lenient monarch, and the Fleet, a lax prison, so that Roe was able not only to minister to the Catholics inside the prison but to go out on parole. This arrangement ended at the time of the anti-Catholic Long Parliament. Roe was transferred to Newgate Prison and brought to trial on Jan. 19, 1642. After an initial refusal, Roe consented to be tried by a jury and was charged as a priest and seducer of the people. He was sentenced to be hanged, drawn, and quartered. On January 21 he said Mass before the other prisoners and made a short speech to them before his execution. He was beatified on Dec. 15, 1929 and canonized on Oct. 25, 1970, as one of the ENGLAND, SCOTLAND, AND WALES, MARTYRS OF.

Feast: May 4; Oct. 25.

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[G. FITZHERBERT]

ROEMER, THEODORE

Historian; b. Appleton, Wis., Jan. 19, 1889; d. Mt. Calvary, Wis., Jan. 7, 1953. He attended St. Joseph School, Appleton, and the preparatory seminary, St. Lawrence College, Mt. Calvary, Wisconsin. Professed in the Capuchin Order in 1907 and ordained by Archbishop Sebastian G. Messmer on July 13, 1913, he began teaching at St. Lawrence College in 1915. From 1919 to 1921 he taught canon law at St. Anthony Seminary, Marathon, Wisconsin. After several years of pastoral activity in the Milwaukee archdiocese, he entered the Catholic University of America, Washington, D.C., where he specialized in American Catholic church history. Upon the completion of his master's thesis, *The Leopoldine Foundation and the Catholic Church in the United States (1829–1839),* he devoted a year to study at the University of Louvain, Belgium, and to research in Germany and Italy. Returning to the Catholic University of America, he was awarded a doctorate in 1933. His doctoral study, *The Ludwig-Missionverein and the Church in the United States (1838–1918),* traced the historical contribution made by the Ludwig Missionverein of Munich to the progress of the Catholic Church in the United States. From 1933 until his death, Roemer taught at St. Lawrence College. He was the author of *Pioneer Capuchin Letters* (1936), *Ten Decades of Alms* (1942), *St. Joseph in Appleton* (1943), *The Alumni, St. Lawrence College* (1946), and a textbook, *The Catholic Church in the United States* (1950).

[R. DUSICK]

ROGATION DAYS

By ancient tradition in the Roman rite, the historical days on which a procession of penance and supplication was held. Because the LITANY of the Saints was sung during the procession, the name for these days in ancient documents is *Major* or *Minor Litanies*.

The title Major Litany is not given in opposition to the Minor Litany, but because of the greater solemnity of the occasion, the feast of St. Mark, (April 25). Neither the origin nor the theme of the rogation observance has anything to do with St. Mark. Of strictly Roman origin, the Major Litany was instituted to supplant an already existing pagan ceremony called the Robigalia held on this day. The pagan Romans went in procession down the *via Flaminia* as far as the Milvian Bridge and there offered the entrails of a dog and a sheep to the god Robigus. The objective they sought was to protect the sprouting crops from blight caused by rust (*robigo*). Chanting the Litany of the Saints, Christians followed the same processional route but ended it at St. Peter's basilica. The name Major Litany appeared for the first time during the pontificate of Gregory the Great (d. 604).

The Minor Litanies were begun around 470 by Mamertus, bishop of Vienne, France. Several days of penitential procession were held to invoke divine protection against a recurrence of the earthquake that had recently wrought such havoc in the city. This custom soon spread to other French localities and even to Rome under Leo III (d. 816). These processions were held on each of the three days that immediately precede Ascension Thursday.

See Also: PROCESSIONS, RELIGIOUS.

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[J. H. MILLER/EDS.]

ROGER BACON

English Franciscan scholastic philosopher and experimentalist; b. Ilchester, Somerset, before 1220 (according to some, 1214); d. *c.* 1292.

Life. He came of minor nobility. Having learned the rudiments of grammar and logic, probably at Oxford, he received his degree in arts from the University of Paris by 1237. In Paris he lectured on the new Aristotelian learning ''longer than any other master,'' at least until

Roger Bacon. (Archive Photos)

1247. Most of his commentaries and lecture notes from this period have not survived, but to this period probably belong the published notes on the *Physics* and *Metaphysics* of ARISTOTLE, the *De plantis* and *De causis* of pseudo-Aristotle, and the *Summulae logicales* of JOHN XXI (*Opera hactenus inedita,* ed. R. Steele, Oxford 1905–40). In 1247 he relinquished his teaching position in Paris to devote considerable time and money to experiments, languages, ''secret'' books, instruments, and astronomical tables. For the next ten years (1247–57) he studied and promoted these branches of learning, which he felt were being neglected by contemporaries of greater influence and prestige. The intensity of his labors and the peculiarities of his own personality brought him near to a physical breakdown. He entered the Franciscan Order in England probably in 1257. In the order he did not have the prestige he had expected or the freedom he had desired to write and lecture. Finding it impossible to communicate, he gave up in despair (*Op. tert.* 13). Return of illness necessitated a two-year respite from all serious work. When his health improved, circumstances worsened, for he seems to have become an advocate of the eschatological views of Abbot JOACHIM OF FIORE.

Having made the acquaintance of Raymond of Laon, a cleric in the service of Cardinal Guy le Gos de Foulques, later CLEMENT IV, Bacon insisted that the whole of current education needed to be revised and intimated that the necessary revision could be found in his writings. These views were related to the cardinal, who, on becoming pope in February 1265, demanded to see these writings. Bacon had been misunderstood, for he spoke not about works already completed but about those he could write if he had the necessary freedom, leisure, and money. On June 22, 1266, Clement again wrote to Bacon commanding him to send without delay and as secretly as possible the writings previously requested, notwithstanding contrary commands of any prelate or constitutions of his order. Bacon was unable to clarify the situation either by direct letters or by his messenger, William of Bonecor. Clement was still under the impression that all that had to be done was to make a legible copy of an existing work, a major contribution to knowledge and to the welfare of the Church. Since secrecy was imposed and funds were unavailable, Bacon used various subterfuges to obtain funds to compose, single-handed and without knowledge of his superiors, an encyclopedia of all the sciences, called *Opus maius* (ed. J. H. Bridges, 3 v. Oxford 1897–1900), which he sent to Clement in 1267 through his favorite pupil, John (see Little, *Grey Friars* 211). The manuscript was in four separate packets, including multiple diagrams, a map of the world (now lost), and a concave lens made at great expense. The work was divided into seven parts: causes and remedies of human ignorance and error; the services that sane philosophy can render to theology; necessity and nature of languages, mathematics, optics, and experimental science; and a discussion of moral philosophy. This was followed, prior to November 1268, by the *Opus minus* and *Opus tertium* (ed. J. S. Brewer, London 1859), which are synopses and developments of various sections of the main work.

For Bacon, languages, mathematics, and experimental sciences were of far greater importance to theology and the Church than the four popular sciences of grammar, logic, natural philosophy, and metaphysics, cultivated by the ''moderns.'' For him, nothing could be known without a knowledge of Greek, Hebrew, Arabic, and Chaldaean; many Latin words currently used could not be understood without a knowledge of Greek. In later years Bacon even wrote Greek and Hebrew grammars to overcome what he called an abysmal ignorance in the schools. Similarly, he considered mathematics a key to all the sciences and scorned all who failed to recognize this, even though Bacon himself was no mathematician. He made many suggestions concerning Biblical studies, chronology, reform of the calendar, geography, apologetics, ALCHEMY, and ASTROLOGY. Deeply influenced by the pseudo-Aristotelian treatise *Secretum secretorum,* he ardently defended alchemy and astrology. Although an ar-

dent advocate of optics and the experimental sciences, his contribution to these sciences was negligible.

For many years Bacon idolized ROBERT GROSSETESTE and ALEXANDER OF HALES because the former cultivated mathematics and languages and the latter gave up all worldly possessions to become a Franciscan friar. Later he blamed both for bringing about a deterioration in theology. He was also severely critical of BONAVENTURE, minister general of the Franciscans. He was particularly resentful of ALBERT THE GREAT and THOMAS AQUINAS, who ''presumed to investigate philosophy by themselves without a teacher'' and became ''masters in theology and philosophy before they were disciples.'' In his *Compendium philosophiae* (*c.* 1272) he returned to the treatment of his cherished languages, mathematics, optics, alchemy, and experimental sciences. The ''moderns'' with few exceptions, he wrote, especially the ''boy'' theologians of the Dominican and Franciscan Orders, despised and persecuted these sciences, for they entered religious life before the age of 20 without the benefit of a proper university training. At that time Bacon seems to have enjoyed considerable freedom to begin an encyclopedic work, only partially completed, comprising grammar, logic, mathematics, natural philosophy, metaphysics, and moral philosophy. The surviving sections, *Communia naturalia* and *Communia mathematica,* are the maturest expression of his thought.

Whatever freedom he did enjoy was brought to an end by Jerome of Ascoli (Pope NICHOLAS IV), minister general of the order (1274–79), who, prompted by many reports, condemned the teachings because they contained certain suspect novelties (*propter aliquas novitates suspectas*). These novelties were undoubtedly Joachite. Jerome even wrote to the Pope, Nicholas III, so that by his authority this dangerous doctrine (*illa doctrina periculosa*) might be completely extirpated. According to the *Chronicle of the 24 Generals* (*Archivum Franciscanum historicum* 3:360) Bacon himself was imprisoned, probably between 1277 and 1279. In the last of his writings, *Compendium studii theologiae* (1292), Bacon castigated the vices and defects of the whole of Christendom as well as the decline of theological studies in the schools of his day. A long tradition claims that he was buried in Oxford.

Teachings. Bacon was one of the earliest masters to teach the text of Aristotle in Paris. Like his Parisian master, ROBERT KILWARDBY, he interpreted Aristotle with the aid of Platonic sources, notably AVICENNA and AVICEBRON. Therefore Bacon never appreciated the true nature of Aristotelian philosophy (*see* ARISTOTELIANISM). Repeatedly insisting that ''without mathematics no science can be had'' (*Opus tertium,* ed. Brewer, 35, 64, 57), Bacon believed that the principles of natural science are to be found in mathematics. He considered the study of mathematics second in importance only to that of languages (*Opus maius* 1:97–108; *Opus tertium* 105–120); he even called it *prima scientiarum.* His view of the hylomorphic composition of all creatures, spiritual and corporeal, by a succession of forms is identical to that of Kilwardby and other Platonizing Aristotelians of the 13th century (*see* SCHOLASTICISM, 1). Bacon identified the agent intellect with God and adapted the illumination theory of AUGUSTINE to his own view of Aristotle. While retaining the basic views of AUGUSTINIANISM, insisting on the dynamic and normative role of universal ideas (*virtus regitiva universi*), he emphasized more than most 13th-century schoolmen the primacy of the individual, the natural termination of knowledge. This led him to appreciate the importance of experimental science. Hence in Bacon's philosophy natural phenomena are to be studied sedulously with experimentation and the aid of mathematics. Mathematics itself leads to metaphysics and the study of God.

Although Bacon was not a theologian, he rightly denounced the use of Peter Lombard's *Sentences* by masters in theology. Instead of lecturing on the Bible, as had been the custom, Alexander of Hales and RICHARD FISHACRE began to lecture on the *Sentences.* Bacon rightly saw this as a deterioration of sacred science. Moreover, he encouraged the study of languages indispensable for understanding the sacred text.

Influence. Bacon had no disciples to continue his work either inside or outside the Franciscan Order. Immediate posterity all but forgot his name. However, with the origin of modern science in the 17th century and renewed pride at Oxford for medieval Mertonians, Bacon acquired new though unfounded fame as an inventor, experimentalist, and precursor of modern experimental science. Fantastic legends grew rapidly and were repeated by countless authors. For this reason it is difficult to separate fact from fiction in historical accounts of Bacon's life.

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[J. A. WEISHEIPL]