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(*b*. Mantes-sur-Seine, France, 24 March 1848; *d*. Paris, France, 11 November 1910)

mathematics.

Tannery was the youngest of the three children of Delphin Tannery, an engineer with the Compagnie des Chemins de Fer de l'Ouest. The eldest child was a daughter and the second was the engineer and historian of science Paul Tannery. The family moved first to Redon, in Ille-et-Vilaine, where his father supervised the construction of a railroad line, and then to Mondeville near Caen.

At the *lycée* in Caen, he was an excellent student, and he won several prizes in the *concours général*. His brother, who was passionately interested in philosophy and Greek antiquity, gave him a taste for these subjects. In 1866 Tannery was admitted with highest standing to the science section of the École Normale Supérieure and, simultaneously, to the École Polytechnique. He decided to enter the École Normale, and in 1869 placed first in the *agrégation*. He was then assigned to teach mathematics at the *lycée* in Rennes, and in 1871 he was named to a post at the *lycée* in Caen, where his former classmate Émile Boutroux was also teaching.

During this period Tannery underwent a religious crisis caused by his profound desire to admire without remorse pagan antiquity, the cult of reason, and the ideas of Lucretius.

Tannery returned to Paris in 1872 as *agrégépréparateur* of mathematics at the École Normale. Encouraged by Hermite, he began work on a thesis inspired by the works of Fuchs ("Propriétés des intégrales des équations différentielles linéaires à coefficients variables"), which he defended in 1874. Two years later he became editor of the *Bulletin des sciences mathématiques,* on which he collaborated with Darboux, Hoüel, and Picard until his death. He wrote a great number of book reviews for the journal–more than 200 for the years 1905 – 1910 alone. Characterized by rigorous criticism and an excellent style, the reviews are models of their kind in both form and content.

Tannery taught higher mathematics at the Lycée Saint-Louis and substituted for the professor of physical and experimental mechanics at the Sorbonne. In 1881 he was named *maître de conférences* at the École Normale and, shortly afterward, at the École Normale for women located in Sèvres. From 1884 until his death Tannery served as assistant director of scientific studies at the École Normale; in this post he displayed the full measure of his abilities. At the same time, from 1903, he was professor of differential and integral calculus at the Faculty of Sciences of Paris.

A member of several educational commissions and of the Conseil Supérieur de l'Instruction Publique, Tannery played an important role in the pedagogical reforms in France at the beginning of the twentieth century. Through his lectures and supervisory duties at the École Normale this gifted teacher gave valuable guidance to many students and inspired a number of them to seek careers in science (for example, Paul Painlevé, Jules Drach, and Émile Borel). Tannery was elected *membre libre* of the Académie des Sciences on 11 March 1907, replacing Paul Brouardel.

Tannery possessed considerable gifts as a writer. The pure and elegant style of the poems he composed in his free hours clearly bears the stamp of a classic sensibility. His vast culture, nobility of character, and innate sense of a rationally grounded morality are reflected in each of his *Pensées,* a collection of his thoughts on friendship, the arts, and beauty. Often they exhibit a very refined sense of humor.

Among his scientific publications, the *Introduction à théorie des fonctions d'une variable* exercised an especially great influence on younger generations of mathematicians. Émile Borel stated that it was a profound, vigorous, and elegant work that taught him how to think. In another book, written with Jules Molk, Tannery presented the results of applying Fuchs's theorems to the linear differential equation that defines the periods of an elliptic function. Tannery also gave a new expansion of the Euler equation. In algebra, following the path opened by Hermite, Tannery studied the similar transformations of the quadratic forms, the invariants of the cubic forms, and the symmetric functions. In geometry, he concentrated his research on the osculating plane of skewed cubic equations and on a fourth degree surface of which the geodesic lines are algebraic. Poincaré highly esteemed Tannery and commented very favorably on his writings. Tannery's work was known abroad, especially in Germany, where a translation of his book *Notions de mathématiques* was published in 1909.

In 1880 Weierstrass published "Zur Funktionenlehre," in which he dealt with the convergence of a series whose terms are rational functions of one variable. Upon reading it, Tannery sent Weierstrass solutions he obtained in a simpler manner, utilizing elementary theorems of function theory. Weierstrass translated Tannery's letter into German and published it in *Monatsberichte der königlich-preussischen Akademie der Wissenschaften zu Berlin* (1881, 228 – 230).

Tannery reflected a great deal on the role of number in science, and he sought to show how the entire subject of analysis could be built up on the basis merely of the notion of whole number. In his speculations on the notion of infinity, he arrived at the conclusion that it is equivalent to the simple possibility of indefinite addition. Finally, his interest in the history of science–undoubtedly inspired by his brother–led him to publish Galois's unpublished manuscripts and the correspondence between Liouville and Dirichlet.

Galois had entrusted his manuscripts to his friend Auguste Chevalier, who gave them to Liouville. The latter bequeathed his library to one of his sons-in-law, Célestin de Blignières (1823 – 1905), a former student at the École Polytechnique and a disciple of Auguste Comte. Mme de Blignières, Liouville's daughter, in turn, gave Galois's papers to Tannery, along with her father's correspondence with Dirichlet.

In his *Éloges et discours académiques* (p. 101), Émile Picard drew the following parallel between Jules and Paul Tannery:

They were extremely close all their lives. Of very different natures, the two brothers complement each other. Paul derived a certain tranquillity from his positivist convictions. A philologist and scholar of extraordinary erudition, he sought to follow, in innumerable notes and articles, the historical evolution of science from Greek antiquity until the end of the seventeenth century. Jules's philosophy, on the other hand, did not free him from intellectual anxiety. His outlook was less universal than his brother's, but also more profound. He had both the subtle mind of the metaphysician and the penetrating insight of the disillusioned moralist.

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