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Educating the Mass Strike: Cosmic Radiation beats Green Fascism

Louis Pasteur

By Noelene Isherwood Part 4 of 4

Spontaneous Generation


Spontaneous Generation?

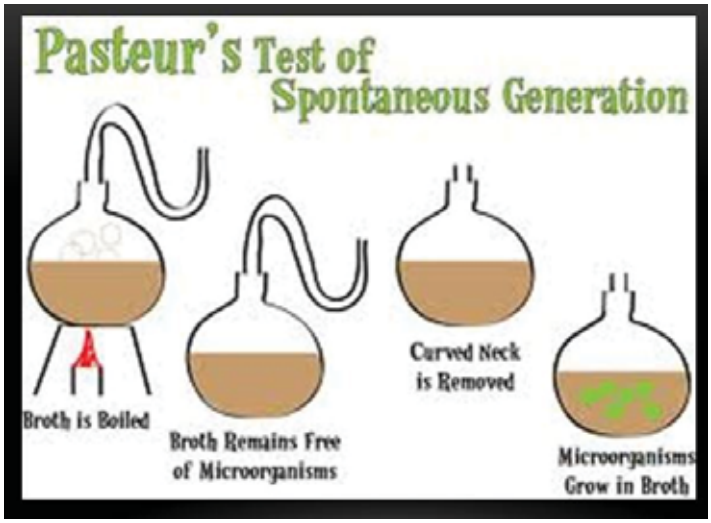
One of the most bitter and contentious issues in history, still to this day—an issue which lies at the heart of the Venetian/British assault on the true nature of man and the universe, and of God—is the question of the origin of Life itself. Does life arise magically from nothing, or from non-living matter as the adherents of Spontaneous Generation (otherwise known as "Abiogenesis") believe, or does the answer lie elsewhere?

For centuries, it was believed that frogs, snails, leeches and many other things were born out of marshes and swamps, that mice would emerge from grain and dirty underwear left in a pot and turtles emerge from sand. Aristotle, Plato's mortal enemy, asserted that life could arise spontaneously out of dirt and dust. (Raphael captured brilliantly in the School of Athens).

However, by the middle of the 19th Century, most people came to accept that at least in the visible realm, animals and plants generate from seeds or eggs. But it was a different question in the microscopic realm of bacteria and viruses. It was claimed that human disease comes from within, that viruses etc. were generated spontaneously in the body rather than transmitted.

So what was the answer? Where did these and other organisms generate from? And further to that, what was the origin of *life* itself? There were two prevailing and opposing views, as you might expect.

The supporters of the Spontaneous Generation doctrine of *Abiogenesis* were followers of Aristotle, Paolo Sarpi, and Newton. Many of them were closely associated with or part of the infamous X-Club formed in England in 1864 by the Rothchilds-controlled British East India Company, under the watchful eye of John Stuart Mill (benefactor of the Positivist Auguste Comte), for the purpose of directing what became known as "The Darwin Project". (See Ann's Lawler presentation *The Humbuggery of Darwin,* which gives you more details on this bunch). The X-Club's very reason for existence was to destroy real science and replace it with a new bastardized and publically acceptable pseudo-science to crush any creative spark in the population.



Those who opposed Spontaneous Generation, were in the tradition of Cusa and Leibniz and believed that dynamic universal principles define the universe, one of these principles being life itself, as opposed to arbitrary, statistical interactions between particles of dead matter. Remember what Cusa had said about the Universe being composed of the abiotic, the biotic, and the noetic. He said that we experience the "being of true beings" with respect to a three-fold gradation, some beings merely *exist*, whereas others are *alive*; and still others are alive and have *intellect.*

LaRouche expressed his understanding of "life" as a principle of creativity, in his April 7, 2011 Weekly Report: The process of universal creativity, he said, gives birth to a physical universe of three distinct phase spaces, three distinct principles, each of which is creative:

You take what we have, of life on Earth, the history of life on Earth, and what we have from that, shows that there's a process of development which has no kinematic explanation. *It's a process of creativity: Life itself is an effect of creativity. …We have this sense of* creativity, *as a principle, on which the universe depends! You have kinematic processes, which are simply kinematic; you have living processes which are not cognitive; and you have cognitive processes: They all work in a similar way. They all interrelate; obviously life probably existed and mentality existed long before we knew about anything like that. There was never an actual beginning of intelligence, intelligence per se, an actual beginning of life per se; there was a* manifestation *of life, a manifestation of intelligence, which we know as human intelligence….And the minute you think about this, at all, you are forced to realise that there are* principles, *which run the universe. And we're trying to discover those principles, and how they work. But it's always principles. It never is deduction. If the universe functioned on deduction, it would have been dead before it was born!*

In response to the loud polemics of those pushing Spontaneous Generation, Louis Pasteur proved scientifically through a crucial experiment, this *principle,* that life comes only from life, and never from non-life.

The leader of the Spontaneous Generation movement in France was Felix Pouchet (1800-1872), a single-minded fanatical "materialist" who, like the Positivists, believed that the universe is reducible to the interactions of matter in empty space. He was a friend and supporter of Charles Darwin and his ideas of natural selection and evolution.

Pouchet ran a series of experiments in which he concluded that animals and plants could be generated in a medium absolutely free from *atmospheric* air. He knew that air contained some microscopic organisms, but insisted they were very sparse, otherwise, based on mathematical calculations, the air would have to be darkened with the mass of their bodies. To get pure air, you have to go to the mountain tops.

So, his experiments involved creating a broth by boiling infusions of hay in water to kill off any living organisms, and then adding only good, clean mountain air. He insisted that the germs or organisms that subsequently clouded the broth, must have been generated spontaneously. Pasteur countered that Pouchet had either not boiled the infusions long enough to kill all the spores from the hay, or had not prevented other sources of contamination.

Pasteur's teacher, M. Balard, had taught his students to make their own devices for experimentation and Pasteur put this skill to good use, with an ingenious invention that would be crucial in disproving spontaneous generation and affirming his germ theory. He invented a special flask, called the swan-necked flask. In it he put water, sugar, and yeast and heated the mixture until it boiled and then simmered it to kill any organisms present. When cool, a small wad of cotton inserted in the neck allowed air to enter the flask, while preventing any germs from entering. The solution inside the flask remained pure for months at a time. When he broke the neck, or tilted the flask allowing some of the solution to run down the neck and back into the flask, it became infused with the previously trapped micro-organisms and became cloudy. Pasteur repeated the experiment over and over again with the same results. He had shown that a fermentable liquid, if exposed to pure uncontaminated air, would lay dormant. Pouchet's less rigorous experiments always resulted in liquid teeming with germs, from which he asserted that life could start in any place, and that growth is found in every case, regardless of the quality of the air used.

First in 1862 [the year that Darwin's *Origin of Species* was translated into French], and then again in 1864, the French Academie of Science set up a Commission to test both Pasteur and Pouchet's experiments, but disbanded each time, due to the enormous political controversy this issue evoked.

On April 7, 1864, Pasteur gave a lecture at the Sorbonne which was attended by many scientists and referring to his swan-neck flask experiments, Pasteur said *"Never will the doctrine of spontaneous generation recover from the mortal blow struck by this simple experiment."* He went on to say,

As I show you this liquid, I too could tell you, 'I took my drop of water from the immensity of creation, and I took it filled with that fecund jelly, that is, to use the language of science, … then I waited, and I observed, and I asked questions of it, and I asked it to repeat the original act of creation for me; what a sight that would be! But it is silent! It has been silent for several years, ever since I began these experiments. Yes! And it is because I have kept away from it, and am keeping away from it to this moment, the only thing that

it has not been given to man to produce, I have kept away from it the germs that are floating in the air, I have kept away from it life, for life is the germ, and the germ is life. —Pasteur quoted in Patrice Debré, *Louis Pasteur*, (p.169)

In England, Dr. Henry Bastian (1837—1915) a physiologist and founder of modern "neurology", wrote seven books on the *Origin of Life*. He continued to publically challenge Pasteur despite his conclusive experiment. Bastian was part of the Darwinian "young guard", the first generation of scientists after Darwin's "Origin of Species" was published. He was convinced that the answer to the origin of life could be found in a laboratory and concluded that life could come from non-life with no need of a supernatural Creator, i.e. God. He was supported by a faction of the Darwinians including Alfred Wallace, the supposed co-discoverer of evolution with Darwin, but was opposed by X-Club members Thomas Huxley and John Tyndall who feared such a blatant refutation of the existence of a Creator would bring the Darwinians into ill-repute, especially with those liberal Christians who supported their evolutionary theory. Huxley insisted that Bastian should not publish his theories. When he went ahead and did so, Huxley and Tyndall took Pasteur's side, at least for public consumption.

Pasteur wrote to Bastian in July, 1877 [the same year the French Academy set up yet another Commission to resolve the spontaneous generation question]—

Do you know why I desire so much to fight and conquer you? it is because you are one of the principal adepts of a medical doctrine which I believe to be fatal to progress in the art of healing—the doctrine of the spontaneity of all diseases. … That is an error which, I repeat it , is harmful to medical progress. From the prophylactic as well as from the therapeutic point of view, the fate of the physician and surgeon depends upon the adoption of the one or the other of these two doctrines. —Pasteur quoted in René Vallery-Radot, *The Life of Pasteur* (p.256)

Pasteur's other achievements

Pasteur spent the rest of his life working on one biological challenge after another.

He devoted six years to discovering the cause of an epidemic disease ravaging France's lucrative silkworm industry, saving not only the nation of France millions, but rescuing the farmers who were nearly wiped out by the disease. This work on silkworms also helped him tackle other biological problems and led to his work on vaccination.

Pasteur's insistence on the role of microbes in disease was picked up by the English physician Joseph Lister. Believe it or not, as late as 1892, most physicians still did not bother to wash their hands, let alone use clean bandages or antiseptics. There was an incredible 25% death rate among women in childbirth at the Paris Hospital where physicians would routinely deliver babies straight after carrying out autopsies. It wasn't until doctors were made to wash their hands with chlorinated lime water before examining pregnant women, that the mortality rate dropped to around 2% at that hospital.

Similarly, the effect of disease on troops in war was astounding. During the Crimean War (1854-1856), out of 300,000 French troops, nearly a third died of disease and amputations done in the field and only about 10,000 were killed on the battlefield! The mortality rate from amputations was 71%! Also, in the U.S. Civil War, the number of men killed by disease and amputations was 2 out of every 3 deaths!

Pasteur never limited himself to one area of science. He wanted to understand the mechanism and life cycle of different diseases, not as a formal interest of study, but with a passionate commitment to saving mankind from these diseases. He said:

Nothing is more agreeable to a man who has made science his career than to increase the number of discoveries, but his cup of joy is full when the result of his observations is put to immediate practical use. —Pasteur quoted in René Vallery-Radot, *The Life of Pasteur* (p.150)

I can't go through in detail Pasteur's work on Vaccination, but you can't speak of Pasteur without addressing this life-saving technology. Of course we all know that there remains enormous controversy on this subject, most of which has to do with very same Malthusian oligarchy which opposed Pasteur himself and which today seeks to destroy true science as well as the competent health system we once had.

From as early as 140 B.C. it was known that by drinking various potions containing poisons a person could develop a tolerance. Snake handlers could become immune to the serpent's venom after numerous bites and so could bee-keepers. It was also known that a person could contract a mild case of a disease and survive, maintaining immunity to the same disease in the future. Thus, the idea of using a small dose of something harmful to develop a resistance to it was known for centuries.

As you heard earlier, smallpox had been a deadly killer unique to humans for at least 10,000 years. Direct injections of smallpox in a controlled manner had been reported in China and India for centuries and inoculations were being performed in Constantinople by 1700. During the Boston smallpox epidemic in 1721-22, the American patriot, Cotton Mather introduced immunization against smallpox into the New World against tremendous opposition. These important contributions to the control of smallpox played an important part in the rapid acceptance of Edward Jenner's vaccination techniques 70 years later. Smallpox was finally declared eradicated worldwide in 1979 after a coordinated campaign of vaccinations.

Pasteur's work on immunization and inoculation included treatments for chicken cholera, anthrax and rabies.

Perhaps the most destructive of these was anthrax, one of the oldest diseases of grazing animals known to man. The rod-shaped *Bacillus anthracis* reproduces rapidly within an infected animal and can kill within days or weeks. After the animal dies, the bacillus can form soil-borne spores which remain dormant in the soil for decades or even centuries and if brought to the surface, can reinfect other animals. Heating, harsh chemicals and burial do not kill these spores and humans can become infected as well. Spores are found on every continent, even Antarctica. It is shocking that there are still many underdeveloped countries that are afflicted with anthrax, 130 years after Pasteur discovered a way to stop its spread. This scourge could again become a nightmare if health and sanitation conditions continue to collapse.

Pasteur's work on rabies was personal. While growing up in the town of Arbois, at age 12, he witnessed a rabid wolf bite up to 10 victims, 8 of whom died. While there were fewer than 500 reported cases in France in any given year, rabies caused such a horrible death that it had a profound and terrifying effect on anyone who witnessed it. He experimented for nearly five years before successfully treating animals, but he is best remembered for saving the life of nine year old Joseph Meister. News of his success spread around the world and patients came from everywhere including the United States, for his treatment.

Despite the international praise of his work, there still existed a nest of opposition. Pasteur Vallery Radot reported:

Certain doctors and certain journalists, always on the alert for something that might erupt into a scandal, pursued Pasteur with their attacks.… Pasteur, it was charged, did not prevent *rabies—he gave it! The public was invited to Anti-Pasteurian Meetings with the topics such as "The alleged discoveries of M. Pasteur, 'his heresies' and frauds."* —Pasteur Vallery-Radot, *Louis Pasteur: A Great Life in Brief* (p.148)

Here is Pasteur's response:

I am the most hesitating of men, the most fearful of responsibility, so long as I am not in possession of a proof. But when solid scientific proofs confirm my convictions, no consideration can prevent me from defending what I hold to be true.… If I had been more timid or more doubtful in view of the principles I had established, many points of science and of application might have remained obscure and subject to endless discussion. The hypothesis of spontaneous generation would still throw its veil over many questions. Your nurseries of silkworms would be under the sway of charlatanism, with no guide to the production of good seed. The vaccination of charbon [anthrax], destined to preserve agriculture from immense losses, would be misunderstood and rejected as a dangerous practice. Where are now all the contradictions? They pass away, and Truth remains. —Pasteur quoted in René Vallery-Radot, *The Life of Pasteur* (p.352)

Conclusion - Pasteur's legacy

You will hear more tomorrow of the legacy of Louis Pasteur, especially as his work on dissymmetry and living processes was taken up by Pierre Curie and Vladimir Vernadsky. But they were by no means the only ones who keyed off of his discoveries.

In the 1920s, Russian/Ukrainian biophysicist Alexander Gurwitsch, like his contemporary Vernadsky, followed in the footsteps of Pasteur, Kepler and Leibniz. Exactly for that reason, his work was systematically suppressed especially in the West where the Rockefeller Foundation considered it a threat to its promotion of reductionist "molecular biology".

Gurwitsch established that *living* cells and tissues generate an extremely weak, yet biologically active, form of electromagnetic radiation, in particular in the ultraviolet range; and that the presence of this radiation is somehow intimately connected with the nature of living processes themselves. He called this phenomenon "mitogenetic radiation".

Gurwitsch was led to his experimental demonstration of "mitogenetic radiation" as a by-product of investigations of embryos and the process of mitosi s (division of a cell into two genetically identical cells). Using onion root tip meristems (similar to stem cells in animals), Gurwitsch tested whether a root tip brought toward another root meristem, could induce increased rates of mitosis. The result was a 20 to 25% increase in mitotic cells in the other root stem. However the effect could be eliminated, if a glass plate that absorbed ultraviolet radiation were inserted between the roots.

This experiment raised many questions as to what was the source of the emission of this photon radiation, and how such a small amount of energy could trigger a process as complex as mitosis. Gurwitsch took his investigations of mitogenetic radiation to the *molecular* level as well. He found that when weak electric and magnetic fields were applied to proteins and then removed, the proteins emitted ultraviolet photons. This was the beginning of his "Biological field theory", which raised the question of what organises the unique properties of living systems.

In these opening decades of the 21st Century, it is precisely this type of ongoing scientific investigation of the broad field of cosmic radiation and the space/time characteristics of biological and cognitive processes, that Lyndon LaRouche and his Basement Team is leading. Their work is truly revolutionary, and has already opened the door to the potential survival of the human species, thanks in large measure to the great scientists such as Pasteur, upon whose shoulders they stand.

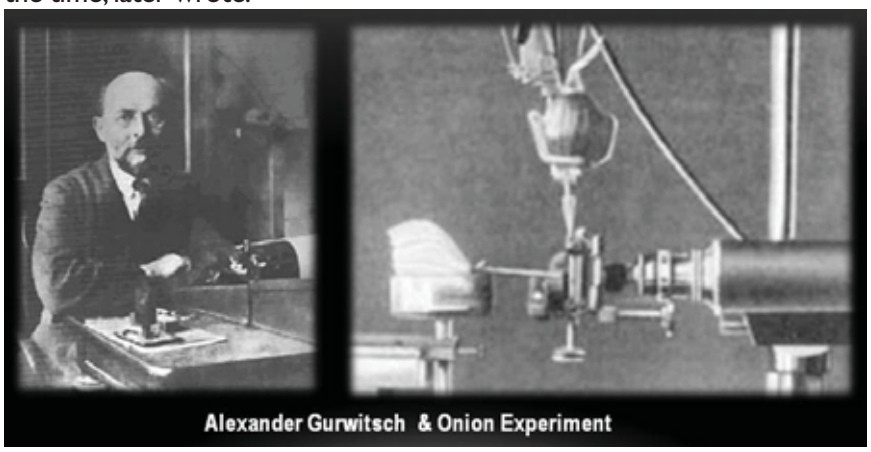
Louis Pasteur was honoured by his friends and colleagues on December 27, 1892, the occasion of his 70th birthday. At this point in his life he had suffered several strokes which left him unable to speak above a whisper. His grandson, aged 5 at the time, later wrote:

The Institut Pasteur de Lille

"A grandiose ovation was staged at the Sorbonne. Representatives of the academies, the universities, and the scientific societies of France and from abroad paid tribute to him. The great Lister, speaking in the name of all physicians and surgeons, remarked that: 'Pasteur had lifted the veil that for centuries had hidden the infectious diseases.' When Pasteur got up to embrace Lister, there was a thundering applause in the huge amphitheatre. All delegates then presented to Pasteur the citations they had come to deliver. —Pasteur Vallery-Radot, *Louis Pasteur: A Great Life in Brief* (p.190-191)

Unable to personally thank the huge assembly, Pasteur's son Jean-Baptiste Pasteur, delivered his response:

"You delegates of foreign countries who have come a long way to show your sympathy for France, have given me the greatest joy a man can feel who believes that Science and Peace will prevail over Ignorance and War, that the nations will learn to understand each other, not for destruction but for advancement, and that the future belongs to those who have done most for suffering mankind. —



Then he called on the younger generation:

"Young men...live in the serene peace of the laboratories and libraries. Ask yourselves first: What have I done for my education? And as you gradually advance: What have I done for my country?—until the moment comes when you experience the tremendous gratification of knowing that in some measure you have contributed to the progress and welfare of mankind. More or less favoured by the current of life as your efforts may be, you must have the right to say, on approaching the great goal: I have done all I could do." —As quoted in René Dubos, *Louis Pasteur: Free Lance of Science.*

Thank you.