

1. Record Nr.	UNINA9910254791803321
Autore	Raynaud Dominique
Titolo	Studies on Binocular Vision : Optics, Vision and Perspective from the Thirteenth to the Seventeenth Centuries / / by Dominique Raynaud
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-42721-0
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XI, 297 p. 90 illus.)
Collana	Archimedes, New Studies in the History and Philosophy of Science and Technology, , 1385-0180 ; ; 47
Disciplina	612.84
Soggetti	History Philosophy and science Geometry Optics Electrodynamics Ophthalmology Architecture History of Science Philosophy of Science Classical Electrodynamics Architectural History and Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	1. Perspectiva Naturalis/Artificialis -- Part I. Errors -- 2. Knowledge and Beliefs Regarding Linear Perspective -- 3. Understanding Errors in Perspective -- 4. Fact and Fiction Regarding Masaccio's Trinity Fresco -- Part II. Theory -- 5. Ibn al-Haytham on Binocular Vision -- 6. The Legacy of Ibn al-Haytham -- 7. The Rejection of the Two-Point Perspective System -- Part III. Sifting the Hypotheses -- 8. The Properties of Two-Point Perspective -- 9. The Hauck–Panofsky Conjecture Regarding Curvilinear Perspective -- 10. The White–Carter Conjecture on Synthetic Perspective -- 11. De Mesa Hypothesis Regarding the Arithmetic Construction of Perspective -- Conclusion -- Appendix 1: Error Analysis and Perspective Reconstruction -- Appendix

Sommario/riassunto

This book clarifies the interrelationship between optics, vision and perspective before the Classical Age, examining binocularity in particular. The author shows how binocular vision was one of the key juncture points between the three concepts and readers will see how important it is to understand the approach that scholars once took. In the Middle Ages and the Renaissance, the concept of Perspectiva – the Latin word for optics – encompassed many areas of enquiry that had been viewed since antiquity as interconnected, but which afterwards were separated: optics was incorporated into the field of physics (i.e., physical and geometrical optics), vision came to be regarded as the sum of various psycho-physiological mechanisms involved in the way the eye operates (i.e., physiological optics and psychology of vision) and the word ‘perspective’ was reserved for the mathematical representation of the external world (i.e., linear perspective). The author shows how this division, which emerged as a result of the spread of the sciences in classical Europe, turns out to be an anachronism if we confront certain facts from the immediately preceding periods. It is essential to take into account the way medieval scholars posed the problem – which included all facets of the Latin word perspectiva – when exploring the events of this period. This book will appeal to a broad readership, from philosophers and historians of science, to those working in geometry, optics, ophthalmology and architecture.
