FIVE

The Problem of Regulation in the Organism and in Society

When my friend Pierre-Maxime Schuhl[1] asked me to lecture at a meeting of the Alliance Israélite Universelle, I accepted gladly and with great pleasure; it is an honor for me, and I only regret having had to pose this one condition—for which I apologize—which resulted in us meeting at a time so out of the ordinary.

I have chosen to treat a problem that, I assure you gentlemen, I have by no means mastered, for it is a question for me, as well. But I have chosen to speak to you of a subject that is not worrying because it worries me, but worries me because I believe it to be fundamentally worrisome. All told, behind the rather too technical title "The Problem of Regulation in the Organism and in Society" is to be found nothing less than a very old, still-unresolved problem, that of the relations between the life of the organism and the life of a society. Is the frequent comparison [*assimilation*] of society to an organism—sometimes scholarly, sometimes popular—anything more than a metaphor? Does this comparison overlie a substantial kinship?

Naturally, this problem is of interest only to the extent that the solution given to it becomes (if it is positive) the point of departure for a political theory and a sociological theory that tends to subordinate the social to the biological and to the extent that it in fact becomes—I will not say risks—an argument for political practice. That there, as a result, we find a subject of considerable concern—this I do not think I need to declare and demonstrate more fully.

This permanent comparison of society to an organism derives from a temptation that is, in general, doubled by the inverse temptation—that of comparing the organism to society.

In the early stages of biological philosophy, one of the Greek thinkers in whom Schuhl has been interested, Alcmaeon of Croton, interpreted the disequilibrium caused by disease, by pathological disorder, as sedition. That is, to explain the nature of the disease in the organism, he brought over a concept of sociological and political origin.[2]

When liberal and socialist economists in the eighteenth and nineteenth centuries drew attention to the social phenomenon of the division of labor and its effects—fortunate, according to the former, detestable, according to the latter—physiologists found it natural to speak of the division of labor concerning the cells, the organs, and the devices [*appareils*] that make up a living body.

At the moment of cell theory's diffusion in the second half of the nineteenth century, Claude Bernard spoke of the "social life" of cells; he asked himself whether cells have the same life in society as they would have in freedom, which came back to anticipating the problem posed by the results of a cell culture.[3] Does the cell, when freed from all the relations that it maintains with others in an organism, behave the same way in freedom as it would in society?

Ernst Haeckel, one of those who did the most to elevate cell theory to the rank of a dogma, spoke of a "Cell State" and a "Republic of Cells" to designate the body of the multicellular living being.[4]

In short, in the movement from sociology to biology, it is unnecessary to multiply examples further in order to reinforce this idea.

Here, we must remark that there has always been an exchange of ambiguous figures of speech between sociology and biology. In some cases, only history allows us to clarify the origin of certain concepts for which a certain

equivocality in biology and in sociology gives an impression of equivalent validity in each of these domains of signification and use.

For example, there is a concept that is fundamental to politics and economics—the concept of *crisis*. Well, it is a concept of medical origin—it is the concept of a change that, signaled by certain symptoms, intervenes in the course of an illness and that will indeed decide the life of the patient.

I remind you also that the term "constitution," which is also one of these perfectly equivocal terms, is as valid on the biological as on the social field; if we look for a passage from one field to another, from the biological to the social, we will not find it, however far back we may go. The term has always been ambiguous, equivocal—it works as well for one field of explanation as for the other.

I recall all these facts only to show that when one compares society to an organism, it is not only as a result of a short-lived sociological theory at the end of the nineteenth century, a theory whose days were rapidly numbered. This theory is called organicism. That this theory would appear in explicit form only at that particular moment had by no means prevented certain sociologists, such as Auguste Comte, from seeking in the concept of "consensus," of sympathy between the parts of an organism—a concept that is of biological origin—a notion that he could import into the sociological field, even as he recognized that, because of human history, because of the fact of tradition, social life and organic life compose two radically heterogeneous domains.

That said, we approach the problem via what I could call its most popular aspect, that is, the temptation of mutual comparison, and I would like to show that if we indeed place ourselves at the point of view of popular representation, a correction for this comparison immediately stands out. By this, I mean that insofar as the social problem and the problems posed by organic life and its disorder are concerned, there is, in public opinion, an attitude that should by itself invite the philosopher to inquire about its underlying reasoning.

Of course, the problem in comparing society to an organism has interest only to the extent that through it we understand certain views concerning the structure or functioning of a society, but even more concerning the reforms to be carried out once the society in question is affected by grave disorders; differently put, what dominates the comparison of the organism

to a society is the idea of social medication, the idea of social therapeutics, the idea of remedies for social ills.

We should then remark that in the link of heath to disease and thus in the relation [*rapport*] to the repair of organic or social disorders, the relations between the illness and the remedy are radically different when an organism is concerned and when a society is concerned.

There is nothing mysterious in what I'm alluding to—everyone has experienced it, if I may say so; it fuels everyday conversations. An organism is a mode of being that is exceptional in that there is, strictly speaking, no difference between its existence and its ideal, between its existence and its rule or norm. From the moment that an organism is, from the moment that it lives, it is what is possible, which is to say, it responds to an organismic ideal [*idéal d'organisme*]; the norm or rule of its existence is given in its existence itself, in such a way that, when what is in question is a living organism, and to take the most banal example, when what is in question is the human organism, the norm one must restore when this organism is harmed or ill does not in the least lend itself to ambiguity. We know very well what the ideal of a sick organism is; the ideal of a sick organism is a healthy organism of the same species. Which is to say that even though we may not know exactly of what an organic disorder consists, even though the physician may debate the nature of the ill [*mal*], and even though one may debate the composition and administration of remedies, no one debates the effect expected of these remedies—the restoration of the organism to its healthy state. In brief, the ideal of the organism here is clear to everyone—it is the organism itself. One may hesitate about the diagnostics and the therapeutics of an affliction of the liver or a disease of the eyes, but no one hesitates about what we should expect from therapeutics; we expect the liver to secrete bile and the eyes to have a satisfactory acuity. In short, in the order of the organism, we commonly see the whole world debate the nature of evil [*mal*] and no one debate the ideal of the good.

But the existence of societies, of their disorders and unrests, brings forth a wholly different relation between ills and reforms, because for society, what we debate is how to know its ideal state or norm.

It precisely here that the problem is posed; the purpose [*finalité*] of the organism is interior to the organism, and in consequence, the ideal we must restore is the organism itself. For its part, the purpose [*finalité*] of society is precisely one of the capital problems of human existence and one of the

fundamental problems that reason poses to itself. Ever since man has lived in society, it is precisely the ideal of society that all the world debates; by contrast, men agree much more easily on the nature of social ills than on the scope of the remedies to apply to them. In the existence of a society, the norm of human sociability is not determined [*enfermée*], and I will try very soon to say why. Hence the multiplicity of possible solutions calculated or dreamt by men to put an end to injustices. One could say that in the organic order, the use of an organ, a device, an organism is patent; what is sometimes obscure, what is often obscure, is the nature of a disorder. From the social point of view, it seems on the contrary that abuse, disorder, and evil [*mal*] are clearer than normal circumstances. Collective agreement is more easily reached on disorders: child labor, bureaucratic inertia, alcoholism, prostitution, police arbitrariness—these are social ills on which collective attention falls (that is, among men of good faith and good will) and on which collective agreement is easy. On the contrary, the same men who agree on a social ill part ways on the subject of reforms, so what appears to some as a remedy appears to others as a state worse than the ill itself, precisely because of the fact that the life of a society does not inhere in society itself.

One could say that in the social order, madness is more clearly discerned than reason, whereas in the organic order, it is health that is more easily discerned and determined than the nature of the illness. This idea has been the object of brilliant (a bit too brilliant) developments on the part of an English author, Gilbert Keith Chesterton, in a work that is not well known, but that has been translated into French, *What's Wrong with the World* (1910).[5] On this subject, Chesterton contented himself, as was his habit, with pointing out very exciting and very stimulating paradoxes. But describing is not enough. I do not say that I will explain—I do not pretend to do so—but I would like to show how, starting from an observation accessible to every man of good will, one may found certain principles of explication.

This is where the word "regulation," which appears in the title of my lecture, intervenes; it is a scientist's word, though not really, insofar as everyone knows what a regulator in an old locomotive is and everyone knows what a regulating station [*gare régulatrice*] is.[6] The concept of regulation is a concept that I would not call familiar, yet not forbidding, either.

The living organism is a type of being that is characterized by the constant presence and permanent influence of all its parts on each of them.

What is proper to an organism is to live as a whole and not to be able to live except as a whole. This is made possible by the existence in the organism of a set of apparatuses or mechanisms of regulation whose effect consists precisely in the maintenance of this integrity, in the persistence of the organism as a whole. This idea of organic regulation is a rather recent concept; I will soon offer some examples of the principal types of organic regulation.

This idea, which begins with the physiology of Claude Bernard, only confirms a very old intuition of Hippocratic medicine—that there exists, by the very fact of the organism's life, a sort of natural medication or natural compensation for the lesions or the disorders to which the organism may be exposed. Modern physiology has provided only confirmations to this old Hippocratic idea of the healing power of nature. An organism comprises, by the sole fact that it is an organism, a system of mechanisms of correction and compensation for the divergences and injuries to which it is subjected by the world in which it lives—by its milieu, a milieu vis-à-vis which these mechanisms of regulation allow the organism to lead a relatively independent existence. To take a very simple example, I cite what used to be called "cold-blooded" and "warm-blooded" animals, which today are called, in a more scientific fashion, "poikilotherms" and "homeotherms." In cold-blooded animals, there is no system to regulate temperature; they are slaves of the temperature of the milieu. The homeotherm has a system of regulation that allows it to compensate for differences between its temperature and that of the milieu, to maintain a constant temperature independent of the milieu's prompts.

By the sole fact of its existence, the organism resolves on its own a kind of contradiction, the contradiction between stability and modification. The expression of this original fact requires terms whose signification is at once physiological and moral; there is in every organism an inborn moderation, an inborn control, an inborn equilibrium; it is the existence of this moderation, this control, this equilibrium, that, following the American physiologist Walter B. Cannon, is known by the scientific term "homeostasis."[7]

The organism's stable states are obtained in all its parts by conserving the uniformity of the natural conditions of the life of these parts—that is, by preserving it from divergences too great from within or from without. In other words, the organism's stable states are obtained by conserving what, since Claude Bernard, is called the "internal milieu." Just as the notion of milieu served biologists at the end of the eighteenth century and

the beginning of the nineteenth to explain the modifications and adaptations of the organism and of species, this notion of internal milieu allowed Claude Bernard to explain how, in the organism's interior, each part finds itself in relation to all the others by the intermediary of a sort of liquid matrix composed of salts, water, and products of internal secretion, a matrix whose stability depends on two devices that in the higher animals are the keystones of all these operations: the nervous system and the system of internal secretion (or endocrine) glands. Bernard's originality resided not just in his showing that there exists an internal milieu, but indeed in his showing that it is the organism that produces this internal milieu. I insist here on the fact that the regulation of the organism is ensured by the special devices that are the nervous and endocrine systems. The regulations that interested Bernard were physiological regulations, for example, the regulation of respiratory movements by the level of carbonic acid contained in the internal milieu; the regulation of the removal of water and salts that annuls the variation of osmotic pressure in internal fluids; thermoregulation (the regulation of animal heat); or the regulation of divergences of nitrogenous nourishment by the maintenance of the law of nitrogen equilibrium.[8]

Claude Bernard's research in two further areas—embryonic development and regeneration—compounded the studies we have been discussing.

Embryologists have discovered that in the fertilized egg, in the course of embryonic life beginning with this fertilized egg, there exists a sort of control by a totality over its parts, thanks to which whatever the variations of ovular substance (if I may put it this way), the living being conserves or maintains the integrity of a specific form. For example one may, using half of an egg or (on the contrary) two joined eggs, obtain a single individual whose specific characteristics are identical to those one could obtain through the development of a normal egg, with only some quantitative differences.[9]

Here, the regulation of what has been called the "specific organizers" functions in such a way that by comparison with the injuries to which the egg is subjected to by exterior elements, the specific form to be obtained is constantly preserved and maintained.

In the same way (and this is only a consequence), the regeneration that occurs in some animals and that enables these animals to recover their proper form following a mutilation, with only some quantitative differences,

shows well that there is a sort of domination of form over matter, a sort of command of the whole over the parts.

All of this is to say that it is not without profundity that a biologist that I just mentioned, Cannon, could title the work in which he summarily outlines these mechanisms of regulation *The Wisdom of the Body*.[10] It is a title we can sneer at, but that is nevertheless worth reflecting on.

What was, in effect, the ancient and pagan idea of wisdom?

In order not to take a lashing from my friend Schuhl's critiques, I will pass over this question rapidly, and I will say that the idea of wisdom was essentially an idea of the measure of control and of mastery in the conduct of life. This is what protected man from the thrall of immoderation—the permanent temptation of deviance, aberration, and contempt for the limit.

It is certain that for many Greek thinkers—some of the greatest ones included—the idea that they had of the universe, the idea they had of the Whole, was the idea of a healthy organism, which is to say an organism all of whose parts accord with one another, are present to one another, and maintain invariable functional relations with one another. Inside this Whole—inside this order that is at the same time life—every being, man included, has a place; in this place, it must work in cooperation with the ensemble of other beings; it must always respect the functional relations that subjugate it to the exigencies of the Whole.

This idea of ancient wisdom is perhaps an idea grafted on an image borrowed from the intuition of life. Of course, it is not the body that is wise, but reason. But as soon as we speak of the wisdom of the body, we restore to the body the image of equilibrium. This is the image on which the idea of wisdom is developed, and, I would say, on which it is grafted.

Cannon's book includes an epilogue entitled "Relations between Biological and Social Homeostasis." Cannon here gives in to the penchant proper to every specialist; he gives in to the temptation that the scientist shares with the common man, which is to import into sociology this magnificent concept of regulation and homeostasis, whose mechanism he has described in the course of the preceding pages.

This book by Cannon, I will say immediately, because this connection is not uninteresting, is a collection of lectures he gave at the Sorbonne in 1930. He was at the time a professor at Harvard. Now, 1930 was the year that Bergson must have been putting the last touches on (perhaps correcting the proofs) of the *Two Sources of Morality and Religion*.[11] We are thus almost

certain that there was no influence. But Cannon's works antedate this considerably, and Bergson, who read everything and knew of everything, may have known of them. What is interesting is to see that in the years from 1930 to 1932, Cannon and Bergson encounter the same problem, the first starting from his biology, the second starting from his philosophy.

It really must be said that Cannon's epilogue on social homeostasis is the weakest part of his book. First of all, it's the shortest; we could say that he was being modest, that he was outside his domain and thus proceeded carefully, but allowing that it is the shortest, it is still the weakest, because the majority of comparisons are founded on commonplaces of politics and sociology, whose foundation he does not seek.

Cannon asks himself if one could not find in society examples of mechanisms of regulation that absorb divergences and tend to compensate for disorders.

Here is one example that I will take the liberty to read in full:

> At the outset, it is noteworthy that the body politic itself exhibits some indications of crude automatic stabilizing processes. In the previous chapter I expressed the postulate that a certain degree of constancy in a complex system is itself evidence that agencies are acting or are ready to act to maintain that constancy. And moreover, that when a system remains steady it does so because any tendency towards change is met by increasing effectiveness of the factor or factors which resist the change. Many familiar facts prove that these statements are to some degree true for society even in its present unstabilized condition. A display of conservatism excites a radical revolt and that in turn is followed by a return to conservatism. Loose government and its consequences bring the reformers into power, but their tight reins soon provoke restiveness and the desire for release. The noble enthusiasms and sacrifices of war are succeeded by moral apathy and orgies of self-indulgence.[12]

And now we come to a passage to which I ask you pay some attention: "Hardly any strong tendency in a nation continues to the stage of disaster; before that extreme is reached corrective forces arise which check the tendency and they commonly prevail to such an excessive degree as themselves to cause a reaction."[13] I cannot help comparing this remark by Cannon to much more profound remarks that Bergson makes, at the end of *Two Sources of Morality and Religion*, on what he calls the "law of dichotomy" and the "law of double frenzy."[14]

For Bergson as well, society, which as you know is at once closed and open, that is to say, conservative, tending to its own conservation like an organism, yet searching ultimately to overcome itself toward Humanity, like the impetus [*élan*] that carries universal existence across matter in an infinite current of creation—society is at each moment in its history oriented by some tendency or other; one tendency carries it toward another, yet once it attains a kind of climax, it is the opposite tendency that in its turn deploys itself.

Still, Bergson does not reason like Cannon, who seems to hold, in the wisdom of the social body, to a kind of extension of Le Chatelier's Principle, which claims that when certain perturbations tend to exert themselves in a system of movement, resistance to these perturbations is produced by relations internal to the system. Bergson, on the contrary, says that if in a certain sense there exists an oscillation around a median position, a sort of pendular movement, then the pendulum, insofar as society as concerned, is endowed with memory, and the phenomenon is no longer the same on the return as it was on the way.[15] Moreover, we should say that in the example invoked by Cannon, the conservative and reformist alternation does not have meaning in every society; but only in a parliamentary regime, that is to say, in a political apparatus that is a historical invention made to channel discontent.[16] It is a type of apparatus that is not inherent in social life as such; it is a historical acquisition, a tool that a certain society gave itself.

Having pronounced this word "tool," I will rapidly set out the reasons why we cannot conceive society to be like an organism.

Concerning society, we must address a confusion that consists in the confounding of organization and organism. That fact that a society is organized—and there's no society without a minimum of organization—does not mean that it is organic; I would gladly say that organization at the level of society is of the order not of organic organization, but of design. What defines the organism is precisely that its purpose, in the form of its totality, is present to it and to all its parts. I apologize—I will perhaps scandalize you—but a society has no proper purpose; a society is a means; a society is more on the order of a machine or of a tool than on the order of an organism.

Certainly, a society bears some resemblance to what is organic, since it is a collectivity of living beings. We cannot, properly speaking, decompose a society, but if we analyze it, which is a very different thing, we discover

that while a society is a collectivity of living beings, this collectivity is neither an individual nor a species. It is not an individual, because it is not an organism endowed with a purpose and a totality that are obtained by a specialized system of devices of regulation; it is not a species, because it is, as Bergson says, closed. Human societies are not the human species. Bergson shows that the human species is in search of its own specific sociability. Thus, society, being neither an individual nor a species, but a being of ambiguous genus, is as much a machine as it is a living thing; not being its own end, it simply represents a means, it is a tool. Consequently, not being an organism, society presupposes and even calls for regulations; there is no society without regulation, and there is no society without rules, yet in society, there is no self-regulation. There, regulation is always, if I may say so, something added on and always precarious.

One could ask in this case, and without paradox, whether the normal state of a society is disorder and crisis, rather than order and harmony. In saying "the normal state of society," I wish to say the state of society understood as a machine, the state of society understood as a tool. It is a tool that is always out of order, because it is deprived of its specific apparatus of self-regulation. In saying "the normal state," I did not wish to suggest it to be the ideal of human life. The ideal of human life is neither disorder nor crisis. But this is precisely why the supreme regulation of social life, namely, justice, does not figure in the form of an apparatus produced by society itself, even if there exist in society institutions of justice.

In society, justice has to come from elsewhere, and this is what Bergson has shown. The Bergsonian idea is much more profound than it appears, even to a serious and attentive reading (I will not say to a quick reading, for that does not lead us to understanding). I wonder whether the distinction and the opposition that he establishes between wisdom and heroism does not dovetail with this idea that justice cannot be a social institution, that it is not a regulation inherent in society, but a different thing altogether. Already in Plato, justice was not inherent in one part of the social body; it was the form of the whole. If justice, the supreme form of the regulation of human society, is not inborn in society itself, then it is not exercised by an institution that is on the same level as the other institutions. This perhaps helps us to understand one fact: there is no social wisdom in the way there is an organic wisdom. One does not need to become clairvoyant because one is born in a certain species that has eyes, that cannot move and cannot

live unless it moves in the light (whereas a plant that lives merely by growing in the light). From the moment that one has eyes, one sees; yet one is not wise in the way that one sees with one's eyes; there is no social wisdom in the way there is a wisdom of the body. One must become wise, one must become just. The objective sign that there is no spontaneous social justice, that is to say, no social self-regulation, that society is not an organism and as a result that its normal state is perhaps disorder and crisis, this is the need for a hero that societies periodically feel.

Wisdom and heroism are strangers to each other. Where there is wisdom, we have no need for heroism, and where heroism appears, it is because wisdom has been missing. Differently put, it is the absence of social wisdom, the absence of social homeostasis, the absence of those regulations that make an organism be an organism—it is precisely the absence of all this that explains the way in which the arrival of a social crisis can suggest that the very existence of society is threatened. At this moment we find what Bergson calls "the call of the hero."[17] Wise men not having resolved the problem, not having avoided its being posed, the hero is he who will find or invent a solution. Naturally, he can invent it only in extremity, can invent it only in the midst of peril.

This is the reason why I believe that there is an essential link between the idea that justice is not a social apparatus and the idea that up to the present, no society has managed to survive except through crises and thanks to these exceptional beings who are called heroes.

Under these conditions, if I have not proved to you, if I have not accomplished—and I'm quite far from doing so—this tour de force to which your president too generously alluded, if I have not succeeded in proving to you that society is not an organism (and besides, in these matters there is no proof), that one must not allow it to resemble an organism, that we must thus be vigilant toward all these comparisons [*assimilations*] whose consequences you can guess—if I have not succeeded in demonstrating this to you, I would simply be happy if I have at least managed to pose for you certain problems, the same ones I pose for myself, in a form that would appear to you worthy of reflection.