

# Biographical Encyclopedia of Astronomers

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Krebs, Nicholas

Born Cusa, (Rhineland-Palatinate, Germany), 1401

Died (Germany), 1464

Nicholas Krebs is generally regarded as a key transitional figure between the Middle Ages and the Renaissance. He gave the study of the Universe a legitimacy that would be exploited by the cosmologists of the 17th and 18th centuries

Krebs' father was a boatman on the Moselle River. In 1413, he joined the Brothers of the Common Life at Deventer in the Lowlands, a group of mystics devoted to experiencing unity with God, inspired by a widely influential book of the time, *\*Imitatio Christi\** (Imitation of Christ). Krebs went on to study philosophy, law, mathematics, the sciences, theology, and the arts at the universities of Heidelberg, Rome, Cologne, and Padua, where he received his doctorate in law. After his ordination in 1433, he pursued a series of ecclesiastical appointments, culminating in his becoming cardinal in 1448 and Bishop of Brixen in 1450.

Krebs's most important philosophical innovation—the concept of the identity of opposites (*coincidentia oppositorum*), developed in his major philosophical work, *De Docta Ignorantia* (Of Learned Ignorance, 1440)—is the idea that the distinctions and oppositions among finite beings resolve into unity at the absolute level. His arguments are remarkable for their analytical sophistication. Draw, for instance, a series of larger and larger circles, all of which touch a straight line at a point. As the circles get larger, the more the curve "flattens out" and approaches the straightness of the line, so that if you could thus draw an *infinitely large circle* and place it against the line, there would no longer be any difference between the "curved" line of the circle and the straight line. In this precise way, Krebs argues that in the infinite all the opposites become one; thus, his often-misunderstood "mystical" thesis that "everything is everything."

Inspired by both Neoplatonic philosophy and 13th-century mysticism, Krebs's thought developed in marked opposition to scholastic Aristotelianism. Striving for a synthesis of, on the one hand, mathematical and experimental knowledge and, on the other, mysticism and knowledge, Krebs made brilliant and original use of analogies from mathematics. He built a system of epistemology and metaphysics in which the categories of reason, with their opposites and contradictions, give us at best only a limited and inadequate representation of reality that in itself is beyond our direct access and understanding. Krebs's work thereby anticipated the great system of Immanuel Kant. Reason is by its very nature discursive, and because our thinking is discursive, any conclusions drawn upon it are attained through a series of inferences and not by direct insight. Although it is possible for the intellect to transcend these limitations through intuitive cognitions perceived all at once, our language cannot adequately express these intuitions because it necessarily relies on categories, oppositions, and contradictions that exist only at the finite, relative level of immediate experience. The unity of opposites in ultimate reality can therefore never be directly or fully attained by us; however, once the mind

sees that this cannot be attained, it is then capable of transcending the very linguistic and conceptual limitations once it understands their necessity.

Another fascinating upshot of Krebs' line of thinking is that in studying the Universe we are studying God. This is an idea that reverberated throughout the Renaissance, especially as brought to fruition by scientists like Galileo Galilei, who sought to study nature directly rather than through official scriptures to learn about God and the origin of the Universe. The Universe, according to Krebs, is a theophany, an "appearance of God." In anticipation of the cosmology of Giordano Bruno and Baruch Spinoza, Krebs viewed the Universe as endless unfoldings of God; the present "expansion" of existence is, according to his theory, the result of a divine "contraction" from which the unity of God unfolds into multiplicity, an anticipation of 20th-century cyclical cosmological theory. The Universe is therefore itself infinite, which led Krebs to reject the idea of fixed points in space and time in a way that further anticipated 20th-century developments in the relativity of space and time as pioneered by Albert Einstein. No place in the Universe—neither on Earth nor on the Sun—is a privileged position. All judgments about location must therefore be relative. Krebs then even went on to conclude that the geocentric view of the Solar System expressed by the Old Testament is false.

According to Krebs, each individual entity in the Universe is a manifestation of the whole, forming a harmonious system in which each is both unique and part of the whole. His revival of the key phrase from Anaxagoras, "everything is in everything," states that everything mirrors the entire Universe, just as conceived in Gottfried Leibniz's subsequent theory of monads. The whole of being is in everything, and everything is in the whole. And anticipating both Spinoza and Leibniz still further, he concluded: "all things are what they are, because they could not be otherwise nor better."

The ultimate goal of all inquiry, described in Krebs' final work, *De Visione Dei* (Vision of God, 1453), is the transcendence of the limitations of sensory knowledge to attain, through intellectual intuition, a vision that goes beyond reason, logic, and language, thereby returning the finite to the infinite and allowing us to achieve a mystical union with the Universe. We are then free to live out the rest of our lives in mystical contemplation of the oneness of all things, a transcendental bridge between the relative, finite world and the absolute, infinite Universe.

*Daniel Kolak*

### **Alternate names**

Nicholas Cusanus (Nicholas of Cusa)

### **Selected References**

Cassirer, Ernst (1994). *Individuell und Kosmos in der Philosophie der Renaissance*. Wissenschaftliche Buchgesellschaft

Hopkins, Jasper (trans.) (1985). *Nicholas of Cusa on Learned Ignorance: A Translation and an Appraisal of De Docta Ignorantia*, 2nd ed. Minneapolis: A. J. Banning Press.

Nicholas of Cusa (1979). *Nicholas of Cusa on God as Not-other: A Translation and an Appraisal of De Li Non Aliud*, translated by Jasper Hopkins. Minneapolis: University of Minnesota Press.

—— (1986). *De Ludo Globi: The Game of Spheres*, translated by Pauline Moffitt Watts. New York: Abaris Books

—— (2001). i, translated by Jasper Hopkins. 2 vols. Minneapolis: A. J. Banning Press.

Yamaki, Kazuhiko (ed.) (2002). *Nicholas of Cusa: A Medieval Thinker for the Modern Age*. Richmond, Surrey: Curzon Press.