THE MAD VOICE OF THE POET

Chronology is a worldwide system knitting all men and all peoples together, even those which, like the Jews and the Islamic peoples, live in an era of their own. In his great book "Zeit und Kultur" (Wiesbaden, 1980) Rudolf Wendorff has told us how this system came into being: how the Egyptians initiated the first essential step by substituting the solar year for the lunar one, how Julius Caesar introduced the leap-year, and how pope Gregory XIII corrected this innovation by leaving out a distinct number of leap-years. This chronology has first accustomed us to counting in hundreds and thousands of years, then, after the discovery of prehistory, in hundredthousands of years, later, in geology and in evolutionary thinking, in millions of years, and finally, in astronomy, in billions of jears. At the other end, an unstoppable development started with the invention of the pendulum clock which made the romantic but hopelessly unreliable sun-dials superfluous and taught us to count in hours, minutes and seconds. Still later we got the splitseconds: for the sportsman tenths and hundreths of seconds are decisive, for the photographer 1/500 and even 1/1000 are quite normal, in industrial production and scientific research much smaller units are in use.

It goes without saying that this very elaborate system plays its part in historical science and in historical education. The concise popular expression of the importance of this chronology is that history consists of dates and of not much else besides. "So you know all the dates" people say when I hear that I am an historian. So important is this system that I would feel able to defend the thesis that historical science is either largely based on a model (the chronology and the division into "ages" and "centuries" seen as a model, in the sense of modern model theory) or even as a model in itself. It has its useful aspects of course: it unifies mankind in its rendering of and speaking about the past, it makes history exact and scientific on the same footing

as other disciplines, it enables us to explain simply and clearly essential historical notions like simultaneousness and synchronism of development, causality, consequences and connections.

So far so good. But there also other aspects. First of all, if we see the events framed in a series of numbers or plotted along a line, the time-line, we introduce an ideological proposition, for thereby we propound that time is infinite, that there is no end to it. Every number (date) is followed by another one and yet another one, ad infinitum, and every straight line can be extended ad infinitum. I suggest that we like this way of framing and proposing so much, because, among other things, it eliminates the notions of death and mortality, not so much of our individual end as of that of mankind as such. There is no room for the final catastrophe, for "Weltuntergang" in this scheme. And our way of visualizing time as a straight and ongoing line also excludes all cyclical and semicyclical conceptions of history and enables us to view all history as an essential unity (all events neatly on the same line which nowhere is broken, interrupted or deflected) and as a development (bad things definitely left behind never to return, lessons learned and good things in the offing). So our chronological notions are in tune with the secularized and optimistic world view prevaling since the days of the Enlightenment.

My second objection is of a more pedagogical nature. A moment ago I used the term "visualization of time", and that is exactly my objection: it is impossible to "see" time or to make it "seen". What we see are people and objects moving and changing, for instance in an hour-glass we do not see time moving, but sand flowing from one end to the other. And as to the time-line, we could paraphrase here a famous saying of Gertrud Stein: 'a line is a line is a line', and therefore not time. You need a rather tortuous mental process which has to be learned - it is not spontaneous at all! - to see the equivalent of invisible time in a material line. Nevertheless, time-charts and "time-lines" are

extremely popular in history teaching. "It is highly desirable that the pupil should have some (sic) sense of cause and effect, and of the interrelation of events in various spheres; and this can be achieved by the use of charts of various types ... they help to fix the historical frame work in the pupil's mind", this is what a well known manual says. This way of working is often recommended with the motivation that pupils like to construct lines and charts. They certainly do - I once saw a time-line stretching along all four walls of the classroom and made by the whole class - , but the old maxim of education: not what they like but what is good for them. And I fear that devices such as these bring about just the opposite of what they aim at.

For the sake of history teaching of historical understanding we must be very clear about this: a line is a series of points one after the other, and what it shows is not time, but space. In his book "Durée et simultanéité" (1922) Henri Bergson makes the distinction between internal time (our own personal time which is not measurable, he says) and external mechanical time (our common time of the clock and the calendar). For this philosopher measurable time always correlates with space, because even the most simple notion of "before" and "after", of temporal succession therefore, needs the idea of space. In fact, in English (as in Dutch) both words are expressions as well for temporal as for spatial relations. What this means - already in a far less simple construction - one can see on the face of a watch where the hands are moving regularlyin a confined space and so indicate the continous and even flow of time. Bergson's dislike of the pretentious objectivity of modern science caused him to say that the internal time is not measurable; this is certainly going too far, for if we do not "measure" it, we have nevertheless our own systematic way of handling our personal time. Bergson was no historian, but had he seen one he would have been horrified by time-charts and time-lines. For in the one-dimensional time-line and in the two-dimensional time-chart

there is no longer talk of a correlation between time and space: whatever such graphs suggest, anyhow not the stream, the flow, the movement of time. There is absolutely nothing which moves in them, and what they visualize is the immobility of space.

In this fixed historical universe - everything standing in its assigned place - there is only one moving object: the spectator. Or better, he is moving outside it, for he goes up and down the time-line as if he were walking along the shop-windows of a big department-store. It seems to me that this does not help the pupil very much to develop "empathy", one of the acknowledged affective aims of history teaching. And what he sees are not the beautiful and often even artistic displays of the shop-windows, but an arid succession of historical atoms without apparent connections and relations between them. This construction seems therefore to defeat one of its own purposes: to give the pupils some sense of the interrelation of events. And as to other purpose, to give them an idea of causality, this seems to me an offence against elementary logic: events are not causes because they happen before another event and not effects because they happen after that event. That "post hoc" does not mean "propter hoc" was already a maxim of the scholastic philosophers.

Some lines ago I used the expression 'a fixed historical universe'. If we let our eyes wander along a time-line - imagine one which covers the whole of human history -, it is as if we travel along the shelves of an immense archive where all the files are ranged neatly one after the other, with the labels on their back. And thus, stretching onward in time from the beginning, they give the impression that they have to be there, that some original, primeval historical consciousness has sent them along until they reached their preordained places. It is as if they orginated from an original revelation, according to the platonic idea, containing everything which can possibly happen. There can be no learning of new things, no discovery method, because in this prestabilized historical universe only fixed, pre-

ordained and unchangeable events are being disclosed. And there is no apparent reason why the timeline should not contain the future also. The prearranged character of its contents make it obvious that future events are preordained too. Although for the moment still invisible they are already in their places and become disclosed when we follow the time-line further. This means that there exists a well stuffed future instead of the absolute emptiness which lies before us, only to be filled by our own efforts. The historicist perspective of the timeline leaves man out as the maker of his own future and constitutes a marked contradiction to our professed aim of educating pupils to responsibility.

I am quite conscious of the objection which is going to be made surely: that I am making far too much of such an innocent and obviously useful device as a time-chart. But as didacticians we are bound to take a very close look at what is being done in history teaching, and when we take this professional look at timecharts and -lines we discover that they betray a historicist bias. Now we all know Popper's resounding attack on historicism and its poverty, and we agree with him that the future is not predictable and that the historian is not a prophet. But do we act according to our creed? There is lurking a lot of historicisms in history writing and in history teaching, especially in the form of extrapolations.

Trends are abstracted from the body of facts and seen as continuing indefinitely, for instance the idea of general progress which stood its ground even against the pathological history of this century. How many times have I heard history teachers declare that they 'always carry forward the line', from a given historical situation to the present. Which suggests that there really exist "lines" in history, and in doing so these teachers expose themselves unwittingly to the very real danger of extrapolation. I still remember, although it is already more than half a century ago, my own schoolmaster who used to quote these lines of a Dutch poet, Tollens (183o): "In the past we find the present, in today what

will become". This is historicism pure and simple. For the main idea of this (un)historical theory is not that the past is contained in the present, but the present (and for that reason also the future present) in the past; this is only the secularized and modern version of the original revelation.

That time has been eliminated will become quite clear, if you will follow me once more to that classroom the four walls of which are covered with a time-line of prodigious length. Having walked along it from the corner where aboriginal man lives to that where Andropov has been buried recently we may turn on our heels and retrace our steps. The spatial extension of the time-line permits us to go back along it. Now this is clearly impossible! There is no going back in time and on time, time is like a river flowing in one direktion only and we are carried along with it. We may quote Herakleitos, the presocratic philosopher: "You cannot descend twice in the same stream". Retrograde history which is sometimes recommended as didactically much better ('working backwards from the present they know to the past they know not') goes against the grain of our mind. Piaget has tried to prove experimentally that we experience time as reversible, but as he based his experiments on objects moving in space (water streaming from vessel A to vessel B for instance), he fell straight into the trap of the "petitio principii". For there is really no reason why water should not stream from B to A. In fact itwas Einstein who induced Piaget to undertake these experiments. The famous physician was not much of an historian, in this sense, I mean, that he is one of the great eliminators of time. In his theory time is so closely interrelated to space that the two become nearly identical. 'Time, so reads his formula, is space divided by velocity'. And thus time becomes a function of space, the "fourth dimension" in fact. Piaget must have been convinced in advance that Einstein was right.

But when you turn a film backwards you get a very comic effect. Children laugh their heads off when they see somebody pop-

ping up out of the swimming pool and landing again upon the diving-board. It is comic because everybody sees the idea of going back in time as nonsensical. This becomes still clearer if we take an hour-glass of exactly thirty minutes run. When we turn it about at the end nobody in his right mind believes that we have reversed time. We have stood a certain quantity of sand on its head, but not our half hour; we take it simply that a new half hour has started.

What we do catching up with a certain date in history is something quite different. By a mental process which is very difficult to explain (and as far as I know has never been explained adequately) we simply skip the interval of time to arrive at once, without intermediate stations by way of stepping stones, at the historical moment where we desire to be. This is what every historical author asks of his readers and every history teacher at the beginning of every lesson, and nobody wonders at the remarkable fact that even persons untrained in history perform this mental operation so easily. But if this were not possible, there would simply exist no transfer of historical knowledge.

At this point I want to stress that it is not my intention to expound the undesirability of time-charts and -lines, I do not even mean to castigate the numerous fallacies that go along with it, although these are fads as widespread and deeply ingrained as they are unconscious. To me the time-line, curious device as it is, is only one of the paroxysms of the chronological order. And it is the dangers and the pitfalls of this order which I want to denounce. For in my view the very perfection of this chronological system hampers the development of historical understanding in pupils and adults, and also, but I shudder to say it, in history students and professional historians. There are of course no easy solutions. Many teachers seem slightly conscious of the problem, for instance when they no longer insist on exact dates. Many a practising student of mine showed himself content with broad guess by a pupil (or by himself for that matter!). And it may seem a

contradiction of my opinion when I reproached them later their inexactitude. But making the system somewhat vaguer or looser offers no solution of course. No, what we need is something quite different. We, that is to say the didacticians (for we cannot wait for the professional historians who are usually not very much interested in theory), we must perform basic research, that is research on the fundamentals, the foundations of history teaching. Basic research is something which mathematics undertook already a long time ago, but which in historical science, including historical education, has been sadly neglected, practical people as we are. I have harped on this subject oftener and shall go on harping, because it is so very essential. And as I have already stated in my "International Workplan" (published in "Communications/Mitteilungen/Informations", Vol. I (198o), no. 1), the first of these basic problems seems to me the problem of historical time.

The argument I have developed above that what a time-line represents is not time but space, may make us a bit more distrustful of the selfevidence with which we take our time-system for granted. Is it not possible that this chronological system also represents something else than time? Say what you like, but it consists of numbers and you write it wholly in numbers: o9.11 -26.5.1984, this means this particular moment of my life. The system also enables us to perform a number of arithmetical operations: adding up, doing subtractions, calculating an average (which can be historically significant: the reigns of the first nine kings of the French House of Capet spanned taken together a period of 283 years, with an average reign of 31 1/4 year, and that means that these kings had ample time to stabilize their kingdom). We even work with negative (B.C.) and positive (A.D.) numbers, a fact that presents a substantial difficulty to younger children. There is so much arithmetics in our chronology that, as we all know, pupils must first have made progress in arithmetics before they can handle the chronological system with sufficient exactitude.

Anyhow, to me the basic question seems justified whether this chronological system, so wholly numerical, so exact, so complete, represents time or perhaps rather numbers. The half insane English poet William Blake once said: "Eternity is in love with the productions of time". But does our timesystem "produce" eternity? No, as I have shown already, it does not produce eternity, it produces infinity, which is something quite else. And the general public, the pupils, do they love our productions of time? There is, as we all know, a general aversion of dates, and people proclaim loudly and proudly that they have 'forgotten all of them'. Before we say disdainfully that they are only too stupid, let us remember a word of our deceased member Kurt Fina: "the fright of dates sits whole generations in their bones". I for one suppose that people are not helped by the very perfection of chronology, on the contrary, it alienates them from history. And with the mad voice of the poet sounding in my ears: "The hours of folly are measur'd by the clock, but of wisdom, no clock can measure", I feel inclined to take a very sharp look at our "clock" indeed.

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