

# **AN OVERVIEW OF EVOLUTIONARY MENTOLOGY**

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## **EVOLUTIONARY MENTOLOGY**

Evolutionary Mentology is an attempt to understand mental processes in general and in particular the mental processes of man, in the stage of civilization. This is an area of inquiry which has been neglected for two reasons. Firstly, the necessary theoretical and practical tools were not available for an inquiry into that. Also there was not a sufficient incentive for undertaking an inquiry through that long route of the classical philosophical method. A method which required observation of apparently disparate things, reasoning with them and then trying to verify them to the extent possible so as to narrow down one's thinking to a working hypothesis, which in the fullness of time would have produced a Science, as has been the case with all other Sciences. Secondly, instead of pursuing this arduous route while man occupied himself with more tangible problems of immediate practical interest to him, he preferred to deal with the world of ideas and emotions and motives in terms of dogmatic premises and then branched out on those premises into various schools of ethics and morality, and religions.

Even in modern times there was a preference to relegate mental processes to the sphere and concept of human nature. Most recently Psychology in the nineteenth century focused its interest in the matter, but it concerned itself more with behavior and attempts to explain behavior, hoping that a discourse on the explanations of that behavior would in itself lead to a mitigation if not a solution of the problem.

More recently two new disciplines have emerged; Brain Sciences, which emerged earlier, followed by Consciousness Studies in the mid 1990s. Brain Sciences pulls in a detailed study of the brain processes, especially its electro-chemical functioning which is correlated with various mental functions, based upon the tools of Magnetic Resonance Imaging (MRI & fMRI), Magnetoencephalography (MEG), CT and PET scans, and Large scale computer modeling. Consciousness Studies which was a corollary of an advanced stage in the study of the brain and mind as objective

phenomena, further reinforced the approach of understanding mental processes on a scientific basis by declaring this endeavor “Toward a Science of Consciousness’. It brought together and connected diverse disciplines for understanding of brain/mind processes like Neuroscience, Cognitive Sciences, Artificial Intelligence, Genetics, Evolutionary Sciences, Quantum Physics and Philosophy, and also provided a platform for new approaches in this area. The most prominent of which is the ‘Quantum mind’ approach, which views mental processes, especially the experience of feelings and consciousness, as quantum<sup>1</sup> phenomena and not electrical, chemical or molecular processes. Work in both these areas has led to an accumulation of a whole fund of facts and knowledge which, despite the problem of making mental processes tangible through scientific tools, is enabling an unprecedented understanding and intelligence about their functioning, which before today was not possible in human history.

The above has been coupled with the further inquiry based upon the recent developments in Genetics, particularly the identification of genes relating to brain processes and those involved in mental traits and characteristics. Along with this there has been a considerable increase in the interest of pharmaceutical companies in research into various medicines and drugs relating to brain disorders.

However, while brain processes do record the effects of various mental processes, but in themselves they do not constitute the mental processes which consist of the world of ideas, feelings, sensitivities, problem solving, data storage, classification and even the decoding of the physical stimuli received from the five perceptual senses. Mental processes constitute a phenomenon separate from the brain processes, although there is clearly a connection between the two, and in all probability the mental processes themselves are a product of the brain processes. That is an area into which as yet a proper inquiry and study has not begun. There have been some speculations concerning this phenomenon by some of the scientists involved in this area but they are fragmented and have not yet been pursued

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<sup>1</sup> A discrete packet of energy like a wave, which is a property of very light and weak subatomic particles.

systematically on account of the lack of tangible tools for inquiring into that phenomenon, which is neither biological nor any other natural processes as yet within the grasp of scientific inquiry.

We nevertheless, in spite of these difficulties felt obliged to begin at least a philosophical inquiry into this area in the expectation that it would, like the history of science in other areas, hopefully lead to a further development of the inquiry, and the eventual success of man in putting it on a proper scientific footing. Our reason for embarking upon an inquiry into the mental processes despite the known difficulties was that the rich experience of human endeavor to change society for the better in the last few centuries has produced only partial success, particularly in the area of material development. The record in respect of social thought however has been less than satisfactory, in as much as none of the approaches or theoretical constructs relating to society have proved to be satisfactory, and have probably created at least as many problems as they have attempted to solve.

After the failure of the nineteenth century Socialist thought and movements based upon that in various permutations and combinations of Marxist paradigms, there has been a vacuum in social thinking. Recent trends in Existentialism and the later trends in Postmodernism have by and large proved to be non-starters in contemporary social life and history. Instead what we find is that various trends based upon extreme religious dogmatism, which includes perhaps the current wave of various shades of terrorism, are a manifestation of the current vacuum in social thinking and social philosophy. Altogether the contemporary scene seems to call for a renewed attempt at fresh thinking concerning man and his society.

We had come to these conclusions somewhat earlier about thirty five years ago. Our starting point was that the growing complexity of the economics, political, cultural scene had reached a stage where it was clear upon evidence that neither theoretical constructs nor practical experimentation was going to produce effective and valid answers. And the incremental efforts in that direction although laudable in

themselves, such as the drive for control of environmental pollution, population control, drive for more education etc, were also not going to go very far. We came to the conclusion that the progress which man has made through technology and science and his existing ability to guarantee even greater progress in the future had made it imperative for us to confront the historically neglected area of darkness in our understanding which was man himself, more specifically man's own mental processes. And that is now a necessary requirement, no longer an option.

We concluded that unless man becomes tangibly intelligent about the way and the manner in which his own ideas, motives, feelings come into being and develop and is able to then apply that intelligence to consciously restructure his existing ideas and motivations, and deliberately produce another suitable culture for himself he would not find a way leading him out of the present worsening situation, and human condition. Our measure for the human future was quite simply the liberation from his growing crisis of unhappiness, and simultaneously being able to practically and holistically achieve a stable and secure growth of human happiness, which corresponds to the existing growth in technologies. This inquiry we labeled as Evolutionary Mentology, for lack of a better term.

The method we adopted in this pursuit was as follows:

1. A study of the evolutionary stages and processes found in macro Nature, i.e., considering Nature holistically in space and time. The contemporary work in Astrophysics, Particle Physics and in Evolutionary Sciences in general has guided us in our inquiry. We concluded that the constant in Nature consisted of a state which included energy/motion and logic. This constant existed long before the Big Bang<sup>2</sup> and constituted a state much simpler than the ones which arose with the emergence of the most basic energy forms/particles that were formed in the wake of the Big Bang. This constant is a precursor to everything we find in Nature; all energy and matter forms that we are familiar with have really been a product of the evolutionary dynamic of this constant.

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<sup>2</sup>The state of infinite temperature and density with which the present universe started 15 billion years ago.

This includes ourselves. We tried to trace the history of Nature till it reached the production of contemporary man. We found that Nature's own evolution viewed as a whole was fundamentally in terms of processes rather than things.

The first process it started with, can be described as a random process, where random interactions accidentally produced forms, which had a longer life than others. Thereafter Nature out of its successes in the random process logically gave birth to what we may term as programmed<sup>3</sup> processes, which were the basis of living things and living forms in Nature. Finally out of a combination of the random and programmed processes there emerged the intelligent process, which was able to reach beyond evolved programmes for living forms, and liberate man from the constraints of a programme. This intelligent process then enabled Nature and man both to explore through this new tool much greater potential of the logical constant in Nature. That is, being able to move efficiently and rapidly towards a dialectic of harmony and away from the hitherto prevailing dialectic of contradiction. For man this translates into greater happiness and correspondingly diminishing pain and misery.

So far Nature has been proceeding in its evolutionary journey at the unconscious level; its own evolutionary progression and the birth of new and more complex phenomena in its journey have been taking place through a tortuous process of trial and error involving a lot of contradictions, conflicts, losses and rejections. In our view these conflicts and contradictions were not an inherent mode in Nature but a consequence of the absence of any intelligence or consciousness in the process. With the evolution of intelligence and consciousness and their becoming crucial players in the evolutionary process of Nature not only can conflicts and contradictions be avoided but with the evolution and maturing of man's intelligence process efficient progress can be made towards the dialectic of harmony.

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<sup>3</sup> Made up of gene-based biological and mental programmes.

Contemporary man is in a stage of transition from the programmed process which he shares with animals towards an exclusively human process of being intelligent, not only about other things but also about his own mental processes. Facilitating this transition is the business of Evolutionary Mentology.

2. During the initial stages of our inquiry we came to the conclusion that mental processes, animal and human, are neither anything supernatural nor a mere ego or the “euphemism of human nature”. They are clearly a natural process and reality like all other things in Nature which we already know about. The only problem with mental processes is that they are neither made of any energy processes that we already know of or are familiar with such as electricity, light, sound or magnetism, nor are they made of the atomic particles which we have already studied and used, and nor material things which are even more familiar to us. Instead the mental processes are made up of some light (almost mass-less) and weak (very weak or no interactions with matter) energy forms which existed before the Big Bang, such as one or more of the three varieties of neutrinos<sup>4</sup> or possibly quarks<sup>5</sup> or even possibly strings<sup>6</sup> as they are known in Theoretical Physics. In fact logically mental processes must be structured in terms of a composite complex of a variety of the pre-big bang energy forms and not one kind of energy form. The reason being the enormous variety of mental processes operating in numerous layers ranging from the simplest to the most complex. These mental processes exist as discrete<sup>7</sup> fully operating systems constructed out of these energy forms.

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<sup>4</sup> One of the weakest and almost mass-less elementary particles belonging to the family of Leptons and thought to be the fundamental constituents of all matter and energy. They were first detected in 1955.

<sup>5</sup> Quarks are the other family of elementary particles which make up matter. Quarks come in five flavors or types.

<sup>6</sup> According to string theorists the fundamental constituents of matter and energy are not point particles but strings, which are one-dimensional vibrating filaments of energy. And it is the different vibrational patterns of these strings which produce the specific properties of different particles, which distinguish one particle from another. (Greene, 2004, pp. 345-46)

<sup>7</sup> Discrete here implies having separate modules which are functionally interconnected and dynamically interactive but at the same time also separate in the sense of having

They have evolved as an adjunct to the evolution of biological life and their further evolution has been continuing ever since, leading to a continuous increase in the multiplicity of their functions, complexity and capability.

We also infer that our genes, particularly the mental<sup>8</sup> genes contain apart from the well known protein codes, codes which enable the microtubules<sup>9</sup> in the brain cells to produce the more elaborate structures of the mental processes. And these mental processes have a two way interconnection and interaction with the other parts of the brain and the genes themselves, and the other biological processes in man; and probably with other things in the environment. A detailed mental observation and perception of this fluid and dynamically interactive relationship between mental processes, brain processes and genes has revealed the need for redesigning this relationship through restructuring our mental processes with the help of mental tools from both the intellectual and emotional areas of our minds.

It should be kept in mind that we know less about our mental processes than we do about the Black Hole<sup>10</sup>. And god knows that we need much more to know about them than about the Black Holes. Or we can say that we have a much more urgent need to know about the mental processes than about the Black Hole. But regrettably while a great deal of funding is available the world over for an inquiry into Black Holes, none however, as far as we know, for inquiry into the mental processes. We do not seek any funding for ourselves but we do hope that such funding will be made available to other and better

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their own developed and specialized structures and functions.

<sup>8</sup> In our view 'gene' is a composite phenomenon made up of two parts; a biological and a non-biological process, which we are referring to as 'mental'. The biological process consists of the protein-making code and the non-biological constitutes a light particle quantum template/code, which in the genes of brain cells performs the function of programming these brain cells to produce mental processes.

<sup>9</sup> These are tube-like structures made up of proteins called tubulins found in all eukaryotic cells. They form a network of fibers to provide a kind of supporting framework for the organelles of the cell. In brain cells these Tubuli are thought to be associated with the generation of consciousness and mental activity.

<sup>10</sup> It is a region in space in which there is very strong gravitational force so that nothing can escape from it. It is formed as a result of the collapsing of a huge star under its own gravitational forces.

qualified people the world over in order to accelerate this much needed inquiry.

3. We realize that questions relating to the human mind had arisen perhaps more than five thousand years ago based upon an observation of not only the phenomenon of the human mind but of the problems that arose out of its previously programmed functioning. These observations were made by occasional thinkers from time to time in various places, such as the Rishis, the Philosophers, the Prophets. In our state of ignorance we consider it valuable to discern from their thoughts possible perceptions and ideas of which we could bounce off our own thinking and cogitation in this matter.

We also tried to trace the evolution of the human social history particularly since the beginning of the pastoral period and tried to observe the manifestations of the human mental processes in various interactions *inter se*. Because by then man was already shifting from a major paradigm of animal existence; which was that its interaction was based upon a need to consume, to find its consumption needs in other species or things. Whereas with the advent of civilization man became more and more dependent upon consuming the labour products of other men through fair or foul means and less and less upon things which were available in a natural state. This obviously produced a far more intense and complex interaction of the mental processes and provided a fertile area of historical observation to gather evidence about the manifestations of the phenomenon we were inquiring into.

We did not ignore mythology or even magic where we found it to exist in an established state; we tried to glean from them ideas which could help us in constructing logical inferences. Which we would then try to shoot down as far as possible in order to reduce them to inferences which we were unable to avoid.

We also looked into the areas which were the products largely of the nonverbal mental processes. The verbal mental processes although extremely valuable and clearly constituting the latest advance in the evolving mental processes, yet they were attended by the hazards of the facility which came with them, i.e., of fanciful imagination and outright lying coupled with illogical reasoning. Our focus on this area was a result of four factors which came to light during our inquiry. Firstly, lop-sided growth of the mind during the period of civilization, i.e. exponential growth and development of the verbal processes at the expense of the non-verbal processes, which became a major cause of the heightened contradictions and conflicts in the lives of human beings. Two, we realized that it was the non-verbal processes which constituted the bulk of our mind; in fact they were our main mind. Three, they were the main obstacle in the way of our restructuring our emotional and intellectual processes. Four, the reserves of the potential for developing and evolving new mental capabilities and functions also lie in the non-verbal mind. Thus we concluded that if man wants to intelligently redesign and develop his mental processes then he will need to tap into his non-verbal mind intelligently and upgrade it.

4. Our primary source of ideas however have been the recent advances in various scientific disciplines; such as Microbiology, Computer Sciences, various kinds of Physics and new discoveries in various scientific fields in the Evolutionary Sciences etc. In the area of nonverbal mental processes we particularly looked at the Arts and Music, more particularly Music, since musical sounds are a product of the nonverbal mental processes and provide observations of its functioning from the beginning to the end of the musical process.
5. We have been closely monitoring current literature in Brain Sciences (and all the earlier mentioned fields) and using it to check and confirm or refute our

own thinking or even disagreeing occasionally where we find a basis and justification for doing so. We have also been compiling suitable references for the reader from available literature in support of our ideas or to record and explain our differences. These differences largely relate to a self imposed narrow approach among empirical scientists and scholars or insufficiently substantiated or insufficiently scrutinized inferences by some writers.

6. The first twenty odd years of our work was disorganized and sporadic, the last thirteen years have been much more organized and written down, which presently add up to about five thousand pages but when further edited will probably be reduced by a bit less than half. Our defined purpose underlying this work is two-fold. Firstly, to focus the interest of other people in different parts of the world to undertake a sustained interest in the study of mental processes, logically and holistically. Secondly, to make available the preliminary spade work that we have undertaken in the hope that some of it may be useful to future intellectual workers who take a sustained interest in an inquiry into mental processes.