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AUGUST, 1914

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The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the
Extension of the Religious Parliament Idea

Founded by EDWARD C. HEGELER



ROGER BACON.
1214-1914.

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Entered as Second-Class Matter March 26, 1897, at the Post Office at Chicago, Ill. under Act of March 3, 1879.
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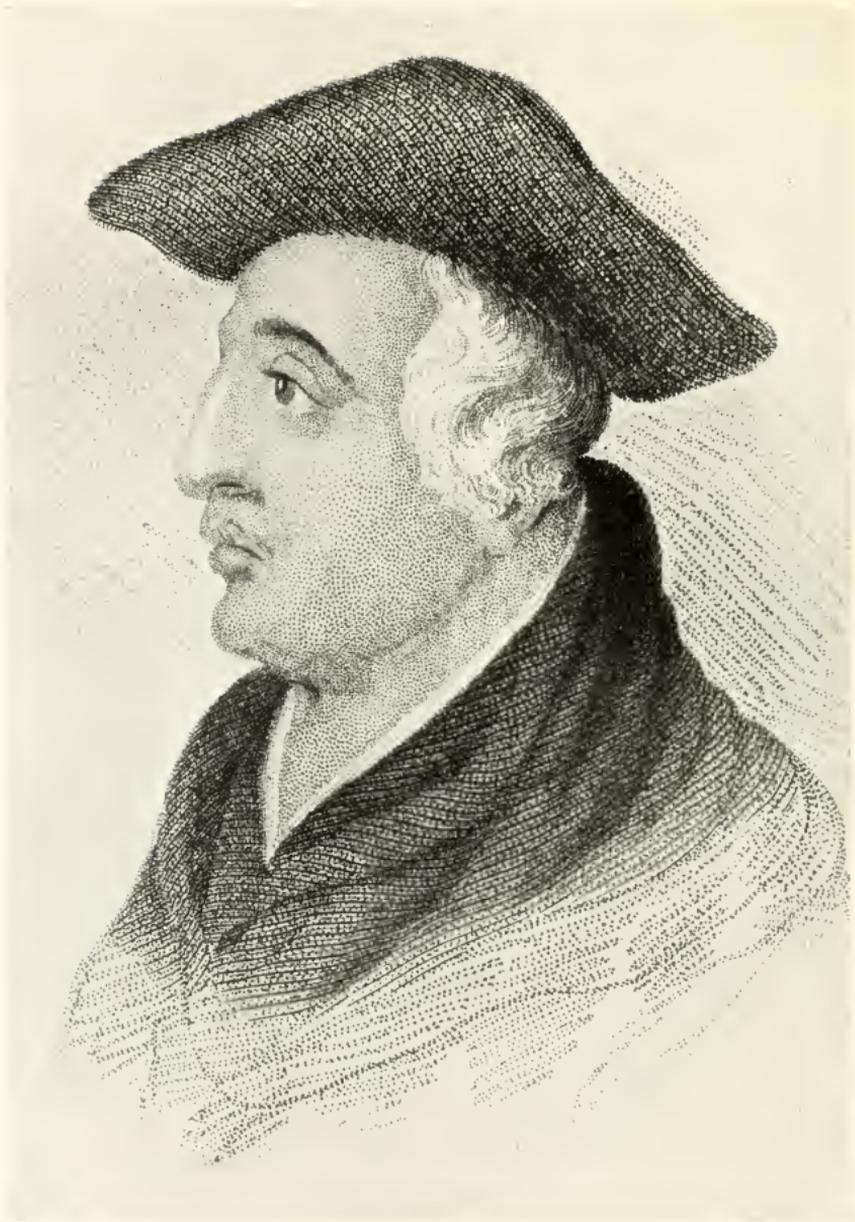
ISIS

REVUE CONSACREE A L'HISTOIRE ET
A L'ORGANISATION DE LA SCIENCE,
PUBLIEE PAR GEORGE SARTON

EN RÉSUMÉ *Isis* est à la fois la revue philosophique des savants et la revue scientifique des philosophes; la revue historique des savants et la revue scientifique des historiens; la revue sociologique des savants et la revue scientifique des sociologues. Conçoit-on encore un philosophe, un historien, un sociologue ignorant tout de l'évolution et de l'organisation scientifiques de l'humanité? Tout philosophe préoccupé de science, tout savant préoccupé d'idées générales, soucieux de regarder au-dessus des cloisons de sa spécialité *doit donc s'abonner à ISIS*. — Le tome I (1913/14) a paru: 826 p. gr. 8°, l'index seul occupant 58 colonnes. (Prix: 30 frs.) Deux grands portraits hors texte. Les exemplaires restants seront réservés de préférence aux souscripteurs du tome II. Prix du tome II: 15 frs. *Demandez le programme et des extraits d'Isis à l'administration à*

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Frontispiece to The Open Court.

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VOL. XXVIII. (No. 8)

AUGUST, 1914

NO. 699

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ROGER BACON.

BY THE EDITOR.

SEVEN hundred years ago, in 1214, Roger Bacon, easily the greatest man of the middle ages, was born. He was not a powerful king like Charlemagne (742 or 747-814), not a great pope like Gregory VII (1020-1085), not a great instigator of crusades like Bernard of Clairvaux (1091-1153), not a master in giving shape to church dogma like Anselm of Canterbury (1033-1109), not a great preacher like Eckhart (1260-1328), not a great devotional writer like Thomas à Kempis (1380-1471), not the founder of a religious order like St. Francis of Assisi (1182-1226),—he was far greater than all of them, he was a man of science. Indeed it is not impossible that he was the only true scientist that lived in the middle ages, and so he was in advance of his time by more than half a millennium; in his enthusiasm for science he foresaw the automobile and the flying machine in his predictions of what science could accomplish, and as a result he was treated as might have been expected. He was accused of black magic and was kept in prison for about twelve years.

In the days of Roger Bacon there was no doubt that he deserved no better fate. He was a mathematician and one of his hobbies was optics. Once when he was lecturing in the University of Paris—then the center of all intellectual life—he exhibited the spectrum to his audience, making God's glorious rainbow colors appear on the wall! The effect was remarkable. His hearers fled from the room in great agitation lest they would share in the curse of witnessing deeds of Satanic exorcism.

Roger Bacon's thoughts and methods would have been lost

and he would have become a mere myth of a sorcerer, had not one of the few admirers of his accomplishments who became pope, ascending the papal throne in 1265 under the name of Clement IV, requested him to write down his theories and send them to Rome, even if all his superiors were to forbid him. This happened in 1267. Unfortunately Pope Clement IV died in 1267, and Roger Bacon lost his powerful protector.

Philosophy in the middle ages was characterized mainly by the struggle between realism and nominalism. Realism in those days was very different from the realism of modern times. Medieval realism believed in the reality of ideas, considering them as entities or *res*; and thus it was practically an extreme idealism.



ROGER BACON.

From Crabb's *Universal Dictionary of Names*.

From *Popular Science Monthly*, LI, p. 147.

Nominalism rebelled against the authority of the firmly established realism, and was represented by Roscellinus, who claimed that ideas were mere names or *nomina*, and these names were nothing but words, *flatus vocis*. The greatest representatives of medieval realism were Johannes Scotus Erigena (c. 800-891) and Anselm of Canterbury. All the great men of scholasticism took part in this struggle between nominalism and realism. Prominent among them were Albertus Magnus (1193-1280), and above all Thomas Aquinas (1225-1274). The latter represents a kind of compromise with pagan philosophy, summed up in Aristotle, and Christian dogma. Realism remained victorious, the last prominent representative of nominalism being William of Occam (1270-1347). In the meantime a preparation for more scientific views came from the Ara-

bians, the greatest among them being Averroes (1126-1198), whose philosophy was transmitted to the Christian nations by the great Jew Moses Maimonides (1135-1204).

In the thirteenth century appeared Roger Bacon, a Franciscan monk who stands in glaring contrast to the spirit of the middle ages. He was imbued with a new spirit insisting upon the only true method of research, which is by experiment. Influenced by the Arabians and their Occidental followers, Roger Bacon understood the paramount significance of mathematics and applied it in the laboratory. But for all that we must not think that he possessed the results and applications of this basic principle of science. After all he remained in almost all important details the child of his age. He did not see the difficulties of Christian dogma, nor of the superstitions of the time. He still dabbled in astrology and wasted much thought and labor on topics of Biblical archeology. In fact these problems were favorite objects of investigation with him, for he was a faithful son of the church withal. He had bright visions of the future; but they were still visions, mere fanciful dreams, and the reality in which he lived remained the monkish conception of the world that surrounded him in life. Let us not for that reason think the less of him. When we consider what high value Isaac Newton placed upon his own explanations of the vision of John the Divine and the significance of the prophecies preserved in Revelations, we shall not judge harshly of Roger Bacon but shall perhaps appreciate him the more because we learn to understand better how difficult it was to break away from the traditions of medievalism.

In this number¹ we celebrate the septencentennial anniversary of Roger Bacon's birth. Honor to his memory!

¹The next number also will contain an article on "Philology and the Occult in Roger Bacon" from the pen of Prof. John S. P. Tatlock of the university of Michigan.