contribution in its process, but in every step of progress makes its own contribution to what has, up to that point, come to be.

For not only thought can be experimental, but world history itself is an experiment—a real experiment conducted in the world and aimed towards a possible just and proper world. This kind of history is also an operative experimental probe, a real-probe, in countless objective-real models, in the direction of a still outstanding instance. Towards an omega instance as was always intended in philosophical anticipation: true being (ontos on, substance, full identity of appearance and essence). And so of course it is no fact but only an imperilled fieri of true being, with no ontology other than that of not-yet-being.

This *not-yet* first provides the self-changing process in the world and above all the changeable in the world with its flow and its plus—the situation of the being-before-itself of still objective possibility. However, the *fieri* comprehended with, in, and from this (possibility is the last-found category in the *plus ultra* of philosophy) occurs only as a lasting experimental extraction, model figuration and figurative model of outstanding true being. Therefore, experimenting and replete with experiments, the human *fieri* moves ahead: the advance of history, moving not in unilinear development but entirely polyrhythmically and polyphonically.

For the same reason, a possible governing reference point of the historical where-to is locatable only in a utopian and not in an already attained and established (well-established) field. There is only an unnegotiable *direction*, but there are many testimonies and traits in the experiment that is known as history, and in the laboratory that is the world.

### 15. Differentiations in the Concept of Progress

### A GOOD CONCEPT

There are words that have an especially lucid effect in themselves. They speak clearly; they seem reliable. Their meaning,

the concept they announce, seems so clear and straight-forward that they require no further debate. The concept of progress is a prime case in point; nowadays it is despised or respected according to the promise of one's situation. This materially radiant notion also has a formally lucid effect, as if its referent were particularly difficult to contend for but easy to understand. Hence the object of progress appears not only as luminous, but as a thing simple and clear in itself.

### LOSSES ON THE MARCH FORWARD

Yet men have always known that all advancement is not advantage. Something can be lost in the process, as in the awakening of a child into adolescence, or of a youth into manhood. Something is disposed of as a man matures, but not always "set aside," which would be less culpable in the child and possibly more noble in the youth.

And, not materially comparable with the foregoing, yet so constituted that when a previous state is compared with the later condition, the former would seem very much more tolerable, in the process of social maturing too there is often matter for regret in the midst of rejoicing. An obvious example is the obscene condition of the working class in Britain during the undeniably progressive Industrial Revolution. Admittedly this misery was the precondition of the initial unleashing of the forces of capitalist production. Negation, complete dehumanization, was dialectically self-generated. Yet what a ghastly minus was characterized as progressive—"progressive" in the same sense as scurvy or tuberculosis. And this was not only a minus for the sake of the common achievement of a plus, but a genuine release of the forces of production in the midst of the plus. The entire nature of emergent capitalism is to be progressive—yet darkly progressive.

### REGRESSION AND THE "HERALD'S STAFF"

At the same time the shadows are quite contradictory and therefore belong to the movement forward itself. But how can it be, if in the course of that progression which allows the positing of the afterwards and of that which will come later as that which will be better, if in progress, in an advance that is not merely numerical, this course brings dead reversals with it? That is, reversals that are not implicitly necessary dialectically, as in the case of the connexion between the increased misery of exploitation and the Industrial Revolution. To take the most hideous example, Hitler was by no stretch of the imagination the negation bringing socialism to final victory. And in this respect there is no certain chronological index of progress, by which what happens later in history is somehow or on the whole a progressive plus compared with what has gone before. If that seems a truism, well it didn't seem so to Hegel; for the Peloponnesian War after the age of Pericles, and the Thirty Years War after the Renaissance, put serious difficulties in the way of his concept of negation—otherwise wholly in the service of progress. And the thorn of this apparent truism can cut so deep that Rousseau—for the very sake of bourgeois-democratic progress —described all history to date, since the dawn of "inequality among men," as deterioration; and denounced the whole progression of civilization to date as a degenerate period compared with the happy primeval age of Nature.

An abstract and absurdly excessive condemnation, yet it registered proficiently the actual reversals of the advance: as against an abstract idolization of the passage of time in itself, by means of which the time-fetishistic ideology of progress in later social democratic thought postulated an automatic progress—a supposition based on the crude economics that could divine from an automatic growth of capitalism the "subsequent stage" of socialism. This kind of triumphalistic progressology did no service to progress, but rather harmed the real advance forwards; for the most part, it served only as the ideology of an

individual disinclination actually to be a cog in the mechanism of history. The plus sign, says Hermann Cohen (not inexactly), is the herald's staff of time; but mere time has often (and not always unjustly) been represented by the image of the hourglass—with sand running down and out, and the scythe nearby.

The plus sign as a herald's staff for the march ahead presupposes for objectively favorable times, for reversals, or for a campaign on tricky ground, men to bear it aloft. Otherwise progress—not comfortable, never formal—becomes no more than the fetish of duration for its own sake, and occasionally one capable of injury or crippling. —As with the Hitler period that followed or was even produced by the age that believed in an automatic tout va bien.

# IRREGULAR DEVELOPMENTS IN THE TECHNOLOGICAL BASIS AND IN THE SUPERSTRUCTURE

But now we must turn to that time and that tract which are efficacious and informed with effort, and in which a movement forward is uniquely alive.

Here some (now pertinent) theoretical difficulties of the concept of progress appear, which require more precise differentiation. Now differentiation occurs quite materially in the object itself; it need only be philosophically portrayed (for of course philosophy is appropriate). Therefore a progress that is not dearly purchased at the price of misery (let alone of perversion) is not always uniformly apparent in the basis, and then in the superstructure. It is quite different in the functional group: the forces of production and conditions of production (economic basis) on the one hand, and the functional (not only reflex) group determined thereby—the superstructure—on the other hand. For, like the conditions, the forces of production can feature an advance with which the superstructure sometimes not only does not comply, but to which it is occasionally even opposed in terms of a particular cultural deficiency. A minor

though especially striking instance of this is apparent in the development of artificial lighting—as shown in a display of significant examples in a science museum. There was a long period of aesthetic and technical evolution from the pine-splinter and the clay lamp to the Roman or the Byzantine candelabra, and to those mosque lamps which are oriental fairy tales in themselves. And so on, with passable improvements, until the paths of technical and aesthetic progress that had been one for so long separated with the advent of the ever brighter though increasingly ugly oil lamp, the gas mantle which offered no more than a photometric brilliancy, and the filament lamp—at first only a crude glare but then made so acceptable with the aid of frosted glass or shades that its exceptional brightness now no longer dazzles the eyes. Yet, despite all this, even today a candelabrum set on an old mahogany table offers a more tender luminosity and a more convivial light.

A minor example, and one that cannot be pressed too far. Yet for a long time technical improvement and aesthetic development in lighting kept in step: there is no need to romanticize the case. Nevertheless, in the major and important matter—just at the point of intersection of technology and culture—there is Marx's famous diagnosis of what he calls "disproportionate development." In the Introduction to his Contribution to the Critique of Political Economy,30 Marx refers to the lack of proportion between the high level of artistic achievement and the low level of technical development in ancient Greece, and to the reverse relationship in the modern capitalist era. According to Marx the great epic can be produced only at a relatively primitive stage of technology; consequently the nature of progress can be very different in the forces of production and in the cultural superstructure. Similarly, with regard to progress in the relations of production, i.e. the specific basis or infrastructure, in relation to the superstructure. Bach or Leibniz do not correspond in the least to the wretchedness of Germany at the time, which only, so to say, wet their feet, whereas on the other hand a fully developed state of capitalism could be damaging to the muses as well as to the masses. "Capitalist production," Marx

says with special emphasis in his Theories of Surplus Value, "is inimical to certain branches of creative production such as art and poetry." Without this insight, without this separation of an economic and State evolution from a hardly so happy development of the epic, one would have "the fanciful imagination of the French eighteenth century which Lessing satirized so admirably." Again this implies that politics and art were not always intercommunicating channels with regard to the rising bourgeoisie. The material connexion between the determinative basis and the superstructure which it determines, and which has a reciprocal effect on it, is limited; obviously progress does not occur at the same rate and at a proportionate level of achievement in the basis and in the superstructure. And something else is supremely decisive with regard to the difference in levels of development, and with regard to the goal which is so essential to the category of progress throughout: As soon as a work is not only significant but continuously significant and therefore forward-pointing, in terms of its goal, it often goes far beyond the so-called "totality" of a society. Otherwise it would necessarily share in the desuetude of a past infrastructure, and also a partial (political) superstructure. Otherwise there would be no enduringly effective cultural legacy—which is a matter not of full-bottomed wigs (whether at a fancy-dress ball or on the stage), but of Bach and Leibniz; a matter not of the politics of Renaissance princelings, but of the culture of the Renaissance. Such major yields from what-has-been do not perish—in contrast to considerable areas of their infrastructure, and also of some superstructures. They are themselves taken up in a specific and still by far unsurpassed progress forward, with the continuing revelation of ever new aspects of their content. Therefore there is every reason to speak of disproportionate development in this respect too, i.e. of continuing development in Werther, but also of a development wholly locatable contemporaneously in Prussian common law circa 1794. And every reason as well to associate the accompanying superstructure of Faust or Werther or The Magic Flute, in accordance with its far distant or high set goal, with another form of progress,

### A PHILOSOPHY OF THE FUTURE

should it happen to correspond with the mere transient harmony of the forces of production and productive relations.

# ART IMPARTIAL; ART AS A BARRIER TO THE ADVANCE OF CULTURE

But again we encounter the doubt and hesitation that arose with the movement forward—or rather: not this time with the movement itself, but with new snares in its all too straight way. The aporias met with now arise primarily from new valuations of forms which had long been assessed as mere first steps to supposedly more proficient artifacts. For a long time Egyptian pictorial works of art were considered to be "crude" precursors of Greek creations; one reason for this was the assessment of Egyptian plastic art by analogy with the actually "inelegant" archaic art of Greece. Obviously the classical ideal of beauty provided the prejudiced standard of evaluation; from that viewpoint even Thorvaldsen31 would seem to be an example of "progress" in comparison with the head of King Zoser from the Third Dynasty. And Oedipus' answer would have solved not only the riddle of the Theban but the secret of the Egyptian sphinx; and his answer was "Man!"-man in an exclusively Greek-classical image.

Nowadays this supposed progress from Egyptian to Greek sculpture no longer seems so obvious. The Egyptians, indeed, have been awarded a credit mark for the homogeneity of their sculpture. In place of the classicist devaluation of all non-Attic art, Alois Riegl introduced the concept of Kunstwollen, in the sense of the specific artistic intentions and formal problems particular to any great culture. (The point itself is hardly novel: the nexus of problems had already been raised in the eighteenth century by Richard Hurd in his Letters on Chivalry and Romance [1762], at the time of the initial re-encounter with Gothic art.) Later, Worringer (in Abstraction and Empathy, 1908) more than dubiously psychologized, dualized and irrationalized the concept of Kunstwollen (specific artistic intention); yet

Riegl himself (Questions of Style, 1893; The Late Roman Art Industry, 1901) was still blissfully unconscious of a reactionary mandate, and only the classicist schema had to give way. In the perspective of Kunstwollen, in the end even non-European art was elevated without any mediatization; the alleged supremacy of later Greek work over Egyptian sculpture (the "developmental theory") vanished. Greek art no longer appeared so unquestionably progressive in relation to Egyptian art; and this became the starting-point for consideration of new theoretical problems in the concept of progress itself. Shortly after Riegl, of course, the dilemma impinged on the declining bourgeoisie's interest in dismissing progress itself as an historico-philosophical category, and considering it unhistorical—in specific cultural matters at least. The multiform existing differences between technical and cultural levels of achievement were also exploited for this purpose, and entirely played up to the point of assuming a non-historicity of art and its intentionality.

Alfred Weber's sociology of culture belongs to the same movement. He does allow progress validity in the "social process" and in the technical-scientific "process of civilization," but the "cultural movement" that he would have as existing substantially beyond these "externalities"—outside this "casing"—would be discernible in "rhythms of life" quite different to those of progress as a process of totalization.

For Hegel, on the other hand, history as a whole consisted of "progress in consciousness of freedom"—which alone made it history. For Hegel, it was still a coherent human progress, in accordance with the basic axiom of his philosophy of history: Tantae molis erat humanam condere gentem (Such toil was required to establish the human race).<sup>32</sup> On the other hand, the "recovery"—so eminently meritorious in itself—of art that had hitherto been so undervalued (so-called primitive art as well) led ultimately, in the age of bourgeois decline, of anti-democracy, to the general arrestation of progress in culture. Not only the humanity of the Ninth Symphony but the unity of the human race (already posited by the Stoics, who conceived of progress as coherent, as a matter of universal history)

### A PHILOSOPHY OF THE FUTURE

was retracted by Fascism. This despite the fact that the aporias of the concept of progress to date, the theoretical difficulties of a concept far too straight-forwardly applied to Europe, were and are a matter of the breadth of art history, *and* of the wholly representative and aesthetic intrinsic valuation of non-Greek and above all non-European art.

# "CULTURAL SPHERES," GEOGRAPHISM AND A MULTIPLICITY OF VOICES

Other attempts are made to use the indisputably problematical for extrinsic ends. The dubious concept of Kulturkreise or cultural spheres—which extends far beyond Riegl—was applied to fine art in general. Consequently a new aporia appears in the concept of progress, one arising from its unilinearity, yet now related to the contradictions of a real universal history. It is the aporia of a deficiency of historical space: that is, the difficulty of accommodating the gigantic amount of non-European historical material in any adequate representation. Therefore the mere succession of progress (that European if not predominantly German time-axis applied by Herder, Hegel and Ranke—though with many simultaneous asides, or side-altars) is paid for anew. According to this theory, Babylon and ancient Egypt can be treated very simply as undoubtedly bygone cultures at the beginning of written history; yet this categorization seems inappropriate for China, India and so on, which—unlike Babylon—have not disappeared. Accordingly, in the case of ancient Egypt and Babylon as well, their extensive after-effects, their long-existing river bed and river system, are not adequately situated. The reactionary theory of cultural spheres certainly did not wish, contre coeur, to absolve China or India from this historical banishment—quite the reverse. Of course, it had affinities with arch-imperialist geopolitics and worked with the reactionary shading which in Fascism quite penetratingly required the words "area" and "form" before the undesirable process—term "time." Hence, in the case of Frobenius,

Spengler and other "morphologists," a kind of geographism prevailed in place of an all too unilinear historicism. It worked not with movements of progress but only with circumstances of biological maturation within the specific "areas of culture," and above all with ultimate symptoms of senility. Of course these separated processes were valid uniquely within the individual cultural spheres, not—so to speak—within the totality and for the totality of an historical process conceived of as a continuum. Accordingly, symptoms of ageing (but these alone) would be preordained for the whole of history—for its nihilistic last moments; and could be confirmed rather than removed by the splintering action of geographism.

This would mean a surrender not only of the Stoic concept of a united humankind, but above all of the Augustinian notion of a unified history of the human race. Moreover, the specific concept of the "process" of history would be dissolved-that concept with which the still rising bourgeoisie expanded the more conservative eighteenth-century notion of "progress." Expanded, that is, with a kind of historical chemistry that can be observed not only in the Romantic philosophy of Nature but in the philosophy of history, and especially in that of Hegel. For Hegel's notion of progress conceived of a "processing out" of content, as if there were the increasing gleam of a "silver vein" of essential being in the fermenting mass of the metal of history; and above all, for Hegel, this processing out would be ultimately uniform: with becoming-for-itself as the universally synthetical unique goal. But all this and more is missing from the doctrine of cultural spheres, from the attempts at cordoning off, and the supposed major islands (without any system of intercommunication) which Spengler's "morphology" above all spared from world history. Then not only Egypt, India or China would be a ghetto in itself, but Greece (with its "Euclidean cultural spirit") would be radically separated from the later West (with its "Faustian cultural spirit"). Of course the same isolating geographism was then offered as a broad and particularly accommodating storage space for all these cultures and their history. The latter was assessed purely according to the analogy

of childhood, youth, manhood and old age; therefore timesomehow still undeniable—was itself related to a "sphere"; with a now permissible juxtaposing or co-existence of several cultures. Hence time, like the life of organisms, would become cyclic, and progress would be made to describe an ultimately entirely repetitive curve. But because such curves or cycles almost without limit would be juxtaposed on the earth without any precedence and subsequence, even without any necessary togetherness, even this geographically divisive spatial categorization is a static obstacle to an historically progressive categorization in time. Accordingly, the aporia which resulted from the unilinear succession of time as far as the reception or insertion of the historical (and particularly the non-European) material was concerned, would be avoided, indeed-so to speak-removed. But by recourse to a truly drastic measure: the demise of the coherent process of history itself, which unites countries, people and epochs.

Nevertheless, even here the adversary calls our attention to something which progress immediately deprives him of. As with Kunstwollen and its consequences, here too (if "space" is not poisoned) an implication can emerge quite different to that envisaged by the advocates of cultural spheres. They would divide history into sectors, islands and autarchies, and artificially mark off a construction that is already extremely artificial. Then at best history would look like a circus with three or more rings, where—simultaneously—acrobats perform, horses show their paces, and the fire swallower displays his skill, but all in isolation. Or historical time, because it does not assist the doctrine of separate spheres of culture, and is not sufficiently functionless and aimless, is transformed into a group of formally measuredoff circular mountains; and history becomes a lunar landscape. Reactionary geographism does not offer any perspective beyond this; from start to finish it is empowered only to destroy the impulse of progress and its concept. Nevertheless (and this is a kind of rational stratagem) the category of space (here both disfigured and exaggerated) has no difficulty in accommodating the immense historical material of the earth. It is therefore a question (once the theory of cultural spheres has been tried and found wanting) of allowing a kind of subsidy of space in the chronological line of history—quite without reference to the interested statics of geographism. In other words, it is a question of considering whether, within the wholly processual succession of history, at least as many simultaneous or chronologically successive settings are not needed and demonstrable as, say, are required to provide an appropriate straightness of execution in epic art. Admittedly, the events portrayed in different settings in the great epics are interwoven with great artistry, whereas Europe and India-and even China-did not (or virtually did not) communicate with one another for thousands of years; and the stages of social development of the various nations of the earth are hardly "simultaneous." Nevertheless the postulated multiplicity of voices is possible: a methodic profusion, an interweaving of time and of epochs, and therefore a spaciousness in the flow of history, which would in no way necessitate any recourse to geographism.

If the lack of, or disrupted, communications between nations, and above all the different stages of social development, should happen to effect a separation, there is no resulting disturbance to the uniform movement: a symphony (to introduce a methodically apt formal analogy) does not feature a continuo of all voices—on the contrary. In the case of all breaks (and is there any reality without a break?) the uniformity of procedure and performance is already guaranteed by the uniform regularity of the social development and the never absent relationship of basis and superstructure. Everywhere there is an advance from a primitive commune, through class societies, to the ultimate maturity of socialism; and everywhere, in all ensembles of social relations, there is the human element—from the anthropological to the humanum—which colors these ensembles so variously, and holds them in a uniform embrace. Undoubtedly so polyphonically cohesive a picture is much more difficult in the case of universal history than in that of periodization; in universal historical terms, at least, it requires a multiverse—and chronologically too. But the concept of progress hardly founders with

this productive complication: in utter contrast to geographism with its stationary and stagnant effect.

The occurrent and existing multiverse of cultures is itself evidence that the humanum is still in the process of becoming conscious of its freedom and selfhood; that it is not yet discovered, but sought for and experimented for everywhere. Therefore this humanum (still in process), together with the many experimental, explorative and contributory paths towards it, provides the only genuinely tolerant (i.e. utopian-tolerant) point of time. And the more nations and cultures belong to the humanist camp, the larger and surer will be the reality and therefore the conceivability of a single goal for the multiverses in the new history of culture.

# A "FLEXIBLE" TIME STRUCTURE IN HISTORY, ON THE ANALOGY OF RIEMANNIAN SPACE

Time is only because something happens, and where something happens, there time is. But not enough thought is given to the matter of whether and how far the variant "that" of that which happens, proclaims itself in the variant form of its flow. This is quite clear in the case of time that is merely experienced at least with regard to subjective (often all too subjective) perception and ideation. Here the perception of time (for reasons that need not be adduced at this point) is quite different in effect from the representation of time—i.e. inversely. A lively hour passes quickly, but a dreary one creeps by; in memory, on the other hand, hours that have been enlivening, or "great" days, expand considerably, whereas entire months of dreariness contract in reminiscence to the point of nothingness. But of course this varying estimate of a flow of time that is always the same in content in each specific case shows that mere experiencetime still cannot provide a satisfactory resolution of our problem. For this subjective representation refers only to the length of the occurrence, exactly as in the case of time-by-the-clocktime wholly external. Here, at the most a substantial, qualitative distinction is indicated—one between "empty" and "full" time. Yet there is something here that is not represented by conventional, clock-measured, non-subjective, formal-metric time.

But in clock-time, of course, the changing and above all inconsistent units of mere experience are absent. Clock-time is uniformly divided and proceeds in equal periods; it advances "inexorably": that is, uniformly. Hence it can be expressed by a numerical progression, which makes both the clock-face and the calendar possible. But the form of progression denoted in this way is wholly indifferent to the contents which occur or do not occur within it. Time-by-the-clock is abstracted from time-as-it-is-lived, and also made abstract; it wholly rectifies time lived, but at the price of formal rigidity. This inflexibility is indispensable in order to measure time—and for working time (even though this may also be qualitatively evaluated in a different way), for historical chronology, for the terms of validity of legal contracts; as the foot-rule is to the spatial arts, so the metronome is to the arts of time. But clock-time never indicates "emptiness" or "fulness," as still semi-quantitative determinations of density: for time-by-the-dial is always uniformly dense. Or, as abstract time, it is everywhere uniformly empty, together with its advance or progression itself, in which—evidently—no qualitative progress is indicated intrinsically. Not even a "relentless flow" is shown by the formal ticking on of clock-time, for then contents from a quite different realm are included.

The Marschallin in the Rosenkavalier stops all the clocks at night because they record time, and time runs down towards old age and death; this action superimposes age and time on the movement of the hands just as a tin memento mori with a perpendicularly moving scythe is attached as an ornament to some baroque clocks. And if it is true that the wheel of history, in the long run at least, cannot be turned back, then this wheel means the addition wholly of tendential time (even though it is a figure drawn from the clock wheel; and even though this

retains the positive forward motion of the clock-wise clock's hand), and is therefore a very qualitative time, and not an intrinsically neutral clock-time.

And even if clock-time, as that of chronology, is necessarily at the basis of every historical-substantial time, at best it is not much more than the rigid skeleton beneath the flesh and blood of tendency-time. If clock-time is absolutized, it is a counter-concept to every attempt to conceive of the form of time on occasion (that is, when its contents require it) as non-rigid, even as "flexibly" as the new, no longer purely Euclidean physics grasps and comprehends space under certain micro- and above all macro-conditions. Clock-time, on the other hand, beats continually with the same chronometric rhythm, showing forth the abstract, simplest form of coherent succession of the uniform one-after-the-other. And much more than mere *rubato*, and a mere change of tempo, is necessary to deal fittingly with *historical time and its "times."* 

Initially, the question of time in inanimate yet impelled matter seems a simpler problem. Because it is quantitative, this measurement concurs with the uniformly constant succession of numerical progression. And, physically, time plays not in the remotest way the same role as space—so long conceived of as typically uniform. It did not play this role even for Galileo, who concerned himself with the calculation of non-uniformly accelerated motion. And not for Newton, for whom time as t was only a quantitative representation of a variable independent of events, which "of itself, and from its own nature, flows uniformly without regard to anything external," in order to permit numerically exact limit transitions. An essential feature of historical time is exactitude of orientation-irreversibility, and this has always been absent from the equations of physics. Only the second law of thermodynamics, which treats of so-called "entropy" in a closed system, recognizes irreversible orientation in the concept of time—analogously expressed in a nonequation; but this second law, the postulation of entropy, is also the most anti-structural of the major laws of physics.

The new physics of the relativity and quantum theories has

treated the category of time from entirely new viewpoints, above all in terms of Einstein's critique of the Newtonian presupposition of a simultaneity of all—even the remotest—events. As is well known, simultaneity exists (at least with differences so minute that they can be ignored) only for adjoining positions, but is not transportable through large tracts of space. Therefore very far distant places do not enjoy a simultaneous moment; and not only on account of the non-measurability of this simultaneity (which in any case would be exclusively an operativeidealistic and not a factual-real confirmation). Every place, according to Einstein, has its own specific time—at least with regard to the moment. However: although the theory of relativity got under way with time problems ("point events") and the quantum theory is also full of them (time only in the case of an aggregate of quanta, not in the case of the individual effective quantum), it remains true that time precisely is ultimately declassed (and indeed from the start) in the first quantized and then mathematized concept of Nature found in physics. As not particularly prominent one-dimensional time, it is connected with the three dimensions of space, and, in four-dimensional multiplicity, produces no asymmetry. Each "world point" ("now" and "here") is determined by its combined space-time coordinates  $x_1$ ,  $x_2$ ,  $x_3$ ,  $x_4$ ; but—inclusively of the temporal "co-ordinate axis"—these co-ordinates are only numbered values, and time is not distinguished from them by any special characteristic. Ultimately, this means that in physics there is no question of specifically natural-historical time as the mode of being of a tendential event.

But the case is different with space conceived in so novel and flexible a manner, although in it time precisely is declassed by total mathematization; and the concept of space of the new physics is very closely related to its concept of time. However, it is not this relationship (with an a-historical, pure mechanical time) that is in question here, but only the variable metrics itself—no longer Euclidean and therefore applied to space above all. Therefore, precisely on the basis of flexibly conceived Riemannian space, it is possible to conceive of something

analogous that would assist the formation of a *non-rigid concept of time in history*. It would assist this concept in the midst of its progress aporias and (closely related to these) the aporias of the allocation and classification of historical material.

Riemannian space is not intrinsically rigid, but rather variable; it allows of changes in its proportions: not on grounds of pure operative-idealistic calculation, but overwhelmingly for objective reasons. Accordingly, Riemann assumed objectively (thus giving "room" for the theory of relativity) that the metric field is not rigidly given once and for all, but depends causally on matter and changes with matter; therefore the field does not adhere to a static homogeneous form, but to the form of changeable events. Although extensions and complications of Einstein's theory of relativity still have to be proven, the objectively variant distribution and movement of matter in the universe itself conditions non-Euclidean variable metrics. This is significant in terms of a permissible—indeed a requisite analogy for the concept of historical time, precisely because the historical material is diversely distributed. Therefore, in contrast to the concept of space of modern physics, the sphere of plasticity—of visibility—is not relinquished; and the analogy (as is methodically concordant) provides only a preliminary pointer: in any case, one may refer from a natural space to an historical time only with considerable qualifications. Conventional history, however, does not recognize the problem of variable dimensions of time, let alone that a non-rigid concept of time itself might be called for on the basis of the variant distribution of the historical matter. The four-dimensional spacetime world, as conceived of by modern physics above all for "macrocosmic"—i.e. astronomical—conditions, is certainly not so constituted that time flows within it as a mode of being of processually substantial motion. Physical time (with the exception of that of entropy) lacks all characteristics of orientation, even a merely conceivable non-recurrence. Nevertheless, in this respect precisely, the space of physics can teach time something: namely, that in its historical succession, time likewise is conceivable suo modo as inconstant, and if not as

curved, at least as "rich in curves." A "multi-dimensionality" of the time-line, as demanded above all by the geographical richness of the historical material, is of course wholly foreign to physics itself. However lavish it may be in *n*-dimensionals, "time-space," in the union of time and space, profits little thereby. Whenever history, or natural history, reappears in physics, a quite different "elasticity" would be necessary here as well, in order to represent the course of flow as a variable form of varying movements, of cosmogonic developments.

As far as human action is concerned, a mere division into different times (ages) has been found satisfactory. Of course these fragments are given different names—Antiquity, the Middle Ages, Modern Times—just as if they stood for different hues of time; as if different kinds of time were already in use here which corresponded with the substantial events of such periods. Yet this coloring remains purely external and peripheral; it is a mere tinted impression of what begins or ends socially at the epochal limit in each particular case. In this terminology, in spite of all attempts at divisions, time itself remains chronologically the same; at most something like human age is transferred to it by analogy—the Greek adolescence of the human race, and so on. Also there is a vapid sort of pinpointing, a kind of inference of renewal in a phrase such as "the dawning of a new century"—to say nothing of mystical emphases once placed on numbers (the year 1000, and 1524). But it is highly significant that not the recording of history as continuity, but the "special disciplines" of historic being and consciousness, which belong to history as a whole, have long made use of individual and legitimate time structures. Above all there is the very important economic concept of working time, in which the same hour is given a variant assessment according to the work performed qualitatively in it in each particular case, and is credited as a multiple.

And there are also quite individual time structures in the superstructure: here one need only mention musical and verse *rhythms*—and in particular the *structural divisions* of music. There is a poised or calm time in the fugue, and a tense time

in the sonata—that is, one allowing room for tensions. There is a broad, onward surging, exceedingly spacious time in the epic, in contrast to time in drama, which is quite materially (not artistically) compressed, or curtailed, or skipped over, or overlapping. In the structure of the sonata as in that of the drama, there is also an individual dominant-tonic-relationship of its own specific time, which takes the no longer chronic but acute, because specifically serviceable, procedural form of blow-upon-blow or stroke-after-stroke of the approaching, then—as it were—vertically striking fall or victory.

Indeed, entire cultures not only stand in time, in the sense of their period, but themselves contain, pre-eminently in their mythology (or religion), a specific time which participates in their individual cultural forms of time—in this respect one need only mention the almost futureless Greek mode of time, and the eschatologically rich Christian mode. And Greek mythology has its time gods, who are—analogously—special gods of motion: Eos, Nike and Hermes—all winged. But what a difference when compared with the "time god" Yahweh; when he, full of futurum, defines his name thus to Moses: "Ehje ascher ehje"— "I will be what I will be." And again, in so to speak a more earthly consecutio temporum (not only in the case of John the Baptist but in that of Thomas Münzer), what has kairos-time a time that is "secure in itself," that is "fulfilled"—in common with the unemphasized time of the Greeks, or with the unending movement onwards that Hegel called "base eternity"?

Item: There are varied time structures—not in the simple chronology of historical succession (which is related only to clock-time), but in the above-mentioned time-color problem of individual historical periods, and, above all, in a legitimate way, in the individual superstructures. It is these varied time structures which—as aforesaid—do not allow progress in economy, technology and art to be attributed simply to the same common denominator. Therefore it is also evident that among the multifarious material which varies the form and content of the concept of historical time and makes it accordant with the particular material, there is ultimately to be found the still manifold

material of the goal, to which in terms of value the forward movement of the various time series is in each case referred and directed. Precisely these teleological relations and references, which are not yet wholly inter-homogeneous, bring about variations not only in the different types of progress—but in the time structures in which these different, so often non-uniform types of progress (in economy, technology, art and so on) occur. The totality of the particular social tendency-also as the total particular time-tendency-certainly overtakes the temporally layered spheres of movement of this tendency; yet the different layer-flows (that is, the movements of different levels) persist in the outreaching whole. And they require most especially to be approached with considerations of time-content that are no longer merely homogeneous—they demand a kind of "Riemannian" time. That is: a time with a variably conceivable metrics—varying according to the particular division, and above all according to the (still variously distant) teleological contents of the historical matter.

Leibniz also allowed time, and not only space, to be comprehended as an operative form of forces and their movement, and type of movement. This is a dynamic conception of time; hence it does not see, in their consequence, the time series of human history too as unalterable and wholly similar in construction. Moreover it sees a difference between the millions (to say nothing of the geological or cosmological milliards) of years of pre-history and the few millennia of cultural history since Neolithic times. Here not only a chronometric difference but one of density in the being of time itself, above all a qualitativestructural distinction, holds sway: in short, an objective changeability in the before-and-after sequence as well. This occurs in every overtaken unity of the developmental-historical relationship; it is not a chronologically linear but a chronologically differentiated and federative and only thus fruitfully centered relationship.

But of course one must remember that there are no intrinsic times or forms of time—times-in-themselves. There is no arguably different metrics apart from the social life of its "time"—

as if a time structure lived and changed as such. No more than there is pure clock-time in history or (which comes to the same thing) time as an abstract-neutral container. Such a form of time can be postulated only because of the unthinking convention that arises solely by reason of the difficulties of accommodating the universal-historical material. —Or perhaps because of a reactionary variety of static interest, as when Nikolai Hartmann asserts that time is always time, and remains so whatever happens within it. Unlike the historical consciousness, the philosophic consciousness may not "confound extension and dimension: whatever 'extends' in time is never time itself," which instead elapses indifferently (Philosophy of Nature, 1950). But for all that, Hartmann's prohibition is instructive in revealing formalism and categorial statics as the only decisive counter-position to Leibniz and variable consequences. From the static viewpoint, differentiations in the concept of progress, and time seriatim, must seem unnecessary or ridiculous according to circumstances.

In addition—to go beyond the reactionary kind of static interest—all unconsidered habituation to clock-time displays certain affinities with a separation of so-called formal logic from dialectics—in this case in the theory of categories itself. For the reification of chronometry would also remove the dialectical transformation which, as such, is as inescapably characteristic of the concept of time as of any other notion which conceives of processes (and what concept other than that of time represents more genuine processes?). Hermann Weyl compares Riemannian space, as distinct from rigid-Euclidean space, to a "fluid . . . a mobile location and orientation yielding to active forces" (Philosophy of Mathematics and Natural Science, 1927). Would this variability be less appropriate to the panta rhei of time? Here there is no *n*-dimensional multiplicity, as in a wholly non-graphic geometry: what must be noted is the purely graphic, historically and materially requisite multiplicity in which the chronological variations occur.

Therefore progress itself does not advance as a homogeneous succession of events in time; it moves forward on different levels

of time that are below and above one another. It proceeds in a humanum-unity of passing and gain that is still only processing itself out in diverse ways. The really common uniform time of the process of history and, indeed, of the world process, springs and is springing forth universally only as a temporal form of emergent identity: that is, of non-estrangement between men, and of non-alienation between men and Nature. But apart from this horizon problem, the relationship of time (precisely as "pure restlessness of life," as Hegel calls it in the Phenomenology) to its varying contents is not one of unvarying externality. As the continually open mode of existence of material movements and processes, it participates in them flexibly; and it is specifically and materially determined by such movements and processes, both in periods and in areas of culture.

### PHYSICAL AND CULTURAL SERIES, AND HOMER'S SUN<sup>34</sup>

If there is time only where something is happening, what if very little happens, or the something happens only with incredible slowness? Or does a succession which, so to say, counts only itself and in itself, and within which almost nothing changes, really proceed in the same way as in a time which is replete with events and "historical"? In other words: Is the time in which the murmuring surge unnumbered times on the same unnumbered idle pebbles chafes, and the time in which century after century hears the grating roar begin, and cease, and then again begin, really only longer or just as dense as one bare Russian 1917? And of course all these questions must be taken in a purely objective sense—not as questions solely about the time of human experience beyond the geological millennia. All epochs—not only those which are humanly historical—have to be comprehended in relation to the differentiations in the density of historical and material occurrence, of its tendencies and contents. There is also an intensive and qualitative difference between historical time itself and natural time (particularly that

in which the "history of Nature" occurs); a time other than that characterized by the t-components of physics. It is now apparent (though, of course, a quite different aspect will become evident shortly) that, despite its formally so very much longer duration, natural time is less dense than historicalcultural time. Though hugely inflated in comparison with the latter, natural time contains less intensive-qualitative time—just as pre-human Nature also contains less developed being. And its millions and thousands of millions of years, which are laid out in an apparently homogeneous succession before the few thousand years of human history (or appear exclusively so to extend), are accordingly—to use a slightly strained though appropriate metaphor—a kind of period of inflation compared with the gold period of history and culture—an inflation-age against a gold-age. Even the formally so much longer duration of natural time, because it extends before human history, is longer only according to the mode of the past, but not according to the mode of the future which, as generally supposed, is wholly predominant in human history. At least insofar as the latter appears as the only unconcluded form of history: the history of Nature pure and simple being substantially complete, despite its everlasting motion from incandescent vapor to incandescent vapor, or from cold dust to cold dust; and on account of this merely cyclic, therefore substantially concluded motion. For the cycle from primal haze to suns and planets (and on these, perhaps, the evolution of life in several forms) would include within each particular process (or, rather, from the appearance of the first traces of life to ever recurrent nova) no novum for the inorganic processes and certainly none for the vapor cycle. Stereotyped, unfruitful, all this would wreathe and wind about, enclosed within itself, as if it were wholly before human history—even if it were ultimately to bury human history beneath it, by drawing it back. Therefore, from the viewpoint of a "pre-historical" Nature pure and simple, dense, rich historical time appears as a plus in contrast to an inflated, natural time virtually inert to process.

But of course this presupposes that the time of so-called dead

things must lie exclusively before human time. And that, like that which occurs within it, natural time must be pure past, having no more specific novelty concealed within itself. Only thus can it lie actually before human history: as a husk from which the grain has been taken; as a slave whose duty is done and whose capacity is exhausted; prodigious pre-history, but prodigious in no other way. Only thus does the history of Nature make a unilinear advance into the history of mankind, which succeeds it and "crowns" it historically, in development. Accordingly there was once a popular scientific book entitled From the Nebula to Scheidemann (O Scheidemann, core and crown of history now revealed!). But even if we substitute a more significant name, a cultural-historical effect always blocks off the natural-historical prius, allowing it re-entry only as a prius that is past: that is, as an exhausted mechanical uterus that might at most now idle on without function. Therefore a specific orbetter—a positive future still appropriate to human history is no longer part of the natural transmission of matter. Physis can even be recognized as basis, and—from a purely cultural-historical viewpoint ante rem—in a blind alley of having-beenness.

But here one is reminded of a similarly false time-past in cultural history itself: the location to which Herder, Ranke and (in toto) Hegel assigned the Near-Eastern civilizations, above all India and China. Hegel saw the last two as no more than the earth and the rest of Nature immersed in the past-even though they still existed, and at that time their influences were felt quite contemporaneously. But for the developmental philosophers of the time, on the line of progress, Nature—and especially inorganic Nature-was, with "voice extinguished," virtually the sputtering done-for beginning. Hegel, for whom Nature was wholly subordinate to history, also asserted that the inorganic world was entirely precedent and exclusively past: "History came to the earth at an earlier time, but now that life which fermented in itself and possessed time in itself is arrested; the Earth spirit not yet in opposition—the movement and dreams of a sleeping entity before it awakes-achieves full consciousness in man, and now confronts itself as the peaceful figure it

was." Thus Hegel describes the most decisively characteristic and assertive human point of history, which surpasses and renders obsolete the universe pure and simple. Since Nature accordingly becomes a mere prelude, its time must appear wholly non-compact and substantially inadequate—as it was represented in the first phrasing of the question.

And now the second, supplementary version: Is Nature in human history really raised upon so ancient a plot, that is, upon a time-plot locatable quite to the rear of mankind? Isn't it absurd to assert that Nature is past and done with in the same way, say, as the Crusades, and that like the Crusades and other events of times gone by, it persists at most in a few after-effects? What about the quite obvious and continuing relationship between men, and between men and Nature? And the relationship between men and raw materials, natural forces and their laws? And the aesthetic bond—together with all the questions of natural beauty and the myths of Nature that so often still resound in it? Doesn't Homer's sun shine on us too—and (quite apart from all connotations of the "legacy of culture") precisely as the actual sun itself that shows no sign of being outworn by human history? Wouldn't it be really absurd to maintain that the vast moving universe and its motion, wholly unmediated with us in the multitude of its stars, has its "continuation" pure and simple in the existing history of mankind, and has achieved its substantial goal in existing cultures? So that the "Iliad of Nature" would literally have found its home and termination in the human "Odyssey of the Spirit"; and, accordingly, the time of the previous history of Nature would appear empty, and—in contrast to the time of human history—without any noteworthy future mode of its own? And therefore without progress sui generis, without real possibility in regard to that very far distant future, still so distant from given history; in regard to that profundity which as yet can hardly even be probed, and which Marx so recently pointed to as the humanization of Nature?

Consequently, in natural time as well, it is evident that in a truly universal-historical topology of times, consideration must be given to the problem of an *individual* natural succession of

time that does not wholly pass over into the given succession of history. The single-file succession of before-and-after is least of all tenable as a not merely finished before of Nature, and a not merely all-expressive after of cultural history. Similarly, to conceive of the immense (and tense) structure of Nature as a setting against which the corresponding drama of human history has yet to be enacted, is more appropriate than to see humanhistorical being and consciousness already as the opened eye of all natural being; of a natural being which not only lies before our history (and bears it), but which for the most part continues to environ it as a history that is still hardly reconciled, in form or content, with historical time. —Assuredly not as a history that would have to remain absolutely unreconciled with natural time and with the particularly latent contents that acquire time within Nature's time. And consequently in a clear double entry of a goal of history and progress (the "commonwealth of freedom"), on the one hand, and a termination of the cycle of Nature ("entropy"), on the other hand. This dualism may seem far-fetched, yet it is a threat precisely where Nature is seen exclusively as the "before" of history that ultimately buries—in hot vapor or cold dust—the historical epochs that are certainly vastly superior to, yet in no way reconciled with or flowing into and ending in, natural time. —Ultimately buries, that is, in the sense that it brings them back in a mere "beforeas-after," and a mere "after-as-before."

Therefore theoretical difficulties in the postulation of a prosperous and true developmental history are apparent here too, in natural, historical time; here precisely these aporias arise from the two abovementioned aspects of natural time: from a terminated past, and a largely inaugurated tomorrow of Nature. Relatively empty, futureless natural time on the one hand, and substantial natural time, replete with future, on the other, are both given—and not merely as methodic but as complementary, actual aspects. One is in the mechanical actual aspect of the past and its correspondingly quantitative, constant element; the other is in the anticipatory actual aspect of a dawn and whatever may correspond to it in the qualitative, open, symbolic element of

### A PHILOSOPHY OF THE FUTURE

natural processes, conceived of primarily in the Goethean and not in the Newtonian sense.

The two modes of time do not, however, flow simultaneously yet separately; and the second does not simply cancel the first, pro rata valid mode: instead, both natural times are polyrhythmically enwreathed in one another. Consequently the natural time of the dawning morrow-to-come, as a time of the humanization of Nature, is particularly bound up with the tendential contents of cultural historical time. This also means that the real "Golden Age" of historical anthropology cannot be conceived of without the just as real "Golden Age" of a new humanist cosmology—one, therefore, which has humane historical time as its influential "before" and, accordingly, also realizes history in natura, in a positive-and-possible way—in a world mass—rather than entombing it negatively-and-possibly.

### PROGRESS AND THE "MEANING" OF HISTORY

Clearly the summons to advance is as little finished with and in itself as the thing it indicates. The concept of progress implies a where-to and a what-for; a what-for to be willed, and therefore a good one; a what-for to be contended for, and therefore one that is not yet achieved or given. Without its whither and wherefore, progress is not conceivable, not measurable at any point, and above all not present in any way as the thing itself. However, the "what-for" implies not only a "goal" but (not simply coincident therewith) a purpose; and (again not simply identical therewith) a "meaning" to the process—at least to the humanly striving and working process. The so to speak automatic process, indeed life itself, just in order to be a process, requires no meaning (men do not live primarily in order to live, but because they live). But certainly the process and life willed, conceived and pursued as progress, neither emerges without a meaning, nor occurs without one; and to deny the reality (even though it is not yet a reality realized) of a meaning, is essentially to remove the conceptual and material content of progress. By

saying that the meaning is not yet really realized, is meant that the meaning of the willing of progress and of the world in which that willing has a meaning, is contained not in a static given existence but in objectively real possibility, and in the dialectical tendency towards realization in the direction of that possibility. Meaning, therefore, is perspective to the extent that it is possible in the world which is to be changed; to the extent that, in the perfectibility of the world—the world's capacity of fulfillment—it possesses the latency of good aims. This perspective dawns gradually before the thinking and doing of what is actually needful; but the whole (totum) of what is absolutely needful must always be intended and remembered in this thought and action, so that both meaning as perspective and perspective as meaning may be present.

The same is evidently true of all that lies round about; true of the whole of history, of the whole meaning of the world. And always as a meaning that is not statically given but progressively to be brought forth by men—"This is the way begun, walk ye in it to its end!" Of course, if the surrounding consciousness of, and the consciousness of being surrounded by, such a utopianly really established meaning (a meaning at least not yet thwarted by any form of total purposelessness), are absent, then the individual and specific meanings of historic progress are without ultimate support and without a philosophical seriousness namely, one that can be represented in a universally systematic way. If the world were basically only a mechanism and its "entropy," then history would be like trout fighting or making love in a tank whilst the cook without is already advancing from the door, bearing with her the knife disparate to yet destructive of the whole process in the tank.

The meaning of human history already there from the start is the building of the commonwealth of freedom; yet, without a positively-possible, possibly-positive meaning in the *surrounding cosmology* which all historical events ultimately merge with, the progress of this historical process (at least to a steady gaze from the viewpoint of totality) might as well never have happened. Of course, a single day can be spent quite meaningfully; a life

put to good—even productive—ends has its meaning, above all in retrospect. Yet this "common-sense" meaning (as it might be termed) is at the same time meso-cosmic (to use a physical concept significant in this respect too); in other words, the inaccuracies have so negligible an effect that they can be ignored. But the inaccuracies have different consequences under macrocosmic conditions (in this instance, totality), and need to be removed if even the common-sense application of the notion of meaning is to hold out against every consequence.

These are additional implications of the concept of progress that follow on the notion of *meaning* implied in that concept. As a particular as well as collective designation of every meaning, the *humanum* has a wide range, and cannot be restricted to anthropology pure and simple. Accordingly, with regard to the category of progress—and here precisely—there can be no new Marxist anthropology without a new Marxist cosmology.

In the history of revolution, deep faith in man and deep faith in the world have long gone hand in hand, unmoved by mechanistics and opposition to purpose. But militant optimism, as the subjective side of real progress, also implies searching for the where-to and what-for on the objective side—of forward-moving being without which there is no progressive consciousness. And the humanum is so inclusive in the real possibility of the content of its goal, that it allows all movements and forms of human culture location in the togetherness of different epochs. The humanum is so strong that it does not collapse in face of a wholly mechanistically conceived cyclic time.

Closer to us, however, a far-distant omega (this time as a goal-point that is not oriented only to the West) has to prove itself in the face of non-European history: which means in face of the non-historic but actual new start of Africa and Asia. For these continents the past of the white races is only negligibly their own too; for those nations who in various ways have enjoyed no future, history as a whole is something that begins tomorrow. The firmer the refusal of a purely Western emphasis, and of one laid solely upon development to date (to say nothing of discredited imperialism), all the stronger is the help afforded

by a utopian, open and in itself still experimental orientation. Only thus can hundreds of cultures flow into the unity of the human race; a unity that only then takes shape, in non-linear historical time, and with an historical direction that is not fixed and monodic.

For the very sake of the human race, Africa and Asia join in the polyphonic chorus of a polyrhythmic advance of progress towards this unity—admittedly beneath a sun which first arose, actively and in theory, in Europe, yet one which would shine upon a community that is really without slavery. In all its revolutions, the Western concept of progress has never implied a European (and of course not an Asiatic or African) vanguard, but a better Earth for all men.



### THESES

- 1. Progress is one of our most important and cherished concepts.
- 2. Any consideration and analysis of the concept of progress must bear on its social function—its why and its wherefore; for progress is a notion that can be misused and abused for the ends of a colonialist ideology.
- 3. The concept of progress can be applied validly to the forces of production and the economic basis; it can be relatively invalid in the case of the superstructure—or at least only faintly valid in comparison; and vice versa. The same is true of superstructures which succeed one another chronologically (cultures, civilizations): especially in the case of the category of progress in art.
- 4. The concept of progress will not tolerate any "cultural spheres" which require a reactionary nailing down of time to space. It requires not unilinearity but a broad, flexible and thoroughly dynamic "multiverse": the voices of history joined in perpetual and often intricate counterpoint. A unilinear model must be found obsolete if justice is to be done to the considerable amount of non-European material. It is no longer possible to work without curves in the series; without a new and complex time-manifold (the problem of "Riemannian time").

- 5. The objective that is the concern and requirement of true progress must be seen as so rich and deep in content that the diverse nations, societies and civilizations of the Earth (in all the stages of their economic and social development, and the dialectical laws governing these stages) have their place in it, and in striving towards it. Therefore the existing non-European cultures must be interpreted in the light of the philosophy of history, without the distortion of a predominantly European perspective, and without any reduction of their specific witness to the richness of human nature.
- 6. This objective has a human content that is not yet clearly defined, not yet manifest: a concrete-utopian human content. The diverse processes of history find their proper order in bearing on the deep relationship of the movement forward: a profundity so profound that all events of the entire world that are in the process of becoming find place and space in it. All earthly cultures and their inherited infrastructures are experiments, ventures and variously significant testimonies to the ultimate humanum: the content that must be processed out, the final and most important reference point of progress. Therefore these cultures do not converge in any one culture already existing in any one place-in one that might be thought to be "predominant," supremely "classical," or already "canonical" in its particular mode (itself only experimental). The unique point of convergence of past, present and future cultures is a human content that is nowhere as yet adequately manifest, but can certainly be appropriately anticipated.
- 7. Similarly with regard to the well-established existential question of a "meaning" of history, in relation to a "meaning" of the world. Here the unifying human content—the eschaton in the goal of progress—is least identical with the result already manifest in terms of men's actual lives and their cosmic environment. It is on the line of elongation of even the most distant projection to date of any goal of men or Nature. It lies in the remotest immanence of the actual possibility of men and Nature; an immanence that, despite its distance, is not closed to anticipation by the intelligence and science of mankind.