

PRINTING AND THE BRAIN OF MAN

THE SIXTEENTH-CENTURY BRAIN



I ▷ PRECURSORS

The works in this section are among the earliest books in my collection. Although this is not a comprehensive list of early works, they are books I have acquired because they have stimulated my historical and collecting interests. Their connection to neurosurgery may not be apparent, but they represent early works in science and the history of medicine from which all subsequent developments arose.



GAIUS PLINUS SECUNDUS [PLINY THE ELDER] (23-79)

1 ◀ *Historia naturale . . . tradocta di lingua latina in fiorentina per Christophoro Landino Fiorentino . . .*

Venice: Nicolas Jenson, 1476.

[1-21¹⁰, 22-26⁸, 27-35¹⁰, 36¹⁰, (36¹⁰+1), 37⁸, 38¹⁰, 39⁸, 40-41¹⁰, 42⁸, 43¹⁰] (lacks first and last blanks)

ff. 413

Nineteenth-century blind-tooled calf over wooden boards. There is a large floral border on the first two leaves; each book opens with a finely illuminated initial letter in gold and colors.

407 x 275 mm.

Hain *13105; Klebs 787.1; Osler IM 103; Proctor 4099; Schullian 375 (430 x 260); Walsh 1583 (418 x 275);

Wellcome 5108 (428 x 278).

Pliny's *Historia naturalis*, first published in print in 1469 by Johann and Wendelin of Speyer in Venice, was the first of the great classical scientific texts to be printed. Although it is an encyclopedia of natural history, Book XXVIII deals with medicine. This is the first Italian and first vernacular edition of this classical text, and one of the earliest medical or scientific works to be printed in the vernacular. This edition contains an example of Jenson's Roman type, which he first used for his 1470 edition of Eusebius.

This is the best-documented production from Jenson's press. About twenty copies of this edition were printed on vellum and one thousand on paper, according to extant records in Florence. The Italian translation was commissioned by the Strozzi, who hired the Florentine humanist Christoforo Landino (1424-1492/1504) to do it. They also paid for the vellum and paper, supervised the printing in Venice, and were involved in the distribution of the book. Copies were shipped throughout Italy and as far away as London and Bruges for both sales and marketing value.

HIPPOCRATES (460-377 BCE)

5 ¶ *Octoginta volumina, quibus maxima ex parte, annorum circiter duo millia Latina caruit lingua, Graeci vero, Arabes, and prisci nostri medici, plurimis tamen utilibus praetermissis, scripta sua illustrarunt, nunc tandem per M. Fabium Calvum . . . Latinitate donata . . . ac nunc primum in lucem aedita.*

Rome: Francesco Minizio Calvo, 1525.

π8, A-E6, F4, A-Z6, AA-ZZ6, AAA-OOO6, PPP8 (-PPP8 blank)

pp. [84], I-DCCXXXIII (i.e. DCCXXXII), [2]

Contemporary limp vellum with yapp edges.

332 x 232 mm.

Adams H567; Grolier Medicine 1A (283 x 203); Hunter p. 179; Iowa 10 (281 mm); NLM 2320 (340 mm);

Norman 1076 (283 x 210); Osler 149; PMM 55; Putti 531; Waller 4495; Wellcome 3177.

First collected edition of eighty Hippocratic works translated from Greek into Latin by Marco Fabio Calvo (d. 1527 in the sack of Rome). Calvo completed the translation in 1515. The translation was published by his brother, Francesco Minizio (né Giulio) Calvo, a humanist and bookseller, who edited works for the Roman printer Eucharius Silber. In 1523 Francesco Calvo established his own press and by 1524 had succeeded Silber as printer for the Apostolic See. This work is dedicated to Clement VII, for whom Calvo was physician.

Hippocrates, or the school of physicians on the Greek island of Kos with whom his name is associated, was the first to establish an empirical system of medicine based on a combination of bedside experience and a collation of the many individual data that then formed the basis of clinical teaching. After the Hippocratic writings no such records were kept again for over a thousand years. The clinical descriptions of fevers, tuberculosis, puerperal convulsions, epilepsy, and other disorders preserved in the Hippocratic writings remain classics. The treatise on surgery includes treatment of dislocations and fractures, an account of trephining the skull, descriptions of surgical instruments, rules on public health and diagnosis, a famous work on the brain, a discussion of the four humors, and many other topics.

Marco Fabio Calvo had prepared his own Greek manuscript in 1512 by collating a fourteenth-century manuscript in his possession with a twelfth-century codex, which remains one of the oldest and most important Hippocratic manuscripts. Both manuscripts, which contain Calvo's annotations, survive in the Vatican Library. The first edition of the Greek texts was published by Aldus Manutius in 1526.

II ▸ CELLS OF THE BRAIN

The assignment of brain function to the ventricles (cells) in the brain can be traced to ancient writers. Since the time of Nemesius and St. Augustine in the fourth century, the concept has been referred to as the Cell Doctrine of Brain Function, indicating the importance of the ventricles rather than the solid brain substance for function. The books in this section contain some of the earliest examples of illustrations that attempt to bring understanding to brain function.



ALBERTUS MAGNUS (1193?-1280)

6 ◀ *Philosophia naturalis* [*Philosophia pauperum*].

Brescia: Baptista Farfengus, 10 September 1490.

π2, a-c8, d6, aa-bb8, cc6

ff. [54]

Modern vellum. The initial letters are illuminated in red and blue. With the bookplate of A. Bernardes de Oliveira.

202 x 147 mm.

Klebs 23,4; Osler 7406; Proctor 7013; Schullian 17 (208 x 146, incomplete).

The first printed illustration of the cerebral ventricles appears on f. 40r. This cartoon served as the model for illustrations of the brain throughout the early sixteenth century. Many examples are included in the present exhibition. These rather primitive renderings were used to indicate the location of brain function in the four ventricles: I and II: Imaginativa; III: Sensus Communis; IV: Memoria. It was Vesalius and later Thomas Willis who assigned functions to the brain substance rather than the fluid in the ventricles. Colin Clair states that running titles first appear in this book; however, they also appear in the *Articella* of 1483 [Cat. 2].

Albertus Magnus was born sometime between 1193 and 1206, in Lauingen in Bavaria. Contemporaries such as Roger Bacon applied the term *Magnus* to Albertus during his own lifetime, in recognition of his immense reputation as a scholar, philosopher, and theologian. He was educated principally at Padua, where he received instruction in Aristotle's writings. About 1221 he became a member of the Dominican Order, against the wishes of his family, and studied theology at Bologna and elsewhere. As a member of the Dominican Order, he taught in Cologne and Paris. His most noted pupil was Thomas Aquinas. In addition to his theological works, Albertus engaged in scientific research.

ALBERTUS MAGNUS (1193?-1280)

7 ◀ *Philosophiae naturalis Isagoge, sive introductiones in libros Aristotelis Physicorum, de Coelo et mundo, de Generatione et corruptione, Meteorum, de Anima, or Summa Philosophiae naturalis* [*Philosophia pauperum*].

MAGNUS HUNDT (1449-1519)

10 ◀ *Antropologium de ho[min]is dignitate, natura, et p[rop]rietatibus, de elementis, partibus et me[m]bris humani corporis : de iuuamentis, nocume[n]tis, accide[n]tib[us], vitijs, remedijs, et physionomia ipsorum : de excreme[n]tis et exeu[n]tib[us] : de spiritu hu[m]ano eiusq[ue] natura p[ar]tib[us] et op[er]ib[us] : de ani[m]a hu[m]ana et ipsius appendicijs.*

Leipzig: Wolfgang Stöckel, 1501.

A-C6, D4, E-L6, M4, N-U6, A4

ff. [120]

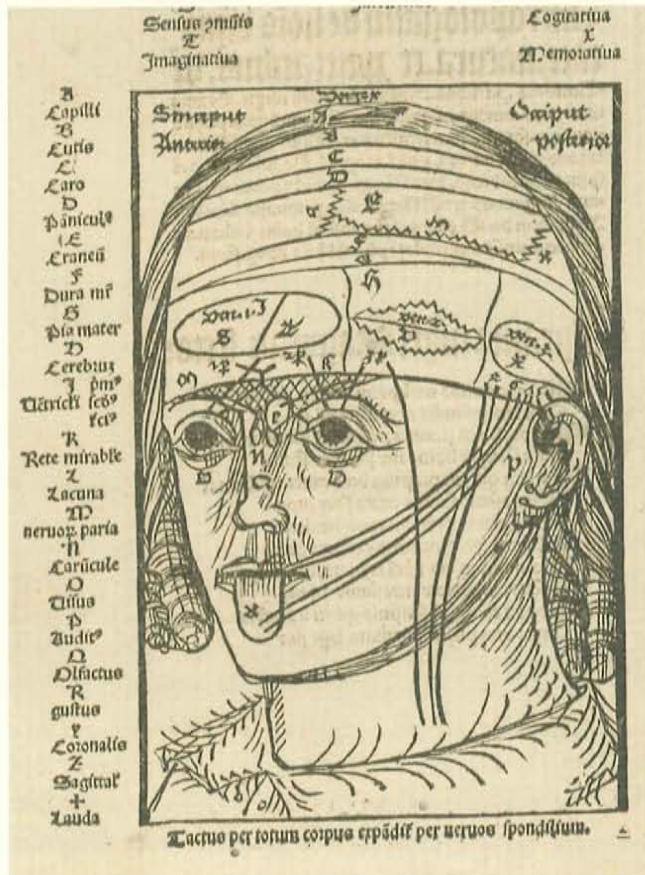
Blind-stamped pigskin by Bernard Middleton. From the Library of the Brooklyn Academy of Medicine, Kings County Medical Society.

210 x 152 mm.

Blocker p. 202 (240 mm); Cushing H499; GM 363.3; Herrlinger pp. 62-64; NLM 2507 (210 x 150); Norman 1115 (210 x 150); Putti 542; Waller 499t; Wellcome 3362a (incomplete).

The *Antropologium* is among the earliest printed works to contain anatomical illustrations. The five full-page woodcuts consist of two identical representations of the human head, an entire body, a hand with chiromantic markings, and the internal organs of the thorax. The smaller cuts distributed throughout the text show the stomach, intestines, eye, and cranium, including the sutures of the skull. The ventricular plate appears here twice and is certainly the basis of Dryander's more refined illustration of 1536 and 1537 [Cat. 14]. This is a large copy with deckle edges on many leaves.

Although dissection had been practiced in Europe for about two hundred years at the time, these illustrations, by an unknown artist, are schematic devices rather than drawings done at a dissection. They do not appear to have been intended to correspond to anatomical reality. The woodcut of the body includes the names of all the external parts but makes no attempt to equate the anatomical terms with the parts they describe. Woodcuts like these were a visual way of listing the main organs rather than providing anatomical details, such as a chart rather than a photograph might be used in a modern book.



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