

Vincent Ilardi. *Renaissance Vision from Spectacles to Telescopes*.

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More than three decades ago Vincent Ilardi, a diplomatic historian, discovered correspondence of the 1460s in which the Sforza court in Milan ordered eyeglasses in Florence. He published his findings in this journal in 1976. Ilardi argued that the large quantities of eyeglasses that the Dukes of Milan ordered in these letters

showed that Florence was a leading manufacturer of eyeglasses in the fifteenth century. The orders were for convex lenses to correct presbyopia, specified according to categories of age from thirty to seventy years, as well as for concave lenses to correct myopia (in two grades). This was, in fact, the first mention in writing of concave eyeglasses, showing them to be readily available by the mid-fifteenth century. Convex eyeglasses had already been invented around 1286.

In his new book *Renaissance Vision from Spectacles to Telescopes*, Ilardi brings new archival evidence to light to support, refine, and contextualize his earlier claims. The book traces the history of eyeglasses from their invention in the late thirteenth century in Pisa to the invention of the telescope in the early seventeenth century. Ilardi is primarily interested in writing economic history. The book discusses the organization of the spectacle trade, the makers of eyeglasses, their prices and the demand for eyeglasses, and the international trade of spectacles. The archival and archeological evidence that Ilardi brings together in this study convincingly shows that eyeglasses were not luxury goods, but were within reach of most people as well as available in most European countries in the fifteenth century. He also finds the explanation of important developments in the history of spectacles in the economic organization of late medieval society. For example, to account for eyeglasses having been invented in the late thirteenth century, and not in antiquity — in spite of evidence of the use of lenses and mirrors for various other purposes than as vision aids — Ilardi claims that “in the intensely commercial and competitive society of late medieval Italy with its well developed and dispersed glass/crystal industry, where merchants and artisans wrote account books and correspondence in the highly abbreviated, cursive commercial script (known as the *mercantesca*) . . . an expanding use of vision aids of all kinds was required” (48).

Similarly, Ilardi also argues that Florence excelled in the spectacle trade in the fifteenth century, partly because “artisans/merchants’ shops, so conveniently concentrated in the quarter of S. Giovanni in Florence [where also a good number of *occhialai* were situated], served as meeting places for colleagues and various customers including intellectuals” (200). An important subthesis of the book is, indeed, that Florence, and not Venice (despite its thriving glass industry), was the premier center of spectacle-making in the fifteenth century. The true treasure of this book is the list of fifty-two Florentine spectacle-makers, including four friars, from the early fifteenth to the middle of the sixteenth century, published together with the location of their shops in the appendix. Ilardi’s discussion of this newly-unearthed archival evidence supports his earlier claims about the premier status of Florence in the spectacle trade in the fifteenth century, before other centers took over in the sixteenth century. It remains to be seen on the basis of new evidence related to other centers of spectacle-making if Florence did not already have competition in the fifteenth century.

The final chapter traces the development from eyeglasses to the telescope with the question of why we had to wait so long after the invention of eyeglasses to see

the telescope appear looming prominently. Ilardi does not fully succeed in answering this question, mostly because, by his own admission, “we know very little about the methods to improve the quality of lenses before the end of the sixteenth century” (224). It will only be possible to fill this gap by closely investigating the archeological finds, partly brought together by Ilardi in his book, for material evidence of the evolution and improvement of grinding and polishing techniques between the fourteenth and sixteenth centuries. Almost simultaneously with this book, Rolf Willach published the results of such material investigations, unfortunately too late for Ilardi to take advantage of them in his book (see “Der lange Weg zur Erfindung des Fernrohrs,” in Jürgen Hamel and Inge Keil, *Der Meister und die Fernrohre* [2007]). However, it should not be doubted that Ilardi’s findings contribute to the emergence of a new image of the development of Renaissance optics. Moreover, this book should also appeal to all those interested in the connections between commerce and the emergence of early modern science.

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