

Chapter One

Two Styles of Explanation

Interpretation and Inquiry

What explains the schism that divides the sciences from the humanities? Their tasks are different: one inquires, the other interprets. Truth and significance are different values; interests they serve are sometimes opposed. Explanations vary accordingly. Science explains phenomena by formulating, testing, and revising hypotheses that cite pertinent causes or laws: citing methane explains coal fires; $F=ma$ explains the velocity of falling apples. Humanists explain phenomena by embedding words or ideas in networks of appraising relations: parenthood is honorable, piety is good. The procedural values of scientific method—simplicity and consistency, for example—are regulative principles that restrict the formation of scientific hypotheses without determining their content. Hypotheses are value-free in the respect that causes or laws they specify obtain or not, irrespective of human concerns; interpretations are suffused with values that determine content, some explicit, others disguised. Science's opposition to the humanities is clarified once and for all if each side is distinguished from the other by reference to these opposed explanatory styles. Thinkers who challenge this program say that facts and values are inextricably entangled. But they conflate interpretation with inquiry.¹

Practical life is the middle term that binds these two. Needy and vulnerable, we interpret and inquire. Inquiry starts when need provokes action: What to eat? Where to sleep? Rabbits survive by following a few hardwired clues or by imitating a parent. Humans, too, associate sensory clues, but practical life would be simpler than it is if doctors and

auto mechanics only tallied symptoms. We do better, because we map our circumstances while deliberating about alternate ways to engage them. Maps represent the structures and processes—the densities and responses—of relevant things. Plans sequence imagined engagements with other things: do this, wait for a response, then, given the anticipated effect, do that. Every cook and mechanic knows the means available and ways to exploit them. Interpretation subordinates practical skills and activities by locating them within a network of meanings. Every aspect of life may be construed in ways that give it significance; every act may express a devotion. Why add this layer of thought and value to effective practices? Because interpretation expresses hopes and fears. It appeases us by making circumstances intelligible in terms that are reassuring and safe. It makes them controllable, if only in the respect that they are understood.

INTERPRETATION

Interpretation categorizes phenomena by situating ideas of them within a conceptual network. I see the world from my point of view, my interests and entitlements confirmed. Or I lie back watching clouds, seeing faces here, animals there. I point them out to you, but you see other things and don't see mine. People reading books also disagree. Each organizes selected incidents or portions while arguing that his or her reading is the right one, perhaps the only plausible or moral way to construe the text. Every such reading expresses three aspects of interpretation. First is orientation, second is the projection of orientation's interests and values onto things perceived or encountered, third is the narrative—the story told—when an orientation is formulated in words and justified.

Musicians or actors interpreting a score or text acknowledge that many readings are possible. We are less tolerant of people whose orientations differ from our own. Each filters available data or ideas in ways appropriate to his or her valorizing perspective, though many are opaque: one doesn't know their interests or fears. Actors experiment with new ways to play a character, but each person lives stubbornly within his or her point of view. He or she may describe it as "living within the truth," but this is an odd sort of truth, one born of the confusion between assertion and evidence. Ask an interpreter how to confirm that his story is true, and he fulminates or fumbles, though an answer is available. Interpretations are orientations. Some, but not all, are expressed by stories that make sense of the world and our place within it. All express the interests and values of the interpreter. None is

true—as the preference for chocolate or vanilla is a preference, not a truth—because the values that infuse an orientation have no basis but personal history, needs, and the attitudes of one’s community.

Hypotheses are formulated so they may be tested, hence falsified or confirmed. Interpretations are not falsifiable, because they resist every surprise; we can reconfigure or reinterpret their claims to accommodate any outcome, including disappointments and disasters. Nothing is settled, everything is adjustable: any apparent fact—favorable or not—can be digested and made to disappear. So, death is unreal if one believes in eternal life. This is interpretation as it expresses thought’s alliance with piety, will, and conscience. A potent story—one that reconciles or vindicates believers—spreads like contagion through a society. I believe it, and tell it to you; you believe it, too, and tell it to others who confirm my belief by repeating it to me. Religion, movies, and advertising are sources for many shared persuasions, some that are open and subject to criticism, others that escape notice because they are disguised and insidious: one thinks of Thrasymachus and Machiavelli and of stories used to regulate and dominate other people.² Contemporary thinkers in every discipline are happy to tell us that interpretation is all the knowledge we have of nature, culture, or ourselves.

Philosophy is party to this consensus: it chronically confuses interpretation with inquiry, telling us that phenomena have no character or autonomy apart from ideas or conceptual systems that differentiate and relate them. Kant is interpretation’s principal sponsor in modern times. Abductions—inferences from phenomena perceived to their conditions (causes or laws)—often exceed the immediate data of experience. They are speculations about things-in-themselves: the hand that conditions the look of a hand, for example.³ Kant argued that interpretations knitting sensory data into networks of coherent experience are all that understanding can achieve. Why schematize sensory data in one way rather than others? Because something valued—a need, interest, desire, or ideal—prompts us to create a satisfying experience. Piety is a sponsoring value of this sort. It operates within interpretations by calibrating and integrating their parts. So, prayer, ritual, and good works are suitable to a religious outlook, because all are expressions of piety. Or the value is patriotism, so loyalty and service—“my country right or wrong”—are its expressions.

Hegel socialized this account, saying that the conceptualizations used to create a thinkable world are common to a community’s members. Bound to one another by history and need, they create and communicate about a common world and shared desires.⁴ Marx emphasized the economic interest that provokes a dominant group to impose its

story on a society's other members.⁵ Foucault argued that various interests—not only economic motives—determine the bias and detail of interpretations that shape social worlds and the conduct of their members.⁶ Carnap constructed systems that would integrate and explain phenomena of every sort; Quine endorsed his program, but disagreed about the logic of conceptual networks.⁷ Their guiding intention is fixed and clear: let no thinkable difference or relation elude a system of sentences or ideas. Or, conversely, affirm that no phenomenon is conceivable—hence that none exists—if there is no place for it within a conceptual system. Truth for these thinkers is the relation of sentences within a system, not the relation of a sentence to an extra-systemic truth-maker. Value—utility—is the conceptual driver and integrator. Carnap argued that the use of conceptual systems—pragmatics—is coequal with their syntax and semantics.⁸ His inspiration was likely Kant's *Critique of Judgment*:

I have been reproached . . . for defining the power of desire as the power of being the cause, through one's presentations, of the actuality of the objects of these presentations. The criticism was that, after all, mere wishes are desires too, and yet we all know that they alone do not enable us to produce their object. That, however, proves nothing more than that some of man's desires involve him in self-contradiction, inasmuch as he uses the presentation by itself to strive to produce the object, while yet he cannot expect success from it.⁹

“Presentation by itself” is mere appearance, the given. This is the material thought forms—schematizes—when perceptual objects are made to satisfy parameters fixed by desire.

Interpretation so dominates modern thinking that writers vindicate inquiry in terms appropriate to interpretation. Dewey wrote with conviction about problem-solving and its biological, cultural setting. Yet, he succumbed to the Kantian style when detailing his notion of inquiry. Every system that satisfies his description is an interpretation, not a hypothesis: it lays down—prescribes—the differences and relations that may be ascribed to the phenomena differentiated and organized within it. Inquiry, as Dewey described it, is “the construction of a new empirical situation in which objects are differently related to one another, and such that the consequences of directed operation form the objects that have the property of being known.”¹⁰ There is less clarity but more detail when Dewey elaborated:

Were it not that knowledge is related to inquiry as a product to the operations by which it is produced, no distinctions re-

quiring special differentiating designation would exist. Material would merely be a matter of knowledge or of ignorance and error; that would be all that could be said. The content of any given proposition would have the values “true” and “false” as final and exclusive attributes. But if knowledge is related to inquiry as its warrantably assertible product, and if inquiry is progressive and temporal, then the material inquired into reveals distinctive properties which need to be designated by distinctive names. As *undergoing* inquiry, the material has a different logical import from that which it has as the *outcome* of inquiry. In its first capacity and status, it will be called by the general name *subject-matter*. When it is necessary to refer to subject-matter in the context of either observation or ideation, the name *content* will be used, and particularly on account of its *representative* character, content of propositions. The name *objects* will be reserved for subject-matter so far as it has been produced and ordered in settled form by meanings of inquiry; proleptically, objects are the *objectives* of inquiry. The apparent ambiguity of using “objects” for this purpose (since the word is regularly applied to things that are observed or thought of) is only apparent. For things exist *as* objects for us only as they have been previously determined as outcomes of inquiries. When used in carrying on new inquiries in new problematic situations, they are known as objects in virtue of prior inquiries which warrant their assertibility. In the new situation, they are *means* of attaining knowledge of something else. In the strict sense, they are part of the *contents* of inquiry as the word content was defined above. But retrospectively (that is, as products of prior determination in inquiry) they are objects.¹¹

Dewey’s summary is concise: “The idea that the intelligibility effected by scientific or controlled inquiry proves the antecedent existence of an a priori rational world puts the cart before the horse.”¹² Inquiry so conceived is very close to the notion described here as interpretation:

There is, accordingly, an element of evaluation involved in appreciation. For such objects are not ends in the sense of being merely termini, but in the sense of being fulfillments: satisfactions in the literal sense in which that word means “*making sufficient*” something *de-ficient*. Consequently, judgments of appreciation are found wherever subject-matter undergoes such development and reconstruction as to result in a satisfying, complete whole.¹³

This is interpretation rechristened inquiry. Situations are problematic: they are, in Dewey's terms, indeterminate. They are made satisfying and determinate by the ways we develop and reconstruct them.

Dewey used the language of problem-solving, interaction, and inquiry to produce a distinctly Kantian result: objects are made not discovered.¹⁴ The effect is similar when organizing words creates interpretations similar to novels: they tell comprehensive stories where nothing excluded has reality in situations they prefigure. We may suppose that life resists: circumstances and our limited abilities confound the stories we tell of ourselves. But is that so? Quine denied that there are indigestible data. Every interpretation can be revised to integrate or ignore them, because the network of constituent sentences or beliefs is plastic and adaptable: it reconstrues the data or yields just enough to incorporate it. Inquiry is less flexible. Consistent hypotheses represent possible states of affairs. Tested against a reality they do not make, they are falsified or confirmed.

This is an odd dilemma for philosophy. Its claim to authority is founded in the belief that truth is unqualified: sentences or beliefs name their truth conditions; they are true if those conditions obtain. Truths of this sort are impersonal. Not your truths or mine, they obtain or not because of circumstances distinct from sentences they confirm. Truth is two things for interpretation: the story expressing an orientation is true, because it satisfies the interests and values of the interpreter, be it a person or society; the story's sentences or ideas are true because they substantiate—cohere with and support—one another. This second criterion is very loose: incoherence, even contradiction, may seem appropriate to a credible story; the omnipotent God tolerates evil and free will; pantheism is odious, though God is said to be infinite, hence omnipresent.

People are reasonably confused: what is philosophy's vocation? Are philosophers interpreters—storytellers, like novelists and playwrights—or merely their accountants and bookkeepers, their logicians and meta-theorists? Or is philosophy, too, an inquiry? Philosophy is troubled, either way. Novelists are not obliged to tell the same story; their books are more interesting for their differences. But reality, presumably, has one form, however complex. Truth-telling would seem to require that comprehensive hypotheses should converge on a single theory that correctly specifies this form or at worst on a set of theories that are translational equivalents. Yet, nothing oppresses philosophers so much as agreement. Every powerful thinker accepts the responsibility for making sense of reality in his own terms: his account is an expression of intellectual integrity, depth, and vision: it shouldn't be elided with others. But it should be measured against other accounts, if reality has

a settled character of its own, one that is accurately, if partially, mapped by several or many others. Philosophers evade this measure because of the peculiar turn that distinguishes Western philosophy from Plato and Descartes to the present, namely, philosophy's dedication to the formula of Protagoras: man is the measure of all that is that it is, and of all that is not that it is not.¹⁵ This is the claim that the character and existence of things is a function of the ways we conceive them: anything that falls outside an interpretive framework is not. Philosophy's affinity to literature is all but explicit: there are many possible novels, and many ways to conceptualize the world before us, a world that includes us.

What comes of truth? Call it his or her truth, then add the social authority that comes with the status of the thinker. Give the thinker high status, and his truth spreads through the ranks of all who defer to him. That it quickly loses persuasive power with his death is evidence that the theory was an interpretation used prescriptively. But what is the alternative? Restrict philosophy to hypotheses, and its claims have no privileged authority: they may be false. Error is an embarrassment to thinkers who want to commend their values, often surreptitiously in the guise of a favored theory. Emphasize testable hypotheses, forgo a valorizing orientation, and philosophy loses its authority. Philosophy's response is alternately righteous and defensive: Leave us alone, is the gist. Our aims and practices are different from the ones of practical life or science. If that implies a retreat into hermetic, self-justifying interpretations or merely the logic of value-driven conceptual systems, so be it.

This choice would be innocuous, but for the identification of philosophy with truth and the popular conflation of ideas, ideals, and ideologies. Peace is an idea. It may be considered by comparing it to war, without an expression of preference. But peace is preferable, hence ideal. More, it may become an ideology, an aim and recipe for transforming circumstances to achieve it. Most philosophic ideas are too fragmentary or abstract to pass into ideals or ideologies, but some do. Those are usually ideas about social or political organization, morality, or ideas that lend themselves to religious practice or belief. Descartes' dedicatory letter avers that his *Meditations* will prove the soul's immortality. This promise, coming from a philosopher who was never slow to affirm the truth of his views, was sure to attract the support of people who also believed that a soul judged and rewarded by its maker is present in each of us. How many pagans were forcibly converted because of an ideology supported by evidence no firmer than Descartes'?

This conceit is philosophy's latent power, and the excuse for its ambiguity: declare that philosophic theses are interpretations, and they—with regimes they inspire—lose authority; require that they be testable

empirically, and we reduce them to the (disreputable) contingency of hypotheses common to practical life and science. But this is not the zero-sum game of mutually annihilating choices. Philosophic inquiry is impelled by vital questions: What are we (who am I)? What is the world about us? What is our place there? These are empirical questions, questions about actual states of affairs known by the empirical differences they make. Interpretation—storytelling—is the poor substitute when we can't determine or don't like the factual answers.

INQUIRY

The character of inquiry is long obscured by two biases that dominate modern philosophy. One is the intuitionist, Humean claim that reality extends no farther than the phenomena—sensory data, ideas, words, sentences, or conceptual systems—set before inspecting minds. The other is the apriorist, Kantian persuasion that reality is identical with the inspectable content mind creates by using rules to differentiate and organize sensory data. These two perspectives—data versus the rules for differentiating and organizing it—share an implication. For inquiry is precluded, if, as Hume and Kant agreed, no legitimate inference exceeds the domain of actual or possible data.

The tension between their skepticism and the demands of practical life are apparent in the ambiguity of the word *hypothesis*. It suggests that inference is tentative, though there are different reasons for caution. Evidence of sparrows reduces to data that have the look of sparrows, with only this possible addition: we extend the domain of our judgments by introducing inductive hypotheses. Seeing one thing or a few, we generalize, fallibly, to some or all. Or—curve-fitting—we formulate equations that track previous observations while entailing others that test and confirm the equations when data predicted are observed. So, Newton and Einstein generalized from a small sample of observations to law statements that represent the dynamical relations of all phenomena. But inferences of both sorts could be mistaken, and are often revised or replaced: black swans, chicken-sized sparrows.

It may seem that nothing we might want to know requires an alternative explanatory method: why try to do more when the laws of motion have no other basis? We want and have a different method because we often use sensory data as evidence of their conditions: causes, constituents, or laws. Seeing an effect, we infer—abductively—to one of them. There may be ample data justifying an abduction (the apple one sees, holds, and tastes), or scant data garnered from instruments (canaries) that register the effects of their causes (methane). Either way, we

mitigate philosophy's skeptical instincts and speculate that features of a face cause (hence explain) the look of the face. And sometimes, we infer from observed effects to their unobservable conditions: from falling apples to $F=ma$.

Abduction has four steps. Provoked by data, one infers its condition or conditions. This is the abductive hypothesis. Next, one deduces the prediction that specific consequences do obtain or could be provoked if the hypothesis is correct. Such consequences—regularities conditioned by laws, for example—are ideally observable, for there is no way to test the hypothesis if they are not. The third step is inductive, though now induction is the activity of looking for or experimenting to produce the effect predicted. Induction of the other, generalizing kind does not occur, until, fourth, we find the data anticipated. We then infer that all or most data of this sort have the condition specified by the hypothesis in the circumstances tested. This last step is a mix of positive or negative feedback. Hypothesize correctly, and nature yields to our expectations; we get what we look for, perhaps again and again. Hypothesize incorrectly, and the evidence is a reproach: do it again, differently.

We use the word *hypothesis* to signify abductions, inductive generalizations, and curve-fitting, though this critical difference is plain if we compare their utility as explanations. Inductive generalizations often make accurate predictions, but their explanatory power is weak: we explain an event merely by citing the law that covers it. This explanatory style is circular, because the law statement has been generalized from just such events as those it explains: we speculate that this blue-bird will be blue, because we generalize after seeing several that all are blue. Such explanations succeed, because they rely on a condition they ignore or deny: namely, the natural kinds they specify. Abductive explanations affirm rather than suppress their material assumptions, and they are not circular. We infer from regularities observed to their constraining constituents, causes, or laws. Curve-fitting hypotheses fall between these stools: they explain adjacent phenomena by representing them as contiguous points on the curve traced by a covering equation. Predictions derived from such equations may be all but infallible, yet the equations are deficient explanations. Like music lovers who sing along without knowing how to play the song, they escape the circularity of inductive generalizations but fail to specify the material conditions for their success.

Induction and curve-fitting skim the surface of phenomena, emphasizing similarity or correlation. Abductions identify a phenomenon's generating conditions; they express the assumption that phenomena have depth, that data affecting us are the leading edge—the effects—of states

of affairs whose bulk and efficacy are independent of mind and its empirical sensibility.

The differences among these kinds of inference are consequential ontologically across the range of situations to which they apply. Laws are an example, because their status is ambiguous: are they sentences reporting correlations or constraints operating upon or within material processes? Inherent constraints seem disreputable, given our reluctance to speculate about extra-mental states of affairs or their conditions, and the prejudice that strips nature of its modalities, be they parochial necessities specific to particular worlds because they satisfy its laws of motion or universal necessities applicable within all possible worlds because they satisfy the principle of noncontradiction.¹⁶ Suspend these dogmas, and we are free to consider the possibility that laws are more than generalizations: we infer from a particular event or effect to the intrinsically constraining relationship it embodies.

Consider, for example, the surmise that every right triangle embodies the Pythagorean theorem, and that each represents its kind.¹⁷ We confirm this by substituting values for the theorem's variables while observing the result: does the sum of the squares of the sides equal the square of the hypotenuse for each particular right triangle? Granting that the effect may be accidental in any single case, we substitute other values for the variables. Repeated successes are evidence that the theorem applies to all right triangles. Still, the point of reference is every single right triangle. Each exhibits the constraining effects signified by the theorem. They inhere within all the individuals of a domain because they inhere within each: cosmic laws in a falling apple. Newton specified these laws as best he could, given the scales of space and velocity known to him. Einstein did it again, more accurately.

This account of physical laws seems carelessly speculative to those who prefer the notion that laws are phenomenological, meaning that law statements signify the observable, functional relations one sees and tests by altering values for their variables. We test an inverse square law for magnetism by moving the iron filings farther and farther from a stable magnet. There is no need to infer a cause or condition that exceeds the observables: they behave as the law reports. But here as above, something is wanting. An event is explained by citing a law that generalizes or abstracts from just such cases: we explain the cycle of night and day by observing that one always succeeds the other. Abduction promises more. It specifies conditions for the effects observed: namely, Earth rotating while turning about the Sun. This complex state of affairs is a condition for the effects observed. Citing it explains them. Phenomenological laws, like inductive generalizations of all sorts, are

much less ambitious: they are verbal or conceptual generalizations—strings of words or mathematical symbols—that extrapolate from observed regularities to all instances of a kind.

Researchers of every sort construe the laws they formulate in these phenomenological terms, because this is a way of discovering laws and because Humean skeptics have convinced them that anything additional—abductive inferences to causes, constituents, or laws—is uselessly excessive. Abduction obliges theorists to formulate models of factors that may condition data mapped by their equations, though it is the equations—we are to believe—not such models, that carry all the force of scientific explanation, prediction, and control. Worse, abduction is profligate: it may generate any number of models that support the same equation. We could choose among them—discounting some, promoting others—if there were testable differences among them. But some or many may not be empirically distinguishable. Why not agree that curve-fitting—formulating equations that generate the values observed—is a sufficient explanation for phenomena that concern us?

This question encapsulates an agenda framed by Cartesian skepticism, Humean empiricism, and the operationalism learned from Kant: garner what you can from the data, organize and use it, but don't speculate. This project is often successful, because there is significant information in the data and because we organize it in ways that provoke additional, useful data. But this result is less than knowledge can be. For the project satisfied has limited itself to the effects of things on our instruments or sensory organs. It ignores the natural processes and structures that cause the data. The language used to differentiate and organize sensory data may be replete with theoretical terms—words that apparently signify those causes—but we are cautioned repeatedly that the word *flute*, for example, is shorthand for a rule that organizes data; it doesn't signify the source of the notes.

Abduction annoys skeptics, because saying that we may identify the extra-mental conditions for sensory effects violates their warnings not to speculate. Skepticism has become so routine that we hardly notice the difference between caution—always or often appropriate—and dogmatic doubt: assume that we never know, because we are never certain we know. This is the ancient Platonic prejudice: distinguish knowledge from opinion in the manner of Descartes' first *Meditation*, then discount opinion. Make sure that every candidate for knowledge—be it sensory data or scientific theory—stands directly before the mind's eye. Practical life and many sciences know better: many abductions are justified by myriad data collected in various ways (wet clothes, wet feet), no disconfirming evidence, and no plausible alternative hypothesis.¹⁸

Explanation is empowered by cycles of advance and consolidation. Sometimes, we know a structure—the vermiform appendix, for example—but not its function. Other times, we observe pertinent behavior, but not the structures or laws engaged. Respiration was familiar, but its conditions were a mystery until the relation of heart and lungs was discovered. Imagine observant people in a culture ignorant of physiology. They explain breath by reducing it to the data observed, then by generalizing: breathing repeatedly is good evidence that we shall breathe many times more. This works for a time, though no explanation is forthcoming when breathing stops. Physics, too, is incomplete until it specifies the entities, processes, and laws that condition matters observed. This is ideal. Pertinent factors elude us, because of their scale (large or small) or because they are unobserved and perhaps unobservable given their nature and our sensory powers. Still, the errors of previous formulations don't obviate the intention or diminish the partial success of previous abductions. Experimental and mathematical techniques evolve; theorists learn to exploit them.

Differences among the several kinds of hypotheses entail different accounts of theoretical terms. Induction generalizes from observables. It sometimes introduces theoretical terms, but they are analyzable—reducible—to terms that cite the observables: *electron* is said to be an economic way of signifying pointer readings and other data pertinent to the generalizations—the theory—where *electron* appears. Theoretical terms introduced by curve-fitting equations are justified in the same way. Theoretical terms introduced by abductive inferences are not reducible to the data from which we infer. *Electron*, on this telling, signifies negatively charged particles. Gravity, too, is introduced by an abductive inference, not by generalizing from the observation of falling apples. Specifying this notion functionally, we speculate about its material basis. Is it a particle with a field force, or the effect of motion in a curved space? Either way, inference exceeds the observables explained. Having a testable answer would enable us to mount experiments, and ultimately a technology. One would confirm the abduction; the other would exploit it.

Social scientists, too, think abductively. Sometimes, the conditions to which they infer are observable indirectly (as faces are), other times the conditions inferred are not observable. Market forces—competition, scarcity, and demand—are observable, though repression was unobservable when Freud inferred it. That is changed: neural inhibition—repression's cash value—makes it observable in our time. Still, repression would not be the mystery alleged by Freud's critics if its mechanics were unknown. For explanation is partly successful when it identifies a function, but fails to specify its generating mechanism. Aristotle used this

inferential style when he ascribed dispositions or potentialities to things whose behaviors were observed, though their mechanical properties were unknown. Having more information about such things, we use abduction to identify the structures and processes responsible for such effects.

Notice that abductive explanations are not essentially value laden. Interests or needs motivate them; procedural values—simplicity, consistency, and fruitfulness—regulate their formulation. But there is no residue of motivating values in the inferences from phenomena to their conditions or in the empirical tests that falsify or confirm them. Alchemists hoped that turning brass to gold would make them rich, but they didn't succeed and knew they hadn't.

DIFFERENT TASKS

Practical life is inquiry that seeks well-being and safety for partners and oneself. Imagining what to do and how to do it, we test our ideas in the ambient world or revise them to do it better. Interpretations satisfy values rooted in the likes, fears, or aversions of attitudes. Confused interpretations express conflicted attitudes, hence schizoid values. Some such conflicts are never resolved, though stable, coherent attitudes dominate in people whose orientations are focused and viable.

Interpretation's task is plain from infancy. Every newborn is distinctively active, reactive, or inert. All are raw, unformed, and vulnerable. One imagines that babies experience their vulnerability as hunger, discomfort, or uncertainty. Many caretakers do their best to reduce all three, so their babies feel and are secure; rarely frustrated because their expectations are satisfied, they are confident, curious, and playful. Others don't fare as well. Sick and apprehensive because their bodily rhythms haven't stabilized, these babies are scared. Early orientations stabilize, because one or another style of human caretaking is dominant and because infants have primitive but quickly evolving cognitive and affective systems. First reactions are automatic, because visceral and innate: the baby is quiescent and responsive, or edgy and anxious. These responses are qualified when caretakers and circumstances are construed as favorable or adverse. For a query is all but explicit in a baby's eyes, posture, and gestures: "What goes on?" The question is urgent in situations gone awry where fear and vulnerability are consuming. But one infers it, too, in the eyes of intense but contented babies: they want to understand. Their curiosity is a precursor to inquiry, though this other motive is also impelling: distinguish people or events that effect security or vulnerability from those indifferent to both. The child construes his or her circumstances, fixing attitudes—*anxious or confident*—that form

as he or she responds. These core attitudes are known by the behavior or intrapsychic feelings they provoke, and later by way of a justifying story that explains one's attitudes.

Interpretation's task—its regulative aim—is the equilibrium achieved when circumstances are construed in ways that satisfy attitudes. Achieving and sustaining this equilibrium—by appreciating, propitiating, or reconciling ourselves to the ambient world—we control anxiety by construing circumstances and ourselves in ways that seem to reduce the exposure that makes us vulnerable. This is a posture, an orientation, that enhances self-perceived mastery and well-being. It expresses itself in defenses and entitlements that are decisive for personal identity and safety: loyalty and status, for example. Endowing life with significance, it defines a circle—a private space—of valorizing light.

The aim is satisfied trivially by everyone having an established orientation, an effect consolidated in childhood when each person construes his or her circumstances as attitudes prescribe. Rodgers and Hammerstein's *The King and I* expressed this achievement in song: "Whenever I feel afraid, I hold my head erect and whistle a happy tune so no one will suspect, I'm afraid. . . . The results of this deception are very plain to tell. For when I fool the people I fear, I fool myself as well." Vulnerability makes us anxious. Interpretation reduces anxiety by construing situations that are dangerous or uncertain in ways that make them seem viable. Salving worry and pain, it makes life supportable. Imagine the alternative: circumstances are so adverse that they defeat every attempt to construe them in a reconciling or propitiating way. Equilibration fails. Numbing oneself to insensibility is the principal alternative.

Speculations about early childhood may seem too shallow a basis for claims about interpretation. But adult experience adds nothing but complexity, detail, and more elaborate stories to this simpler rubric. Consider the opposing sides posited by Nietzsche's *Genealogy of Morals*: the self-directed artist versus the herd. Members of the herd loathe the artist's vanity and bohemian ways. They believe that differentiating himself from them is his principal aim. They would destroy him—Socrates, for example—merely for not wanting their approval. But the artist is mostly oblivious to them and their values. Comfortable in himself or fiercely uncomfortable because he cannot succeed in his own terms, he reworks some part of the world—its notes, paint and canvass, other people, words, gestures, or stone—in ways fixed by his will, skills, and imagination. The artist may be a painter or musician but also a rock-climber, carpenter, statesman, athlete, or cook. Other people suppose that climbers are foolish or crazy, but self-perception requires that they test themselves against sheer walls. There is equilibrium—elation

and contented exhaustion—when a climb satisfies attitude’s expectations or demands. Artists and writers are also stubborn. Infirm or close to death, they struggle to finish a task because attitudes that fix self-perception won’t let them stop. Members of the herd don’t understand the artist’s persistence, but their behavior is similar. They won’t violate social norms, because core attitudes are a principal point of self-identity and a bulwark against vulnerability: think of believers who risk death by refusing a forced conversion. Why refuse? Because losing—rejecting—a defining portion of oneself is alienating and shameful. Like Socrates, they face extinction in either way: self-betrayal or bodily death.

Is this gravity excessive in a culture where identity is worn lightly by people who assume and relinquish roles and styles with every year’s fashion in cars, clothes, or ideas? No, this is evidence that certain bases for identity—religious beliefs, for example—are less compelling than before. The implication for core attitudes is unclear: are we more confident, hence willing to change the trappings of life at will, or is the pleasure and relief of change evidence that we are less secure, more vulnerable, as we sort frantically through successive ways to interpret our selves and circumstances? Nietzsche didn’t know people of this chameleon sort, or he didn’t mention them: no one in Nietzsche’s *Genealogy of Morals*—no artist or member of the herd—changes his or her orientation: attitudes make them belligerently autonomous and self-securing, or socialized because dependent on the recognition of others.

What explains the herd’s immobility? What binds its members? The temperaments and developmental histories of individual members are surely different. Why do they adopt routinizing laws, rituals, and a common story? One reason is complexity, and the need for coordination. But that interest is satisfied without a tribal story: by traffic laws, for example. What additional need explains their uniformity? Principal factors are vulnerabilities they share, plus dominating social pressure and the availability of a homogenizing story. The story valorizes, justifies, protects, and intimidates. Who could oppose it, given its many believers, without making him or herself more vulnerable? The story’s credibility is variable: passionate believers read it literally, others give it lip service while grateful for the cover it supplies.

Believers root their security in a glorious narrative lovingly told, but they could have been equally defended by any tale learned early and believed. This is the odd contingency of one’s commitment to a tribal story; allegiance is a historical accident. Born and raised in Cleveland, Boston, Los Angeles, or New York, one identifies osmotically with a local team: its successes and failures are one’s own. Believers address one another within the circle of their “truths.” But truth is equivocal.

Does it signify a belief passionately held, or one whose material truth conditions are satisfied: ‘There are birds on the roof’ is true, if there are such; “true believers” are distinguished by the intensity of their commitment, not by the truth of their beliefs.

No one likes being told that his “truths” aren’t true or false, though interpretation’s claims are affirmed for various reasons—affiliation and loyalty, for example—not because of their truth. Hence the implication that any story may satisfy us if it gratifies or reconciles us to our circumstances. Is it a fantastic story replete with contradictions? Do we avow it in the absence of confirming evidence, or despite evidence that the story is false? No matter: we are motivated by needs, fear and attitudes, not by truth. The issue would be less confused if we didn’t err by thinking that beliefs of every sort are truth-claims. For beliefs are commitments of various sorts: truth is one interest among others. We believe in someone despite having no evidence for our confidence: we believe that loyalty is its own reward while knowing that often it isn’t. Divers occasions promote belief—including affiliation, social suasion or status, culture, convenience, and fear—though we wrongly suppose that belief’s causes are incidental when every belief should also be justifiable as a truth-claim. There is confirming evidence for some beliefs sponsored by attitudes: we rightly believe in the uses of learning and health. But truth is often incidental both to belief and to the reason or reasons for it: many beliefs expressing attitudes (including affiliative expressions and directives: “Believe in yourself”) have no other basis. They are not candidates for truth however closely they resemble the propositional forms of truth-claims.

Interpretation resists this view of its conflict with inquiry, because *truth* is an honorific: surrendering claims to truth invites the judgment that interpretations are false. But this is the implication scouted above: interpretation doesn’t challenge inquiry as the source of truths, if we distinguish truth-claims from beliefs that satisfy attitudes. Conflating beliefs of these two sorts is, nevertheless, an all but inextinguishable imperative. No fervent ideologist, religious or political, agrees that his beliefs aren’t true. None is appeased by the news that beliefs sponsored by interpretation serve a different interest.

PERSPECTIVE

Perspective is often situational: here or there, myself or others, rich or poor. These are complementary matters of fact, though difference sometimes hardens into contrariety: male if not female, here if not there. Contrariety is mutual exclusion. It pervades thought and provokes

hostility when one side is favored, the other deplored. What explains the transition from an easy tolerance for situational differences to the intolerance of contrariety? A principal reason is the fact that perspective is often evaluative, not situational: we disagree because of our values, not because we see things from different angles.

Conflating perspectives of these two kinds subverts the distinction between interpretation and inquiry. For we may infer that every situational difference is also an evaluative difference. I see things as I do because my perspective expresses my values: my entitlements versus your obligations. Does inquiry resolve such differences in ways that identify things as they are, or is inquiry irrelevant because competing values declare congenial “facts” in the absence of an objective standard? Physicists have equations for translating measurements of motion made in one frame of reference into measurements made in frames moving uniformly or at rest relative to the first: a body moving ten miles an hour in your frame of reference has the same measured velocity in mine. But there are no comparable equations when differences of perspective express different interests. A stock market crash is good for those who short the market, bad for those invested in shares. The values are opposed, though this example leaves a space for inquiry because these responses didn’t create the state of affairs that gratifies some and disappoints others. There are, however, many occasions when inquiry has no comparable leverage. There may be no neutral facts relevant to the quarrels of spouses or friends: each alleges the indifference of the other, and both deny the charge. Their conflict is evaluative, not situational: inquiry—fact-finding—can’t settle the dispute because each insists that the other’s attitudes—hence values—are intolerable.

Inquiry is forever distinguished from interpretation because of this difference: belief is dominated by facts on the ground or by values that organize perception and behavior. One inquires because of wanting to understand a quarrel better, or one insists on the legitimacy and superiority of his or her attitudes. The second is often more significant for human concerns than the first: something that comforts you, threatens me. Shall I see the world as it is—to the degree I can—or do I see it in ways congenial to my attitudes? The paths are distinct; the means are different. People lean one way or the other: they are secured and satisfied by information about their circumstances or by stories that construe a situation in ways favored by their values.

This is a delicate issue for inquiry, because the preference for interpretation or inquiry is itself an intention: attitude is favorable to one or the other. This preference affects every subsidiary determination with the effect that disputes are barren among those who choose differently. People

oriented by beliefs that sustain hope or reduce fear are not cordial to those who believe that gratifying stories are trumped by sober truths. Most every smoker in the West reads and ignores the block letter warnings on cigarette packages. Addiction explains some. But a value—raffishly attractive me—motivates others. These are alternative ways to be: interpret or inquire. They don't coalesce at the extremes. But very few people can ignore every relevant fact; few or none are self-effacing to the degree that they never subordinate facts to attitudes.

Everyone in the middle does both. Interpreting and inquiring, sometimes at once, we express our ambiguity: I rightly perceive the organization within which I work: knowing its inequities, feeling aggrieved, I want satisfaction. Does this muddle imply that inquiry is compromised by its sanctioning values: does it follow that its claims, too, are appeasing stories? This is not implied, because the discipline of inquiry precludes it. Inquiry is provoked by needs or interests and the values they express, but intention alone cannot formulate or test, let alone confirm, its hypotheses: wanting something, I do what I can to have it, knowing all the while that desire is no guarantee of success. Inquiry is exploration: we hypothesize and experiment. Interpretation won't save us from a dog that bites.

The distinction between interpretation and inquiry nevertheless risks collapse. Everyone gathers and uses information about himself and his circumstances many times in the course of every day, because effectively engaging other people and things is a condition for safety and well-being. Yet, these discrete encounters are jejune: they lack integration and in most lives significance: nothing in them bestows meaning and worth. Understanding wants more. Interpretations provide it by locating us within the integrated, valorized worlds they prefigure, usually on terms that comfort and secure us. The political party I favor tells a story that justifies my interests; a different story reconciles me to my sex or describes my relation to the god who looks after me and my interests: I live as it prescribes. Interpretation fills every problematic space with a conceptualization that propitiates, rectifies, justifies, or explains. Whether my circumstances are treacherous or benign, I know where I am.

Probably everyone has a story that reconciles the ragged parts of his or her life, a story that excuses, extenuates, or affirms yesterday's memories, today's conduct. Novelists make art of these reflections; not content to make sense of their own lives, they knit invented lives into a coherent story. Daydreams and fantasies do as much for us. Nor is this something we could easily stop doing. Unlike creatures that merely react, we justify and anticipate. Moving back and forth between action

and reflection, we want the coherence and significance interpretations supply. We barely notice the contrary implications of practical life where maps, plans, and hypotheses direct our engagements with other people and things. This is reality testing, not interpretation.

Hume and Kant acknowledged the inclination to distinguish them, but dismissed it as unjustifiable. Conceptual relativists agree. Believing that scientific explanations are interpretations, not hypotheses, they tell us that every differentiation, relation, and state of affairs is posited by the conceptual system used to think it. Doing Kant's work in our time—rejecting hypotheses that infer from data to their extra-mental conditions—they say that everything is text and that texts have no integrity—no fixed sense—apart from the readings made of them. Foucault is emblematic:

There is no difference between marks and words in the sense that there is between observation and accepted authority, or between verifiable fact and tradition. The process is everywhere the same: that of the sign and its likeness, and this is why nature and the word can intertwine with one another to infinity, forming, for those who can read it, one vast single text.¹⁹

But though language no longer bears an immediate resemblance to the things it names, this does not mean that it is separate from the world; it still continues, in another form, to be the locus of revelations and to be included in the area where truth is both manifested and expressed.²⁰

What shapes a reading? Just our way of construing phenomena of any sort, including words, sensory data, or marks of any sort. Textual critics displace authors; scientists displace nature. For nature, like a book, has no essential character of its own. All its differences and relations derive from the theories—the interpretations—used to think it. No matter that this denigrates reality, frustrates practice, and stunts thought.

Is it true, nevertheless, that the realist assumptions of naïve practice are correct, implying that the idealism bred of skepticism or caution is wrong? Suppose that engineers or neurologists dispute the belief that conscious mind is a distinct substance. Saying that mind is the activity of a material system, the brain especially, they build mechanical models that duplicate mental functions. But they are challenged: materiality is a concept or notion, one that has a succession of different meanings through the course of scientific reflection. It has no application apart

from interpretations that use it to organize and construe sensory data. For we have the dicta of Locke, Berkeley, Hume, and Kant that nothing known exceeds mind's power to differentiate and organize the data inspected as they stand before it. Materiality, no less than talk of the gods, is the projection of a value-satisfying conceptual system.

This notion of mind's power is a weapon. Anyone who supposes that thought reaches beyond itself—fallibly but responsibly, in practical life or science—is shamed into silence by the simple remark that nothing can be known of extra-mental things. But is that so? Meeting someone new, I am better able to anticipate her responses with every subsequent encounter. Sometimes mistaken, I correct my assumptions. But what of this acquaintance: is she the creature of my thinking or its measure? And if the latter, why isn't materiality, too, a control on what we say of it?

Interpretation spreads a conceptual net, one that distinguishes and valorizes disparate things for the mind that thinks them as one. But this is not mind's only activity. We also infer from data to their extra-mental conditions, then experiment to justify hypotheses that specify them: smoke because fire. We are prudent in many ways, because well-informed about the material effects of many things: no one swallows thumbtacks because of having an interpretation that construes them as a delicacy. Every such thing is known as we infer from its effects to its extra-mental properties. Hypotheses are necessarily speculative, because we never have direct—unmediated—access to things inferred, though we test our speculations by constructing correctible maps or models while searching for collateral evidence that they are as we describe them. Suspecting mice, we lay traps. Fearing coal gas, we expose canaries. One is observable, the other is not. Both are inferred. Inquiry is self-correcting: large mice require bigger traps. Inquiry's methodological values are subject to criticism and revision if there is evidence that reality is more complicated than was thought. Compare interpretations that rationalize our conduct by way of stories infused with value: all our projects are blessed, because we are a virtuous people. No confirming experiment is required.

Practical life also idealizes its objectives, but it depends on ventures directed by hypotheses. Science embellishes practical ideas, generalizing, extrapolating, and analogizing to formulations that simplify and extend that understanding. In one as in the other, values—needs or interests—provoke actions (experiments, for example), though the existence and character of things engaged are independent of our values. Water slakes thirst, but wanting it, searching for it, is incidental to this effect: thirst motivates; testability is a procedural value.