|  |
| --- |
| **ORIGINAL ARTICLE** |
|  |
|

|  |
| --- |
| **Year** : 2014  |  **Volume** : 2  |  **Issue** : 1  |  **Page** : 15-20 |

 |

Psychiatry, karma and gene expression

[Hitesh Chandrakant Sheth](http://www.ijoyppp.org/searchresult.asp?search=&author=Hitesh+Chandrakant+Sheth&journal=Y&but_search=Search&entries=10&pg=1&s=0)
Department of Psychiatry, Hospital for Mental Health, Jamnagar, Gujarat, India

|  |  |
| --- | --- |
| Date of Web Publication | 2-Jun-2015 |

|  |
| --- |
| **http://www.ijoyppp.org/images/dpdf_b.gifhttp://www.ijoyppp.org/images/09.gifhttp://www.ijoyppp.org/images/pa_b.gifhttp://www.ijoyppp.org/images/rwc_b.gifhttp://www.ijoyppp.org/images/cmgr_b.gif** |

**Correspondence Address**:
Hitesh Chandrakant Sheth
Department of Psychiatry, Hospital for Mental Health, Jamnagar, Gujarat
India


**Source of Support:** None, **Conflict of Interest:** None

**DOI:** 10.4103/2347-5633.157988



|  |  |  |
| --- | --- | --- |
|   Abstract |   |  |

**Background:** There is a wide spread belief in our society that only genes play a significant role in shaping men's behavior and illness he inherits from his parents. **Aim:** This study aims to determine the role of man's karma, his thoughts and position of planets on expression of genes and level of neurotransmitters. **Materials and Methods:** A review of various Indian literatures was done and was compared with various scientific studies regarding genes expression. **Results:** The result shows that men's behavior and destiny are affected by many factors such as genes, environment, karma, thoughts, and planets. The role played by men's karma in shaping his behavior, is not less than the role played by the genes he has inherited from his parents. **Conclusion:** The scripts written in deoxyribonucleic acid may have a major say in shaping men's behavior and illness he develops, but the environment, thoughts and karma, also play an important role in this matter. Genes build neural structures and proteins not behavior. We are not the helpless flotsam caught in a fiery flood called life, but the architect of our own destiny.

**Keywords:** Environment, free will, genes, karma, neurotransmitters

|  |
| --- |
| **How to cite this article:**Sheth HC. Psychiatry, karma and gene expression. Int J Yoga - Philosop Psychol Parapsychol 2014;2:15-20 |

|  |
| --- |
| **How to cite this URL:**Sheth HC. Psychiatry, karma and gene expression. Int J Yoga - Philosop Psychol Parapsychol [serial online] 2014 [cited 2015 Jul 8];2:15-20. Available from: <http://www.ijoyppp.org/text.asp?2014/2/1/15/157988> |

|  |  |  |
| --- | --- | --- |
|   Introduction |   | Top |

There is persistent endeavor of human beings to find the mysterious principles of gene expression and its role in determining the vast arrays of human behavioral patterns. The endeavor became more pronounced when scientist discovered that there are only 30,000 or thereabout genes in the body. The human deoxyribonucleic acid (DNA) differ only 2% from chimpanzee and 0.1% from fellow human beings. So such a vast difference in human behaviors cannot be explained by the tiny differences in genes alone. We have to consider other factors too, to explain the human behavioral patterns. Genes do not encode our behavior and karmic destinies. We are free to exercise our will as we are not a mere helpless automaton riding like a blade of grass on a fiery storm of life. We are responsible for own karma and the poor helpless genes that cannot defend themselves are not solely responsible for our kismet or destiny. We can influence the expression of genes to a certain extent by our strong will power or by changing an environment or by changing our thoughts.

|  |  |  |
| --- | --- | --- |
|   Materials and methods |   | Top |

**Gene expression, neurotransmitters and depression**

Unlike physical disorders, there are various hypotheses ranging from psychosocial causes to neurobiological causes for the origin of mental illness like major depressive disorder (MDD) and other psychiatric disorders. However, there are various arguments against the neurotransmitter and genetic theories of depression. The researchers argue that there is no confirmed serotonergic lesion in any mental disorder and brain is vastly complex and poorly understood organ. [[1]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref1) Depression is a clinically and etiologically heterogeneous disorder and like the other psychiatric conditions, it has turned out to be very resistant to robust gene identification. [[2]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref2) Human psychology is unlikely to be directly governed by a biochemical mechanism such as a hormone, enzyme, or neurotransmitter. [[3]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref3) The study has shown that it is likely that environmental factors are largely responsible for whether a person express genetic vulnerability as anxiety or depression. [[4]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref4) The powerful financial and political interests may bias current research and medical education. Some two-thirds of DSM's "advisory task force,"" for example, reported financial conflicts such as links to "Big Pharma," [[5]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref5)

Now let us assume for a moment that only biological causes are responsible for depression. Now a biological etiology theory of depression hypothesized that the depression is due to deficiency of monoamine neurotransmitters, notably nor epinephrine and serotonin. According to this theory, the levels of neurotransmitters are determined by the genes. An individual cannot choose his genes as he inherits genes from his parent. So if he inherits faulty depression causing genes, he is fated to develop depression. So going by that logic, we can safely come to the conclusion that it is in person fate that, he will develop depression or not; and the person's states of mood solely depends upon the vagaries and levels of his neurotransmitters in his brain.

Suppose, if some person hears sad news, he may get depressed. According to this hypothesis, if we measure a serotonin level of that person at that particular time, it may be low. Now at that time if the same person receives information that the earlier news was wrong, he may feel elated, and his serotonin level may rise. So it was a thought of mind, that was responsible for, increase or decrease in the level of serotonin, which in turn leads to depression or elation, rather than vice versa. Therefore, by changing the thoughts of mind or the ways of perception, we can alter the level of serotonin and thus can cure a mental illness like depression. [[6]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref6)

Still it would be foolishness on our part to say that antidepressants are not at all effective because if alcohol, cannabis and other substances produce high by altering the brain substances, then the same thing can be presumably produced by the neurotransmitters modulating action of antidepressants. However, the same intoxicating and mood elevating effects can be also produced by watching beautiful sunset, listening intoxicating music or doing exercise. [[7]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref7),[[8]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref8)

We must realize that directly changing the neurotransmitters does not resolve conflicts. It is like sweeping the dust of conflict under the carpet of the unconscious mind. Moreover, seething volcano of the conflict may erupt anytime and can cause far more damage than an untreated MDD. [[6]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth#ref6)

What we need now is the judicious use of pharmacotherapy and psychotherapy; choice of which is not dictated by financial interests or self-interest, but interest of the client.

|  |  |  |
| --- | --- | --- |
|   Will power and genes expression |   | Top |

We have many fewer genes than might have been expected for a relatively complex organism. Flies have 13,000 genes and nematode worms have 18,000. From the analysis of the human draft genome, there only seem to be 30,000 or thereabouts genes and hence that even if every single gene in the body were devoted to a synapse, one would still be out by 10 10 . So, we can no more attribute autonomous functions to the most basic level of brain function - genes - than we can to the most macro - the brain regions. [[9]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref9) The confusion, once again, can be traced to the mistaken idea of genome as blueprint; genomes describe processes for building things rather than pictures of finished products: better to think of the genome as a compression scheme than a blueprint. [[10]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref10)

Although the difference between a chimpanzee and human DNA is only 2%, still a man is neither a super ape nor a super mouse. Men's capacities and faculties belong to an altogether different dimension. Therefore, to generalize the result from the animal studies to human beings is not an appropriate thing, at least in a psychological field.

The sequence of a gene, or the template function, is not affected by environmental experience, but the transcriptional function of the gene-the ability of a gene to direct the manufacture of specific proteins-is certainly responsive to environmental factors and regulated by those influences. A gene, a stretch of DNA, does not produce a behavior. A gene does not produce an emotion, or even a fleeting thought. It produces a protein. There is a "gene myopia in our society: A belief that it is the genes alone that determined our health and well-being throughout our life." Studies of protein synthesis reveal that epigenetic "dials" can create 2000 or more variations of protein from the same gene blue print. [[11]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref11)

Now let us assume that an etiology of depression lies in genes. However, the claims of links between genes and complex human traits are rarely replicated and or verified. [[12]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref12) That was also the fate of a scientist Dean Hamer's report of a "gay gene" that, according to Hamer, predisposed gay men to homosexuality. Follow-up work failed to replicate his claim. Dean Hamer another discovery VMAT which he dubbed as "God gene" also met the same fate. However in this case, not another person but he contradicts himself on page 77 of his own book, "The God Gene." He disowned his book title "The God gene" in front of his colleague said that what he meant was "a" God gene not "the" God gene. [[13]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref13)

If we are all exposed to those same environmental factors, but only the people who are genetically prone to depression get depressed, that is a pretty powerful vote for genes. The problems here, however, are two-fold. First, a substantial minority' of people with a genetic legacy of depression do not get depressed, and not everyone who has a major depression has a genetic legacy for it. Genetic status is not all that predictive by itself. [[14]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref14)

Thus genes are not a destiny. A person with a weak constitution but strong will power may influence expression of genes by doing exercise. Moreover, by changing the expression of genes he may change his body's constitution and can become strong. When he becomes strong, the people would treat him in a different way. Thus, he can change not only his body, but also an environment in which he is working or staying. There are certain styles of karate wherein; one has to do dips on first tow knuckles of fists. Initially, it is excruciatingly painful, but then gradually the skin thickens and becomes as thick as the skin of soles. The planned exercise forces the genes to express in a particular way and makes the skin of knuckles as thick as the skin of soles. Moreover, the brain possesses more plasticity than most of the other organs in the body. Hence, it is no wonder that to change brain by the thoughts is easier than to change body. A particularly amusing example of plasticity in the adult's brain was of London taxi drivers, who are renowned for their "knowledge" whereby they have to memorize the streets of London and how to navigate them. In taxi drivers, part of the hippocampus was larger than in non-taxi drivers of a similar age. [[15]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref15)

Another example of brain plasticity is seen in, adults who lose their left hemisphere and are likely to lose permanently much of their ability to talk; a child who loses a left hemisphere may very well recover the ability to speak, even in the absence of a left hemisphere. Such flexibility is pervasive, down to the level of individual cells. A cell that would ordinarily help to give us a sense of touch can be recruited into the visual system and accept signals from the eye. Most recently scientists have discovered that even skin cells can be turn into pluripotent stem cell and can be recruited to produce various types of cells. [[16]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref16) With that high level of brain plasticity, some think that genes are left on the sidelines, as scarcely relevant onlookers. Biologists have realized that genes are neither blueprints nor dictators; instead, genes are better seen as providers of opportunities. The notion of genes as sources of options rather than purveyors of commands has yet to enter really into our understanding of the origins of human psychology. Although individual genes can have powerful effects, no trait is the consequence of any single gene. Even a single brain cell or a single heart cell is the product of many genes working together. Genes build neural structures, not behavior. [[10]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth#ref10)

For example, a person may have a genetic variant that is known to increase his or her risk for developing emphysema from smoking, an environmental factor. However, if he uses his will power and never smokes, then emphysema may not develop. The commerce between the genes and environment is a two-way street: Genes do not merely tell us what to do; they also listen and respond to biochemical signals triggered by the environment. When they respond, they produce proteins, not feelings, thoughts or behavior. To search for a particular gene responsible for a particular thought is like searching for atmosphere on the moon. Thus, there are genetic vulnerabilities, tendencies and predispositions but rarely genetic inevitabilities. [[14]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth#ref14) So it is not surprising that by using our will power to change the mind, we may change the expression of genes and level of the neurotransmitter and thus can cure illness like depression.

|  |  |  |
| --- | --- | --- |
|   Environment and gene expression |   | Top |

If only genes determine the mental and physical condition of a person, one would expect identical twins to have exactly the same characteristics throughout their lives. However, this is not so. Stressors in the environment may also be influential in triggering genetic vulnerability to illness in adults. It is now recognized that the regulation of gene expression, which is the switching on and off of genes is not a property of the genes themselves, but is controlled by environmental signals. [[17]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref17) We are also now aware of the fact that organisms under stress are able to actively alter their DNA and create new genes in an effort to accommodate environmental challenges. [[18]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref18) The genes do not simply act: They must be activated. [[19]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref19)

Rather than being genetically predetermined, organisms develop in balance with their environment and purposively select, or if necessary rewrite, what they perceive to be appropriate gene programs to ensure their survival. [[20]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref20) This was also demonstrated in a series of painstaking studies of the diet of a simple bacterium. They aimed to understand how *Escherichia coli* bacteria could switch almost instantaneously from its favorite diet of glucose to a diet of lactose-an emergency backup food. They found that absence of glucose spontaneously activated enzymes that metabolize lactose, to ensure bacterium survival. [[21]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref21) Same thing was also shown in a series of innovative experiments with the marine snail Aplysia. He demonstrated how synaptic connections could be permanently altered and strengthened through the regulation of gene expression connected with learning from the environment. [[22]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref22)

The impact of environmental factors on gene expression also explains why there is phenotypic differences-difference in expression of genes- between identical twins. In a study of major depression in twins, researchers followed 2164 pairs of female twins for an average of 17 months and found that, recent stressful events were the most powerful risk factor for an episode of major depression; the role of genetic factors were substantial but not overwhelming. [[23]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref23) The scientists examined the differences in DNA of a large cohort of monozygotic twins, who shared common genes. Though the twins were genetically indistinguishable during the early years of life, older twins exhibited remarkable differences in genomic distribution affecting their gene-expression portrait. Moreover, the differences were more pronounced if they had different lifestyles, and had spent less of their lives together. [[24]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref24)

Another example is that of Alzheimer disease, when one twin develops Alzheimer's disease, the other does not always develop the disorder, although both shares same set of genes. [[25]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref25) The studies have also shown that even though a child may be afflicted with specific genetic defects, the degree of the defect's "expression" may be highly variable, and it is regulated by non-genetic factors, including prenatal environmental influences. [[26]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref26)

The program for activating genes does not reside in the genome alone, but it also depends on environment. Moreover, these patterns of genetic activity continually change in response to changing circumstances. [[27]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref27)

|  |  |  |
| --- | --- | --- |
|   Karma and gene expression |   | Top |

By thoughtfully executing our karma or acts, we can alter our genes or fate. According to Vankoba Rao, "The assumption that Karmic effects are inevitable, immutable and proceed inexorably and man is under its sway is not always valid. Karmas are of three types: Prarabdha, sanchita and agamic. While the first one is a carryover from an earlier life and has to be choicelessly experienced, "sanchita karmas" are acquired in current life over which one could exercise a degree of control. From "Agami Karma" proceed actions that shape the next life. [[28]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref28)

These three types of Karma are compared with the archer with his bow and the arrows. The arrow that has already been discharged is the "prarabdha" karma, over which one has no control. However even in this case also, we can at least deflect the arrow from its predetermined path, e.g. Deflecting a flood from a more populous area to a desert and thus making the flood less destructive or even constructive. The other metaphor is that of steering a boat against the current of the river. You cannot escape the influence of the current (past karma or fate) but you can navigate intelligently (exercise a degree of free will or choice). The one that is ready to be discharged is the "sanchita" karma over which there is some control while those in the quiver are "agami" type that determines the karmas that will operate in the next life and over which one has full control. [[29]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref29) Thus to call karma as fatal is a negative philosophy. Man is the sower as well as the reaper of karma.

Genotype is perhaps comparable to Sanchita and phenotype to Prarabdha. The Prarabdha (Fate) is subject to constant modification depending on the environment. Individual's thoughts, whether one is consciously aware or unaware, also effect the gene expression. By creating a facilitating and enabling environment, it can be possible to alter the program in the genes to the extent that their self-perpetuating character is curbed. [[30]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref30) The Jaina School of philosophy too agrees with this view. Jaina School of thought holds there is in man an infinite capacity or power for right action (anantavirya) with the result the karma can never subdue this power though it may suppress it intermittently. However, for this power man would have been under the eternal sway of karma, which secures for him only bondage. Owing to this power man can overcome the obstacles thrown by karma or genes and reach the highest of the attainment (purusharthas), namely nirvana (salvation). [[31]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref31)

|  |  |  |
| --- | --- | --- |
|   Karma of thinking and genes expression |   | Top |

We must not forget that even an act of thinking is karma. If you realized how powerful your thoughts are, you would never think a negative thought. [[32]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref32) We have millions of genes that can toggle "on" or "off" when we find the right switches in our thoughts and feelings. [[33]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref33) Thoughts the mind's energy, directly influence how the physical brain controls the body's physiology. Thought "energy" can activate or inhibit the production of proteins that affect the cell's function via the mechanics of constructive and destructive influence. [[34]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref34) The study has found that participants trained in Buddhist insight meditation showed increased grey matter resulting from practice. [[35]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref35) A study performed in 2008, under Dr. Herbert Benson a cardiologist at Harvard have found that, thoughts a product of mind can alter the genetic activity of bodily cells in a healthy fashion. [[36]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref36)

By changing the thoughts, we can influence expression of genes and thus can change the level of neurotransmitters and thus can cure MDD.

|  |  |  |
| --- | --- | --- |
|   Karma and influence of planets on mind |   | Top |

There are sun signs in a western astrology likewise there are moon signs in an eastern astrology. According to this theory, the moon and stars influence the lives of men. The physiologist knows that blood has been evolved from seawater. Moreover, the seawater is influenced by the moon as we see in a phenomenon of tide and ebb. It is possible that we may be influenced by the moon as the word lunatic suggests. Moreover, it is not implausible, because as J.B.S Haldene had said, "the universe is not only queer than we supposed, it is queerer than we can suppose." [[37]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref37) But even if we accept this proposition, then the moon influence a man only through influencing his mind. So if he keeps his mind strong, then even the stars or moon can do nothing. Alternatively, if they can influence a mind then there influence can be minimized. Our destiny does not lie in genes or stars but in our mind. Genes and stars are just indicators. It is not in our stars to lord our destiny but in ourselves. [[38]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref38) If the signs were really binding, advice would likewise be of no use. To give advice is to admit that the indications are not binding that they can be resisted. [[39]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ref39)

It seems logical to assume that destiny is merely a name we assign to that legion of strong forces that we ourselves have set in motion, a net consisting of our accumulated motives, desires, and actions from out of the past. We have woven this net for ourselves, but it is not absolutely binding, for the same will which set the forces in motion can resist them; the same mind which planned them can encompass their results (Henry 2002). [[39]](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth#ref39)

|  |  |  |
| --- | --- | --- |
|   Results |   | Top |

The discussion shows that we are the architect of our destiny and can force even the floods of calamities to serve humanity that it ought to destroy. As body can influence a mind, so mind can influence the matter. By using strong will power, we can change the mind, which in turn can change the level of the neurotransmitters. The altered level of neurotransmitters can change the expression of genes. Thus, we can cure diseases like an MDD and anxiety disorder ourselves.

|  |  |  |
| --- | --- | --- |
|   Conclusion |   | Top |

Thus, we are free as well as bound and can influence genes and fate up to a certain extent. The moment we change our perception and get engaged in productive karma is the moment we change our neurotransmitters and our environment, which in turn would lead to change in our so-called adverse fate. Thus, by using strong will power one can change the karma, which in turn would change mind, neurotransmitters, disease and fate.

|  |  |  |
| --- | --- | --- |
|   References |   | Top |

|  |  |
| --- | --- |
| [1.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft1) | Horgan J. The Undiscovered Mind: How the Human Brain Defies Replication, Medication, and Explanation. New York: Free Press; 1999. p. 336.  Back to cited text no. 1     |
| [2.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft2) | Hasler G. Pathophysiology of depression: Do we have any solid evidence of interest to clinicians? World Psychiatry 2010;9:155-61.  Back to cited text no. 2     |
| [3.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft3) | Joseph J, Ratner C. The Fruitless Search for Genes in Psychiatry and Psychology: Time to Re-Examine a Paradigm. New York: Algora; 2006.  Back to cited text no. 3     |
| [4.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft4) | Roy MA, Neale MC, Pedersen NL, Mathé AA, Kendler KS. A twin study of generalized anxiety disorder and major depression. Psychol Med 1995;25:1037-49.  Back to cited text no. 4     |
| [5.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft5) | Newman A. The New American Sun; 13 May, 2012. Available from: http://www.sott.net/article/245515-Profit-Motive-Big-Psychiatry-Invents-and -Redefines-Mental-Illnesses. [Last accessed on 2013 Dec 23].  Back to cited text no. 5     |
| [6.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft6) | Sheth HC. Mind, brain and psychotherapy. Indian J Psychol Med 2009;31:11-5.  Back to cited text no. 6[[PUBMED](http://www.medknow.com/crt.asp?prn=6;aid=IntJYoga-PhilosopPsycholParapsychol_2014_2_1_15_157988;rt=P;u=http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=21938085&dopt=Abstract)]  Medknow Journal   |
| [7.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft7) | Maratos AS, Gold C, Wang X, Crawford MJ. Music therapy for depression. Cochrane Database Syst Rev 2008:CD004517.  Back to cited text no. 7     |
| [8.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft8) | Babyak M, Blumenthal JA, Herman S, Khatri P, Doraiswamy M, Moore K, *et al.* Exercise treatment for major depression: Maintenance of therapeutic benefit at 10 months. Psychosom Med 2000;62:633-8.  Back to cited text no. 8     |
| [9.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft9) | Marcus G. Making the Mind, Why we have Misunderstood Nature - Nurture Debate. Boston Review; 2003.  Back to cited text no. 9     |
| [10.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft10) | Greenfield S. Mind, brain and consciousness. Br J Psychiatry 2002;181:91-3.  Back to cited text no. 10[[PUBMED](http://www.medknow.com/crt.asp?prn=10;aid=IntJYoga-PhilosopPsycholParapsychol_2014_2_1_15_157988;rt=P;u=http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12151275&dopt=Abstract)]     |
| [11.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft11) | Nathanielsz P, Vaughan C. The Prenatal Prescription. New York: Harper Collins; 2001. p. 218.  Back to cited text no. 11     |
| [12.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft12) | Davidson K. No Easy Links Between Genes and Behaviour, DNA Studies Dash Quest for Easy Answers, Genome Link to Behaviour Hard to Prove. San Francisco: Chronicle; 2001.  Back to cited text no. 12     |
| [13.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft13) | Zimmer C. Faith boosting genes. In: Hamer D, editor. A Review of the God Gene: How Faith is Hard-Wired into Our Genes. New York: Scientific American; 2004.  Back to cited text no. 13     |
| [14.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft14) | Sapolsky R. A Gene for Nothing. Discover Magazine; Oct, 1997.  Back to cited text no. 14     |
| [15.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft15) | Maguire EA, Gadian DG, Johnsrude IS, Good CD, Ashburner J, Frackowiak RS, *et al.* Navigation-related structural change in the hippocampi of taxi drivers. Proc Natl Acad Sci U S A 2000;97:4398-403.  Back to cited text no. 15     |
| [16.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft16) | Takahashi K. Tanabe K, Ohnuki M, Narita M, Ichisaka T, Tomoda K, Yamanaka S. Induction of Pluripotent Stem Cells from Adult Human Fibroblasts by Defined Factors. Cell. 2007;131:861-72.  Back to cited text no. 16     |
| [17.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft17) | Nijhout HF. Metaphors and the role of genes in development. Bioessays 1990;12:441-6.  Back to cited text no. 17     |
| [18.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft18) | Thaler DS. The evolution of genetic intelligence. Science 1994;264:224-5.  Back to cited text no. 18     |
| [19.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft19) | Keller EF. The Century of the Gene. Cambridge: Harvard U. Press; 2000.  Back to cited text no. 19     |
| [20.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft20) | Lipton BH. Maternal Emotions and Human Development. 1995. Also available from: https://birthpsychology.com/free-article/maternal-emotions-and-human-development#.VDZrjldJHIU [Last Accessed on 2014 Feb 21].  Back to cited text no. 20     |
| [21.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft21) | Jacob F, Perrin D, Sanchez D, Monod J. L'operon: Groupe de genes a l'expression coordonne par un operateur. Compt. Rendu. Acad. Sci. 1960;245:1727-9.  Back to cited text no. 21     |
| [22.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft22) | Kandel ER. A new intellectual framework for psychiatry. Am J Psychiatry 1998;155:457-69.  Back to cited text no. 22     |
| [23.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft23) | Kendler KS, Kessler RC, Walters EE, MacLean C, Neale MC, Heath AC, *et al.* Stressful life events, genetic liability, and onset of an episode of major depression in women. Am J Psychiatry 1995;152:833-42.  Back to cited text no. 23     |
| [24.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft24) | Fraga MF, Ballestar E, Paz MF, Ropero S, Setien F, Ballestar ML, *et al.* Epigenetic differences arise during the lifetime of monozygotic twins. Proc Natl Acad Sci U S A 2005;102:10604-9.  Back to cited text no. 24     |
| [25.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft25) | Plassman BL. 9 th International Conference on Alzheimer›s Disease and Related Disorders (ICAD); 2004.  Back to cited text no. 25     |
| [26.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft26) | Wolf SS, Jones DW, Knable MB, Gorey JG, Lee KS, Hyde TM, *et al.* Tourette syndrome: Prediction of phenotypic variation in monozygotic twins by caudate nucleus D2 receptor binding. Science 1996;273:1225-7.  Back to cited text no. 26     |
| [27.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft27) | Capra F. The Hidden Connections. New York: Doubleday; 2002. p. 163-75.  Back to cited text no. 27     |
| [28.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft28) | Venkoba Rao A. The karma theory and psychiatry. Indian J Psychiatry 2001;43:2.  Back to cited text no. 28     |
| [29.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft29) | Wikipedia. Available from: http://www.en.wikipedia.org/wiki/Prarabdha\_karma. [Last accessed on 2014 Jun 14].  Back to cited text no. 29     |
| [30.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft30) | Ramesam V. Religion Demystified. Sunday January 6, 2008. Also Available from: http://www.religion-demystified.blogspot.in. [Last accessed on 2014 Jun 14].  Back to cited text no. 30     |
| [31.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft31) | Das Gupta SN. A History of Indian Philosophy. Vol. 1. Cambridge: Cambridge University Press; 1969. p. 62-77, 78-166.  Back to cited text no. 31     |
| [32.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft32) | Mildred NL. Peace Piligrim: Her life and Work in Her Own Words. Ocean Tree Books; 1992. Available from: http://www.brainyquote.com/quotes/quotes/p/peacepilgr183377.html. [Last accessed on 2014 Jun 15].  Back to cited text no. 32     |
| [33.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft33) | Ewin DM. Psychobiology of gene expression: Neurosciences and neurogenesis in hypnosis and the healing arts. Am J Clin Hypn 2003;45:251-4.  Back to cited text no. 33     |
| [34.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft34) | Lipton BH. The Biology of Belief, Unleashing the Power of Consciousness, Matter and Miracles. Santa Rosa, CA: Mountain of Love/Elite Books; 2005. p. 224.  Back to cited text no. 34     |
| [35.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft35) | Lazar SW, Kerr CE, Wasserman RH, Gray JR, Greve DN, Treadway MT, *et al.* Meditation experience is associated with increased cortical thickness. Neuroreport 2005;16:1893-7.  Back to cited text no. 35     |
| [36.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft36) | Herbert BH. Available from: http://www.brainworldmagazine.com/dr-herbert-benson-on-the-mindbody-connection/. [Last accessed on 2014 Jun15].  Back to cited text no. 36     |
| [37.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft37) | Haldane JB. Possible Worlds: And Other Essays. London: Chatto and Windus; 1927. p. 286.  Back to cited text no. 37     |
| [38.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft38) | Shakespeare W. "Julius Caesar" Cassius to Brutus in act I, scene II. Available from: http://www.quoteland.com/author.asp?AUTHOR\_ID=119. [Last accessed on 2014 Jan 06].  Back to cited text no. 38     |
| [39.](http://www.ijoyppp.org/article.asp?issn=2347-5633;year=2014;volume=2;issue=1;spage=15;epage=20;aulast=Sheth" \l "ft39) | Henry T. Sunrise Magazine. California: Theosophical University Press; 2002. p. 1221-36.  Back to cited text no. 39     |

|  |
| --- |
|  |