BIOPOLITICS, ECOLOGY, PANDEMICS
QUESTIONING THE FORGETFULNESS OF THE ENVIRONMENT

Starting from the book
Biopolitics for Beginners. Knowledge of Life and Government of People
(Mimesis International 2020)

Conversation between Ottavio Marzocca and Letizia Konderak

Letizia Konderak: In this conversation, I will analyze with Ottavio Marzocca his use of Michel Foucault's research on governmentality and biopolitics to grasp some current unedited phenomena, such as the relationship between ecological crisis and the pandemics. Indeed, while plagues have been scourging the humankind since the dawn of time, the SARS-Covid 19 pandemic seems to depend on the drastic anthropic turmoil of the environment.

Nowadays, the pandemic disappeared from the urgencies of the worldly political agenda. Nevertheless, the Covid outbreak did not cease, nor did the risk of the emergence of new infectious diseases due to zoonosis. Re-reading Marzocca's insights allows us to deepen a commonly underestimated aspect of this crisis, i.e., its ecological grounding: the pandemic is one of the disastrous effects of the current way of dealing with the environment while obliterating it.

Three further insights of Marzocca's are pivotal: firstly, the tendency of the current political and social organizations to reduce the ecological crisis to climate change. Secondly, Marzocca digs into the intertwining of the effectiveness and ineffectiveness of medicine, which tends to focus more and more exclusively on individuals. Lastly, Marzocca examines the origin of the ecological science, wondering whether some economic and biopolitical axioms hunt its very foundation.

Let's start with the first question. In your book, *Biopolitics for Beginners. Knowledge of Life and Government of People*, after summarizing your decennial research on Foucault and discussing a vast range of interpretations of his thought, you employ his analysis of the government to grasp the current ecological crisis and the SARS Covid-19 pandemic.

In this occasion, you propose what might be described as a genealogy of the ecological science. Following the Foucauldian pathway that recognizes the political and social rooting of sciences, you detect the impact of economy and biopolitics in the theoretical foundations of ecology.

Could you please deepen this thesis and show how this trait of ecological thought jeopardizes its disposition to take the environment seriously?

Ottavio Marzocca: To answer your question I would first of all consider biopolitics from Foucault's point of view, that is, as a kind of power exercised over the *life of the population*, over the population understood as a living species, a multitude of organisms or living beings. In this sense we can recall that – according to Foucault – biopolitics is a form of government in which the following features are central: 1) policies aimed at increasing or moderating population growth; 2) control over phenomena such as diseases, well-being, fertility, longevity, morbidity, mortality of people; 3) the statistical and administrative management of these problems.

Foucault also thinks that this kind of government of people as living beings requires considering them in a specific form of spatiality that can be called environment (or *milieu*): a complex and dynamic dimension in which natural and artificial elements, events and

processes interact. It is in a form of spatiality like this that a population can be governed in a biopolitical way as a living species, that is as *a multiplicity of individuals who are and essentially exist biologically bound to the materiality within which they live*.

What we can consider regarding these issues is that there are many relationships of biopolitics with biology and, through the latter, with nascent ecological knowledge.

Especially in its historically most important form that is *Darwinism*, biology has clearly assumed as crucial topics to be studied both: that of *living species as populations* and that of the *relationships between living species and their environment*.

Darwin and Darwinian scientists think that living species are constantly exposed to the risks of *growing too much,* of *shrinking* or of *extinction based on the influence of environmental conditions and the ability or chance of living species themselves to adapt to these conditions and survive in them*.

This is a central problem for Darwinian biology, the problem of what we can call in biopolitical terms *demographic dynamics*: growth, decrease, well-being, fertility, mortality, etc., of a species or population of living beings. Furthermore, we can see that Darwinian biology clearly relates this problem to environmental conditions, that is to a dynamic dimension similar to the one in which the government of modern society – according to Foucault – seeks to rule biopolitically the population.

What is certain is that the first scientific definition of ecology has been proposed on these bases by the Darwinian zoologist Ernest Haeckel. According to him, ecology is the science of the relationships between the organism and the outside world, in which we can recognize the conditions of existence of the organism itself and its species, conditions which – Haeckel says – are partly organic and partly inorganic in nature: in the first case, these conditions are all the other organisms to which the organism and its species relates and that contribute to their well-being or damage them; in the second case, this conditions are the physical, chemical and climatic characteristics of the place the organism and its species inhabit.

L.K.: *Well, considering that both biopolitics and Darwinian biology are intensely interested in the relationship of population-species with the environment, can we say that biopolitics is also a political ecology?*

O.M.: In my opinion, this is a mistake that must absolutely be avoided.

Certainly, in this regard, there are affinities and influences between Darwinian biology and biopolitics, but this does not mean that the ecological question is the essential concern of biopolitics. What is the goal of biopower when it governs the human population in relation to the environment? Historically, according to Foucault's analysis, *security* is the general aim of biopolitics, and the emerging *modern city* is the principal form of the biopolitical environment; moreover *circulation*, or better, the *dynamic governance of circulation* is the main way in which security can be pursued in the context of a biopolitical environment.

Circulation is a crucial notion in this context; circulation understood above all in two senses: firstly, as fluid and regulated circulation of water, air, people, aimed at ensuring collective health, hygiene, salubrity of spaces, and avoiding the danger of contagion; secondly, as good functioning of commercial traffic, of the arrival and departure of goods and people, and of everything concerning the economic activities of a city no longer delimited by walls, a city which communicates, which must inevitably communicate with its exterior.

Ultimately, we can say the biopolitical environment is first of all an urban and economic milieu; it is the modern city as a *market town*, where the government pursues security and collective wellbeing above all by avoiding scarcity of goods and also contagions,

epidemics, revolts, etc. More generally, we can say that the biopolitical environment is an economic environment – perhaps a demographic environment –, but not so much an ecological environment.

L.K.: *In your book you also detect the influence of economy on ecology. A remarkable example is the influence of Malthus' principle of population, formulated in 1798: according to him, misery and scarcity depend on the unbalance between the population's growth rate and that of resources. However, contemporary ecology is massively influenced by Darwinism, that supposedly left the 18th century legacy behind. Do you think that the ecological science as it emerges from Darwinian biology – unlike biopolitics – is extraneous to economy? In other words, does Malthus' principle of population disappear from modern ecology?*

O.M.: Well, again, I think this is a misjudgment that we have to avoid. As you know, a fundamental notion of the Darwinian thought is that of *struggle for existence*. This is a very important notion especially with regard to the relationship between species and their environmental conditions, which include the presence of other living beings.

Let me recall what Darwin says in his *On the Origins of Species*:

struggle for existence inevitably follows from the high rate at which all organic beings tend to increase. Every being, which during its natural lifetime produces several eggs or seeds, must suffer destruction during some period of its life, and during some season or occasional year, otherwise, on the principle of geometrical increase, its numbers would quickly become so inordinately great that no country could support the product. Hence, as more individuals are produced than can possibly survive, there must in every case be a struggle for existence, either one individual with another of the same species, or with the individuals of distinct species, or with the physical conditions of life. (63-4)

What we can implicitly grasp here – among other things – is the decisive importance of the availability, in a given environment, of resources useful for survival, starting with food. According to Darwin, this availability is inevitably limited compared to the growing number of organisms that need resources; therefore, the chance organisms and species have to survive is itself inevitably conditioned both by the limits of this availability and by the presence in the same environment of other living beings who also need food and resources in general.

What we can say in this regard is that the ecological vision that emerges from the Darwinian biology poses a fundamentally economic problem that the biopolitics itself poses: the problem of *scarcity* or *risk of scarcity of goods*. In other words, here we can see the emergence of a significant relationship between ecology and economy. Exactly Malthus is the theorist of classical political economy who must be recalled to make this relationship clear. What is very interesting is that Darwin himself refers to Malthus considering his *economic population theory* as the basic premise for his biological – and ecological – vision based on the idea of "struggle for existence".

According to Malthus the human population growth, if it does not encounter obstacles, tends spontaneously to overcome the development of the production of subsistence goods, causing misery that is hunger, poverty diseases, worsening of the health conditions, and increased mortality of the population itself. Certainly – says Malthus –, to address this problem one can try to improve the land productivity with various technical means. However, this productive capacity will never be able to increase proportionally to the population growth.

According to this author, human societies can avoid the negative effects of these tendencies above all by promoting what he calls «the moral restraint», that is «the restraint from marriage which is not followed by irregular gratifications» as «promiscuous intercourse, unnatural passions, violations of the marriage bed» and other kinds of «vice». In a certain sense, in the Malthus' theory it is particularly clear the connection that in modern society become necessary between economic and biopolitical strategies, namely: on one hand, rational organization of production and, on the other hand, governmental management of demographic processes.

Darwin argues that his vision of species life and its relationships with the environment – based on the idea of *struggle for existence* – is a general application of the Malthus population theory. Well, this combination of biology and economy, based on the centrality of the demographic problem, has also represented a sort of cornerstone of scientific ecology.

L.K.: *Could you please deepen this idea?*

O.M.: I limit myself to point out that one of the most relevant forms of ecological knowledge of the 20th century has been *population ecology*, a science with a clear matrix both biological and economic, Darwinian and Malthusian.

Furthermore, it is very important to underline that an essentially Malthusian matrix also characterizes the famous "Report for the Club of Rome" (*The Limits to Growth*, 1972), that is one of the most important references of contemporary ecological knowledge and culture. In this *Report* the ecologically dangerous relationship between the growth of the human population, the industrial development and the subsequent consumption of environmental resources emerges as a crucial problem.

From this point of view, we can think that there is a kinship – albeit a critical one – between the ecological vision and the economic conception of the world, based on the relationship between Darwinism and Malthusianism. More precisely, we can say that in the ecological discourse of the *Report* there is the same intertwining, which we find in Malthusian theory, between the biopolitical question of population growth and the economic problem of production development. However, while based on these common assumptions, the two discourses pose two different questions.

Malthus asks: "how to avoid that the development of the production of subsistence goods causes an unmanageable demographic growth, given that the second tends to exceed the first?" The answer is: "by continuing to develop production and, at the same time, actively reducing population growth."

Instead, the *Report* asks: "how can we avoid that the mutual strengthening relationship between productive development and population growth compromises the natural resources and environmental conditions on which both depend?" The answer is: "by actively moderating and reducing both productive development and population growth".

What should be noted in this regard is precisely that in the ecological discourse – already in its Darwinian version – the economic scheme of Malthusian reasoning is presented as fundamental; instead, in the Malthus's economic reasoning the ecological question of the limits of natural resources and environmental degradation does not arise at all. Or rather, the question of limits arises as a problem of scarcity due to the avarice of nature and, above all, to the natural finitude of man, a living being constantly conditioned by natural needs and desires, always exposed to death. Therefore, perhaps one can affirm that the economic (or bio-economic) discourse can influence the ecological one, but it is not certain that the concerns for ecological problems can influence the economic discourse. This is particularly clear if we consider the substantial indisputability with which

the market economy imposes itself both in the theoretical-historical context of Malthus' theory and in that of our times.

Can we say the same about ecology?

L.K.: *Certainly not, as we experience that the urgency of political agendas always prioritizes other emergencies with respect to the ecological crisis. In this regard, in your book you also detect the indirect role of Adam Smith in the emergence of ecological problems. Indeed, Smith claims that a country's growth of wealth depends more on manufacturing and trading than agriculture. Therefore, he downgrades the latter and those activities that connect human beings to natural rhythms and knowledge. In your opinion, this idea grounded the belief that the economy could detach from its natural and environmental basis. Does this bias determine the common forgetfulness of the ecological crisis?*

O.M.: In the Adam Smith's most famous work the indifference towards the natural limits of the environment emerges when he analyzes the relationship between the manufacturing and commercial economy of the city, and the agricultural economy that takes place in the natural context that surrounds the city itself. According to him, the development of the urban activities is far more important than that of agriculture, since – he says – *the revenue of a trading and manufacturing country cannot fail to be much greater than that of one without trade or manufactures*. Therefore, the cities can also take no interest in the goods that the surrounding environment provides them through the agricultural activity that takes place there, since it can easily obtain them elsewhere. This view is explained with Smith's confidence in the free market's ability to spontaneously produce the well-being of each and every one.

In any case, the strange – or asymmetrical – relationship between ecology and economy emerges very clearly in other relevant form of ecological knowledge: in particular, in the *ecosystem ecology* (or *ecosystems theory*). Here, this relationship is expressed through the fact that this theory describes the interactions between the biological sphere and environmental conditions of life above all in terms of *flows, circulation and transformation of energy and matter*. The biosphere is seen as a gigantic mechanism of accumulation, consumption and conversion of energy, which produces and reproduces living matter by drawing from the environment both energy and the organic and inorganic matter necessary for this purpose.

For Eugene P. Odum, in particular, ecological science must study the conditions in which energy, chemical and biological processes manage to interact and combine so that the ecosystems in which they take place guarantee a constant production of organic matter. According to him, the evolution of ecosystems tends to become mature in the developmental sense, that is, in steady-state timewise. And it is through their tendency to maintain this state of balance that ecosystems function best.

Then, perhaps we can say that, starting from the ecosystem ecology, ecological knowledge tends to present the functioning of the interactions between life and the environment as a form of economic rationality superior to that to which the prevailing economic models in our society adhere. Indeed, it is no coincidence that this approach became an essential reference for *ecological economics* and "sustainable development" strategies.

As is known, "sustainable development" will occur if the activities and the numerical consistency of men do not cause consumption of resources and emissions of polluting substances which exceed the capacity of the environment to regenerate the former and absorb the latter without irreversible damage. The environmental issue will thus tend to

become a problem of rational reorganization of the economy and of "conservation" of nature as a "natural capital".

Unfortunately – so to speak –, when in the eighties the prospect of "sustainable development" was officially placed at the centre of global ecological governance strategies, it was quite clear that globalization and the neoliberal deregulation of the market economy were taking over, determining the insurmountable framework in which every other economic perspective had to be placed.

What we can hypothesise in this regard is that the very fact that the ecological discourse compares with modern governmentality on its economic and biopolitical terrain does not represent at all a favourable condition for the success of the strategies it proposes to "solve" the environmental crisis. On this ground, in fact, modern governmentality always has a multiplicity of possible options that ecological strategies do not have. More precisely, in our age, global capitalism is always ready to welcome "sustainable" production, ecological or energetic "transition" within its sphere, and, at the same time, to continue to welcome anti-ecological production and consumption.

L.K: *Your book underlines that the ecological crisis strictly interweaves with the SARS Covid-19 outbreak. Moreover, you show that the global approach based on surveillance of the inevitable emerging of new diseases conceals the ecological ground of the pandemics. Do you think that this approach undermines the enacting of an effective approach to emerging infectious diseases?*

O.M.: Today the knowledge and powers that have to do with the care of life do not ignore the epidemic consequences that environmental changes caused by contemporary societies can have. Focus of attention among these trends are the climate change, the process of deforestation, the dizzying increase in intensive animal farming, the growing urbanization of the territories, the increase and acceleration of the mobility of human masses, other living beings and goods, the intense trade in wild animals for food or as pets, etc..

These trends are seen as factors that contribute significantly, in different ways and intensities, to: the alteration or devastation of ecosystems inhabited by wild animals, possibly reservoirs and carriers of potentially pandemic pathogens (it is the case of the climate change, deforestation and urbanization); the creation of powerful attraction poles of pathogens coming from wild species that can easily be transmitted to humans (it is the case of industrial animal farming and trade in wild animals); the creation of the main conditions in which an infectious disease can take on a pandemic dimension (it is again the case of the growing urbanization); the empowerment of a very efficient pathogen export factor (it is the case of the increase of mass mobility).

An important point for determining the current dangers of pandemics in ecological terms is certainly the definition of *emerging and re-emerging infectious diseases* in which experts and health institutions, for some decades, have included the potentially pandemic diseases of our time. This definition represents an implicit recognition of the growing difficulties that current societies are destined to encounter due to the recurring and unexpected occurrence of new contagious diseases which, combining with the breadth, intensity and speed of the typical processes of globalization, constantly risk to become uncontrollable. As is know, with regard to these diseases, there is a concept that has taken on fundamental importance in recent decades: that of *zoonosis*, that is to say the idea that some pathogens that animals carry, under certain conditions, can transfer to human organisms; in this case these pathogens can cause serious epidemic processes and significant levels of mortality, if humans are without effective immune defences against

them. The concept of zoonosis, therefore, implies the need to pay particular attention to the relationships between species.

The international institutions such as the World Health Organization (WHO), have for some decades found in the concept of *emerging and re-emerging infectious diseases* a fundamental reference to strengthen their role as planetary organizations actively committed to protecting life. Especially after the explosion of the SARS epidemic (2003), WHO first of all asks the member states to commit themselves to provide in a transparent and timely way any information on potentially epidemic events that occur within their borders. Moreover, on the basis of this information it elaborates guidelines for risk prevention and management of possible emergencies, trying to adapt them to the global scenario in which emerging infectious diseases can unfold their pandemic effects. Finally, this evolution of WHO strategies has found a sort of crowning glory in the convergence of intentions that has taken place around the idea of "One World, One Health" between the policies of WHO itself and those of other world organizations.

The adoption of the "One World, One Health" concept has led to the strengthening of the planetary dimension as a privileged area to face the epidemic pathologies of globalized humanity. In this perspective, among the main aspirations of the WHO in particular emerges that of remedying the general unpreparedness of the national states to face the risks deriving from emerging infectious diseases, unpreparedness consisting of their inadequacy to address the global nature of threats from these diseases.

Hence the importance that the Organization attaches to the constant collection and processing of information on pathogens and epidemic risks, as fundamental tools of a global policy to be based above all on preventive surveillance and the use for this purpose of the most advanced technologies. The WHO favours the global surveillance approach since it considers fundamental «to prepare for the inevitable». Evidently, this conditions aspects of life protection strategies regarding the ecosystemic factors of new diseases. In fact, these aspects are placed in an overall emergency concept, in a perspective of permanent surveillance, which ends up jeopardizing broader approaches.

The centrality that WHO attaches to global surveillance based primarily on the collection and timely processing of information is a fact that needs to be considered further. It is superfluous to remember that real global giants – from Google to Twitter – are moving on this terrain. The substantial domination that these global players exert on the information and telematic technologies scene implies a profound change in the ways of conceiving, collecting and processing information data; a change mainly due to the use of algorithmic technologies that these subjects favour in the management of huge and constantly growing masses of data of all kinds.

Whatever the case, the enormous importance that algorithmic technologies have assumed in the management of data collected via telematic networks has inspired the creation of various *syndromic surveillance systems* whose main focus is precisely the danger of epidemics and pandemics.

The information on which the surveillance that these systems aspire to guarantee is based are not only that officially communicated by national health services, governments or biomedical research laboratories; these systems – at least in their most advanced forms – deal with algorithmic technologies especially the "non-diagnostic" information obtained, for example, from the behaviours that web users make known through the use of their telematic devices when doing certain searches, they buy certain therapeutic remedies, they frequent or do not frequent certain places, and so on.

A significant example of a syndromic surveillance system is that of Google Flu Trends (which stopped its activity in 2015). Based mainly on the research that network users carried out through the same Google engine on topics apparently related to initial states of flu, in the 2012-2013 winter season it found itself repeatedly overestimating the signs of a

possible epidemic in the USA. In this case, the algorithmic treatment of the Big Data has shown aspects of considerable unreliability of the predictions based on alleged correlations between certain user searches and the onset of infectious diseases. These searches, in fact, can have the most contrasting motivations and therefore they can push the algorithmic calculation systems to "misunderstand" the meaning and scope of certain behaviours recorded randomly on the network.

Among the syndromic surveillance systems, we can also mention the Global Public Health Intelligence Network (GPHIN), in which the WHO participates. In this way, the Organization adds a powerful tool for processing information obtained from the media around the world to its own institutional surveillance system in which the information systems of the participating states are officially involved.

Precisely in this regard, however, problems arise which cannot be overlooked. For example: the collaboration of states, their ability or willingness to provide complete and timely information on health hazards are inevitably uncertain for various reasons. In particular, many of them may always have an interest – economic, political or otherwise – in avoiding or delaying the communication and sharing of information on their health problems.

If, therefore, we take into account both these problems and those concerning the predictive use of algorithmic technologies, we have further reasons to consider disputable the idea that a question such as that of pandemics can be adequately addressed through policies based above all on global surveillance. The momentary reticence of a nation state, the overconfidence in the surveillance and decision-making abilities of a world organization, or the occasional inefficiency of technological forecasting systems – algorithmic or otherwise – may be enough to provoke a pandemic such as that which exploded in 2020.

L.K.: *Do you also think that the pandemic reveals a certain powerlessness of medicine? In the beginning of your book, you show how medical sciences and practices have been the "battering ram" of biopolitics. Indeed, in its various forms, medicine shaped the population into a biological entity, to be treated according to its natural processes and* omnes et singulatim*. The 20th century public health system locates in these manifold strategies while contributing to a general increase of living standards. Contrary, nowadays, against the background of the always-growing medicalization of societies stands a policy of aggressive privatization of medical services for their high profitability. Besides the defunding of what the French significantly call* État-providence*, you ground medicine's crisis in its epistemological transformation: this science is increasingly focusing on the individuals, aiming at deciphering illnesses in the code of their genetic heritage. Does this approach contribute to the invisibility to medical of the ecosystem sciences?*

O.M.: The SARS-COV2 pandemic has clearly revealed the widespread health vulnerability that the previous forty years of neoliberal policies have created in many countries. Therefore, if it is true that nation states are inadequate to face the pandemic risks of new infectious diseases, the reason for their inadequacy does not lie only in their difficulty in intervening on health problems whose size exceeds their territorial boundaries; their "unpreparedness" is also explained by the downsizing policies of their health care systems: decrease in public spending destined for these systems, progressive reduction of their territorial articulations, privatization of most of their services, etc.

Another important consideration to make is the following: the pandemic has offered clear and perhaps final evidence that contemporary medicine has largely lost its "war" against deadly contagious disease. The dramatic importance attributed by the WHO to emerging and re-emerging infectious diseases can also be explained in this way.

To all this must be added the growing importance gained in the last decades by genetics and molecular medicine which turn its attention above all to the individual microcosm of molecular, cellular and genetic mechanisms of the bodies of single individuals. It is no coincidence that this type of medicine is the basis of the so-called *personalized medicine*. Therefore, it appears to be unsuitable for addressing collective, social and global health problems. But, in reality, this risks to be a simplistic assessment if we do not make it much more complex.

The techno-scientific capabilities developed by molecular biology around genomics can prove decisive for rapidly recognizing the characteristics of pathogens, as well as for developing and producing drugs and vaccines. On similar bases, in fact, during the pandemic both biomedicine and biocapitalism managed to conquer a central role in the same biopolitics implemented on a collective level; the large pharmaceutical companies, in particular, have conquered this role by reaffirming their supremacy on the global market of health tools.

This means that the private dimension of contemporary medicine and the bio-capitalist economy that supports it seems destined to still prevail over the social dimension of the welfare state and public health systems. Furthermore, by imposing its hegemony also on problems such as emerging and re-emerging infectious diseases, this medicine certainly does not favor attention to the ecosystemic complexity of the factors that cause or can cause them in our age.

On the other hand, the fact that the pandemic has given back to the state a role which it seemed to have largely lost, should not lead us to think that in this way the public and communal character of life-care services certainly recover the lost importance. Especially in the case of advanced liberal societies this possibility could have been largely compromised by the role that the state has played since the end of the last century as a vehicle for the privatization of medicine and health services. In the case of the "socialist", centralist and authoritarian states, however, this possibility could have been compromised by the fact that they often actively promoted collective adherence to the logic of the global market, becoming the main culprits of: the deterioration of collective health, caused by upsetting and highly polluting forms of industrialization and urbanization; the consequent alterations of ecosystems, from which many of the new epidemic diseases arise. Needless to say, China – the country where many of the most serious epidemics in recent decades have exploded – is the clearest example of this type of situation.

In any case, our experience of pandemic should urge us to think that the dimension that goes beyond the sphere of the individual towards a wider dimension of existence is not simply that of the family, society, state or population-species, but that of the worldly sphere which can be defined as ecosystem, environment, territory, place, city, bioregion, world, cosmos, etc. At the same time, this experience should lead us to consider that the human animal does not connect to life only through the somatic matter that inhabits it in cellular and genetic form; he relates to it also or above all through trans-specific and ecosystemic relationships which, due to their irreducibility to a molecular microcosm, can become decisive in provoking unexpected and sometimes catastrophic events such as a pandemic.

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