



From the desk of Pierre Beaudry



LOUIS PASTEUR:

THE VIRAL POWER OF THE 'INNER GOD'

by Pierre Beaudry, July 4, 2012



"The universe is a dissymmetrical whole. I am inclined to think that life, as manifested to us, must be a function of the dissymmetry of the universe and of the consequences it produces. The universe is dissymmetrical; for, if the whole of the bodies which compose the solar system were placed before a glass moving with their individual movements, the image in the glass could not be superposed to the reality. Even the movement of solar life is dissymmetrical. A luminous ray never strikes in a straight line the leaf where vegetable life creates organic matter. Terrestrial magnetism, the opposition which exists between the north and south poles in a magnet, that offered us by the two electricities positive and negative, are but resultants from dissymmetrical actions and movements. [...] Life is dominated by dissymmetrical actions. I can even foresee that all living species are primordially, in their structure, in their external forms, functions of cosmic dissymmetry."

Louis Pasteur.

Figure 1. Louis Pasteur, (1822-1895)

FOREWORD

Louis Pasteur knew that if scientists did not have a total control over living and dying processes in the animal domain, then mankind would not be able to survive long as a creative species. The significance of the 1881 Pouilly-Le-Fort experiment is a case in point. The experiment was not so much the proof that Pasteur's method worked to save animal lives from the scourge of the anthrax virus and other deadly diseases, but that his scientific method was intended to save people from their own backwardness and stupidity. Pasteur demonstrated that human minds were capable of changing their defective beliefs by making axiomatic changes when necessity required it, and that it could be done in time.

As we must also understand this in our own situation today, Pasteur understood that unless human beings properly addressed the notion of the *infinite*, by continuously making axiomatic changes that totally transform their previous ways of thinking, and secure the future of mankind, they would be taken over by lower forms of life that would exterminate them all. So, his true purpose was to inoculate people of goodwill with the viral idea of devotion to the future and to their "*inner God*" who would guide them to it. This report contains the following experiments.

INTRODUCTION: ENTHUSIASM: THE 'INNER GOD'

1. THE FERMENTATION FACTOR OF DISSYMMETRY
2. THE FUTURE-ORIENTED PRINCIPLE OF VACCINATION
3. THE CRUCIAL EXPERIMENT OF POUILLY-LE-FORT

INTRODUCTION: ENTHUSIASM: THE 'INNER GOD'

When Pasteur addressed the French Academy des Sciences in 1882 on the subject of the *infinite*, he was not merely denouncing the reductionist positivist mentality that had taken control over French education in his time, he was most emphatically calling future young scientists to the devotion of searching what is beyond the finite, and what is the underlying cause of the human ability to conceive and be creative. As he said:

“Positivism sins not only through methodological error. There is a considerable gap in its seemingly tight net of reasoning ... The large and obvious flaw in the system consists in that the positivist conception of the world does not take into account the most important of positive notions—that of the *infinite*.

“What lies beyond the starry vault of the heavens? More starry heavens. So be it! And beyond? Pushed by an invisible force, the human mind will never cease asking itself: What is there beyond? Does it want to stop either in time or space? Since an endpoint would be merely a

finite dimension, greater only than those that had preceded it, no sooner does the mind begin to envision it than this implacable question returns, and the mind cannot quell curiosity's call. ... Positivism gratuitously brushes aside this positive and fundamental notion, along with its consequences for the life of society. ...

“Are not the science and passion of understanding nothing else but the effects of the spur of knowledge, put in our souls by the mystery of the universe? Where are the real sources of human dignity, of liberty and of modern democracy, if not in the notion of the *infinite* before which all men are equal?”

“The spiritual bond situated within a sort of lower-level religion of Man, cannot reside elsewhere than within the higher notion of the *infinite*, because this spiritual bond must be associated with the mystery of the world. The Religion of Man is one of those superficially obvious and suspect ideas which brought one eminent psychologist to say: “I have thought for a long time that the person who has only clear and precise ideas must assuredly be a fool. For the most precious notions harbored by human intelligence are deeply behind-the-scene and in semi-daylight, and it is around these confused ideas, whose interrelations escape us, that the clear ideas gravitate, extending, developing, and germinating themselves.” If we were cut off from this background, the exact sciences would lose the greatness which they draw from the secret rapport they hold with those infinite truths whose existence we can only suspect.

“The Greeks understood this mysterious power below the surface of things. It is they who bequeathed to us one of the most beautiful words of our language: the word enthusiasm, [which means] “inner God.”

“The greatness of human actions is measured by the inspiration that gives them birth. Joyous is he who carries within him an “inner God,” an ideal of beauty, which he obeys: an ideal of art, an ideal of science, an ideal of his nation, an ideal of the virtues of the Gospel. These are the living sources of great thoughts and great actions, and all of them are lit by the gleam of the *infinite*.” (Louis Pasteur, Speech delivered to the French Academy of Sciences, 1882. Quoted from Pierre Beaudry, [*The Geometry of the One and the Many: The Metaphor of Perspective*](#), Fidelio, Summer, 1995.)

Therein lies, in his understanding of the *infinite*, the secret of Pasteur's discovery of principle which we have now to replicate from the extraordinary biographical work, [*The Life of Pasteur*](#), by René Valléry-Radot, Louis Pasteur's son-in-law and one of his closest collaborators. This book represents, for a student of science, one of the most instructive case-studies of how a discovery of principle is made, especially through the discovery of the solution to the silkworm disease in 1865 (p.87-114), and the discovery of the cure for the anthrax disease in 1881 (p.297-340). Those are two of the most extraordinary accounts of the process of discovery which is “lit by the gleam of the *infinite*,” in a manner that they both reflect the fundamental epistemological fight between sense certainty and the scientific truth of creativity. The secret of Pasteur, here, lies in the notion of the wonderful application he made of the word “*enthusiasm*,” as it was bequeathed to us by the Greeks under the term *εν θεός*, “*inner God*.”

It is in that sense, and with the beryl lens of one's own “*inner God*,” that the intention of every new discovery of principle is aimed at doing away with a dysfunctional conception of the world, by doing

away with the underlying assumptions of its old habits of reasoning, and at improving the measure by means of which the world changes and progresses antientropically, infinitely. Pasteur's discoveries completely transformed the domain of General and Veterinary Medicine, by bringing about, primarily, a change in the state of mind of the medical and political fields of his time. As Radot demonstrated, Pasteur made three fundamental discoveries: 1) Fermentation in wine or beer which was demonstrated to be generated by a microbe, 2) Each infectious disease was demonstrated to be generated by a specific microbe, and 3) The microbe of a deadly infectious disease was demonstrated to be capable of being transformed paradoxically into a life saving vaccine.

However, this third discovery is not the result of a mere chemical reaction. It is of this third and most profoundly paradoxical discovery of a life-saving vaccine that this report will discuss, not as a practical discovery, but as a paradigm of the type of infection that is required to successfully inoculate mankind against its own obstinate stupidity.

1. THE FERMENTATION FACTOR OF DISSYMMETRY

For Pasteur, death is an act of life. The way life dies in a living being is not different from the way a deadly germ infects a living being, because life is a virus. But, in order to discover this amazing truth, Pasteur had to develop the means by which the perpetual dissymmetrical principle of life killed some living beings in the same way that it kept other living beings alive. It is not the nature of the virus itself that is important, but the trace of the action that it leaves behind in the infected living body, as a reflective shadow of the creative process of the universe.

Pasteur used the principle of dissymmetry to discover the mode of fermentation, which became later known as vaccination. Life itself creates such forms of action to perpetuate itself within the universe in its totality. That decisive dissymmetric action, however, also marks the difference between the living and the non-living, something that takes place between fermentation and the ferments, between the wave and the particle, between what exists and what does not yet exist. In other words, life is demonstrably a process of pasteurization in the most profound and universal sense of the word.

For that purpose, Pasteur recommended, for example, that after gathering blood from a victim that died of the plague, one had to discover the micro-organism that caused the death, and then prepare the appropriate medium of culture in which to reproduce the killer germ in a less virulent form; that is, paradoxically, in a life transmitting form. By this means, he could, then, inoculate others with it and protect their lives from the same virulent micro-organism. For Pasteur the purpose of science was to replicate the creative nature of this precise process in the laboratory. This is how Pasteur understood the paradoxical generative principle of life, and that is what he set out to demonstrate in his study of ferments:

"'If I place,' he said, 'one of the salts of racemic acid, paratartrate or racemate of ammonia, for instance, in the ordinary conditions of fermentation, the dextro-tartaric acid alone ferments, the other remains in the liquor. I may say, in passing, that this is the best means of

preparing laevo-tartaric acid. Why does the dextro-tartaric acid alone become putrefied? Because the ferments of that fermentation feed more easily on the right than on the left molecules.

'I have done yet more,' he said much later, in a last lecture to the Chemical Society of Paris: 'I have kept alive some little seeds of *penicillium glaucum* that mucor which is to be found everywhere on the surface of ashes and paratartaric acid and I have seen the laevo-tartaric acid appear ...'

"What seemed to him startling in those two experiments was to find molecular dissymmetry appear as a modifying agent on chemical affinities in a phenomenon of the physiological order." (Quoted by René Vallery-Radot, [*The Life of Pasteur*](#), pp. 73-74)

Here, the crucial point is that, very early on, Pasteur had discovered how *molecular dissymmetry was a modifying agent of living processes*, and he was beginning to ask himself: "How did this work with human beings? How did that dissymmetrical physical process work in the creative thinking process of an axiomatic change? Johann Sebastian Bach would have probably answered: "By using the Lydian modality of well-tempered music."

During the early 1850's, Pasteur discovered an unexpected extension between living crystallography and epistemology. This discovery was unique, because for the first time in the history of mankind, someone had discovered how the Biosphere could be controlled by human beings. However, this was not obvious, especially to those who had participated in the discovery. For example, on October 1, 1852, Pasteur wrote from Prague to his wife Marie:

"Here is a startling piece of news. I arrive in Prague; I settle down in the Hotel d'Angleterre, have lunch, and call on M. Kochleder, Professor of chemistry, so that he may introduce me to the manufacturer. I go to the chemist of the factory, Dr. Kassmann, for whom I had a letter from M. Eedtenbacher, his former master. That letter contained all the questions that I usually make to the manufacturers of tartaric acid.

"Dr. Bassmann hardly took time to read the letter; he saw what it dealt with, and said to me: 'I have long obtained racemic acid. The Paris Pharmaceutical Society offered a prize for whoever manufactured it. It is a product of manufacture; I obtain it with the assistance of tartaric acid.' I took the chemist's hand affectionately, and made him repeat what he had said. Then I added: ' You have made one of the greatest discoveries that it is possible to make in chemistry. Perhaps you do not realize as I do the full importance of it.

"But allow me to tell you that, with my ideas, I look upon that discovery as impossible. I do not ask for your secret; I shall await the publication of it with the greatest impatience. So that is really true? You take a kilogram of pure tartaric acid, and with that you make racemic acid?"

" ' Yes,' he said; ' but it is still ' . . . and as he had some difficulty in expressing himself, I said : ' It is still surrounded with great difficulties ? ' "

" ' Yes, monsieur.' "

"Great heavens! What a discovery! If he had really done what he says! But no; it is impossible. There is an abyss to cross, and chemistry is yet too young." (Quoted by Radot, Op. Cit., p. 68.)

What was clear to Pasteur was not at all understood by Dr. Bassmann. The shadow of dissymmetry was there for everyone to see, yet it did not make any sense to anyone else but Pasteur. There are circumstances like this, when even after extensive explanations of the creative process, the discovery is not made, even in the best of circumstances. Why? Because the subject to whom the discovery is meant to be imparted has to be willing to make it.

2. THE FUTURE-ORIENTED PRINCIPLE OF VACCINATION

Thirty years later, during the early 1880's, Pasteur began to study the deadly disease of chicken cholera. He had seen many such situations before, but had not yet been able to isolate the microbe. He needed to try successive cultures in different media. After several attempts he found that a broth of chicken gristle, neutralized with potash, and afterward sterilized, was the best medium, at a temperature of about 110 to 115° Fahrenheit. Radot reported:

"The facility of multiplication of the micro-organism in that culture medium is really prodigious," wrote Pasteur in a duplicate communication to the Academies of Sciences and of Medicine (February, 1880), entitled *Of Virulent Diseases, and in particular that commonly called Chicken Cholera*. "In a few hours, the most limpid broth becomes turgid and is found to be full of little articles of an extreme tenuity, slightly strangled in their middle and looking at first sight like isolated specks; they are incapable of locomotion. Within a few days, those beings, already so small, change into a multitude of specks so much smaller, that the culture liquid, which had at first become turgid, almost milky, becomes nearly clear again, the specks being of such narrow diameter as to be impossible to measure, even approximately. (Radot, Op. Cit., p. 298)

Even though Pasteur had given the same microbe to guinea-pigs, the disease had no affect on them. However, if some droppings of the guinea-pigs were mixed with the chicken-feed or rabbit feed, the chickens and the rabbits would become infected and die. But here, a simple observation in *the dissymmetry of time and attenuation* led Pasteur to a great discovery. Pasteur noted that every time some of the hens were inoculated with an old culture of the same microbe, a culture that had been put aside and forgotten for a few weeks, the surprise was that instead of dying, the hens would become ill and would recover afterward. Memory had become the crucial factor in immunization.

An unexpected phenomenon of resistance to the disease had taken place. When the culture had time to become stale, the hens would stay alive, even though the microbe itself was still alive. Pasteur explained the phenomenon as follows: "Finally, if you take each of these attenuated cultures as a starting-point for successive and uninterrupted cultures, all this series of cultures will reproduce the attenuated virulence of that which served as the starting-point ; in the same way non-virulence will reproduce non-virulence." (Radot, Op. Cit., p. 300)

This was the little pathway through which something great was about to be discovered. Pasteur realized that by attenuating the inoculations in time, a hen could, afterward, receive an overdose of the deadly virus, and yet be affected by a mild form of the disease and suffer only a mild indisposition. If you let the solution sit for a while, and let it incubate in its own juice, you may have changed the past. Depending on *the dissymmetry in time reversal and attenuation of the virus*, not only the virulence could be controlled, but a means of immunization could be gotten to save lives. Pasteur had discovered the principle of time reversal behind vaccination, the memory of what is to be prevented in the future! He then put forward the following hypothesis:

"Since the plague is a disease, the cause of which is absolutely unknown, it is not illogical to suppose that it too is perhaps produced by a special microbe. All experimental research must be guided by some preconceived ideas, and it would probably be very useful to tackle the study of that disease with the belief that it is due to a parasite.

"The most decisive of all the proofs which can be invoked in favor of the possible correlation between a determined affection and the presence of a micro-organism, is that afforded by the method of cultures of organisms in a state of purity ; a method by which I have solved, within the last twenty-two years, the chief difficulties relative to fermentations properly so called; notably the important question, much debated formerly, of the correlation which exists between those fermentations and their particular ferments." (Radot, Op. Cit., p. 301)

From that moment on, Pasteur had but one idea in mind: create a scientific laboratory which would specialize in finding, for a given microbe the appropriate culture medium, and inoculate animals of all kinds with a mild version of the disease, and, thus, determine experimentally what relations exist between the reaction of the animal organism and the diseases of mankind. His understanding of how life and death behaved in the animal form was the key to understanding how the creative process would work in the human mind.

While pursuing his research on chicken-cholera, Pasteur was also preoccupied with the etiology of splenic fever, otherwise known as anthrax. The answer as to how to proceed came to him while traveling to a farm near Chartres, where he discovered a discolored field in which there were little twisted earth cylinders that were made by earthworms. When he questioned the local farmer, he was told that a number of sheep, dead of anthrax, had been buried in that field. "Could it be," thought Pasteur, "that earthworms were germ carriers of anthrax spores?" When Pasteur returned to his Paris laboratory, he discovered that the bodies of those earthworms contained anthrax spores. Pasteur concluded: "Animals should never be buried in fields intended for pasture or the growing of hay. Whenever it is possible, burying-grounds should be chosen in sandy or chalky soils, poor, dry, and unsuitable to the life of earthworms." (Radot, Op. Cit., p. 305)

As a result, a crucial experiment was about to take place. People were about to be inoculated by a vaccine that would activate their immune system memory against any future attacks by the bacteria of ignorance and stupidity. Pasteur's immunization became the means of discovering how to produce cells that were to protect human beings by having them remember any future attack by disease, forever.

3. THE CRUCIAL EXPERIMENT OF POUILLY-LE-FORT

At the turn of the year of 1881, Pasteur received an unexpected challenge from one of the editors of the Veterinary Press, a Mr. Rossignol, who wrote an article denouncing Pasteur as the high-priest of a new form of quackery. Rossignol wrote in the January 31 edition of his magazine: “Will you have some microbe? There is some everywhere. Microbiolatriy is the fashion, it reigns undisputed; it is a doctrine which must not even be discussed, especially when its Pontiff, the learned M. Pasteur, has pronounced the sacramental words. *I have spoken*. The microbe alone is and shall be the characteristic of a disease; that is understood and settled; henceforth the germ theory must have precedence of pure clinics; the microbe alone is true, and Pasteur is its prophet.” (Quoted by Radot, Op. Cit., p. 314)

Rossignol was preparing an anti-Pasteur campaign with the farmers of the Brie region, whose cattle had significantly suffered from splenic fever, a highly infectious cattle and sheep disease, but which can also be transmitted to human beings. Rossignol was provoking Pasteur in the hope that he would come to the Brie region, before the farming community, and demonstrate publically that his microbe theory was a hopeless fiasco and that his forecasting method was all wrong. Public opinion made of microbes a constant subject of jokes, and, Rossignol succeeded in rallying the officials of the Melun Agricultural Society to invite Pasteur to come to their region by April 1881. The chairman of the society, Baron de la Rochette, invited Pasteur to perform an experiment in preventive vaccination of anthrax in the region of Melun. As Rossignol put it: “The noise will strike every mind and convince those who may still doubt; the evidence of facts will have the results of ending all uncertainty.” Never truer words had been spoken.

At the end of April, Pasteur accepted the invitation to do a public experiment at the farm of M. Rossignol, Pouilly-Le-Fort, located near Melun in the Department of Seine and Marne, and the program was so challenging that even Pasteur’s closest friends and collaborators were nervous for him. The program of the event was printed and distributed not only throughout the department of the Seine and Marne, but “throughout the whole agriculture world.” Pasteur was totally confident and even felt compelled to reassure his anxiety ridden associates by telling them: “What has succeeded in the laboratory with fourteen sheep will succeed just as well at Melun on fifty.” The official Pasteur report included the following eight points:

1. “The Agriculture Society of Melun will put sixty sheep at the disposal of Mr. Pasteur.
2. “Ten of these sheep will not undergo any treatment.
3. “At an interval of twelve to fifteen days, twenty-five of these sheep will receive two vaccinations of unequally attenuated anthrax.
4. “These twenty-five sheep will be inoculated by very virulent anthrax at the same time as the remaining twenty-five (uninoculated sheep), after a new interval of twelve or fifteen days. All twenty-five sheep that were not vaccinated will perish; all twenty-five that were vaccinated will

resist infection, and we will ultimately compare them with the ten untreated sheep above. This is to show that vaccination does not prevent the sheep from returning to a normal state.

5. “After the general inoculation of very virulent microbe to the two batches of vaccinated and unvaccinated sheep, the fifty sheep will remain together in the same cattle shed; one will distinguish one from the other by punching a hole in the ear of the twenty-five vaccinated sheep.

6. “All the sheep which will die of the anthrax will be buried in distinct pits neighboring each other in a pallisaded enclosure.

7. “In May 1882, we will put twenty-five new sheep — which have never been subjected to these treatments — in the enclosure in question to prove that the new sheep can be infected spontaneously by the anthrax microbes brought back to the surface of the ground by earthworms.

8. “Another twenty-five other new sheep will be herded a few meters away from the enclosure described above. No animals infected with anthrax have ever been interred in this new area, and thus this experiment will show that none of these new sheep will contract anthrax.” (Louis Pasteur, [SUMMARY REPORT OF THE EXPERIMENTS CONDUCTED AT POUILLY-LE-FORT, NEAR MELUN, ON THE ANTHRAX VACCINATION](#), (with the collaboration of Mr. Chamberland and Mr. Roux. Originally published in the Comptes Rendus de l’Académie des Sciences 92: 1378-1383, June 13, 1881.)

The experiments were a total success as far as the animals that were involved. Every single point enumerated in the above list was adhered to, and each point confirmed that the forecasting method of Pasteur was correct. There was never any doubt in Pasteur’s mind, because he knew in advance what the future results would be. Pasteur’s doubt was about the success of the experiment on human beings. The question was: “How will the inoculation of animals affect the state of mind of human beings?” Most people attending the experiment did not realize that the experiment had to deal with them, and that the experiment involved their ability to change their own belief structure. However, once they were inoculated, their immune system never forgot that day. They had been immunized against their own stupidity. In that sense, the generative process of inoculation of animals and human beings was similar and the consequences of the inoculation were also expected to be similar.

The difference, however, was that you could not tell in advance which people were to be successfully immunized and which ones would not. That is a very important moral difference to understand between man and animal. For example, when the inoculations began, on May 31st, the proportion of disbeliever to believers was beginning to change during a single day. Pasteur appeared to be so confident in his method that some of the people, who in the morning were making toasts to his “*fiasco*,” began to say by late afternoon: “He can surely not be mistaken.” The experiments were overseen by Pasteur’s main collaborators, Messrs. Chamberland and Roux. They followed exactly all of the steps that Pasteur had written down for them.

According to Radot, after 48 hours, the patients were reacting precisely in the way that Pasteur had predicted. All of the unvaccinated sheep were visibly going from bad to worse. “In all of them,” noted M. Rossignol, “breathlessness is at its maximum; the heaving of the sides is now and then interrupted by groans. If the most sick are forced to get up and walk, it is with great difficulty that they

advance a few steps, their limbs being so weak and vacillating.” By the time the observers retired on the night of the second day, Rossignol was forced to recognize that three unvaccinated sheep had already died, and he noted in his record book “that a great number of sheep will succumb during the night.” (Quoted by Radot, Op. Cit., p. 321)

When Mme. Pasteur retired that night, she noticed that Pasteur was very anxious and she thought it was because a few of the vaccinated sheep had showed an increase in temperature. Next morning, she wrote to her daughter:

"This morning, at eight o'clock, we were still very much excited and awaiting the telegram which might announce some disaster. Your father would not let his mind be distracted from his anxiety. At nine o'clock the laboratory was informed, and the telegram handed to me five minutes later. I had a moment's emotion, which made me pass through all the colors of the rainbow. Yesterday, a considerable rise of temperature had been noticed with terror in one of the sheep; this morning that same sheep was well again." (Quoted by Radot, Op. Cit., p.321.)

However, Pasteur's anxiety did not come from the sheep's condition. On that same day, June 2, Pasteur had also written a letter to his children in which he explained how his anxiety had been conceited within the process of his already acknowledged victory:

"It is only Thursday, and I am already writing to you; it is because a great result is now acquired. A wire from Melun has just announced it. On Tuesday last, 31st May, we inoculated all the sheep, vaccinated and non-vaccinated, with very virulent splenic fever. It is not forty-eight hours ago. Well, the telegram tells me that, when we arrive at two o'clock this afternoon, all the non-vaccinated subjects will be dead ; eighteen were already dead this morning, and the others dying. As to the vaccinated ones, they are all well; the telegram ends by the words ' stunning success ' ; it is from the veterinary surgeon, M. Rossignol.

"It is too early yet for a final judgment; the vaccinated sheep might yet fall ill. But when I write to you on Sunday, if all goes well, it may be taken for granted that they will henceforth preserve their good health, and that the success will indeed have been startling. On Tuesday, we had a foretaste of the final results. On Saturday and Sunday, two sheep had been abstracted from the lot of twenty-five vaccinated sheep, and two from the lot of twenty-five non-vaccinated ones, and inoculated with a very virulent virus. Now, when on Tuesday all the visitors arrived, amongst whom were M. Tisserand, M. Patinot, the Prefect of Seine et Marne, M. Foucher de Careil, Senator, etc., we found the two unvaccinated sheep dead, and the two others in good health.

"I then said to one of the veterinary surgeons who were present, ' Did I not read in a newspaper, signed by you, a propos of the virulent little organism of saliva, "There! One more microbe; when there are 100 we shall make a cross "'? 'It is true,' he immediately answered, honestly. 'But I am a converted and repentant sinner.' 'Well,' I answered, 'allow me to remind you of the words of the Gospel : Joy shall be in heaven over one sinner that repenteth, more than over ninety and nine just persons which need no repentance.'

"Another veterinary surgeon who was present said, ' I will bring you another, M. Colin.' 'You are mistaken,' I replied. 'M. Colin contradicts for the sake of contradicting, and does not

believe because he will not believe. You would have to cure a case of neurosis, and you cannot do that.

“Joy reigns in the laboratory and in the house. Rejoice, my dear children.” (Quoted by Radot, *Op. Cit.*, p. 322.)

The whole series of experiments had been a complete success within 48 hours. However, June 5th was the day that Pasteur had fixed for the experiment to be completed and the proof of his scientific method to be considered decisive. When he arrived at the farm of M. Rossignol, in the afternoon of June 2, Pasteur was greeted with complete acclamation by everyone who had doubted him, or who had let their minds be poisoned by newspaper reporters and negative science journal articles. Delegates from agricultural and medical institutions greeted Pasteur as a national hero. Officials and ordinary people alike were enthusiastic in expressing their gratitude to a great man whose credit was to have remained faithful to the truth of his quest for the *infinite*, by relentlessly pursuing what was hidden behind the shadows of sense perception.

Even M. Rossignol, personally, took this historical moment to do his public *mea culpa* and to recognize that although some experiment might appear impossible, the willful creative human mind is always capable of discovering the truth beyond the mere beliefs of well meaning people and, consequently, he made the extraordinary decision to change the name of his own farm of Pouilly-Le-Fort and give it the new name of *Clos Pasteur*. Before the month of June was over, in recognition for his discovery of the splenic fever vaccination, the French Government gave Pasteur the Grand Cross of the Legion of Honor. Pasteur accepted the honor only under the condition that his two associates, Chamberland and Roux, were given the same honor. The Government complied.

CONCLUSION

Ultimately, Pasteur’s discovery of principle can be understood rigorously only within a Riemannian manifold; that is to say, through a conceptual manifold in which Pasteur had the foresight of discovering that a correlation between the dissymmetry of living tartaric crystals and the dissymmetry of contrary rotary powers in the universe were the hallmark of the creative powers of the self-reflective human mind. As Pasteur once stated to the newspaper *La Vérité*: “*Never was treasure sought, never adored beauty pursued over hill and vale with greater ardor.*”

Pasteur had been educated to admire great men and women who bequeathed important contributions to their nation and to mankind. However, as he said many times, it was not to the greatness of men, as such, that his respect was given, but to the greatness that their actions inspired in others. Pasteur’s actions demonstrated how to replicate that same devotion through one’s “*Inner God*.” It is the legacy of such great actions as Pasteur’s devotion to truth that we must be inspired to impart to the future generations. Indeed, it is not what these men and women were that must be venerated, but what they helped us change in ourselves, and that is to never forget what the future is all about.

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