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The Modern Concept of History

Hannah Arendt

HERODOTUS, who has been rightly called the Father of Western history,¹ tells us in the first sentence of the Persian Wars that the purpose of his enterprise is to preserve that which owes its existence to men (*ta genomena ex anthrôphôn*), lest it be obliterated by time, and to bestow upon the glorious, wondrous deeds of Greeks and Barbarians sufficient praise to assure their remembrance by posterity and thus make their glory shine through the centuries.

This tells us a great deal and yet does not tell us enough. For us, concern with immortality is not a matter of course, and Herodotus to whom this was a matter of course does not tell us much about it. His understanding of the task of history—to save human deeds from the futility that comes from oblivion—was rooted in the Greek concept and experience of nature, which comprehended all things that come into being by themselves without assistance from men or gods—the Olympian gods did not claim to have created the world²—and therefore are immortal. Since the things

¹ For recent discussion of Herodotus and our concept of history, see especially C. N. Cochrane, *Christianity and Classical Culture* (New York, 1944), ch. 12, one of the most stimulating and interesting pieces in the literature on the subject. His chief thesis that Herodotus must be regarded as belonging to the Ionian school of philosophy and a follower of Heraclitus is not convincing. Contrary to ancient sources, Cochrane construes the science of history as being part of the Greek development of philosophy. See note 6 of this article, and, also, Karl Reinhardt, "Herodots Persengeschichten" in *Von Werken und Formen* (Godesberg, 1948).

² "The gods of most nations claim to have created the world. The Olympian gods make no such claim. The most they ever did was to conquer it." (Gilbert Murray, *Five Stages of Greek Religion*, paper-edition, p. 45). Against this statement one sometimes argues that Plato in the *Timeus* introduced a Creator of the world. But Plato's god is no real creator; he is a *demiourgos*, a world-builder who does not create out of nothing. Moreover, Plato tells his story in the form of a myth, invented by himself, and this, like similar myths in his work, are not proposed as truth. That no god and no man ever created the *kosmos* is beautifully stated in Heraclitus, fragment 30 (Diels), for this cosmical order of all things "has always been and is and will be (like) an ever-living fire that blazes up in proportions and dies away in proportions."

of nature are ever-present, they are not likely to be overlooked or forgotten; and since they are forever, they do not need human remembrance for their further existence. All living creatures, man not excepted, are contained in this realm of being-forever (*aei einai*) and Aristotle explicitly assures us that man, insofar as he is a natural being and belongs to the species of mankind, possesses immortality; through the recurrent cycle of life, nature assures the same kind of being-forever to things that are born and die as to things that are and do not change. "Being for living creatures is Life," and being-forever (*aei einai*) corresponds to *aeigenes*, eternal procreation.³

No doubt this eternal recurrence "is the closest possible approximation of a world of becoming to that of being,"⁴ but it does not, of course, make individual men immortal; on the contrary, embedded in a cosmos in which everything was immortal, it was mortality which became the hallmark of human existence. Men are "the mortals," the only mortal things there are, for animals exist only as members of their species and not as individuals. The mortality of man lies in the fact that individual life, a *bios* with a recognizable life-story from birth to death, rises out of biological life (*dzoe*). This individual life is distinguished from all other things by the rectilinear course of its movement, which, so to speak, cuts through the circular movements of biological life. This is mortality: to move along a rectilinear line in a universe where everything, if it moves at all, moves in a cyclical order. Whenever men pursue their purposes, tilling the effortless earth, forcing the free-flowing wind into their sails, crossing the ever-rolling waves, they cut across a movement which is purposeless and turning within itself. When Sophocles (in the famous chorus of *Antigone*) says that there is nothing more awe-inspiring than man, he goes on to exemplify this by evoking purposeful human activities which do violence to nature because they disturb what, in the

³ See *Oikonomika*, 1343b24: Nature fulfills the being-forever with respect to the species through recurrence (*periodos*) but cannot do this with respect to the individual. In our context, it is irrelevant that the treatise is not by Aristotle, but by one of his pupils, for we find the same thought in the treatise *On the Soul* where he says: *to dzen tois dzosin to einai estin*, Being for living things is life, 415b13, or in *On Generation and Corruption* in the concept of Becoming which moves in a cycle.

⁴ Nietzsche, *Wille zur Macht*, Nr. 617.

absence of mortals, would be the eternal quiet of being-forever that rests or swings within itself.

What is difficult for us to realize is that the great deeds and works of which mortals are capable, and which become the topic of historical narrative, are not seen as parts either of an encompassing whole or a process; on the contrary, the stress is always on single instances and single gestures. These single instances, deeds or events, interrupt the circular movement of daily life in the same sense that the rectilinear *bios* of the mortals interrupts the circular movement of biological life. The subject matter of history is these interruptions, the extraordinary, in other words.

When in late antiquity speculations began about the nature of history in the sense of a historical process and about the historical fate of nations, their rise and fall, where the particular actions and events were engulfed in a whole, it was at once assumed that these processes must be circular. The historical movement began to be construed in the image of biological life. In terms of ancient philosophy, this could mean that the world of history had been re-integrated into the world of nature, the world of the mortals into the universe that is forever. But in terms of ancient poetry and historiography it meant that the earlier sense of the greatness of mortals, as distinguished from the undoubtedly higher greatness of the gods and nature, had been lost.

In the beginning of Western history the distinction between the mortality of men and the immortality of nature, between man-made things and things which come into being by themselves, was the tacit assumption of historiography. All things that owe their existence to men, such as works, deeds, and words, are perishable, infected, as it were, by the mortality of their authors. However, if mortals succeeded in endowing their works, deeds, and words with some permanence and in arresting their perishability, then these things would, to a degree at least enter and be at home in the world of everlastingness, and the mortals themselves would find their place in the cosmos where everything is immortal except men. The human capacity to achieve this is remembrance, *Mnēmosyne*, who therefore was regarded as the mother of all other muses.

In order to understand quickly and with some measure of clarity how far we today are removed from this Greek understanding of the relationship between nature and history, between the

cosmos and men, we may be permitted to quote four lines from Rilke:

Berge ruhn, von Sternen ueberpraechtigt;
 aber auch in ihnen flimmert Zeit.
 Ach, in meinem wilden Herzen naechtigt
 obdachlos die unvergaenglichkeit.⁵

Here even the mountains only seem to rest under the light of the stars; they are slowly, secretly devoured by Time; nothing is forever, immortality has fled the world to find an uncertain abode in the darkness of the human heart that still has the capacity to remember and to say: forever. Immortality or imperishability, if and when it occurs at all, is homeless. If one looks upon these lines through Greek eyes (their perfection, incidentally, seems to me to defy translation) it is almost as though the poet had tried consciously to reverse the Greek relationships: everything has become perishable, except perhaps the human heart; immortality is no longer the medium in which mortals move, but has taken its homeless refuge in the very heart of mortality; immortal things, works, deeds, or words, if men should still be able to externalize, reify as it were the remembrance of their hearts, have lost their home in the world; since the world, since nature is perishable and since man-made things, once they have come into being, share the fate of all being—they begin to perish the moment they have come into existence.

With Herodotus, those things that owe their existence exclusively to men became the subject matter of history. Of all man-made things, these are the most futile. The works of human hands owe part of their existence to the material nature provides and therefore carry within themselves some measure of permanence, borrowed, as it were, from the being-forever of nature. But what goes on between mortals directly, the spoken word and all the actions and deeds which the Greeks called *praxeis* or *pragmata*, as distinguished from *poiesis*, that is, all modes of fabrication, can never outlast the moment of their realization, would never leave any trace without the help of remembrance. The task of the poet and historiographer (both of whom Aristotle still puts in the same category, because their subjects are *praxeis*), consists in making some-

⁵ Rilke, *Aus dem Nachlass des Grafen C. W.*, First series, poem X.

thing lasting out of remembrance. They do this by translating *praxis* and *lexis*, action and speech, into that kind of *poiesis* or fabrication which eventually becomes the written word.

History as a category of human existence is of course older than the written word, older than Herodotus, older even than Homer. Not historically but poetically speaking, its beginning lies rather in the moment when Ulysses, at the court of the king of the Phaeacians listened to the story of his own deeds and sufferings, to the story of his life, now a thing outside himself, an "object" for all to see and to hear. What had been sheer occurrence now became "history." But the transformation of single events and occurrences into history was essentially the same "imitation of action" in words which was later employed in Greek tragedy,⁶ where, as Burckhardt once remarked, "external action is hidden from the eye"⁷ through the reports of messengers, even though there was no objection at all to showing the horrible. The scene where Ulysses listens to the story of his own life is paradigmatic for both history and poetry; the "reconciliation with reality," the *katharsis*, which, according to Aristotle, was the essence of tragedy, and, according to Hegel, was the ultimate purpose of history, came about through the tears of remembrance. The deepest human motive for history and poetry appears here in unparalleled purity; since listener, actor, and sufferer are the same person, all motives of sheer curiosity and lust for new information, which, of course, have always played a large role in both historical inquiry and aesthetic pleasure, are naturally absent in Ulysses himself, who would have been bored rather than moved if history were only news and poetry only entertainment.

Such distinctions and reflections may seem commonplace to modern ears. Implied in them, however, is one great and painful paradox which contributed (perhaps more than any other single factor) to the tragic aspect of Greek culture in its greatest manifestations. The paradox is that, on the one hand, everything is seen and measured against the background of the things that are forever and, on the other, true human greatness was understood, at least, by the pre-Socratic Greeks to reside more in deeds and words, and

⁶ See *Poetics* 1448b25 and 1450a16-22. For a distinction between poetry and historiography see *ibidem*, ch. 9. The definition of tragedy as in ch. 6, 1.

⁷ *Griechische Kulturgeschichte*, ed. Kroener, II, p. 289.

was rather represented by Achilles, "the doer of great deeds and the speaker of great words," than by the maker and fabricator, even the poet and writer. This paradox, that greatness is understood in terms of permanence while human greatness is seen in precisely the most futile and least lasting activities of men, has haunted Greek poetry and historiography as it has perturbed the quiet of the philosophers. Heraclitus still thought that the greatest and the most human aspiration of mortal men was to reach for immortal fame, and while he denounced with violent bitterness the political conditions of his own time at Ephesus, he never condemned the realm of human affairs as such or doubted its potential greatness.

Prior to the Socratic school—with the possible exception of Hesiod—we encounter no real criticism of "immortal fame," but from then on its solution of the paradox became authoritative for all philosophy schools of antiquity. The solution taught that men ought to turn away from the whole realm of human action and not take too seriously the *pragmata tôn anthrôpôn* (Plato) because it would be absurd to think that man is the highest being there is (Aristotle). Even more telling, perhaps, is that Plato, as well as Aristotle, no longer believed that mortal men can "immortalize" (*athanatidzein*, in the Aristotelian terminology⁸ an activity whose object is by no means necessarily oneself, one's own immortal fame, but includes all kinds of occupation with immortal things in general), through great deeds or great words. To "immortalize" meant for them to dwell in the neighborhood of those things which are forever, to be there and present in a state of active attention, but without doing anything, without performance of deeds or achievement of works, for the proper attitude of mortals, once they have reached the neighborhood of the immortal, is actionless and even speechless contemplation: the Aristotelian *nous*, the highest and most human capacity of pure vision, cannot translate into words what it beholds⁹ and the ultimate truth which the vision of the ideas disclosed to Plato is "speechless."¹⁰ In other words, the paradox is resolved by denying to man, not the capacity to "immortalize," but the capability of measuring himself and his own deeds against the everlasting greatness of the cosmos, to match, as it were, the immortality of nature and the gods with an immortal

⁸ Nik. *Ethics*, 1177b33.

⁹ *Ibidem*, 1143a36.

¹⁰ *Seventh Letter*.

greatness of his own. The solution clearly comes about at the expense of "the doer of great deeds and the speaker of great words."

It is the same predicament which the historian originally was called upon to solve. His solution lies in the Greek concept of greatness. Praise, from which come glory and eventually everlasting fame, can be bestowed only upon things already "great," that is, things that have that emerging, shining quality which distinguishes them from all others and makes glory possible. The great is that which deserves immortality, that which should be admitted to the company of things that last forever and surround the futility of mortals with their unsurpassable majesty. Through history, men almost become the equals of nature and only those events, deeds or words that rose by themselves to the ever-present challenge of the natural universe are historical. Not only the poet Homer and not only the storyteller Herodotus, but even Thucydides, who in a much more sober mood was the first to set standards for historiography, tells us explicitly in the beginning of the *Peloponnesian War* that he wrote his work because of the war's "greatness," because "this was the greatest movement yet known in history, not only of the Hellenes, but of a large part of the barbarian world . . . almost mankind."

The concern with greatness, so prominent in Greek poetry and historiography, is based on the most intimate connection between the concepts of nature and history. Their common denominator is immortality. Immortality is what nature possesses without effort and without anybody's assistance, and immortality is what the mortals therefore must try to achieve if they want to live up to the world into which they were born, to live up to the things which surround them and to whose company they are admitted for a short while. The connection between history and nature is therefore by no means an opposition. History receives into its remembrance those mortals who through deed and word have proved themselves worthy of nature, and their everlasting fame means that they, despite their mortality, may remain in the company of the things that last forever.

Our modern concept of history is no less intimately connected with our modern concept of nature than the corresponding and very different concepts which stand at the beginning of our history. They, too, can be seen in their full significance only if their com-

mon root is discovered. The nineteenth-century opposition of the natural and historical sciences, together with the allegedly absolute objectivity and precision of the natural scientists, is today a thing of the past. The natural sciences now admit that with the experiment, testing natural processes under prescribed conditions, and with the observer, who in watching the experiment becomes one of its conditions, a "subjective" factor is introduced into the "objective" processes of nature.

The most important new result of nuclear physics was the recognition of the possibility of applying quite different types of natural laws, without contradiction, to one and the same physical event. This is due to the fact that within a system of laws which are based on certain fundamental ideas only certain quite definite ways of asking questions make sense, and thus, that such a system is separated from others which allow different questions to be put.¹¹

In other words, the answers of science will always remain replies to questions asked by men; the confusion in the issue of "objectivity" was to assume that there could be answers without questions and results independent of a question-asking being. Physics, we know today, is no less a man-centered inquiry into what is than historical research. The old quarrel, therefore, between the "subjectivity" of historiography and the "objectivity" of physics has lost much of its relevance.

The modern historian as a rule is not yet aware of the fact that the natural scientist, against whom he had to defend his own "scientific standards" for so many decades, finds himself in the same position, and he is quite likely to state and restate in new, seemingly more scientific terms the old distinction between a science of nature and a science of history. The reason is that the problem of objectivity in the historical sciences is more than a mere technical, scientific perplexity. Objectivity, the "extinction of the self" as the condition of "pure vision" (*das reine Sehen der Dinge*—Ranke) meant the historian's abstention from bestowing either praise or blame, together with an attitude of perfect distance with which he would follow the course of events as they were revealed in his documentary sources. To him, the only limitation of this attitude, which Droysen

¹¹ W. Heisenberg, *Philosophic Problems of Nuclear Science* (New York, 1952), p. 24.

once denounced as "eunuchic objectivity,"¹² lay in the necessity of selecting material from a mass of facts which, compared with the limited capacity of the human mind and the limited time of human life, appeared infinite. Objectivity, in other words, meant non-interference as well as non-discrimination. Of these two, non-discrimination, abstention from praise and blame, was obviously much easier to achieve than non-interference; every selection of material in a sense interferes with the historical process and all criteria for selection puts the historical course of events under certain man-made conditions, which are quite similar to the conditions the natural scientist prescribes to natural processes in the experiment.

We have stated here the problem of objectivity in modern terms, as it arose during the modern age, that believed it had discovered in history a "new science" which then would have to comply to the standards of the "older" science of nature. This, however, was a self-misunderstanding. Modern natural science developed quickly into an even "newer" science than history and both sprang, as we shall see, from exactly the same set of "new" experiences with the exploration of the universe, made at the beginning of the modern age. The curious and still confusing point about the historical sciences was that they did not take their standards from the natural sciences of their own age, but harked back to the scientific and, in the last analysis, philosophical attitude which the modern age had just begun to liquidate. Their scientific standards, culminating in the "extinction of the self," had their roots in Aristotelian and mediaeval natural science, which consisted mainly in observing and cataloguing observed facts. Before the rise of the modern age, it was a matter of course that quiet, actionless, and selfless contemplation of the miracle of being, or of the wonder of God's creation should also be the proper attitude for the scientist, whose curiosity about the particular had not yet parted company with the wonder before the general, from which, according to the ancients, sprang philosophy. With the modern age this objectivity lost its fundament and therefore was constantly on the look-out for new justifications. For the historical sciences the old standard of objectivity could make sense only if the historian believed that history in its

¹² Quoted in Friedrich Meinecke, *Vom geschichtlichen Sinn und vom Sinn der Geschichte* (Stuttgart, 1951).

entirety was either a cyclical phenomenon which could be grasped as a whole through contemplation (and Vico, following the theories of late antiquity, was still of this opinion) or that it was guided by some divine providence for the salvation of mankind whose plan was revealed, whose beginnings and ends were known, and, therefore, could be again contemplated as a whole. Both these concepts, however, were actually quite alien to the new consciousness of history in the modern age; they were only the old traditional framework into which the new experiences were pressed and from which the new science had risen. The problem of scientific objectivity, as the nineteenth century posed it, owed so much to historical self-misunderstanding and philosophical confusion that the real issue at stake, the issue of impartiality, which is indeed decisive not only for the "science" of history, but for all historiography from poetry and storytelling onward, has become difficult to recognize.

Impartiality, and with it all true historiography, came into the world when Homer decided to sing the deeds of the Trojans no less than those of the Achaeans, and to praise the glory of Hector no less than the greatness of Achilles. This Homeric impartiality, as it is echoed by Herodotus, who sets out to prevent "the great and wonderful actions of the Greek *and* the Barbarians from losing their due meed of glory," is still the highest type of objectivity we know. Not only does it leave behind the common interest in one's own side and one's own people, which, up to our own days, characterizes almost all national historiography, but it also discards the alternative of victory or defeat, which moderns have felt, expresses the "objective" judgment of history itself, and does not permit it to interfere with what is judged to be worthy of immortalizing praise. Somewhat later, and most magnificently expressed in Thucydides, there appears in Greek historiography still another powerful element that contributes to historical objectivity. It could come to the foreground only after long experience in *polis*-life, which to an incredibly large extent consisted of citizens talking with one another. In this incessant talk the Greeks discovered that the world we have in common is usually regarded from an infinite number of different standpoints, to which correspond the most diverse points of views. In a sheer inexhaustible flow of arguments, as the Sophists presented them to the citizenry of Athens, the Greeks learned to exchange their own viewpoint, their own "opinion"—the way the world appeared and opened up to them (*dokei moi*, it appears to

me, from which comes *doxa* or opinion)—with that of their fellow citizens. They learned to *understand*, not each other as individual persons, but to look upon the same world from each other's standpoint, to see the same in very different and frequently opposing aspects. The speeches in which Thucydides makes articulate the standpoints and interests of the warring parties are still a living testimony to the extraordinary degree of this objectivity.

What has obscured the modern discussion of objectivity in the historical sciences and prevented its ever touching the fundamental issues involved seems to be the fact that none of the conditions of either Homeric impartiality or Thucydidean objectivity are present in the modern age. Homeric impartiality rested upon the assumption that great things are self-evident, shine by themselves; that the poet (or the historiographer later) has only to preserve their glory, which is essentially futile, and that he would destroy, instead of preserving, if he were to forget the glory that was Hector's. For the short duration of their existence, great deeds and great words were, in their greatness, as real as a stone or a house, there to be seen and heard by everybody present. Greatness was easily recognizable as that which by itself aspired to immortality, that is, negatively speaking, as a heroic contempt for all that merely comes and passes away, for all individual life, one's own included. This sense of greatness could not possibly survive intact into the Christian era for the very simple reason that according to Christian teachings, the relationship between life and world is the exact opposite to that in Greek and Latin antiquity: in Christianity, neither the world nor the ever-recurring cycle of life is immortal, only the single living individual. It is the world that will pass away; men will live forever. The Christian reversal is based, in its turn, upon the altogether different teachings of the Hebrews, who always held that life itself is sacred, more sacred than anything else in the world, and that man is the supreme being on earth.

Connected with this inner conviction of the sacredness of life as such, which has remained with us even though for many security of the Christian faith in life after death has passed away, is the stress on the all-importance of self-interest, still so prominent in all modern political philosophy. In our context, this means that the Thucydidean type of objectivity, no matter how much it may be admired, no longer has any basis in real political life. Since we

have made life our supreme and foremost concern, we have no room left for activity based on contempt for one's own life-interest; selflessness may still be a religious or a moral virtue, it hardly can be a political one. Under these conditions, objectivity lost its validity in experience, was divorced from real life and became that "life-less" academic affair which Droysen rightly denounced as being eunuchic.

Moreover, the birth of the modern idea of history not only coincided with but was powerfully stimulated by the modern age's doubt of the reality of an outer world "objectively" given to human perception as an unchanged and unchangeable object. In our context the most important consequence of this doubt was the emphasis on sensation *qua* sensation as more "real" than the "sensed" object and, at any rate, the only safe ground of experience. Against this subjectivization, which is but one aspect of the still growing world-alienation of man in the modern age, no judgments could hold out: they were all reduced to the level of sensations and ended on the level of the lowest of all sensations, the sensation of taste. Our vocabulary is a telling testimony to this degradation. All judgments not inspired by moral principle (and these are felt to be old-fashioned) or not dictated by some self-interest, are considered matters of "taste," and this in hardly a different sense from what we mean in saying that the preference for clam chowder over pea soup is a matter of taste. This conviction, the vulgarity of its defenders on the theoretical level notwithstanding, has disturbed the conscience of the historian much more deeply because it has much deeper roots in the general spirit of the modern age than the allegedly superior scientific standards of his colleagues in the natural sciences.

Unfortunately it is in the nature of academic quarrels that methodological problems are likely to overshadow more fundamental issues. The fundamental fact about the modern concept of history is that it arose in the same sixteenth and seventeenth centuries which ushered in the gigantic development of the natural sciences. Foremost among the characteristics of that age, which are still alive and present in our own world, is the world-alienation of man, which I mentioned before and which is so difficult to perceive as a basic condition of our whole life because out of it, and partly at least out of its despair, did arise the tremendous structure

of the human artifice we inhabit today, and in whose framework we have even discovered the means of destroying it together with all non-man-made things on earth.

The shortest and most fundamental expression this world-alienation ever found is contained in Descartes' famous *de omnibus dubitandum est*, for this rule signifies something altogether different from the skepticism inherent in the self-doubt of all true thought. Descartes came to his rule because the then recent discoveries in the natural sciences had convinced him that man in his search for truth and knowledge can trust neither the given evidence of the senses, nor the "innate truth" of the mind, nor the "inner light of reason." This mistrust of the human capacities has been ever since one of the most elementary conditions of the modern age and the modern world; but it did not spring, as is usually assumed, from a sudden, mysterious dwindling of faith in God, and its cause was originally not even a suspicion of reason as such. Its origin was simply the highly justified loss of confidence in the truth-revealing capacity of the senses. Reality no longer was disclosed as an outer phenomenon to human sensation, but had withdrawn, so to speak, into the sensing of the sensation itself. It now turned out that without confidence in the senses, neither faith in God nor trust in reason could any longer be secure because the revelation of both divine and rational truth had always been implicitly understood to follow the awe-inspiring simplicity of man's relationship with the world: I open my eyes and behold the vision, I listen and hear the sound, I move my body and touch the tangibility of the world. If we begin to doubt the fundamental truthfulness and reliability of this relationship, which of course does not exclude errors and illusions but, on the contrary, is the condition of their eventual correction, none of the traditional metaphors for suprasensual truth—be it the eyes of the mind which can see the sky of ideas or the voice of conscience listened to by the human heart—can any longer carry its meaning.

The fundamental experience underlying Cartesian doubt was the discovery that the earth, contrary to all direct sense experience, revolves around the sun. The modern age began when man, with the help of the telescope, turned his bodily eyes toward the universe, about which he had speculated for a long time—seeing with the eyes of the mind, listening with the ears of the heart and guided by the inner light of reason—and learned that his senses are not

fitted for the universe, that his everyday experience, far from being able to constitute the model for the reception of truth and the acquisition of knowledge, was a constant source of error and delusion. After this deception—whose enormity we find difficult to realize because it was centuries before its full impact was felt everywhere, and not only in the rather restricted milieu of scholars and philosophers—suspicions began to haunt modern man from all sides. But its most immediate consequence was the spectacular rise of natural science, which for a long time had seemed to be liberated by the discovery that our senses by themselves do not tell the truth. Henceforth, sure of the unreliability of sensation and the resulting insufficiency of mere observation, the natural sciences turned toward the experiment which, by directly interfering with nature, assured the development whose progress has ever since appeared to be limitless.

Descartes became the father of modern philosophy because he generalized the experience of the preceding as well as his own generation, developed it into a new method of thinking, and thus became the first thinker thoroughly trained in that "school of suspicion" which, according to Nietzsche, constitutes modern philosophy. Suspicion of the senses remained the core of scientific pride until in our time it has turned into a source of uneasiness. The trouble is that "we find nature behaving so differently from what we observe in the visible and palpable bodies of our surroundings that *no* model shaped after our large-scale experiences can ever be 'true'"; at this point, the indissoluble connection between our thinking and our sense perception takes its revenge, for a model that would leave sense experience altogether out of account and therefore, be completely adequate to nature in the experiment is not only "practically inaccessible but not even thinkable."¹³ The trouble, in other words, is not that the modern physical universe cannot be visualized, for this is a matter of course under the assumption that nature does not reveal itself to the human senses; the uneasiness begins when nature turns out to be inconceivable, that is, unthinkable in terms of pure reasoning as well.

The dependence of modern thought upon factual discoveries of the natural sciences shows itself most clearly in the seventeenth century. It is not always admitted as readily as by Hobbes, who

¹³ Erwin Schroedinger, *Science and Humanism*, 1951, pp. 25-26.

attributed his philosophy exclusively to the results of the work of Copernicus and Galileo, Kepler, Gassendi, and Mersenne, and who denounced all past philosophy as nonsense with a violence matched perhaps only by Luther's contempt for the "*stulti philosophi*." One does not need the radical extremism of Hobbes's conclusion, not that man may be evil by nature, but that a distinction between good and evil does not exist, and that reason, far from being an inner light disclosing truth, is a mere "faculty of reckoning with consequences"; for the basic suspicion that man's earth-bound experience presents a caricature of truth is no less present in Descartes' fear that an evil spirit may rule the world and withhold truth forever from the mind of a being so manifestly subject to error. In its most harmless form, it permeates English empiricism, where the meaningfulness of the sensibly given is dissolved into data of sense perception, disclosing their meaning only through habit and repeated experiences, so that in an extreme subjectivism, man is ultimately imprisoned in a non-world of meaningless sensations that no reality and no truth can penetrate. Empiricism is only seemingly a vindication of the senses; actually it rests on the assumption that only common sense arguing can give them meaning, and it always starts with a declaration of non-confidence in the truth-or reality revealing capacity of the senses. Puritanism and empiricism, in fact, are only two sides of the same coin. The same fundamental suspicion finally inspired Kant's gigantic effort to re-examine the human faculties in such a way that the question of a *Ding an sich*, that is the truth-revealing faculty of experience in an absolute sense, could be left in abeyance.

Of much more immediate consequence for our concept of history was the positive version of subjectivism which arose from the same predicament: although it seems that man is unable to recognize the given world which he has not made himself, he nevertheless must be capable of knowing at least what he has made himself. This pragmatic attitude is already the fully articulated reason why Vico turned his attention to history and thus became one of the fathers of modern historical consciousness. He said: *geometrica demonstramus quia facimus; si physica demonstrare possemus, faceremus*.¹⁴ (Mathematical matters we can prove because we ourselves make them; to prove the physical, we would have to make

¹⁴ *De nostri temporis studiorum ratione*, iv.

it.). Vico only turned to the sphere of history because he still believed it impossible "to make nature." No so-called humanist considerations inspired his turning away from nature, but solely the belief that history is "made" by men just as nature is "made" by God and hence historical truth can be known by men, the makers of history, but physical truth is reserved for the Maker of the universe.

It has frequently been asserted that modern science was born when attention shifted from the search after the "What" to the investigation of "How." This shift of emphasis is almost a matter of course if one assumes that man can only know what he has made himself, insofar as this assumption in turn implies that I "know" a thing whenever I understand how it has come into being. By the same token, and for the same reasons, the emphasis shifts from interest in things to interest in processes, of which things were soon to become almost accidental by-products. By his day Vico had assumed that to penetrate the mystery of Creation it would be necessary to understand the creative process, whereas all previous ages had taken it for granted that one can very well understand the universe without ever knowing how God created it, or, in the Greek version, how the things that are by themselves come into being. Since the seventeenth century, the chief preoccupation of all scientific inquiry, natural as well as historical, has been with processes; but only modern technology (and no mere science, no matter how highly developed), which began with the technicalization of the processes of labor and work and ended with starting new natural processes, would have been wholly adequate to Vico's equation of knowing and making. For our technology does indeed what Vico thought divine action does in the realm of nature and human action in the realm of history.

In the modern age history emerged as something it never had been before. It was no longer composed of the deeds and sufferings of men, and it no longer told the story of events affecting the lives of men; it became a man-made process, the only all-comprehending process which owes its existence exclusively to the human race. Today this quality which distinguishes history from nature is also a thing of the past. We know today that though we cannot "make" nature in the sense of creation, we are quite capable of starting new natural processes, and that in a sense therefore we "make nature," to the extent, that is, that we "make history." It is true we have

reached this stage only with the nuclear discoveries, where natural forces are let loose, unchained, so to speak, and where the natural processes which take place would never have existed without direct interference of human action. This stage goes far beyond not only the premodern age, when wind and water were used to substitute for and multiply human forces, but also the industrial age, with its steam engine and internal combustion motor, where natural forces were imitated and utilized as man-made means of production.

The contemporary decline of interest in the humanities, and especially in the study of history, which seems inevitable in all completely modernized countries, is quite in accord with the first impulses that led to modern historical science. What is definitely out of place today is the resignation which led Vico into the study of history. We can do in the natural-physical realm what he thought we can do only in the realm of history. We have begun to act into nature as we used to act into history. If it is merely a question of processes, it has turned out that man is as capable of starting natural processes as he is of starting something new in the field of human affairs.

Since the beginning of the twentieth century technology has emerged as the meeting ground of the natural and historical sciences, and although hardly a single great scientific discovery has ever been made for pragmatic, technical, or practical purposes (pragmatism in the vulgar sense of the word stands refuted by the factual record of scientific development) this final outcome is in perfect accord with the innermost intentions of modern science. The comparatively new social sciences, which so quickly became to history what technology had been to physics, may use the experiment in a much cruder and less reliable way than do the natural sciences, but the method is the same: they too prescribe conditions, conditions to human behavior as modern physics prescribes conditions to natural processes. If their vocabulary is repulsive and their hope to close the alleged gap between our scientific mastery of nature and our deplored impotence to "manage" human affairs through an engineering science of human relations sounds frightening, it is only because they have decided to treat man as an entirely natural being, whose life process can be handled the same way as all other processes.

In this context, however, it is important to be aware how decisively the technological world we live in, or perhaps begin to

live in, differs from the technicalization which came about with the industrial revolution. This difference corresponds essentially to the difference between action and fabrication. Industrialization still consisted primarily of the technicalization and improvement in the making of objects and man's attitude to nature still remained that of *homo faber*, to whom nature gives the material out of which the human artifice is erected. The world we now have come to live in, however, is much more determined by man acting into nature, creating natural processes and directing them into the realm of human affairs than by building and preserving the human artifice as a relatively permanent entity.

Fabrication is distinguished from action in that it has a definite beginning and a predictable end: it comes to an end with its end product, which not only outlasts the activity of fabrication but from then on has a kind of "life" of its own. Action, on the contrary, as the Greeks were the first to discover, is in and by itself utterly futile; it never leaves an end product behind itself. If it has any consequences at all, they consist in principle in an endless new chain of happenings whose eventual outcome the actor is utterly incapable of knowing or controlling beforehand. The most he may be able to do is to force things into a certain direction, and even of this he can never be sure. None of these characteristics is present in fabrication. Compared with the futility and fragility of human action, the world fabrication erects is of lasting permanence and tremendous solidity. Only insofar as the end product of fabrication is incorporated into the human world, where its use and eventual "history" can never be entirely predicted, does even fabrication start a process whose outcome cannot be entirely foreseen, and is therefore beyond the control of its author. This only means that man is never exclusively *homo faber*, that even the fabricator remains at the same time an acting being, who starts processes wherever he goes and with whatever he does.

Up to our own age, human action with its man-made processes was confined to the human world, whereas man's chief preoccupation with regard to nature was to use its material in fabrication, to build with it the human artifice and defend it against the overwhelming force of the elements. The moment we started natural processes of our own—and splitting of the atom is precisely such a man-made natural process—we not only increased our power over nature, or became more aggressive in our dealings with the

given forces of the earth, but for the first time we have taken nature into the human world as such and obliterated the defensive boundaries between natural elements and the human artifice by which all previous civilizations were hedged in.

The dangers of this acting into nature are obvious if we assume that the above mentioned characteristics of human action are part and parcel of the human condition. Unpredictability is not lack of foresight, and no engineering management of human affairs will ever be able to eliminate it, just as no training in prudence can ever lead to the wisdom of knowing what one does. Only total conditioning, that is, the total abolition of action, can ever hope to cope with unpredictability. And even the predictability which comes about through terror can never be sure of its own future. Human action, like all strictly political phenomena, is bound up with human plurality, which is one of the fundamental conditions of human life insofar as it rests on the fact of natality, through which the human world is constantly invaded by strangers, newcomers whose actions and reactions must be unknown to those who are already there and are going to leave in a short while. If, therefore, by starting natural processes, we have begun to act *into* nature, we have manifestly begun to carry our own unpredictability into that realm which we used to think of as ruled by inexorable laws. The "iron law" of history was always only a metaphor borrowed from nature; but the fact is that this metaphor no longer convinces us because it has turned out that natural science can by no means be sure of an unchallengeable rule of law in nature as soon as men, scientists or technicians, or simply builders of the human artifice, decide to interfere and no longer leave nature to herself.

Technology, the ground on which the two realms of history and nature have met and interpenetrated each other in our time, points back to the connection between the concepts of nature and history as they appeared with the rise of the modern age in the sixteenth and seventeenth centuries. The connection lies in the concept of process: both imply that we think and consider everything in terms of processes, and are not concerned with single entities or individual occurrences and their special separate causes. The key words of modern historiography—development and progress—were, in the nineteenth century, also the key words for the then new branches of natural science, particularly biology and geology, the one dealing

with animal life and the other even with nonorganic matter in terms of historical processes. Technology, in the modern sense, was preceded by the various sciences of natural history, the history of biological life, of the earth, of the universe. A mutual adjustment of terminology of the two branches of scientific inquiry had taken place before the quarrel between the natural and historical sciences preoccupied the scholarly world to such an extent that it confused the fundamental issues.

Nothing seems more apt to dispel this confusion than the latest developments in the natural sciences. They have brought us back to the common origin of both nature and history in the modern age and demonstrate that their common denominator lies indeed in the concept of process—no less than the common denominator of nature and history in antiquity lay in the concept of immortality. But the experience which underlies the modern age's notion of process, unlike the experience underlying the ancient notion of immortality, is by no means primarily an experience which man made in the world surrounding him; on the contrary, it sprang from the despair of ever experiencing and knowing adequately all that is given to man and not made by him. Against this despair, modern man summoned up the full measure of his own capacities; despairing of ever finding truth through mere contemplation, he began to try out his capacities for action, and by doing so he could not but become aware that wherever man acts he starts processes. The notion of process is first of all not an objective quality of either history or nature, but the inevitable result of human action. The first result of men acting into history is that history becomes a process, and the most cogent argument for men's acting into nature in the guise of scientific inquiry is that *today*, in Whitehead's formulation, "nature is a process."

To act into nature, to carry human unpredictability into a realm where we are confronted with elemental forces which we shall perhaps never be able to control reliably is dangerous enough. Even more dangerous would be to ignore that for the first time in our history the human capacity for action has begun to dominate all others—the capacity for wonder and thought in contemplation no less than the capacities of *homo faber* and the human *animal laborans*. This, of course, does not mean that men from now on will

no longer be able to fabricate things or to think or to labor. Not the capabilities of man, but the constellation which orders their mutual relationships can and does change historically. Such changes can best be observed in the changing self-interpretations of man throughout history which, though they may be quite irrelevant for the ultimate 'what' of human nature, are still the briefest and most succinct witnesses to the spirit of whole epochs. Thus, schematically speaking, Greek classical antiquity agreed that the highest form of human life was spent in a *polis* and that the supreme human capacity was speech—*dzoon politikon* and *dzoon logon echon* in Aristotle's famous twofold definition; Rome and mediaeval philosophy defined man as the *animal rationale*; in the initial stages of the modern age, man was thought of primarily as *homo faber*, until, in the nineteenth century, man was interpreted as an *animal laborans* whose metabolism with nature would yield the highest productivity human life is capable of. Against the background of these schematic definitions, it would be adequate for the world we have come to live in to define man as a being capable of action; for this capacity seems to have become the center of all other human capabilities.

It is beyond doubt that the capacity to act is the most dangerous of all human abilities and possibilities, and it is also beyond doubt that the self-created risks mankind faces today have never been faced before. Considerations like these are not at all meant to offer solutions or to give advice. At best, they might encourage sustained and closer reflection on the nature and the intrinsic potentialities of action which never before has revealed its greatness and its dangers so openly.¹⁵

¹⁵ The point made earlier about the influence of science upon history was also made by Edgar Wind more than twenty years ago in his contribution to *Philosophy and History, Essays presented to Ernst Cassirer* (Oxford, 1936), "Some Points of Contact between History and Natural Science." Wind shows that the latest developments of science which make it so much less "exact" lead to the raising of questions by scientists "that historians like to look upon as their own." When I wrote this article I was not aware of Wind's essay. It seems strange that so fundamental and obvious an argument should have played no role in the subsequent methodological and other discussions of historical science.