Lagny, Thomas Fantet De | Encyclopedia.com

(*b* Lyons, France, 7 November 1660; *d*. Paris, France, 11 April 1734)

mathematics, computation.

There are certain obscurities in our knowledge of Lagny's life, talented calculator though he was. Fantet was the name of his father, a royal official in Grenoble. It appears that Lagny studied with the Jesuits in Luons and then at the Faculty of Law in Toulouse. In 1686 he appeared in Paris under the name of Lagny. He was a tutor in the Noailles family and the author of a study on coinage. His collaboration with L'Hospital and his first publication concerning the approximate calculation of irrationals (1690–1691) show that he was a good mathematician. He was living in Lyons when he was named an associate of the Académie Royale des Sciences on 11 December 1695. He stayed in Paris in 1696 and then, in 1697, through the Abbé Jean-Paul Bignon, obtained an appointment as professor of hydrography at Rochefort. The position assured him a salary but in a distant residence which allowed him only written contact with the Academy. His former pupil, the Maréchal Duc de Noailles, president of the Conseil des Finances of the regency, called upon him in 1716 to assume the deputy directorship of the Banque Générale founded by John Law. He reigned this job in 1718, at the time of the institution's transformation into the Banque Royale, and was not involved in the bankrupcy that shook the French state.

A *pensionnaire* of the Academy from 7 July 1719, Lagny finally earned his living from science, as he wished to do, but he was growing weaker and could barely revise his old manuscripts. His declining powers obliged him to retire in 1733, and the Academy completed the book that he planned to crown his work.

Lagny's work belonged to a type of computational mathematics at once outmoded and unappreciated. He lived during the creation of integral calculus without being affected by it. While the idea of the function was gaining dominance, he continued to approach mathematical problems—both ancient problems such as the solution of equations and new one such as the solution of equations and new ones such as integration—with the aid of numerical tables. Employing with great skill the property possessed by algebraic forms of corresponding to tables in which the differences of a determined order are constant, he recognized the existence of transcendental numbers in the calculation of series.

Lagny made pertinent observations on convergence, in connection with the series that he utilized to calculate the first 120 decimal places in the value of π He attempted to establish trigonometric tables through the use of transcription into binary arithmetic, which he termed "natural logarithm" and the properties of which he discovered independently of Leipniz.

In this regard his meeting with the inventor of the differential and integral calculus is interesting, but it was only the momentary crossing of very interesting, but it was only the momentary crossing of very different paths. Lagny generally confined himself to numerical computation and practical solutions, notably the goniometry necessary for navigators. Nevertheless, his works retain a certain didactic value.

BIBLIOGRAPHY

I. Original Works. Lagny's writings include "Dissertation sur l'or de Toulouse," in *Annales de la ville de Toulouse* (Toulouse, 1687), I, 329–344; *Méthode nouvelle infiniment générale et infiniment abrégée pour l'extraction des racines quarrées, cubiques...* (Paris, 1691); *Méthodes nouvelles et abrégées pour l'extraction et l'approximation des racines* (Paris, 1692); *Nouveaux élémens d'arithmétique et d'algébre ou introduction aux mathématiques* (Paris, 1697); *Trignonmétrie française ou reformée* (Rochefort, 1703), on binary arithmetic; *De la cubature de la sphére où l'on démontr une infinité de portions de sphére égales à des pyramides rectilignes* (La Rochelle, 1705); and *Analyse générale ou Méthodes nouvelles pour résoudre les probémes de tous les genres et de tous degrés à l'infini*, M. Richer, ed. (Paris, 1733).

Lagny addressed many memoirs to the Academy, and most of them were published. Perhaps the most important is "Quadrature du cercle." in *Historie et Mémoires de l'Académie...pour 1719* (Amsterdam, 1723), pp. 176–189.

There is a portrait of Lagny in the Lyons municipal library, no. 13896.

II. Secondary Literature. See Jean-Baptiste Duhamel, *Regiae scientiarum academiae historia* (Paris, 1698), pp. 430–432; and B. de Fontenelle, "éloge de M. de Lagny," in *Historie et Mémoires de l'Académie...pour 1734* (Amsterdam, 1738), 146–155.

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