

## HARMONY AND TRAGEDY — SCIENCE AND METAPHYSICS — GENERAL INTERRELATIONS

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1.

We shall try to substantiate the contention that a metaphysical system can be described as a literary work of art, originally conceived and elaborated to be a scientific theory of the universe in its totality and we shall show that the transformation of scientific intentions in artistic results is an inevitable consequence of the nature of our universe. We shall limit ourselves to very general characteristics of the universe, of science, of art and finally of metaphysics. Consequently the analysis is not exhaustive at all but merely — it is hoped — sufficient to prove our point. Moreover, the ontology proposed is completely hypothetical, conceived to show how and why a metaphysical system pretending to be science turns out to be art. The thesis itself is to be conceived of as a generalisation of empirical research concerning existing metaphysical systems.

2.

Anthropologically speaking the universe consists of real and symbolic actions of human agents spatially and temporally organised. Actions can be spatially and temporally coextensive, but the overall organisation presents an irreversible and finite sequence, the “lifeline” of the agent. The explanation for this sequence might be the following. Human agents are defined by sets of conflicts that determine possibilities of action. An action is considered to be a “reaction” to a conflict, i.e. an energetical element changing the defining set of conflicts. In this interpretation the lifeline of an agent can be described and explained by considering, first the initial conditions of the agent, both possibilities and limits, the sequence of

choices made (if there are any), and finally the set of ultimate incompatibilities or unsolvable conflicts his actions necessarily result in. These ultimate conditions determine the end of the lifeline and hence the desintegration of the agent. In a deterministic universe conflicts and actions determine one another univocally, in an indeterministic one the agents can choose any of the initially possible lifelines resulting in one of the possible ultimate unsolvable conflicts. It is to be stressed that the possibilities of the agents as well as the sequences of actions are finite. Further, it is supposed any agent has a "conatus" to avoid desintegration, i.e. to continue his sequence of actions indefinitely. Thus, final unsolvableness being initially given, it is clear there are only two possibilities of continuation of the sequence: first, the introduction in reality of "cyclical action", i.e. sequences of actions returning finally to their initial conditions, thus enabling in principle indefinite repetition of identical sequences; and secondly, the introduction of trivial repetitivity, i.e. symbolic action. Indeed, syntactically, a symbol is an energetical complex that can be combined arbitrarily with any other energetical complex of the same nature, i.e. syntactically relations between symbols are exempt from incompatibilities or, in other words, their combinatorial possibilities are practically unlimited. Thus, concatenation and hence repetition of symbols is almost entirely free. Semantically, of course, this is not the case, but suchlike limitations are not due to the nature of symbols but to their denotations and designations, "reality" finally being an irreversible sequence. The symbolic order, therefore, is an order of reality wherein cyclical action-patterns can be introduced almost directly and at will without preliminary investigation. The first possibility to introduce cyclical action leads to science, the second to art.

### 3.

Science indeed can be interpreted as a very special sort of symbolic action. In fact, a scientific theory is a system of symbols that in contradistinction to art can be applied. This means that scientific symbolic action can be transformed in real action so that, given initial conditions, symbolically enacted final conditions can be realised in reality with systematical efficiency. That is to say, science implies systematically efficient means to realise desired ends by the use of theory describing in a computable way repetitive, i.e. cyclical processes of the universe. Moreover, science, in so far as it reveals cyclical processes of nature, is both the only and the most efficient way to maximize repetitive action, i.e. to indefinitely lengthen the

lifeline of human agents. Indeed, on the basis of theoretical insights, applied science indicates the initial conditions that must be realised in order to be able to introduce formerly unknown cyclical patterns in a finally irreversible sequence of action. This applicability of the scientific system of symbols is essential : if, given initial conditions, results are not obtainable or results cannot be computed, the scientific nature of the system becomes dubious. Ideally therefore, a scientific theory implies a threefold systematical efficiency.

First application supposes the scientific theory enables the symbolizing agent to compute, given well-defined initial conditions, a symbolic sequence of action : the theory must supply him with a series of precise rules enabling him to construct the desired sequence. In other words, on the basis of definitional limits on symbols and their combinations, symbolic action itself is systematically efficient : for any symbolizing agent, given initial conditions precise prescriptions are necessary and sufficient to "realise" the sequence of symbolic actions as many times as is thought fit. This is the first property that marks off science from art. An aesthetical system of symbols is not a theory that enables one to construct in a systematically efficient way repetitive sequences of symbolic action. As a system of symbols an object of art is, so to speak, its own theory or, alternatively, its own application. We are presented with a spatially and temporally organised series of symbols, but this system does not contain prescriptions for the construction of other sequences given initial conditions, nor does it contain prescriptions for the exact description of such conditions. On the contrary, in itself it presents unchangeable initial conditions, a sequence of actions and a final outcome all in one. In certain cases, spatially and sequentially, this system of symbols may indeed have a loose structure (for instance, visual art does not determine precisely the sequence of symbolic action) but nevertheless the unique character of the given systemic picture the symbols present cannot be used to construct in a systematically efficient way (i.e. without using scientific means) other sequences of symbolic action to be considered as "applications". Naturally the system of symbolic action can be repeated indefinitely, but such repetition reproduces the original system and has its origin in the trivial repetitiveness of symbols as such and not in specific rules inherent in the "theory". As far as application is concerned, the most that can be realised is a "pastiche". A "pastiche" however precisely consists in the imitation of cyclical procedures used by the artist in creating his work, i.e. in the "technical" imitation of repetitive elements of "style". And just the existence of such cyclical patterns of action in symbolic

sequences — the “formal” laws of the work of art in contradistinction to the “material” laws of nature — makes possible such an imitation. More than these technical peculiarities cannot be “imitated” in a systematically efficient way without reproducing in its uniqueness the system of symbols, and this fact makes for the individuality of the work of art and makes it original and unique. In short, as a system of symbols a scientific theory suffices to generate different sequences of symbolic actions in a systematically efficient way, whereas a work of art as such does not contain generating devices of this nature.

Secondly, in a scientific theory at least some symbols are subject to semantic rules that are precise enough to connect the symbols in question in a systematically efficient way with elements of reality that can be exactly described. It is indeed the systematical efficiency of these connections between indefinitely repeatable symbols and indefinitely repeatable elements of reality that guarantee that the theory is in fact a theory of a certain part of reality and that makes for the possibility of the transformation of symbolic in real action. Systematically efficient action in reality is indeed but guaranteed when initial conditions of the symbolic sequence of action can be connected in an unequivocal way with initial conditions in reality and symbolically foreseen results can be connected in the same way with results obtained when real action is taken. If this is not the case, relevant initial conditions cannot be described and thus not be realised efficiently and final results cannot be described either and consequently cannot be checked. In such a situation cyclical patterns of action cannot be introduced in a systematically efficient way, which means that the theory cannot be applied satisfactorily.

These syntactical and, partially, semantical demands necessitate a system of symbols of a special nature. In a general way scientific symbols are artificial, heterotelic, understood by stipulation and abstract, i.e. exempt from content, in contradistinction to art wherein use is made of “natural” visual, auditory or linguistic entities, and symbols are autotelic, understood by suggestion implicit in the symbols themselves and thoroughly concrete. Scientific symbols are abstract because without interpretation they but exemplify a syntactical structure without significance. The symbols by themselves do not contain any reference, vague or precise, to elements of reality. Moreover their intrinsic nature is such that they do not suggest, let alone imply, certain relations with one another. Syntactical as well as semantical relations must be stipulated precisely and completely, i.e. in the axioms and rules of interpretation. For this reason empirical elements shall be selected

that can be discriminated easily and unambiguously. Because one can only make sense of the system by interpretation, scientific symbols, or at least a part of them, are heterotelic. The others however — the uninterpreted symbols — are not autotelic either : they merely have syntactical functions to perform, namely to help realise in a systematically efficient way the transformation of initial semantically relevant symbols in final semantically relevant symbols. As such they need no interpretation whatever. Finally, abstraction, stipulation and heterotelically make for the artificial nature of scientific symbols. In art, on the contrary, symbols are concrete, suggestive, autotelic and “natural”. A work of art, even applied art, cannot be “applied” in a scientific sense, it only can be contemplated. It is, as it were, its own symbol, whereas a scientific theory is first and foremost a symbol of reality. A work of art does not contain a “program” for the construction of different series of sequences of action. It is in itself such a series and consequently not a “theory” of reality but an “imitation”, a “mimesis” thereof : a world in itself. Syntactical and semantical relations of the symbols do not refer to anything but the work of art itself, and the work of art itself does not refer to some well-defined part of reality, but merely “shows” itself as such, self-sufficiently as reality itself. Naturally, a work of art is about “something”, but it is not — and it must not — be clear what this something “really” is. Rules of interpretation are not formulated, even not intimated, they must be supplied by the contemplator on the basis of the semantics “shown” by the semantical and syntactical relations of the aesthetical symbols themselves. Moreover, aesthetical symbols cannot be clearly and unambiguously divided into semantical and syntactical ones. Indeed, all symbols have both functions to perform : syntax and semantics are but vaguely distinguished. Syntactical relations are at least partly determined by the “content” of the symbols and thus semantically “informed”. On the other hand, semantical relations in general do not refer to anything outside the system of symbols, which is to say they have an overall syntactical function to perform. In short, aesthetical symbols and their relations have properties analogous to “real” objects and “real” relations, and therefore they are not abstract, but concrete. They show what they are by means of their compactness and complexity, whereas scientific symbols say what they mean by virtue of their distinctiveness and simplicity. Being concrete, aesthetical symbols are analogically suggestive : they can be interpreted in a great variety of ways and these interpretations are not determined by precise rules. The distinction between a true and a false interpretation is difficult if not impossible to establish and one

might even ask whether it makes sense to speak of "true" and "false" in this context. Furthermore, aesthetical symbols are autotelic because syntactical and semantical relations of individual symbolic entities are partly or wholly a consequence of their intrinsic nature and the system as a whole does not by itself contain relations to other objects, neither symbolical nor real ones. Such relations must be added externally. Thus, a work of art has many affinities with a "natural" object and in this sense it is an "imitation", a "mimesis" of nature. We may conclude therefore that science and art are indeed very different sorts of symbolisations. If in the last analysis both are reducible to the desire to prolong the lifeline of the agents concerned indefinitely, one must attribute their remarkable differences to the difference of their object. This leads us to the third form of systematical efficiency characteristic of science.

Indeed, the applicability of a scientific theory means that the theory permits the deduction of prescriptions that can be executed in reality so that initial conditions can effectively be transformed, at least theoretically if not technically, in desired final conditions and that this process can be repeated indefinitely when identical initial conditions are present or can be realised. This systematical efficiency in real action must be attributed to the existence of cyclical patterns in reality. Systematic efficiency of action on a scientific basis thus is due to the indefinite repeatability of combinations of naturally cyclical processes, detected by observation and experimentation and finally described and explained by so-called scientific laws. Cyclical processes prolonging the lifeline of agents therefore are not created out of nothing, but are introduced into the lifeline by the use of repeatable combinations of naturally cyclical processes. Consequently, scientific theory and scientifically informed real action are possible only in so far as naturally cyclical processes (known or unknown) exist or can be introduced into reality by repeatable combinations of existing ones. Now, a cyclical process is the primary "image" of "harmony", because such processes are energetical counterparts of equilibrated structures of conflicts: in this case indeed, all conflicts are solvable and the sequence of actions never comes to a standstill. A finite irreversible sequence of actions on the other hand is the primary "image" of "tragedy," because such processes are the energetical counterpart of auto-destructive structures of conflicts: in this case indeed, at least one unavoidable conflict is unsolvable and therefore the sequence finally desintegrates. Using this terminology, we can recapitulate by saying that science is possible and scientifically informed action can be introduced in reality precisely in so far as harmony exists or can be constructed, or

alternatively, that science is impossible or cannot be introduced in so far as tragedy is unavoidable. In this supposition one easily understands that aesthetical symbolisation is the only way to introduce a cyclical pattern in tragical sequences, precisely because of the triviality of merely symbolical repetitiveness, whereas in science repetitiveness is not only and evidently symbolical but actually real as well. Scientific symbolisation therefore is highly limited, aesthetical symbolisation almost not. Conversely, scientific theory is effective as it can be applied with success, aesthetical symbolisation is not, as it can only be contemplated. In consequence, even if art and science have the same origins, as they surely do, they inevitably split up : the "conatus" leading on the one hand to scientific theory-making in so far as harmony is possible, and on the other hand to the creation of art in so far as tragedy is unavoidable. This contention is indeed plausible if we consider the fact that "scientism", "positivism" and other philosophies that stress the exclusive importance of "science" metaphysically deny the existence of unsolvable conflicts. Besides, it is unquestionably true that the object of works of art, their "real" significance pertains in the highest degree to irreversible sequences and unsolvable conflicts, such as human suffering, ageing and death. Finally, we must add that our analysis clarifies the fact that scientific theories can be contemplated as works of art, what indeed is often the case. As a work of art a scientific theory is contemplated either as a formal system, i.e. all interpretation is suspended and only syntactical relations are taken into account, or as a "realistic" model of that part of the universe the theory is about, i.e. all or most so-called theoretical concepts do get an interpretation — they are considered to be representations of "really" existing objects of nature —, and syntactical relations are considered to be the result of the "essence" of the objects symbolised. In the first case, the scientific theory is contemplated as a work of art, in the second as an ontology or a metaphysics. However, neither of both interpretations is practically speaking necessary or even useful, as neither implies any change in the prolongation or the chance of prolonging really and actually the lifeline of the agents in question. This does not mean both and in the first place the ontological interpretation are not important. This point however can but be elucidated by considering the nature and function of metaphysics in the light of our observations concerning science and art. It may be interesting to point out that such "realistic" visions of science combined with the necessity of precise empirical interpretation, might account for the seeming contradiction between the epistemological primacy of common sense, i.e. immediate experience, and the ontological

primacy of theoretical entities, a problem that is at the core of our first issue on metaphilosophy. However, we shall not expatiate on this point in this context.

#### 4.

Anthropologically, the function of metaphysics can be described as providing the overall orientation of the lifeline of the human agent. A metaphysical system therefore necessarily presents the following three features. Firstly, a theory about lifelines in their totality, which implies a theory of the world as well, i.e. a theory about the totality of "worldlines" of events that possibly might influence the lifelines considered. Secondly, a theory of choice enabling the human agent to choose the "best" lifeline out of all possibilities, in our presupposition of "conatus" the "longest" one. Thirdly, a theory enabling the agent to realise in a systematically efficient way the finally chosen lifeline. It is evident these requirements cannot be satisfied unless a scientific theory of the totality of all that is can be constructed. Only then the set of possible lifelines of the agent can be determined, only then a rational choice can be made, and only then the conditions can be realised or at least be known that make possible the realisation of the aims of the agent. On the other hand, it is evident as well these requirements necessarily cannot be satisfied in a universe consisting in finite sequences of actions, starting from unalterable initial conditions and resulting in inevitable final unsolvable conflicts. In such a universe science cannot possibly be the science of the universe, but at most the science of parts of the universe. Analogously science cannot possibly be complete, but is of necessity partial. In our universe, therefore, the metaphysician tackles an unsolvable problem. Anthropologically speaking he necessarily needs a scientific theory of the universe, the only sort of symbolisation that possibly can satisfy his requirements. Ontologically however, such a theory necessarily is impossible. Consequently his problem is to be described as an intellectual tragedy, or, more exactly, as the inevitable meta-tragedy of the universe. Indeed, if a science of the universe were possible, i.e. could the totality of all that is be or be made a cyclical process, all unsolvable conflicts were or could be eliminated and this would mean tragedies would disappear. The construction of a "real" science of the universe thus would imply the elimination of all tragedy. Conversely, the impossibility of such a science bespeaks the nature of the universe in so far as it indicates the inevitability of tragedy. However, precisely because of the necessity of choice combined with



the possibility of introducing cyclical processes, the metaphysician cannot resign: he cannot but endeavour to construct a symbolization of the totality that is. If he does not do so, the wished-for threefold systematical efficiency is surrendered to trivialisation, and such a procedure cannot possibly be considered a solution, as it merely denies the existence of the problem. Indeed, everywhere and always such an attitude finally results in some form of nihilism and consequently in an unsolvable split between thinking and doing and thus in a pragmatic contradiction. Metaphysical symbolisation really is inevitable.

If our analysis of symbolization is accepted, it is not difficult to see what will happen. The metaphysician's purely scientific intention progressively will be transformed in artistic creativity, in so far as his scientific endeavours and his scientific synthesis of the universe are inevitably circumscribed by unsolved and unsolvable problems. The integration of these problems in the "system" unavoidably necessitates the introduction of theoretical terms and relations that cannot in principle be interpreted in the same way as really scientific terms are by the application of precise semantical rules. Moreover these theoretical terms and relations will be invested with ontological significance. The science of the universe thus progressively tends to become an aesthetically interpreted "scientific" system. Furthermore, these theoretical terms concerned cannot possibly have precisely determined syntactical relations, because these relations cannot be checked by successful application, and thus syntax cannot be axiomized satisfactorily. The metaphysical system tends to resemble a system of aesthetical symbols and finally becomes indistinguishable from it, the only difference being that the object in question is "the universe", not an empirically known part of it. Metaphysics is, as we said at the beginning, an aesthetical symbolisation of a thoroughly scientific theory of the universe in its totality, the symbolization of a realisation, not that realisation itself. In this sense it is the consummation of art by means of the symbolization of the enthronement of science. On the other hand, it is the symbol of the inevitable tragedy of both.

Our analysis helps to explain certain remarkable features of metaphysical systems. In the first place it clarifies the typical ambiguity of metaphysical concepts, being abstract and concrete, stipulative and suggestive, autotelic and heterotelic, and finally "natural" and "artificial" at the same time. Metaphysical concepts are by nature theoretical, thus abstract, but functionally they prove to be aesthetical symbols and therefore are concrete as well. By nature their significance is determined by stipulation as in science,

but this in fact being impossible their ontological relevance is based upon their suggestiveness. Thirdly, whereas syntactically they pretend to constitute an axiomatic system, in fact, as they transcend the scientifically possible, their interrelations are determined semantically, i.e. by their content. Thus they "show" the reality they are, which proves their autotelic character. Finally, "showing" reality, they tend to present themselves as "mimesis" of nature, thus to be "natural", whereas in fact they are extremely "artificial", because they are abstract and their interpretation is not limited by explicit rules. In the second place, our analysis helps to understand the affinity metaphysics unquestionably has with both science and art. So-called "metaphysical" problems are not unambiguously solvable or unsolvable. Progress in science antiquates certain metaphysical issues, while creating new ones. Conversely, so-called "metaphysical" solutions sometimes foreshadow in a variety of ways scientific ones. On the other hand, networks of relations between metaphysical concepts, exemplifying so-called "ontological" laws but in fact being laws of "symbolization", more or less resemble "styles" in works of art. Thus a metaphysical system, as much as an aesthetical movement expresses psychical, social and cultural limits and perspectives, problems and solutions. Finally, this last observation helps to clarify the ambiguous historicity of "metaphysical movements", as historically conditioned on the one hand and as being "eternal" paradigmatic structures on the other. Whereas for science historicity is inessential because science as the introduction of cyclicity in nature "eliminates" history, for metaphysics and art history is essential because historical evolution determines changes and solves problems thought essential in both. Nevertheless history remains inessential in a sense, because in so far as art and metaphysics are concerned with really unsolvable and unavoidable problems — such as death for instance — their possible relevance necessarily remains the same for all periods of history. Further, because art has a limited subject-matter, some art may be or become completely historical in nature in contradistinction to metaphysics that, being all-embracing, necessarily preserves at least some part of its relevance. Naturally, detailed investigation is necessary to substantiate these suggestions and this cannot be done in this context. Let it suffice we have shown that the implications of our thesis have prima facie plausibility and possibly may be confirmed by detailed empirical observation.

## 5.

To conclude. If the essential features of our ontology can be substantiated, it can easily be seen that "metaphysics" is a necessary but impossible science. This being so, it can be shown metaphysical constructions inevitably turn out to be very special "works of art", that pretending to be science and assuming applicability to reality, in fact impose an essentially arbitrary type of lifeline on human existence. Thus the inevitable but unjustifiable "scientific" claims of "merely" aesthetical preferences seem to lie at the foundation of human culture. It is evident we are confronted here with a very important problem. However, in this context we cannot expatiate on the possible consequences.

Of as much importance is the fact that our thesis might be attacked on grounds of circularity. The "nature" of metaphysics has indeed been explained metaphysically. One might try to weaken the circularity of this approach by appealing to the essential ambiguity and historicity of metaphysics itself and by assuming the difference of science, art and metaphysics is gradual, relative and historical, which in our opinion is indeed partially true. However, we think such a procedure is of no avail, and moreover, unnecessary. If our analysis is accepted, circularity is indeed inevitable: it simply means metaphilosophy itself is metaphysical in nature, so that any analysis of "metaphysical systems" partakes of the nature of such systems. In a sense however, the analysis may be said to be absolute, because the circularity is necessitated by the ontology itself. If we accept the ontology, an analysis of metaphysics necessarily results that confirms the ontology, and that, moreover, is in accordance with empirical fact. On the other hand, if we reject the ontology, metaphysics necessarily reduces to an illusion or a fake, unnecessary and superfluous, so that empirical observations become incomprehensible. Logically speaking, the ontology seems to be the only available one that can explain the well-established facts of metaphysics. It is in a sense evident. And indeed, we think it is "evident" that the world and especially human existence contain at least some unsolvable conflicts. And this observation is indeed trivial. It seems however that no one till now really bothered to take such a simple fact seriously. And if this is done, classical metaphysics as we have seen must be completely rethought.