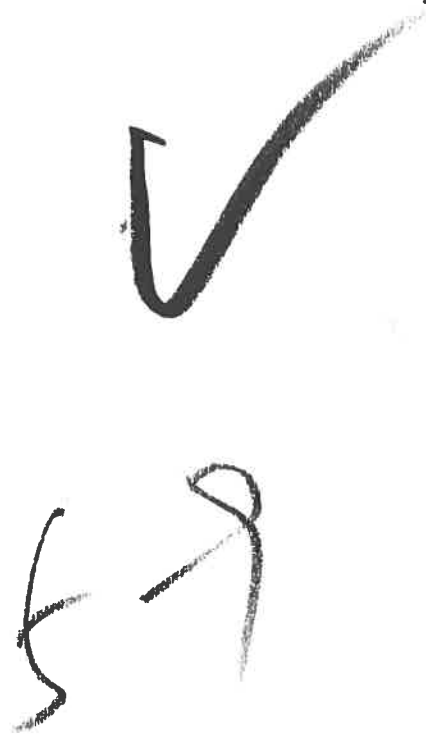


Committee V
East-West Perspectives on Science
and Spirit: Time and Consciousness

DRAFT--6/15/91
For Conference Distribution Only



THE ARROW AND THE CYCLE

by

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The Eighteenth International Conference on the Unity of the Sciences
Seoul, Korea August 23-26, 1991

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I first wish to recall the conceptions of time which characterize the so-called primitive civilizations, in which the time of ordinary life must be periodically abolished to reinstate the Time of sacred beginnings. I also propose to point out that this conception, though in a more metaphysical expression, is still at the heart of what has been called the traditional doctrine, as well in Hinduism, Buddhism, Hellenism as in the neo-platonic Jewish, Islamic and Christian mysticism of the Middle Ages. We will see, with the example of Meister Eckhart, how inside Christianity this conception had to compose with another, that of a positive evolution of time, symbolized by the arrow. The chief influences at play were, on one hand, the Jewish conception of time, axed on eschatology, and on the other the revolution introduced by Aristotle in the classic conception. Then I propose to recall a few examples of the necessity of both symbols, the cycle and the arrow, for the understanding of time: such as Stephen Jay Gould's brilliant demonstration concerning the discovery of geological time, and the sociological approach of Anne Sauvageot showing, through her study of publicity, that the longing for the sacred Time of beginnings still exists at the heart of the contemporary world. I shall conclude on the necessity of finding a principle of complementarity, after a brief survey of what as well anthropologists as physicists have to say on that subject.

The irreversibility of events which is the characteristic mark of history for modern man does not constitute an evidence for archaic man. For the latter, what happened ab origine, in primo tempore or before time is susceptible to repeat itself through the power of rites which reactualize the myth of origin. Through them profane, ~~chronological~~ time gives place to a quantitatively different Time, a Hierohistory, at once primordial and indefinitely recuperable ¹. That means that the rites do not consist in a simple commemoration of the mythical events, but in their reiteration. (This is true as well for the myths concerning the absolute, i.e. cosmological beginnings, as for those concerning the origin of a particular reality: element, part of the world, plant, etc.) This return to the Origin is a capital experience for archaic societies. Though we often find in their myths the notion of Eternal Return, i.e. of a cosmos renewing itself regularly, founded on the observation of the annual cycle, Mircea Eliade deems that, connected with this myth of the cycle, there is another ideal, of different origin and structure: that of the perfection of beginnings ². This expresses a deeper religious experience: a reminiscence of Paradise Lost, of a beatitude that preceded the present human condition: " Not naked, but trailing clouds of glory do we come - From God, who is our home" ³.

In a later stage of historical development, the myth of origin, in its primitive aspect, was submitted to a

deconstruction which took place in pre-socratic Greece, as well as in the India of the Upanishad. For the thinking elites the essential was no longer to be sought in the history of the gods, but in the primordial situation which precedes their history or hierohistory. However, the transition from mythology to ontology did not abolish definitively mythical thought since the prestige of origin remained the same, and since the forgetfulness of what happened in illo tempore - or in a transcendent world - was still considered as the chief obstacle to knowledge as well as to salvation. So, in spite of the philosophers' efforts at demythisation, the Greeks remained faithful to the essentials of mythical thought ⁴. Their ontology is soteriological, and so it has remained through the Middle Ages and later, practically until the existentialist revolution.

What is said here of Greece can be generalized if we examine how the traditional doctrines envisage the problem of reality. If we turn to Hinduism, we read in Atharva Veda (XIX,53-54) that Time, i.e. Absolute Time, is the sum of all relative times: it is not duration but Non-time or Eternity to which all moving time is ever present. In this conception, the instants in their succession must be controlled, in order for the liberated to attain to a discriminative gnosis: its final term allows him to possess as present the things of all times, without being concerned by their succession (Yoga Sutra Bashya III,52).

The same type of gnosis is to be found in Buddhism, in the kingdom of Buddha's eternal Law, i.e. of this "unborn, unbecome, uncomposed, which is", and without which there would be no possible liberation from birth, from becoming, from creation and composition. In tantric Buddhism "whose intention is involutive, we find a contemplation of time which, directed towards the immediate realization of always longer durations and pursued until it extends to the whole of time, can be experimented now...the operation terminating in a complete resolution of microcosmic time... " 5

Concerning Islam, Ananda Coomaraswamy notes that it holds few metaphysical doctrines which are not connected with - and probably derived from - Vedic or Buddhistic sources, in particular the Sufi doctrines of time and eternity. He also gives a quote of the same marrow by Meister Eckhart: "As long as the soul does not know all she has to know, she will not be able to reach the unknown good" 6 .

This type of gnosis of time, though similar to the "primitive" thinking first mentioned, is characterized by a metaphysical insight which integrates time into Time, or Eternity. This integration has, as already said, nothing to do with succession.

In Christianity we have, particularly if we consider the works of the medieval mystics - as well as in their patristic sources, especially Greek - one strong trend which comes from Platonism and Neo-Platonism. It underlines

the dichotomy between time and eternity to which we do not so much have to "stretch forward", according to the paulinian expression, but rather to return as to our Origin before time. This dichotomy has found its classical expression in Plato's Philebos (53 d - 59 a), opposing the gnosis of Eternity - which is also the true Self - to the inconsistency of the phenomenal world:

But the technologists, to the opposite of what they believe they are doing, do not study this Nature; they only think of finding out what are the things of this world, how they become...how they operate..., not taking the trouble of discovering the things which really are, but only the things which are becoming, have become and shall become.

We must not forget this metaphysical background if we want to understand the central theme of eckhartian ontology, that of conversion to God-Being. It expresses the aim of philosophy as well as of religion and of life here below: to assist the soul in recovering her original being in God, or rather in the Godhead, and to lead back to this source the whole of Creation. For Creation has emanated from God in and through time, and its whole purpose - and especially that of humankind - is to return to him, above time, out of time. God - or more exactly Godhead - is thus defined by opposition to time: "Nothing is as much opposite to God as time" (Predigt 50). The same is said of essential man, i.e. of human nature considered in its universality, as partaking of divine nature: "The

masters say that human nature has nothing to do with time" (Predigt 24).

Therefore God as a Creator, who has a relation with time through Creation (as contrasted to the non active Godhead or Deity), is not the ultimate Origin to which man is to return: "I pray God to deliver me from God, for my essential Being is above God inasmuch as we conceive God as the principle of creatures... I am the cause of myself according to my Being which is eternal, and not according to my becoming which is temporal."

(Predigt 52).

These few quotations suffice to show that Eckhart professes a theology and mysticism of atemporality. As in some of the traditional texts mentioned above, God is defined as Non-time. Even the fundamental affirmation of the Bible, that God created the world at the beginning, is reinterpreted in this perspective. In principio (at the beginning) is explained as meaning in the principle (Cf. In Johannem I,1). And for many medieval thinkers Creation in time had to be accepted as revealed, but was considered not to be possibly inferred by reason and observation.

Let me recall briefly here another instance showing how near East and West are in this brushing aside of temporality. That similarity, especially with the zen wording of mystical experience, has been pointed out by many authors, to begin with Daisetsu Suzuki⁷. Others have criticized a too easy comparatism, to their minds, and accentuated

the difference between Eckhart's theism and zen "atheism" ⁸ .
But the question to be asked here is: which is the most
fundamental perspective? No doubt Christianity and
Mahayana Buddhism represent two different and even
diverging traditions concerning the divine - but it seems
that this concerns more recent structures or superstructures.
The similarities based on a common experience of "piercing
through" time and temporality to return to our Origin
come from a deeper and more ancient tradition, inscribed
in the heart of humankind. Therefore what is vital for us
nowadays, to my mind, is no longer doctrinal comparatism
as such. For it necessarily points out similarities or
differences which have to be interpreted with the utmost
care, owing to the differences of apprehension in the
various cultures, as has been well shown by Beni
Scharfstein, for instance ⁹ . Many of us are more
interested in discovering the unity of human thought
or intuition , at a deeper level than the merely rational
or intellectual, such as that of the mythical approach. We
certainly have here, as well in Zen as in Eckhartian
mysticism, the two chief elements which, according to
Eliade, characterize this approach: return to the Origin,
and the perfection of beginnings: "Returned to the Ground
and to the Origin - The shepherd has accomplished
everything" ¹⁰ . In this same conference, Profesor Dy's
excellent paper accentuated the same point, concerning
the true Taoist: "Letting things go, he rests in his
original nature".

Let me now turn towards the opposite, or rather complementary symbol to that of the cycle: the arrow, the sign of linear, irreversible time. We note in the Western world two different influences which allowed philosophical and scientific thought to free itself from the hegemony of the cycle, and opened the closed circle of time. They were, on one hand, the Judeo-Christian Revelation; on the other, the aristotelic revolution. The latter took place in Athens, where the myth of circularity had exercised its empire in space as well as in time. The conception, which was already that of Hesiod, was made into a system by Plato, the master of thought of the West. The source of this mythical representation is the apparent movement of the starry sphere which, ever present but inaccessible, bears testimony of the Essence of the world, which does not consist in perishable objects but in eternal Ideas or Forms. The inexorable movement of the celestial vault is not eternity, but the sign of eternity:

The nature of ideal Being is eternal and without end, but it was impossible to confer this attribute in all its splendour to a creature. For this reason the Creator decided to procure a moving image of Eternity when he framed the skies, and made this image eternal but moving, in accordance with certain numbers, whilst Eternity itself remains One. This image we call time (Timaeos, 37).

In fact, Plato's starry vault is neither time nor the reflection of time, but the reflection of Non-time.

"It is difficult to imagine the effort of abstraction which Aristotle had to furnish to dissociate time from circularity and search, thanks to movement, a new foundation to the notion of time"¹¹. Starting from the experience of movement, it is possible to construct a concept of time which bears on something measurable, and this opens up to the future of science. Also time is considered as successive, i.e. it repeats itself at every instant while renewing itself. Further Aristotle underlines the distinction between the before and the after : "Time is the number of the movement according to the before and the after" (Physics 220).

It is not the place to go any further in this analysis. My purpose here is simply to examine how the aristotelian theory of time was assumed in the eckhartian doctrine. Does the arrow combine here with the cycle, and in what way? In reality, both are assumed, in a complementary way, in the metaphysics of the Word. For the teaching of the Word concerns as well natural phenomena as spiritual and moral life. The intelligibility of these different processes is explained by the introduction of the substantial form in the composed, through the aristotelian opposition of alteration and generation (i.e. what precedes and what follows the introduction of the form), or movement (motus) and substantial change (mutatio). The disposition to the form, in the continuous movement of its intension, comes to a threshold where it is no longer disposition, but

necessitation. The last and final degree of the disposition is situated in the last instant of the alteration. There, the disposition belongs already to the category of the generated form: thus the form of water is transformed into that of fire.

This eckhartian theory of the instantaneity of substantial change is inspired by the doctrine formulated by Aristotle in Physics 8, chap. 8, and by Aquinas' commentaries on this text. To explain how "what is engendered ceases not to be and begins to be, e.g. non white from white in a certain body", Thomas and Eckhart, as most medieval theoreticians of change, accept the aristotelic notion of the density of time ~~tz~~.

What we have here is physics of change so to say integrated to a metaphysic of the instant, the proprieties of which have in Eckhart's work a triple reality: mystical, exegetical and philosophical. The instant in which the Word is generated in the creature is the nunc aeternitatis (the now of Eternity). The instant of generation is one and the same instant as that in which things are created. The numeral unity of the instant signifies the principle explained as a negation of time, i.e. the coincidence of the beginning and the end of all things. Therefore Creation is integration to the divine Being, who alone is. Generation is entering into, or returning to Being, whereas becoming is the mark of the ontological finitude and even nothingness of creatures. It is in itself bitter, since it is opposed to Being which is the root of all sweetness. Generation, in nature, is but the term of becoming, and thus what puts an end to the bitterness and the suffering of alteration. All alteration, i.e. all

movement which precedes and prepares generation, is but a suffering in time. Nevertheless alteration is a preparation to the reception of the form. The movement which precedes generation is the movement we see in Nature, it precedes the apparition of forms and thus continually prepares the return of everything that is to the very principle of its being. There is no movement before Nature, or time before Creation (In Johannem , n. 214; In Genesim, n. 7), but there is a movement of Nature and in Nature, a time of this world and in this world, which see the efforts of the creature moving away from God or drawing nearer to him. Therefore it is only in the instant defined as limit of time or end of time that the distinction between East and West is abolished. For the conversion of the creature to the Word is not the return of the particular to the place of its first distinction (archetype or exemplar) but the suppression of the particular as such, shadowed with suffering and time, to God's own substance ¹².

What constitutes the heart of Eckhartian metaphysics is this bold relation instituted between the thomistic theory of the introduction of the substantial form into the composed and the doctrine of the generation of the creature in the Word. The censors of Cologne, who practically condemned the whole of that metaphysics, also condemned the perfectly orthodox doctrine according to which "God has nothing to do with time, for he only gives and operates in Eternity" (Proposition 27 of the second Accusation Act).

We see from what precedes that Eckhart's information about contemporary physics and the aristotelian theory of time did not really lead him to a reevaluation of the latter, though we find in his works passages where, in accordance with the Christian doctrine - and in some measure with that of Plato - he shows the necessity of time for fallen man: to help him unravel the signification of his life here below, to atone for his sins, to "learn to live". This acknowledgement is however finalized by the mythical view of in illo tempore or better in principio (In Johannem, n. 1-51). To summarize, we could say that for Eckhart the sole problem is to know, i.e. to recover "what we were before time" (Predigt 67; cf. Pfeiffer, Mystics of the 14th century, p. 501), in accordance with the question posed by the sixth Zen Patriarch: "What was your original face before you were born?".

Thus we see that in the West, for Eckhart is representative of medieval thinking, in spite of the irruption of Biblical time, and that of science, the balance was first in favour of cyclic time. This is not surprizing, since all along the course of history, mankind kept to the notion of cyclic time, and considered sagittal time either as unintelligible or as a cause of terror. Most cultures refused to accept the idea that history is the reign of impermanence, and that its dangers, such as wars and natural disasters, could not be amended in some way through rites and prayers. The interest for what is new and irreversible in history has appeared very recently in the life of humankind, whereas archaic society defended itself against it ¹³.

However, both symbols seem to be at play in the approach of Time's mystery. This necessity is exposed at length in Sephen Jay Gould's remarkable history of geology which simultaneously contains good part of his own intellectual autobiography, linked to the discovery of the complementarity of these two symbols in the understanding of "deep time". He demonstrates that they have revealed themselves as important for the discovery of the quasi infinitude of geological time, compared to the briefness of human history, as the observation of natural facts. He shows that it is in fact this dichotomy which led the great discoverers of deep time in the anglo-saxon tradition (Thomas Burnet, James Hutton and Charles Lyell), as well as their observations. Gould also shows that their works have often been misinterpreted because the notion of cyclic time has become unfamiliar to us. He reminds us that it contains fundamental principles for the interpretation of reality, and that for this reason we must absolutely recuperate that notion. Whereas the symbol of the arrow allows for the understanding of distinct and irreversible events, the cycle does so for the temporal order considered as a law submitted structure¹⁴ .

After noting the complementarity of the arrow and the circle in one of the most important scientific discoveries, let us now turn, with the sociologist Anne Sauvageot, to the investigation of the sure revealer of the modern mentality which we have in publicity. We find there, e.g., the myth of reactualization of the original elements in

their sacred power. To say that the great wines of the Côtes de Provence have two ~~thousand~~ ^{thousand} ~~hundred~~ six hundred years of age is to refer symbolically to a Time of the Origin , when nothing was yet soiled or worn out. Publishers have understood the profit they can draw from references to Ancient Times. E.g. also the Arcopal table plates, made of ancestral matter, i.e. glass, presented in association with the picture of a fossil: "they will keep their beauty in spite of all". The publicitary myth, in this way of evoking primordial Time evokes the idea of Eternal Return. The nostalgic evocation of past time and its reiteration convey the reassuring illusion of some kind of immutability. According to Eliade, it is nostalgia, this dream of the imagination, which nowadays allows us to revive symbolically the myth which, formerly, needed the praxis of the ritual to be reactualized. Let us notice that this nostalgia is at once the regret of a lost past and the desire to find that past again. So this regret gives birth to the desire and awaiting of a future world. For our consciences, at the same time as they are prospective, are also retrospective.

As according to Freud, every one tends to recreate anterior states, every civilization tends in the same way to re-live in its past. The conscience of the present is penetrated by the fundamental symbolic ambivalence of past and future. And publicity, which is at the service of present everyday life, brings its symbolic contribution to the reiteration of time past.

Thus the mythical language of publicity evokes the plural dimension of time. The vigour of myths such as that of Eternal Return invite us to question ourselves on our own representations of time, and on the sociological theories concerning the sense of history. The social dynamics does not seem to be necessarily linear, as the progressist theses intimated, nor fatally cyclic. Authors like N. Berdiaev, O. Spengler, R. Guénon have insisted on the cyclic character of history. But these cyclic conceptions, nourished by millenary myths, have been completed by much more complex representations of history, such as Sorokin's. According to him :

The great symphony of social life is orchestrated through an incalculable number of separate processes, each proceeding in the manner of a wave and coming again in space, in time, at once in space and in time, periodically or not, after short or long intervals. ¹⁵

Thus we see that the recurrence of most social facts does not follow only one model, that of the cycle, implying a destiny exterior to the events. On the opposite, those recurring processes are multiple in their development. Sorokin's theory makes of historic process an aleatory and non linear process, including dialectical forms, discontinuities and reappearances. So the development of history, according to that theory, should be polyrhythmic. This allows us to understand better the lack of synchronicity to which different cultural moments are subject, e.g. the fabulous advance in physics of ancient Greece.

The multiple models proposed by the study of any historical process express the ambivalence of time in the duality or dichotomy of synchronic and reversible time and diachronic, irreversible time. As well the psychology of depths as ethnology have shown that the same desires, the same affective and imaging structures repeat themselves from one civilization to the other, from one historical period to the other. It is thus that the reading of publicity has led us to discover synchronicities, i.e. constant significations for the human species.

It is the function of anthropology to discover the synchronicities which are manifested by the analogies of thought in different civilizations, whereas history is more interested by the variations which show the diachronic side of events. Thus we can oppose to the infinite multiplicity of socio-cultural forms the conviction of a potential unity referring to a general structural archetype of our representation of the world. The preoccupation of a stable and archetypal foundation of the patrimony of our representations comes as an heir to important philosophical currents, such as the German Naturphilosophie of Hegel and Schelling. This kind of morphology interests more and more the modern physicists, e.g. Stevens, and especially René Thom. According to the latter, the principle of synchronicity of the fundamental forms of the Psyche, participating of a potential archetypal unity of the totality of the Universe, can be understood as the expression of an a-causal order. The thought of E. Mach participates of this view which admits an influence of the globality of the universe on all its parts ¹⁶.

The comparatist views of the anthropologists, and their confrontation with that of the physicists shows the concordance of a notion of synchronicity - in the face of an experimentation which cannot be understood within the sole frame of causal determinism.

The question is then: how can we conciliate an a-causal approach of the archetypal constants which are omnipresent in our representations, and the conception of the time of history as well as the historicity of our individual consciousness? Is it possible to envisage a principle which would make their complementarity possible?

If we recall the recent history of science, with the discovery of quantic phenomena which do not obey the newtonian determinism, it is the principle of complementarity defined by Niels Bohr, which will be adopted to allow the understanding of quantic mechanics as not obligatorily contradictory to classic^{al} physics¹⁷. Without making an over simplist^{ic} analogy between the a-temporal and therefore a-causal character of archetypes and that of quantic phenomena, it is possible, in the light of the principle of complementarity, to render non-contradictory the different approaches of time through which we are invited through our own experience. Niels Bohr himself was convinced of the necessity of new epistemological formulations, for which complementarity would play a fundamental role as well in the domain of physical science as in that of social anthropology¹⁸.

Allow me to conclude, in the sense of this common research of the modern geologist, physicist and anthropologist, by this quote of the philosopher Michel Serres:

This coexistence is not easy to understand: that we happen to be immersed in two times whose difference reaches contradiction. However, it is so. The world comes to terms with it and our bodies have no problems concerning it. But it is not very sure that our groups and their history have ever accepted this double extension without terror or violence. Reversible time is order, irreversible is tendency to disorder: it is probable enough that violence arises at their common border. It is even less easy to understand that a third one exists ¹⁹ .

A third one? Michel Serres means the conviction of a sense, of a universal becoming, of a "Grand Ensemble" which the principle of complementarity, postulated by the dialectic of the arrow and the cycle, seems in its turn to postulate ?

NOTES

1. "The events of angelology are essentially 'Events in Heaven'; they transcend History; they are Hierohistory; their time is not the continuous time of History and historic causality, but tempus discretum. The liturgical mystery is also accomplished 'in Heaven', liturgical time is tempus recurrens...it is an essentially reversible time." Henry Corbin, Le paradoxe du monothéisme, quoted in Temps et Hiérophistoire (Cahiers de l'Université Saint Jean de Jérusalem, no 14, Paris: Berg International, 1988), p. 11.
2. On all this see Mircea Eliade, Aspects of Myth (New York: Harper, 1962). Fr. transl. Aspects du Mythe (Paris: Gallimard, 1962).
3. Wordsworth: "Ode on the Intimations of Immortality".
4. See Ananda Coomaraswamy, Time and Eternity. Fr. transl. Le Temps et l'Eternité (Paris: Dervy-Livres, 1976), p. 46-47.
5. Ibid. "The Buddha's memory does not operate by going through the temporal succession of birth and death. It seizes immediately, instantly, any situation in whatever time the Buddha chooses to perceive them: i.e. that all times are present for the Buddha's instantaneous vision."
6. Ibid. Quote without bibliographical reference.

7. Daisetsu Suzuki, Mysticism Christian and Buddhist (London: George Allen and Unwin, 1957).

8. See e.g. Shizuteru Ueda, Die Gottesgeburt in der Seele und der Durchbruch zur Gottheit (Gütersloh: 1965).

9. Beni Scharfstein, Philosophy East, Philosophy West (Oxford: Basil Blackwell, 1978), p. 9 ff.

10. The Taming of the Ox, IX,1. Japanese Zen poem of Chinese origin.

11. Rémy Lestienne, Les Fils du Temps (Paris: Centre National de la Recherche Scientifique, 1990), p. 28.

12. On all this see Emilie Zum Brunn et Alain de Libera, Maître Eckhart. Métaphysique du Verbe et Théologie négative (Paris: Beauchesne, 1984), p. 111 ff. Jap. transl. (Tokyo: Kokubunsha, 1985).

13. See on this Mircea Eliade, The Myth of Eternal Return. Fr. transl. Le Mythe de l'Eternel Retour. Archétypes et Répétitions. (Paris: Gallimard, 1949).

14. See Stephen Jay Gould, Time's Arrow, Time's Cycle. Myth and Metaphor in the Discovery of Geological Time (Cambridge: Harvard University Press, 1987). Fr. transl. Aux Racines du Temps (Paris: Grasset et Fasquelle, 1990) .

15. P. Sorokin, Social and Cultural Dynamics (Boston: Porter Sargent Publisher, 1957). See also E. Bloch's theme of the polyrythmisches Gebilde.

16. See René Thom, Paraboles et Catastrophes (Paris: Flammarion, 1983) and E.Mach quoted by Hubert Reeves, Patience dans l'Azur (Paris: Seuil, 1981).
17. See Niels Bohr, Physique atomique et connaissance humaine, Fr. transl. (Paris: Gonztheir, 1961- p. 137-140.
18. "We meet in many other realms of knowledge situations of which remind us those we know in quantic physics. Thus the integrity of living organisms, and the characteristics of individual consciousness, as well as those of human cultures present the features of a whole, and imply, to account for them. a typically complementary mode of description...". Ibid. p. 121.
18. On all this, see Anne Sauvageot, Figures de la Publicité, Figures du Monde (Paris: Presses Universitaires de France) 1987.
19. Michel Serres, Le passage du Nord-Ouest (Paris: Editions de minuit, 1980), p. 78 .