

# From Epistemology to Anthropology and Back Again

## Crossed Reflections

*Patrick Tort and Jean-Luc Jamard*

In order to leave our debate open, it is important to end with a potentially crucial encounter between two domains whose representatives have not yet engaged in direct dialogue. Epistemology and anthropology, indeed, have many ideas to exchange and interactions to stimulate, particularly insofar as both of them consider the relations between a science of nature and a science of humankind.

Although the following text appears to take the form of an interview, its more profound coherence results from the authors' shared approaches to these concerns. In order to make this conceptual solidarity felt, we have tried presenting their reflections alternately, rather than simply juxtaposing their answers. Patrick Tort's epistemology<sup>1</sup> has a direct bearing on anthropology, particularly with regard to classifications.<sup>2</sup> As for the "the anthropology of anthropologies" explored by Jean-Luc Jamard, its ever-present epistemology is in no way a betrayal of its own discipline.<sup>3</sup>

*Q: Patrick Tort, you never define yourself as a "historian of ideas," and you dislike the expression "philosophy of science," but if pressed you will admit being qualified as a historian of science or an epistemologist. In fact, the only methodology with which you can fully identify yourself seems to be the one that you yourself created, which you call "the analysis of discursive complexes." Moreover, your work clearly has a bearing on anthropology: are the great epistemological questions distinguished by this characteristic?*

**Patrick TORT:** The expression “the history of ideas,” conveniently used to designate something like a discipline that would straddle the blurred confines of history, letters and philosophy – for within the sequence of disciplines as they are taught, the field acquires a shape only through the history of literature, then through the history of philosophy (to which aesthetics, epistemology, and the history of science are attached in a higher sequence) – directly designates no assignable object, no disciplinary reality, nor *a fortiori* any distinct methodology of its own. You will observe that in the system of what is taught in school, literature, like art in general, teaches its own history. As does philosophy. Science does not. The theoretical and historical knowledge of the sciences and of scientific methods finds its place only in the context of a separately pursued external specialization, possibly reached through a ramification of philosophy. Literature is taught *with* Balzac, Stendhal, or Flaubert; philosophy is taught *with* Plato, Descartes, or Kant; but biology is not taught *with* Darwin. The teaching of science does not involve any reflexivity. It is not charged with enabling science to understand how it came about. It is an unremittingly *dogmatic* teaching, in the Comtian sense, precisely because it does without history. I will leave it to you to measure the consequences this has for what we refer to as “culture,” which nevertheless purports to be a contemplation of history as the creator of works and the ripener of meaning. Science also will quite simply be *excluded*, and this already distances its “cultural” intelligence from most people – indeed, very often, from scientists themselves – and it also, paradoxically, fuels “scientism,” which like all forms of idolatry conceals history or rewrites it in the form of myth. “Scientific culture,” through not being advanced by the sciences in the process of teaching, thus becomes the concern of ideology, one of the stakes in battles of influence and mass manipulations, the task of journalists or patented mythographers charged with managing apparent conflicts, fabricating vague consensus, maintaining popular paradigms, and regulating received ideas.

Today, one “received idea” is that Darwinism is “obsolete.” We know that this is not only false, but contrary to the most recent research in the biology of evolution. Now this common convic-

tion, acquired by impregnation and fueled by the recent drift of publications such as *La Recherche*, stems from an effect of ignorance which is not spontaneously generated in the public, but results from the complex generation of an anti-Darwinian myth whose history I have traced – and once the history of a myth is explained and made known, its credibility can be expected to dissipate. This myth tactically widens the gulf between the true technicians of scientific knowledge and the common consciousness. Now of all this, what will be retained by the history of contemporary “ideas”? The profound “idea” of Darwinism confirmed (which is accurate from the viewpoint of the scientific community), or this superficial idea – propagated by rumor and yet virtually dominant in terms of its public “visibility” – of the Darwinian model’s obsolescence, that is to say, the myth? Having no serious theoretical basis (particularly as concerns a sociology of knowledge and of its present-day modes of diffusion), the empirical “history of ideas” will often be no more than a more or less deferred reflection of the more visible effects of these same forces whose interplay has determined the momentary dominance of one or another “popular” convictions.

A consequence of the situation I have described is that the history of science is increasingly being taken up as a hobby by scientists who are at a standstill in their own research, and for this very reason, groping for *their own culture* and for the *meaning* of their past activity – the very activity that ought, in all *intelligence*, to have benefitted from such illumination, which besides arriving belatedly is all too often lacking in method or blindly obedient to the dominant myths.

Beyond this general inconsistency, the necessarily vague notion of the “history of ideas” evokes, in a very classically “idealist” manner, the independence of a sphere of “ideas.” Yet there is no “history of ideas” that can be separated from the history of *actions*. Ideas are the *gestures* of intelligence, and this gestuality acts upon the world (which naturally acts upon it in turn) through discourses and strategies; history being that fluid medium of states of the world, woven of ideas *and* actions, that selects by turns dominant gestural modes which are defined *and act* within the framework of discursive forms that are always more than simple

“reflections.” *La Raison classificatoire*, the book to which you referred, is the illustration of this.

As for the expression “the philosophy of science,” its totally anachronistic persistence comes from the alleged impossibility of conceiving the scientific status of a discourse whose object would be the sciences themselves. To speak of “philosophy” evades the problem, while opening up a space with vague outlines in which we can speak of science as we do of any other object, and without any specific methodology. In France, Canguilhem, the author of studies that are often quite remarkable in other respects, remained a prisoner of the aporia of an epistemology that was deemed incapable of partaking of the status – which he considered more or less explicitly as a status of *exactitude* of its object. In 1983, I defended a diametrically opposed position.<sup>4</sup> Epistemology *must* gamble on being a science, for what would be the use, applying to science, of a discourse that is less “exact” than science, if “exactitude” is the value that is being defended? To speak of the “philosophy of sciences” is to lower epistemology to the status of conversation. This “decorative” status (therefore accessory, marginal, not necessarily rigorous, but above all *non-specific*) to which epistemology is generally relegated is in fact no more than an avoidance strategy that is typical of a system of forces (that is, of *power*) that implies that the theory of science should be maintained *separately* from its production. Technology teaches techniques; epistemology does not teach sciences. What conclusions do you suppose we are to draw from this?

To define the history of science, as Canguilhem does, as “the laboratory of epistemology” is intuitively agreeable and possibly fecund, but practically and theoretically inexact. We cannot fundamentally distinguish epistemology from the history of the sciences as we can distinguish a product from the process of its production – quite simply because the knowledge of a product *as such* implies that of the process of its production. In the logic of the Canguilhemian formula, the history of the sciences would thus be the descriptive discipline through which we would learn how to know – we would observe – the processes of the production of truth in the advent of scientific discourses that is, in Canguilhemian terms, in the substitution of a science for a “scientific ideology,” to retain

only the theoretical quintessence of the element of a field of knowledge that is abstracted from historical contingency (*epistemology*, which would be in a sense the science of timeless universals at work in all processes of production of positive knowledge). However, simplistically opposing historical reconstitution and the search for structures is no longer the point (and Canguilhem himself most likely did not fall into the trap of his own formulation). Yes, “universals” do exist, “elementary structures” or “initial gestures” of the process of knowledge, matrices of gnoseological behavior. But they can be identified only in context, that is, *within history*, that is, again, as *dependent actualizations* of interplaying forces. The *analysis of discursive complexes*, which (it may be useful to recall) was invented before complexity came into fashion, studies these *dependent actualizations* within past and present history.

*La Raison classificatoire* begins with a chapter entitled “On the Twofold Root of the Principal of Classification,” which aims to identify the relation (already a complex one) between the two nuclear gestures of the most elementary activity of thought: that is, the reciprocal inclusion of the *metonymic* scheme and the *metaphorical* scheme, which is actualized in history only under the *alternating dominance* of one or the other scheme. For example: the system of classifying living creatures on the basis of similarity (the “metaphorical” scheme) is succeeded by the Darwinian project of a classification based on kinship (the “metonymic” scheme). However, in the living universe, resemblance leads to mating (“birds of a feather flock together,” the law of specific precopulatory recognition), that is, a metonymic contiguity, which then produces resemblance (that of “descendants”), which in its turn, on the genealogical scale, is an index of kinship. Another classic example: contrary to Jakobson’s scheme, the aphasic who says “knife” instead of “fork” has not “lost” the relation of similarity (metaphor) in exchange for that of contiguity (metonymy), for “knife” and “fork” are *alike* in that they are both items found in table settings, and they are indistinguishable in terms of “eating implements.” In any taxonomic relationship, neither of the two schemes can be lost, for the fundamental reason that each, as a functional relay, is constitutive of the other. On the axis of historical time, this produces not a loss, of one or the other, but an “oscillatory” play of alternating dominance.

Whereas structuralism ordinarily treated the metaphorical and metonymic schemes as external polarities in opposition to each other (in keeping with what Jakobson makes explicit), I go beyond this static opposition to show that each actualization of a given scheme is inhabited by the subversive influence of the partner scheme, which is preparing its future dominance, which will be expressed only when it is required or favored by a particular state of historical forces. Instead of the rigid oppositions of structuralism, therefore, we have here an “elementary” dynamic structure, a matrix of transformations.

*Q: It is fitting here to refer to the first chapter of La Raison classificatoire and to the historical applications to which it leads ...*

**TORT:** One more remark. On the subject of classification, you are clearly right to speak of the “bearing on anthropology.” No anthropology dispenses with reflection on the modalities whereby human populations order the objects of the world with respect to themselves and to each other. Conversely, no epistemology of the act of classification could legitimately neglect to consider this act through its realizations as compared across the human species, as well as in its elementary psychogenesis: the simplest expression of the gesture of classifying (let us say, naming at its most fundamental) is necessarily the closest reflection of the functioning of human universals. If you choose to apply the name “epistemology” to the sort of work I am describing then, yes, this epistemology is a *part of anthropology*, as is linguistics or genetic psychology. But it appears to me that this question should be quickly resolved by the obvious fact that any “human” science is by definition a branch of anthropology. Technology is quite rightly studied by anthropologists. I do not see why the same should not be true of epistemology.

*Q: From your point of view, Jean-Luc Jamard, how does the anthropologist’s thought seem to imply an epistemology? Is epistemology present in all forms of anthropology?*

**Jean-Luc JAMARD:** I have a feeling that the relations between epistemology and anthropology are established on several levels.

First of all, in the broadest sense of the function that is properly assigned to epistemology, any anthropologist's thought implies it willy nilly, consciously or unconsciously – on the condition, naturally, that he still covets the status of science for his discipline (we will undoubtedly return to this question) ... no more or less than – but perhaps in a different way from – the thought of a researcher in natural science (even if the natural sciences “do not think,” if we are to believe Heidegger). As regards this first relation, all anthropological thought fueled by empirical research presumes an epistemology in the weak sense: a more or less controlled autocritical distancing with respect to scientific practice. But that is not all. The human sciences are necessarily “sciences having a thematics that consistently links the theory of the scientific domain with a theory of the knowledge of this theory,” we already read in Husserl, here cited by Bourdieu.<sup>5</sup> What this means is that in order to be rigorous, any anthropology must be reflexive, unless it forgets to take up as an object of study its own conditions of existence, such as culture or language ... The anthropologist, at several stages of the process, must in particular objectivize the interaction between “him,” “them,” “that,” those people and things that he observes. The epistemology of anthropology – the reflection on the system and the conditions of its “truths” – is thus an integral part, sometimes an obvious part, of anthropological practice itself.

Last but not least, we may consider that the overarching aim of epistemology in its broadest sense consists in “explaining,” or at least in analyzing, all the *systems for explaining reality or certain regions of the real* – in short, all the modes of knowledge constructed about the world by known cultures. From this point of view, the sort of anthropology that, without losing sight of others, tends in our day to include the study of our own forms of knowledge in all modes (including ethnological modes!) indisputably turns out to be the most powerful and comprehensive of epistemologies, and moreover the only one that is truly comparative and reflexive. What remains is for it to come to terms with certain paradoxes of self-reflexivity ... Considered from this angle, not all anthropologies are necessarily epistemologies: ethnosciences and cognitive anthropology (but we ought not to debase these terms)

or certain forms of “cultural technology” are of course specialties that seem to me to be forms of comparative epistemology.<sup>6</sup> Alongside the general history of ideas and the particular history of *scientific* ideas and discoveries (the latter falling under the aegis of epistemology in its non-normative sense), there are the cross-cultural study of positive forms of knowledge about the world and the analysis of local heuristics, which are not unrelated to the general anthropology of systems of thought.

One more thing. For any anthropologist to disregard or denigrate, whether implicitly or explicitly, any of the philosophies he encounters seems to me to be improper, for his profession is in some measure indebted to their existence. Moreover, in his consistency, this specialist in the forms of humanity can only envision the Western philosophies as his potential subjects of research: are the so-called “native theories” to be rejected as objects of study? They are of a different order ... But from a certain angle – that of the anthropologist, for example – they are indeed of the same order. Thus Lévi-Strauss wrote: “For the ethnologist, [Sartre’s] philosophy represents, like all other philosophies, a first-rate ethnographic document, the study of which is indispensable if we wish to understand the mythology of our time.”<sup>7</sup> Personally, I would add the following: we must strive for an anthropology that ideally would be capable of taking on “classical” epistemology itself as an object of study.

Still, to wrap up this question, there remains a nice problem that might contrast the anthropologist to the epistemologist who analyzes discursive complexes as does Patrick Tort. According to him, “one of the essential tasks of the history of science and of epistemology is indeed to sort out what is ideology and what is science”<sup>8</sup>: to put it bluntly and perhaps somewhat simplistically, to separate the true from the false. But (like certain historians, perhaps) the anthropology of systems of thought teaches us that the richness and positive effectiveness of these systems may sometimes lie in the very mixture of true and false that they embrace; more precisely, in an interweaving of what we, as modern, rationalist Westerners, know *at this moment* to be true and false. Yes, I am suggesting that all forms of knowledge, in the past or elsewhere as well as in our time, are indeed in a sense conditioned by



their time and place; however, this statement in no way betokens an anything-goes relativism: unlike many, I maintain the value, even the necessity, of “sorting out” – but this sorting may one fine day be performed *scientifically* within what is today held to be true by Western scientists.

Moreover, today we are seeing the emergence of a form of anthropology that claims to hold out on epistemology, even to disqualify it: the anthropology or sociology of science, first inspired, in recent times, by the Edinburgh School and the so-called “strong program” ... But that is quite another story, to which we may return.

*Q: Haven't recent decades favored a dehumanized epistemology, for example via logicism, or an extra-human conception of the scientific enterprise? And are we not witnessing an opposite trend, via a new relativism?*

**JAMARD:** These questions must be framed more specifically and contextualized. I believe that the attitude of epistemologists as such must be distinguished from the sort of epistemology that implicitly or explicitly underlies the work of professional researchers in the natural or human sciences and (if I may appropriate the term) *spontaneous* epistemology, a public attitude towards the sciences that results from certain popularizations ... and from the tenor of the times.

In the area of the history of science and epistemology, the French university and French research are shored up by a solid tradition: Gaston Bachelard, Alexandre Koyré, and Georges Canguilhem are among the great names that stand out. I think it is hardly relevant to ask whether the works of these scholars are infused with “logicism” or partake of a “dehumanized epistemology.” But you are probably referring to something else. You speak of “recent decades.” Fifteen or twenty years ago in France, we began to see the burgeoning of long-overdue translations and synthetic texts spreading logical positivism and analytical philosophy, but also of epistemological undertakings such as the work of Karl Popper,<sup>9</sup> which had long languished in the shadows here, overwhelmed by the craze for continental existentialism and phenomenology that dominated the postwar period (for some time a number of our fashionable thinkers had considered a disregard

for scientific thought and the philosophy of science to be in good taste, hence the lags in diffusion).

Already the propagation of Popper's falsificationism had undermined positivist tendencies by spreading the idea that the certitudes of science can only be negative, since science can be sure of nothing but its errors. This thinking did, it is true, spring from a certain form of logicism ... which implies that a theory – a set of hypotheses – achieves scientific status only when it is supplied with potential falsifiers: in other words, insofar as it is possible *at least to imagine* a state of fact or an experiment that would refute or "falsify" the theory. From this angle, in the majority of cases, it is abusing the term "science" to apply it to anthropology and more generally to the human and social "sciences" – even when they are rife with abstruse concepts, fancy curves and charts, or highly rigorous arguments. But then, vast swaths of biology, as well as other disciplines, would be indicted by this decree of purity. And such was the sad fate of the Darwinian theory of evolution, for example: not being susceptible to empirical invalidation, it was in Popper's eyes on the wrong side of the line of demarcation – *although it still constituted a very interesting "research program,"* in the long run capable of stimulating, as may happen in the "soft" sciences, the genesis of explanations that can then be properly refuted. (But late in the day Popper rehabilitated the hypothesis of natural selection, recognized as susceptible to testing *in extremis* .... unlike Marxist theories: resistant to being disproven by real history, they remained in Popper's eyes occasionally interesting but always non-scientific.)

One of the sources of the attitude that is diametrically opposed to that of normative and procedural epistemologies is the work of Thomas Kuhn,<sup>10</sup> who was also translated rather belatedly into French. As we know, he paved the way for a new relativism with his notion of paradigms which he applied to the history of science (the physical and natural sciences as well as others), a notion that quickly became a topic of debate. The paradigm could be seen as a world view; in any case, it is a system of presuppositions and models, a delimiting *credo*; for researchers who adhere to it, it defines the field of questions to be resolved and the procedures to be used to this end – almost like a cultural system for certain

anthropologists. And, simply speaking, what is a system transformation but a paradigm switch? A scientific revolution. Not only is every scientific procedure inflected by extra-scientific factors (this is trivial), but quite often the certitudes of the scientist are only *beliefs*. Thus epistemology yields to a sort of psycho-sociology of the sciences. It should be noted that Kuhn was recently obliged to climb down a peg in order to censure the excesses of the post-modern conception of the sciences. After finding expression in Feyerabend's philosophy of "Anything goes" and "Farewell to reason," these excesses peaked in certain representatives of the new sociology such as the extremist Hübner,<sup>11</sup> who employs highly methodical arguments to maintain that the explanations furnished respectively by myth and by science are equally valid, equally true ...

But not all the proponents of the "strong program" in the sociology of science, which developed from the work of Barry Barnes and especially David Bloor, who launched the program at the University of Edinburgh, are so radical, or if they are it is in a subtler way, unless their arguments lead to the same results against their will. The "symmetry principle," one of the elements that characterize this program, holds that scientific truth, not just error, must be explained socially. Nature is constructed by researchers and their allies, by means of controversies. In France, this perspective has been developed principally by Michel Callon (the principle of "generalized symmetry": society too is constructed, above all by the social sciences) and by Bruno Latour. And these constructions must always be explained by an *anthropological* approach. Exit epistemology and the philosophy of science ...

I would add in relation to my own particular interest as an anthropologist: according to Latour and Callon, we cannot say that on the one hand there are objects and techniques, and on the other human actors, but rather there are networks, "cobbled together with odds and ends," in which quasi-objects, both human and non-human, are associated. Better still: according to Latour, the powerful reality and the universality of such genre-blending networks, which he has recently uncovered beneath the distinctive categories of the "Moderns" (that is, ourselves), were already revealed and then confirmed by the reality of "non-mod-

ern" ("primitive") or "premodern" societies, where the "seamless fabric of nature/culture" that prevailed was observed by our anthropologists and historians. These researchers either did not know or did not dare see that our own reality is of the same stuff: despite our fairly recent reconstructions that separate animals, human beings, artifacts, nature, society, God, and so on, "*We have never been modern.*"<sup>12</sup> But beware. Our author is only dressing an old question in new clothes: for one thing, nature and society are equally "constructed," everywhere and always (as per "generalized symmetry," and I am ready to concede it to him with a qualification: to be logical, then, the "Amoderns" construct and reconstruct their worlds – as we do, but in their own fashion – in ways that vary [Latour skirts this aspect] depending on the time and place, and moreover they always reserve some matters [Latour says nothing about these] for "non-culture," for "true things," which are not everywhere the same); on the other hand, or by the same token, the truths that the various relevant sciences uncover in nature or in culture are the products of their specialists' temporary victories in specific controversies (same comment, but let us be consistent here: this is also the case with mutually debated anthropological truths relating to exotic "worlds," human or otherwise). Consequently, although (or because) he is quite brilliant, Latour is caught in a fundamental self-contradiction, or at least in circles, *on these questions*. In fact, this is a problem of methodological choice (the respective yields of which are evaluated case by case, according to the "context"), but not an ontological discovery as we are urged to believe ... This being said, the empirical anthropology of the sciences has several admirable successes to its credit ... But in my opinion, it is not capable of challenging as such the programs of epistemology and of "classical" philosophy," inasmuch as it eludes the *question of truth* ...

In sum, let us return to the effects that all these tendencies in the analysis of science have in specific contexts. In fact, I believe that they all coexist in our day, but that their respective successes can be divided according to various sectors – whence their uneven echoes within the "general educated public." The practitioners of the "hard" sciences are, I believe, often ready to admit that they are "somewhat Popperian," with nuances, while still claiming to

be positivists (in the operationalist sense) – that is, when they even pause to give a moment's thought to situating themselves on an "epistemological scale." There are many epistemologists and sociologists and historians of science who are highly critical of the "relativist lapses"<sup>13</sup> of those who espouse the "new program": but these critics' voices and their writings are rarely perceived by non-specialists, who under the reigning influence of postmodernism have all eyes turned upon their adversaries.

I will conclude my remarks. Relativism – or "amodernism" – has known some successes, alongside positivist or, more particularly, sociobiological reductionism; in the case of sociobiology, a certain scientism can mitigate the blind faith or affected, if not resigned, indifference of certain anthropologists or sociologists towards the natural sciences – an attitude change that might also entail the adoption of a postmodern (or amodern) relativist position: "That's all Science is? They should have told us earlier!" In both cases, there is a reassuring disqualification of "applied rationalism" and of the real conditions of scientific work ...

**TORT:** I don't yet know whether I should take the opposite point of view or on the contrary support and develop the intuition that shapes your question. From my point of view, what you refer to as "dehumanized" epistemology apparently arises from a quite widespread confusion, between the enterprise of descriptive objectivity in the "human" sciences and the *formalizations* (mathematics, logics, systematics..) that have indeed known massive success, which has been insufficiently analyzed over the past quarter of a century. One might say just as accurately that this "dehumanization" is the direct consequence of a "functionalism" that is the heir to the oldest form of sociological organicism as distilled by its passage through cybernetics, and which is substantially not much different from "structuralism," in that in both of them "subjects" disappear and "structures" are equivalent, for each structure ensures its own idiosyncratic "functionality," the study of which is separated from any consideration of the processes by which it was formed, set up, and evolved – that is, also separated from *history* as an arena of intercultural confrontations and of the perceptibly differentiated deployment of their consequences for the societies

in concern. This “dehumanized” epistemology would be opposed to an epistemology as a “human” science that would include and interpret the transformative action of history and of sociocultural and gnoseological progress – a “superhumanized” epistemology at times in its claim to predict the direction of human evolution. What is this but structuralism (which is a “functionalism” as well as a “systemism,” along with the famous “theoretical anti-humanism,” which in anthropology engenders *relativism*, which is at once the effect of a very specific choice of relation to the object and an ethical (“humanist”) reaction against the hierarchical normativity of previous ideology of the historical progress of human societies.

All of this is profoundly connected to the broad oscillation of theoretical modes between *process* and *system*. Not to put too fine a point on it, let us say: between diachronic study and synchronic study, between the study of history and the study of structures. Here again, we are talking about two polarities that appear to be external to each other, whereas in reality each interferes with and is constituent of the other. What becomes apparent in their alternation is the way in which one momentarily overshadows the other, which never ceases to constitute and to subvert the first pole while already preparing for its own domination. The history of “systems of thought” that is most easily recorded, in terms of “trends,” is the one whose periodizations are based upon this alternation. Jakobson had imagined a projection of the metaphorical-metonymic scheme upon the history of aesthetic production. The intuition was a fecund one, but Jakobson, in a sense a prisoner of the apparent exteriority of the two schemes (which he thought he had deduced from his studies of aphasia), did not identify their cohabitation. Let us take a simple example. The age we refer to as “classical” was dominated by a creationist theory of nature and living things: the species, independently created by God, are classified as related entities on the basis of *similarities*, which are expressed in the theory of the graduated chain of being, and on the basis of irreducible *differences* which perpetuate the identical reproduction of what has been distinguished from the beginning, and therefore perpetuate *specific distinction* itself. This is the reign of similarity. The similar essentially engenders the similar, of which it is the bearer, since the creationist theory of generation

rests on the postulate of conformation between the parent and the germ that the parent will when the time comes carry to maturity by simple increase in size, in order to generate a new being that will itself be the bearer of the parental likeness, and therefore of everything that specifically distinguishes it from those outside the group. The scheme of resemblance – the metaphorical scheme of the transfer of sameness – implies, as is self-evident, the scheme of difference (that from which the same distinguishes itself) and its external existence, equally fixed and constant.

In the nineteenth century (to take a very vague point of departure), the theory of nature and of life forms changes dramatically. Lamarck puts forward transformism as a body of doctrine, Goethe applauds the academic daring of Geoffroy Saint-Hilaire, Darwin proposes the theory of descent as modified by means of natural selection. He ushers in the genealogical approach to natural classifications. The theory of the chain of being then becomes invested with an evolutionary orientation: if classes of related beings are similar, it is because they were engendered historically. Similarity, rather than guaranteeing the perennial maintenance of a transgenerational and intraspecific identity, becomes the *index of phylogenetic kinship of the species themselves*. Difference is integrated into the *process* of transmitted variation. The scheme of *kinship* goes beyond the border of the specific group. Just as a child resembles his parent with slight differences, a species can resemble a parent species with slight differences. The greater the resemblance, the closer the kinship. The true mechanism that governs the passage from a creationist rationality (ahistorical) to a transformist rationality (historical) has not been sufficiently explored. In the first, reproduction, seen as essentially reproducing the identical, maintains the different (the *otherwise* identical) outside itself *ab origine*. In the second, reproduction, producing the *different within the same element of resemblance*, introduces the *possibility of having been produced by the different*. Giving precedence to *identity* within resemblance serves to *distance the other and history*. Giving precedence to *difference* within resemblance serves not only to acknowledge them, but to acknowledge *itself* as a *product of the other and of history*.

In order to conclude this reply, I will return to an observation that is as familiar to me as it was unfamiliar to those who nour-

ished the “structuralist” vogue in France. The theoreticians who are generally seen as having inspired the return to the “synchronic” not only never called for a break with historical analysis, but they even expressly urged just the *opposite*. In his *Course on General Linguistics*, Saussure underlines the necessary complementarity of study *pursuing both axes* (synchrony and diachrony) of the referent objects of “sciences working with values.” Propp, in a note in his *Morphology of the Folk Tale*, defines “interesting” work at the horizon of the study of structures as being that of *history*, the moment of interpretation. Finally, Jakobson dreams of an interpretation of the alternance of the great aesthetic movements by projecting the bipolar schema of metaphor/metonymy onto historical-discursive sequences. But these pronouncements, which are of primordial epistemological significance, did not attract any attention at the time (I myself pointed them out in 1979), for the theoreticians of the human sciences were themselves immersed in *one of the moments* of the alternance that they should have been describing. They were participants in the oscillatory movement that led from the historicism of comparative linguistics and evolutionist anthropology, through a reversal of polarization (a change in dominance, with the effect of newness), towards the study of structures in synchrony. By so doing, they were following a vast ideological movement that cast in a radically oppositional mode a relation of complementarity between two intellectual gestures that are indissociable yet alternately dominant. The history of the expressions of the human mind is the history of this alternance; this history appears to record as major landmarks only the *most radically opposed moments* of oscillation. Now what this *analysis of discursive complexes* constructs is the *theory of forces and operations that, within structures and under the selective constraints of the present (of the “historical context” or the “state of the world”), work towards their transformation.*

**Q:** *Today we are increasingly forced to choose between two poles that present themselves as mutually exclusive: in biology, either one is a sociobiologist, or else one is mystical; in anthropology, either one is functionalist, or one is postmodern. Are these extreme tendencies interdependent?*



**JAMARD:** This postmodernist trend in anthropology that we spoke of earlier – which has been assimilated, especially in the United States, to the mode referred to as “poststructuralist” – indeed goes hand in glove with the decline of the “great social theories” (Marxism, generalized structuralism), a decline that itself is not unrelated to the siren songs of “New Age” irrationalism. The same ideological dissatisfaction seems to me to be at the root of the opposite proclivity, the propensity for “vulgar” materialism and reductionist functionalism, both of which, once again, are ideological (for example, cultural materialism as practiced by Marvin Harris, and sociobiological anthropology). At the two extremes, we find ourselves in the para-scientific realm, with the fallacious confusions that that entails; the “postmodernists,” often seeking the path of least resistance in denouncing the strategies of “anthropologists’ discourse,” end up blurring the boundaries between the real and the texts that “describe” it (as in Geertz and even more so in his followers); in parallel, cultural and sociobiological materialism fail to distinguish between the analysis of the real and the simple construction of a priori models, which both begin and end their discourses. To confuse the model with the real is to fall victim to the “Pygmalion syndrome” ...

I am not in a position to analyze the situation in biology with the same degree of assurance. But as far as I know, if we examine the big picture we find more or less the same configuration – and we should be surprised that we find this surprising. I am in complete agreement, therefore – while cognizant of the need for a deeper discussion that what we have time for now – that we should speak of a “common alternative.”

*Q: In your opinion, does the reiteration of a parascientific ideology require the reiteration of the opposing ideology?*

**JAMARD:** I have very little to say on this matter, except to recall the following cliché, which relates to previously discussed illustrations: with respect to ideological structures or systems even more than in other areas, we define ourselves most of all by excluding; and in order to exclude, nothing could be easier than to set up a contrast with an extreme opposite, with a concrete exis-

tence. As for the problem of reiteration, Patrick Tort has shown in the best possible way just how this movement (if such it can be called) characterizes parascientific ideologies.

*Q: A propos, in our day and our society, Patrick Tort, can ideology be anything but a parasite to science? Can you describe the general art line of the mechanism that explains the reiteration of para-scientific ideologies?*

*TORT:* If the *distinction* between science and ideology remains the key question of any theory of knowledge, that is because the judgment that pronounces this distinction determines the very possibility of all positive thought, having previously established the fact that, strictly speaking, these two realities can be defined only in relation to each other – as with truth and error. The existence of error and a consciousness of its disqualifying consequences is what endows truth with its qualifying value and hence with its propensity to conclude with the universal. But error is not sufficient to define ideology, just as truth is not sufficient to define science. Geocentrism is an error, heliocentrism is a truth. But beyond being simply an error, geocentrism revealed in its moment of crisis that it was also an element capable of producing discourse and ostensible justifications for a power that was destabilized when this element was refuted. It was, in fact, in this precise context, an *ideology*. Ideology can thus be defined as the continued teaching, often by means of argumentative artifacts borrowed from science, of an illusory perspective on the world; which helps to maintain a *power ascendancy*. All ideology is a *pragmatics of appearance*. And the more the value of truth tilts towards science, the more ideology will borrow the discursive forms of science to clothe its simulacra. Today, for example, ideological resistance to Darwinism is argued in a field that was long ago chosen as the one most worthy of credibility: mathematics. The appearance is scientific, the reasoning rigorous, but the premises are false or arbitrary. And what the analysis of discursive complexes has brought to the fore is that all of these tactical errors, all of the pacts contracted with appearances, are repetitions. The regime that produces ideological illusion is never that of *invention*. It is the regime of *reiteration* and *reshaping*. The modern opponents of Darwinism invoked mathe-

mathematical probability to contest the formation of complex organs through the process of variations chance and selection, an objection formulated already in 1871 by the Catholic Saint-George Mivart, who simply pushed to the extreme an objection Darwin had already leveled against his own work in 1844.<sup>14</sup> The reiteration of this objection, which had exactly the same structure in that moment as in our time, several intermediate stages notwithstanding, would itself provide enough material for a monograph that would illustrate most eloquently what I have called the *reiterative structure of para-scientific ideologies*.

Thus the only "history" ideology has is reiterative, and one of the methodological problems of the analysis of discursive complexes lies in theorizing the relation between the innovative historicity of the developing sciences and the parasitic transhistoricity (in the form of a "return") of para-scientific ideologies. This requires that a certain number of confusions be dispelled. First of all the intellectually wretched, but by this very fact readily popularized, misconception that science and ideology are "consubstantial," and that they are indistinguishable in their inscriptions. Those who hold to this non-distinction are in general those who have only a superficial relation with scientific disciplines, and who derive deep satisfaction from the self-granted possibility that they may continue to hold an ideological discourse on science while prohibiting others from condemning them in the name of this distinction, whose troublesome existence they would prefer to deny. The corollary of this attitude is the proposition (which is often presented as implicit evidence) that an ideology can be "born" of a science. This conviction, which springs from a crude lack of analysis, nevertheless enjoys great currency. No ideology can, of course, by right as by deed, be "born" of a science. "Social Darwinism," the ideology underpinning ultra-liberalism, is "born" not of Darwinism, but of Spencerism, which shaped this ideology as a synthetic system. It is a fact that ideology constantly looks to science to supply it with utterances, logical fragments, and analogous imagery to construct its simulacra in the likeness of science. Clearly, that does not mean that science must be considered as "consubstantial," nor should it be held "responsible." Biology itself cannot be called to account for what ideology has, throughout history, unilaterally consigned to its juris-

diction. Since science has no authority to refute what is not itself, the invocation of scientific authority by ideology partakes of bad faith, and all the more so because ideology attempts as much as possible to mime science in its procedures, its modes of exposition, and its pronouncements. On the other hand, it behooves science not to recognize as its own those propositions of ideology that are always seeking to speak in the name of science. What is highly unpredictable in this regard is the degree to which scientists will feel the necessity of doing this. In order to do so they would have to be epistemologists (an impossibility, given the current structures of educational programs), and they would have to have accepted the ideal that the immediate and constant role of the epistemological domain is, as I have always wished, to be able to *sort out* what belongs to *scientific discourse* (the current legitimacy of which can in principle gain recognition) and what belongs to the great raw, unruly *text* of one or another individual scholar who must be regarded simultaneously, and differentially, as an actor in science, an agent of a system, and a subject of ideology.

Ideology never innovates. What appears to be new in ideology is what it borrows from its model which, itself, does evolve. *The grammar of ideology is an opportunistic paraphrase of science.* One of the oldest ideological *topoi* in the history of humanity is the sociopolitical use of the *organism* as an analogical representation for the social "body." Since the Apologue of Menenius Agrippa of Titus-Livius, which produces the organizational law of the city-state using the model of the body (the lesson being one of complementarity, or of interdependence with a dominant element), organicist sophism, identical to itself in its structure as an apologue and in its goals, has wended its way through history borrowing from every advance of biological science whatever jibed with its own purpose of periodically renewing and solidifying the bases of its central demonstration, which remains unchanged and always identically articulated. Following an organicism founded simply on anatomy and physiology, there was an organicism based on tissue elements, then on cells, and then on genes. Contemporary sociobiology, which identically matches the structure of Spencer's discourse on the relation between selfishness and altruism, is a dynamic organicism of the gene, with all the attendant reductionist

childishness, and without substantial evidence of the least novelty. Sociobiology *repeats* Spencerism, for since it was introduced to the United States in 1860 in the form of the "Programme" of the "system of synthetic philosophy," Spencerism became the mean of North American ideology, whose reign is expressed in contemporary neo-liberalism, and whose theoretical thrusts occur in reaction to the moments of weakness of a system shaken by periodical crises. Ideology repeats itself because in each of its visible reactivations it responds to the necessity to come to the aid of a system of power whose credibility is momentarily (and visibly) faltering. Sociobiological ideology is a classic figure of the wholesale intervention of the biological (that is, the exhibition of a "profound" grounding in nature) on behalf of a political order that it attempts to relegitimize by homology. I say *homology* advisedly, for the great and very old *analogy* of the organism has inevitably been inflected by transformism: not only is the social order *analogous* to the natural order (of the organism or of a group of organisms), but it *arose* out of the natural order, and this implies that its constituent features, at the level of the subject as well as that of the group, are inherited, and thereby determined as to their place, their connection, their coherence, and their hierarchy. A reductionist hereditarian organicism based on the crude hegemony of natural selection: such is the current identity of sociobiology, as it began to emerge in the great repetition of Wilson's "new synthesis," which naturally cannot conceal its link to the neo-Darwinian "synthesis," from which it branched off, and above all to the Spencerian "synthesis," which it may have forgotten as an explicit theoretical referent but which it completely reactivates in its discourse. Another revealing symptom: just as when it was formed, ultra-liberal ideology, which is thoroughly pervaded with Spencerian thought (whose ethical opposition to Darwin's thought I have demonstrated countless times) is spectacularly bound to the nuclear motive of "Darwinism," the theory of *selection-elimination*. On the same basis of ignorance, or blindness, contemporary sociobiology repeats the Spencerian gesture of fragmented reference to the doctrine of selection, thus exploiting the only popularized element of Darwinian theory, previously filtered through a "philosophical" interpretation and channeled by the reiterative tradition of the "biological soci-

ologies" which are inscribed in the interminable refashioning of the original organicism. The synthetic theory of evolution was the meeting of the gene with the theory of selection, and that meant, to confine ourselves to this, a new scientific departure. Sociobiology is the meeting of synthetic theory and Menenius Agrippa. It is a repetitive combination dominated by ideology.

Indeed, neither Spencer nor his sociobiologist repeaters have shaken off the functional imperatives of parascientific ideology: fragmented rewriting, reduction to a basic theoretical utterance presented as the nucleus of the theory; an ignorance of developments peculiar to this nucleus in the domain pursued; and finally the extension of this nucleus (of this product of reduction) to the treatment of far removed problematics and contents that constitute the true stakes of what is borrowed. Not long ago I summarized this process as follows: *The first functional rule of ideological work*: the extension of the field of application of a theory must at first be based on the reduction of this theory to a fragment or a moment of itself that will be arbitrarily accorded precedence over those other elements that could point to its legitimate applications, in keeping with its proper and complete coherence.<sup>15</sup>

Thus, "sociobiology," which moves forward against all legitimacy, in the guise of complete Darwinism, reduces the knowledge of Darwinian theory to the only groups of statements that illustrate the basic functioning of the selection mechanism and its consequences for individuals and populations. This is done at the cost of amputating virtually all the rest of Darwin's work (apart from *The Origin of Species*, only limited passages of the work as a whole has generally been read), in particular his anthropological and anthropogenetic work (in the first place, *The Descent of Man* of 1871<sup>16</sup>). What takes place in Darwin's work at the level of the theory of *civilization* (the development of rationality and the tendential elimination of elimination by the progressive selection of *social instincts* and, through these, of moral sentiments and anti-selective altruistic behaviors with a universal horizon) is entirely masked as being contrary to the requirements of the ultra-liberal extension of the reduced thesis. The first function of ideological work is thus to *reduce in order to apply*.

The other type of functioning is precisely symmetrical: *to apply* (or more accurately, to *overapply*) *in order to reduce*. Creationist the-

ologians and partisans of the transcendence of moral sentiments have always produced the fiction that consists of “pushing Darwinism to its ultimate consequences” (this means, in fact, adopting the error of their sociobiologist opponents) in order to show its ethical inadmissibility: the reduction of Man to animal, the triumph of selfishness, the ruthless elimination of the weak. What we have here is the same fragmentation, the same ignorance of the texts, the same denial of existence with respect to those places where Darwin speaks explicitly of Man, civilization, and morality. This evacuation is clearly a major symptom of a will to *ignore* (whether consciously or unconsciously may vary, and this opens up a whole other problematic whose importance I discussed some time ago). Thus the contemporary debate between sociobiologists and creationists (a “spectacular” debate that is utterly lacking in scientific value, except for the purposes of analysis of discursive complexes, which studies the forms and behaviors of repetition) *reiterates* the old debate between evolutionist monists and finalist theologians. Let us take this further. Ideological repetition affects the structure of argumentations in an infinitely more precise way. In *Pour Darwin*, I explain the following: it has for example been said that, if Darwinism were true, the geological eras would be too short to permit the gradual evolution of species (Thomson, Jenkin, Mivart), the conservation of the initial stages of useful variations could not be explained by selection (Mivart, Denton), the number of beneficial accidents would be too high to produce a complex organ (Mivart, Denton, Schützenberger). In each case, the mechanical overapplication of a “basic” principal is invoked in order to reduce the theory to factual inapplicability. But we should note that this process rests on the same preliminary *reduction* that inhabits the first procedure: the idea of variation (or the more modern idea of gene mutation) is reduced to the idea of an isolated, limited transformation whose effects are juxtapositional and exclusively additional. This approach leaves out the complexity of the organism in its interactive connections to break it up into separate parts through mathematical abstraction, into fragmentary units, each of which can only be the effect of a cause and the cause of an effect. Against a limited knowledge of the Darwinian “mechanism” is set a *hyper-mechanization* of the living structures in evolution. Just as in the eighteenth century

the providentialist theory of the originary creation of freaks argued against the theory of accidental causes (mechanical lesions arising in the course of development) by *hyper-mechanizing* the representation of the living (through the famous fiction of the two clocks broken against each other, meant to render impossible the probability of repairing the circuits and vital processes after such a lesion). Even when the application itself is designed to reduce, there is always an effort to *reduce before applying*. That the universe of repetition is never left behind is once again verified, like a banal observation. Whence the synthetic pronouncement that is found in "Darwin et la laïcisation du discours sur l'Homme," with regard to the objectifiable distinction between science and ideology. In science, *history obliterates structure* (there are new discoveries). In ideology, *structure obliterates history*<sup>17</sup> (there is nothing new).

*Q: In this connection, Jean-Luc Jamard, don't the sciences themselves play an impudent role as popularizers (for example, in the diffusion of models that serve as bearers of a message that no longer belongs to the domain of scientific discourse)? And isn't anthropology constantly being popularized in this way, as a victim or a plaintiff?*

**JAMARD:** As a plaintiff: first of all, an extreme example, which I will use almost as a counter-example to nuance your formulations right away. Popularization often consists of a simplified description of an outdated state of a given discipline. Now, it has been claimed that one of the errors of the "scientific" structuralism that grew out of anthropology was the elected "technical model": structural phonology. The author to whom I refer<sup>18</sup> claims that this model was of inferior quality and already obsolete in its original domain. Indeed, one of the principal theses of the researcher in question rests on this gap between various movements in the sciences of language and the importation of their models – just when these models are becoming outdated in their "home" sciences, it would appear – by other disciplines. But I maintain that the potential reality of this phenomenon – since it is no doubt a frequent and sometimes fruitful procedure (especially since borrowing can transform what is borrowed) in the movement of concepts among various sciences is not by itself enough to disqualify the structuralist enterprise in anthropology.



And since I am on the subject of structuralism, here is an example of a skewed criticism that mixes the effects of “high” diffusion in anthropology with those of the popular image that is transmitted of this discipline, according to which it consists of nothing more than sharing in an “exotic experience.” We can hardly reproach structuralist analysis à la Lévi-Strauss for choosing to confine itself to achronic states and leave it at that (though there are those who do so): then why not also subscribe to the curious reproach, once leveled at structuralism, that it disregards “experience” or “dehumanizes” it, that it rejects “universal comprehensiveness”? In both cases, this would be to heap blame upon a theory for doing what all theories do, that is, for knowing only the objects that it chooses or that it constructs (an idea that the popularizations are hard pressed to communicate, at least when they are dealing with the sciences of man and society).

This being said, how can we not deplore the all too frequent distortions of “importations” by anthropologists who think they are “hardening” their discipline by consistently using the language of the “hard” sciences? This is a particularly pernicious form of popularization, often not a conscious one on the part of the importers themselves, but one for which many popularizers bear responsibility, as do even some “hard” researchers who yearn after a larger public – who trade in ignorance and carefully maintain their investment ... Whence the “Gödelism,” “chaophilia,” and other “complexolatries” of certain *social scientists*, who are doing nothing to help their own disciplines: being sciences like any other sciences, although more difficult than the other sciences, these disciplines must try all the harder to appear cautious and rigorous in their reciprocal trespassings upon certain other sciences; nevertheless such collaborations remain possible and useful as long as there is no “mispopularization.”

As for anthropology as an “victimized object” of popularization, I can illustrate the problem briefly by referring to the symmetrically inverse excesses of writings that, in our time, still perpetuate images of the “noble savage close to nature” or of “backwards primitives given to the worst excesses” (and this takes us back to what I said about popularization, which remains arrested at obsolete and simplified stages of the results of the dis-

ciplines whose teachings it distorts). Let us also think of the political engagements (in the broad or the narrow sense) of anthropology: for example, whereas the current data of anthropology could, if thoroughly understood, contribute to the legitimate efforts of feminists, countless feminist thinkers (and not the least of them) have sought validation in the erroneous (popularized) notion of a “primitive matriarchy”?

A final illustration, now. Sociobiology, applied to the human sciences, dangerously “popularizes” anthropology. Thus, in societies known as multiracial (and what society is not multiracial, after all, since the “races” are social inventions?), ideology in a sense pilots the biological (the racial) and its movement, which in turn reinforce or inflect the purely ideal hierarchy of color categories. And this, of course, is accomplished through the sleight-of-hand of “well-managed” marriages or illegitimate reproductive unions that themselves orient the flow of genes in the population as a whole. The sociobiological illusion thus inverts the determinations that operate in the real, with consequences that we can all imagine.

There are so many other examples that you will have to cut me off here. I will quite briefly conclude by mentioning that anthropology, more than any other discipline, most directly and globally illustrates the circle: it is also because anthropology produces knowledge about an object that is itself that anthropology must be an epistemology.

*Translated from the French by Jennifer Curtiss Gage*

## Notes

1. Patrick Tort, ed., *Dictionnaire du darwinisme et de l'évolution*, 3 vols. (Paris, 1996); *Pour Darwin* (Paris, 1997).
2. Patrick Tort, *La Raison classificatoire* (Paris, 1989).
3. Jean-Luc Jamard, *Anthropologies françaises en perspective. Presque-Sciences et autres Histoires* (Paris, 1993).
4. Patrick Tort, *La pensée hiérarchique et l'évolution: Les complexes discursifs* (Paris, 1983).
5. Edmund Husserl, *Formal Logic and Transcendental Logic*, tr. Dorion Cairns (The Hague, 1969) [*Formale und transzendente Logik* (Halle, 1929), p. 52]. Cited by Pierre Bourdieu, *Esquisse d'une théorie de la pratique, précédé de Trois études d'ethnologie kabyle* (Genève, 1972), p. 167.
6. These specialities may overlap to some degree, ethnoscience being the comparative, cross-cultural study of local forms of knowledge especially having to do with the physical and natural world, and cognitive anthropology is the study of the ways in which a culture is taught and passed down, with particular attention to all of the culture's forms of knowledge; as for "cultural technology" ("*technologie culturelle*"), it is the anthropology of the technique, and it is readily apparent that this discipline is capable of forging a link between the two previously mentioned ones (as well as with ecological anthropology).
7. Claude Lévi-Strauss, *Le Cru et le Cuit (Mythologiques I)* (Paris, 1964), p. 21; tr. John and Doreen Weightman (New York, 1975; 1st ed. 1969).
8. Patrick Tort, *La Pensée hiérarchique et l'évolution* (Paris, 1983), p. 13.
9. Karl Popper, *The Logic of Scientific Discovery* (New York, 1959), a revised, corrected and augmented translation of *Logik der Forschung* (Vienna, 1935).
10. Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago, 1962, 1970).
11. K. Hübner, *Die Wahrheit des Mythos* (Munich, 1985).
12. Bruno Latour, *Nous n'avons jamais été modernes. Essai d'anthropologie symétrique* (Paris, 1991); tr. Catherine Porter, *We Have Never Been Modern* (Cambridge, Massachusetts, 1993).
13. See for example Raymond Boudon and Maurice Clavelin, eds., *Le Relativisme est-il irrésistible? Regards sur la sociologie de sciences* (Paris, 1994). This book grew out of a colloquium held at the Sorbonne in January 1993.
14. Charles Darwin, "Essay of 1844", in *The Foundations of the "Origin of Species": Two Essays written in 1842 and 1844*, ed. Francis Darwin (Cambridge, 1909).
15. Patrick Tort, *Pour Darwin*.
16. Charles Darwin, *The Descent of Man and Selection in Relation to Sex* (London, 1871).
17. Patrick Tort, *Pour Darwin*, pp. 1-2.
18. Thomas Pavel, *Le Mirage linguistique. Essai sur la modernisation intellectuelle* (Paris, 1988).