THREE LATE-SEVENTEENTH CENTURY
ITALIAN TELESCOPES, TWO SIGNED BY PAOLO BELLETTI
OF BOLOGNA

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Three Italian late-seventeenth century telescopes and
a stand have been examined in detail. The constructional
characteristics are tabulated, and the arrangement of the
lenses shown in diagrams. Some preliminary comparisons
are made with telescopes produced elsewhere in Europe.

1) INTRODUCTION

Modern studies on the history of the telescope have treated the
instrument as part of the equipment in an observatory, and have not, in
general, given attention to the use of the telescope as a 'philosophical'
instrument. The observatory telescope is given considerable attention in
the books by King and by Riekher 1, and there is the classic study of the
origins of the instrument by De Waard 2. North has written on Thomas
Harriot and his use of a telescope before Galileo 3; Rosen has consid-
ered how Galileo first heard of the invention 4; and Van Helden descri-

1 H. C. King, The History of the Telescope (London, 1955); Rolf Riekher,
Fernrobre und ihre Meister. Eine Entwicklungsgeschichte der Fernrohrtechnik (Berlin,
1957).
2 C. De Waard Jr, De uitvinding der verrekijkers. Eene bijdrage tot de beschavings-
geschiedenis (The Hague, 1906).
3 John North, "Thomas Harriot and the First Telescopic Observations of Sunspots",
129-65.
4 E. Rosen, "When did Galileo make his First Telescope?", Centaurus, II (1951),
bes the early, two-lensed astronomical telescope. Pedersen has published an important paper on the optical glass and lenses that were available to Galileo. Bonelli and Van Helden have shown, by using manuscript archives, how telescopes by Divini and Campani were tested for practical merit by using a standard test object. Too many studies on the history of science deal with scientific instruments in a literary manner (when they notice them at all), and not from a technical viewpoint. Who thought of it first, and who named it, are matters worthy of attention, but the grave difficulties in making optical quality glass can too easily be overlooked, as can the related technical problem of grinding and polishing lenses. For this reason Pedersen’s paper is particularly welcome. It must be stressed that there are technical frontiers to be overcome with any invention.

When it comes to the actual construction of the telescope, the makers thereof, and the market demand, there are remarkably few modern studies. Bedini has written more on the subject than any other scholar, in particular on the illustrations of telescopes from the early to mid-seventeenth century; on the optical workshop equipment of Giuseppe Campani in late-seventeenth century Rome; and on the making of telescope tubes.

One aspect of the construction of telescopes made for the general market has been the subject of a paper by the present author. Thirty-five telescopes and thirty-five microscopes made between 1660 and 1750 in England were examined. What all the instruments have in common is that they are made of pasteboard covered in leather or vellum, and decorated with gold-tooled motifs. By studying the motifs

6 Olaf Pedersen, “Sagredo’s Optical Researches”, Centaurus, XIII (1968), 139-50.