

The role of the concept of "dynamic myth" as symbols and forms in the process of social creativity

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Regarding the topic itself, I am convinced that even from the pure rationalist point of view, the history of sciences reveals that the development of new ideas and creative products cannot be satisfactorily explained by the analysis of the immediate motivations of the scientists. A number of studies have been made in this respect and I myself made a contribution in my book : "Scientific creation". Basically the usual motivations behind the incentive to make something new (creation proper), i.e. to introduce into the world or the mind a form (Gestalt) that was not present already, are :

1. what the philosophers call, properly speaking, the "call of truth", a vague but potent urge to reshape the world or a small part of it, according to a series of constraints which come from logical thinking and the observed conditions of the contexts;
2. the will to be recognised as a creative person by one's colleagues or, more remotely, by one's fellow men in general, an urge of a competitive character to be "primer inter pares", to be recognised, to be praised;
3. a kind of routine of novelty; after all, creativity does not deal only with the foundation of the physical world, abstruse mathematics or the tools of industry or evolution. Creativity is a faculty of the mind to see the world differently (recodification principle of WERTHEIMER).

Every normal human being has some kind of creativity, at least to the extent his mind is young enough not to be overloaded by routine, common sense and laziness of thought. Everybody creates, to some extent, and people whose business it is to create, so-called scientists, do it just because it is their job and, independently of all kinds of special genius (it helps) they just select and foster new ideas or new shapes because they have been trained to do so. This is specially true of the artist, of the inventor in his laboratory, but also of quite a number of common citizens. Indeed, what I have called elsewhere the **scientific city** or the **scientific ghetto** is made up of such people; it can be considered a very bourgeois city, with a sharp meritocracy, keen competition and wide systems of recognition, whether financial or not.

One of the purposes of a sociology of science (BARBER, BEN DAVID) is to ascertain what is the relative weighting of these drives in a statistical manner in order to estimate the relative factors of motivation in connection with the development of pure science, applied science and artistic creation. Now, it appears conclusively, that the **loadings** -to use a word from factor analysis- do not really explain the totality of the variants in the creative process. There are others, and it seems that these factors are of a rather irrational nature, not connected to the immediate motivation, epistemological or social, but probably connected to what it is not abusive to call common consciousness, shared by all individuals, and especially the scientists, which makes one or more latent drives that would, in the end, represent the

irrational propensity to rational thinking. Amongst other evidence, is the phenomenological analysis showing that the urge to rationalise, to build logical consistency, comes after and not before, the illumination, the flash of the new idea with its instant and deceptive certainty : first we imagine the "Truth" and afterwards we rationalise, a remark already made by GEBSER some time ago.

In short, there is a part of irrational motivation in the rational building of what we can call science (or art) and it is not outside the realm of thought to try to study it in a rational way, i.e. to try to lay out a rational science of the irrational. This science, belonging to the field of human and social sciences is, a priori, rather vague, relies on fuzzy concepts, just as does psychoanalysis, social analysis and the like, and most of the "Geisteswissenschaften", its material is essentially the establishment of regularities of the mind processes, the typology of drives and instincts, the phenomenology of processes which are before, and thus beyond, the pure rationality of so-called pure sciences that appear, in a general, epistemological way, to be some kind of luxury of the mind, a sort of refined and sophisticated step which comes at the end of the logical process, and not the beginning, and which requires, to a large extent, a more flexible way of thinking than strict deductive processes. But this restriction does not necessarily mean that they are no science at all, and although vague, sometimes confused, very cautious in its steps, the science of the irrational, like rules of behaviour and among others, of rational behaviour, does play its part in the theatre of the mind. In other words, there is a place in the big book of general sciences for chapters on the regularity of thought processes that exceed enormously the field of perfectly consistent reason, which is the ultimate step that these chapters are unable to come to grips with. Although psychoanalysis, and especially those branches of psychoanalysis which have tried specifically to deal with myths symbols and forms, may have laid down some guidelines, it appears that they have not, until now, really taken in charge this immense world of irrationality, as a world of pre-rationality, the knowledge of which could help to master the creative process and a better assessment of the role of science and logical thinking in the development of society. In my opinion, the present Committee has as its role, to delineate some of the elements of it, according to various approaches, whether resulting from the causality gaps that exist in the present image of physics due to the uncertainty principles and to the new conceptions of elementary particles as the bricks of the universe. This might, to some extent, be one of the interpretations of CHARON's paper.

How do we grasp these regularities in the functioning of the mind which remain for the exercise of reason, the justification of a scientific attitude? There is certainly a number of them, among which the study of those entities that have been named symbols and that have been recognised as more or less universal in different cultures. This is, for instance, what Professor SKOLIMOWSKY tries to do.

Symbols are shapes which are between concrete objects of the surroundings and pure entities imagined as creations of the mind. Symbols are the ghosts of universals, tools for infralogical thinking preparatory to a future, logical expression. Symbols are material of dreams and a first step towards abstraction. They prepare an encoding, most typical in artistic activity, but also in regular science. Taking them into account, just as they are handed to us by religions and cultures, can at least provide milestones to the evolution of cultures and it is especially interesting to confront the massive heritage of symbols from the past of our various cultures and arts and the development of symbolic thinking as a pure product of technology and logics, where symbols have perfectly closed definitions.

Among the various repertoires that the unconscious or, more exactly, the sub-conscious has carried over from generation to generation in our evolution, myths are of special significance. Myths are lies, properly speaking, they are expressions of a transcendence of reality, which is a denial of physical laws, at the same time, a refusal in the past (ancient times) or in the future, at a time when we can better master nature. Thus, myths are a good means for approaching the ambiguous relationship between reality and wishes, in the effort of man to overcome his very nature. Along the same lines as some participants in this committee, I suggest here that more attention be paid to the special kind of myths that I call **dynamic myths**, a sub-set of general mythology dealing specifically with these myths which appear to be incentives for man to overcome natural laws, the laws of physics. As we well know, man dominates the laws of nature only by observing them, but by clever manipulation of their combinations. But the idea of overcoming appears as an irrational dream which will, in the future, feed the creativity of the scientist, in other words, dynamic myths are those, commented and developed in universal archetypes of all civilisations, that rely definitely on the trespassing of some kind of law of nature, e.g. the law of gravity, the law of conservation of chemical species, the law of death, the law of immutability of sexes or zoological categories, the law of transmission or propagation of signals, etc..., the whole catalogue of constraints that knowledge of nature sums up in its general course of physics at a given time. All of these dynamic myths, as poetically described by archetypes and legends of the past express, more or less adequately, the points where, in a field of consciousness, we are in conflict with the constraints that the nature of things lays on our wishes, our needs, our will. These dynamic myths consequently constitute an approximation, some kind of catalogue of incentives for trespassing the laws of nature. It is an expression of this latent factor which explains the variants of the mind is procedures in its creative activity. Beyond the idea of Truth, more or less translatable into logical thinking and universal consistency, over and above the will to succeed or to dominate, over and above the commonplace activity of combining pieces of truth in the mind in order to obtain the new truth, the new shape, that I mentioned earlier, there is this will to trespass the constraints of human nature which is conveyed by the dynamic myth and which is present in the minds of all scientists, whether they like to acknowledge it or not. Any careful reading of the non-scientific texts of great scientists and ordinary ones too, shows very demonstratively that this will to trespass the laws of nature, such as they were, there and then, at the time of their thinking, is definitely present. This leads to some kind of dialectical view of scientific thinking which can be