

Book Reviews

MARTIN KEMP, *Leonardo da Vinci. The marvellous works of nature and man*, London, J. M. Dent, 1981, 4to, pp. 384, illus., £14.95.

The title of this beautifully-produced book gives the key to its content.

Giambattista Venturi in 1797 was the first to emphasize the scientific importance of Leonardo's studies of the works of nature. During the following century, there was a vague, exaggerated admiration of Leonardo's achievements in science. However, the artistic side of Leonardo's activity, though so small in quantity, was so rich in quality that many books have been devoted to it; and it raises the question whether there is anything more to be said. The answer is emphatically yes, and Martin Kemp in this book gives us a signpost as to the whereabouts of the still-unexplored Leonardo.

Approaching Leonardo's work from the point of view of art history, he does not dismiss Leonardo's observations and experiments on the "works of Nature" as "mere science". He sees that Leonardo infused his science into his artistic works. In this approach he develops the views of Gombrich and Heydenreich. Kemp's analyses of each of Leonardo's paintings thus acquires a new, fresh dimension. His point of view is made clear in the first sentences of his preface, "This is intended to be a book about Leonardo as a whole. I have endeavoured to capture the unity of his creative intellect . . .". This is a very ambitious undertaking. How far is it successful?

The answer depends largely on the reader's points of view, of which three are fundamentally different. Is the reader interested in Leonardo's biography, his art, or his science? In this book a successful integration is made from the artistic viewpoint.

Kemp has chosen to present Leonardo's progress chronologically in biographical form. This has the great advantage of revealing Leonardo's different opinions at different stages of his life as reflected in his artistic works. It has the disadvantage of fragmentation and an incompleteness, most evident in his account of Leonardo's first Florentine period, where the influence of the Platonic entourage of Lorenzo de' Medici on this "child of Florence" is played down in spite of the heading of Part I, "Leonardo da Firenze". In this period the basis of perspective takes the limelight. Giotto, Brunelleschi, Masaccio, and Alberti hold the centre of the stage in conjunction with "Verrocchio and Co.". This leads to a revealing analysis of Leonardo's painfully diligent construction of the *Adoration of the Magi*. It is interesting to see in Plate 27 showing Leonardo's studies of the "speaking hands", the hand of the Magus holding the lid of the incense pot behind the Virgin's right shoulder which appears in the subsequent painting. Leonardo's mechanical inventions of this early period are widely divorced from his artistic work except in so far as his drawings already reflect a mastery of perspective.

In Milan, Leonardo's creative intellect rises like a sun into a spherical brilliance impossible to describe in words. Kemp well summarizes Leonardo's attitude to his sources through the medium of the list of books in Leonardo's possession. The confluence of architecture and anatomy is beautifully illustrated in the drawings of the skull where the "senso commune" and the fulcrum (*polo*) of the skull balanced on the cervical vertebrae are located geometrically in a brilliant concordance with the anatomical drawings (Plate 37). Incidentally, Leonardo's erroneous scheme of the brachial plexus (Fig. 24) was not derived from Mondino. It was one of Leonardo's own visual anatomical hypotheses.

Leonardo's view of a divine order of creation by which Nature's laws governed both macrocosm and microcosm is well presented. This analogy, like his early rules of perspective, suffered severe trauma from his own later observations. However, such blows were not so devastating as to make Leonardo abandon either completely. He modified them with each incompatible observation. Sometimes in pursuit of natural laws he devised dramatic transformations comparable to his *ludi geometrici*.

Leonardo's interest in creating artistic visual illusions of truth, and his ingenuity in achieving this, are manifest in both artistic and scientific fields. A good example of this is found in what

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Kemp neatly calls, the “fantasia”, expressed by the painting of the *Last Supper* in which the perspectival illusion is interestingly explained. In the scientific field, similarly inspired ingenuity is found in Leonardo’s geometrical transformations.

The physiological truth so beautifully symbolized in the *Leda and the Swan* and the portrait of a *Lady on a Balcony* (the *Mona Lisa*) is here interpreted as “the procreative powers of all living things”. This exemplifies the author’s insight into the richness of Leonardo’s mind.

This book is full of insights which enrich the artistic interpretations offered; a feature which will make it exceptionally welcome to art historians. For historians of science it provides glimpses of the way from rigid mathematical exactitude into spatial transformations of the truth. This has been largely lost since algebra subjugated geometry as the chosen language of science. But spatial analysis was Leonardo’s great and unique contribution to the unification of art and science. His every painting and drawing is charged with his science in the form of his physics of light and shade, perspective, and the geometry of forces acting on all objects, be they rocks or men. Martin Kemp’s fluent expression of his awareness of this is to be warmly welcomed.

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MARY C. GILLETT, *The Army Medical Department 1775–1818*, Washington, D.C., Center of Military History (US Army), 1981, 8vo, pp. viii, 299, illus., \$11.00.

By the most diligent research, Dr. Mary C. Gillett has skilfully picked her way through a mass of conflicting historical material to select, with great perception and clarity, the significant events which provided the milestones in the evolution of the American Army medical system. It is an all-too-familiar story of ineffectual central control, makeshift organization, confused legislation, ill-defined responsibilities, and blurred chains of command. Personal, professional, and unit rivalries prevented the collaboration necessary for the provision of medical facilities and the transport of casualties and supplies during the ebb and flow of battle. This ranged over territory either frozen in snow and ice or scorched by burning heat, so that the book is as much a testament to the ragged, often starving soldiers, militiamen, and volunteers exposed to raging epidemics of smallpox, typhus, malaria, dysentery, and other diseases, as to the inadequately trained, equipped, and disciplined regimental surgeons, knee-deep in the blood and water of their trenches, or their hospital counterparts struggling with a massive influx of casualties in unsavoury and insanitary buildings.

Dr. Gillett’s limpid literary style makes for enjoyable reading and her opening chapter on contemporary medical practice provides a yardstick by which the performance of her American surgeons might be judged. She could, with profit, have provided similar synopses of each campaign to enable the reader the better to orientate himself amidst descriptions of the various engagements and to draw more meaningful conclusions. In fact, as the author explains, documentation was so poor that records are incomplete and overall statistics difficult to establish. Despite this handicap, Dr. Gillett has provided an admirable concluding chapter on inferences to be drawn. This all pointed to the need for strong central administration. Yet, in spite of the lessons of the Revolutionary War, the War of 1812 found the Army again unprepared, and it was not until 1818 that the Army Medical Department was finally established on a permanent basis.

Useful appendices, character sketches, full notes, a comprehensive bibliography, and maps, tables, and illustrations all augment an absorbing and well-documented review of early American medical history.

Surgeon Vice-Admiral Sir James Watt
London

M. W. FLINN, *The European demographic system 1500–1820*, Brighton, Harvester Press, 1981, 8vo, pp. xi, 175, £15.95.

This book is one in a new series devoted to the history of pre-industrial Europe 1350–1850. Although not explicitly excluding the more traditional forms of historical writing and analysis, the list of titles leaves no doubt that the general editor, Geoffrey Parker, wishes to focus atten-