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# Rajju Sarpa Bhranti - A Metaphysical Analysis of Visual Illusions in Light of Doctrine of Vivarta Vada

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## ABSTRACT

According to the theory of causality (*Sat Karya Vada*), any cause is responsible for a particular action and the material effect should be identical with the material cause. This effect can be interpreted in two ways - complete transformation (*Parinama Vada*) and transformation in appearance with no change in reality (*Vivarta Vada*). When due to sensory deceptions, a real object in front of us appears to be an unreal one or we fail to perceive the actual object in its own nature - this phenomenon is termed as illusion in modern psychiatry. Illusions are misinterpretations of stimuli arising from an external object or we can say, illusion refers to a specific form of sensory distortion. According to modern psychologists, these distortions of perceptions are influenced by past knowledge, previous hypotheses and prejudices, as well as sensory signals. These sensory deceptions are many among them visual illusions are most dominant and nearly experienced by all individuals. Visual illusions can be divided into two categories - those which are physiologically based and those which are cognitively based. In Ayurveda, we can explain the various mechanisms of visual illusions at par with the modern psychophysics on the basis of the theory of *Vivarta Vada*, originally propounded by the *Advaita Vedanta* school of philosophy. According to this theory of appearance, due to our ignorance (*Avidya*) we fail to differentiate between the reality and appearance (*Maya*) which leads to superimposition of appearance over reality (*Adhyasa*). Thus, these three components lead us to manifestation of unreal knowledge, known as illusion (*Vivarta*). This illusion can be eliminated with the help of proper knowledge of the real nature of object (*Vidya*) - in presence of which all the *Avidya*, *Maya* and *Adhyasa* banish simultaneously and the reality of an object reveals to us. In this article, the authors have tried to explain the various mechanisms of visual illusions as described by the modern psychophysics and validated these mechanisms by the theory of *Vivarta Vada*.

**Key words:** Illusion, Visual illusion, Vivarta Vada, Avidya, Maya, Adhyasa, Rajju Sarpa Bhranti

## INTRODUCTION

'Rajju Sarpa Bhranti' - when a rope is mistakenly perceived as a snake it gives rise to several questions in our mind. In what circumstances does the rope appeared to be a snake? What are the causes behind

this sensory deception? Why the rope is appeared to be a similar object like snake only, not a dissimilar object like a cat? These arguments behind causes and mechanism of such false perception have been raised since the very beginning of development of philosophical understandings as well as modern psycho-pathology. Right from the inception of *Ayurveda*, through its development across the ages, the fundamental principles of Ayurveda have been influenced and enriched by the thoughts and logics from different Indian philosophical schools. Among the many branches of Indian philosophical schools, *Nyaya*, *Vaisheshika*, *Samkhya*, *Vedanta* and certain *Buddhist* schools had a great influence in building up the basic fundamental principles of *Ayurveda*. The theory of causality behind every action i.e., *Karya Karana Vada* has been adopted by the majority of Indian philosophical schools with their own unique

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explanation, which gives the distinct identity to each of the doctrines related to the theory of cause and effect. A number of doctrines and concepts are described in different philosophical schools in relation with the theory of cause and effect, among which *Paramanu Vada* (doctrine of atom), *Pilu Paka Vada* (doctrine of molecular change), *Pithara Paka Vada* (doctrine of physical change), *Sat Karya Vada* (doctrine of causation), *Asat Karya Vada* (doctrine of non-existence), *Arambhavada* (doctrine of commencement), *Parinama Vada* (doctrine of transformation), *Vivarta Vada* (doctrine of appearances), *Kshanabhangura Vada* (doctrine of momentariness), and *Swabhavoparama Vada* (doctrine of self-destruction) are few notable theories. The doctrine of *Sat Karya Vada* is propounded by the *Samkhya* school of philosophy.<sup>[1]</sup> Later the philosophers of *Advaita Vedanta* school of philosophy also admitted this doctrine of causation.<sup>[2]</sup> The *Samkhya* school holds that the material effect is identical within its material cause. *Parinama Vada* (theory of real change) and *Vivarta Vada* (theory of apparent change) are the two aspects of the theory of *Satkarya Vada*, as both accept that the material effect is identical with or pre-exist in the material cause.<sup>[3]</sup> While *Samkhya* school has accepted theory of real change but the doctrine of appearance has been propounded and substantiated by *Advaita Vedanta* school of philosophy, mainly by *Adi Shankaracharya*.<sup>[4]</sup> *Vivarta Vada* is a philosophical term that refers to 'the origin of the universe from the manifestation or appearance of the unique *Brahman*' or in other words it refers to the material cause hood of *Brahman*.<sup>[5]</sup> The word *Vivarta* is consist of two words - '*Vi*' means *Viruddha* (opposite to reality i.e., unreal) and '*Vartana*' means *Vyavahara* (manifestation). So, the terminology of *Vivarta* is - '*Viruddham Vartanam Vyavahara Iti Vivarta*' - that's to say, manifestation of unreal or false knowledge is termed as *Vivarta*.<sup>[6]</sup> The theory of imaginary and illusive knowledge about the objects which are present as absent and absent as present is called *Vivarta Vada*.<sup>[7]</sup> In other words, when any substance without leaving its real entity, projects itself as another substance, is known as *Vivarta* and the theory explaining this phenomenon is known as

*Vivarta Vada*.<sup>[8]</sup> The classical example placed by *Advaitins* in support of this doctrine is our central topic - '*Rajju Sarpa Bhranti*' - false perception of rope as snake. This theory actually talks about appearance and its reality, because the produce is the effect without undergoing any change itself. *Adi Sankaracharya's* theory of *Vivarta Vada* rests on his fundamental claim that form does not and cannot have any reality of their own, their reality is inseparable form and dependent upon substance.<sup>[9]</sup> When an actual rope appears before us as a snake - the thread is the one unchanging reality between the transitions of appearance from rope to snake. So, the change in form is not actual but it is only in appearance. The philosophers from *Advaita Vedanta* school conjoined three important concepts of *Maya* (illusion), *Adhyasa* (super imposition) and *Avidya* (ignorance) with the theory of *Vivarta Vada* for metaphysical explanation of changes in appearance which are going to be discussed later.

In modern psychopathology and cognitive psychology such sensory deceptions can be divided into illusions, which are misinterpretations of stimuli arising from an external object, and hallucinations, which are perceptions without an adequate external stimulus.<sup>[10]</sup> In illusions, stimuli from a perceived object are combined with a mental image to produce a false perception.<sup>[11]</sup> So, we can interpret the instance of rope being perceived as snake as a classical example of illusion and not as hallucination. An illusion is a distortion of the senses, which can reveal how the mind normally organizes and interprets sensory stimulation.<sup>[12]</sup> In other words, it can be said that, illusion refers to a specific form of sensory distortion. Unlike a hallucination, which is a distortion in the absence of a stimulus, an illusion describes a misinterpretation of a true sensation.<sup>[13]</sup> Although illusions distort our perception of reality, they are generally shared by most people.<sup>[14]</sup> For example, hearing voices regardless of the environment would be a hallucination, whereas hearing voices in the sound of running water (or another auditory source) would be an illusion. Depending on the sensory organs illusions may be classified as visual illusion, auditory illusion, tactile illusion, temporal illusion and sometimes inter-

sensory illusion.<sup>[15]</sup> Illusions may occur with any of the human senses, but visual illusions (optical illusions) are the best-known and understood. The emphasis on visual illusions occurs because vision often dominates the other senses. Our present example of illusion of rope as snake falls under the category of visual illusion. Some illusions are based on general assumptions the brain makes during perception. These assumptions are made using organizational principles (e.g.: Gestalt theory), an individual's capacity for depth perception and motion perception and perceptual constancy.<sup>[16]</sup> Other illusions occur because of biological sensory structures within the human body or conditions outside the body within one's physical environment.<sup>[17]</sup> Visual illusions are a key methodology in vision research to help us understand and make inferences about the mechanisms for creating subjective experiences of the visual world. They place constraints on the processing of a stimulus and allow for the reliable manipulation and quantification of the visual mechanisms the illusion engages.<sup>[18]</sup> It must be remembered that, illusions, mainly visual illusions can be occurred both in healthy individual as well as in diseased persons like the patients of schizophrenia. However, the pattern of illusion in healthy individual and in diseased one can be different. A recent study (*Dima and Colleagues, 2011*) has proposed that visual illusions can be divided into two categories: those which are physiologically based and those which are cognitively based.<sup>[19]</sup> Whilst people with schizophrenia typically show decreased performance in cognitive tasks, it is interesting to note a more accurate performance in perceptual judgment tasks using visual illusions compared to healthy individuals.<sup>[20]</sup>

In the above context, in the present study the authors will try to analyse the concept and mechanism of visual illusions in light of *Vivarta Vada* as propounded by *Advaita Vedanta Darshana*.

### AIMS AND OBJECTIVES

The present study has been conducted keeping the following aims and objectives:

1. To evaluate the doctrine of *Vivarta Vada* as propounded by *Advaita Vedanta Darshana* and its application in the field of psychiatry.

2. To evaluate the concept of Illusion and its analysis based on modern psychopathology and ancient metaphysics with special reference to the doctrine of *Vivarta Vada*.

### MATERIALS AND METHODS

The literary information regarding the doctrine of *Vivarta Vada* has been taken from various classical texts of *Ayurveda* and Indian philosophy and the information related with illusions has been taken from various reputed books of modern psychiatry and scientific journals. All the literary information has been verified and validated through this study.

### DISCUSSION

The distinction between sensations and the perceived interpretation of those experiences in effect between what our sensory systems receives and what the mind interprets has occupied a central position in perception and cognition.<sup>[21]</sup> The study of the relationship between the physical changes of the world and the psychological experiences associated with these changes is called psychophysics.<sup>[22]</sup> As we have discussed earlier, illusions are misinterpretations of stimuli arising from an external object. In illusions, stimuli from a perceived object are combined with a mental image to produce a false perception. Psychophysicists use measurements of the physical and psychological quality of the same sensory stimuli. Sometimes reality and perception do not match, as in the case of perceptual illusions. A well-known example is the Müller-Lyer illusion (Figure 1), in which two equal segments of a line seem unequal. The explanation of this illusion is probably partly influenced by our past experiences, which have taught us to expect that certain shapes are far away and others close.<sup>[23]</sup> On the other hand, some argue that this illusion (and many more like it) reflects deep-seated invariant structures of the brain.<sup>[24]</sup> Illusions are important to psychophysicists, not because they point out fault in our ability to perceive, but rather because they provide insight into how our perceptual system works.<sup>[25]</sup> For example, the circles in the rotating snake illusion (Figure 2) appear to move because luminance changes in the pattern, moving from darker to lighter



luminance. The illusion plays out only in the periphery of our vision as a direct glance to the moving circle halts the perception. This suggests that the peripheral vision interprets (processes) changes in luminance as motion (Kitaoka & Ashida, 2003).<sup>[26]</sup> The relationship between perception and prior knowledge of the world is manifested not only in simple geometric illusions but also in the interpretation of scientific data. Perceptions are influenced by past knowledge, previous hypotheses, and prejudices, as well as sensory signals.<sup>[27]</sup> In an illusory image where multiple images are superimposed in a single frame, which image we see is dependent upon our perspective and cues in the environment. Most people are usually able to be prompted to see the other image that they first had not initially noticed; however, it is not possible for people to see both images at once. Alternatively, images that are ambiguous to their figure and ground can have multiple interpretations. So, the way we perceive the primary information of the world is greatly influenced by the way the sensory system and brain are initially structured - we are "hard-wired" to perceive the world in a certain way and by our past experiences, which give abundant meaning to the initial sensation of stimuli.<sup>[28]</sup> If past learning did not influence our perception, the curious lines on this page the reader is now reading, which we call letters, would not be perceived as parts of words and the words would be devoid of meaning. We have to learn what visual (and auditory, tactile, gustatory, and olfactory) signals mean.<sup>[29]</sup>

In this background of modern psychophysics, we will now try to evaluate the concept of *Vivarta Vada*. *Shankaracharya* subscribes to the *Sat Karya Vada* view of causation.<sup>[30]</sup> *Sat Karya Vada* is the doctrine that the material effect is identical with the material cause. As we discussed earlier this doctrine has two versions - *Parinama Vada* and *Vivarta Vada*. According to the former, although the effect pre-exists in the cause, the cause undergoes a real transformation in bringing about the effect; according to the later, the transformation is not real but only apparent. *Shankaracharya* emphatically rejects the former view and upholds the later view i.e., *Vivarta Vada*.<sup>[31]</sup> When

a cause produces an effect, it undergoes no real changes either in its substance or in its form. The changes in form that we observe are only apparent changes like in every visual illusion where the real object only falsely interpreted by us another one - there is no actual transformation of the character of the object. Like in the image no. 3, if the young woman is interpreted as old lady this does not bring any real changes to the character of the young woman, rather it only brings changes in the appearance of the young woman. Same is in the case of rope and snake. This example is used by the modern psychophysicist to demonstrate visual illusion. It should be pointed out that *Shankaracharya's Vivarta Vada* rests on his fundamental claim that forms do not and cannot have any reality of their own; their reality is inseparable from and dependent upon substance.<sup>[32]</sup> *Shankaracharya* therefore concludes that all changes in form are only apparent changes.<sup>[33]</sup> In brief, changes in form are not changes in reality but only in appearance. *Shankaracharya* conjoined three important concepts of *Avidya*, *Maya* and *Adhyasa* with the theory of *Vivarta Vada* for metaphysical explanation of changes in appearance which we are now going to discuss.

### *Avidya*

The term *Avidya* means ignorance, which may be characterized as not knowing the real and also thinking that appearances are real. Often the philosophers of *Advaita Vedanta* school of philosophy refer *Maya* and ignorance interchangeably.<sup>[34]</sup> From a logical point of view, *Maya* and ignorance are coeval, in that there cannot be the one without the other. However, from an epistemological view, ignorance may be regarded as prior to *Maya*, in that the latter presupposes the former.<sup>[35]</sup> That is, *Avidya* or ignorance is necessary condition for *Maya*. That also means that *Maya* vanishes as soon as ignorance is overcome by knowledge of real.<sup>[36]</sup>

### *Maya*

The concept of *Maya* should be understood in perspective of its psychological, epistemological and ontological meaning. From psychological point, *Maya*

is our persistent tendency to regard appearances as reality and vice versa.<sup>[37]</sup> In terms of criterion of sublatibility, *Maya* is our constant propensity to regard the sublatale as the unsublatale and vice versa.<sup>[38]</sup> From epistemological point of view, *Maya* is our ignorance as to the difference between appearances and reality.<sup>[39]</sup> Ignorance as to the nature of reality is the foundation of *Maya*.<sup>[40]</sup> The changing world of our senses, emotions and intellect is merely an appearance. From ontological point of view, *Maya* is the creative power of *Brahman* by virtue of which the world of variety and multiplicity comes into existence.<sup>[41]</sup> It is to be emphasized that when *Shankaracharya* talks about the phenomenal world as *Maya* in the sense of illusion, he does not mean that it is absolutely nothing, but that our experience is liable to be stultified by means of knowledge of things as they are. We cannot say that *Maya* exists or it doesn't exist.<sup>[42]</sup> In one of the foundation book of *Advaita Vedanta* philosophy, *Vedantasara* written around 700 years ago by *Sadananda Swami*, this *Maya* has been referred as *Ajnana* and its function has been said to be two - *Avarana* (it obscures / veils the reality of object) and *Vikshepa* (it projects the reality as it is not).<sup>[43]</sup> Appearance, unlike unreality, is sublatale. For this reason, there can be no such thing as pure illusion. Every illusion is grounded in reality. Thus, one cannot experience a rope as snake in broad day light but under certain objective, empirical circumstances.<sup>[44]</sup>

### **Adhyasa**

The literal meaning of *Adhyasa* is superimposition, which *Shankaracharya* defines as - "the apparent presentation in the form of remembrance, to consciousness of something previously observed in some other thing".<sup>[45]</sup> It is an apparent presentation that is knowledge which is subsequently falsified, in other word it is illusionary knowledge.<sup>[46]</sup> As it is impossible to have illusionary knowledge without the mixing up of two things, we find the word 'something previously observed' in the definition of *Adhyasa* by *Shankaracharya*. These words together with the words 'apparent presentation' make it clear the thing superimposed is not the real object seen sometimes before but something like it. A mere experience, and

not the reality, is what is necessary, hence the word 'observed'. The experience should not be a present one but a past one, and that is the significance of the word 'previously'. So, the thing superimposed is a false or unreal thing. The word 'in form of remembrance' excludes all cases of recognition, in remembrance the object is not in renewed contact with the senses. It is mere a remembrance that operates in the case of superimposition.<sup>[47]</sup> The classic illustration of superimposition is our present example of rope and snake. When a person steps on a rope in the dark and perceives it as a snake - here the rope is what is immediately present to consciousness, the snake is an object of past experience and superimposition is the person's mistakenly attributing the remembered qualities of the snake to the rope.

The present experience of the rope and the past experience of a snake are necessary conditions for one to be able mistakenly to claim that what is now experienced is a snake. In other words snake like experience cannot be had in the absence of the rope. But, when one brings a lamp a lamp and discovers that what one has stepped on is only a rope, his ignorance about the true nature of the object (*Avidya*) disappeared, and one's snakelike experience is recognized as being illusory. So, it can be concluded that, on attaining knowledge of reality (true nature of an object) (termed as *Vidya*), ignorance (*Avidya*), *Maya*, superimposition (*Adhyasa*) and the world of appearances (*Vivarta*) vanish away simultaneously.<sup>[48]</sup>

With this backdrop of metaphysical analysis of classical *Vivarta Vada*, we will now try to further analyse the concept of illusion in modern psychiatry. Illusions in themselves are not indicative of psychopathology since they can occur in the absence of psychiatric disorder, as in the case of our classical example of rope being mistakenly perceived as snake. Illusions can occur in delirium when the perceptual threshold is raised and an anxious and bewildered patient misinterprets stimuli.<sup>[49]</sup> While visual illusions are the most common, they can occur in any modality. The classic psychiatrists described fantastic illusions in which patients saw extraordinary modifications to their environment.<sup>[50]</sup>

Modern psychophysicists have described three types of illusion as follows:

### 1. Completion illusions

These depend on inattention such as misreading words in newspapers or missing misprints because we read the word as if it were complete. Alternatively, if we see faded letters we may misread the word on the basis of our previous experience, our interests etc., for example, to the person with an interest in reading, the word '–ook' might be misread as 'book' even though the faded letter was an 'l'. As soon as our attention is drawn to the mistake, our perception alters.<sup>[51]</sup> An incomplete perception that is meaningless in itself is filled in by a process of extrapolation from previous experience and prior expectation to produce significance. Completion illusion demonstrates the principle of closure in Gestalt psychology: there is a human tendency to complete a familiar but not quite finished pattern (Beveridge, 1985).<sup>[52]</sup> It is necessary for us to make sense of our environment; so when the sensory cues are nonsensical, we alter them slightly with remembered or fantasy material so that the whole perceptual experience becomes meaningful.<sup>[53]</sup>

### 2. Affect illusions

These arise in the context of a particular mood state.<sup>[54]</sup> For example, a bereaved person may momentarily believe they 'see' the deceased person, or the delirious person in a perplexed and bewildered state may perceive the innocent gestures of others as threatening. In severe depression when delusions of guilt are present the person, believing that he is wicked, may also say that he hears people talking about killing him when he is in the company of others. In these circumstances it is difficult to know if he is experiencing illusions or hearing hallucinatory voices talking about him and attributing them to those around him.<sup>[55]</sup>

### 3. Pareidolic illusions

This is an interesting type of illusion, in which vivid illusions occur without the patient making any effort. These illusions are the result of excessive fantasy thinking and a vivid visual imagery.<sup>[56]</sup> They cannot therefore be explained as the result of affect or mind-

set, so that they differ from the ordinary illusion. Pareidolias occur when the subject sees vivid pictures in fire or in clouds, without any conscious effort on his part and sometimes even against his will. Pareidolia occurs in a considerable proportion of normal people. It may also be provoked by psychomimetic drugs.<sup>[57]</sup> Typically, images are seen in shapes in pareidolic illusion. Pareidolic illusions are created out of sensory percepts by an admixture with imagination. Pareidolic illusion occurs in children more than in adults.<sup>[58]</sup>

Completion and affect illusions occur during inattention; they are banished by attention<sup>[59]</sup> - this very aspect is directly co-relatable with the *Vedantic* concept of *Maya*. It has been said in *Vedantasara* that, one of the five qualities of *Ajnana* or *Maya* is '*Yat Kinchit*' i.e., something mysterious and it vanishes the moment we pay attention to it. Illusions have to be distinguished from intellectual misunderstanding and the latter is usually obvious. Thus, when someone says that a piece of rock is a precious stone this may be a misunderstanding based on lack of knowledge.<sup>[60]</sup> The distinction between an illusion and a functional hallucination may be more difficult. Both occur in response to an environmental stimulus but in a functional hallucination both the stimulus and the hallucination are perceived by the patient simultaneously, and can be identified as separate and not as a transformation of the stimulus.<sup>[61]</sup> This contrasts with an illusion in which the stimulus from the environment changes but forms an essential and integral part of the new perception.

### Interpretation of Illusion by means of *Avidya*, *Maya* and *Adhyasa*

As we have discussed earlier, perceptions are influenced by past knowledge, previous hypotheses, and prejudices, as well as sensory signals. So, in case of the classic illusion of rope and snake (*Rajju Sarpa Bhranti*) there are the essential factors which can be summarized as: ignorance about the real nature of the rope (*Avidya*) under certain circumstances (darkness) leads to *Maya*. Due to *Maya* we fail to differentiate between appearances (snake) and reality (rope). So, the very appearances appear to be real to us. The combined state of *Avidya* and *Maya* further lead to

*Adhyasa* where the appearance (snake) superimposed on the reality (rope) and creates *Vivarta* (an illusion). The present experience of the rope and the past experience of a snake are necessary conditions for one to be able mistakenly to claim that what is now experienced is a snake. That is to say for creating a classic illusion, the present sensory deception and a previous memory of a known similar object is necessary. When a person steps on a rope in the dark and perceives it as a snake - here the rope is what is immediately present to consciousness, the snake is an object of past experience and superimposition is the person's mistakenly attributing the remembered qualities of the snake to the rope.<sup>[62]</sup> In presence of proper knowledge about the true nature of the rope this illusion of snake banishes automatically - this knowledge of reality can be termed as *Vidya* as described by *Shankaracharya*, in presence of which all the *Avidya*, *Maya* and *Adhyasa* banishes simultaneously and the true nature of an object reveals, thus leads to an end of *Vivarta* (illusion).<sup>[63]</sup> The great philosopher of *Advaita Vedanta* tradition, *Vachaspati Mishra* in his masterpiece '*Bhamati Chatusutri*' has quoted that *Prapti* (discovery / realisation) is of two types - *Grama Desha Prapti* (where something new is discovered which was previously absent) and *Gala Valaya Prapti* (discovery of one's own object which was with him but he fails to realise it).<sup>[64]</sup> With proper knowledge realisation about the true nature of an object, which was in front of one's eye previously but due to ignorance he failed to recognise it, as in the case of illusion, can be defined as *Gala Valaya Prapti* which leads to an end of illusion.<sup>[65]</sup>

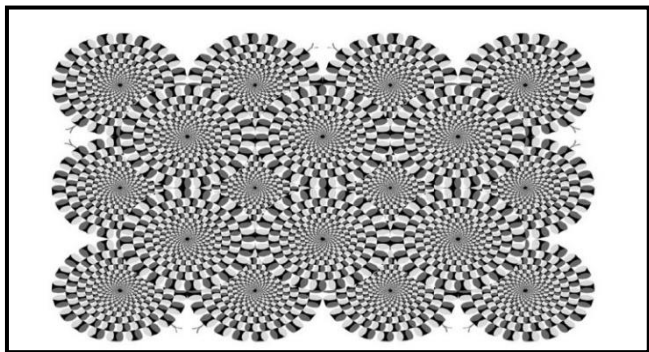


Figure 2: Illusion of rotating snakes by Akiyoshi Kitaoka



Figure 3: Illusion of Young woman or old lady

(Credit of Figure 1, 2 & 3 : Solso, Maclin, Cognitive psychology, 8<sup>th</sup> edition, Edinburgh, Pearson, 2014)

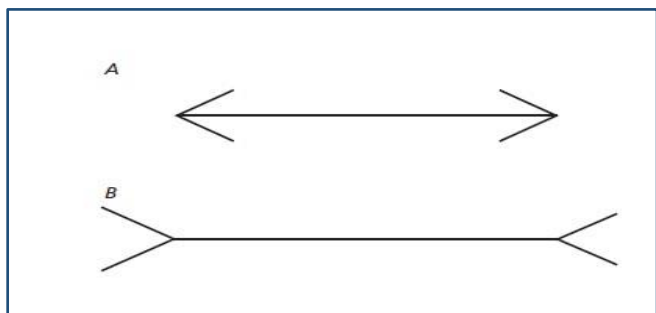


Figure 1: Müller-Lyer illusion

(Which line A or B looks longer? They are the same length. Even knowing this cannot upset the illusion)

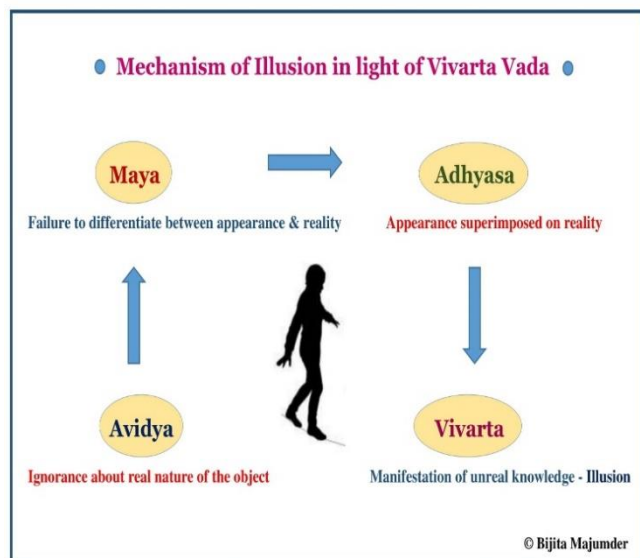
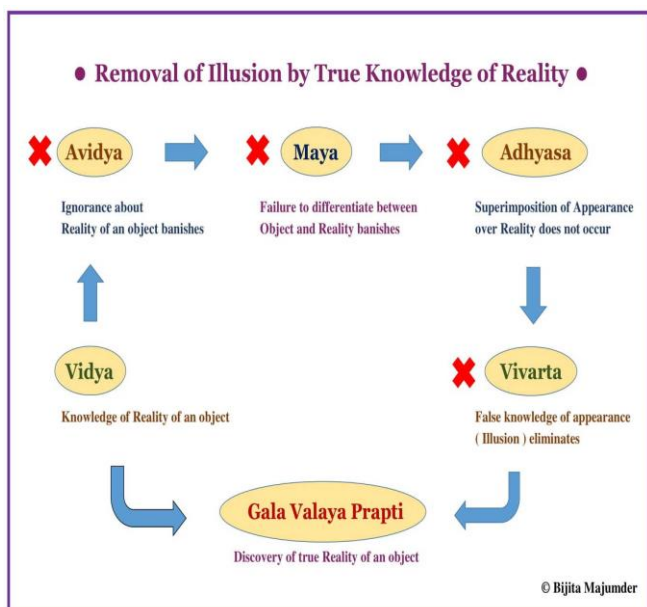


Figure 4: Explaining the illusion of Rope and Snake through the doctrine of *Vivarta Vada*

(here Rope should be considered as reality and Snake should be considered as appearance)





**Figure 5: Removal of False Knowledge of Appearance (illusion) by True Knowledge of Reality**

## CONCLUSION

Among the many theories of Indian philosophical schools, *Ayurveda* has accepted and eventually applied many of those theories to explain different biological events as well as universal phenomenons. The theory of *Vivarta Vada* teaches us that there is no real change takes place as consequence of any cause. All the changes are only apparent. This theory actually talks about appearance and its reality, because the produce is the effect without undergoing any change itself. According to *Sankaracharya*, form does not and cannot have any reality of their own, their reality is inseparable form and dependent upon substance.<sup>[66]</sup> This understanding can be applied to explain how an illusion occurs. Illusion are misinterpretations of stimuli arising from an external object. These misinterpretations depend on many factors like-ignorance about the real nature of the object, our present perception of a false object, our past experiences which gives abundant meaning to the initial sensation of stimuli etc. These various components of illusions in modern psychophysics can be studied in light of the basic components of the theory of *Vivarta Vada* which are *Avidya*, *Maya* and *Adhyasa*. How ignorance about the real nature of the present object leads us to deception of perception can

be explained by the concept of *Avidya*. While how past experiences about the nature of other objects, ignorance about real nature of the present object and present deception of perception leads to a complex situation of human brain when it fails to analyse the real nature of the present object - can be explained by the concept of *Maya*. Similarly, how brain's inability to analyse the true nature of the object leads to superimposition of a similar false object (which is based on previous experience) on the real object and perceive it as the former one - can be explained by the concept of *Adhyasa*. Thus, we can say, with the proper analytical understanding of many eternal Indian philosophical doctrines like the doctrine of *Vivarta Vada* of *Advaita Vedanta Darshana* can open the new doors of research in modern psychiatry and psychophysics and thus can help us to understand the human mind better. The same can be said about the other theories of Indian philosophical schools too, which can lead us to new horizons of scientific understandings and medical research for the benefit of mankind.

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