

*Life without goodness, good thoughts, good actions and good words is like the sky in the night without the moon or stars.*

- *Fourth Veda*

<http://thinkexist.com/quotation/life-without-goodness-good-thoughts-good-actions/356308.html>

The phrase "Good Thoughts, Good Words, Good Deeds" represents the three pillars of the Zoroastrian Faith and sums up the beliefs and conduct of its followers. Zoroastrianism is the world's oldest revealed monotheistic faith. It was founded by Zoroaster (Zarathustra) about a thousand years before the birth of Christ in ancient Persia, now Iran. We know this faith via the three Magi who visited the Christ child in the Christmas story, the Magi being Zoroastrian priests, who in their tradition were fulfilling a prophecy of Zoroaster, *"When I return, you will see a new star in the East-- follow it and thou wilt find me there, cradled in straw."*

<http://kzamembers.wikifoundry.com/page/Good+words,good+thoughts+and+good+deeds>

I'll come back to this story later. Robert Edward Lee was an American career military officer who is best known for having commanded the Confederate Army of Northern Virginia in the American Civil War. Lee distinguished himself as an exceptional officer and combat engineer in the United States Army for 32 years. During this time, he served throughout the United States, distinguished himself during the Mexican-American War and served as Superintendent of the United States Military Academy. Although a gentleman of the South, his family did not own slaves. When Virginia declared its secession from the Union in April 1861, Lee chose to follow his home state, despite his personal desire for the country to remain intact and despite the fact that President Abraham Lincoln had offered Lee command of a Union Army. "How could I raise my hand against Virginia, against my family?" he said. As any student of history will tell you, Lee and his outnumbered and outgunned Army, in a series of brilliant military campaigns, led the US Army a merry dance for four years.

[http://en.wikipedia.org/wiki/Robert\\_E.\\_Lee](http://en.wikipedia.org/wiki/Robert_E._Lee)

One cannot help but think that if Lee had chosen to stay loyal to the United States and taken command of the Northern Army that the war would have been over by Christmas and more importantly, hundreds of thousands of lives spared. But it is not only big history that can turn by small events. Things that we do in our daily lives can have a profound impact on the lives of others. Sometimes we are not even aware of the consequences our actions have. Let me give you an example from my personal experience.

A former student of mine who is now in her third year of a Master's Degree in Physics at Strathclyde University came back to the school to visit us recently. She was just back from Cern in Switzerland where she had been visiting the large hadron collider. It turns out that this young lady was top of her year in Quantum Mechanics. No mean feat. What, I enquired, had inspired her to study Quantum Mechanics? *"It was you, she informed me. You gave a lesson on Quantum Mechanics in Sixth Year and I thought this is really cool. This is what I want to do."* While I was very flattered at the compliment, I cannot take any credit for her academic ability, nor do I believe I am entitled to a percentage of any Nobel Prize she might win some day. What is of interest to me personally is that I have absolutely no recollection of the lesson to which she referred. Over the years I must have taught thousands of lessons. It was for me just another lesson, but another lesson with a profound impact on another person's life.

Now the idea that small things can have a profound impact on major events somewhere down the line is an idea familiar to mathematicians and is known as the butterfly effect.

In chaos theory, the butterfly effect is the sensitive dependency on initial conditions in which a small change at one place in what is called a *"deterministic nonlinear system"* can result in large differences in a later state. The name of the effect, coined by the 20<sup>th</sup> century American mathematician Edward Lorenz, is derived from the theoretical example of a hurricane's formation being dependent on whether or not a distant butterfly had flapped its wings several weeks earlier.

In plain English, the phrase refers to the idea that a butterfly's wings might create tiny changes in the atmosphere that may ultimately alter the path of a tornado or delay, accelerate or even prevent the occurrence of a tornado in another location. Now of course the butterfly does not power or directly create the tornado. The flap of the wings is a part of the initial conditions; one set of conditions leads to a tornado while the other set of conditions doesn't. The flapping wing represents a small change in the initial condition of the system, which causes a chain of events leading to large-scale alterations of events similar to the domino effect. Had the butterfly not flapped its wings, the trajectory of the system might have been vastly different - it's possible that the set of conditions without the butterfly flapping its wings is the set that leads to a tornado.

[http://en.wikipedia.org/wiki/Butterfly\\_effect](http://en.wikipedia.org/wiki/Butterfly_effect)

Our fellow Unitarians in the United States base their Unitarian faith on seven principles, the seventh of which is, "*Respect for the interdependent web of all existence of which we are a part*". Now while this normally has environmental connotations, I prefer to apply it specifically to the interconnected web of human relations of which we are part.

<http://www.uua.org/beliefs/principles/282070.shtml>

Indeed, I would argue, that if religion does not primarily concern itself with humanity and how we interact with each other, then it is of little value. However a study of the religions of the world reveals, at their core, some form of the golden rule. "*Do unto others as you would have them do unto you*", "*love your neighbour as yourself*" and so on. You would think that after millennia of wisdom across all cultures that we as a species would have it sussed by now, but we keep messing up. As Saint Paul wrote in his letter to the Romans,

*I know that nothing good lives in me, that is, in my sinful nature. For I have the desire to do what is good, but I cannot carry it out. For what I do is not the good I want to do; no, the evil I do not want to do--this I keep on doing.*

*Romans 7:18,19. NIV.*

I am sure we can all relate to this in some way. Paul also gives his reason for why we behave so badly; original sin. Now I am mindful that the doctrine of original sin has never held much water amongst Unitarians and Universalists. Indeed I would not be much of a science teacher if I were to propose that a vengeful deity should curse mankind because a young girl ate a piece a forbidden fruit given to her by a talking snake. However there is a sense, from a scientific perspective, where the sins of the father are visited on the son. Every cell in our bodies is the product of hundreds of millions of years of evolution, and we carry this genetic evolutionary inheritance with us.

Let us consider the field of evolutionary brain science. Our brains show no evidence that they were designed "fit for purpose" by a great designer, but are rather the product of evolutionary development. The most ancient part of our brain is the reptilian part of the brain, at the back of the head. This is the brainstem and cerebellum. This part of the brain deals with the basics of physical survival. This part of the brain deals with basics; safety, sustenance and sex. It is our genetic inheritance from our ancestors hundreds of millions of years ago who were reptilian.

About 85 million years ago our ancestors were early mammals, lauraslathere. The part of the brain that we inherit from this period includes the hippocampus and amygdale. This part of the brain controls things like emotions, feelings, bonding emotions, kinship. Status is important to mammals in a way that is not important to reptiles. Play is also a function of this part of the brain. Cats will play. Lizards don't. There is also a darker side to this side of our brain.

Tribalism, racism, sectarianism, “us and them” activity is driven by this part of the brain. If you have ever watched the nature programmes on T.V. about Meerkats and their tribal territory battles you can see this clearly in other creatures.

When we evolved into apes we developed the new mammalian part of the brain, the neocortex or frontal lobes. This part of the brain allowed us to develop two new functions; the drive to comprehend and the drive to predict. Why? So that the old mammalian brain and the reptilian brain could get what they want more effectively, i.e. more status, food, security and mates.

Finally as humans we have developed the prefrontal cortex. This part of the brain deals with good judgement or poor judgement. It's the last part of brains to fully develop, usually between the ages of 23 to 25. Parents know this. Car insurance companies know this. It also controls our sense of higher purpose. This part of the brain is especially important because if we let it, it can override the other parts of the brain, but it won't override them unless there is some strong commitment to do so.

Dowd, M (2007); Thank God for Evolution: How the Marriage of Science and Religion Will Transform Your Life and Our World, Viking Penguin, USA.

Understanding our mismatched instincts is important. Our instincts did not evolve to meet our current needs but to match the survival needs of our ancient pre-human ancestors. Understanding this can help us understand why we behave the way we do. If it wasn't bad enough having a brain that is not perfect for our needs, we have hormones to deal with. Believe me as a teacher of teenagers I know a lot about hormones and the problems they can cause. Take testosterone for example, the chemical that drives both our sex urge and aggression. Doctors will tell you that when someone achieves an increase in status, say a big promotion, there is a big surge in testosterone production in the body. This is why so many people who achieve power can turn into aggressive bullies or previously loyal husbands end up chasing women.

There's a great example of this in the Old Testament in the story of King David. He starts off as a young shepherd, a fairly low status position. Suddenly he becomes the champion of Israel. Women sing songs about him, “Saul has killed his thousands, David his tens of thousands”. Then he becomes king. It's not enough. He builds an empire. He has more wives than he knows what to do with. It's not enough. He covets another man's wife and ensures he is killed in battle so he can have her. If ever you wanted a demonstration of the power of testosterone as a result of increasing status look no further.

Being human isn't easy. We have a lot to deal with. Now of course understanding why we can behave badly doesn't justify or excuse it. We can no more say “my hormones made me do it” than we can say “the devil made me do it”. This begs 2 questions. How do we do something about it and why bother? What we do depends on your approach.

One could for example, take refuge in the Buddha; develop wisdom through right view and right intention. Develop our ethical conduct through right speech, right action and right livelihood. Develop mentally through right effort right mindfulness and right concentration. Or one could follow a humanist path and adopt an ethical perspective that emphasizes human dignity, concerns and capabilities, especially rationality. One could study Torah and the Prophets, the Tao or come to a saving faith in Christ Jesus. I believe that any spiritual path followed sincerely, not for professional aggrandizement, not to dominate others, not to justify evil deeds, will have the same effect. It will help us to become emotionally literate people by helping us to know our feelings, develop our sense of empathy, learn to manage our emotions and repair emotional damage.

What makes us uniquely human (excluding opposable thumbs and walking upright) is not the common cellular biology we share in common with other organisms, nor the parts of the brain that we share in common with other creatures. It is our prefrontal cortex that makes us human. Over the last 5 million years, while the human brain has grown in general threefold, this part of the brain has grown six fold. It is this part of the brain we have evolved for our survival as a species today and with it our capacities for reason, encouraging wise acceptable choices whilst inhibiting unacceptable behaviour and controlling our higher purpose.

As for the question, "Why bother?" In our second reading today Chet Raymo asked, "Does it matter?" Yes, I believe it does matter. Everything matters. The Butterfly Effect demonstrates that even the small things we do, or fail to do, can have a profound effect on this interconnected web of existence of which we are part. A profound effect on ourselves, on others and on the type of society we want to live in.

Now let me take you back to the Bethlehem story. There is no way I believe we should in any way view this as an historic event. Joseph Campbell studied the world's mythology and showed us the same themes of these ancient stories occur again and again across cultures and across time. If we compare the Bethlehem story to say the birth of Krishna we find amazing parallels. In the Krishna story the creator god Brahma decides to save the world. In the Christian story it's the creator god Yahweh. Krishna's mother Devaki is married off to Vasudeva and has Krishna's birth announced to her by a voice from heaven. Mary is married off to Joseph and has Christ's birth announced by an angel. Both babies are born in unusual places, one in a prison, the other in a stable. In India, the wicked king Kamsa kills all the babies. In Israel it's Herod. Christ is the second person of the trinity. Krishna is the 8<sup>th</sup> incarnation of Vishnu, the second person of the Indian trinity. And so on.

If we remember then, that this story was written by ancient eastern mystics rather than modern western historians and understand it as allegory, it may still have meaning for us. We must let the star of Bethlehem that is the light of the world shine on us. It can't happen in the inn, in the crowded part of the brain with all the emotions and desires. There's no room there. We must step outside to the stable to the quiet part of the brain, our frontal cortex, and there let the Holy Child, which is love, be born within us. Then, and only then, will we be able to accept the wisdom from the East. Those three magi; good thought, good words and good deeds.

### **Readings**

Reading 1: Matthew 2:1-12 The Magi visit the Messiah. NIV.

Reading 2: Matters of Fact by Chet Raymo; Science musings blog August 2013.

<http://blog.sciencemusings.com/2013/08/matters-of-fact.html>