

phenomena and that it has need itself of an explanation. Brought up in the scholastic and peripatetic philosophy, he was naturally predisposed to accord more of reality to the corporeal substance, and his own reflections soon carried him much farther along the same line."

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The following, briefly stated, are the facts of Leibnitz's life.

Gottfried Wilhelm Leibnitz was born at Leipsic in 1646 and lost his father at the age of six years. He was very precocious, and from his infancy gave evidence of remarkable ability. At fifteen, he was admitted to the higher branches of study, philosophy and mathematics, which he pursued first at Leipsic and then at Jena. An intrigue not very well understood prevented his obtaining his doctor's degree at Leipsic, and he obtained it from the small university of Altdorf near Nuremberg, where he made the acquaintance of Baron von Boineburg, who became one of his most intimate friends and who took him to Frankfort. Here he was named as a councillor of the supreme court in the electorate of Mainz, and wrote his first two works on jurisprudence, *The Study of Law* and *The Reform of the Corpus Juris*. At Frankfort also were written his first literary and philosophical works and notably his two treatises on motion: *Abstract Motion*, addressed to the Academy of Sciences at Paris, and *Concrete Motion*, addressed to the Royal Society at London. He remained with the Elector till the year 1672, when he began his journeys. He first went to Paris and then to London, where he was made a member of the Royal Society. Returning to Paris, he remained till 1677, when he made a trip through Holland, and finally took up his residence at Hanover, where he was appointed director of the library. At Hanover he lived for ten years, leading a very busy life. He contributed to the founding of the *Acta Eruditorum*, a famous journal of learning, which served the purpose of the later Academies. From 1687 to 1691, at the request of his patron, Duke Ernst-Augustus, he was engaged in searching various archives in Germany and Italy for the writing of the history of the house of Brunswick. To him the Academy of Berlin, of which he was the first president, owes its foundation. The last fifteen years of his life were given up principally to philosophy. In this period must be placed the *New Essays*, the *Theodicy*, the *Monadology*, and also his correspondence with Clarke, which was interrupted by his death,—November 14, 1716. During the life-time of Leibnitz, aside from the articles in journals, only some five of his writings were published, including his doctor's thesis, *De Principio Individui* (1663), and the *Théodicée* (1710). After his death (1716) all his papers were deposited in the library at Hanover, where they are to-day, a great part of them (15,000 letters) still unpublished.

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#### SIR JOHN MAUNDEVILLE ON THE CIRCUMNAVIGATION OF THE GLOBE.

Now that the causes of Columbus' memorable voyage which resulted in the discovery of America are under discussion, the sources of our information will doubtless be exhaustively scrutinised, but there is an item of evidence which, though well known by scholars, has received little attention from the public and is not without significance.

Whether the map and the two letters of Toscanelli to Columbus are forgeries, as Mr. Henry Vignaud seeks to prove, or not, are we wrong in believing that the

idea was quite commonly held by educated men of that time that Cathay and the Indies might be reached by sailing westward across the Atlantic?

Sir John Maundeville is believed to have written his *Voyages and Travels* in the year 1355. In his chapter describing the "Isle of Lamary" he goes on to say :

"In that Land and in many other beyond that, no Man may see the Star Transmontane (or Polar Star), that is clept the Star of the Sea, that is unmoveable and that is toward the North, that we call the Lode-star. But Men see another Star, the contrary (or opposite) to it, that is toward the South, that is clept Antarctic. And right as the Ship-men here take their advice and govern them by the Lode-star, right so do Ship-men beyond these Parts govern them by the Star of the South, the which Star appeareth not to us. And this Star that is toward the North, that we call the Lode-star, appeareth not to them. For which cause Men may well perceive, that the Land and the Sea be of round Shape and Form; for the Part of the Firmament showeth in one Country that sheweth not in another Country. And Men may well prove by Experience and subtle Compassing of Wit, that if a Man found Passages by Ships that would go to search the world, he might go by Ship all about the world and above and beneath.

"The which thing I prove thus after what I have seen. For I have been toward the Parts of Brabant, and beheld by the Astrolabe that the Star that is clept the Transmontane is 53 Degrees high; and more further in Germany and Bohemia it hath 58 Degrees; and more further toward the Septentrional (or Northern) Parts it is 62 Degrees of Height and certain Minutes; for I myself have measured it by the Astrolabe. Now shall ye know, that over against the Transmontane is the tother Star that is clept Antarctic, as I have said before. And those 2 Stars move never, and on them turneth all the Firmament right as doth a Wheel that turneth on his Axle-tree. So that those Stars bear the Firmament in 2 equal Parts, so that it hath as much above as it hath beneath. After this, I have gone toward the Meridional Parts, that is, toward the South, and I have found that in Lybia Men see first the Star Antarctic. And so the more further I have gone in those Countries, the more high I have found that Star; so that toward the High Lybia it is 18 Degrees of Height and certain Minutes (of the which 60 Minutes make a Degree). After going by Sea and by Land toward this Country of which I have spoken, and to other Isles and Lands beyond that Country, I have found the Star Antarctic 33 Degrees of Height and some Minutes. And if I had had Company and Shipping to go more beyond, I trow well, as certain, that we should have seen all the Roundness of the Firmament all about.

"By the which I say to you certainly that Men may environ all the Earth of all the World, as well underneath as above, and return again to their Country, if that they had Company and Shipping and Conduct. *And always they should find Men, Lands and Isles, as well as in this Country.*

"And therefore hath a Thing befallen, as I have heard recounted many times when I was young, how a worthy Man departed sometime from our Countries to go search the World. And so, he passed Ind and the Isles beyond Ind, where be more than 5000 Isles. And so long he went by Sea and Land, and so environed the World by many Seasons, that he found an Isle where he heard Folk speak his own Language, calling on Oxen at the Plough, such words as Men speak to Beasts in his own Country; whereof he had great Marvel, for he knew not how it might be. But I say that he had gone so long by Land and by Sea, that he had environed all the Earth; and environing, that is to say, going about, he was come again unto his own Borders; and if he would have passed further, he had found his

Country and Things well-known. But he turned again from thence, from whence he was come. And so he lost much painful Labour, as he himself said a great while after, when he was come Home. For it befell after, that he went unto Norway. And there a Tempest of the Sea took him, and he arrived in an Isle. And, when he was in that Isle, he knew well that it was the Isle, where he had heard speak his own Language before and the calling of the Oxen at the Plough; and that was a possible Thing."

This book was written over a century before the voyage of Columbus. It was intended as a popular exposition of geographical knowledge and was so widely circulated that the British Museum alone has about a hundred different printed editions in all European languages and there are over three hundred different manuscript versions extant. And in this fourteenth century book of travels we find it stated as something more than a theory, not only that the Earth can be circumnavigated but that in its circumnavigation would be found "Men, Lands and Isles, as well as in this Country."

Little attention has been of late accorded Maundeville's *Travels* because it is alleged the book is mainly cribbed from other authors and even that no Sir John Maundeville ever existed. However, in this connection it matters nothing whether the *Travels* was written by Maundeville or Jehan de Bourgogne nor whether it is a compilation from the works of Hetoum, Odoric, William of Boldensele and others. If the latter be true it only shows the more general diffusion of the matter the *Travels* contains.

We know from Aristotle that in his day the globular form of the Earth and the possibility of sailing west to India were discussed. Eratosthenes and Seneca both maintained that the voyage could be made, and Strabo believed that other inhabited worlds lay beyond the confines of the then known world. Although during the Middle Ages these views were lost sight of and the geographical theories of Cosmos Indicopleustes generally accepted except by the learned, the travels of Carpini, Rubruquis, Marco Polo and others in the thirteenth century had revolutionised geographical knowledge. In 1267 Roger Bacon is discussing the distance from Spain west to Asia; in 1410 we find a similar discussion in the *Imago Mundi* of Alliacus. The passage quoted from Maundeville adds further weight to the conclusion that the idea of a westward route to the Indies was no novelty in the fifteenth century. And it is known that Columbus was familiar with these views.

EDWARD LINDSEY.

Warren, Pa.

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#### PETER RIJNHART IN TIBET.

Our readers may remember occasional notes and communications made on Dr. Peter Rijnhart, a missionary of rare enthusiasm and energy bent on converting the Tibetans to Christianity. He had tried to enter the country from the south, but did not succeed. So he decided to try the longer and more dangerous way through China.

He was not sent by any Church or Board of Missions, but went on his own responsibility, a free lance for the propagation of Christianity, supported by a few friends, among whom the Rev. Charles T. Paul, pastor of the Church of Christ, Toronto, Canada, has done much to support his cause and start him on the way to Tibet.