To give the various modes enough room, we must first try to grasp existents according to the mode of reproduction by making this mode one trajectory among others in order to avoid the strange notion of an invasive material space.

If those who have occupied all the space nevertheless lack room, it is because they have been unable to disamalgamate the notion of matter by the proper use of the [REP·REF] crossing.

Now, as soon as we begin to distinguish two senses of the word “form,” the form that maintains constants and the form that reduces the hiatus of reference, we begin to obtain a nonformalist description of formalism, which turns out, unfortunately, to be wiped out by a third sense of the word “form.”

At this point we risk being mistaken about the course followed by the beings of reproduction in that we risk confusing two distinct courses in the idea of matter.

A formalist description of the outing on Mont Aiguille generates a double image through a demonstration per absurdum that would lead to a division into primary and secondary qualities.

But once the origin of this Bifurcation into primary and secondary qualities has been accurately identified, it becomes a hypothesis too contrary to experience and the magic of rationalism vanishes since we can no longer confuse existents with matter, a matter that would no more do justice to the world than to “lived experience.”
To give the various modes enough room, we are going to notice that if the Moderns have never been able to take the experience of the various modes as a guide, it is for want of enough room to shelter them all, in particular the trajectories whose autonomy we have just recognized, and among these especially the one called reproduction [rep]. For reasons we shall try to sort out in this chapter and to some extent in the next, the Moderns have chosen to institute not a mode but an amalgam between two modes [rep · ref] that everything should have encouraged them to distinguish carefully. The most common name for this amalgam is “material world,” or, more simply, “matter.” The idealism of this materialism—to use outdated terms—is the main feature of their anthropology and the first result of this inquiry, the one that governs all the others.

For a clear understanding of what follows, the reader must be prepared to stop considering this “matter” as a province of reality, but rather as an extremely bizarre institution, one that has had the rather unfortunate consequence, moreover, of creating, by contrast, a “knowing subject” and even a “mind” capable of extracting itself from “matter” by projecting an “external world” “outside” itself, a world whose existence has become uncertain, furthermore. It is this strange series of inventions that has made the Moderns opaque to themselves, and, what is more serious, it has left them unable to grasp the “other cultures,” which had been getting along perfectly well without either the “material world” or “subjects.”
Indeed, this is why anthropology has never been able to encounter the others except precisely as “cultures.” To get back to the thread of experience, to become capable of learning from those who have worked out their relations with existents quite differently, and to understand, finally, why the verb ecologize is going to serve as an alternative to the verb modernize, we shall have to highlight the mode of reproduction and then make it clear through what operation it has been confused with that of reference so as to engender “matter.”

Our ethnographer is at first glance quite powerless to define the mode of reproduction, since among the Moderns no institution is available to help her locate it. Every time she defines it, she risks appealing to what she “knows” about it according to the mode of reference [ref] alone, and thus, thanks to the positive sciences, she too hastily obliterates the correspondence whose strange pas de deux we have just reconstituted. She is then in danger of settling for the standard versions of scientific cosmology, deploying the series of atoms, quanta, planets, genes, cells, living organisms, that would always land her on some Master Narrative leading from the Big Bang to human evolution, from Lucy in the Great Rift Valley to the gangs in suburban Los Angeles. Or, worse still, she might rely on the countless efforts, as old as the scientific revolution itself, to grasp the world “outside,” “alongside,” or “beyond” Science; if she were to do this, she would be settling for a more “immediate,” more “naïve,” more “sensitive,” more “sensual,” more “alive,” perhaps more “romantic” grasp—in any case a less well equipped one; but then she would find herself brought back to simple human subjectivity and thus as far as possible from the originality proper to this mode, which is as distant from Subjects as from Objects. As Whitehead indicates so vividly, no question about such a trajectory can be clarified by adding the presence of a human mind contemplating it.

The strangeness of reproduction would be better captured by a sort of negative metaphysics: no, reproduction is surely not “Nature,” a premature unification of all existents, probably political in origin; nor is it the cosmos—too nice a setup, aesthetic in origin; nor is it the spectacle of sublime landscapes suited to elevate the soul by imitating moral law; nor is it the world indifferent to human feelings, since the world of
reproduction is swarming with differences, and the fact that it in no way targets persons is not even attributable to indifference toward them. It is hardly probable that this world obeys laws, for there is not yet any law and still less any obedience; it would be useless to supplement it with mind, with anthropomorphism, humanity and souls; and, of course, the world of reproduction is not objective, either, since objectivity comes to it only through a crossing with reference; to say that this world is “before” everything, like a “background,” does not advance us any further, for the world is as much tomorrow’s as it is today’s, as remote as it is close, and it applies to all sorts of existents. And if, despairing before this apophantic metaphysics, the ethnographer resigns herself to saying that there is nothing specific about this world, that perhaps it simply doesn’t exist, all the existents that can be grasped according to the mode of reproduction press forward and insist stubbornly on being recognized for themselves and in their own names. If they demand to be thought for themselves, it is because they do not want to be mistaken for mere supporting players or accomplices of knowledge.

Fortunately, the ethnologist of the Moderns is now equipped with a questionnaire that allows her to determine trajectories fairly precisely without having to involve them in the major issue of Objects and Subjects (from here on always in capital letters as a reminder that we are steadily distancing ourselves from them). Every instance of continuity is achieved through a discontinuity, a hiatus; every leap across a discontinuity represents a risk taken that may succeed or fail; there are thus felicity and infelicity conditions proper to each mode; the result of this passage, of this more or less successful leap, is a flow, a network, a movement, a wake left behind that will make it possible to define a particular form of existence, and, consequently, particular beings.

When we use this questionnaire with beings of reproduction, we understand why it would be very unsatisfactory to qualify them by saying that they form a simple “material world” or that they are “prelinguistic.” On the contrary, they express themselves, they predicate themselves, they enunciate themselves, they articulate themselves admirably. To be sure, they reproduce themselves almost identically, but that is no reason to believe that they do not have to pay for maintaining themselves
in existence by passing through other beings, thus by a particular **pass**. Indeed, this is probably what qualifies them best: they insist on existing without any possibility of return. The risk they take in order to continue in existence can never be taken a second time; if they fail, they disappear for good. No mode is more demanding in terms of the difference between success and failure.

We can recognize them first in two forms, as **lines of force** and as **lineages**, two distinct ways of defining the minuscule or massive hiatus that separates their antecedents from their consequents. The difference between these two types of alignments is well marked by Whitehead when he points out humorously that museums of natural science keep crystals in glass cases, but they have to keep living creatures in zoos and feed them!

The insistence proper to lines of force—these entities called, too disparagingly, “inert beings”—has repetition and quantity as its consequences; they are numerous, no, they are countless, because they repeat themselves and insist. The very notion of **force**, which will be such a useful handhold when physics and then chemistry are born, is the consequence of this repeated insistence and of this proliferation. But if these entities form lines, alignments, it is because, despite the hiatus, despite the leap from one instant to the next (a leap impossible for human eyes to discern), each occasion inherits something that allows it to sketch out, as Whitehead says (he was their mentor and, as it were, their protector!), “historic routes.” The notion of a “material world” would be very ill suited to capturing their originality, their activity, and especially their diffusion, for it would transform into a full, homogeneous domain what has to remain a deployment within a network of lines of force.

But it is with lineages that the distortion would be greatest, if someone were still stubbornly insisting on talking about a “material world.” Here the existents in question are much less numerous than the lines of force, much more complex and sensitive to all sorts of influences and opportunities; in order to endure, they must not only insist by repeating themselves, they must first of all succeed in enduring, and then in reproducing themselves—in the usual sense of the term—by running the truly frightening risk of disappearing entirely if they fail to pass something along—but what?—to the next generation. And all this
with no possibility of returning to the past; no second chances. Living beings—for these are at issue here—sketch out more regional entanglements, to be sure, but also more folded, more heterogeneous, more inventive ones as well. Thanks to Darwinism, we have been familiar for a century and a half with the risk taken by the entities that thrust themselves into subsistence through the intermediary of reproduction. We experience without difficulty the richness of the “almost,” since we are, literally, its descendants. We have finally understood that there was no Idea of a Horse to guide the proliferation of horses. Here ends, on this point at least, the quarrel of the Universals. If each mode of existence defines a form of alteration through which one must pass to subsist, then lineages continue to have much to teach us about the alterations and detours necessary to their subsistence.

But the grasp of existents according to the mode of reproduction is not limited to lines of force and lineages; it concerns everything that maintains itself: languages, bodies, ideas, and of course institutions. The price to pay for the discovery of such a hiatus is not as great as it appears, if we are willing to consider the alternative: we would have to posit a substance lying behind or beneath them to explain their subsistence. We would certainly not gain in intelligibility, since the enigma would simply be pushed one step further: we would have to find out what lies beneath that substance itself and, from one aporia to another, through an infinite regression that is well known in the history of philosophy, we would end up in Substance alone, in short, the exact opposite of the place we had wanted to reach. It is more economical, more rational, more logical, simpler, more elegant—if less obvious in the early phases owing to our (bad) habits of thought—to say that subsistence always pays for itself in alteration, precisely for want of the possibility of being backed up by a substance. The landscape discovered in this way seems surprising at first glance, but it has the immense advantage of being freed from any ultraworld—substance—without loss of continuity in being—subsistence. There is nothing beneath, nothing behind or above. No transcendence but the hiatus of reproduction. This newly acquired freedom of movement (in the world and in the language of the world alike) will count for a lot when we have to become authentic “materialists” and when we redefine, in Chapter 10, what must be understood by immanence.
Ethnography is obviously not in a position to sketch out the institution that would shelter these beings—we would need a whole new diplomacy, whose lineaments we shall discover only later. What is important to us here is simply to situate the trajectories of reproduction outside the stifling clutch of a “material world,” or, worse, of an “external world,” by recognizing that they have a capacity for articulation, and thus for expression, which makes them comparable to the other modes we have already recognized, since they are able to respond to the same questionnaire. Here an approach that is not so much positive as defensive will suffice to keep us from smoothing over all the leaps with the notion, though it is a very widespread one—we are about to find out why—of an “external” or “objective world” subjected solely to the reign of “laws of causality.” This is because, if we are to get across all the modes, including reproduction, we need room, and the institution of a “material world” does not have enough to give us.

We know, thanks to Malinowski, that every anthropologist has his moments of weakness (is it the heat? exhaustion? homesickness? the mosquitoes?) when in spite of himself he gives in to exoticism: “These people are really too weird; their customs are absolutely atrocious; I want to go home.” He gets over it, of course, but still, he occasionally succumbs. Our ethnologist, too, gives in from time to time, out of weakness, to Occidentalism. Especially when she hears some popularizer explain to her in tremulous tones that the quantum world “is not restricted to the three dimensions of common sense.” What she finds really bizarre is not the quantum world, it is that predicator’s idea of the common world. What! It has only three dimensions?! She turns and looks in every direction, but to no avail: she does not understand where the famous “Euclidean space” might be, a space that is supposed to be equally suited to all the world’s objects and that would stand in such striking contrast to the breathtaking proliferation of the quantum worlds. She is no more convinced when someone adds to the ordinary world, in a sort of concession, the “fourth dimension” of time. She cannot keep from wondering: “How can these people believe for a second that they are living in a world of 3+1 dimensions? They are really too absurd. I want to go straight home.
Let’s leave the Moderns to their weirdness.” Only there’s the rub: she has no other home to go to!

And yet the problem remains: through what cascade of category mistakes have the Moderns managed to start thinking that they live in a four-dimensional world when nothing in their experience, nothing at all, validates this astonishing reduction? If we do not succeed in understanding this dizzying gap between experience and its representation, we shall never understand the sort of frenzy for which they need treatment. This is moreover the only way to define the term modern, which we have been using from the start rather too casually, though we shall really be able to account for its meaning only if the inquiry succeeds.

We could give a more precise definition even now by saying that a Modern is someone who thinks he lives in a world of $3 + 1$ dimensions. Provided that we add: and who then wonders with increasing anxiety where he is going to be able to localize the set of values to which he holds. In other words, a Modern is someone who, believing himself to be submerged in a world of $3 + 1$ dimensions, is distressed to see that it literally no longer has any room, anywhere, for him to deploy his values. He considers the importance of law, morality, fiction, politics, the economy, organizations, perhaps religion, even psyches, collective actions, seeking to anchor them somewhere, all in vain: there is no longer any place to put them. He is groping in the dark. “The Son of Man has no place to lay his head.”

This frenzy that has struck all observers since the adjective “modern” came into use stems less from a utopian dream than from the sort of wandering explained by the brutal expulsion not from an earthly paradise but from the entire habitable Earth. Modern man has been seeking to settle down for centuries, yet he has voluntarily chosen displacement, exile, in a terra incognita. As if the Whites, wherever they landed, left blank (white!) spots on the map. Because they believe they are living in a $3 + 1$ dimensional world, precisely. Were they chased away from their homes? No, they expelled themselves! In thought, at least, for, in practice, on the contrary, they have settled in everywhere… they have conquered the world and yet they still lack room! These internal exiles
are still fighting for their “living space,” their “breathing room.” We have to admit that, for our inquiring ethnologist, the paradox warrants a closer look, and we shall readily excuse her brief lapse into Occidentalism.

All the more so because it is precisely from here that, from the beginning of the modern era on (in the historians’ sense, this time), all the poisons and perfumes of exoticism are going to emerge. The more the Moderns expel themselves from all habitable lands, the more they believe that they have discovered among the “others” peoples that are, unlike themselves, solidly attached, anchored, rooted, yes, “autochthones,” as we say or, better yet, “natives.” Oh, how they are going to start envying those noble savages! “If only we had been able to remain like them!” And there will never be a shortage of reactionaries to fuse these two forms of exoticism, the distant and the near, by starting to dream of a utopian utopia, utopia squared: “If only we could become like them again!” Once again rooted, once again native, once again autochthonous, once again “really at home.” A recipe for creating the most dreadful barbarities. Inevitably, since the Moderns, to begin with, have never left home! Have never been modern! How could they have survived for a moment if they had really lived in this $3 + 1$ dimensional world? A strange adventure, believing they are a people wandering in the desert searching for a promised land when they haven’t even gotten out of Egypt! We told you that the Moderns warranted an in-depth anthropological study, that they too are really interesting … that they need us to approach their wounds with caution. That they are worth comforting; we might even contemplate caring for them.

Once again, these questions are much too vast to be confronted head on, and yet it is indispensable to do the genealogy, however sketchily, of this idea of a space so invasive that it would stifle all modes of existence. As if the Flood had devastated everything, and there were only a few rafts floating on the waters, vessels on which the exiled Moderns had piled up in haste the few values they wanted to save.

It would not be wrong to define the Moderns as those who believe they are materialists and are driven to despair by this belief. To reassure them, it would not make much sense to turn toward the mind, that is, toward all the efforts they have deployed as a
last resort, all the lost causes (and causes are indeed at issue here!) in order to situate their values in “other dimensions,” as they say—dimensions other than that of “strict materialism” since matter, as we are beginning to understand, is the most idealist of the products of the mind. The operation we must undertake leads us in exactly the opposite direction: we have to de-idealize matter in order to arrive at immanence and find the means, at last, to follow experience. When everything is submerged in matter, there is no raw material, no accessible reality, no experience to guide us. The reconquest of the “living space” necessary for the deployment of the full set of modern values comes at this price.

Even though this is an extremely complicated issue, we are not completely helpless, since we have identified the crossing noted [rep · ref]. We have already understood that matter is a composite arrangement that amalgamates, to the point of indistinguishability, the requirements of knowledge—a transfer of constants, or, to use the technical term, of immutable mobiles—and the requirements of subsistence—maintenance in existence through the leap of reproduction. It is as if the mode of displacement necessary to reference had been mistaken for the mode of displacement of the beings of reproduction to which reference accedes. In other words, the notion of matter is going to come in and hide the [rep · ref] crossing by making it undergo this minuscule and nevertheless decisive modification that will make it impossible to tell the two hiatuses apart even though they are radically distinct.

The operator that is going to allow this slight displacement in the idea of displacement itself is the possibility of producing a description of formalism that is not itself formalist. The development that follows will seem somewhat brusque to the reader, but it is indispensable to the comprehension of the whole. If we do not succeed in deploying this crossing, all the rest of the inquiry may go up in smoke. (It might be more expedient, moreover, to skip over the rest of this chapter and come back to it after finishing the book, after verifying whether it is true or not that there is indeed now room to accommodate other modes of existence rather than simply multiple representations of a single world.)
It all depends on the possibility of redescribing the notion of form as a practice. The work of reference, as we now know, relies on the establishment of a series of transformations that ensure the discovery and the maintenance of constants: continuity of access depends on discontinuities. This is the only means—but a means whose practical discovery is always perilous and fragile—to ensure the back-and-forth movement, the coming and going owing to which one can start from a given point (a laboratory, an institute, a computer center) and reach another, more or less remote. Think about the hundreds of successive operations required by an electron microscope through which a researcher ensures access to the division of a cell that cannot be seen by the naked eye. Think about the strings of calculations needed for the spectrum analysis owing to which an astronomer ensures access to a galaxy, also invisible to the naked eye. Two infinities that should not scare us, since biologists and astronomers both have access to them without the slightest vertigo, from their laboratories (provided that they have gone through the tollbooths of their “access providers,” a term from information technology that would provide a pretty good basic definition of the sciences). The thing known comes closer as the steps taken to reach it multiply!

There is no difficulty here: a form is what is maintained through a series of transformations. Suspend the alignment of the transformations and the form vanishes at once. Using the metaphor of hurdle jumping or relay races, form, in this first sense, thus occupies the position of the runner. No matter how good an athlete one is, even during training, at every hurdle, at every passing of the baton, one always feels the little flutter that raises the heartbeat of the champion, of course, but also of the coach and the spectators. Why? Well, because he might fall, knock over the hurdle, drop the baton. It can go wrong. Form is what must be called a dangerous sport.

Let us look now at the makeup of the successive stages along the risky course of reference: it is composed of forms, this time in the very concrete sense of the term (it is interesting to note that in French forme and fromage have the same root). A form or shape, in this second sense, is always an object (an instrument, a document, an image, an equation) that allows putting into form, or shaping,
because it ensures the transition between the “tails” side of the coin, closer to the original raw materials, and the “heads” side, which brings us closer to the stage of putting into words or calculations.

Here, too, this is very ordinary business: delicately placing a specimen brought back from an archaeological dig in a drawer lined with cotton is “putting into form,” since the drawer is marked by a label with a number that will make it possible to categorize the specimen, and the white cotton lining makes the specimen’s shape more visible (it was hard to make out when it was only a brown spot on brown soil). The drawer has its “tails” side—it takes in the fossil—and its “heads” side—the fossil receives a label and reveals its outlines more readily. Something like an ideography. A minuscule transition, to be sure, but indispensable in the long series of transformations that permit, in the end, perhaps, if the paleontologist is lucky, the reinterpretation of the fossil.

Through the centuries, every discipline has developed thousands of these arrangements for putting into form, from the humblest, like the drawer, to the most audacious equations. (But let’s not belittle the file cabinets, the ring binders, the card files, the cupboards: you would be surprised at the number of sciences that depend on them!)

The key point is that each of these shapings, these putting-into-form events, has meaning only through the stage \( n - 1 \) that precedes it and the stage \( n + 1 \) that follows; only the set of successive embeddings allows this highly paradoxical back-and-forth movement that obtains continuity of reference (the runner) through the discontinuity of the stages (the hurdles, the passing of the baton). When we speak of form in the concrete sense of the term, then, we are designating the framework and the chain of all reference networks. There are longitudinal forms, as it were, that replay the constants through the transformations, that thus achieve immutability through mobility, and there are lateral forms that authorize the passage of the longitudinal ones by multiplying the transitions, gradually paving over the distance that separates one place from another. A bit like a ladder, which needs both vertical rails and horizontal rungs to be used to reach something.

The metaphors of hurdle-jumping, relay-racing, and ladders obviously have their limitations, for here it is by multiplying hurdles or relays
or rungs that we speed up the course! The more numerous the stages
to cross, in fact, the more the forms are separated by tiny hiatuses, the
faster reference will move to catch what it is to bring back. It is as though
by multiplying the transitions we can ensure coverage of great distances.
In the end, when everything works, when the network is in place, access
is indeed obtained: you put your finger on a map, a document, a screen,
and you have in your hand for real, incontestably, a crater of the Moon, a
cancerous cell deep within a liver, a model of the origin of the universe.
You really do have the world at your fingertips. There is no limit to knowl-
edge. To describe, as do the history and sociology of the sciences, the
circulation of these veins and arteries of objective knowledge, from
Greek geometry to CERN’s huge detectors, is to appreciate the enthu-
siasm that these have generated. It is also to measure their fragility. Not
only because any little thing may interrupt them but also because if they
work too well they risk disappearing from view. This disappearance of
the risky character of form—in the first sense—and of the concrete char-
acter of forms—in the second sense—is going to lead to the invention of a
wholly parasitical sense of this same word. It is through the very success
of reference that things begin to go badly.

Let us suppose that, through a mix of enthu-
siasm for the results obtained and a sudden outburst
of laziness, which will be mingled, as we shall see in
the following chapters, with powerful political and
even religious motives, we were to start to take the
word “form” in a third sense. This time, we are going to pay no attention
at all to the back-and-forth movement of reference, and we are going
to select only some of the stages covering the chain, without taking into
account all the movement and all the apparatus necessary to the work
of reference.

What forms are we going to choose? Certainly not those found at
the beginning of the transitions (like the storage drawer!), for these are
too material, too humble, too unworthy of respect to play the role we
want them to play. No, we are going to isolate instead those at the end,
those that have the consistency of a number, or, better, of mathematical
signs. We are going to start saying that what really counts in reference
(there is no more chain, no more linkage) is form in the new sense of a
suspended notation, a document whose movement has been interrupted, a freeze-frame. And here is where the whole danger of the operation comes in: we are going to find ourselves tempted to believe that the true basis for knowledge lies there, and there alone. With this third sense of the word “form,” we introduce a formalist definition of formalism that is going to exploit parasitically the nonformalist description of forms in the first two senses. An isolated document, shifted 90°, is now going to be taken for the entirety of the risky transfer of immutable mobiles that the network as a whole made possible. It is as though we were to take the fascinated contemplation of a single hurdle, the last one, for the whole hurdle course, or if we were to take the baton dropped on the ground for the whole relay race, or the top rung for the whole ladder!

As we saw in the previous chapter, the work of abstraction is a concrete job: it is the labor of a whole chain of proof workers, from those whose hands are black with dirt to those whose hands are white with chalk. Why, our ethnologist wonders, would one give this an abstract description that would result only in interrupting the movement of knowledge? Here is indeed a category mistake that we run no risk of making. And yet this confusion seems to be central to the definition of modernity. Why? Because an accident of history has come along to combine it with another suspension, another freeze-frame, that is going to be practiced now on the other side of the crossing, on the movement of reproduction [rep]. And it is through this double category mistake that the notion of “matter” emerges, sometime in the seventeenth century—let us say, as a reference point, at the moment when the res extensa is being invented, around Descartes. The Moderns—this is what will define them—begin to believe that the thought of matter describes real things, whereas it is only the way the res cogitans—itself dreamed up—is going to start imagining matter.

We have seen earlier that a mountain, a cat, a yeast, in short any line of force or any lineage at all, necessarily had to pass through a series of discontinuities [rep] to achieve continuity. To obtain being, otherness is required. Sameness is purchased, as it were, at the price of alterations. These discontinuities are totally different from those of forms in the sense that I have just defined, but they compose the passes, the passage, the past thanks to which this particular type of insistence and
persistence is achieved. This is what allows the mountain to remain the same, and the cat, even if it grows old, to prolong its meditation on its proverbial mat without being interrupted by the meditation of the no less proverbial philosopher drinking his white wine fermented by yeasts. All of these (mat, cat, mountain, yeasts, and even the philosopher) move along surprising trajectories, yes, networks, composed, as we have just seen, of their antecedents and their consequents separated by a slight gap, a little leap.

It just may be tempting, however, to erase these discontinuities, these filiations, these risks, in their turn (we shall soon see where this temptation comes from). Especially because they are not always visible, or because one may choose not to emphasize them. Now, as soon as we fail to note the hiatus of persistence in being, we are surreptitiously introducing a substance underneath subsistence. We are thus starting to imagine that there would be, “underneath” the beings of reproduction, a support, a subversive agent, a console, a seat that would be more durable than they are and that would ensure their continuity without having to take the trouble, themselves, to leap over the discontinuities required for existence. We would be starting from a passage of the same through the other, and then slipping unawares toward a maintenance of the same on the same.

At first glance, making the beings of the world go through this abrupt interruption that would isolate them from their antecedents and their consequents may seem to be no more meaningful than interrupting the course of reference by isolating one form from those that precede it and those that follow. In the first case, one would be interrupting the movement of reproduction; in the second, that of knowledge and access. So this second supposition appears as improbable as the first. One can thus rely on common sense to make sure that these two hypotheses are never entertained.

Except, precisely, if you cross the two suppositions, the two interruptions, and you make the form taken on the side of reference the thing that would ensure substance on the side of reproduction. Then you eliminate all the risks, all the movements, all the leaps. You explain in a single stroke the famous correspondence between the world and
knowledge. You obtain simple displacements, whereas up to this point you had to concern yourself with translations. In the place of the crossing, only a simple transport of indisputable necessities appears (we shall see in the next chapter what the adjective “indisputable” is doing in this muddle).

It’s a bit as though the Evil Genius we met earlier, Double Click, had managed to wipe out everything that made both modes of existence risky, as if he had succeeded in erasing the two series of discontinuities that had made subsistence possible for the one, access to remote beings for the other. Everything is seemingly still in place, and yet everything is profoundly different, since on both sides the motor that made it possible to achieve displacements is missing. The race is always already won in advance—without any need to budge. We are now going to act as though there were cost-free displacements of constants both in the world—res extensa—and in the mind—res cogitans. And the two are going to become inextricable: the world is knowable; thought grasps the world. From here on it will be as though, from the fact that knowledge is possible, we had drawn the conclusion that the world was itself made of “knowability”! Matter becomes this ideal world that might be called res extensa-cogitans.

To flesh out this operation that seems so implausible, let us go back to the example of Mont Aiguille, and try to explain how the map works, setting aside everything that we learned in Chapter 3 as well as the first two definitions of the word “form.”

In this demonstration per absurdum, we are going to try to account for the mystery of reference. To begin with, we shall get rid of the whole jumble of networks, geometricians, pack mules carrying geodesic reference points; we shall do without the whole slow accumulation of mediations, cartographers, national geographic institutes, and tourist offices; we shall thus force ourselves to ignore everything about the path of existence that Mont Aiguille has to follow in order to continue to exist. We shall skip over both modes of existence [REF · REF] at once. This time, there will be nothing painful about our hike; it’s really just a stroll for our health. The explanation is self-evident. Necessarily, because it has no more obstacles to overcome! We shall say that the map and Mont
Aiguille “are alike” because they both share the same form (in the third sense of the word).

That the map is made up of forms (in the second sense) is unquestionable. It has meaning only because it inscribes, little by little, linked angles—obtained earlier at great cost by the perilous missions of geometricians equipped with geodesic targeting equipment and moving from triangle to triangle, starting from a base measured with precision (and a lot of hassles) by a surveyor’s chain. But it is precisely all that rich practical experience, all that labor, that we have decided to erase. On this base map, the geographers then learned to respect the various constraints of two-dimensional projection, to draw elevation curves, to add shading, and then they taught us how to respect the typographical conventions as well as the color codes. Let’s forget that too. But this still doesn’t explain the effectiveness of my map, for Mont Aiguille itself isn’t two-dimensional; it still doesn’t fold up to fit in my pocket, it still doesn’t seem marked by any elevation curves, and today, moreover, as it disappears into the clouds, it completely lacks the aspect of the little pile of calibrated scribbles marked in oblique letters in fifteen-point type, “Mont Aiguille,” that appears on my map. How am I to superimpose the map and the territory?

All I have to do is act as though Mont Aiguille itself, basically, in its deepest nature, were also made of geometric forms. This is where the Evil Genius, the serpent of knowledge (though not that of good and evil) becomes truly dangerous. Then here everything is indeed explained all at once: the map resembles the territory because the territory is basically already a map! Map and territory are the same thing, or rather have the same form, because things are basically forms. I then obtain a term-for-term superimposition that gives the notion of correspondence an indisputable validity. The operation is painless, the passage surreptitious, the temptation immense. And it is true that at first glance, such an explanation appears so enlightening that it would explain the Enlightenment itself. It’s Columbus’s egg, the one that opens the way, not to the Indies but to the continent still more mythical than the one Columbus hoped to discover: the immense terra incognita of knowledge, that continent formed by equating a mind (which thinks form) and things (which are forms). The idea is so impressive that the divine Plato himself draws
from it the very idea of the Idea. The Object finds a Subject worthy of itself since both are made of thought.

In this enlightening explanation there is obviously one tiny detail that seems not to fit in very well at the start and that makes the supposition absurd: Mont Aiguille, which I am going around on my hike, stubbornly continues not to resemble in the slightest the map that I unfold from time to time. It continues to bear down with its full weight, to veil itself in the scattered mist, to gleam intermittently with colors that the map does not register, and, especially, it continues to exist at scale 1: there is no way I can fold it up or make it change scale.

Now it is at just this point, in order to respond to a common-sense objection, an objection truly as massive as Mont Aiguille itself, that one may let oneself be tempted by a second supposition, a consequence of the first. To respond to this common-sense objection, let us agree that Mont Aiguille has a double. We are going to pretend that what, in the mountain, resembles the map, is its form, in the third sense of the word, and we are going to make this its real basis, its true substance, while setting aside all the rest, claiming that it is unimportant, that it is in fact insubstantial. Even if we are obliged to acknowledge (how could we do otherwise?) that this form remains invisible (except, precisely, through the intermediary of the map!) and that it appears solely to the universe of thought—still, this form is what remains real, objective, and even—here is where the amalgam is produced—material. Descartes would not have hesitated to subject Mont Aiguille to the same treatment as his famous ball of wax: subjected to erosion, everything would disappear, except extension. And the best proof of this fundamental and ineradicable objectivity is that it is indeed this formal half of Mont Aiguille that resembles the map, which is made, it is true, we have acknowledged this, of geometrical forms (to which have been added some typographical conventions that can just as well be ignored). The reasoning is logical from start to finish even if its consequence is not very rational, since it has lost the thread of the reasoning, that is to say, let us not forget, of the trajectories and the networks.
And this is not all. What are we to do, indeed, with the rest? For, after all, we cannot just wipe away with a stroke of the pen all that cumbersome accumulation of dissimilarities: the mountain remains in its irreducible mismatch, which—a major drawback—cannot be missed by any observer, from a four-year-old child to the most seasoned climber: you freeze your fingers when you reach the summit of Annapurna, not when you unfold the map of Annapurna. To get out of the jam without abandoning the foregoing reasoning, there’s no other solution, in the face of the indignant protests of the most widespread experience, except to take one more step in this sort of coherent madness: we shall now suppose that all these properties, these dissimilarities, are in fact superfluous, since they do not touch the formal essence, the rational objectivity of Mont Aiguille but belong rather to the “subjective” impression that the mountain inspires among the mere mortals whose minds remain, alas, “too limited” to grasp the thing “in its essence,” that is, “in its form,” by “thought alone.” This is where the rest (which is almost everything!) is going to become and remain from now on a heap of peripheral attributes, devoid of reality, with respect to the unique real substance whose existence can be proved, moreover, in case of doubt, by the map (as long as the network that gives the map its meaning is left out, a network whose outline, by making the equipment visible, would instantly annul the so-called proof!).

In the seventeenth century, to designate this real, invisible, thinkable, objective, substantial, and formal Mont Aiguille, grasped by the cartography whose practice had been obliterated, people fell into the habit of speaking of its primary qualities—the ones that most resembled the map. To designate the rest (almost everything, let us recall), they spoke of secondary qualities: these are subjective, experienced, visible, perceptible, in short, secondary, because they have the serious defect of being unthinkable, unreal, and not part of the substance, the basis, that is, the form of things.

At this stage of reasoning, Mont Aiguille indeed has a double. As Whitehead would put it, the world has begun to bifurcate. On the one hand there is an invisible but formal reality—which explains the
effectiveness of the map since, at bottom, the map and the territory are each reflected in the other; and on the other hand we’re left with a whole set of features, accessible to the senses, to be sure, but unreal, or in any case devoid of substance; the map, indeed, can get away with neglecting them (the dissimilarity is thus well “explained”!) since they refer simply to the perceptual requirements of human hikers. And this division of labor will recur every time a discipline—geology, agriculture, meteorology—approaches Mont Aiguille without foregrounding the instruments of its knowledge and its access. This multiplied bifurcation is going to make the reconciliation of modern philosophy with common sense infinitely difficult; its genesis is what will allow us to explain in large part the opposition between theory and practice that is so characteristic of the Moderns.

Because of this bifurcation, or, better, these multiple bifurcations, we see the emergence of that strange artifact of matter, res extensa-cogitans, this world of displacements without transformation, of strict linkages of causes and effects, of transports of indisputable necessities. The fact that this world is impossible and so opposed to experience will not be held against it; on the contrary, that it is contrary to experience proves its reality. In the grip of such a contradiction, Reason herself cannot help but cry out: “Credo quia absurdum!” “I believe because it is absurd.”

Is such an operation feasible? Can such a cascade of implausible consequences be reasonably—let us not say rationally—sustained to the end? Even though the answer is obviously “No, of course not!” from the standpoint of common sense, it turns out that this operation has been sustained and extended to everything and everyone by the Moderns: it has reached the point of defining solid, serious, brute materiality. This is one of the knots of our entire history. No one believes himself to be a realist—not among the Moderns, at least—if he is not a “materialist” in the sense in which we have just defined the term, if he does not believe that everything visible that exists is forever carved out of the unique fabric of “knowability”—a composite and toxic product that does not even have the advantage of ensuring knowledge for us, since it is as far removed from the networks of reference as it is from the paths of existence that allow beings
to continue existing. As if all the objects of the world had been transfused and turned into something like zombies.

The reader unfamiliar with the anthropology of the Moderns will object that putting Mont Aiguille through such an indignity by this doubling, imposing on common sense such a flagrant contradiction and, more strangely still, rendering the very establishment of chains of reference—the only guarantors of both the production and circulation of equipped and rectified knowledge—unthinkable, incomprehensible, while depriving the world’s beings themselves of any path of existence: performing such a series of operations has no chance to succeed. One cannot found Reason by rendering the world insubstantial, experience vain, science itself unattributable. This whole matter of matter has to have remained just a simple mind game.

This reader could reassure himself moreover by telling himself that practicing scientists, those who work proofs, in short, all those whose direct interests require the establishment and continual maintenance of knowledge networks, will rise up to prevent anyone from giving a version of his work that would so manifestly interrupt its course. How could scientists allow notions to be developed that would no longer make it possible to equip the paths of knowledge with all their heavy apparatus of forms and instruments? How could they not be the first to make sure that the conditions have all come together to capture the rare events called discoveries? It isn’t done by corresponding with zombies, this much they know perfectly well. Moreover, the more the sciences develop and insinuate themselves everywhere, the more the continual pulsation of these networks becomes visible, and the less one will risk confusing their mode of displacement with the others. This vascularization of the sciences is as visible as the veins and arteries on the inside of the wrist. Not a single scientist would let himself be taken in by this childish example in which the form of Mont Aiguille on a map is naïvely mistaken for its fundamental reality.

Yet the reader should not count too much on the resources of good sense. This would mean forgetting the immense gap between Science and the sciences, a gap that divides all the practitioners themselves—as we have seen from the introduction on—and that explains the decision to begin
the inquiry with this question, so off-putting in appearance. In the gene-
alogy I have just sketched (one that would take volumes to complete),
matter does not emerge as a part of the world, a demarcated domain of
a much broader ontology (alongside or underneath another domain
that would be “thought” or “mind”): it is an institution, an organi-
zation, a distribution of the powers of thought (and of politics, as we shall
soon see). Although it may seem strange, we can speak appropriately
from now on of the institution of matter at the heart of the history of the
Moderns. This is what has brought about the quite peculiar designation
of the res extensa-cogitans and what has over time produced the strange
scenography of a being that believes itself to be a “Subject” in the face of
what it believes to be an “Object.”

How can such an institution have been established despite the
continual denials of common experience as well as of scientific exper-
imentation? We have to remember that there may be situations so
perilous that people will prefer the irrealism of description to the power of
the effects achieved. There might exist such powerful motives that they
will sweep away all objections and give such a thought experiment some
rather solid support. Such are the motives at the heart of the rationalism
to which Moderns believe they must cling as to the apple of their eye.

We shall have an initial idea of these motives if we recall the point
of departure: erasing the two types of hiatus, of breaks in continuity,
of mediations that make the detection of constants allowing access
to remote beings as risky as the discovery of discontinuities that
permit subsistence. With one stroke of the magic wand—and it
is really a question of magic here, except that magic is the source of the
idea of Reason!—we mow down all the difficulties, we eliminate all the
risks, we forget all the failures, we have no more need for any costly, local,
material conditions. Necessities (that no one has produced) are tran-
sferred (untransformed) without conduits, without networks, without
cost, throughout a world at once real and knowable, composed entirely
of forms that are the only substances. The construction may appear mad,
but the gains are enormous.

How can we manage to put a stop to this Flood that is drowning existents under the waters
of matter—of the thought of matter? The difficulty
ceases, the waters begin to recede, as soon as we
notice that this res ratiocinans is never of or in space. If it gives the impression of being “everywhere,” this is because it is literally nowhere, since it does not pay for its displacements by setting up networks. If it is capable of invading everything (in thought), this is because it never controls the budget for its extension, because it wipes out all the gaps, short-circuits all the passes, and acts as though there were only undistortable displacements of necessities, concatenations of causes and effects in which even the little leap, the little break in continuity, the hiatus between cause and effect, had disappeared—necessarily, because the relay, as we are about to see, has been surreptitiously taken over by an argument whose goal is to put an end to a debate.

If the popularizer I was mocking earlier, dumbfounded by the multiplicity of quantum worlds, could believe that the “common world” unfolded in a “space of only three dimensions,” it is because it cost him nothing to believe that the microphone into which he was speaking, the rostrum from which he was pontificating, his own body, his genes, the walls of the room, the audience that he was carrying along in his frenzy, all that too was bathed in a Euclidean space. He has to believe that, since he submerges in thought all the dimensions that compose them, bathing them in that res extensa that renders unattributable any operation of measuring and any element of proof. Experience will never contradict him, because he has lost the thread of experience.

If he had begun to take the measure of what he was saying in a somewhat serious way, for example, if he wanted to have a carpenter make him a copy of the rostrum that had brought him such success, he would have had to take a woodworker’s tape measure, a square, a piece of paper, and a pencil out of his pocket; and all this wouldn’t have been enough, for he would have had to draw the piece of furniture in perspective or as a projection before he sought out a color specialist to choose the tint and put together another set of samples so he could decide on the quality of the wood; and even so, a rostrum is easy to draw, it bears enough resemblance to a thinkable object in Euclidean space. How could we imagine the work he would have had to undertake to capture the dimensions, spatial relations, temporal relations, and rhythms of the set of beings gathered together to listen to him? One hopes, for him, that, after interrupting his talk for several minutes in order to ponder all the dimensions
of the problem, he would have modified his conclusion and admitted that the quantum world is child’s play in comparison with the multiplicity and complexity of the dimensions that are simultaneously accessible to the most minimal experience of common sense.

Unless, and this would be cleverer, he were to conclude that, all things considered, once rid of its transfusion of res ratiocinans, the common-sense world, with all those leaps, discontinuities, and unexpected branchings, closely resembles the quantum worlds. Except for one detail: it has been infinitely less explored than the other! What a fine paradox: we have gotten so much in the habit of thinking that we believe in the res ratiocinans, thinking that we live, as it were, “submerged,” that the world of common sense has become less thinkable, less calculable, less describable than that of the infinitely small…

We see now why we have been able to define the Moderns as a people who believe themselves to be materialist and despair at the thought. For the Moderns are never entirely comfortable with this position. Who would want to live indefinitely flooded, under water, without access to dry land, to terra firma, lacking even raw materials? This is in fact the strangest consequence of the extension of the res ratiocinans: it does not even let us do justice to the values of the Moderns, to the values they themselves most obviously hold dear, and, to begin with, the sciences themselves.

In everything I have said so far, I have not claimed that materialism, unfortunately, missed the subjective, the intimate, “lived experience.” In the example chosen, I did not try to make my reader resonate with the warmth of my feeling for Mont Aiguille, a feeling that “will never be captured by the frozen knowledge of geologists or mapmakers.” Quite to the contrary: the establishment of chains of reference, the history of cartography, geology, trigonometry, all this was just as warm, just as respectable, as worthy of attention as my pale expressions of admiration, as my emotions as an amateur hiker and as the shiver I feel when the wind comes up and chills the sweat running down my chest. By splitting Mont Aiguille into primary and secondary qualities, making it bifurcate into two irreconcilable modes, what is neglected is not only subjectivity, “lived experience,” the “human,” it is especially Mont Aiguille itself, in its
own way of persisting, and, equally, the various sciences that have striven to know it and that depend on its durability to be able to deploy their chains of reference. In this matter, it is not only humans who lack room, it is first of all Mont Aiguille itself, and second, the various sciences that allow us access to it! If the splitting had caused only the neglect of human feelings, would the loss be so great? The danger is that this loss threatens to deprive us of both the map and the territory, both science and the world.

Our investigator understands perfectly well that in criticizing materialism she risks getting mixed up in a defense of “spiritualism”—which would lead her straight to the nineteenth century—or in a struggle against “reductionism”—and we would then be right back in the twentieth. But she understands now that these two battles have ceased for want of combatants, or, more precisely, for want of matter. There is no matter at all. The *res ratiocinans*, that strange composite of *res extensa* and *res cogitans*, is not the basis for the world. We don’t have to struggle “against” it. We can just do without it, as physicists have learned to do without ether. It is a badly conceived institution, in fact, the effect of a badly written Constitution intended to establish an awkward compromise between entirely contrary constraints, the result of a conflict of values [rep · ref] that has had as an unintended consequence the digging of an abyss between theory and practice, the relegation of experience to the inexpressible; and it has ended up hiding the very materiality of materials under its profound ignorance.

As we shall observe in subsequent sections of this book, even technology, even the economy, these triumphs of modern “materialism,” are not made more comprehensible than the sciences if one confuses their raw materials with matter. Imagine this: a people for whom common sense is less familiar than the quantum world and that cannot account for its own greatest exploits, technology, the economy, objective knowledge, three of its principal sources of pride! We should not be astonished that the Moderns have been rather surprised to see the specter of Gaia suddenly fall upon them.

To exit from matter and allow comparison with the “other cultures,” we must not look up, for example, toward the mind, but rather down, toward the solid ground whose damp, rich, and fertile forms are beginning to reveal themselves. If matter does not exist, then the waters have
already receded. The institution of matter distributes the competencies of beings as poorly as possible, and ensures no protection whatsoever for the deployment of modes of existence. In the face of this institution, anthropology (conjugated with militancy, and almost half diplomacy in any case) finds itself rather like General de Gaulle champing at the bit with impatience before the Constitution of the Fifth Republic during his time away from power. Anthropology knows that nothing good will come of it; it has in mind a different distribution that would share powers appropriately and would liberate the energies that are continually hampered by the current arrangements; it is waiting for grave events to overturn the old procedures. Are we not also waiting, we too, for grave events to overturn the outworn institution of matter and are we not also, we too, expecting an entirely different Constitution? Moreover, haven’t these grave events already taken place?