Textual Strategies

PERSPECTIVES IN POST-STRUCTURALIST CRITICISM

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The Algebra of Literature: The Wolf's Game

THE WOLF AND THE LAMB

The reason of the strongest is always the best.¹ We will show this shortly. A Lamb quenched his thirst In the current of a pure stream, A fasting Wolf arrives, looking for adventure, And whom hunger draws to this place. "Who makes you so bold as to muddy my drink?" Said the animal, full of rage: "You will be punished for your temerity." "Sire," answers the Lamb, "may it please Your Majesty Not to become angry; But rather let Him consider That I am quenching my thirst In the stream, More than twenty steps below Him; And that, as a result, in no way Can I muddy His drink." "You muddy it," responded this cruel beast; "And I know that you slandered me last year." "How could I have done so, if I had not yet been born?" Responded the Lamb; "I am not yet weaned." "If it is not you, then it is your brother." "I do not have any." "Then it is one of your clan; For you hardly spare me, You, your shepherds, and your dogs. I have been told: I must avenge myself." Upon which, deep into the woods The Wolf carries him off, and then eats him, Without any other form of proces.

¹As Serres's article will show, "La raison du *plus fort* est toujours la *meilleun* can also be understood as meaning "the reason of the stronger is alway better."—Ed. The notion of structure, recently discovered in the realm of methodology, has an algebraic origin. It designates a set of elements whose number and nature are not specified, a set provided with one or more operations, one or more relations which possess well-defined characteristics. If one specifies the number and nature of the elements of the structure and the nature of the operations, then its model becomes evident. Perhaps the simplest example is that of an *ordered structure*. It designates a set of elements provided with an *ordering relation*. Let there be for example three points A, B, and C on a line D, and a direction defined by the arrow. The ordering relation between these three points, which are elements of the set, can be one of "predecession" or of succession. A precedes B, which precedes C. C, in



turn, is the successor of B, which succeeds A. One sees immediately that no point is its own predecessor or successor: the relation is irreflexive. If, on the other hand, A precedes B, it is impossible for B to precede A; the relation is antisymmetric. Finally, if A precedes B and if B precedes C, then A precedes C: the relation is transitive. An ordering relation is irreflexive, antisymmetric and transitive. An ordered structure is a set provided with such a relation. The reader must excuse these prolegomena, which come from basic mathematics.

We are in the countryside, beside a stream; but let us forget all this for a moment—except the fable's last words: the "form of the proces." This term has at least two meanings: the judicial meaning (trial), and the etymological meaning (process). A process includes a predecession and a succession: it is an order. Question: what is, first of all, the form of the trial, to wit, and the form of the process? Here the form is a reason, a ratio, a connection, a relation.

The reason of the stronger" is definitely an ordering relation. cannot be stronger than itself. A's being stronger than B

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excludes B's being stronger than A, and if A is stronger than B, and B is stronger than C, it follows that A is stronger than C. In the set of animals present, being stronger clearly defines an ordered structure. This is the first (we will call it the biological) model. The whole question will soon become one of finding the strongest, he who will have no predecessor in the order, but only successors.

Being "better" is also an ordering relation. A cannot be better than itself. A's being better than B excludes B's being better than A; if A is better than B and B is better than C, then A is better than C. We will call this second model of the ordered structure ethical. The whole question will soon become one of passing from the relative (an ordering relation) to the absolute, of finding the best, he who will have no predecessor in the order, only successors. The movement of the transitive relation is therefore blocked in order to arrive at stability, invariance: *always*. Finally, the use of *is* ("The reason of the strongest *is* always the best") indicates the invariance of the models in the structure, and therefore there is no need for demonstration: it is *always* a matter of the same process.

Let there be "the current of a pure stream." This is a third, topographical model of the same structure. It deals with an irreversible process which can, nevertheless, be determined at any point using an "upstream-downstream" type of relation. I shall no longer verify the axioms, because they are self-evident: no point is upstream of itself, the upstream's upstream is still upstream, and so forth. The wolf "whom hunger drew to this place," and not thirst, is farther up than the lamb, who drinks, in the stream, "more than twenty steps below Him."

In the fourth place, in an irreversible stream, one can define a process of causality. The cause precedes the effect, which succeeds the cause, without any possible reversal, without moving against the current. The third model was sequential; this one is consequential: "Who makes you so bold as to muddy my drink?" Since the cause is upstream from the effect, the lamb replies: "And that, as a result, in no way / Can I muddy His drink." One finds here a demonstration. The demonstration by cause and effect is only one particular model of the global structural chain. The lamb demonstrates and La Fontaine shows. Whereas the

latter shows the structural invariance using the model's variance, the former demonstrates his point by using only one of the structure's models. Hence the idea, which can help us understand Descartes: the order of reason is only a particular exemplar of order in general. And this result has immense consequences.

One can construct a phenomenon on a spatial-type sequence or on a chain of consequences. Geometry, algebra, and physics constitute the Cartesian construct of the real. As Descartes wrote to R. P. Bourdin, the simplest of these phenomena can be seen in a basket of apples; if one of them is rotten, it diffuses rottenness around it by an irreversible process. In other words, and contrary to certain cosmogonies, the chaotic mixture succeeds separation, and impurity succeeds purity. We have since learned that this belongs to the irreversibility principle of thermodynamics (the law of entropy). The chain of purity or separation followed by mixture is the physical model of the ordered structure. For us, it is isomorphic to the relation of the strongest: maximal energy is always upstream in an irreversible process. It is always a wolf, and not a lamb, who quenches his thirst in the transparent stream of a pure reason.

Now let us choose a political hierarchy, such as that of the Classical age. Mark two points on our drawing and name them king and subject. This is a new model of the ordered structure: "Sire," answers the Lamb, "may it please Your Majesty / Not to become angry; / But rather let Him consider / That I am quenching my thirst / In the stream, / More than twenty steps below Him." Here there is something new. It is no longer the case of a strong individual who can find a still stronger one, of a "betterable better," an upstream that is downstream from another spot, a cause which can be an effect, or a purifiable energy; it is not, in short, the case of a *greater*, but of a *maximum*. There is nothing above the king. Is this the answer to our previous question?

In seventh place, as Rousseau—and many others—would say, none of these chains and none of these processes can be thought of outside of time. This is a new, temporal model of the ordered structure. On its flow, mark the before and the after, then verify the axioms. "And I know that you slandered me last

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year." But two events block the continuing movement of the flow: birth and death. "How could I have done so, if I had not yet been born?" If you kill me and then eat me, my time freezes and its order disappears. Relative relation and absolute limits: the wolf, upstream from time, is looking for adventure; he is the master of the future.

Now let us deal with the parental relation. This set is now well known, provided with several ordering relations. Either the ancestor-descendant (parent-child) relation: "I am not yet weaned," or the older child-younger child relation: "If it is not you, then it is your brother." The latter is the elder, since the encounter occurred last year. Or finally the general relation on the irreversible genealogical tree: "Then it is one of your clan." These are the complete models of kinship for the ordered structure.

Finally, let us try a social organization and its various roles. Mark two points on its flow chart and call them (seriously, now) protector and protected. Designated in this way, the relation clearly verifies all the axioms. One thereby obtains the ninth model: "You, your shepherds, and your dogs."

The trial is a process whose global balance sheet can easily be recorded. It consists of an ordered structure with given axioms, a structure that branches out in several models: the social tree, the genealogical tree, the tree of time and history, the political tree, the tree of the production of energy, of entropy, and of pollution, the tree of causes, the hydrographic tree, the tree of the "better," the tree of good, evil, and knowledge, the tree of the distribution of forces—and a tree in general. So many trees make a forest, into which "The Wolf carries him [the lamb] off, and then eats him."

This is not demonstrated by an order between that which precedes and that which follows, but shown as a forest of models, a forest of symbols. The proof is only one process among others: there exist philosophers from whom a whole forest is hidden by a single tree.

In this way one obtains something like a space, a very general space organized by the ordered structure. All of the fable's modelspaces are deducible from very elementary properties of the ordering relation. Let us take the most general case, the very form of the process. And let us say that this space, organized in this way—a space in which there always exist pairs like upstream-downstream, cause-effect, mother-son—is that of a game-space. Now the process becomes a trial. What is its form? What are the rules of the game?

| Absolute limit | Ordering relation | Model |
|-------------------------------------|---|---|
| the strongest the best source | stronger-weaker better-worse upstream-downstream cause-effect purity-mixture dominator-subject before-after ancestor-descendant protector-protected | biological ethical spatial rational physical political temporal genealogical social |
| king birth-death | | |
| Maximum | Greater-Lesser | Ordered Structure |

A trial (as elementary jurisdiction) first of all tries to establish a responsibility. Let there be a wrong-doing that a plaintiff claims to have suffered: before evaluating the vengeance (the punishment that the accused must incur), it is necessary to show at least the possibility of injury. The set of possibilities includes physical, moral, temporal, sociopolitical, and other possibilities. Now, possibility is always the higher point on the tree, whatever that tree might be. If an order is strict, he who occupies the lower position, let us call him the *minorant*, has no control over the *majorant*, who, on the contrary, has complete control over the former. Hence the fable's strategies.

They are all engendered by the wolf's first word: "Who makes you so bold as to muddy my drink?" Until now we only knew two terms, which defined an order in the game-space: wolf and lamb. It is necessary to define a third one, namely that which makes the lamb so bold. As a consequence we have the *rule of the* game and the trial's law: the wolf plays, in the order, either the lamb or the third man upstream of himself, the lamb on the contrary plays himself downstream. The term who? is a reference to the majorant (the upper position's occupant). Now, he who is upstream, he who is greater, is responsible and loses. The

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minorant wins and eats the other. Whether dealing with drinking, eating, or dying, the succession of moves in the game follows the ordering relation: you are the stronger, I am the weaker; you are upstream, I am downstream; you are the cause, I am the effect; you muddy it, I cannot muddy it; you slandered me last year, I had not yet been born; it must be your brother, I do not have any, and so on. The lamb shows, at every move, that he (or the third man) is absent from the upper position where his adversary places him. In short, the wolf "majorizes" or maximizes the lamb, who "minorizes" or minimizes himself. Everything is played upstream from the wolf: however, are the places there occupied or vacant? And how is this going to determine the results of the game? Theorem I: the lamb wins. The number of moves is almost infinite. There are as many of them as there are models of the ordered structure and as a result, the game would never end: it would be necessary to show at every move, that the place is vacant. This is what the lamb does. But, in addition, in the ultimate instance, he no longer proves the place's vacancy, but rather its inexistence, and the game is over. Not only is the place vacant, but there is no place. If the wolf is the king, "Sire," and "Majesty," he does not have a majorant. He is in an absolute position like an absolute monarch. Not only is there no third man, but it is impossible to conceive of one: quo nihil majus cogitari potest. Therefore the lamb has won, and the wolf has no majorant. He is himself the maximum. But then there is theorem II: the wolf carries him off, nonetheless, and he does it according to the rule of the game. He succeeds in showing the existence of a third man, upstream from himself, in the lamb's social group. This is because the shepherds and the dogs, protectors of the flock, are, in reality, much stronger than the wolf; they retain, upstream, the constant possibility of doing him harm. "I have been told": quo nihil majus dici potest. In the ordering relation, they are clearly majorants. The place preceding the wolf's place is occupied by the shepherd, who is the strongest. The shepherd and his watchdogs are above the "king-wolf." The fable is a perfect operational definition-perfect in that it is free of all psychologism-of hypocrisy. In fact, the term hypocrisy comes from the verb to judge, to choose, to decide, and from the prefix underneath. In other words, if you want to win, play the

role of the minorant. I imagine that all the *Fables*, by the metamorphosis that they represent, function in a similar fashion.

Structure organizes only the game-space. Without a set provided with an ordering relation, there would be no game. But the structure by itself is not the game. There is a tree space, and then active and mortal choices associated with each location on the tree, whatever that tree may be. Stable structures and dialectical processes are inseparable.

Besides, let us note the circle: A is upstream from B. A must place B or a third person upstream from himself in order to have the right to eat or kill the adversary. Let us, for the moment, retain the three results: ordered structure, fight to the death, and circularity.

The seventeenth century founded experimental and mathematical physics as well as the calculus of probability. Pascal discovered the equilibrium of liquids; Leibniz developed an acoustics, a game theory and his logical calculus; Bernoulli dealt with mechanics when he wrote his *Ars Conjectandi*. This simultaneity has a meaning, even though, in the details of the demonstrations and of the works, the relationships are not easily visible. I do not know if historians have ever described these two births as contemporaneous, or if they have even questioned their "twinness."

If we define nature as the set of objects with which the exact sciences are concerned at a given moment in history, viewed synchronically (which is a restrictive but operational definition), the emergence of physics, in particular, can be thought of only in the global framework of our relations to nature. Now, ever since Francis Bacon's work, these relations have been described, from the heights of his social situation, by the command-obedience couplet. One commands nature only by obeying it. This is probably a political ideology—betrayed by the prosopopeia—which implies practices of ruse and subtlety: in short, a whole strategy. Since nature is stronger than we are, we must bend to its law, and it is through this subterfuge that we dominate it. We are under its orders and turn its forces back against order. This is the circle of ruse and productive hypocrisy: nature is a majorant; we try, ourselves, downstream, to majorize ourselves in relation to it.

Here one finds again, intact, an ordered structure, a game, its rule (and how best to implement it), the struggle to seize power, and the closed cycle outlined by these moves.

Descartes, after Bacon, picks up the precept: he calls for us to become the masters and possessors of nature. The impulse to obey has just disappeared. Baconian physics made science into a duel, a combat, a struggle for domination; it gave it an agonistic model, proposing a form of ruse for it so that the weak one would triumph. It transformed science into a game of strategy, with its rules and its moves. But Baconian reason is a weak reason which loses at least the first round, because it first resigns itself to obedience. Descartes rejects this, and, consequently, he suppresses the loss. In the relationship of agonistic forces between ourselves and the exterior world, he seeks the means that will permit us to win at every move. "The reason of the strongest is always the best." The best reason always permits a winning game. The foundation of modern science is in this word, always. Science is a game, an infinite game, in which we always win. Reason is an absolute and constant "optimization."

In a contest, a competitor is not always assured of winning. A player stronger at a given moment because of a given move, can later fail when his opponent discovers the means or obtains the power to pass upstream from him. The dichotomy then appears to reverse itself; the weaker has taken the stronger's place. In fact, it is the entire couplet which is displaced in the game-space structured by the ordering relation. This displacement is infinite, and does not stop-as long as one stays in the same space-since it is relative. It is the infernal time of hierarchical struggle, the time of human unhappiness. There are two, and only two strategies that can give a final turn to the sequence of moves. First, one stays with the dialectical game and tries to discover a martingale² in order to win, whatever the move might be: then the game is over and there is a definitive dominant. Old times are over and struggles stop under the insurmountable power of one of the contestants. With a maximal move, one freezes the game-space in a single pattern of order and hierarchy. It is the

²A martingale is any system by which one tries to make up one's losses in previous bets by doubling or increasing the amount bet.—Ed.

end of a slice of history. Second, one attacks *the ordered structure itself*—which is the condition for the game's existence, or rather, without which the game can have neither space nor time—in order to shatter it. This move would mark the beginning of a new history. Philosophers have rarely taken the second path: they have always tried to find the maximum and the minimum points at the edge of the space organized by the couplet of the majorant and the minorant. As soon as it is discovered, one can say: *always*. And it is always the time of the wolf.

Look at Rousseau, for example. He repeats, after many others: the stronger is never strong enough always to be the master, unless he transforms his might into right and obedience into duty. As we indicated earlier, this kind of transformation is the shift from one model to the other: another move, same game. The second move is as unstable as the first: jurisprudence and ethics are relative to a cultural space organized by the ordering relation. At times a radical, at others a tiny change in the ordering relation is sufficient to make an entire group overthrow its morals and its laws. The trial's dialectics remain, based on the majorant's and the minorant's relationships, with the division of the stakes left to the balanced distribution of forces and to the recuperation of ruse. It is therefore necessary to recognize an infinity of moves in the relative field of the "more" and the "less." As in the fable, one must maximize the "more" and minimize the "less." One must maximize in an absolute fashion; in such a way that there may not exist, that one may not conceive, a majorant to a maximum and a minorant to a minimum. One must transform force into factual necessity and obedience into an inevitable law. One may cut off the king's head, kill the dog, or eat the shepherd, yet one cannot do without Reason's verdicts. And this is why, since Rousseau, one no longer hesitates to invoke science in the realm of law, power, and politics. It is because science has already pointed the way to the winning strategy. For it must be remembered that the foundation of science-whether it be the pure sciences at the Hellenic dawn or the experimental sciences in the Classical age-had taken place in an agonistic field.

I could be accused of forcing the answer. And yet, one can show that abstract mathematics and axiomatics owe their emergence to the Sophists' discussions and paradoxes, as well as

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to Plato's dialogue techniques. Agonistics is there, in the background. And yet, the purest positivist cannot challenge Auguste Comte's analysis, which defines the birth of geometry (in his eyes a natural science) as a ruse or set of ruses: to be able to measure inaccessible things, to find indirect means for man to perform that which he does not have the means to do. Once again, this is a strategy. And as soon as laws are written, they allow man *always* to have access to the inaccessible. The stability and constancy of certitudes or precisions are conceived in the beginning as the end of a prior game.

Another founding word was that of Galileo: nature is written, it is drafted in a language; everyone agrees that this is a mathematical language. But this writing is not obvious, it is hidden, concealed under the phenomenal appearance of the material world. One must force open the secret, find the key to the logogriph, and decode this writing. Now, in this game of decoding or deciphering, nature defends itself. It is subtle, it is hidden, it is secret. One must therefore employ subtler strategies in order to make its defenses fail. Once the key is discovered, the world surrenders. The isomorphic relation between force and writing, recognized elsewhere,³ is again brought into play here.

Just as in Plato's work there abound traces of this state of affairs necessary for the founding of the rigorous sciences, so, in the same way, Descartes's work shows such traces at the dawn of exact sciences (conceived, since the Classical age, as the optimal relationship from subject to object). I have recalled this founding word at the end of which we should have made ourselves the masters and possessors of nature. And I expressed it in terms of a game: Baconian obedience having been suppressed, the project became one of always winning. Reason is optimized, it is the best, it is always invincible. From La Fontaine spring Descartes and the game, or vice versa; it matters little. The three elements located in the fable should then be found in the Metaphysical Meditations: a space structured by the ordering relation, a circle, a game with its moves, its end and its winner. Two and only two have been recognized by the commentators; the third, which is the most visible-since it concerns action-remains hidden. I

³Cf. Jacques Derrida's De la grammatologie (Paris: Minuit, 1967).-Ed.

have suggested elsewhere a static type of solution⁴ to the problem of the Cartesian circle framed in a historical context. Another solution is possible through the strategy of the game.

First of all, there exists in the text an ordering relation, the famous order of reason, the long chain of the geometricians, such that a link A precedes B, its successor, which proceeds from A, its predecessor, and such that it is impossible that A derive from B. The order of reason is therefore irreflexive, antisymmetric, and transitive, according to the axioms of the relation. Transitivity remains a constant preoccupation with Descartes, who suggests time and again that we reconsider the ordered set in its totality. But, as we have seen in the fable, the demonstrative (or deductive, if one wishes) sequence is only one tree in the forest of model-sequences. One tree alone must not hide the forest from us. Behind, or besides, the premises-consequences couplet, there exist other simple couplets, other models of the ordering relation present in the text: predecessor-successor, upstream-downstream, older-younger, and so forth. Moreover, the demonstrative order, taken from the Greek geometricians, links together relationships or proportions, as is noted throughout Descartes's Regulae. The geometric sequence is a series of relationships and analogies. These relationships quantify very different things: relationships of size, height, ruse, and power. Even, occasionally, relationships of sovereignty and slavery, since the first Meditation closes with the representation of a slave who, while sleeping, dreams that he is free. From this results an ordered space and no longer just a linear chain whose list of model-relations would be quite long: more powerful/less powerful, better/worse, before/after, more wily/less wily, more or less true, more or less false, etc., and in which the cause-effect pair is only one particular relation. The set of these models, and not just one of them, makes the ordered structure visible. This is because the word "structure" was taken by commentators in the Latin sense commonly used until the end of the nineteenth century, that is, in the etymological sense of architecture, meaning logical architecture.

If one takes it in the sense defined above, everything changes:

*Serres, Hermes ou la communication (Paris: Seuil, 1968).-Ed.

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the ordered structure is common to several relations. One need only choose a parallel text, such as Leibniz's Meditationes, in order to understand the question clearly. These meditations are constructed by pairs, such as light-dark, confused-distinct, aligned so that they constitute a simple filter. The ordered structure being relative, the pluralist method makes it function iteratively, until it finds one or several remainders. If, in Descartes (or in the Cartesian method), there was only order, and order alone, then Leibniz's text would be Cartesian. Reciprocally, Descartes's text would be Leibnizian, since it posits a maximum and minimum strategy in an ordered space. This switch is exactly what happens. On the ordered structure considered as a gamespace, one can, of course, construct a game. And this, again, Leibniz had seen, since he accuses Descartes of staging a whole spectacle, that is, an action in a game. "I would ... believe myself at fault, if I spent in deliberation the time that remains to me for action."5 Action: characters or prosopopeias, God, the ego, the evil spirit, defined as opposing elements in a regulated global strategy. In the fable, one saw, quite simply, that if the direction of the moves remained at the level of the formal pair majorantminorant, the game was endless and without a stable victor. It is therefore necessary to put an end to this once and for all; one of the adversaries must be assured of always winning. That is possible only if one passes from the position of majorant to a maximum without conceivable predecessor, and from the position of minorant to a minimum without any imaginable successor. There is no place above the king, there is no place above the shepherd assisted by his dogs, and there is no place below the lamb. From this comes the global theorem: in the Cartesian Meditations, all the moves are maximized.

The syntax confirms this without exception: comparatives of order, superlatives of maxima. Descartes speaks of his age: "so ripe, that I could not hope for another after it, in which I could be adequate to execute [this enterprise]" (p. 404); of his project: "it made me defer so long that I would henceforth believe myself at

fault, if I spent in deliberation the time that remains to me ..." (ibid.). Optimal age, optimal time, such that there no longer remains any better. Descartes again, speaking of doubt: "as much as reason persuades me already that I should no *less carefully* keep myself from believing in things that are *not entirely* certain and indubitable, *any more than* in those that appear to us to be *manifestly* false" (p. 405). Result: the universal quantificator. A constant repetition of: all, always, never, absolutely, etc. Appearances of *always*, the key word, "I shall *always* follow this path" (p. 414).

Quantification, until now, has been rather indefinite. Observe the progression from the first *Meditation* to the second: "Any subject for doubt that I find will suffice to make me reject all [opinions]" (p. 405); "it is never entirely prudent to trust those who have deceived us once" (ibid.); and "distancing myself from everything in which I will be able to imagine the least doubt" (p. 414). First we move from the universal (all) to the particular (any), then, to the reduction of the particular to a single case, (once), and finally, to the reduction of unicity to the minimum (the least). This is clearly the final move.

God's position and that of the atheists establish the rule: "the *less powerful* the author that they assigned to my origin will be, the *more* probable it is that I am *so* imperfect that I am *always* in error" (p. 410). It will suffice to envisage the extreme case in order to invert the result, to find the *quo nihil cogitari possit*, sovereignly omnipotent, veracious. As far as I know, "perfect" signifies "optimal."

The global description of the procedure follows: "having so balanced my [new and old] prejudices that they can no longer sway my opinion" (p. 411). With the model of a simple machine, taken up again, later, at Archimedes' point (p. 414) (thus the minimum, to move the earth, the maximum), one obtains the static comparison of relationships. In this space, the optimized move is precisely the Archimedian fixed point. The progression is the same.

Speaking of the evil spirit, Cartesian progression is still the same: first called "no less wily and deceiving than powerful" (p. 412), the evil spirit is called later in the second Meditation "a pery powerful and very wily deceiver, who employs all his energy

⁵Descartes, Oeuvres philosophiques (Paris: Garnier, 1963) II, 404. All further page references will be to this volume of the Garnier edition. Given the technical nature of Serres's demonstration, the editor has chosen to translate all of Descartes's quotes from the French original.

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to deceive me always" (p. 415). We move again from the comparison of relationships to the maximal relationship such that nothing can exist beyond it. Here is the strategy in relation to this spirit: "I shall prepare my mind so well against all of this great deceiver's ruses, that, no matter how powerful and wily he may be, he will never be able to impose anything on me" (p. 412). And the final move as Descartes sees it: "let him deceive me as much as he wishes, he will never manage to turn me into nothing, as long as I think that I am something" (p. 415). This doubt is called hyperbolic, but no effort is made to understand the hyperbole's function. The word must be analyzed as I have done for the fable's hypocrisy. Hypocritical ruse and hyperbolic doubt are operators totally devoid of psychologism.

"My meditation of yesterday has filled my mind with so many doubts, that it is no longer in my power to forget them ..." (p. 414); "I am so surprised, that I cannot fix my feet on the bottom nor swim ..." (ibid.). The existence of the "I," "I am," "I exist," is clearly uncovered by a minimum-maximum move: it is the minimal remainder of a maximized strategy or ruse. At the end of which, as soon as everything that can be in any way disputed has been dismissed, I [Descartes] obtain "a more certain and more evident knowledge than all the knowledge I had earlier" (p. 416). Once again, the universal quantificator is the final move in the quantification of a relationship followed to its limit.

One could continue the demonstration. The syntax is constructed entirely in this way. The process is everywhere quantified, tactics are everywhere maximized, the final move is on the maximum maximorum, and even more on the quo nihil.... Not only is there no one in the places upstream, but there is no longer any upstream locus. To give oneself an adversary and defeat him with the help of an all-powerful and truthful associate, God Himself: this is a game between two players, between three, in which nature disappears; burned, melted, minimized, destroyed. The malleable wax and I become one; thus I always win. God is a point without an upstream, the wax a point without a downstream, and myself in the center, hence the circle; I can no longer lose at this game.

Then everything becomes possible: optics and dioptics, the world and its system, medicine and everything that follows from

it. In the game of truth, error has been checkmated; in the game of domination, all is reduced to slavery, including the body. Metaphysics is operatory, it is the strategic set without which physics and the exact sciences are nothing but partial and dispersed tactics. Einstein rediscovered Descartes by turning around a parable: God is subtle, but he does not cheat. To know nature is a game. Not a futile amusement, but a deadly dangerous game. Nature's secret lies in the fact that one sees only the backs of the cards, and that one must play carefully and cautiously, in order to uncover this secret and read the faces of the cards, that is to say, to read them mathematically. Experimentation is a game in which the more one cheats, the less one knows (hence morals and deontology), a game one can lose and win, but in which there exists a guaranteed winning strategy. The development of mathematics, independent of experimentation is another result: one must try to refine strategies, which are useful against an adversary whose strategies are also extremely refined. "Game," then, is not just a word of science, it is the model of all exact knowledge. Information theory, the daughter of physics and probabilities, has discovered this model once again. But during the Classical age, it is a martial game. Like many other philosophers, Descartes pursued his military calling in metaphysics.

It is often said that probability theory and the art of conjecture were born, in a given economic context, from the idea of life annuities, before the large banks and companies thought of insuring against death. This is probable, although not proven by the facts. Leibniz, among others, computed life annuities. Even supposing that one proved it, one would only have affirmed in one case an already established theory which had sometimes proved itself useful. The more significant idea is that of the wager, a wager that is not very specific, since every martial game is a game to the death, a wager on death. If it is a question of dates, you have insurance and annuities; if it is a question of stakes, you have Pascal. Thus it is that the relation between theory and practice, the relation of metaphysics to knowledge, and the relation of the latter to domination, come together in the same place, at the outcome provided by death.

Michel Serres

For Plato and a tradition which lasted throughout the Classical age, knowledge is a hunt. To know is to put to death—to kill the lamb, deep in the woods, in order to eat it. Moving from combat with prey outside the species to killing inside the species, knowledge now becomes military, a martial art. It is then more than a game; it is, literally, a strategy. These epistemologies are not innocent: at the critical tribunal they are calling for executions. They are policies promulgated by military strategists. To know is to kill, to rely on death, as in the case of the master and the slave.

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Today we live out the major results of these wolfish actions. For the "I," who played the role of the lamb by minimizing his powers and placing the declared powers upstream from himself, this "I" is the wolf. In the ordering relation, in the game-space, the "I" is clearly in the middle, between the victorious sheepdog and the defeated devil or the wax. It has taken the wolf's place, its true place. The reason of the strongest is reason by itself. Western man is a wolf of science.

GILLES DELEUZE

The Schizophrenic and Language: Surface and Depth in Lewis Carroll and Antonin Artaud

The presence of esoteric words and portmanteau words has been pointed out in the rhyming chants of little girls, in poetry, and in the language of madness. Such an amalgamation is troubling, however. A great poet can write in a direct relation to the child that he was and the children that he loves: a madman can produce a great body of poetry in direct relation to the poet that he was and has not ceased to be. This in no way justifies the grotesque trinity of child, poet, and madman. We must be attentive to the displacements which reveal a profound difference beneath superficial resemblances. We must note the different functions and depths of non-sense and the heterogeneity of portmanteau words, which do not authorize grouping together those who invent them or even those who employ them. A little girl can sing "pimpanicaille" (in French, a mixture of "pimpant" + "nique" + "canaille"), a poet write "frumious" (furious + fuming) or "slithy" (lithe + slimy), and a schizophrenic say "perspendicacious" (perpendicular + perspicacious)¹: we have no reason to believe that the problem is the same because of superficially analogous results. There can be no serious association of the little elephant Babar's song with Artaud's breathscreams, "Ratara ratara ratara Atara tatara rara Otara otara

¹"Perspendicacious" is a portmanteau word used by a schizophrenic to designate spirits that are suspended above the subject's head (*perpendicular*) and that are very *perspicacious*. Mentioned in Georges Dumas, Le Surnaturel et les dieux d'après les maladies mentales (Paris: Presses Universitaires de France, 1946), p. 303.