

# Introduction

The object of this study is the condition of knowledge in the most highly developed societies. I have decided to use the word *post-modern* to describe that condition. The word is in current use on the American continent among sociologists and critics; it designates the state of our culture following the transformations which, since the end of the nineteenth century, have altered the game rules for science, literature, and the arts. The present study will place these transformations in the context of the crisis of narratives.

Science has always been in conflict with narratives. Judged by the yardstick of science, the majority of them prove to be fables. But to the extent that science does not restrict itself to stating useful regularities and seeks the truth, it is obliged to legitimate the rules of its own game. It then produces a discourse of legitimation with respect to its own status, a discourse called philosophy. I will use the term *modern* to designate any science that legitimates itself with reference to a metadiscourse of this kind making an explicit appeal to some grand narrative, such as the dialectics of Spirit, the hermeneutics of meaning, the emancipation of the rational or working subject, or the creation of wealth. For example, the rule of consensus between the sender and addressee of a statement with truth-value is deemed acceptable if it is cast in terms of a possible unanimity between rational minds: this is the Enlightenment narrative, in which

the hero of knowledge works toward a good ethico-political end—universal peace. As can be seen from this example, if a metanarrative implying a philosophy of history is used to legitimate knowledge, questions are raised concerning the validity of the institutions governing the social bond: these must be legitimated as well. Thus justice is consigned to the grand narrative in the same way as truth.

Simplifying to the extreme, I define *postmodern* as incredulity toward metanarratives. This incredulity is undoubtedly a product of progress in the sciences: but that progress in turn presupposes it. To the obsolescence of the metanarrative apparatus of legitimation corresponds, most notably, the crisis of metaphysical philosophy and of the university institution which in the past relied on it. The narrative function is losing its functors, its great hero, its great dangers, its great voyages, its great goal. It is being dispersed in clouds of narrative language elements—narrative, but also denotative, prescriptive, descriptive, and so on. Conveyed within each cloud are pragmatic valencies specific to its kind. Each of us lives at the intersection of many of these. However, we do not necessarily establish stable language combinations, and the properties of the ones we do establish are not necessarily communicable.

Thus the society of the future falls less within the province of a Newtonian anthropology (such as structuralism or systems theory) than a pragmatics of language particles. There are many different language games—a heterogeneity of elements. They only give rise to institutions in patches—local determinism.

The decision makers, however, attempt to manage these clouds of sociality according to input/output matrices, following a logic which implies that their elements are commensurable and that the whole is determinable. They allocate our lives for the growth of power. In matters of social justice and of scientific truth alike, the legitimation of that power is based on its optimizing the system's performance—efficiency. The application of this criterion to all of our games necessarily entails a certain level of terror, whether soft or hard: be operational (that is, commensurable) or disappear.

The logic of maximum performance is no doubt inconsistent in many ways, particularly with respect to contradiction in the socioeconomic field: it demands both less work (to lower production costs) and more (to lessen the social burden of the idle population). But our incredulity is now such that we no longer expect salvation to rise from these inconsistencies, as did Marx.

Still, the postmodern condition is as much a stranger to disenchantment as it is to the blind positivity of delegitimation. Where, after

*600 2000 1000 1000*

the metanarratives, can legitimacy reside? The operativity criterion is technological; it has no relevance for judging what is true or just. Is legitimacy to be found in consensus obtained through discussion, as Jürgen Habermas thinks? Such consensus does violence to the heterogeneity of language games. And invention is always born of dissension. Postmodern knowledge is not simply a tool of the authorities; it refines our sensitivity to differences and reinforces our ability to tolerate the incommensurable. Its principle is not the expert's homology, but the inventor's paralogy.

Here is the question: is a legitimation of the social bond, a just society, feasible in terms of a paradox analogous to that of scientific activity? What would such a paradox be?

The text that follows is an occasional one. It is a report on knowledge in the most highly developed societies and was presented to the Conseil des Universités of the government of Quebec at the request of its president. I would like to thank him for his kindness in allowing its publication.

It remains to be said that the author of the report is a philosopher, not an expert. The latter knows what he knows and what he does not know: the former does not. One concludes, the other questions—two very different language games. I combine them here with the result that neither quite succeeds.

The philosopher at least can console himself with the thought that the formal and pragmatic analysis of certain philosophical and ethico-political discourses of legitimation, which underlies the report, will subsequently see the light of day. The report will have served to introduce that analysis from a somewhat sociologizing slant, one that truncates but at the same time situates it.

Such as it is, I dedicate this report to the Institut Polytechnique de Philosophie of the Université de Paris VIII (Vincennes)—at this very postmodern moment that finds the University nearing what may be its end, while the Institute may just be beginning.

# The Postmodern Condition

## 1. The Field: Knowledge in Computerized Societies

Our working hypothesis is that the status of knowledge is altered as societies enter what is known as the postindustrial age and cultures enter what is known as the postmodern age.<sup>1</sup> This transition has been under way since at least the end of the 1950s, which for Europe marks the completion of reconstruction. The pace is faster or slower depending on the country, and within countries it varies according to the sector of activity: the general situation is one of temporal disjunction which makes sketching an overview difficult.<sup>2</sup> A portion of the description would necessarily be conjectural. At any rate, we know that it is unwise to put too much faith in futurology.<sup>3</sup>

Rather than painting a picture that would inevitably remain incomplete, I will take as my point of departure a single feature, one that immediately defines our object of study. Scientific knowledge is a kind of discourse. And it is fair to say that for the last forty years the "leading" sciences and technologies have had to do with language: phonology and theories of linguistics,<sup>4</sup> problems of communication and cybernetics,<sup>5</sup> modern theories of algebra and informatics,<sup>6</sup> computers and their languages,<sup>7</sup> problems of translation and the search for areas of compatibility among computer languages,<sup>8</sup> problems of information storage and data banks,<sup>9</sup> telematics and the

perfection of intelligent terminals,<sup>10</sup> paradoxology.<sup>11</sup> The facts speak for themselves (and this list is not exhaustive).

These technological transformations can be expected to have a considerable impact on knowledge. Its two principal functions—research and the transmission of acquired learning—are already feeling the effect, or will in the future. With respect to the first function, genetics provides an example that is accessible to the layman: it owes its theoretical paradigm to cybernetics. Many other examples could be cited. As for the second function, it is common knowledge that the miniaturization and commercialization of machines is already changing the way in which learning is acquired, classified, made available, and exploited.<sup>12</sup> It is reasonable to suppose that the proliferation of information-processing machines is having, and will continue to have, as much of an effect on the circulation of learning as did advancements in human circulation (transportation systems) and later, in the circulation of sounds and visual images (the media).<sup>13</sup>

The nature of knowledge cannot survive unchanged within this context of general transformation. It can fit into the new channels, and become operational, only if learning is translated into quantities of information.<sup>14</sup> We can predict that anything in the constituted body of knowledge that is not translatable in this way will be abandoned and that the direction of new research will be dictated by the possibility of its eventual results being translatable into computer language. The “producers” and users of knowledge must now, and will have to, possess the means of translating into these languages whatever they want to invent or learn. Research on translating machines is already well advanced.<sup>15</sup> Along with the hegemony of computers comes a certain logic, and therefore a certain set of prescriptions determining which statements are accepted as “knowledge” statements.

We may thus expect a thorough exteriorization of knowledge with respect to the “knower,” at whatever point he or she may occupy in the knowledge process. The old principle that the acquisition of knowledge is indissociable from the training (*Bildung*) of minds, or even of individuals, is becoming obsolete and will become ever more so. The relationship of the suppliers and users of knowledge to the knowledge they supply and use is now tending, and will increasingly tend, to assume the form already taken by the relationship of commodity producers and consumers to the commodities they produce and consume—that is, the form of value. Knowledge is and will be produced in order to be sold, it is and will be consumed in order to be valorized in a new production: in both cases, the goal is exchange.

Knowledge ceases to be an end in itself, it loses its “use-value.”<sup>16</sup>

It is widely accepted that knowledge has become the principle force of production over the last few decades;<sup>17</sup> this has already had a noticeable effect on the composition of the work force of the most highly developed countries<sup>18</sup> and constitutes the major bottleneck for the developing countries. In the postindustrial and postmodern age, science will maintain and no doubt strengthen its preeminence in the arsenal of productive capacities of the nation-states. Indeed, this situation is one of the reasons leading to the conclusion that the gap between developed and developing countries will grow ever wider in the future.<sup>19</sup>

But this aspect of the problem should not be allowed to overshadow the other, which is complementary to it. Knowledge in the form of an informational commodity indispensable to productive power is already, and will continue to be, a major—perhaps *the* major—stake in the worldwide competition for power. It is conceivable that the nation-states will one day fight for control of information, just as they battled in the past for control over territory, and afterwards for control of access to and exploitation of raw materials and cheap labor. A new field is opened for industrial and commercial strategies on the one hand, and political and military strategies on the other.<sup>20</sup>

However, the perspective I have outlined above is not as simple as I have made it appear. For the mercantilization of knowledge is bound to affect the privilege the nation-states have enjoyed, and still enjoy, with respect to the production and distribution of learning. The notion that learning falls within the purview of the State, as the brain or mind of society, will become more and more outdated with the increasing strength of the opposing principle, according to which society exists and progresses only if the messages circulating within it are rich in information and easy to decode. The ideology of communicational “transparency,” which goes hand in hand with the commercialization of knowledge, will begin to perceive the State as a factor of opacity and “noise.” It is from this point of view that the problem of the relationship between economic and State powers threatens to arise with a new urgency.

Already in the last few decades, economic powers have reached the point of imperiling the stability of the State through new forms of the circulation of capital that go by the generic name of *multinational corporations*. These new forms of circulation imply that investment decisions have, at least in part, passed beyond the control of the nation-states.<sup>21</sup> The question threatens to become even more

thorny with the development of computer technology and telematics. Suppose, for example, that a firm such as IBM is authorized to occupy a belt in the earth's orbital field and launch communications satellites or satellites housing data banks. Who will have access to them? Who will determine which channels or data are forbidden? The State? Or will the State simply be one user among others? New legal issues will be raised, and with them the question: "who will know?"

Transformation in the nature of knowledge, then, could well have repercussions on the existing public powers, forcing them to reconsider their relations (both *de jure* and *de facto*) with the large corporations and, more generally, with civil society. The reopening of the world market, a return to vigorous economic competition, the breakdown of the hegemony of American capitalism, the decline of the socialist alternative, a probable opening of the Chinese market—these and many other factors are already, at the end of the 1970s, preparing States for a serious reappraisal of the role they have been accustomed to playing since the 1930s: that of guiding, or even directing investments.<sup>22</sup> In this light, the new technologies can only increase the urgency of such a reexamination, since they make the information used in decision making (and therefore the means of control) even more mobile and subject to piracy.

It is not hard to visualize learning circulating along the same lines as money, instead of for its "educational" value or political (administrative, diplomatic, military) importance; the pertinent distinction would no longer be between knowledge and ignorance, but rather, as is the case with money, between "payment knowledge" and "investment knowledge"—in other words, between units of knowledge exchanged in a daily maintenance framework (the reconstitution of the work force, "survival") versus funds of knowledge dedicated to optimizing the performance of a project.

If this were the case, communicational transparency would be similar to liberalism. Liberalism does not preclude an organization of the flow of money in which some channels are used in decision making while others are only good for the payment of debts. One could similarly imagine flows of knowledge traveling along identical channels of identical nature, some of which would be reserved for the "decision makers," while the others would be used to repay each person's perpetual debt with respect to the social bond.

## 2. The Problem: Legitimation

That is the working hypothesis defining the field within which I intend to consider the question of the status of knowledge. This

scenario, akin to the one that goes by the name "the computerization of society" (although ours is advanced in an entirely different spirit), makes no claims of being original, or even true. What is required of a working hypothesis is a fine capacity for discrimination. The scenario of the computerization of the most highly developed societies allows us to spotlight (though with the risk of excessive magnification) certain aspects of the transformation of knowledge and its effects on public power and civil institutions—effects it would be difficult to perceive from other points of view. Our hypothesis, therefore, should not be accorded predictive value in relation to reality, but strategic value in relation to the question raised.

Nevertheless, it has strong credibility, and in that sense our choice of this hypothesis is not arbitrary. It has been described extensively by the experts<sup>23</sup> and is already guiding certain decisions by the governmental agencies and private firms most directly concerned, such as those managing the telecommunications industry. To some extent, then, it is already a part of observable reality. Finally, barring economic stagnation or a general recession (resulting, for example, from a continued failure to solve the world's energy problems), there is a good chance that this scenario will come to pass: it is hard to see what other direction contemporary technology could take as an alternative to the computerization of society.

This is as much as to say that the hypothesis is banal. But only to the extent that it fails to challenge the general paradigm of progress in science and technology, to which economic growth and the expansion of sociopolitical power seem to be natural complements. That scientific and technical knowledge is cumulative is never questioned. At most, what is debated is the form that accumulation takes—some picture it as regular, continuous, and unanimous, others as periodic, discontinuous, and conflictual.<sup>24</sup>

But these truisms are fallacious. In the first place, scientific knowledge does not represent the totality of knowledge; it has always existed in addition to, and in competition and conflict with, another kind of knowledge, which I will call narrative in the interests of simplicity (its characteristics will be described later). I do not mean to say that narrative knowledge can prevail over science, but its model is related to ideas of internal equilibrium and conviviality<sup>25</sup> next to which contemporary scientific knowledge cuts a poor figure, especially if it is to undergo an exteriorization with respect to the "knower" and an alienation from its user even greater than has previously been the case. The resulting demoralization of researchers and teachers is far from negligible; it is well known that during the 1960s, in all of the most highly developed societies, it reached such

expensive dimensions among those preparing to practice these professions—the students—that there was noticeable decrease in productivity at laboratories and universities unable to protect themselves from its contamination.<sup>26</sup> Expecting this, with hope or fear, to lead to a revolution (as was then often the case) is out of the question: it will not change the order of things in postindustrial society overnight. But this doubt on the part of scientists must be taken into account as a major factor in evaluating the present and future status of scientific knowledge.

It is all the more necessary to take it into consideration since—and this is the second point—the scientists' demoralization has an impact on the central problem of legitimation. I use the word in a broader sense than do contemporary German theorists in their discussions of the question of authority.<sup>27</sup> Take any civil law as an example: it states that a given category of citizens must perform a specific kind of action. Legitimation is the process by which a legislator is authorized to promulgate such a law as a norm. Now take the example of a scientific statement: it is subject to the rule that a statement must fulfill a given set of conditions in order to be accepted as scientific. In this case, legitimation is the process by which a "legislator" dealing with scientific discourse is authorized to prescribe the stated conditions (in general, conditions of internal consistency and experimental verification) determining whether a statement is to be included in that discourse for consideration by the scientific community.

The parallel may appear forced. But as we will see, it is not. The question of the legitimacy of science has been indissociably linked to that of the legitimation of the legislator since the time of Plato. From this point of view, the right to decide what is true is not independent of the right to decide what is just, even if the statements consigned to these two authorities differ in nature. The point is that there is a strict interlinkage between the kind of language called science and the kind called ethics and politics: they both stem from the same perspective, the same "choice" if you will—the choice called the Occident.

When we examine the current status of scientific knowledge—at a time when science seems more completely subordinated to the prevailing powers than ever before and, along with the new technologies, is in danger of becoming a major stake in their conflicts—the question of double legitimation, far from receding into the background, necessarily comes to the fore. For it appears in its most complete form, that of reversion, revealing that knowledge and power are

simply two sides of the same question: who decides what knowledge is, and who knows what needs to be decided? In the computer age, the question of knowledge is now more than ever a question of government.

### 3. The Method: Language Games

The reader will already have noticed that in analyzing this problem within the framework set forth I have favored a certain procedure: emphasizing facts of language and in particular their pragmatic aspect.<sup>28</sup> To help clarify what follows it would be useful to summarize, however briefly, what is meant here by the term *pragmatic*.

A denotative utterance<sup>29</sup> such as "The university is sick," made in the context of a conversation or an interview, positions its sender (the person who utters the statement), its addressee (the person who receives it), and its referent (what the statement deals with) in a specific way: the utterance places (and exposes) the sender in the position of "knower" (he knows what the situation is with the university), the addressee is put in the position of having to give or refuse his assent, and the referent itself is handled in a way unique to denotatives, as something that demands to be correctly identified and expressed by the statement that refers to it.

If we consider a declaration such as "The university is open," pronounced by a dean or rector at convocation, it is clear that the previous specifications no longer apply. Of course, the meaning of the utterance has to be understood, but that is a general condition of communication and does not aid us in distinguishing the different kinds of utterances or their specific effects. The distinctive feature of this second, "performative,"<sup>30</sup> utterance is that its effect upon the referent coincides with its enunciation. The university is open because it has been declared open in the above-mentioned circumstances. That this is so is not subject to discussion or verification on the part of the addressee, who is immediately placed within the new context created by the utterance. As for the sender, he must be invested with the authority to make such a statement. Actually, we could say it the other way around: the sender is dean or rector—that is, he is invested with the authority to make this kind of statement—only insofar as he can directly affect both the referent, (the university) and the addressee (the university staff) in the manner I have indicated.

A different case involves utterances of the type, "Give money to