

Session 7 – Stage 6 of Spiritual Hierarchy Continued

March 2nd, 2014

Jai Swaminarayan! Sahajanand Swami Maharajni jai, Bapashreeni jai, Sadguruoshreeni jai, Swaminarayan Bhagwanani jai, tatha anant anadi muktoni jai!

A humble prayer in their lotus-feet and our Guru AMPP NarayanMama-LilaMasi's lotus-feet to augment this assembly with their divinity and grace, and to enhance our knowledge and guide us towards them.

Last week, there was a very good question on monotheism v/s polytheism. I answered the question to the best of my ability, but upon further thinking, I realized that my answer though correct, was not complete and all-encompassing. Inspired by Lord Swaminarayan and AMPP NarayanMama, I was reading part 3 of Amrut Sarita 2-3 days ago and found the complete answer. Sometimes you know the answer but you forget it, and that's what happened to me. The way AMPP NarayanMama has explained it is that when one is unified with the supreme Lord Swaminarayan, then nothing else matters, and therefore there is no other God. It does not mean that other categories stop existing, but the devotee or the Mukta is so engrossed in the bliss and Moorti of the Supreme Lord, that others cease to exist from his perspective. For the devotee of MulAkshar, there is the MulAkshar they worship, and many other such MulAkshars, and the immanent and transcendent form of the Supreme Lord and the Mukta of Supreme Lord. So whether they know and agree or not, they automatically live in a polytheist world. And henceforth for all subsequent categories. As we discussed in the very first Satsang, one should have an unflinching devotion in one form of God. So while we share the knowledge as imparted to us by the great ones, our intent is not to break/damage anybody's faith or belief in their belief system, our intent is simply to share the knowledge of the greatness that is out there. And if they worship the form that they worship, with the feeling and knowledge of that greatness and they will eventually reach that greatness. So that was the complete answer to the question that was asked last week. My answer last week was partial.

Let's now continue our journey forward. Last week we started walking through Stage 6 of the hierarchy and covered plants, animals, humans, deities, demons, 14 worlds, and the trinity. One of the things we talked about was the theory of evolution and how spiritualism says that humans were created as they are, and science talks about the theory of evolution. We also talked about varying degree of atonement for violence against a living being based on how evolved they are. Let's look at this a little more closely this week. Within religious community, there seems to be no disagreement about God creating humans. In the scientific community the opinion is split. Some scientists believe that evolution happened on its own, by some magic. Some believe that God created evolution. So in scientific community, they all believe in evolution, but some say that it happened on its own, and some say that someone or God created evolution. Let's look at both the approaches in terms of mathematical probability. To quickly understand probability, probability is a chance of an event occurring. For example, if we flip or toss a coin, there is a 50% chance that it will turn up heads and a 50% chance that it will turn up tails. Mathematicians try to explain evolution with a very simple example of evolution of a 8X8 chess board

from black and white squares. Everybody knows a chess board – alternate squares of white and black, eight rows and eight columns. Initially there is an empty space, which needs to be evolved in a chess board. Mathematicians have determined that the possibility of getting a chess board through a random process is one in 18 quintillion, (million is 10^6 , billion is 10^9 , trillion 10^{12} , quadrillion 10^{15} , quintillion is 10^{18}). So the probability is 1 in 18 quintillion, for the evolution to succeed. And this is just for an 8x8 chess board. If evolution of chessboard was guided by an intelligent process, the possibility to create a chess board is one in 5000. If there was someone all-knowledgeable, knew everything, like God, and if God created chessboard, with a birds-eye view of the chessboard, it can be created in 16 attempts! So probability is one in 16. Of course evolution of the world is much more complex than creating a chess board. It is believed that DNA evolved from RNA, and RNA evolved from TNA, and TNA is a combination of 5 types of sugars mixed in a specific order. Genetic code evolution is too complex and 4 billion years (10^9 years) are not enough if evolution happened on its own, based on the probability theory of evolution. Even if we do not understand probability, its enough to understand that mathematically, the evolution could not have happened on its own. So even if God did not create human beings directly, He did evolution, there is no way we would exist today. So even if God did not create humans beings directly, He definitely created evolution. If God did not create evolution, there is no way we could exist today. If there was no guiding principle, if there was no God's hand in the process of evolution, human beings would not have evolved from a micro-organism in just 4 billion years.

Having established that even if God did not create living world, like the non-believers say, He definitely created evolution. The next step is to observe the world that we can see – there are patterns everywhere – from large to small. We saw that in our very first Satsang as well – that there are patterns everywhere. For example, the tree branch structure, the streams and rivers are seen from sky, veins and arteries in our body, lightening, all have a similar structure. But then not everything is formed with that one single structure. There are other structures and there are multiple patterns as well. Someone must have decided how each pattern would evolve and play its role in the universe and life. Someone must have decided which parts of the body will follow which pattern. Someone must have decided which part of the landscape will follow which pattern. The theory that everything did not happen on its own, is called theory of irreducible complexity & intelligent design, and theory of patterns in the creation is called constructal law. For those interested in knowing about this further, I have included a couple of links in my slides today. So when I send the presentation out you will receive it. That will be a good starting point and then you can research further on irreducible complexity & intelligent design and constructal law.

In a nutshell, it seems like in the scientific world too, more and more theories are emerging to show that someone or something created the universe and the life. Not only that, there is a small set of scientists who believe that even our ethics are predefined by someone and wired into us. In the recent years, the brain chemical generally discounted as related to child-birth, has gained more visibility. Oxytocin is related not only to child birth but also to ethics like love, compassion, trust, etc. When we trust someone our oxytocin levels go up, and since it is also a “feel good” chemical, we feel good when we interact with people we trust or love. But how did oxytocin come about? Did someone create it? One question that is slowly being asked now is did God also create our ethics system or was it really a moral

evolution? Moral evolution is a theory that is believed in the scientific world today. But now they are questioning that theory.

The second question that the scientific community is now asking is that what tells those 7 million billion billion atoms (I think) in our body to stay together and not drift away? What tells each atom what it is supposed to do? What combines the atoms to form a tissue, tissues to form organs, organs to form a system, and systems to form a body? Irrespective of whether we came through process of evolution or we came directly, what holds our bodies together today? If there is a force field that does that, who created that force field and how does it determine, whose body should be formed, when and how? And science is just about beginning to ask these questions. So all in all, there is a belief forming gradually that there is a higher governing power or a set of rules that created us, our ethics and the universe, and still continues to govern it.

Some scientists believe that the entire universe and everything inside it is living and exhibits life-like characteristics. There is a theory of Biocentrism that says biology should replace physics in explaining the universe. Many biologists say that Great Barrier Reef in Australia – the great coral reef that can be seen from space, is the largest living organism. Some take this concept even further and believe in the theory of Cosmological natural selection which says that just like evolution of life, even rivers, mountains, earth, and universe is also alive and evolves, mutates, has a heartbeat, etc. The heartbeat of a universe in existence like ours is may be once every trillion years when new galaxies are formed. Heartbeat of a nebula may be every few billion years when new stars are born. Some say that the heartbeat of a universe is the big bounce. Big bounce is a combination of a big bang, big crunch, and another big bang. Universe is created through a big bang, then it stays in that state for some time, then it collapses in big crunch, and then there is another big bang. That process is called the big bounce. Some physicists speculate that the spiral clouds of dust, spanning many light years across is the DNA of the universe. Now that is pure speculation, but it's a belief! What I am trying to bring out through all this is that, just as there is a process of evolution in the living world on Earth as we know it, and there are organisms at different levels of evolution, likewise, there is a huge big living world up there at different levels of evolution. Even some of the scientific hypothesis and theories are now talking about it. It will not be surprising if a few years down the road, science comes back and says that there indeed are different levels of evolution above ours – essentially come back and say that there is a hierarchy up there too.

Lets look at it from one more perspective - the perspective of brain capacity. An ant's brain capacity is much lower than humans, but the collective intelligence of an ant colony of 40 thousand ants is the same as that of a human. In fact, we have already adopted this concept. Since supercomputers are expensive to built, one alternative is to create a closed network of many computers, whose CPU capacity is merged together to act like a supercomputer. So the concept of hive intelligence is already being used. With this increased computational power, we are now able to understand weather patterns, world's social emotion, etc. With this new understanding of weather pattern, we believe that it all happens due to jet streams, high pressure, low pressure, etc. But we still do not know what guides these, what forms tornados, how to hurricanes form, why does east coast get so much snow and California faces a drought? Who decides that? May be when our computational power increases further,

we will be able to see that these are all governed by some principles that we did not understand earlier. Sorry for a quick digression, but coming back to brain capacity and hive intelligence. So just as collective intelligence of ants can equal a human intelligence, likewise can collective intelligence of humans equal intelligence of the creator?

Some scientists say yes. There is an emerging technology called "Quantum computer". Quantum mechanics is the physics and the laws around very small particles like photons, fermions, bosons, and the laws of quantum mechanics are different than the laws of physics that govern the larger world. A quantum particle like a photon, can behave as a particle and as a wave. We will talk more about quantum mechanics in coming weeks, but for now, let's understand the concept at a high level. Due to its dual nature, a quantum particle can be in two states at the same time. So in a standard computer we have binary digits so its "0" and "1" or "yes" and "no" or "on and off" states. There are only 2 digits, and its called a binary digit or a bit. In a quantum computer, it is called a qbit and it can have states of "0", "1", and both 0&1, or in other words in a quantum computer, a switch can "on or off or on-and-off at the same time". With this concept, the possibilities for computations and artificial intelligence become immense! With invention of a quantum computer(it has already been created), the new theory that has come up in the recent years is that universe actually has a quantum brain. If the concept of quantum computer, sounds a little complicated, just know that there is now a thinking in the scientific world that universe has a brain. Based on the guesstimate of visible quantum particles(each quantum particle can act as a qbit), it is believed that universe can compute 10^{106} computations in a second. Humans can compute 10^{16} computations in a second, that too only when we use the full capacity of our brain. Most of us use only 10% of our brain capacity. Those who use 15% brain capacity, are called genius. But if we used our complete brain capacity and used our collective intelligence, it can scale up to the intelligence of the universe. But just as there is not just one human being, but many human beings, and collective intelligence of 40000 ants maps only to one human being, but there are many such human beings. The belief says that there are many universes and each has its own intelligence! And this is based on just the visible things that we are able to see and perceive.

Not only does the universe have computational capacity that is greater than us, but some physicists are toying with the idea of a reproducing universe. Some believe that our universe is an offspring or a child of another universe. When a dust cloud starts forming a star system, or when a star explodes and forms a new star system, the cooling of the gas into solid mass is done by carbon monoxide. Carbon, Oxygen & Hydrogen are the building blocks in organic chemistry and they are in abundance in nature. They are top 3-4 elements in the nature. Given that these are all very abundant in the universe, there is an emerging theory or hypothesis that, universe has ensured its own fertility by having the building blocks in abundance. The survival of the fittest concept exists even at that level!

To summarize our discussion so far today, there are emerging theories in science that show that universe was created by someone, we were created by someone, our ethics were also created by someone, universe and everything in it has intelligence, universe and everything in it can reproduce, there is a possibility of an altogether differently evolutionary world up there with multiple levels of consciousness, and anything and everything that we see has life.

In Hindu philosophy, it is said that mountains, rivers, Earth, Water, Oceans, wind, sky, deities, all have a form and are living. During the Kurma or Kuchchh avatar, Lord Vishnu sought help from Mandrachal or Meru parvat for Samudra Manthan. So Mandrachal has a human life-form. Mandrachal and Ganga are known to have spoken to Lord Shiva, Himalaya came to Lord Swaminarayan for liberation. So everything that we see has a life or a soul in it. AMPP NarayanMama used to say that if a mukta eats June one fruit of tree growing on a mountain, then all the souls starting from the fruit and its seeds to the mountain itself, get liberated. In fact, when Lord Swaminarayan was physically visible on the Earth, the saints were tasked to give vartman to 5 souls every day. If they could not find human beings, they could give vartman to trees, animals, rivers, lakes, etc. Also in Hindu philosophy there is a mention of evolutionary hierarchy up there that we cannot see. That was a long conversation on mapping latest scientific findings and theories to Hinduism and to the belief in God. Let's continue forward.

One question last week was where are these other 14 worlds that we talked about, that were created by Lord Brahma? As we discussed, they are in dimensions that we cannot see and the principles that govern them are also different than ours. However, there are places on Earth or in Earth's orbit, which could get us closer to either a portal to those worlds, or to those world themselves. We had taken example of Badrikashram, Kailash and Heaven. There are similar places worshipped by the locals in Peru, Rome, etc. These places are in the subtle worlds not visible to us even if we go to those locations on this Earth. The relevance is that there either is portal or proximity to those worlds from these locations on Earth. We will have one Satsang especially on size and dimensions of all the strata in the physical world in coming weeks. So we will talk more about it at that time.

Lets now look at some stories and beliefs in Hinduism and map them to some emerging scientific and astronomical theories and hypothesis. A lot of this could be considered speculation, since there is no clear data available scientifically or spiritually as to what really happened or where these worlds are. But nevertheless, the correlation is quite interesting and helps establish that there is some truth to whatever is written in the scriptures. In Hinduism, we have 15 days of Shraadh around August-September. Chinese have a similar concept of Ghost Festival on the 15th day of 7th month. Since their new year falls in Janurary-February time-frame, their ghost festival aligns with our Shraadh time. Shraadh is done for the Pitris and their deities live in Maharlok. So may be at that location in Earth's orbit, we are close to Maharlok or close to a portal to Maharlok. Again, as I said, this is all speculation.

Let's look at a different story. There is a theory that Moon used to be a planet that formed very close to the earth. Then in a massive collision – either between Earth and Moon or may be a huge meteorite struck one of the two and they collided with each other. But what happened was, with that collision both the Earth and the moon transformed, Earth continued to be a planet and Moon became its satellite. In Shiva puran it is said that Moon was cursed by Prajapati Daksh for mistreating one of Prajapati's daughters, that he will gradually diminish and die. That was the curse – that Moon will diminish and die. Lord Shiva came to rescue and said that to honor Prajapati's curse, Moon will wax and wan, but will not completely die. Prior to that, there used to be a full moon everyday on the Earth. The only way a full moon everyday can be explained is if the moon was orbiting around the sun, with its orbit close to Earth, orbit cycle time exactly the same as Earth's orbit time, and was on the dark side of Earth.

So the Moon used to be a planet, and was going to die due to curse of Prajapati, but was revived as a satellite. It is interesting how the present day findings map to this story.

There is a growing belief, especially after Mars rover landing in 2012, that there used to be life on planet Mars. There was water and rivers flowed on the planet. Recently, I think in last one week, CNN released a report that even today there is a possibility that water streams form on Mars in a one season and then disappear. There has been a theory that Mars once had life, but was struck by a meteor or a comet and lost its atmosphere and water. Recently, considerable traces of Xenon have been found on Mars. Xenon is found only when there is a nuclear explosion. So something happened to life on Mars. The dating of that incident as given by scientists today is about 65 Million years ago, which is around the time dinosaurs went extinct on planet Earth. Sumerians who believe that Annunaki genetically engineered humans, came from Mars and the 12th planet which was destroyed. So in those cultures there are 9 planets, Sun and Moon, which makes 11, and there used to be a 12th planet which got destroyed. Now, in Shiv Puran it is mentioned that when Lord Shiva cut-off Lord Ganesh's head and refused to bring Lord Ganesh back to life, Goddess Parvati was very angry and threatened to destroy the creation. When Lord Shiva did not listen to her, she destroyed one world. Lord Shiva still did not bring Lord Ganesh back to life. So she went ahead and burnt the second world. Lord Shiva still did not bring Lord Ganesh to life, so she prepared to destroy Earth. That's when Lord Shiva stopped her, and brought Lord Ganesh back to life with an elephants head. Putting 2&2 together, may be the belt of asteroids is the destroyed world by Goddess Parvati and Mars is the burnt world, and Earth was spared! Mars and Earth both fall in the goldilock zone of the Sun, and the belt of asteroids is at the border of that zone.

It is said that Lord Shiva cut-off the head of Lord Ganesh due to a curse by Kashyap Rishi. Kashyap Rishi is the father of deities and demons. The Sun was becoming too powerful and arrogant. So Lord Shiv killed the Sun. Since the Sun was Kashyap Rishi's son, Kashyap Rishi got very upset and cursed Lord Shiva, that the way he killed the deity Sun, he will behead his own son someday. After the curse, Lord Shiva then brought the Sun back to life and explained to Rishi Kashyap that the Sun had become too powerful and arrogant. So he killed the Sun and brought him back to life in a smaller form. Interestingly, physicist today believe that our Sun is the 2nd or even 3rd or 4th generation of a much bigger star. A much bigger star existed here, which went supernova, and from what remained, a new star system – our solar system was born. Otherwise, there is no way we would have had so many minerals and heavy and precious metals on Earth.

Germans have come to respect Sanskrit language and scriptures more than Indians. Its very unfortunate, but it's the truth. I once worked for a company that had offices in Leuven, Belgium and Aachen, Germany. These are both university towns. It was about a couple of hours of drive between the two offices, so I used to drive back-n-forth when I visited. Along the way I would see signs for Aachen University. Education has always been my passion, and I did not want to miss this opportunity. So with help of one of my coworkers and a student intern, I managed to visit the university and their library. The collection of Sanskrit books that I saw there, I have not seen anywhere in India. I am sure there exists collections of Sanskrit scriptures in India, but I have not seen one. I saw one in Germany. So Germans have come to value the old Sanskrit literature and scriptures quite a bit. It is believed that during the time of Hitler, Germans studied Hindu Sanskrit scriptures very deeply – especially those around

“Vimana”. Vimana is a flying object. The space travel in US was made possible in the post-Nazi days by one such scientist from Germany. His design of spacecraft looks similar to the design of Rukma Vimana in Hindu scriptures. In Hindu scriptures there are 4 types of Vimanas that are described, Sundara, Sankara, Rukma – I do not remember all the names. Space shuttle is designed like Rukma Vimana. So the scripture have some validity in it – based on the design in the scriptures you can really create a space shuttle. Along those lines, many ancient scripture talk about wars waged in the sky. This is a reality today. We also saw last week archeological evidences to support Matsya Avatar story.

From all these mappings, we can determine that there is truth to these scriptures and the stories that are mentioned in there. It is just that due to the scale and magnitude as well as lack of technological and intellectual advancements, we are not able to comprehend those scriptures well. But from whatever we have been able to figure out, some of the stories have now started making sense, even if one calls it speculation. Based on this, we can say there must some validity associated with other stories as well. It is just that the scriptures are written in an all-comprehensive and symbolic language, therefore we cannot understand them clearly.

Just as we established that there has to be a creator, who created us and universe, there must be someone who operates the universe. We saw last week, that Lord Vishnu is responsible for the operation of the universe. We talked a little bit about 4 universal forces last week. The 4 forces are the electromagnetic force associated with light and magnetism, weak force associated with radioactivity, strong force associated with nuclear power inside the stars and within the nucleus of any atom, and the gravitational force associated with gravity. These 4 forces have to be in balance for universe to exist. Scientists believe that if any one of these forces were even off by a fraction of 1%, the universe as we know it will not exist. So who continually maintains this balance? Someone must be doing that on an ongoing basis. Lord Vishnu maintains this balance for the 14 worlds created by Lord Brahma. Lord Vishnu is said to have had 10 Avatars or incarnations or manifestations in some scriptures and 24 in some. The 10 Avatars are more popular and we will stay with those during our course. We will not go into the details of each, but lets list them – Matsya (half/full body of fish), Kachchha or Kurma (body of tortoise), Varah (body of a boar), Nrusinh (half body of a lion), Vaman (born to Aditi, so a Dev, but a dwarf human form), Parashuram (born to one of Saptarishi – Rishi Jamdagni), Lord Ram, Lord Krishna, Lord Budhha, and Lord Kalki. Of these, first 5 were not in a complete human form. The first human form was with Parashuram, but it was called a partial manifestation or Anshavatar of Lord Vishnu. All these six avatars are manifestation of the Lord Vishnu of the trinity. We will look at others in little more details as we move forward. We established credibility of Matsya avatar as it is related to us – the human beings – the descendents of Manu. Kurma avatar, Varah avatar, Nrusinh avatar and Vaman avatar are more associated with Deities and demons. We have not found anything supporting yet. May be we will find it someday. However, there are evidences found for Lord Ram’s bridge to Lanka, Lord Krishna’s Dwarika, and Lord Buddha is also pretty well established. So based on that, we can safely say that other Avatars must also be true.

Coming to the cleanup or destruction, we saw some validity of things mentioned in Shiva puran, along the way. One of the things I wanted to touch upon was the blackholes. Earlier, blackholes were a myth. Then the physicists researched, and agreed of a supermassive blackhole at the center of every galaxy.

Now scientists believe that there are many blackholes in a galaxy and they are varying sizes, depending on how many stars they have eaten. A blackhole is formed when a massive star gets destroyed. Sometimes that star or the remains of the star after the explosion, collapse into something so dense that even light cannot escape it. It is believed that in our universe, there is one blackhole being formed every second. There are billions of galaxies and each has many stars exploding and forming blackholes. These blackholes then keep roaming in the galaxy eating more stars and planets on their way. May be, it is the power of destruction that we talked about. May be it is the effect of Lord Shiva and we have one for the 14 worlds. Since blackholes are of varying size, their cause might also be different. So blackholes are the effect and their cause might be different depending on their size. Once again, this is speculation since no accurate data is available on these things in the spiritual and scientific world to map it.

So last week, we talked about many polytheist and monotheist religions, and looked at the hierarchy under the trinity of Brahma-Vishnu-Shiva. This week, we supported some of the stories and incidents in the scripture with some real and some speculative theories and observations. Last week we also saw that there are limitations in the levels that we have looked at so far. Next week, we will transition in to Vairaj Purush, 24 elements, 3 Ahankars and Mahattva.

Lets pause here today. I ask for forgiveness of the sabha for any mistakes or shortcomings. Jai Swaminarayan to everyone.