply to this that we are about to concern ourselves with is one of the numerous passages which illustrates this in a dramatic fashion.

Marx showed that all value, in the private and market economy, must be measured in human social labour invested in "goods" of any kind. In consequence, all accumulation, any reserve of new value and new wealth, must correspond to work done and "not consumed", that is to say, to a marketable difference between the work obtained and the quantity of means of subsistence granted to the worker's consumption. In the course of this imposing process of thought, he had to demonstrate that the wealth consumed not only by the proletarian and the capitalist, but also by the landowner, can have no other origin. In economic terms: land rent is only a part of surplus value, deducted from the value created from the sum of social effort on the part of the workers.

This thesis ruled out one of the opposing theses, that proposed by the Physiocratic school, which states that wealth and value can come out of the ground, before it even receives the contribution of human labour.

At the present stage in history, and given the measurements of the land, populations and foodstuffs, we have to put paid to any idyllic vision which represents a small, serene and naïve humanity, which lives on fruit which falls into its mouths from spontaneously growing trees under which it lies, singing and embracing. This, they say, is what happened on Tahiti and on the other chains of islands in the Pacific, where an eternal spring reigned. But the colonists of modern capitalism got there in due course and, in place of free love in the open air, they imported mercantile love and brothels. As the French rightly say (the pun is in the pronunciation): civilisation and syphilisation – paper money and the sickly spirochete.[3]

Subsequently Marx deals with the relation between man and the earth. For us, man is the Species; for bourgeois gentlemen, man is the individual.

[3] A group of bacteria, one of which is responsible for syphilis.

Marx said right at the beginning – and we haven't forgotten – that he deals with property in land as it presents itself when the capitalist mode of production is fully developed. He knew very well that in the majority of countries you could still find vestiges of other historical forms of landed property: the feudal form, which supposes that the direct producer only constitutes a simple accessory of the soil (in the form of serfs, slaves etc.),[4] and which therefore had the characteristic of a personal domination over the mass of people; the form of fragmented property, which supposes that the agricultural labourers have not been "dispossessed of their means of labour"[5] – land, instruments of labour and spare supplies.

Marx therefore made an abstraction of the precapitalist forms, and considered agriculture organised on the basis of the following elements: the landowner, who periodically received a rent from the capitalist farmer; the farmer who brings the capital of exploitation and pays wages; the mass of agricultural workers. Marx said that to do his research it was enough to consider as absolutely analogous the capitalist manufacturing firm and the agricultural enterprise, the capitalist who produces industrial goods and the one who produces foodstuffs. For the sake of clarity, he reduced even the latter to wheat, the essential food of modern-day people. It remains only necessary to explain the function of a third personage, who is (generally) absent from manufacturing, but who is always present in capitalist agriculture: the landowner. And we still need to examine the source of his wealth, or land rent.

The development of capitalism imposes the elimination of feudal agrarian forms and small landed property, the liberation of all serfs and the maximum ruin of the direct cultivators, which dumps them all into the proletariat without land or reserves (reserves are a stock of objects of consumption, or money sufficient to acquire them when there is no other source of revenue). However, as Marx showed, the only form of ownership of the earth which is compatible with full capitalism is not a necessary condition for it. In other words, landed property will disappear in front of industrial capitalism; or yet, as is illustrated magnificently all the way from the passages which come from *The Poverty of Philosophy* in 1847 to one of the last letters Marx ever wrote (read at our meeting in Milan, in September),[6] the suppression of private property in soil does not mean the passage to socialism.

> It is true, as we shall see later, that landed property differs from other kinds of property in that it appears superfluous and harmful at a certain stage of development, even from the point of view of the capitalist mode of production.[7]

As was said in Milan, the "later" came after the dramatic digression of Engels which closed what we have of Book 3 (in Chapter 52, while here we are in Chapter 37): *here the manuscript breaks off...*[8] As for us, we contend that the crowning point of the work must be the chapter-programme on the social passage of capitalist production to communism.[9]

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[4] *Capital*, Book 3, chapter 37. All quotes from Marx and Engels are taken from the versions used on www.marxists.org.

[5] Op. cit.

[6] The account of this meeting in September 1952 (*L'invariance historique du marxisme - Fausse ressource de l'activisme* ["The historical invariance of Marxism – the false resource of activism"]) was published in French in the review *Programme Communiste* nos. 53-54, October 1971. The letter mentioned is that of Marx to Sorge, 20 June 1881.

[7] *Capital*, Book 3, op. cit.

[8] In fact, this is the end of the book!

[9] That is, Book 3, Chapter 48, where Marx discusses the relationship between freedom and necessity: http://www.marxists.org/archive/marx/works/1894-c3/ch48.htm

After these explanations, always necessary even if we repeat ourselves, according to the method that we have decided to apply, let's recall the Marxist definition of property in land (as opposed to the pseudo-definition of idealist philosophy) as stated by Marx in a footnote. We only have to transcribe them:

> Landed property is based on the monopoly by certain persons over definite portions of the globe, as exclusive spheres of their private will to the exclusion of all others.[10]

And now the note:

> Nothing could he more comical than Hegel's development of private landed property. According to this, man as an individual must endow his will with reality as the soul of external nature, and must therefore take possession of this nature and make it his private property. If this were the destiny of the "individual", of man as an individual, it would follow that every human being must be a landowner, in order to become a real individual. Free private ownership of land, a very recent product, is according to Hegel, not a definite social relation, but a relation of man as an individual to *"nature"*, an *"absolute right of man to appropriate all things"* (Hegel, Philosophie des Rechts, Berlin, 1840, p 79) This much at least is evident the individual cannot maintain himself as a landowner by his mere "will" against the will of another individual, who likewise wants to become a real individual by virtue of the same strip of land. It definitely requires some thing other than goodwill [*here Marx, employing with a fine irony the Hegelian jargon which he had been a master of since 1840, wants to say: for that, you need the good will of truncheon blows*]. Furthermore, it is absolutely impossible to determine where the "individual" draws the line for realising his will – whether this will requires for its realisation a whole country, or whether it requires a whole group of countries by whose appropriation *"the supremacy of my will over the thing can be manifested."* Here Hegel comes to a complete impasse. *"The appropriation is of a very particular kind; I do not take possession of more than I touch with my body; but it is clear, on the other hand, that external things are more extensive than I can grasp. By thus having possession of such a thing, some other is thereby connected to it. I carry out the act of appropriation by means of my hand, but its scope can be extended"* (p.90). But this other thing is again linked with still another and so the boundary within which my will, as the soul, can pour into the soil, disappears. *"When I possess something, my mind at once passes over to the idea that not only this property in my immediate possession, but what is associated with it is also mine. Here positive right must decide, for nothing more can be deduced from the concept"* (p. 91). This is an extraordinarily naive admission "of the concept", and proves that this concept which makes the blunder at the very outset of regarding as absolute a very definite legal view of landed property belonging to bourgeois society – understands "nothing" of the actual nature of this landed property. This contains at the same time the admission that "positive right" can, and must, alter its determinations as the requirements of social, i.e., economic, development change.[11]

Here ends the very important note by Marx. Idealist speculation searches in vain for the relation between the Person and the land-thing, and describes it as a projection, from the

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[10] Op. cit., Chapter 37

[11] Op. cit., Chapter 37, Footnote 26. For greater clarity we have put the passages of Hegel quoted by Marx in italics.

beginning, of mysterious magnetic fluid emanating from will. Marxism straightaway eliminates the fetish of the person. It sets out to study the extremely variable historical process of relations between people, as a species and as a society , and agricultural production. Finally it establishes positively the process in the reality of the relation between classes, that is to say between people who, in rural production, have different tasks and share differently in the product and the benefits. Philosophy and all the bourgeois philosophers are completely helpless here!

The passages from Hegel, and the rough *mise au point* of the *pupil* Karl, bring into clear relief to what extent the tiresome grumbling of the *Stalino-Turinian marxists*[12] stinks of Hegelianism. When a self-described Marxist has made sacrifices to those two tragic theses: *the dignity of the human Person* on the one side, and the *division of the land* amongst the peasants on the other, there is no need to wait for a third piece of stupidity: he's already renounced everything.

In the chapter under study, therefore, Marx only skims through the history of occupation, of organis-ation of the land by humans, before the present capitalist phase. However, he explains at the start that there is no simple "right to the surface" in which the present positive right is established as ownership of land, transmissible by exchange against money. It is a matter of a stage in the disposition of human installation on the earth's "crust", in other words in a layer which extends above and below the surface of the soil. In effect, Marx signals not only that in the expression of land is included the waters which are the object of economic use, but that in the development of the theory of landed rent he deals with rent seen not only as applying to the produce of the fields, but also to mines, built-up areas, construct-ion and any other installation fixed to the ground, whether it is found above or below the surface.

The utilisation of all these forms requires the provision of financial capital to seed, labour, harvest, construct, dig, build etc. The "cadastral" [land registration] right which attributes each piece of land to its owner, establishes that the entrepreneur who raises the capital cannot put it to work if he doesn't obtain permission to cross over the boundary and set to work with all his labourers and employees. He thus opens a temporary breach in the monopoly of the owner, who the "positive right" – an exception made to that supreme finesse which is expropriation by force – cannot prevent from lying down on his *chaise longue* right in the middle, with his belly to the sun (or to the moon), and protected by a surrounding wall or a series of notices: entry forbidden. A monopoly, therefore, and not an ownership like that of objects of consumption. Now, the permission to break or interrupt the monopoly has to be paid for, and, in effect, the capitalist entrepreneur pays an annual rent. His gain will be diminished accordingly. He will deduct this sum from the total profit which he will have left after paying one thousand for the labour and selling the wheat for two thousand. Thus the land by itself, and even the calories radiating from the sun do not give anything to man on the *chaise longue*; and yet he pockets a rent, which has been subtracted from the labour-value produced by those who show their backs, and not their bellies, to the blazing rays of the sun and who rip, dripping with sweat, at the fertile womb of the soil, virgin and not mother.

Marx showed that the law of the falling rate of profit of capital, more than any other factor, raises to the maximum the value of the land monopoly, and that the maximum increase is produced for the forms which are not purely agrarian, such as mines and building land, particularly in the area around large towns.

[12] To put it another way, Gramscism.

Before going any further, and ending up with Marx at the demonstration that the modern relation between people and the land is the worst of all the ways of using, or to put it another way, "equipping" the earth's crust by means of all the various kinds of installation, we will very quickly retrace the history of its conquest by man. Clearly we are not going to seek out the psychic-like fingerprints of acts of will, but the physical effects of labour and the efforts of generations, accomplished not because anyone set out with reason or consciousness, but because in the beginning there was need, and at various stages of its development, human collectivity providing in various ways for its security, its life and its multiplication, in a diverse succession of successes and catastrophes.

Man is not the only animal who leaves a trace on the earth's crust, and is not content to travel around on light feet brushing gently on the surface and leaving hardly a trace, like the fish who swims in the sea or the bird who flies in the air. In one sense man is inferior and the dream of Leonardo da Vinci has still not succeeded in detaching him from the ground with only the power of his muscles and without the help of vehicles – which, besides, were inaugurated by a sheep. In the water, despite his bathyscaphe made from the finest steel, Piccard[13] can only manage a descent of a few hundred metres, while life pulses in the submarine depths and was perhaps born there. On the solid crust, man perhaps has primacy over the other zoological species, but he was not the first to leave footprints or construct buildings. Numerous animals prowl about in the subsoil boring out galleries, and the mysterious animal plant-colony, the coral, has constructed from its chalky corpses something greater than our edifices: veritable islands which we consider as an integral part of the geophysical landscape.

The first humans were nomadic just like the beasts, and consequently had no interest in creating "fixed installations", such that the first acts of will, like Hegel said, did not give a soul to the soil, to the turf or the rock, but only to a branch torn down to serve as a club or a stone carved into an axe. On the other hand, they were already preceded by other "colonising" creatures of the earth's crust and authors of "stable structures", and not only fixed things, but in certain cases things endowed with movement, if it is true that the beaver has a house and the elephant has a graveyard.

Let's leave aside the nomad who only left fleeting and often dispersed traces on the earth's surface, and approach the first sedentary societies. We won't try to retrace history. It took millennia before, under the pressure of demographic growth and thanks to the first technical resources of labour, there appeared real constructions going beyond the tent of the Bedouin or the ice cabin of the Lapp. Man set out to dig the earth first of all to extract the rocks and the cement which would enable him to construct the first houses and buildings under the ground, and he imprinted on the wild crust the first paths, channels, numerous camps and trails which have resisted being uprooted and swept away over the centuries.

While the predominant production was agricultural, the density of population was low, needs were limited (even if this already meant a demand for fixed territorial sites and the necessity of defending them, not only against natural calamities, but also against attack, invasion or destruction by other human groups), and the exchange of products of the land remained at an embryonic stage, the form of "kitting out of the earth's crust" by human societies would

[13] Auguste Piccard pioneered deep-water submersible craft in the late 1940s. See http://en.wikipedia.org/wiki/Auguste_Piccard.

conserve the traits of an intervention of limited depth. The greatest part, by far, of the space required by people was subjected to no intervention other than cultivation, which doesn't involve breaking into the ground beyond a few tens of centimetres. Obviously it makes sense to ignore terrain which is not very fertile or which is too exposed to the danger of flooding, unhealthy conditions, high winds, tides, drought, which is situated a too great an altitude etc. Between the cultivated fields, would be a few rudimentary habitations for the farmers, a modest network of roads to be travelled on foot or even on horseback, rare hydraulic constructions to assist rural techniques... From time to time there might be a castle where a lord or a military commander lives and, installing themselves little by little around it, the village houses of the first artisans. In the middle ages, even more than in the Classical period, towns were rare, lightly populated, distant from each other, and connected by unreliable roads travelled by light vehicles pulled by animals. The ventures of some maritime peoples go back a long way and were sometimes astounding, but maritime and port cities did not have a great importance, at least not until the twelfth century, given the weak impact of maritime traffic on the general economy.

The dispersed population clearly outnumbered the population concentrated in towns.

We know very well this segment – one of the most oafish – of the idealist symphony: it is urban agglome¬ration which has produced schools, culture, civi¬lisation, the participation of the whole people in political life, freedom, human dignity! It's always like this: the more we see individuals crammed in their thousands and millions into stinking rabbit hutches, military abattoirs, barracks and prisons, the more we see them reduced to pulp, because of this very concentration, by bombs (atomic or not), the more the Phariseean adoration of the Individual spreads its infection.

Above all, urban agglomeration has produced illnesses and epidemics, superstition and fana¬ticism, physical and criminal degeneration, the forma¬tion of the lumpen-proletariat and of an underworld worse than the highwaymen of previous centuries, the terrifying rise of all the statistics relating to crime. On this level the richer and more advanced countries are ahead of the backward countries and the prize goes to those with the biggest urban units.

Here it is not a question of applauding the situation of the rural masses today, those rare examples of a real agricultural proletariat who are really housed in modern habitations spread out over an area, and not concentrated in towns of more than fifty thousand people. The small farmer who lives in a log cabin on his little piece of land doesn't offer us an image of anything desirable either. On the subject of this layer of the population, an object today of adoration from fascists, the democratic and Stalinist false left or the Catholic centre, here is what Marx had to say:

> Small landed property creates a class of barbarians standing halfway outside of society, a class combining all the crudeness of primitive forms of society with the anguish and misery of civilised countries. [14]

But (and it would be useful to complete the description of this picture some time) the results of big rural property and modern industry are scarcely any more brilliant. The first leads to the progressive reduction of the agricultural population and the fertility of the soil, the second

[14] *Capital*, Book 3, chapter 47; op. cit.

destroys "labour-power, hence the natural force of human beings".[15] In this, Marx adds, they go hand in hand. And for him, as for us, the healthy and vigorous coarseness of the barbarian peoples was less dire than the degeneration of the masses in the capitalist epoch, the epoch that our enemies designate as civilisation – a word used well here, and in its proper sense, because it means the urban way of life, the way of life proper to those great agglomerated monsters which are the bourgeois metropolises.

Today

We are not dealing here with urban development and its effects from the point of view of the whole of social development, but only from the "technical" basis of the organisation of the land, which tends to transform it, without much concern for the needs of agriculture, into a space really equipped with all the general installations which create the platform of urban complexes – transforming it into a space, to put it another way, which has roads, sewers, equipment for the distribution of water, electricity and gas, installations for lighting and heating, communication and public transport of all kinds. Up until the Classical era, spaces left by cities swept away or razed by various devastations remained, despite the lower density of equipment and their weaker attachment to the subsoil, arid and unfit for any cultivation, as enclaves of desert in the midst of cultivated fields. Thus the extension of the town to the detriment of the countryside, which accompanied the influx of people into the former, involved a very different and much more profound manner of transforming the earth's crust, and this new technical fact engendered new economic relations of value and rent (as defined by Marx and Engels) and thus of social relations – *and* the programmes of social revolution.

According to modern technicians, the system of big concentrations of people is "economic" in terms of the expenses required, in every way, to "install the population on its territory". But "economic", for them, means adapted to profit and to the monopoly of the dominant class. They would burst out laughing on seeing a proposal for a more dispersed and uniform organisation, and would claim that the network, very different in this case, of all the systems of supply and drainage for habitations and people, would lead to excessive costs. But this is personified in the most extreme way by applied science, which is supposed to be animated by an incessant progress while it is more and more reduced, under the pressure of wheeling and dealing, to a jumble of lies, calculations and consciously incorrect deductions, and an terrible entanglement of superstitions and clichés.

Italy, an extremely densely populated country, has more than 150 inhabitants on average per square kilometre. But in the towns, or at least in the centre of the towns, there are 400 inhabitants per hectare, that's 40,000 per square kilometre, without considering the most disastrous cases. The density there is therefore more than 250 times greater than the average, and the ratio is even higher if we compare the average urban density with the rural average. While the "economic policy" of capitalism tends to further exacerbate this terrible contradiction, revolutionary policy will frontally attack it with radical measures.

Modern technology claims to have created masterpieces with the massive unitary infrastructures which allow the provisioning of a city with water and lighting, which make its congested transport function, which look after its roads, take away its waste and destroy them to make them inoffensive, that is to say by mineralising the organic part, or transporting them great distances, into the rivers or the sea. Naturally, it scorns the type of rural organisation in

[15] Ibid.

which each farm, or each group of farms, resorts to almost "natural" means to resolve the problems of supplying water or disposing of rubbish.

The young graduate fresh out of university and a reader of fashionable journals would therefore grimace if he read the following passage from Engels (*The Housing Question*, 1872), and would condemn it as backward and "superseded" by history and brilliant modern applications. Here, Engels responds to those who see as utopian the abolition of the opposition between town and countryside under the pretext that *this opposition is natural or, more exactly, is a consequence of history*:

> The abolition of the antithesis between town and country is no more and no less utopian than the abolition of the antithesis between capitalists and wage workers. From day to day it is becoming more and more a practical demand of both industrial and agricultural production. No one has demanded this more energetically then Liebig[16] in his writings on the chemistry of agriculture, in which his first demand has always been that man shall give back to the land what he takes from it, and in which he proves that only the existence of the towns, and in particular the big towns, prevents this.[17]

Liebig! Our youngster will say, what an old idea! He lacked all the data that we have today, after almost a century of research in all areas, chemical, biological and agronomic! Liebig is also cited by Marx, and if today we still have more confidence in him than in the modern universities, it is because more than all the present experimental data he lacked something particularly notable: the grants and salaries distributed by Montecatini[18] or Agfa.

> When one observes how here in London alone a greater quantity of manure than is produced by the whole kingdom of Saxony is poured away every day into the sea with an expenditure of enormous sums, and when one observes what colossal works are necessary in order to prevent this manure from poisoning the whole of London, then the utopian proposal to abolish the antithesis between town and country is given a peculiarly practical basis. And even comparatively insignificant Berlin [*but certainly not today, in 1952*] has been wallowing in its own filth for at least thirty years.
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> On the other hand, it is completely utopian to want, like Proudhon, to transform present-day bourgeois society while maintaining the peasant as such. Only as uniform a distribution as possible of the population over the whole country, only an integral connection between industrial and agricultural production together with the thereby necessary extension of the means of communication – presupposing the abolition of the capitalist mode of production – would be able to save the rural population from the isolation and stupor in which it has vegetated almost unchanged for thousands of years.[19]

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[16] Justus von Liebig (1803-1873). German chemist and agronomist, author of many books on these subjects, notably *Organic Chemistry in its Applications to Agriculture and Physiology* (1840). As Bordiga mentions further on, Liebig is cited numerous times in Books 1 and 3 of *Capital* by Marx, who comments: "To have developed from the point of view of natural science, the negative, i.e., destructive side of modern agriculture, is one of Liebig's immortal merits. His summary, too, of the history of agriculture, although not free from gross errors, contains flashes of light." (*Capital*, Vol 1, Chapter 15, footnote 245).

[17] Friedrich Engels, *The Housing Question*, pp. 113-114

[18] The company later became Montedison, after fusing with Edison in 1966. Finally it was taken over by a consortium dominated by Fiat in 2002.

[19] Ibidem.

We should not consider as outmoded the thesis of Liebig which says that the rotating cycle of organic matter necessary to life will become deficient if we relinquish the waste of humans, and part of that of animals. Yet today this abandonment is an accomplished fact, justified in the name of a deceitful urban hygiene, which would be opposed to the precepts of speculative profit if it put in doubt the necessity of cramming huge masses of humans into zones where the subsoil is equipped with the network of urban services, and limiting them to breathing by "iron lung". All the modern research on the perspectives for food production, taking account of the growth of population, from the extent of cultivable land and energy calculations of heat and available chemical methods, conclude that a food shortage is approach-ing. The only possible compensation may be constituted by "plankton" from the waters of the sea, that is to say by the miniscule bodies of tiny animals which populate the seas, which can be extracted with appropriate means into a kind of tinned food. We can also foresee that, thanks to the atomic manipul-ations of chemistry, it will be possible to synthesise nutrient pills (we know the response of the lady who was told that in future children will be produced in a laboratory: it is truly admirable, but I think that we'll always return with pleasure to the old system!). But the fact is that, setting aside these futuristic visions, the cycle of the land, agriculture-animals-humans, today is deficient, particularly in substances containing nitrogen. Why then neglect the enormous losses due to the present systems of sterilisation of waste (for sterilisation all that's needed is a strong dilution and a few hours) while the mineral reserves of some types of fertiliser are close to exhaustion?[20] The human species thus destroys innumerable masses of calories in this vital sector, as it does with the preservation of dead bodies. Don't worry: we don't want to industrialise corpses like the Nazis did. Anyway, the sum of waste excreted by a man in the course of an average life represents around 300 times the weight of his body. But by replacing the cemeteries by some other system, even mineralising corpses, we can gain cultivable land. Today this would be for the promoters of tempting building land – but let's have no confusion about this, it's not on their behalf that we're taking up the cudgels.

When we plan the first unitary "projects" to achieve a *uniform network* of infrastructure on the earth's crust in which man will no longer be either peasant or townsman, we are situating ourselves therefore, with Marx and Engels, not on the terrain of utopia or vague hypotheses, but in the framework of a precise post-revolutionary and post-capitalist programme. Bourgeois democracy cries out in horror if, to all the other freedoms of the citizen, we want to add the freedom… to grow fat from the soil. As for bourgeois democracy, it has stooped so low as to renounce the *freedom to breathe*. The black fog which has attacked the great city of London paralysed all activity for several weeks, while it deposited the fine coal dust secreted from the thousands of chimneys around the metropolis into the lungs of those who ventured into the streets, and rendered completely useless the magnificent systems of lighting and transport, as well as all the factories and other places of work; so much so that it was the thieves and hoodlums who largely profited from it.[21]

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[20] Here Bordiga must be referring to phosphorus fertilisers which – unlike nitrogen compounds created using nitrogen in the atmosphere – have to be dug out of the ground. In the words of the CEEP (Centre Européen d'Etudes des Polyphosphates): "Modern society has moved from a phosphorus recycling loop, where animal manure and human wastes were spread on farming land to recycle nutrients, to a once-through system, where phosphates are extracted from mined, non-renewable phosphate rock and end up either in landfill (sewage sludge, incinerator ash) or in surface waters." However, several European countries have begun to implement phosphorus recycling and, according to industry bodies such as the International Plant Nutrition Institute (http://www.ipni.net/) there is no immediate prospect of phosphorus fertilisers running out. As with nitrogen, the problem today is too much fertiliser in the environment, not too little.

[21] Bordiga is referring to the "smog" of early December 1952 (just before this article was written), which killed 4000 people. Chilly weather and stagnant air meant that smoke from coal fires and coal-fired trains and power stations filled the streets. A government enquiry followed, and then the Clean Air Act of 1956, which regulated

We have therefore gone well beyond the equilibrium between the "interests" of the townsman and those of the countryman, which is the question in the latest declarations of Stalin.[22] Here it is a question of an objective which capitalism pursues in vain, while that of the socialist revolution is to go beyond social classes, and therefore to suppress the possibility that social groups can secure improvements and well-being at the expense of other groups.

The capitalist system and its supposed modernisation of the most ancient systems wants something for the crust of our planet which is completely irrational. The question is no longer about sharing out the product of such an enterprise. It is no longer a question of the economy, understood as dispute about mercantile or monetary wealth. It is a matter of physically introducing a totally different type of technical equipment for the soil and the subsoil. Perhaps we can leave some of the existing equipment standing here and there for archaeological purposes, some masterpieces of the bourgeois epoch maybe, so that those who accomplished this centuries-old work, only possible after the world revolutionary explosion, can remember them.

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About Amadeo Bordiga

Amadeo Bordiga (1889-1970) was the first leader of the Italian communist party, which he helped found in 1921, along with Antonio Gramsci, who became better known.

Bordiga began his political activity in the Italian Socialist Party (PSI) in 1910, where he immediately identified with its left wing. He was a member of the Federation of Italian Socialist Youth (FGSI), which became increasingly radicalised. During the Italian colonial war against Libya (September 1911 to October 1912) many members of the FGSI agitated against the war amongst conscripts – while PSI parliamentary representatives voted for it.[23]

In 1912 Bordiga split from the reformist-dominated local section of the PSI in Naples and set up the "Karl Marx Circle". After the outbreak of the first world war in 1914, Bordiga became more and more antiparliamentarian. He worked for the organisation of the Camera del Lavoro (trade union centre) in Naples. In 1917 he helped set up the "intransigent socialist fraction", which fought the leadership of Giacinto Serrati from the left.[24] From December 1918 Bordiga was involved in publishing the newspaper *Il Soviet*; it became the organ of the "Abstentionist Communist Fraction" of the PSI, which

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domestic coal smoke. See John McNeill, *Something New Under the Sun: an environmental history of the twentieth century* (Penguin, 2000), p. 66. In case anyone thinks that this kind of thing doesn't happen any more, we should recall that in present day Beijing "several days a week, the air is so toxic that the children cannot play outside at school" ("Where the mornings taste grey: living under a cloud of smog in Beijing", *Daily Telegraph*, 25 Dec 2011).

[22] An allusion to the text by Stalin already cited: *The economic problems of socialism in the USSR*, point 4: "Abolition of the Antithesis Between Town and Country, and Between Mental and Physical Labour, and Elimination of Distinctions Between Them": http://www.marxists.org/reference/archive/stalin/works/1951/economic-problems/ch05.htm

[23] A very valuable source of information about the political evolution of the FGSI is "The Third Generation: the Young Socialists in Italy, 1907-1915", *Canadian Journal of History*, August 1996.

[24] Serrati was referred to, in the language of Italian socialism, as a "maximalist". This meant someone who was *theoretically* not a "reformist", but still believed firmly in "the parliamentary road to socialism", to use the language of British socialism.

opposed participation by socialists in parliament. He was a delegate of the Italian Communist current at the Third Congress of the Communist International (Comintern) in Moscow in 1920.

Bordiga is not well-known, partly because he fell out with the Bolshevik leadership in Russia. He was criticised by name in Vladimir Lenin's pamphlet, *Left-Wing Communism: an infantile disorder*, for rejecting all participation in parliament. He was also one of the last party militants to criticise Stalin to his face and live to tell the tale (at a meeting of the Executive Committee of the Comintern in 1926).

Bordiga's leadership of the Italian Communist Party (PCI) did not last long. When he was imprisoned by the fascist government from February to October 1923, the "Bordigist" leadership was replaced by that of Gramsci and Palmiro Togliatti. However, Bordiga was not actually expelled from the party until March 1930, allegedly for "Trotskyism" (he was not a Trotskyist, although he did vote against a resolution defining Trotsky as "one of the open enemies of the Communist International").

Bordiga – unlike the so-called "German Left" (Anton Pannekoek, Herman Gorter, and others),[25] who were also calumnied by Lenin – never really broke from Lenin and the Third International. He maintained a Leninist outlook on political organisation throughout his life. Indeed, he made a point of insisting on his continuity with Lenin as a true proponent of "the theory of the proletariat" ... this is in spite of the fact that in 1921, as General Secretary of the PCI, he had openly opposed Lenin's "united front" tactic of allying the Communist parties with reformist organisations.

Another reason that Bordiga is not so well known is because of the principle of "revolutionary anonymity". Bordiga and his comrades believed that the proletarian revolution was an essentially anonymous process which had no place for heroes, Great Men, or cults of personality. Here they were naturally thinking of Stalin, but probably also of Mussolini, who was a contemporary of Bordiga on the left wing of the Italian Socialist Party, but dramatically – and shockingly for the Socialist youth – swung towards nationalism on the eve of World War I. However, Bordiga was perhaps not completely rigorous in the application of this principle – some of his writings in the 1920s are actually signed "A.B."

There was another side to Bordiga, apart from his ideas on revolutionary organisation, which is perhaps more interesting. From an early age he seems to have taken an interest in science and technology, and this is how he earned his living. He studied engineering, and later worked as a structural engineer designing houses. Bordiga's father was a professor of agricultural economics, and Bordiga himself was an assistant professor of agrarian mechanics at one point. This partly explains Bordiga's long-standing interest in the agrarian question, which he saw as crucial to understanding capitalism,[26] and what can only be described as an obsession with Marx's theory of land rent. It is also clear that Bordiga saw marxism as something which can be scientifically validated. This is what he said in 1918 about the Russian Revolution:

> What happened in Russia was a great experiment, certainly not an experiment like those which the physicist or the chemist would carry out with artificial means to deduce from its results the proof of the validity of one of the theories put forward, but a development of phenomena such as we can find in the domain of geology or astronomy where attentive observation allows us to decide which hypothesis is correct amongst the various scientific hypotheses concerning the constitution of the globe or the reciprocal movement of stars in space.[27]

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[25] See: http://libcom.org/tags/council-communism and the pamphlet *Bordiga versus Pannekoek*: http://libcom.org/library/bordiga-versus-pannekoek .

[26] See the article "Communism is the Material Human Community: Amadeo Bordiga Today" by Loren Goldner – available in the Bordiga section of libcom.org. Also, see the collection of articles (in French) by Bordiga on the agrarian question, which can be found in the French Bordiga section of www.marxists.org .

[27] "The lessons of recent history", *Avanti!*, February 1918.

At the end of 1926 the fascist government sentenced Bordiga to exile on the islands of Ustica and then Ponza, where he remained until November 1929.[28] On the island of Ustica he met up with Gramsci and other party members and carried on considerable political activity and discussion. It is significant that on the island Bordiga headed up the "scientific section" of the party, while Gramsci ran the "literary and historical section". In this sense, Bordiga did not resemble very many marxists – certainly not those of today – but did have something in common with Marx himself, who always kept up with the latest developments in scientific knowledge.[29]

After his expulsion from the party, until almost the end of the second world war, Bordiga did not engage in any formally organised political activity. He worked as an engineer in Naples until 1943, when fascism fell. During this time he seems to have been genuinely detached from his former comrades, both in Italy and the "Italian Left" abroad. It is significant that there is no available written material produced by Bordiga from this period, apart from correspondence with individuals. However, the Fascist police did note in July 1939 that "Bordiga in Naples always finds new sympathies, even among his adversaries, and meets a broad adhesion in the camp of the intellectual middle class".

After 1944, Bordiga became involved with Naples-based Fraction of Socialists and Communists. But when this grouping was dissolved into the Internationalist Communist Party ("PCInt"), Bordiga did not initially join, believing that the time was not ripe to create a party. The PCInt split in 1952, and Bordiga also became involved with the successor, the International Communist Party, built around the newspaper *Il programma comunista* in Italy, and the *Programme communiste* review in France. Most of Bordiga's writings appeared (unsigned, of course) in the journals of the PCInt and the International Communist Party. Many were also translated into French and published in the French journal *Invariance*, founded by Jacques Camatte, a former member of the International Communist Party, in 1968.

After the second world war Bordiga was still writing about many of the same things he had written about in the 1920s – the role of the communist party and the need for proletarian dictatorship, for example. But he also wrote about subjects with a more "utopian" tinge to them, such as the one we publish here on the future of citie, and started to make a critique of bourgeois forms of knowledge.

Many of Bordiga's writings from this time can be said to explore "ecological" themes, before the term came into widespread use – although he would have totally rejected the reformist perspectives of present-day environmentalists who exclude or downplay the class struggle. Another theme he explored was the nature of precapitalist societies, which he often expressed an admiration for. In 1961 he even wrote an article claiming that on the Mexican island of Janitzio there is no fear of death, due to attitudes inherited from an ancient communist civilisation.[30] Related to this is the need to consider all previous revolutions. According to Camatte: "In effect, he began his study by a reflection on revolution: is there an infinite or a finite series of revolutions? Our revolution, the proletarian revolution, will be the last, but we marxists, so he says, will take into account all the revolutions of the species."[31]

Bordiga became strongly critical of science itself, even going so far as to say: "Therefore lets launch the cry which leaves perplexed all those who are blinded by the force of their putrid commonplaces:

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[28] See Arturo Peregalli & Sandro Saggioro, *Amadeo Bordiga. - La sconfitta e gli anni oscuri (1926-1945)* - reviewed in English: http://libcom.org/history/important-book-unknown-bordiga-1926-1946-philippe-bourrinet .

[29] Right at the beginning of *Capital* volume 1 (chapter 1, section 3), Marx shows off his knowledge of organic chemistry by stating that butyric acid and propyl formate contain the same ratios of carbon, hydrogen and oxygen but have very different chemical properties. This is intended as an analogy for how a quantity of value can be instantiated in very different things. It's a bad analogy – value is historically specific, while all the evidence suggests that carbon atoms have existed significantly longer than commodity exchange.

[30] *Programma comunista,* no. 23, 1961

[31] From Camatte's introduction to the French edition of Bordiga's book *Russia and revolution in marxist theory* (Spartacus, Paris, 1975).

down with science!"[32] But this was not because he had rejected materialism and embraced mysticism – quite the opposite. For Bordiga, science was an expression of the mode of knowledge typical of capitalist society. He drew attention to the way that, within this society, it becomes an autonomous and despotic force, and gives rise to an absurd level of specialisation in which no one can see the bigger picture.[33] Another common theme of his writings from the 1950s onwards is the way that science was becoming increasingly corrupted by "wheeler-dealing politics" to the extent that it could no longer function as a means of making objective decisions. This was linked to Bordiga's regular observation that the relationship between the state and private capital in democratic Italy was even more corrupt than it had been in fascist Italy.

Bordiga described communists as "explorers of the future" and the text we have published certainly fulfils that role, positing the abolition of cities. In the spirit of Bordiga himself, we have commented on it with reference both to theories of social change and to science.

An anonymous proletarian, April 2012

The best online sources of Bordiga's writings, and writings about Bordiga, are:
In various languages: "International Library of the Communist Left":
http://www.sinistra.net/lib/bor/bordiga.html
In English (mostly): Bordiga section of libcom: libcom.org/tags/amadeo-bordiga
In French: This includes texts which are not in the International Library of the Communist Left:
www.marxists.org/francais/bordiga
Articles from *Invariance*: http://revueinvariance.pagesperso-orange.fr/archives.html

[32] "Programme of integral communism and the marxist theory of knowledge", 1962
[33] In this connection, see the pamphlet "Murdering the Dead – Amadeo Bordiga on capitalism and other disasters", produced by an "anonymous collective" in 2001. It brings together several texts by Bordiga on the subject of science, technology and "disasters" . The introduction to the pamphlet and all the referenced texts can be found in the Bordiga section of libcom.org.