



Do Future Events Depend on Us?

The Coming of The New Cycle

Carlos Cardoso Aveline, from Brazil¹

In this hectic beginning of the 21st century, sincere theosophists may ask themselves what is their responsibility with regard to the bulk of human karma.

As students of esoteric philosophy, they are the outer guardians of a sacred wisdom both ancient and modern. It is supposed that they do not study it solely for their own individual benefit – for, if they do so, failure is unavoidable from the start. In order to understand sacred wisdom, your goal must be benefitting mankind, and even this is not enough. HPB also taught that philosophical knowledge must be a living and creative process tested in daily life. You can't achieve great wisdom simply by repeating ideas contained in the best books available.

But if we have some degree of true altruism and a willingness to act – we may be entitled to face, in these days, an uncomfortable question:

“As our civilization confronts great and growing dangers and challenges of various kinds, in what sense should we feel responsible for its future? What is our actual responsibility?”

To answer such a question is no simple task. Yet there is at least one thing about which we can be sure: crises and opportunities are all around us. Each evening they are in the news. They are presented to us as part of our favourite TV shows. All over Africa, Europe, Asia and the Americas, floods, forest fires,

droughts, hurricanes and other similar events seem to prepare a global climatic change which can have drastic effects over the fate of our civilization. These hundreds of climatic events are shown by the media as if they were merely isolated facts, now happening by some strange sort of coincidence.

This is not true.

It is also not a coincidence that the signs of ethical and social decay in our civilization — including poverty, war and terrorist attacks — run parallel to deforestation, environmental pollution and climatic changes. Spirit and matter evolve together. Each time in History when man's greed made him destroy his natural environment, he himself had to pay the price for it.

Writing on the effects of deforestation in India, H. P. Blavatsky said in 1879:

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“We need only glance at the pages of History to see that the ruin and ultimate extinction of national power follow the extirpation of forests as surely as night follows day. Nature has provided the means for human development; and her laws can never be violated without disaster.”¹

Theosophists and ecologists both know that everything is interconnected. But we also see that having access to information is not the same as having knowledge. The difference between knowledge and fancy is that knowledge results in action, but fancy often does not.

In order to answer the question on our responsibility with regard to the fate of present civilization, we may have to start by examining a previous, also uncomfortable query:

“How much of *direct knowledge* we have about esoteric philosophy?”

The importance of it is that only direct knowledge is the source of a lasting sense of responsibility. An accurate, heartfelt perception of things results in a sense of ethics and an active intention to be useful. Perhaps it was to highlight the significance of this feeling of personal accountability that Thomas Taylor, the translator of Plato and the Neoplatonists, wrote:

*A little learning is a dangerous thing.
Drink deep, or taste not the PLATONIC
spring;
There shallow draughts intoxicate the brain,
And drinking largely, sobers us again.*²

¹ *The Theosophist*, Adyar, India, Volume I, November 1879, p. 42.

² *The Theosophist*, Adyar, India, Volume II, December 1880, p. 52.

Responsibility emerging from deep knowledge makes us be sober again — because it eventually leads us into both inner and outer action.

If students have a *natural and spontaneous* sense of duty to their sacred teachers and to teachings of esoteric philosophy, now may be the right time for a growing number of them to start thinking, in a calm and quiet way, about two questions:

- 1) How can we evaluate the present moment of our civilization, from the viewpoint of the doctrine of cycles?
- 2) What is the relationship between the emergence of a new cycle and the growing difficulties facing so many countries in the first decade of 21st century?

Perhaps we can obtain only a few fragments of the necessary answer — but this is absolutely no reason to give up. Patiently investigating the issue and sharing our efforts may be useful both for the Cause and for ourselves. Every aspirant must accept starting from fragments. He should remember that sooner or later intuition tends to come and help him to fill in the blanks. As time passes, Karma and those who know best will assist our efforts as much as we *gradually* come to deserve.

If we are to investigate the doctrine of the cycles as it relates to the present moment in human history, there is something we must remember from the very start. It is basically useless to try to establish the exact moment when this or that great event should occur. Changes of cycles do not take place according to our own superficial and linear notions of time. In HPB’s text *Conversations on Occultism*, a student asks:

“Is it wise to inquire as to the periods when the cycle changes, and to

speculate on the great astronomical or other changes that herald a turn?"

And a Sage answers:

"It is not. There is an old saying that the gods are jealous about these things, not wishing mortals to know them. We may analyse the age, but it is better not to attempt to fix the hour of a change of cycle. Besides that, you will be unable to settle it, because a cycle does not begin on a day or year clear of any other cycle; they interblend, so that, although the wheel of one period is still turning, the initial point of another has already arrived."¹

As to the coming of the next cycle, there is a well-known paragraph written by H. P. B. and which Henry Olcott says she took from dictation from her teacher.² I quote from *Five Years of Theosophy*:

"We are at the end of a cycle – geological and other – and at the beginning of another. Cataclysm is to follow cataclysm. The pent-up forces are bursting out in many quarters; and not only will men be swallowed up or slain by thousands, "new" land appear and "old" subside, volcanic eruptions and tidal waves appal; but secrets of an unsuspected past will be uncovered to the dismay of Western theorists and the humiliation of an imperious science. This drifting ship, if watched, may be seen to ground upon the upheaved vestiges of ancient civilizations, and fall to pieces. We are not emulous of the prophet's honours: but still, let this stand as a prophecy."³

¹ *H. P. Blavatsky Collected Writings*, Volume IX (1888), TPH, USA, 1986, p. 101.

² *Old Diary Leaves*, Second Series, H. S. Olcott, TPH, 1974, p. 466.

³ This belongs to the final paragraph of the text entitled *Sakya Muni's Place in History*. See *Five*

Cataclysm is to follow cataclysm, she wrote in 1883. As we know that different cycles interblend during transition, we can easily infer that this prophecy did not refer to a couple of decades only. Let's see, then — from the viewpoint of the best available scientific surveys – what is the evaluation made in 2005 about the geological and climate-related events which took place in the last century or so.

This serves to illustrate the fact that, in spite of all possible obstacles, esoteric philosophy must keep a living dialogue with science and scientists. As one of the Mahatmas wrote: "Modern science is our best ally".⁴ Conventional science frequently attacks esoteric wisdom, yet the sentence of the Master remains true.

The widely respected *WorldWatch Institute*, in Washington, uses to make studies about present world events from the viewpoint of social ethics and ecological sustainability. In the January/February 2005 edition of its magazine, the Institute published an article called *Rethinking Security – a Different Role for the Military*". Written by Gregory D. Foster, a professor at the National Defense University in Washington, the text compares two of the main problems now confronting our civilization: terrorism and environmental crisis.

A leading U.S. military expert, Professor Foster says most governments underestimates the importance of ecological issues. Then he explains:

"That environmental matters should be of such little overall public concern is a reflection of how limited and

Years of Theosophy, The Theosophy Co., Los Angeles, 1980, p. 388.

⁴ *The Mahatma Letters to A. P. Sinnett*, T.U.P., Pasadena, 1992, Letter XI, p. 63.

unstrategic our thinking about security actually is. (...) Look, for instance, at comparative fatalities from the highly credible threat of terrorism and the highly dubious threat of natural disasters. Since 1968, there have been 19,114 incidents of terrorism worldwide, resulting in a total of 23,961 deaths and 62,502 associated injuries. However disturbing these figures may be, they pale in comparison to those running from natural disasters.”

And he proceeds:

“The average *annual* death toll over the past century due to drought, famine, floods, windstorms, temperature extremes, wave surges, and wildfires has been 243,577. Thus, even if we ignore earthquakes, volcanic eruptions, and disease epidemics, and don’t count injuries or other harmful effects (such as homelessness), three times as many people die each year on average in natural disasters that could be linked to – and exacerbated by – climate change as have been killed and injured together in 37 years of terrorist incidents. And lest the use of a century-long average seem skewed, consider that just since 1990, there has been more than 207,000 fatalities from the foregoing types of disasters in South Asia alone, more than 23,000 in Central America and Mexico, and tens of thousands more in other parts of the world.”¹

So the prophecy written down by HPB in 1883 has proved entirely correct, if we compare it with present data available from scientific sources.

Professor Foster’s article in the *Worldwatch* magazine is not an isolated fact. One year before it, Sir David King,

¹ *WorldWatch magazine*, Worldwatch Institute, Washington, vol. 18, no. 1, January February 2005, p. 43. The whole article is most useful for a theosophical evaluation of mankind’s present moment.

chief science advisor to British Prime Minister Tony Blair, had written a controversial article published in the January 9, 2004 edition of *Science* magazine, saying that climate change was “the most severe problem that we are facing today – more serious even than the threat of terrorism”. Sir David King said that the U.S. government was “failing to take up the challenge of global warming”.²

In February 2004, the magazines *The Observer*, in Great Britain, and *Fortune*, in the U.S.A., revealed some of the main conclusions of a scientific Report made by the Pentagon to the President George W. Bush. The report foresaw the possibility of an environmental, economical, social and military worldwide disorder, between 2010 and 2015, with serious problems starting from 2007. (The popular motion picture *The Day After Tomorrow* was based on some of the main hypothesis ecologists and scientists contemplate now.)

Facts are facts: leading scientists and experts are having to accept an obvious reality. Climatic patterns and rhythms get more and more unpredictable the world over. In December 2004 we saw the Asian tsunami with thousands of victims in many different countries. The whole planet earth was slightly shaken by that incident, suggesting that greater events of the kind could change the position of the planetary axis, a cyclic event discussed in *The Secret Doctrine*.

In August 2005 the hurricane Katrina killed many and caused a great devastation in the USA.

² Quoted by professor Foster in *Worldwatch magazine*, January/February 2005, p. 38.

Thousands of less spectacular events happen everyday with huge economical and social costs.

Does all this have any relationship to the change of cycle? Yes. We can be reasonably sure about that. Future events often cast their shadow over the present, and a sacred Teacher wrote:

“The approach of every new ‘obscuration’ is always signalled by cataclysms — of either fire or water”.¹

It is clear by now that the “pent-up forces” of which HPB wrote in her 1883 prophecy are not only “bursting out in many quarters.” They are accelerating their pace, too. The fact that we are facing so many different facts at the outer level, all taking place at the same time, makes us think about the relationship between the change of cycle and the speeding up of events.

And we may remember these words from an Adept, published in the *Mahatma Letters*:

“Less than two centuries prior to the arrival of Cortez there was a great ‘rush’ towards progress among the *sub-races* of Peru and Mexico as there is now in Europe and the U.S.A. Their sub-race ended in total annihilation through causes generated by itself ; so will yours at the end of its cycle.”²

Less than two centuries, indeed.

As we have seen before, inner and outer events are tightly connected and can’t be separated. The ethical, social and geological crises of our time are all part of the same process. Geological and cosmic cycles are linked in a direct way

¹ *The Mahatma Letters to A. P. Sinnett*, T.U.P., Letter XXIII-B, p. 156.

² *The Mahatma Letters to A. P. Sinnett*, T.U.P., Pasadena, USA, 1992, Letter XXIII-B, p. 149.

to the subjective tides going up and downwards within the souls of living beings.

William Q. Judge wrote:

“In regard to great cataclysms occurring at the beginning and ending of great cycles, the main laws governing the effects are those of Karma and Reembodiment, or Reincarnation, proceeding under cyclic rule. Not only is man governed by these laws, but every atom of matter as well, and the mass of matter is constantly undergoing a change at the same time with man.”³

We also know, on the other hand, that inner processes are more influential than the physical ones. *The Universe is governed from within*, as the 20th century physicist Fred Hoyle wrote in his book *The Intelligent Universe*.

Therefore, upon examining the destiny of globes, Judge says:

“We do not admit that the ending of the force is the withdrawal by a God of his protection, nor the sudden propulsion by him of another force against the globe, but that the force at work and determining the great cycle is that of man himself considered as a spiritual being (...).”⁴

And that which applies to greater cycles is also true of smaller ones.

So we can see that the higher and lower tides of human ethics, justice and solidarity have a significant degree of influence on the fate of civilizations. And that becomes most clear when we see the *Puranic Prophecy* as registered by H.P.B. in the pages of *The Secret Doctrine*:

³ *The Ocean of Theosophy*, William Judge, Theosophy Co., Los Angeles, 1987, see p. 123.

⁴ *The Ocean of Theosophy*, William Judge, p. 118.

“There will be contemporary monarchs, reigning over the earth – kings of churlish spirit, violent temper, and ever addicted to falsehood and wickedness. They will inflict death on women, children, and cows (...) they will be of unlimited power, their lives will be short, their desires insatiable. (...) Property alone will confer rank; wealth will be the only source of devotion; passion will be the only bond of union between the sexes; falsehood will be the only means of success in litigation, and women will be objects merely of sensual gratification... until the human race approaches its annihilation (*pralaya*) When the close of the of the Kali age shall be nigh, a portion of that divine being which exists, of its own spiritual nature . . . shall descend on Earth . . . (*Kalki avatar*) (.....) He will re-establish righteousness on earth and the minds of those who live at the end of Kali Yuga shall be awakened and become as pellucid as crystal.”

Again, we can't refer these words automatically to some far-distant future – because we know that **greater cycles** are anticipated by **minor cycles**.

Immediately below this transcription of the *puranic prophecy*, HPB wrote, not without an irony:

“Whether right or wrong with regard to the latter prophecy, the *blessings* of Kali Yuga are well described, and fit in admirably even with that which one sees and hears in Europe and other civilized and Christian lands in full XIXth, and at the dawn of XXth century of our great era of ENLIGHTENMENT.”¹

Since inner and outer events are always connected, it becomes easier for us to understand some aspects of the karmic and ethical responsibility belonging to the theosophical movement

— and to each of its members — as to the fate of our present civilization. HPB didn't refuse to write about that. In at least two texts, she acknowledged the existence of a direct link between the level of loyalty to Truth in the theosophical movement – and the destiny of mankind in the years after her lifetime.

In the article **Our Cycle and the Next**, HPB quotes an optimistic prophecy ascribed to the French writer Victor Hugo. The author of *Les Misérables* wrote:

“The sixteenth century will be known as the age of painters, the seventeenth will be termed the age of the writers, the eighteenth the age of philosophers, the nineteenth the age of apostles and prophets. (.....) In the twentieth, war will be dead, the scaffold will be dead, animosity will be dead, but man will live. For all there will be but one country – that country the whole earth; for all, there will be but one hope – that hope the whole heaven.”

Below this quotation, HPB strongly refers to the occult link between Theosophy and the fate of our civilization:

“If Theosophy prevailing in the struggle, its all-embracing philosophy strikes deep root into the minds and hearts of men, if its Doctrines of Reincarnation and Karma, in other words, of Hope and Responsibility, find a home in the lives of next generations, then, indeed, will dawn the day of joy and gladness for all who now suffer and are outcast. For real Theosophy is ALTRUISM, and we cannot repeat it too often. It is brotherly love, mutual help, unswerving devotion to Truth. If once men but do realize that in these alone can true happiness be found, and never in wealth, possessions, or any selfish gratification, then the dark clouds will roll away, and a new humanity will be born upon earth. Then the Golden Age will be there, indeed. But if not, then the

¹ *The Secret Doctrine*, H. P. Blavatsky, The Theosophy Co., Los Angeles, 1982, volume I, pp. 377-378.

storm will burst, and our boasted western civilization and enlightenment will sink in such a sea of horror that its parallel History has never yet recorded.”¹

The Key to Theosophy is another text in which HPB links the future of civilization to the work of the theosophical movement. She writes in the final paragraph of that book:

“Tell me if I am too sanguine when I say that if the Theosophical Society survives and lives true to its mission, to its original impulses through the next hundred years – tell me, I say, if I go too far in asserting that earth will be a heaven in the twenty-first century in comparison with what it is now!”²

Less than two centuries have passed since these words were written.

At the first decade of the 21st century, there remains a collective nucleus of deep, heartfelt and active loyalty to Universal Truth and to Altruism — that is, to Theosophy. It is spread over several countries and languages. *How big* is that nucleus is another question, and this is perhaps of secondary importance. The key factor from the viewpoint of esoteric philosophy is the actual existence of this *subtle Territory of Truth and Compassion*, which remains as a living process inside the wider, common karma of mankind.

Big or small, this *umbrella of brotherhood* is directly connected — as an *active factor* at a *causal level* — to the destiny of our civilization in the years and decades to come. We may have more challenges and opportunities in front of us than we can easily see and identify. As Karma accelerates, we are invited to do

¹ *H. P. Blavatsky Collected Writings*, Volume XI (1889), TPH, USA, 1973, p. 202.

² *The Key to Theosophy*, H.P. Blavatsky, Theosophy Co., India, 1987, p. 305.

what we can to improve such a nucleus of broad *mutual understanding and solidarity*.

We do not have an entirely clear picture of outer events, present and future. And that is not expected of us. But we can open our eyes and our hearts – and TRY to help.

Once we accept our anonymous share of personal responsibility for world events, that may be but a natural thing to do.



*Editorial*³

RECKONING IN NEW ORLEANS

BY MARIANNE WILLIAMSON

Something very important is happening here — something more than simply a hurricane, or the suffering of thousands who were neglected by their government during a time of great need. Most worldly occurrences reflect deeper truths. What is happening is a gigantic reckoning, as Americans are forced to come to terms with how very, very naked is the Emperor who we thought had such incredible clothes.

We are raised in the United States of America to believe that our government is the strongest in the world, that as Americans we are basically protected, and that our country is basically good. It is cognitive dissonance for us to be confronted with evidence to the contrary, and yet such evidence has been piling up fast and furiously during

³ Thanks to Linda Smith for sending us the above by Marianne Wilson, and also having Garrett Riegg send us his response. — Ed., A.T.

this odd and potentially catastrophic phase of American history

There is nothing strong about rushing into a unilateral war based on faulty intelligence, thereby squandering the resources necessary with which to take care of your own people; there is nothing protective about a government that apparently didn't monitor events on the ground in New Orleans any better - in fact, less well! - than the average viewer of CNN; and there is nothing good about taking care of the rich at the expense of the poor. If it took a Level 5 hurricane and the huge suffering of thousands to bring those facts to light, then at least it can be said that there is value in this horror. If enough Americans are beginning to wake up and face the awful fact that our country's basic functioning has become infected by a soulless sensibility, then perhaps the suffering on the Gulf Coast will not have been in vain.

Regarding the abysmal response of our government to the hurricane's aftermath, there is a lot of talk right now about accountability. Some argue we should have the discussion today, while others argue that the discussion should wait for a more propitious time. But there is a danger in waiting, for a governmental status quo has talent for co-opting criticism as long as it can buy enough time. Passions cool; memories become revised and faded. Six months after a disaster, the government appoints an independent commission to find out what really happened but by the time the commission releases its final report there is not much sense that too many people are listening. The people are exhausted by then; they're trying their best to move on.

And the status quo knows this; that's part of its game. Do whatever you want; act horrified and remorseful for a minute whenever too much suffering results as a part of your actions; then put off the

accountability conversation until people are too tired to care anymore. This is not a new pattern in America. What might be new - what I sense might be happening - is that people are waking up to it now. And as soon as we wake up, then the pattern will end.

Abraham Lincoln said there is not too much evil any American government can perpetrate, as long as the people remain vigilant. He was referring to the fact that we have federal elections every two years, through which we can replace the entirety of the House of Representatives and one-third of the U.S. Senate. The ultimate accountability conversation is written into the U.S. Constitution; it is called elections. At this particular juncture, that means the mid-term elections of 2006.

The president prides himself on running the government like a well-run business. That of course makes him the chief executive. And if the government failed, then he failed.

Fool us once, and maybe their tricks were dirty; fool us twice, maybe their PR was too good; fool us now, and perhaps we just deserve to be fooled. From war to hurricanes, oh America, the alarm bells of needless human suffering are going off everywhere. A nation who refuses to wake up at this point is in a dangerous slumber. The nightmares are upon us now. They will remain until our eyes are opened and we have awakened to the truth.



*Editorial***ONE MAN'S REACTION TO
KATRINA AND MARIANNE
WILLIAMSON**

Linda,

Thanks for that email of Marianne Williamson's reflections. I know Marianne expresses the deep feelings of many disaffected citizens. I've always been interested in her books, tapes and lectures because she is a great promoter of *A Course In Miracles*, which next to theosophy has affected me the most. Her forays into politics in the last few years interested me as a former political science major. I share her ideals but not her perception of the world or what will work economically or socially. May I balance her perspective with my own?

If you share her conclusions, then her harsh criticism is probably reassuring. But as a lawyer I see no evidence; no facts; no logic. It's all generalities and platitudes. This does not advance a dialogue of truth or trust or love. It's mostly an attack even if it sounds dignified and "wise". It's full of the "blame" and "judgments" that *A Course In Miracles* warns us not to make.

Every government, every company, every person makes big mistakes. But what are the alternatives?

Watching ROME on HBO, I am shocked by the cruelty and corruption of that empire. I am grateful for our government (imperfect as it may be), our system, our progress. Yes we could do better but pessimism and denigration are not enlightening. I suggest that Brotherhood and progress come from sharing the positive and forgiving each other.

I would ask Marianne: Is there no vision of optimism or joy?

Let's first count our blessings: like our unemployment rate — close to the lowest of the century; the lack of any terrorism in our country for 4 years; the relatively good handling of 3 other hurricanes and their aftermaths; improving student scores; ever more college students; progress today with N. Korea; no sex scandal with subordinate employees; no perjury indictments or convictions, etc. I notice that the spate of stories of corporate fraud seemed to end two years ago. Justice is slow but sure. Today two more corrupt executives received 25 year sentences. We are learning how to be vigilant.

If we don't have national health care, every state has federally funded Medi-Cal for poor people and I've never heard of a hospital turning people down for urgent care. (they just close their ER's to avoid bankruptcy due to artificially low Medi-Cal rates.) The average family under the poverty line owns a car and two TVs. Section 8 pays over 80% of the rent for some of my tenants. Over 40% of former welfare recipients are now working (and proud of it). If incomes have not gone up, most everyone with a house has seen an increase in equity (wealth) often equal to their wage or salary. And many of us are donating some of that money to great causes.

The big picture is amazing. No depression for 70 years; and barely a recession for 25 years! Someone said a billion people joined the middle class, or at least tripled their incomes in the last 30 years. Eastern Europe is free; nuclear war is much less likely. What a relief! We are so fortunate.

\$3 per gallon gas is still less than half of the cost in Europe. Gas is still a smaller cost than insurance or depreciation on most cars. The higher the price, the more we'll conserve for future generations. A blessing in disguise.

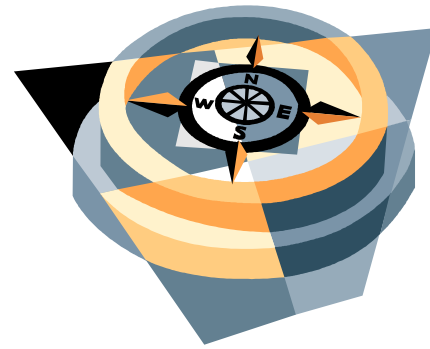
Yes the Iraq war is terrible, but I see it as a quasi-regional civil war. True, we triggered it, but it could have started on its own in a decade or two. The powerful Sunni Minority is struggling to get back to power. Do we really want to give in to blatant tyranny by a dedicated, murderous religious minority? Compared to Korea, Vietnam or the World Wars, the Iraq conflict is tiny — about 5% of the casualties of those wars, tho' it's probably worse for the civilians. I cry for the injured and dead, but I remember that most (150) other countries are at peace.

Putting aside political bias, our latest nominee to the Supreme Court is objectively one of the best qualified nominees in history. That's a plus.

I think Mme. Blavatsky said that the 21st century would be like heaven compared to the 20th. I think it is working out that way. Imagine Katrina a 100 years ago, before FEMA existed, before TV, before helicopters and cars and the internet. Maybe 100,000 would have died almost unnoticed — rather than 1,000. Not perfect but much closer to it. I'm grateful to have a place to put up two Katrina victims — 2,000 miles away from their lost home. In history's broad sweep, that's a miracle!

Sorry to go on so long. It's rare that we theosophists talk politics. There's a good reason for that. Hope we haven't opened Pandora's box.

Garrett Riegg
Oakland, CA



POINT OUT THE WAY

LXIX

Chapter XVII

I — The Psychic World in Everyday Life.

Question: — Isn't it a fact that the psychic world is the realm of angeles and devils?

Answer: — What is meant by the psychic world? We might think of it from this point of view: There are beings which incarnated — that is, took physical forms — in matter as we know it, including our astral matter; and there is a whole stream of evolution which will never know matter as we know matter during our period of evolution. It is a world of perfectly real beings, but they are out of embodiment during our period of evolution — they are in the psychic world, pure and simple, a world of *discarnate* beings.

Every time we die we go into that realm, not as natives of it, but as foreigners, as voyagers; and we come out of it again to the earth. The psychic world is an evolution quite outside of any that is connected with physical matter. We contact this world when we go to Devachan.

Question: — Mr. Judge would have been right, then, in saying that the psychic world is a realm of devils and angels?

Answer: — They appear to *us* as devils and angels. We are influenced by them. We are aware while we are awake; no matter what state it is that we are awake in, we are conscious of that state. Here, we are in waking consciousness. But the psychic world interpenetrates ours, and we are influenced by the beings of that world, and they are influenced by us. We mistake the nature of the influence, however, and when in abnormal states we get glimpses of some of those beings, we define them in terms of earth-life, in terms of earth-religion, and we call them angels and devils and gods.

It would be worth while to read, for example, pp. 605-608 in the First Volume of *The Secret Doctrine*, about *other worlds*. How many have ever seen the fiery lives? Everyone could. There you are looking at “Devachanees.” One who is out in clear air and looks away from the sun, will see that the whole air is luminous with what look like little silver globules, globules of mercury or quicksilver. They don’t belong to this plane at all, but, in a certain light and in a certain purity of the air, they can be seen — in exactly the same way that, say, molecules can be seen through a high-powered laboratory microscope. By means of light reflections we can see images; and so we can see these lives. They are denizens of the psychic world, of a million different kinds, but they all look to us like globules. Were we able to use our inner sight, we could tell what kind of beings they are, and what their state is.

Do you know that such is the limitation of our physical sight that it is almost impossible for the average man to focus his sight at all, unless he has an object to focus on? If you want to try an experiment, see if you can look at a dime in the air six feet away from you—the dime existing only in your imagination. In other words, can you focus your sight on

a point in space? If you could, you would soon find out that space is full of something. But the truth is, we are unable to focus our sight, except upon a gross physical object. Whenever we are able to focus our sight mentally, we shall discuss that there is another kind of vision. All of these things are here for us to learn about; they are a subject for thought, a legitimate subject of experimentation.

Question: — It has been said that Devachan is a subjective state. Does the subjective” mean that we ourselves project the pictures that we see there, or do we actually contact outside entities?

Answer: — We are in the psychic world just as an egg is in the physical world: the egg does not contact anybody or anything—the chicken has to hatch first. It is only when the life in that egg has become a chicken that it has conscious contact here. So when we go into Devachan we go back to the highest state; we are in the psychic world, but we are not in contact with the beings of that world. We are mineral matter there, or vegetable matter there — whatever kind of matter we want to call it—we are in the seed state. One of the Masters wrote that the only human beings who could remain awake in that world are either adepts or sorcerers.

Our experiences in that world are subjective; that is, they are confined to ourselves alone. Undoubtedly, the life in an egg or a seed is undergoing some kind of experience, but that experience is only internal to itself. It is here in the world, but it has no consciousness of the world it is in.

When we die and go into the astral or psychic world, there is where we “are” in the physical sense. But in the conscious sense we know nothing whatever about it. We are living in worlds of our own imagination, just as it

is conceivable — perhaps more easily conceivable — to consider that as we sit right here, each one of us is in an inner world which he calls his mind. So long as we are thinking in that mind, we are not in contact with anyone else. Why not? Because we are not awake on the plane of mind. We do not rise beyond the psychic state of mind. If we ever do, once we are awake on the plane of mind, the phrase in the First chapter — that the Adepts have power over space, time, mind and matter — will become something else besides a phrase.

Question: — Is it wise for one who is awake to try to see on the psychic plane?

Answer: — No. Why not? Because our ideas of the psychic plane are hallucinations, and so anyone who tries to see on the psychic plane, in the sense in which we use the word, is simply seeking to become hallucinated. There are plenty of us who are off-center; that is, we see things in another sense altogether than the ordinary one. Whenever we can think of another world, another plane of matter, in just as matter-of-fact terms as we think of this plane of matter, then we can begin experimenting — but who can?

Suppose a ghost walked out here and became visible. There are plenty of ghosts in this room — the atmosphere is full of denizens of the psychic and astral world. Suppose they suddenly became visible. There is nothing more unnatural about them than there is about our physical visibility. Nobody gets off his balance because he glances around the room and sees a hundred physical bodies. But everybody entertains a semi-miraculous, semi-religious notion of the psychic world. And so what they do in the way of experimentation is ruinous. Take a chemist who finds out that ferments produce a certain liquid and that the name of the liquid is alcohol. He begins to study the nature of alcohol and

fermentation — but that is quite a different thing from putting himself outside of a quart of liquor. The modern method of psychic investigation is psychic intoxication.

The real investigation is quite another story. If we examined our own minds, we should find there our proper world of psychic examination. We don't do it, yet it is through our mind and not through our body that we come in conscious contact with the psychic world.

In line with this kind of investigation of the psychic world, you may wish to note a cross-reference to p.158 where Mr. Judge speaks of "spirits not favoured by spiritualism." (p. 149 Am. Ed.) The article by Mr. Judge, entitled "About 'Spirit' Materializations," tells about Jim Nolan and his "spirit messages," explaining various mediumistic phenomena. (See The Theosophical Movement XI, p. 49)

Why are the ethics so greatly emphasized in the teachings? If we apply our ethics, then it is certain that when we begin to study the astral world we will apply our ethics there, and when we begin to study the psychic world, we will apply our ethics there. Basically, it means that when we begin to study our own lives we will apply our ethics.

Here is a man who is feeling happy; then somebody says something to him, looks at him crossly, and instantly the man's psychic balance, his psychic centre of gravity, is completely upset—he has had a terrible psychic experience, and hasn't sense enough to know it.

The man whose psychic centre of gravity is upset because the money he had expected to make he has lost, because the friend he had expected would be happy at seeing him has turned into an enemy, needs to apply his ethics to those

experiences to see what is the matter with his psychic principle, and what he has been doing with himself that he should be upset at every passing whim of circumstance. This is the kind of psychic investigation which these two chapters are intended to lead us to think about.

There is nothing any more wrong in studying the psychic side of nature than in studying the physical, but most of us lean over backwards. What is our trouble? It is precisely because we are not indulging in psychic investigation; we are not studying the operations of our own minds, of our own feelings. Every day, anybody can push us into the depths of Kama Loka, and we haven't sense enough to know it. Almost any body can raise us into the seventh heaven, and when we are in the seventh heaven, we don't know that it is Devachan. If we are happy, we are completely swept off our feet. We don't say, "This is Devachan; I am in the upper regions of the psychic world." Then, when we have the blues and are despondent, when we have lost our job, when we need all our faith and courage, we have none. We don't say, "Why, hello, I have slipped into Kama Loka; I am mired in Avitchi." Yet that's the fact.

If we can't recognize these psychic states while we are alive in the body, while we are awake, we become totally their victim after death. Have we ever thought that Devachan and Kama Loka are wholly psychic states, and that, whether he is in the one or the other, the man is wholly the victim of those states? That's the fact. That's the kind of psychic study we need to think about—not the kind the so-called yogis teach. Ethics doesn't consist of holding our breath; and studying the psychic world does not consist in getting astrally intoxicated.

Questio: — Since we are part of the whole, is the real man — in any state or condition, or in any position of life — ever independent?

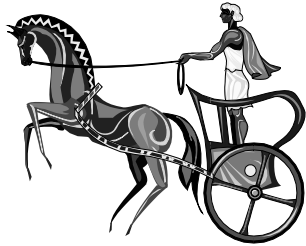
Answer: — Don't you think that depends upon the meaning that we give to the word "independent"? If we look around, we shall find this, that and the other one saying, "Thank Heaven, I am independent." He has had a job and now he is in business for himself, perhaps. Independence, we think, means irresponsibility — I can do what I please and nobody can stop me." No being in the universe is ever independent in that sense. Independence means the knowledge of Nature and how to deal with it. A truly independent being is the one who has the fullest recognition of his responsibility to the whole of Nature and who acts in accordance with that recognition. If we get rid of the idea of irresponsibility as connected with the word "independence," we can see that the Masters of Wisdom are the only independent beings there are, because they alone of all the beings in manifestation recognize and live up to their responsibility to the whole, being consciously a part of the whole.

Question: — Mr. Judge once called the Theosophical Movement "that Universal Lodge of Free and Independent Theosophists which embraces every friend of of the human race." Just what is meant by "Free and Independent Theosophists"?

Answer: — Those who are not bound by the prejudices of race, creed, sect, condition and organization. Those who know that "a man's a man for all that" — a man's a man, regardless of race, creed, sect and condition. Such are the free and independent Theosophists.

[TO BE CONTINUED]

[Next insertion will be the conclusion of Mr. Gar-
rigues Introductory Address with which the class-
began.]



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DNYANESHVARI

LXVIII

[The *Dnyaneshvari* is mentioned many times by Madame Blavatsky, always in glowing terms. The following rendition is extracted from Manu Subedar's translation. The great Sage, Dnaneshwara Maharaj sang this work to his people when he was quite young. He did it in their native language, Marathi, about 700 years ago. It is his commentary on the *Bhagavad-Gita*.]

CHAPTER SIXTEEN

[continued from October]

Krishna says to Arjuna: Beginning from the highest, human beings should do their respective duties in their respective stations. They should offer worship, to whatever deity they want, in a proper and respectful form. The priest might do the six-fold worship, which he has been taught and the common man might show reverence for such a priest. Both of them would secure equal merit. According to one's condition and resources all the worship, which may be offered, should be, however, offered without desire of fruits.

The priest might do the six-fold worship that he has been taught, and the common man might show reverence for such a priest. Both of them would secure

equal merit. According to one's condition and resources all the worship that may be offered, should be, however, offered without desire of fruits. Pursuing the tenets of the Shastras, the performance of Yadna in this manner, is meritorious when one does not allow the feeling to enter one's mind that "I am doing this."

The next attribute is the "study of Self." Just as in order to rebound, a ball has to be thrown and a seed is sown with due attention to the requirements of agriculture, a lamp is taken in hand to light the way in darkness, water is put at the root of a tree in order that the branches and fruits might grow, and just as the mirror is kept clean over and over again in order that one might see his image more properly, so one should study the teaching of the Upanishads in order that the deity described in the Vedas might be reached. In this way, the Upanishads serve their purpose to the very learned, whereas the ordinary incantations and recitations serve the purpose of the ordinary men. This is called the study of the Self.

I will now describe "asceticism" to you. What is given away in charity is only the good. The rest of the expenditure is useless. Just as trees dry up after they have given fruits, incense emits scent while it is burning, gold loses its luster while it is being purified, and the dark half of the moon the size of the moon diminishes, similarly all exertions made by the vital breath, the body and the senses for the attainment of Brahman are to be regarded as asceticism. There are other ways of asceticism. The constant thought of the awakened soul to keep separate the physical body from one's true self is also asceticism. The mind is then turned to the soul and the intelligence turns away from objects of sense. Activity in thoughts of Self is the second and higher form of asceticism.

Gentility towards all living beings is necessary just as the milk of the mother is for the benefit of the child (without reservation) life and vitality activate everything in the universe (without distinction).

So conducting oneself in body, speech and thought as to contribute to the happiness of the world is true Ahimsa (non-violence). The Lotus is not harsh, yet it penetrates the water. Light is hot, yet the light of the moon is cool. That cannot be described as medicine, which the moment it is employed destroys a malady and which is also not unpleasant to taste. Water, which is so soft that it does not hurt the eyeballs when washed with it, can also cut down mountains from which it flows. Speech should be, therefore, as sharp as steel when it is employed for the destruction of doubt, but it should be more that sweet to the ear. That which one would be tempted to hear, and which when heard would lead on account of its truth to the attainment of Brahman, that which does not mislead anybody and, while being correct does not hurt anyone, is "truth." The music of the hunter, though sweet, is harmful to the deer. Fire is very helpful, but if you trifle with it, you will be burnt. That word, which is attractive to the ear but the meaning will break the heart, cannot be commended. It is satanic. Speech must be like that of the mother who even when she speaks in great anger, entertains unbounded love in her heart, softer than the flowers. Speech must be, therefore, sweet to the hearing, beneficial in results and unmanipulated. This is called "truth." This is called the attribute of "truthfulness."

The quality of "non-anger" is that in which anger does not arise in spite of numerous expressions being used, which would ordinarily arouse anger. As an animal when once dead does not come to life, if an enormous amount of water is

sprinkled there be no sprouting from a stone, just as rice water, if churned would not produce butter, just as the cast off skin of a snake if trampled on would never turn back to bite, just as a parrot gets no sexual feeling even if he has opportunities of observing the form of a lovely woman and just as fire cannot emerge no matter what quantity of butter is thrown on the ashes. Thus the quality of non-anger is different in kind, not in degree.

[TO BE CONTINUED]

HPB DEFENSE FUND REPORT¹



\$10,000.00 FUND RAISING EFFORT FOR PUBLISHING AN AUTHENTIC VOLUME I OF HPB's Letters.

Cumulative gifts as of September 21, 2005

ER	500.00
Anonymous	50.00
DLJ	50.00
EPB	200.00
MRJ	50.00
DLJ	100.00
RD	250.00
Anonymous	50.00
PHX	500.00
Anonymous	20.00
Anonymous	20.00
Anonymous	500.00
RD	500.00
GR	1,248.00
CR	50.00
EPB	300.00
Anonymous	20.00
James & Sally Colbert	50.00
Anonymous	100.00
Anonymous	25.00
APGr	500.00

¹ We apologize. You were promised a thermometer each month, but we discovered a learning disability in that department. Fund stands at 51+% — Ed., A.T.

DB 50.00
TOTAL AS OF September 21, 2005 5,133.00

The HPB Defense Fund is specifically dedicated to the publication of an authentic Volume I of Madame Blavatsky's letters. The proposed volume will have the fraudulent letters in the current Adyar edition removed and also take note of other authors who follow the practice of mixing lies side by side with truth as if they were *equally relevant*. It is our intent to equip the student and inquirer with eyes to *discriminate* the authentic from the fraudulent, the clean from the corrupt.

A good companion volume for a historical overview of the life of Madame Blavatsky. Is already in print: *The Extraordinary Life and Influence of Helena Blavatsky.*" (600+ pages). This volume is by far the most readable and best documented work available. — ED., A.T.¹

"She has no need of any man's praise; but even she has need of Justice."
William Q. Judge



Correspondence

False Theosophy and Academics Do Scholars Circulate Libels?

Dear Editor,

Congratulations for having published the text *Judgement, Intuition and Psychic Entities* in your edition dated October 17th, 2005.

It helps us to understand how it could be possible that people well-acquainted with theosophical literature like John Algeo and

¹ It is offered at a discount to subscribers: \$20 for the hardback version; \$15 for the softback; and is also available online at www.theosociety.org/pasadena/tup/-onl.htm

Daniel Caldwell would start publishing collections of libels against HPB, depicting her as a mean, false and bad person. They did this with a remarkable ease of manners, as if circulating *obvious lies* against HPB were perfectly acceptable in theosophical circles. In fact, it may be a form of jesuitry, possibly unconscious — and it constitutes a dangerous test for the loyalty of the theosophical movement to Truth and to its main Founder.

An important text indeed, the one you published. Yet there is one thing that I would like to add to such an excellent approach to the problem.

If anyone is to think that John Algeo has acted in such a manner because he has a past of academical activities, one is certainly wrong.

One does not need to know much about universities to perceive that they are **not** in the business of publishing libels against great people who lived in the past.

University and academical life cannot be an excuse, therefore, for publishing criminal lies against HPB, William Judge or other important thinkers.

Of course, every theosophist can see the limits and shortcomings of modern academical life. A long time ago, the great writer Mark Twain had strong reasons to say:

"I never allowed school to interfere with my studies".

The Irish thinker George Bernard Shaw confessed, though:

"At a certain moment, I had to interrupt my education to enter University".

Referring to the pedagogical methods based on examinations, Albert Einstein said:

"Most teachers lose their time asking questions to discover that which the student *doesn't* know, while the true art [of education] consists in discovering that which the student *knows*, or is *able to know*".² Thus, Einstein adopted the

² *The Quotable Einstein*, Brazilian edition, *Assim Falou Einstein*, Ed. Civilização Brasileira, RJ, 1998, 258 pp., see p. 63.

platonian view of education, according to which, knowledge is fundamentally within, not outside, the learner. Unfortunately, many teachers ignore that.

It is all true: Universities have a lot to learn. Yet, save for a few exceptions, academical scholars and editors are basically honest people. They never publish or teach what they *know* to be false.

There is a wide difference, then, between *academic blindness* and a conscious *intellectual falsehood* — or jesuitry — however clever and disguised in academical language. I will not repeat here the lies that John Algeo published in his illegitimate volume *The Letters of H.P. Blavatsky* (TPH, Wheaton, 2003), but students who have the time and the stomach to read it should examine them in full to see whether such libels can be tolerated by one who has respect for HPB and for Truth.¹

What is the significance of remembering that there is no academical support or excuse for the publishing of false information or personal libels against great thinkers of humanity? It is in the fact that Universities deserve our respect. In the long run modern science — and History is part of it — is an *ally* to esoteric philosophy and occult science, as we can see clearly stated in the *Mahatma Letters*.

As to modern exact science, for instance — which depends very much on academic circles — we have some interesting words in the *Great Master's Letter*, a text consisting of a report, made by one of the Mahatmas, about the Chohan's (the Great Master's) view on the Theosophical movement.

¹ I recommend, for instance, Letters 7, 11, 12, 17, 33, 37, 45, 53, 54, 55, 60, 61, 69, 70, 72, 76, 85, 90 and 94, which are among the forged documents published as authentic.

The first paragraph of the document says:

“The doctrine we promulgate being the only true one, must — supported by such evidence as we are preparing to give — become ultimately triumphant, like every other truth. Yet it is absolutely necessary to inculcate it gradually; enforcing its theories (unimpeachable facts for those who know) with direct inferences, deduced from and corroborated by the evidence furnished by modern exact science.”²

This paragraph — as well as many others in the theosophical literature — make it clear that in spite of many obstacles, modern, conventional science is a natural partner for the theosophical movement in the search for truth.

The same cannot be said of libelers, old and modern.

Best regards,
Carlos Cardoso Aveline,
Brasília, Brazil.



Editorial

MAYAN END-TIMES

We are living today in the Mayan end-times. The Great Cycle of the Mayan Long Count Calendar ends on the winter solstice of 2012 A.D. Following Mayan concepts of cyclic time and World Age

² *Theosophy* magazine, Los Angeles, Volume XXXVIII, number one, November, 1949, p. 6.

transitions, this is as much about beginnings as endings. In fact, it was considered by the ancient Maya to signify the Creation of a new World Age.

Mr. Judge would say that the country is experiencing the “sure process of Nature”: *Mixture, Amalgamation, and Precipitation.*

The sources of Mayan mythology are found in the sky, and the timetable of Creation Day is pinpointed by the end date of the Mayan Great Cycle.

It is not doom but the beginning of a New Cycle, far better than the old one brought catastrophically to a close, which is a way of saying the old cycle forces are NO LONGER the DIRECTING ENERGIES of the cycle. However, since there is an IMMENSE overlapping of cycles, the old will be on a line of retreat or in “retardation” for some time to come. It will still have a role to play in events, but it will be a “diminishing role.” We are in what might be called a “Chrysalis Condition” or an “In-Between” state — a *Sandhya*.

The Secret Doctrine, explains this as “Jupiter’s Law (II, 786).”

“Jupiter” is merely the personification of that immutable Cyclic Law, which arrests the downward tendency of each Root-Race, after attaining the zenith of its glory. ...

“The Cyclic Law of Race-Evolution is most unwelcome to scientists. It is sufficient to mention the fact of “primeval civilization “to excite the frenzy of Darwinists; it being obvious that the further culture and science is pushed back, the more precarious becomes the basis of the ape-ancestor theory. But as Jacolliot says: — “Whatever there may be in these traditions (submerged continents, etc.) and whatever may have been the place where a civilization more ancient than that of Rome, of Greece, of Egypt,

and of India, was developed, *it is certain that this civilization did exist*, and it is highly important for Science to recover its traces, however feeble and fugitive they be. (*Histoire des Vierges; les peuples et les continents disparus, p.15.*) Donnelly has proved (*Atlantism, the Ante-Diluvian World.*)” (*Ibid fn*) Man witnessed and remembered the upheaval of the Alps. “The final disappearance of the largest continent of Atlantis was an event coincident with the elevation of the Alps.” A master writes in *Esoteric Buddhism (p.70)*, “*Pari passu*, as one portion of the dry land of our hemisphere disappeared, some land of the new continent emerged from the seas. It is on this colossal cataclysm, which lasted during a period of 150,000 years, that traditions of all the “Deluges” are built, the Jews building their version on an event which took place later in “Poseidonis.” (*SDII, 751fn*)

If this “colossal cataclysm lasted during a period of 150,000 years” we must realize that it might also be described as a 150,000 year *TRANSITION PERIOD*. The cycle we are already in, that began roughly with the end of the 19th century is another “*Transition Period.*” *In which Institutions, governments, religions, etc., etc., are experiencing rapid change. Old Traditions are dying, new ones being born..* According to HPB the germs of the sixth sub-race are developing in the United States:

Since the beginning of the Atlantean Race many million years have passed, yet we find the last of the Atlanteans, still mixed up with the Aryan element, 11,000 years ago. This shows the enormous overlapping of one race over the race which succeeds it, though in characters and external type the elder loses its characteristics, and assumes the new features of the younger race. This is proved in all the formations of mixed human races. Now, Occult philosophy teaches that even now, under our very eyes, the new Race and Races are preparing to be

formed, and that it is in America that the transformation will take place, and has already silently commenced.

Pure Anglo Saxons hardly three hundred years ago, the Americans of the United States have already become a nation apart, and, owing to a strong admixture of various nationalities and inter-marriage, almost a race *sui generis*, not only mentally, but also physically. "Every mixed race, when uniform and settled, has been able to play the part of a primary race in fresh crossings," says de Quatrefages. "Mankind, in its present state, has thus been formed, certainly for the greatest part, by the successive crossing of a number of races *at present undetermined*." (*The Human Species* p. 274.)

Thus the Americans have become in only three centuries a "primary race," *pro tem.*, before becoming a race apart, and strongly separated from all other now existing races. They are, in short, the germs of the *Sixth* sub-race, and in some few hundred years more, will become most decidedly the pioneers of that race which must succeed to the present European or fifth sub-race, in all its new characteristics. After this, in about 25,000 years, they will launch into preparations for the seventh sub-race; until, in consequence of cataclysms — the first series of those which must one day destroy Europe, and still later the whole Aryan race (and thus affect both Americas), as also most of the lands directly connected with the confines of our continent and isles — the Sixth Root-Race will have appeared on the stage of our Round. ... It will silently come into existence; so silently, indeed, that for long millenniums shall its pioneers — the peculiar children who will grow into peculiar men and women — be regarded as anomalous *lusus naturae*, abnormal oddities physically and mentally. Then as they increase, and their numbers becomes with every age greater, one day they will awake to find themselves in a majority. It is the present men who will then begin to be regarded as exceptional

mongrels, until they die out in their turn in civilized lands; surviving only in small groups on islands — the mountain peaks of today — where they will vegetate, degenerate, and finally die out, perhaps millions of years hence, as the Aztecs have, as the Nyam-Nyam and the dwarfish Moola Koorumba of the Nilghire Hills are dying. All these are the remnants of once mighty races, the recollection of whose existence has entirely died out of the remembrance of the modern generations, just as we shall vanish from the memory of the Sixth Race Humanity. The Fifth will overlap the Sixth Race for many hundreds of millenniums, changing with it slower than its new successor, still changing in stature, general physique, and mentality, just as the Fourth overlapped our Aryan race, and the Third had overlapped the Atlanteans. (SD II, 444-45)



THAT MYSTERIOUS BLUE LIGHT

Astronomers using the NASA/ESA Hubble Space Telescope have identified the source of a mysterious blue light surrounding a supermassive black hole in our neighbouring Andromeda Galaxy (M31). Though the light has puzzled astronomers for more than a decade, the new discovery makes the story even more mysterious.

Now, new spectroscopic observations by Hubble's Space Telescope Imaging Spectrograph (STIS) reveal that the blue light consists of more than 400 stars that formed in a burst of activity about 200 million years ago. The stars are tightly packed in a disk that is

only a light-year across. The disk is nested inside an elliptical ring of older, cooler, redder stars, which was seen in previous Hubble observations.

The astronomers also used STIS to measure the velocities of those stars. They obtained the stars' speeds by calculating how much their light waves are stretched and compressed as they travel around the black hole. Under the black hole's gravitational grip, the stars are travelling very fast: 3.6 million kilometres an hour (1,000 kilometres a second). They are moving so fast that it would take them 40 seconds to circle the Earth and six minutes to arrive at the Moon. The fastest stars complete an orbit in 100 years. Andromeda's active core probably made similar disks of stars in the past and may continue to make them.

"The blue stars in the disk are so short-lived that it is unlikely in the long 12-billion-year history of Andromeda that such a short-lived disk would appear now," Lauer said. "That's why we think that the mechanism that formed this disk of stars probably formed other [stellar](#) disks in the past and will trigger them again in the future. We still don't know, however, how such a disk could form in the first place. It still remains an enigma."

The astronomers credit Hubble's superb vision for finding the disk. "Only Hubble has the resolution in blue light to observe this disk," said team member Richard Green of the National Optical Astronomy Observatory in Tucson. "It is so small and so distinct from the surrounding red stars that we were able to use it to probe into the very dynamical heart of Andromeda. These observations were taken by the members of our team that built STIS. We designed its visible channel specifically to seize such an opportunity - to measure starlight closer to a black hole than in any other galaxy outside our own."

Solid Evidence for a Monster Black Hole
In addition to the discovery of the disk of stars, the astronomers used this uniquely close look at Andromeda to prove unambiguously that the galaxy hosts a central black hole. In 1988, in independent ground-based studies, John Kormendy and the team of Alan Dressler and Douglas Richstone discovered a central dark object in Andromeda that they believed was a supermassive black hole. This was the first strong case for what are now 40 detections of black holes, most of them made by Hubble. Those observations, however, did not definitively rule out other, very exotic, and far less likely, alternatives.

"There are compelling reasons to believe that these are supermassive black holes," Kormendy said. "But extreme claims require extraordinarily strong evidence. We have to be sure that these are black holes and not dark clusters of dead stars."

The STIS observations of Andromeda are so precise that astronomers have eliminated all other possibilities for what the central, dark object could be. They also calculated that the black hole's mass is 140 million Suns, which is three times more massive than once thought.

So far, dark clusters have definitively been ruled out in only two galaxies, NGC 4258 and our galaxy, the Milky Way. "These two galaxies give us unambiguous proof that black holes exist," Kormendy added. "But both are special cases - NGC 4258 contains a disk of water masers that we observe with [radio](#) telescopes, and our galactic center is so close that we can follow individual stellar orbits. Andromeda is the first galaxy in which we can exclude all exotic alternatives to a black hole using Hubble and using the same techniques by which we find almost all supermassive black holes."

"Studying black holes always was a primary mission of Hubble," Kormendy said. "Nailing the black hole in Andromeda is without a doubt an important part of its legacy. It makes us much more confident that the other central dark objects detected in galaxies are black holes, too."

"Now that we have proven that the black hole is at the centre of the disk of blue stars, the formation of these stars becomes hard to understand," Bender added. "Gas that might form stars must spin around the black hole so quickly - and so much more quickly near the black hole than farther out - that star formation looks almost impossible. But the stars are there."

A Galaxy's Active Core The black hole and the disk of stars are not the only pieces of architecture in Andromeda's core. A team led by Lauer and Faber used Hubble in 1993 to discover that the galaxy appears to have a double cluster of stars at its centre. This finding was a surprise, because two clusters should merge into one in only a few hundred thousand years. Scott Tremaine of Princeton University solved this problem by suggesting that the "double nucleus" was actually a ring of old, red stars. The ring looked like two star clusters because astronomers were only seeing the stars on the opposite ends of the ring. The ring is about five light-years from the black hole and its surrounding disk of blue stars. The disk and the ring are tilted at the same angle as viewed from Earth, suggesting that they may be related.

Although astronomers are surprised to find a blue disk of stars swirling around a supermassive black hole, they also say the puzzling architecture may not be that unusual.

"The dynamics within the core of this neighbouring galaxy may be more common than we think," Lauer explained. "Our own Milky Way apparently has even younger stars close to its own black hole. It seems unlikely that only the closest two big galaxies should have this odd activity. So this behaviour may not be the exception but the rule. And we have found other galaxies that have a double nucleus."

Source: ESA/Hubble Information Centre ¹



¹ <http://www.physorg.com/news6626.html#>