

# Models in Psychiatry: The Science and Mythology of Understanding Mental Disorder

**Amiya Banerjee**

*Assistant Professor, Department of Psychiatry, SIMS, Hapur, Uttar Pradesh*

## ABSTRACT

This article explores the concept of ‘truth’ as understood in scientific disciplines, and the implications it has on the evolution of the understanding of the mind and the brain. It draws parallels between the ways of understanding mythology and the way that models are used in psychiatry. It discusses the possibility of studying mythology that is lived in today’s world as a means of furthering our understanding of psychiatric models.

**Keywords:** *psychiatric models, beliefs, mythology.*

## INTRODUCTION

Let us begin by discussing truth in general. There are many kinds of truths, and there are many kinds of dealings that one can have with it. There are those who would study truth itself. The question, ‘What is truth?’ leads some to philosophy verging on mathematics, and others to mathematics verging on philosophy. Either way, a set of ideas emerge, that, when well developed, lend themselves to a ‘hence proved’ kind of conclusion. These theories can support themselves independently of the person expounding upon them. There is an academic abstraction to them - an expert is expected to ‘know’ and ‘teach’ these theories, not ‘believe in’ and ‘propagate’ them.

The question, ‘What is the true (or absolute) truth?’ looks very much like the ‘What is truth?’ question, but the paths it sends the questioner down could not be more different. One this path one meets the mystics and the seers. Each one’s claim of knowing the answer is based on his unique inner experience. He and his followers first believe, and then go looking for evidence to support that belief. ‘Hence proved’ is neither the object of their

striving, nor the point of conclusion or closure. To them, the operative term is ‘proved, hence...’ It provides the opening for beginning their exploration, not the ending for concluding it.

One obvious characteristic of these truths is that they are subjective. But beyond being subjective, they are also personal, in the sense that the believer *takes it personally*. Another characteristic is that they elicit passion. The believer believes passionately, this passion drives his conduct. It is not just that he believes something to be true; that thing holds much more *meaning* for him. For the believer, his belief is as much a matter of faith as it is a matter of true or false.

This brings us to science, and the scientific method. As a method of thought, it is objective and evidence based, with no space for emotion and belief. As a turning point in the history of mankind, it ushered in the age of reason, sweeping away the excesses of faith that preceded it.

## Truths in psychiatry

Scientific, rational knowledge - considered today the ‘true’ path to truth - is objective and evidence based. It addresses the ‘how’ questions, the mechanics of things. With the right mathematics and the right instruments, much of the world we inhabit is now understood. It can be manipulated, even controlled. We input science, it outputs technology.

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### Corresponding Author:

Dr Amiya Banerjee  
Assistant Professor,  
Department of Psychiatry,  
SIMS, Hapur, Uttar Pradesh.  
E-mail: amiyaban@gmail.com

This approach has defined and shaped the modern world. In the vast middle band of our experience, in the scales of things that are ‘usual’ and hence ‘normal’, it works well. At either of the two edges of the scale, at the limits of our ability to experience and imagine, it wobbles a bit. The scale could be, for instance, of size, of distance, or of time. Think the universe; think the subatomic wave-particle. Think of the conundrums raised by the speed of light. These are concepts that even the best minds have difficulty wrapping themselves around. At a more mundane level, think of the sounds and frequencies the dog hears but we don’t.

But where the scientific approach really flounders is on the scale of variables. Any complex system, with large numbers of variables, many of them varying variably, can challenge processing capabilities. If, besides large numbers of known and changing variables, there are variables in that complex system that are unknown but show their existence through their effects, the challenge becomes daunting. The traditional methods of science - observation, experimentation and analysis, throw up voluminous data but not much knowledge. Finally, when that complex system operates at multiple levels, the scientific method is no longer capable of generating the simple, consistent answers it is valued for. An example of a complex system of this type is one that we deal with every day - human behaviour, normal and abnormal, looked at from the level of the molecule right up to the level of the community.

And how do we, the designated experts of this particular complex system, respond to this challenge? We respond by creating *models*. I wish to highlight two characteristics of our models. One, they are part explanations of the larger picture. They break down, analyze, the question into smaller parts, and try to work out each part separately. Think the dopamine model of psychosis<sup>1</sup>. It is based on the observation that dopamine antagonists reduce psychotic symptoms. This led to the conclusion increased levels of dopamine are responsible for causing psychosis, and the antipsychotic medicines work by reducing the dopamine transmission through dopamine receptor blockade. As a part explanation, it was fine, but when an attempt was made to expand it into a complete theory of psychosis, it floundered. The observations regarding negative symptoms of schizophrenia, upregulation of dopamine receptors after prolonged medication, and the role of other

neurotransmitters – all these could not be fitted neatly into the dopamine model of psychosis. Models, then, deal with particular aspects, from a particular frame of reference. They are useful to the extent that they are of some use. They build, and there get built around them, a vocabulary and a language. They attract adherents, who become part of a culture that shares this language and this belief in the model.

The other characteristic of our models grows out of the need to answer the ‘why’ question that we are asked. ‘Why did this happen to me?’ Our explanations of brain chemicals and genes are met with polite nods, but the question still comes back. ‘But, Doctor, why did this happen to *me*?’ We talk mechanism, the person wants meaning. We think she is asking, ‘What is the process,’ when what she is actually asking is, ‘what is the purpose?’ Please help me make sense of what is happening to me.’

### **Models as mythology**

Conventionally, myth means falsehood, and mythology is about fantastic stories. Actually, these words have two somewhat different connotations. To understand this, we have to turn to the philosophy of ancient Greece and of ancient India.

Ancient Greek philosophers knew myth as *mythos*. They distinguished *mythos* from *logos*. *Mythos* gave rise to the arts. From *logos* came science and mathematics. *Logos* explained how the sun rises and how babies are born. It took man to the moon. But it never explained why. Why does the sun rise? Why is a baby born? Why does man exist on earth? For answers one had to turn to *mythos*. For the ancient Greeks, ‘*mythos*’ gave the ‘why’ to the ‘how’ of ‘*logos*’ - the logical sciences and mathematics.

Our rishis knew myth as *mithya*. They distinguished *mithya* from *sat*. *Mithya* was truth seen through a frame of reference. *Sat* was the truth independent of any frame of reference. *Mithya* gave the limited, the distorted truth. But it was still essential to indicate the Absolute, ‘true’ Truth. The two characteristics of our models correspond to these two ways of conceptualising mythology.

‘Myth is essentially a cultural construct, a common understanding of the world that binds individuals and communities together.... All myths make profound sense to one group of people. Not to everyone. In the final

analysis, you either accept them, or you don't... From myth come beliefs, from mythology customs. Myth conditions thoughts and feelings. Mythology influences behaviours and communications. Myth and mythology thus have a profound influence on culture, and, likewise, culture has a profound influence on them'.<sup>2</sup>

## DISCUSSION

We can look upon the broad field of the study of the brain and mind as one of evolving mythologies. Each tree that grows out from this field branches and sprouts its own ideological culture. On these branches, a community of believers hatches, chirps and prospers. To carry this forest analogy further, these communities of birds and other creatures influence the forests' growth, and their wellbeing is in turn influenced by the forest. Over time, the topography may change from rain forest to farmland; the creatures could go from being dinosaurs to poultry and cattle, but the interdependence of the soil, the outgrowth and the denizens remains. For an explorer lost inside a thick forest such as this, it is easy to miss the woods for the trees. For a bird safe and comfortable amongst the dense foliage and fruits of one branch, it is too much trouble to fly high enough to get a birds' eye view.

Our field has always believed itself to be, or at least wanted itself to be, rooted in the soil of the certainties of science. If I be permitted to totally scramble my metaphors, the lost explorer, should she get a birds' eye view, will only be able to imagine what soil the trees are rooted in. What she will be able to see is that the ground is completely covered over with a vibrant, variegated outgrowth of the mythology of models.<sup>3</sup>

## CONCLUSION

There are practical applications of the approach outlined above. For convenience, I use the term 'psychiatry' to indicate all disciplines related to mind, brain and behaviour. If models of psychiatry can be discussed as mythology, can mythologies be discussed as a model for psychiatry? As clinicians, our decision making and interventions have material impacts on real

people<sup>4</sup>. What we think has practical implications. Are there mythologies that are lived and that are living, in real, here-and-now places and people? Can the study of these mythologies contribute to the study of our ones<sup>5,6</sup>?

Kashi is a place ideally suited to start seeking answers in. Scripturally, it is located at the centre of Hindu mythology. Historically, it is the oldest city in the world with a continuity of culture stretching thousands of years into antiquity. The word Kashi derives from the Sanskrit root *kaash*, 'to shine'. Kashi is the luminous one, the illumining one<sup>7</sup>. In the next paper, I will explore in what manner Kashi, the City of Light, can bring some enlightenment on these questions.

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