Danti, Egnatio (Pellegrino Rainaldi) | Encyclopedia.com

(*b*. Perugia, Italy, April 1536; *d*. Alatri, Italy, 1586)

cosmography, mathematics.

Danti's father, Giulio, and his grandfather, Pier Vincenzio, were very well–read in Italian literature and in astronomy. The Danti family was originally named Rainaldi, but contemporaries of the grandfather, admiring his talents, began to call him Dante or Danti. The new name was taken by Giovanni Bautista, pier Vincenzio's brother, who was well known for his work in mathematics and mechanics and who, according to contemporary reports, in 1503 made what appears to have been a successful flight.

At the age of thirteen Danti, having changed his name form Pellegrino to Egnatio, entered the Dominican order. His reputation as a scholar in science and the arts reached Cosimo I de' Medici, perhaps through his brother Vincenzio, a well–known sculptor at the court of the grand duke toward the end of 1562 or early in 1563. Cosimo I ordered him to prepare maps for his collection and a large terrestrial globe, which is still in existence, Cosmo's admiration for his cosmographer later grew to the point that, in 1571, he wrote to the general of the Dominical order, requesting permission for Danti to reside in the palace. While preparing the maps. Danti also did other work; and Cosimo I commissioned him to study reform of the calendar, which was later carried out by Gregory XIII.

Ever since the seventh and eighth centuries chronologists had noted that the length of the year as determined by Julius Caesar, which was the basis of the calendar then in use (the Julian calendar), did not correspond to the true course of the sun. In 45 b.c. Caesar, at the suggestion of the Alexandrian astronomer Sosigenes, had determined that the year should be 365 days, five hours, forty–eight minutes, and forty–six seconds. The value was eleven minutes greater than the true one, and by the time of Danti the error, which had been increasing for sixteen centuries, amounted to eleven days. The vernal equinox and the summer solstices should have fallen, respectively, on 21–22 march and 21–22 June. In order to establish the displacement in days, Danti, with the permission of the grand duke, constructed on the façcade of the church of Santa Maria Novella an astronomical quadrant and an equinoctial armillary. By means of the latter Danti was able to observe the vernal equinox of 1574 and found that it fell on 11 March. Danti had also wanted to construct a large gnomon in Santa Maria Novella, but the death of Cosimo I prevented him from completing the work.

In 1569 Danti published the *Trattato dell'uso et della fabbrica dell'astrolabio*, which was reprinted in 1578. In 1579 he published the *Sphere* of Sacrobosco, translated by his grandfather, which he enlarged with his own comets. His Italian translation of Proculus' *Sphere* appeared in 1573. These were the earliest astronomical treatises in Italian.

Cosimo I had commissioned Danti to give public lectures in the mathematical sciences, but he was obliged to abandon this assignment in 1574, following the death of Cosimo I, when he lost the favor of the new grand duke, Francesco. Within twenty–four hours of the succession he was transferred to Bologna, where a year later he became professors of mathematics. In Bologna he was bale to construct a large gnomon in the church of San Petronio, where he made observations on the exact date of the spring equinox.

In 1577 Danti returned to Perugia, where he was commissioned to draw up the topographical map of Perugia and the surrounding countryside. The pope later pointed him to enlarge the map to include all the papal states: Emilia–Romagna, Umbria, Latium, and Sabina. In 1580 pope Gregory XIII called Danti to Rome to reform the Calender; and at the Vatican Danti constructed a meridian inside the Tore de' Veneti, in the room that later became known as the Calendar Room. In the same year Pope Gregory ordered him to depict in the Belvedere Gallery the various regions of Italy, in thirty–two large panels. On the completion of this work in November 1583, the pope appointed Danti bishop of Alatri. Even with this new office Danti found time to prepare, with corrections and additions, the second edition of Latino Orsini's *Trattato del radio latino*. In the same year Pope Sixtus V called Danti to Rome, to assist the architect Domenico Fontana in raising the obelisk in St. Peter's Square. On his return from Rome, Danti, although unwell, left Alatri for the transfer of a monastery. He contracted pneumonia, of which he died at the age of forty–nine.

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