Ozanam, Jacques | Encyclopedia.com

(*b*. Bouligneux, Bresse, France, 1640; *d*. Paris, France, 3 April 1717 [?]), *mathematics*.

Ozanam came from a Jewish family that had converted to Catholicism. As the younger of two sons he was educated for the clergy, but chemistry and mechanics interested him more than theology. He was said to be generous, witty, and gallant; and probably he was too tolerant to have made a good churchman of his day. Except for a tutor who may have helped him slightly, Ozanam taught himself mathematics.

Four years after Ozanam had begun studying for the church, his father died; he then devoted himself to mastering mathematics, with considerable success. He taught mathematics at Lyons without charge until the state of his finances led him to charge a fee. A lucky circumstance took him to Paris, where his teaching brought him a substantial income. Being young and handsome, his gallantry as well as his penchant for gambling drained his resources; Ozanam sought a way out by marrying a modest, virtuous young woman without means. Although his financial problems remained unsolved, the marriage was happy and fruitful; there were twelve children, most of whom died young. After his marriage Ozanam's conduct was exemplary; always of a mild and cheerful disposition, he became sincerely pious and shunned disputes about theology. He was wont to say that it was the business of the Sorbonne doctors to discuss, of the pope to decide, and of a mathematician to go straight to heaven in a perpendicular line.

Following the death of his wife in 1701, misfortune quickly befell Ozanam. In the same year the War of the Spanish Succession broke out; and many of his students, being foreign, had to leave Paris. From then on, the income from his professional activities became small and uncertain. The last years of his life were melancholy, relieved only by the dubious satisfaction of being admitted as an *élève* of the Academy of Sciences. Ozanam never regained his customary health and spirits, and died of apoplexy, probably on 3 April 1717, although there is some reason to believe that it may have been between 1 April and 6 April 1718.

By almost any criterion Ozanam cannot be regarded as a first-rate mathematician, even of his own time. But he had a flair for writing and during his career wrote a number of books, some of which were very popular, passing through many editions. According to Montucla:

He promoted mathematics by his treatise on lines of the second order; and had he pursued the same branch of research, he would have acquired a more solid reputation than by the publication of his *Course*, *Récréations, or Dictionnaire mathématique*; but having to look to the support of himself and family, he wisely consulted the taste of his purchasers rather than his own [*Histoire des mathématiques*, II, 168].

In short, his contributions consisted of popular treatises and reference works on "useful and practical mathematics," and an extremely popular work on mathematical recreations; the latter had by far the more lasting impact. Ozanam's *Récréations* may be regarded as the forerunner of modern books on mathematical recreations. He drew heavily on the works of Bachet de Méziriac, Mydorge, Leurechon, and Daniel Schwenter; his own contributions were somewhat less significant, for he was not a particularly creative mathematician. The work was later augmented and revised by Montucla and, still later, was translated into English by Hutton (1803).

Ozanam is not to be confounded with a contemporary geometer, Sébastien Leclerc (1637–1714), who upon occasion used the pseudonym Ozonam.

BIBLIOGRAPHY

I. Original Works. Ozanam's writings include *Méthode pour tracer les cadrans* (Paris, 1673, 1685, 1730); *La géométrie pratique du sr Boulenger* (Paris, 1684, 1689, 1691, 1736, 1764); *Tables de sinus, tangentes et sécantes; et des logarithmes …* (Paris, 1685, 1697, 1720, 1741); *Traité de la construction des équations pour la solution des problèms indéterminez* (Paris, 1687); *Traité des lieux géométriques, expliquez par une méthode courte et facile* (Paris, 1687); *Traité des lignes du premier genre, expliquées par une méthode nouvelle et facile* (Paris, 1687); *Usage du compas de proportion … augmenté d'un traité de la division des champs* (Paris, 1688, 1691, 1700, 1736, 1748, 1794); *Usage de l'instrument universel …* (Paris, 1688, 1700, 1748); and *Methode de lever les plans et les cartes de terre et de mer, avec toutes sortes d'instruments, et sans instrumens….* (Paris, 1693, 1700, 1750, 1781).

His major works are *Dictionnaire mathématique, ou, idée générale des mathématiques*.… (Amsterdam-Paris, 1691), *translated and abridged by Joseph Raphson* (London, 1702); *Cours de mathématique, qui comprend toutes les parties les plus utiles et les plus necessaires a un homme de guerre, & à tous ceux qui se veulent perfectionner dans les mathématiques*, 5 vols. (Paris, 1693), also 3 vols. in 1 (Amsterdam, 1697), translated as *Cursus mathematicus: Or a Compleat Course of the Mathematicks*…, 5 vols. (London, 1712); and *Récréations mathématiques et physiques*…, 4 vols. (Paris, 1694, 1696, 1698, 1720, 1725, 1735, 1778, 1790; Amsterdam, 1698), translated as *Recreations Mathematical and Physical*…, (London, 1708); as *Recreations in Mathematics and Natural philosophy* …, *First Composed by M.Ozenam*…. *Lately Re composed by M. Montucla, and Now Translated into English … by Charles Hutton* (London, 1803,1814). rev. by Edward Riddle (London, 1840, 1844); and as *Recreations for Gentlemen and Ladies, or Ingenious Amusements*.…. (Dublin, 1756).

Among his other works are *Traité des fortifications* … (Paris, 1694), translated by J. T. Desaguliers as *Treatise of Fortification*…. (Oxford, 1711, 1727); *Nouveax élémens d' algebre* …, 2 vols. (Amsterdam, 1702); *Géographic et cosmographie* (Paris, 1711); *La perspective, théorique et pratique* (Paris, 1711, 1720); *La méchanique… tirée du cours de mathématique de M. Ozanam* (Paris, 1720); *La gnomonique…. tirée du cours de mathématique de M. Ozanam* (Paris, 1746); *and Traité de l'arpentage et du toisé, nouvelle édition, mise dans un nouvel ordre par M. Audierne*(Paris, 1779). Ozanam also published several articles in the *Journal des scavans*, including a proof of the theorem that neither the sum nor the difference of two fourth powers can be a fourth power.

His translations or editions of works by others include a revised and enlarged ed. of Adriaan Vlacq, *La trigonométrie rectiligne et sphérique… avec tables* (Paris, 1720, 1741, 1765); and *Les éléments d'Euclide du R. P. Dechalles … et de M. Ozanam … démontrés d'une manière…par M. Audierne* (Paris, 1753).

II. Secondary Literature. See Heinrich Zeitlinger, ed., *Bibliotheca chemico-mathematica* (London, 1921), I. 171, and II, 643; Moritz Cantor, *Vorlesungen über die Geshicte der Mathematik*, 2nd ed. (Leipzig, 1913), II, 770, and III, 102–103, 270, 364; Fountenelle, "Éloge…," in *Oeuvers diverses*, III (The Hague. 1729), 260–265; Charles Hutton, *Philosophical and Mathematical Dictionary*, II (London, 1815), 144; J. E. Montucla, *Historie des mathematiques*, II (Paris, 1799), 168; *The penny Cyclopaedia of the Society for the Diffusion of Useful Knowledge*, XVII (London, 1840), 111–112; and Edward Riddle, *Dr. Hutton's Philosophical Recreations* (London, 1840), v-vii.

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