Spaces of security: The example of the town. Lecture of 11th January 1978

Michel Foucault

So, some general features of these apparatuses (dispositifs) of security. I would like to identify four, I don’t know how many … anyway I will start by analyzing some of them. First of all I would like to study a little, just in an overview, what could be called spaces of security. Second, I would like to study the problem of the treatment of the uncertain, the aleatory. Third, I will study the form of normalization specific to security, which seems to me to be different from the disciplinary type of normalization. And finally, I will come to what will be the precise problem of this year, which is the correlation between the technique of security and population as both the object and subject of these mechanisms of security, that is to say, the emergence not only of the notion, but also of the reality of population. Population is undoubtedly an idea and a reality that is absolutely modern in relation to the functioning of political power, but also in relation to knowledge and political theory, prior to the eighteenth century.

So, first, questions of space, broadly speaking. Baldly, at first sight and somewhat schematically, we could say that sovereignty is exercised within the borders of a territory, discipline is exercised on the bodies of individuals, and security is exercised over a whole population. Territorial borders, individual bodies, and a whole population, yes … but this is not the point and I don’t think it holds together. In the first place it does not hold together because we already come across the problem of multiplicities in relation to sovereignty and discipline. If it is true that sovereignty is basically inscribed and functions within a territory, and that the idea of sovereignty over an unpopulated territory is not only a juridically and politically acceptable idea, but one that is absolutely accepted and primary, nevertheless the effective, real, daily operations of the actual exercise of sovereignty point to a certain multiplicity, but one which treated as the multiplicity of subjects, or [as] the multiplicity of a people.

Discipline is of course also exercised on the bodies of individuals, but I have tried to show you how the individual is not the primary datum on which discipline is exercised. Discipline only exists insofar as there is a multiplicity and an end, or an objective or result to be obtained on the basis of this multiplicity. School and military discipline, as well as penal discipline, workshop...
discipline, worker discipline, are all particular ways of managing and organizing a multiplicity, of fixing its points of implantation, its lateral or horizontal, vertical and pyramidal trajectories, its hierarchy, and so on. The individual is much more a particular way of dividing up the multiplicity for a discipline than the raw material from which it is constructed. Discipline is a mode of individualization of multiplicities rather than something that constructs an edifice of multiple elements on the basis of individuals who are worked on as, first of all, individuals. So sovereignty and discipline, as well as security, can only be concerned with multiplicities.

On the other hand, problems of space are equally common to all three. It goes without saying for sovereignty, since sovereignty is first of all exercised within the territory. But discipline involves a spatial division, and I think security does too, and the different treatment of space by sovereignty, discipline, and security, is precisely what I want to talk about.

We will take again a series of examples. Obviously, I will look at the case of towns. In the seventeenth century, and at the beginning of the eighteenth century, the town still had a particular legal and administrative definition that isolated it and marked it out quite specifically in comparison with other areas and spaces of the territory. Second, the town was typically confined within a tight, walled space, which had much more than just a military function. Finally, it was much more economically and socially mixed than the countryside.

Now, in the seventeenth and eighteenth centuries this gave rise to a number of problems linked to the development of administrative states, for which the juridical specificity of the town posed a difficult problem. Second, the growth of trade, and then, in the eighteenth century, urban demography, raised the problem of the town’s compression and enclosure within its walls. The development of military techniques raised the same problem. Finally, the need for permanent economic exchanges between the town and its immediately surrounding countryside, for means of subsistence, and with more distant areas, for its commercial relations, [ensured that] the enclosure and hemming in of the town [also] posed a problem. Broadly speaking, what was at issue in the eighteenth century was the question of the spatial, juridical, administrative, and economic opening up of the town: resituating the town in a space of circulation. On this point I refer you to a study that, since it was made by an historian, is extraordinarily complete and perfect: it is Jean-Claude Perrot’s study of Caen in the eighteenth century, in which he shows that the problem of the town was essentially and fundamentally a problem of circulation (Perrot, 1975).1

Take a text from the middle of the seventeenth century, La Métropolitée, written by someone called Alexandre Le Maître. Alexandre Le Maître was a protestant who left France before the Edict of Nantes and who became, and the term is significant, general engineer of the Elector of Brandenburg. He dedicated La Métropolitée to the king of Sweden, the book being published in Amsterdam. All of this — protestant, Prussia, Sweden, Amsterdam — is not entirely without significance. The problem of La Métropolitée is: Must a country have a capital city, and in what should it consist? Le Maître’s analysis is the following: The state, he says, actually comprises three elements, three orders, three estates even; the peasants, the artisans, and what he calls the third order, or the third estate, which is, oddly, the sovereign and the officers in his service.2 The state must be like an edifice in relation to these three elements. The peasants, of course, are the foundations of the edifice, in the ground, under the ground, unseen but ensuring the solidity

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2 “Of the three Estates that should be distinguished in a Province; their function and their qualities” (Le Maître, 1682, chap. X, pp. 22–24).
of the whole. The common parts, the service quarters of the edifice, are, of course, the artisans. As for the noble quarters, the living and reception areas, these are the sovereign’s officers and the sovereign himself (Le Maître, 1682). On the basis of this architectural metaphor, the territory must also comprise foundations, common parts, and noble parts. The foundations will be the countryside, and it goes without saying that all the peasants, and only peasants, must live in the countryside. Second, all the artisans, and only artisans, must live in the small towns. Finally, the sovereign, his officers, and those artisans and tradesmen who are indispensable to the functioning of the court and the sovereign’s entourage, must live in the capital. Le Maître sees the relationship between the capital and the rest of the territory in different ways. It must be a geometrical relationship in the sense that a good country is one that, in short, must have the form of a circle, and the capital must be right at the center of the circle. A capital at the end of an elongated and irregular territory would not be able to exercise all its necessary functions. In fact, this is where the second, aesthetic and symbolic, relationship between the capital and the territory appears. The capital must be the ornament of the territory. But this must also be a political relationship in that the decrees and laws must be implanted in the territory [in such a way] that no tiny corner of the realm escapes this general network of the sovereign’s orders and laws. The capital must also have a moral role, and diffuse throughout the territory all that is necessary to command people with regard to their conduct and ways of doing things. The capital must give the example of good morals. The capital must be the place where the holy orators are the best and are best heard, and it must also be the site of academies, since they must give birth to the sciences and truth that is to be disseminated in the rest of the country. Finally, there is an economic role: the capital must be the site of luxury so that it is a point of attraction for products coming from other countries, and at the same time, through trade, it must be the distribution point of manufactured articles and products, et cetera.

We can leave aside the strictly utopian aspect of this project. All the same, I think it is interesting because it seems to me that this is essentially a definition of the town, a reflection

3 “As in the Countryside or villages there are only peasants, the Artisans must be distributed in the small towns, having only in the big Towns, or the Capital cities, the leading people and those Artisans who are absolutely necessary” (Le Maître, 1682, chap. XI, pp. 25–27).
4 “The size that the country, the Province, must have; or the district in which one will situate the Capital city” (Le Maître, 1682, chap. XVIII, pp. 51–54).
5 “The Capital city does not only possess the useful, but also the honor, not only of wealth, but also of rank and glory” (Le Maître, 1682, chap. IV, pp. 11–12).
6 “(The Capital) will be the political heart giving life and movement to the entire body of the Province, through the fundamental principle of the ruling science, which forms a whole of several parts, without destroying them” (Le Maître, 1682, chap. XVIII, p. 52).
7 “It is (…) necessary that the Prince’s Eye casts its rays over the movements of his people, that he observes their conduct, can note them closely, and that his presence alone keeps vice, disorder, and injustice in check. This can best be achieved only through the union of the parts in the Metropolitaine” (Le Maître, 1682, chap. XXIII, p. 69).
8 “The Sovereign’s presence is necessary in his Estates where the greatest commerce takes place, to be witness of the actions and trade of his Subjects, to keep them in equity and fear, to be seen by the people, and be like their Sun, which illuminates them by his presence” (Le Maître, 1682, pp. 67–72).
9 “In the Métropolitaine the professors and preachers must be famous orators” (Le Maître, 1682, chap. XXVIII, pp. 79–87).
10 “There are powerful reasons for the foundation of Academies in the Capital cities, or Métropolitaines” (Le Maître, 1682, chap. XVIII, pp. 76–79).
11 “The Capital, having the greatest consumption, must also be the site of commerce” (Le Maître, 1682, chap. XXVII, pp. 72–73).
12 “The essential and final cause of the Capital city can only be public Utility, and to this end it must be the most opulent” (Le Maître, 1682, chap. V, pp. 12–13).
on the town, in terms of sovereignty. That is to say, the primary relationship is essentially that of sovereignty to the territory, and this serves as the schema, the grid, for arriving at an understanding of what a capital city should be and how it can and should function. Moreover, it is interesting how, through this grid of sovereignty, a number of specifically urban functions appear as the fundamental problem: economic, moral, and administrative functions, etcetera. In short, the interesting thing is that Le Maître dreams of connecting the political effectiveness of sovereignty to a spatial distribution. A good sovereign, be it a collective or individual sovereign, is someone well placed within a territory, and a territory that is well policed in terms of its obedience to the sovereign is a territory that has a good spatial layout. All of this, this idea of the political effectiveness of sovereignty is linked to the idea of an intensity of circulations: circulation of ideas, of wills, and of orders, and also commercial circulation. Ultimately, what is involved for Le Maître — and this is both an old idea, since it is a matter of sovereignty, and a modern idea, since it involves circulation — is the superimposition of the state of sovereignty, the territorial state, and the commercial state. It involves fastening them together and mutually reinforcing them. I don’t need to tell you that in this period, and in this region of Europe, we are right in the middle of mercantilism, or rather of cameralism,¹³ that is to say, of the problem of how to ensure maximum economic development through commerce within a rigid system of sovereignty. In short, Le Maître’s problem is how to ensure a well “capitalized” state, that is to say, a state well organized around a capital as the seat of sovereignty and the central point of political and commercial circulation. Since Le Maître was the general engineer of the Elector of Brandenburg, we could see here a filiation between the idea of a well “capitalized”¹⁴ state or province, and Fichte’s (1762–1814) famous closed commercial state (1930, French translation),¹⁵ that is to say the evolution from cameralist mercantilism to the German national economy of the beginning of the nineteenth century. In any case, in this text the town-capital is thought in terms of relations of sovereignty exercised over a territory.

I will now take another example. I could just as well have taken it from the same part of the world, that is to say, from the region of Northern Europe extending from Holland to Sweden, around the North Sea and the Baltic Sea, which was so important in the thought and political theory of the seventeenth century. Kristiania,¹⁄ and Gothenburg¹⁷ in Sweden would be

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¹³ Cameralistics, or cameral science (Cameralwissenschaft), designates the science of finance and administration that developed from the seventeenth century in the “chambers” of princes, the organs of planning and bureaucratic control that will gradually replace traditional councils. In 1727, the discipline obtained the right to enter the universities of Halle and Frankfurt an der Oder, becoming an object of teaching for future state functionaries (see Stolleis, 1988). The creation of chairs in Oeconomie-Policey und Cammersachen was the result of the desire of Frederick William I of Prussia to modernize the administration of his realm and to add the study of economics to that of law in the training of future functionaries. A.W. Small summarizes the thought of the cameralists in the following way: “To the cameralists the central problem of science was the problem of the state. To them the object of all social theory was to show how the welfare of the state might be secured. They see in the welfare of the state the source of all other welfare. Their key to the welfare of the state was revenue to supply the needs of the state. Their whole social theory radiated from the central task of furnishing the state with ready means” (Small, 1909, p. viii). On mercantilism, see Foucault (2004, p. 345).

¹⁴ The inverted commas appear in the manuscript for the lectures, p. 8.

¹⁵ In Der geschlossene Handelsstaat (Fichte, 1800) dedicated to the Minister of Finance, the economist Struensee, Fichte protests against both liberalism and mercantilism, that he accuses of impoverishing the majority of the population, and opposes to them the model of a contractually founded “State of reason” controlling production and planning the allocation of resources.

¹⁶ Kristiania, or Christiania: old name for the capital of Norway (today Oslo, since 1925), rebaptized by the king Christian IV in 1624 after the fire that destroyed the town. Foucault always says “Kristiania.”

¹⁷ Founded by Gustave II Adolphe in 1619, the town was constructed on the model of Dutch cities because of marshy terrain.
examples. I will take an example from France. A whole series of artificial towns were built, some in Northern Europe and some here in France, in the time of Louis XIII and Louis XIV. Take a little town called Richelieu, which was built from scratch on the borders of Touraine and Poitou. A town is built where previously there was nothing. How is it built? The famous form of the Roman camp is used, which, along with the military institution, was being reutilized at this time as a fundamental instrument of discipline. The form of the Roman camp was revived at the end of the sixteenth and the beginning of the seventeenth century, precisely in protestant countries — and hence the importance of all this in Northern Europe — along with the exercises, the subdivision of troops, and collective and individual controls in the major undertaking of the disciplinarization of the army. Now, whether it is Kristiania, Gothenburg, or Richelieu, the form of the camp is used. The form is interesting. Actually, in the previous case, Le Maître’s La Métropolitée, the layout of the town was basically thought in terms of the most general, overall category of the territory. One tried to think about the town through a macrocosm, since the state itself was thought of as an edifice. In short, the interplay of macrocosm and microcosm ran through the problematic of the relationship between town, sovereignty, and territory. In the case of towns constructed in the form of the camp, we can say that the town is not thought of on the basis of the larger territory, but on the basis of a smaller, geometrical figure, which is a kind of architectural module, namely the square or rectangle, which is in turn subdivided into other squares or rectangles.

It should be stressed straightaway that, in the case of Richelieu at least, as in well-planned camps and good architecture, this figure, this module, is not merely the application of a principle of symmetry. Certainly, there is an axis of symmetry, but it is framed by and functions thanks to well-calculated dissymmetries. In a town like Richelieu, for example, there is a central street that divides the rectangle of the town into two rectangles, and then there are other streets, some parallel to and others at right angles to the central street, but at different distances from each other, some closer, others further apart, such that the town is subdivided into rectangles of different sizes, going from the larger to the smaller. The biggest rectangles, that is to say, where the streets are furthest apart, are at one end of the town, and the smallest, with the tighter grid, are at the other. People must live on the side of the biggest rectangles, where the grid is widest and the roads are broad. Conversely, trades, artisans, and shops, as well as markets, must be situated where the grid is much tighter. And this commercial area — we can see how the problem of circulation [ … 20], more trade means more circulation and the greater need for streets and the possibility of cutting across them, etcetera — is flanked by the church on one side, and by the market on the other. There will be two categories of houses in the residential area where

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18 Situated to southeast of Chinon (Indre-et-Loire), on the side of the Mable, the town was built by Cardinal Richelieu, who demolished the old hovels, on the site of the patrimonial domain, in order to reconstruct it, starting in 1631, on a regular plan outlined by Jacques Lemercier (1585–1654). The work was directed by the latter’s brother, Pierre Lemercier, who provided the plans of the chateau and the town in its entirety.

19 The Roman camp (castra) was a square or a rectangle subdivided into different squares and rectangles. On the Roman castramétabation (or art of establishing armies in the camps), see the very detailed note in the Nouvelle Larousse illustré, vol. 2, 1899, p. 431. On the revival of this model, at the beginning of the seventeenth century, as condition of military discipline and ideal form for “observatories” of human multiplicities” — “The camp is the diagram of a power that acts by means of general visibility” — see Surveiller et Punir, pp. 173–174, and fig. 7; Discipline and Punish, pp.170–172. The bibliography cited by Foucault is mainly French, with the exception of the treatise of von Wallhausen (1615). Wallhausen was the first director of the Schola militaris founded at Siegen in Holland by Jean de Nassau in 1616. On the characteristics of the Dutch “military revolution” and its spread in Germany and Sweden, see the rich bibliography given by Parker (1984).

20 Incomplete sentence.
the rectangles are bigger. On the one hand, there are those overlooking the main thoroughfare, or the streets parallel to it, which will be houses with a number of floors, two I think, and attics. On the other hand, the smaller houses with only one floor will be in the streets perpendicular to the main street: difference of social status, of wealth, etcetera. In this simple schema I think we find again the disciplinary treatment of multiplicities in space, that is to say, [the] constitution of an empty, closed space within which artificial multiplicities are to be constructed and organized according to the triple principle of hierarchy, precise communication of relations of power, and functional effects specific to this distribution, for example, ensuring trade, housing, and so on. For Le Maître and his Métropolitée what was involved was “capitalizing” a territory. Here, it is a case of structuring a space. Discipline belongs to the order of construction (in the broad sense of construction).

And now, the third example. This will be the real development of towns that actually existed in the eighteenth century. There are a whole series of them. I will take the example of Nantes, which was studied in 1932. I think, by someone called Pierre Lelièvre, who provided different construction and development plans for Nantes (Lelièvre, 1942). It is an important town because, on the one hand, it is undergoing commercial development, and, on the other, its relations with England meant that the English model was employed. The problem of Nantes is, of course, getting rid overcrowding, making room for new economic and administrative functions, dealing with relationships with the surrounding countryside, and finally allowing for growth. I will skip the nonetheless delightful project of an architect called Rousseau who had the idea of reconstructing Nantes around a sort of boulevard-promenade in the form of a heart.21 It’s true that he is dreaming, but the project is nonetheless significant. We can see that the problem was circulation, that is to say, for the town to be a perfect agent of circulation it had to have the form of a heart that ensures the circulation of blood. It’s laughable, but after all, at the end of the eighteenth century, with Boullée,22 Ledoux (1804),23 and others, architecture still often functions according to such principles, the good form having to be the support of the exact exercise of the function. In actual fact, the projects realized at Nantes did not have the form of the heart. They were projects, and one project in particular put forward by someone called Vigné de Vigny,24 in which there was no question of reconstructing everything, or of imposing a symbolic form that could ensure the function, but projects in which something precise and concrete was at stake.

First, cutting routes through the town, and streets wide enough to ensure four functions. First hygiene, ventilation, opening up all kinds of pockets where morbid miasmas accumulated in crowded quarters, where dwellings were too densely packed. So, there was a hygienic function. Second, ensuring trade within the town. Third, connecting up this network of streets to external roads in such a way that goods from outside can arrive or be dispatched, but without giving up

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21 Plan de la ville de Nantes et des projets d’embellissement; présenté par M. Rousseau, architecte, 1760, with this dedication: “Illustrissimo atque ornatissimo D. D. Armando Duplessis de Richelieu, duci Aiguillon, pari Franciae” (see Lelièvre, 1942, pp. 89–90). “The only interest of such an utterly arbitrary imagination is its disconcerting fantasy.” The plan of Nantes, with its heart form, is reproduced on the verso of p. 87. See also p. 205: “Is it absurd to suppose that the idea of ‘circulation’ could have inspired this anatomical figure criss-crossed with arteries? We take no further than he this analogy confined to the schematic and stylized contour of the organ of circulation.”

22 Étienne-Louis Boullée (1728–1799), French architect and designer. He preached the adoption of geometrical forms inspired by nature (see his projects for a Museum, a National Library, and a capital Palace for a great empire, or a tomb in honor of Newton, in Starobinski (1973).)

23 Claude-Nicolas Ledoux (1736–1806), French architect and designer.

24 Plan de la ville de Nantes, avec les changements et les accroissements par le sieur de Vigny, architecte du Roy et da la Société de Londres, intendant des bâtiments de Mgr le duc d’Orleans. — Fait par nous, architecte du Roy, à Paris, le 8 avril 1755. See Lelièvre (1942, pp. 84–89); see also the study devoted to him by Delattre (1911).
the requirements of customs control. And finally, an important problem for towns in the eighteenth century was allowing for surveillance, since the suppression of city walls made necessary by economic development meant that one could no longer close towns in the evening or closely supervise daily comings and goings, so that the insecurity of the towns was increased by the influx of the floating population of beggars, vagrants, delinquents, criminals, thieves, murderers, and so on, who might come, as everyone knows, from the country [... 25]. In other words, it was a matter of organizing circulation, eliminating its dangerous elements, making a division between good and bad circulation, and maximizing the good circulation by diminishing the bad. It was therefore also a matter of planning access to the outside, mainly for the town’s consumption and for its trade with the outside. An axis of circulation with Paris was organized, the Erdre was developed along which wood for heating was bought from Brittany. Finally, Vigny’s redevelopment plan involved responding to what is, paradoxically, a fairly new and fundamental question of how to integrate possible future developments within a present plan. This was the problem of the commerce of the quays and what was not yet called the docks. The town is seen as developing: a number of things, events and elements, will arrive or occur. What must be done to meet something that is not exactly known in advance? The idea is quite simply to use the banks of the Loire to build the longest, largest possible quays. But the more the town is elongated, the more one loses the benefit of that kind of clear, coherent grid of subdivisions. Will it be possible to administer a town of such considerable extent, and will circulation be able to take place if the town is indefinitely elongated? Vigny’s project was to construct quays along one side of the Loire, allow a quarter to develop, and then to construct bridges over the Loire, resting on islands, and to enable another quarter to develop starting from these bridges, a quarter opposite the first, so that the balance between the two banks of the Loire would avoid the indefinite elongation of one of its sides.

The details of the planned development are not important. I think the plan is quite important, or anyway significant, for a number of reasons. First, there is no longer any question of construction within an empty or emptied space, as in the case of those, let’s say, disciplinary towns such as Richelieu, Kristiania, and suchlike. Discipline works in an empty, artificial space that is to be completely constructed. Security will rely on a number of material givens. It will, of course, work on site with the flows of water, islands, air, and so forth. Thus it works on a given. [Second], this given will not be reconstructed to arrive at a point of perfection, as in a disciplinary town. It is simply a matter of maximizing the positive elements, for which one provides the best possible circulation, and of minimizing what is risky and inconvenient, like theft and disease, while knowing that they will never be completely suppressed. One will therefore work not only on natural givens, but also on quantities that can be relatively, but never wholly reduced, and, since they can never be nullified, one works on probabilities. Third, these town developments try to organize elements that are justified by their poly-functionality. What is a good street? A good street is one in which there is, of course, a circulation of what are called miasmas, and so diseases, and the street will have to be managed according to this necessary, although hardly desirable role. Merchandise will be taken down the street, in which there will also be shops. Thieves and possibly rioters will also be able to move down the street. Therefore all these different functions of the town, some positive and others negative, will have to be built into the plan. Finally, the fourth important point, is that one works on the future, that is to say, the town will not be conceived or planned according to a static perception that would ensure the perfection of the function there and then, but will open onto a future that is not exactly controllable, not precisely

25 Some inaudible words.
measured or measurable, and a good town plan takes into account precisely what might happen. In short, I think we can speak here of a technique that is basically organized by reference to the problem of security, that is to say, at bottom, to the problem of the series. An indefinite series of mobile elements: circulation, x number of carts, x number of passers-by, x number of thieves, x number of miasmas, and so on. An indefinite series of events that will occur: so many boats will berth, so many carts will arrive, and so on. And equally an indefinite series of accumulating units: how many inhabitants, how many houses, and so on. I think the management of these series that, because they are open series can only be controlled by an estimate of probabilities, is pretty much the essential characteristic of the mechanism of security.

To summarize all this, let’s say then that sovereignty capitalizes a territory, raising the major problem of the seat of government, whereas discipline structures a space and addresses the essential problem of a hierarchical and functional distribution of elements, and security will try to plan a milieu in terms of events or series of events or possible elements, of series that will have to be regulated within a multivalent and transformable framework. The specific space of security refers then to a series of possible events; it refers to the temporal and the uncertain, which have to be inserted within a given space. The space in which a series of uncertain elements unfold is, I think, roughly what one can call the milieu. As you well know, the milieu is a notion that only appears in biology with Lamarck. However, it is a notion that already existed in physics and was employed by Newton and the Newtonians.

What is the milieu? It is what is needed to account for action at a distance of one body on another. It is therefore the medium of an action and the element in which it circulates. It is therefore the problem of circulation and causality that is at stake in this notion of milieu. So, I think the architects, the town planners, the first town planners of the eighteenth century, did not actually employ the notion of milieu, since, as far as I have been able to see, it is never employed to designate towns or planned spaces. On the other hand, if the notion does not exist, I would say that the technical schema of this notion of milieu, the kind of — how to put it? — pragmatic structure which marks it out in advance is present in the way in which the town planners try to reflect and modify urban space. The apparatuses of security work, fabricate, organize, and plan a milieu even before the notion was formed and isolated.

The milieu, then, will be that in which circulation is carried out. The milieu is a set of natural givens — rivers, marshes, hills — and a set of artificial givens — an agglomeration of individuals.

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26 Foucault repeats: An indefinite series of mobile elements.
27 Jean-Baptiste Monet de Lamarck (1744–1829), author of *Philosophie zoologique* (1809); see Canguilhem (1965):

“Lamarck always speaks of milieus, in the plural, and by this expression he understands fluids like water, air, and light. When Larmarck wants to designate the set of actions exerted on a living being from outside, that is to say what we today call the milieu, he never says the milieu, but always, ‘influential circumstances (*circonstances influentes*).’ Consequently, for Lamarck, circumstances is a genus of which climate, location and milieu are the species.”

28 “Considered historically, the notion and word milieu were imported into biology from mechanics in the second half of the eighteenth century. The mechanical notion, but not the word, appears with Isaac Newton, and the word, with its mechanical meaning, is present in D’Alembert’s and Diderot’s *Encyclopedia*. (…) The French mechanists called milieu what Newton understood by fluid, the type, if not the archetype, of which in Newton’s physics is the ether” (see Canguilhem, 1965, pp. 129–130). Canguilhem explains that it is through the intermediary of Buffon that Lamarck borrows from Newton the explanatory model of an organic reaction through the action of a milieu. On the emergence of the idea of milieu in the second half of the eighteenth century, through the notion of “penetrating forces (*forces pénétrantes*)” (Buffon), see Foucault, *Histoire de la folie*, pp. 385–392; *Madness and Civilization*, pp. 212–220. (“A negative notion (…) which appeared in the eighteenth century to explain variations and diseases rather than adaptations and convergences. As if these ‘penetrating forces’ formed the other, negative side of what will subsequently become the positive notion of milieu,” p. 385 [this passage is omitted from the English translation].)
29 “The problem to be solved for mechanics in Newton’s time was that of the action at a distance of distinct physical individuals” (Canguilhem, 1965, p. 130).
of houses, etcetera. The milieu is a certain number of combined, overall effects bearing on all who live in it. It is an element in which a circular link is produced between effects and causes, since an effect from one point of view will be a cause from another. For example, more overcrowding will mean more miasmas, and so more disease. More disease will obviously mean more deaths. More deaths will mean more cadavers, and consequently more miasmas, and so on. So it is this phenomenon of circulation of causes and effects that is targeted through the milieu. Finally, the milieu appears as a field of intervention in which, instead of affecting individuals as a set of legal subjects capable of voluntary actions — which would be the case of sovereignty — and instead of affecting them as a multiplicity of organisms, of bodies capable of performances, and of required performances — as in discipline — one tries to affect, precisely, a population. I mean a multiplicity of individuals who are and fundamentally and essentially only exist biologically bound to the materiality within which they live. What one tries to reach through this milieu, is precisely the conjunction of a series of events produced by these individuals, populations, and groups, and quasi natural events which occur around them.

References