

Poincaré, Einstein and the Relativity: the Surprising Secret

C. Marchal

General Scientific Direction ONERA, BP 72, 92322 Châtillon, FRANCE
clbmarchal@wanadoo.fr

Abstract

In 1999 the scientific and historical studies of the birth of Relativity had led to a mixed conclusion : it seemed obvious that the real founder of Relativity was Henri Poincaré and that the text of Einstein was a plagiarism*. But it was really difficult to understand how this had been possible to Einstein in the few available weeks, especially if we consider furthermore that he had never previously published anything on this subject.

However in the recent years two new significative elements have been discovered: A) The absence of recension of the two major relativistic texts of Poincaré in the *Annalen der Physik*, in spite of the German meticulousity, of three other recensions of Poincaré' work for the only year 1905 and of many other recensions of French scientific texts of lesser importance. B) The seemingly deliberate concealment of three major relativistic texts in the seminar "on theory of electrons" organized in June and July 2005 at the University of Göttingen: the first Poincaré relativistic text (the famous note to the Academy of Paris: "On the dynamic of electron"), the corresponding major Lorentz memorandum of May 2004 and the relativity principle presented by Poincaré at the world scientific conference of Saint-Louis in September 2004.

This latter absence is very strange: the Göttingen *Mathematische Gesellschaft* had organized a seminar on the Poincaré relativity principle on January 31, 2005 !

Because of this triple absence the Göttingen seminar will be a failure: it will deal with electrons going faster than the velocity of light in vacuum...

With all these elements it is possible to reconstitute the history of Relativity and we go from surprise to surprise...

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Introduction

We must hide Poincaré's relativistic works !

Scientists are human beings with their qualities and their failings; they know jealousy, pride, vanity, nationalistic passions... A recent example has been given by the controversy between Luc Montagnier and Robert Gallo in the years 1983-92 about the discovery of AIDS' virus.

At the dawn of the twentieth century, the scientists of Göttingen considered their University – where Gauss, Riemann, Lejeune-Dirichlet taught – as the world pole of mathematics and one of the main leader of scientific research especially in Physics. But in June 1905 the relativistic work of Poincaré proved them that they were working in the wrong direction! And this just in the middle of the worst pre-war crisis between France and Germany...

David Hilbert, who was already awfully jealous of Poincaré, decided to react. He organized a machination in order to give to Germany the relativistic works of his French rival. But as risks were high, they were given to a young man that had little to loose and much to gain...

We have seen in the first part and in the reference 1 that Einstein, besides his obvious plagiarism of Poincaré's relativistic works, had summarized for the "*Beiblätter zu der Annalen der Physik*" (the supplements to the Annals of Physics) several works of physics including this of Mister Ponsot: "La conduction dans un système capillaire" (The conduction in a capillary system) that was published in 1905 in the reports of the French Academy of Sciences (ref. 2–3). Since meticulousity is one of the main qualities of Germans, it was normal to expect that the, much more important, Poincaré "note to the Academy" of June 5, 1905 and its very rich development in the "Rendiconti del circolo matematico di Palermo" (ref. 4) should also be summarized in the "*Beiblätter zu der Annalen der Physik*".

The first surprise is that these two major relativistic texts did not appear in the "*Beiblätter*" in spite of three summaries of the other works of Poincaré for the only year 1905 and, which is even more surprising, in spite of a long and meticulous summary of the relativistic works of Poincaré in the competitive yearly "*Die Fortschritte der Physik*" (The progress of Physics) at the beginning of 1906.

But the second surprise is much more unexpected. At the Göttingen University a seminar on the theory of electromagnetism was organized for the period from June 5 to August 1, 1905. The organizers were David Hilbert, Hermann Minkowski and Emil Wiechert. They already knew the Lorentz memorandum of Mai 1904 (ref. 5) and the Poincaré relativity principle of September 1904: they had had a meeting of the "Mathematische Gesellschaft" on this subject January 31, 1905. On June 12 or 13 they received the Poincaré note of June 5 (ref. 4). But these three essential works never appear all along the seminar . In his Einstein biography "The young Einstein and the advent of Relativity" L. Pyenson considers that this triple absence was deliberately done (ref. 6).

We will see why, but let us consider first the atmosphere of a large research institute and also that, so particular, of the years 1900–1914.

In **1983** Doctor Luc Montagnier and his team of the Pasteur Institute of Paris discovered the AIDS' virus. A fantastic discovery ! However this discovery will not be so easily accepted by the American dominant school of Professor Robert Gallo. Years of investigations by the Chicago team of journalists, the discovery of several frauds and even a long lawsuit will be required before the recognition of the work of the French team.

Very generally, in most domains, it is very difficult for the scientific dominant school to accept the success of its competitors. This is perfectly summarized by the opinion of Maxime Schwartz, the director of the Pasteur Institute, about the skepticism that has been surrounding the discovery of Luc Montagnier for so many years: "*If that skepticism lasted so long, it is because the dominant school in human retrovirology and its leader Robert Gallo have done everything to minimize the results of the French team. This attitude has had a very large impact on the international scientific community, even in France.*" ("Le Monde", December 30, 1992).

But, beyond the quarrels of the scientific schools, we must also understand the political atmosphere of the years around 1900.

January 27, 1894

"Another victorious war and, as former Poland, France will be no more than a bad historical souvenir ! " Invited to deliver a speech for the birthday of the German emperor, the Kaiser, the pangermanist historian Heinrich von Treitschke was perfectly clear...

1905

For the Russians the war against Japan went from bad to worse. That war began during the night from February 8 to 9, 1904 with the sudden destruction of the Russian navy in Port-Arthur – as later the American navy in Pearl-harbor – the Japanese conquered the harbor and the city in January 1905 and won the battle of Moukden in March, they destroyed a second Russian navy at Tsou-Shima at the end of May... and revolutionary troubles then burst all over Russia.

Count von Schlieffen, the highest rank officer of the German army who was later Field-marshal, told the Kaiser: *" Now we must crush France definitely. If we wait ten more years Russia will be again standing and it will no longer be possible"*. And indeed France alone was not able to resist.

The Kaiser looked for a pretense. He delivered a provocative speech in Tanger (Morocco), on March 31. Under threat of immediate war, the Germans required the resignation of Théophile Delcassé the French minister of foreign affairs and the initiator of the entente between France and Britain. Frightened, the French government gave up June 6 in spite of the protests of his minister... "An unprecedented humiliation !" wrote Georges Clemenceau.

These hates and these fears date back a long way. On the German side the souvenir of the systematic destruction of Palatinate by the armies of King Louis XIV and especially the *Befreiungskrieg* (the war of liberation) of 1813–1914 after the Napoleonic invasions. On the French side the humiliation and the political earthquake of the 1870–1971 war, the loss of Alsace and Lorraine and, above all, the completely new feeling of living next to an hostile and warlike giant that only believed in force and grew everyday.

And indeed in the years 1900 the growth of the German Empire was very impressive. The weak and divided Germany of 1850 was then dominant in many domains: in industry, in technics, in military, in demography (2 million births in 1900; 900 000 only in France), in science, in philosophy and even in most artistic domains. The Germans of 1900 were in the psychological situation of the Spaniards of the 16th century, the French of the reign of Louis XIV and the Americans of today.

But let us come back to the University of Göttingen.

That University, the University of Gauss, Riemann and Lejeune-Dirichlet, was considered as the world pole of mathematics and one of the leader of scientific research, especially in Physics. After having been organized during many years by Klein, the Göttingen University was, in this year 1905, under the reign of "the Master", David Hilbert, another first rank mathematician.

However in that same year, the Bolay price of Mathematics was not given to Hilbert : it was attributed to Henri Poincaré, which of course did not improve the feelings of the jealous Master. But, perhaps was it possible to beat that French in Physics? Sommerfeld, Herglotz and Wiechert were trying to, and during the fall of 1904 and the winter of 1905 published three successive works on the "superlumenic electron" – the electron moving faster than the velocity of light in vacuum – in the journal of the University, the *"Göttinger Nachrichten"*, (see for instance ref. 7). Sommerfeld even published in the *Amsterdam Proceedings* a work in which, from a

Lorentz hypothesis, the conclusion was: "Since, for a velocity faster than that of light, this hypothesis doesn't work, I cannot use it" (ref. 8).

Let us recall that Sommerfeld was a great scientist: he is the one who will improve the Niels Bohr model of atom in order to agree with Relativity and quantum Mechanics.

In these conditions the preparation of the June and July seminar on the "theory of electrons" – the theory of electromagnetism – led naturally to a session "Motion with velocity faster than that of light; proper motions of electrons", that session was prepared for the week of July 24, with Emil Wiechert as the chairman (ref. 9, page 144). Several other sessions had also some parts about these superluminal motions.

The seminar began on June 5. However, just as it had begun, the bomb exploded: the "note to the Academy" of Henri Poincaré (ref. 4). That note was presented at Paris on Monday June 5, printed, published and sent to all the correspondants of the Academy on Friday 9, it arrived at Göttingen at the earliest on Saturday 10 and at the latest on Tuesday 13. Its verdict was definitive: a material body cannot go faster than the velocity of light in vacuum, and Hilbert was in an impossible situation...

So what could be done? If Klein had still been healthy and at the head of the University he would have had the loyalty to recognize highly the fundamental value of the work of Poincaré and the errors of his colleagues. He had already been in this situation for the automorphic functions, he had reacted as a man of honour and had kept a great admiration for Poincaré. But the master was then David Hilbert, who considered Poincaré as a rival and not as a colleague. We now understand the temptation to act as Robert Gallo with respect to the discoveries of Luc Montagnier. Hilbert had to save face, preserve the dominant position of the scientific school of Göttingen and then do everything to hide the relativistic work of Henri Poincaré.

Hence three decisions:

A) To ignore systematically the relativistic work of Poincaré and the neighbouring works : the Lorentz memorandum of May 1904 (ref. 5) and the Poincaré Relativity Principle of September 1904 – in spite of the meeting of the "*Mathematische Gesellschaft*" on this subject the previous January 31. We have seen that L. Pyenson considers that this triple absence was deliberate (ref. 6, page 104).

Of course this triple absence was to be prejudicial to the seminar, but it was required by the machination...

B) To look for a German who would accept the risks of this manipulation by publishing the Poincaré results under his signature. It was then that Einstein appeared.

C) To ask for the help of Max Planck, who was then the Director of the "*Annalen der Physik*": Poincaré's note must not appear in this journal that was then the equivalent of *Nature* and *Science* today.

We must notice that this last point is the weakest point of our analysis. Max Planck is a man of great integrity; his second son, an officer in the German army, will take part in the plot of July 20, 1944, he will be arrested, tortured and executed by the Nazis... The only likely explanation is patriotism: Max Planck would have thought, as Europe was at the verge of war, that his duty was to give Germany this major scientific discovery.

Let us recognize that many French of great integrity (and especially my two parents) considered, during the second world war, that their duty was to act at the Germans' expense each time when they had an opportunity, the least being to give them a wrong information when they were asking their way...

It remains to understand why David Hilbert and Hermann Minkowsky, after having written or at least organized the plagiarism, have chosen Einstein for its signature.

It is possible to give the following reasons:

A) To put their own signature was a high risk. If the French reacted it was the shame, the expulsion from the University, the end of their scientific career. The idea was then to look for a young man who had little to lose and much to gain.

B) Minkowski knew Einstein, he had been his student during the years 1896–1900.

C) Planck and Einstein had exchanged many letters on quantum theory.

D) Einstein had written in the years 1902-03-04 many papers on thermodynamics that were very similar to the earlier paper of Gibbs, without reference. “*The similarity is quite amazing*”, wrote Max Born (1954 Nobel prize of Physics, ref. 10). Hilbert, Minkowski and Planck could then hope that Einstein would not refuse this machination.

This organization worked very well. On the one hand the situation of Einstein was not good, his papers on thermodynamics and on the quantum of light only met silence and he was living difficult years. The role that was proposed to him was a fantastic and unexpected chance. On the other hand, the divided French will not react and the modesty of Poincaré prevented him from protesting... The lasting concealment of Poincaré’s relativistic works was successful.

Perhaps it is in order to help to this concealment that Max Planck organized in Berlin in fall 1905, just after the publication of Einstein paper, **an unforgettable colloquium** on this subject (as said by von Laue, ref. 11). And, until the breaking between the two scientists in 1911, he heaped praises on Einstein, the “new Copernic”.

Conclusion

The official history tells us that Einstein, without having read the works of Lorentz and Poincaré past 1895 and without any prior publication on the subject, had written alone in Bern the “founder paper” of the Relativity in the last days of June 1905. For that reason, and a few other of less importance, the biographers of Einstein have called that year 1905 “Annus mirabilis” and its centennial is celebrated in 2005.

However on June 5, 1905, after many other papers on this subject, Poincaré had presented a note at the French Academy of Science, a text that contains the essential elements of Einstein paper: the relativity principle and the “Lorentz transformation”. This *coincidence* involves the suspicion of a possible plagiarism of Poincaré by Einstein.

But two new *coincidences* have recently been discovered.

A) The deliberate concealment of the relativistic works of Poincaré and of the corresponding Lorentz’s work during the June and July 1905 seminar at the University of Göttingen, a seminar organized exactly on the same subject by David Hilbert, a first rank mathematician and a rival of Poincaré.

B) The absence of recension of the relativistic works of Poincaré in the *Annalen der Physik*, in spite of the meticulousness of Germans, three recensions of the other works of Poincaré for the year 1905 alone and many recensions of French texts of lesser importance. This absence will allow Max Planck, who controlled this major publication, to organize from November 1905 an unforgettable praise of the just published Einstein text.

In front of these three so accurate coincidences, the only possibility is to forsake the thesis of the solitary genius and even that of the direct plagiarism of Poincaré by Einstein. The “founder paper” was written in Göttingen either by Hilbert himself or by one of his colleagues, then signed by Einstein and published without delay in Planck’s publication. The reason of this machination is very usual, it is the scientific and nationalistic jealousy of its authors that had all the necessary means to achieve it – competence, knowledge of the subject, plagiarized texts, scientific authority

and fast means of publication – on the other hand it was easy to convince Einstein to take all the risks: being young he had little to lose and much to gain, and he had already committed some plagiarism that were known in Göttingen and in Berlin.

This conclusion will of course imply incredibility and many protests. For these reasons all this study is considerably developed in the book of Jules Leveugle (ref. 9) in which all necessary documents are gathered, translated and analysed.

Il y a deux histoires: l'histoire officielle, menteuse, et l'histoire secrète où sont les véritables causes des événements. (There are two Histories: the official and lying History, and the secret History in which are the real reasons of events).

Honoré de Balzac

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