ANDREAS VESALIUS

The Fabric of the Human Body

An Annotated Translation of the 1543 and 1555 Editions of “De Humani Corporis Fabrica” by

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with contributions by Vivian Nutton and Nancy Siraisi

For the first time ever, both editions of Andreas Vesalius’ masterpiece “De Humani Corporis Fabrica” are accessible in the English language. They were critically compared and published in a modern layout transforming the Renaissance anatomical atlas for the 21st-century reader. More than 5,000 annotations cover anything from antique sources over Galenic references to the medical and cultural background of Vesalius’ time.

To enable the reader and medical student to really study Vesalius’ woodcut illustrations, the images were digitally enhanced and often enlarged to feature his painstaking work of marking each pertinent anatomical part with characters. All over Vesalius’ descriptive text, the standard Latin Nomina Anatomica and Terminologia Anatomica provide the reader with the modern medical terminology.

www.vesalius-fabrica.com
ON THE MUSCLES OF THE EYELIDS

THE MAKE-UP OF THE EYELIDS

Lower and upper eyelids [palpebrae inferiores, pp. superiores] are each formed by the membrane that takes its beginning from the membrane [pericranium] surrounding the skull; this membrane is a single body continuous with the adherent or white tunic of the eye [tunica conjunctiva bulbii] (η in fig. 18, Ch. 14, Bk. VII); it is also formed by the skin together with its fleshy membrane [tunica conjunctiva palpebrarum]. These are most firmly united at the ends of the eyelids and where the cartilage [tarsus] supporting the eyelashes is situated (fig. 1 [figure] in Ch. 35, Bk. I). So well are these four parts united – the skin, two membranes, and the cartilage that we called the tarsus – that they form the eyelid, a body of low density resembling no other part in the human body. Through the remaining area of the eyelids, the skin, so far as connection is concerned, is attached to the fleshy membrane as in nearly all other parts of the body; but instead of fat, only an oily humor* lies between the skin and the membrane.

TWO MUSCLES OF THE EYELID

In the upper eyelid along its entire width, the fleshy membrane [septum orbitale] is abundantly equipped with muscular fibers, and makes as it were two muscles situated between the skin and the membrane which we said is continuous with the adherent or white tunic of the eye.

WHY IT WAS NECESSARY FOR THE UPPER EYELID TO MOVE*

It was necessary for the upper eyelid to be moved voluntarily; otherwise, it would be useless to us. Nature would have given us eyelids in vain if whenever something came to them from outside which would strike them and damage them (human eyes being far softer than those of beetles and crabs), we were unable voluntarily to close them. So it is that Nature produced two muscles with marvelous artistry, thin, broad, membranous, and of uniform substance nearly everywhere, placing one in the greater angle of the eye and the other in the lesser.

ONE MUSCLE

The one [ligamentum palpebrale mediale] (A, then C, b [above]; C in table 3) that occupies a portion of the greater angle begins from the middle of the angle at the side of the nose, also touching with its beginning the part of the eyebrow nearest the nose. Its wide ending, like the entire muscle, is implanted in the cartilage in which the lashes are set, occupying the entire half facing the greater angle.

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1 Numbered Ch. 9 in the 1555 edition. See n. 1, Ch. 8 (1543 ed.) above.
2 1555: *and called the tarsus.*
3 The 1555 edition omits this sentence.
4 The tarsal glands, which are modified sebaceous glands, produce an oily hydrophobic secretion along the margins of the eyelids.
5 Either m. orbicularis oculi, pars palpebralis or m. orbicularis oculi, pars orbitalis; m. occipitofrontalis, senter frontalis.
6 What follows recapitulates a long passage in Galen, De usu partium (1.788.18–807.3, May, 1968, pp. 484–488), opposing the view that motion of the eyelid is involuntary and explaining how the two muscles attached to opposite ends of the tarsus cause the eyelid to go up and down.
7 Vesalius deleted this comparison in his notes to his copy of the 1555 Fabrica.
8 Albro quandam artifici, omitted from the 1555 version.
The Use of Ossicles of the Organ of Hearing

Comparison of the Second Ossicle to the

How Nature Made Provision for the

The Use of the Jugal Bone

The Jugal Bone

The Bones Resembling a Rocky Outcropping

The Anvil-like Ossicle

Nerves from the Fifth Pair to the Organ of

The Cavity Made for the Organ of Hearing, and

Appendix: 1555 Version of the First 32 Lines of

Marcus Antonius Genua and Wolfgang Hervort,

Fourth Maxillary Bone

The First Bone of the Maxilla

How Many Bones Make Up the Eye Socket

Brief Enumeration of the Bones of the Maxilla

Structural System of the Maxillary Bones

Why the Maxilla Consists of Several Bones,

Third Maxillary Bone

The Second Maxillary Bone

The Sixth Bone of the Maxilla

The Fifth Bone of the Maxilla

Index of the Second Figure and Its Characters

Index of the First Figure of the Ninth Chapter

and Its Characters

Temporal Muscles

Both Hollow and Light

As If They Were Entirely Separate

the Chapter 8 Narrative

and Completion of This Work

Femoral Bone

the Foramina Extending into It

Why a Description of the Foramina Is Undertaken

the Upper Maxilla

Dental Epiphyses

Hollow Space in Teeth

Wisdom Teeth

The Number of Teeth Sometimes Varies

Roots of the Teeth

How Teeth Are Fixed in the Jaws

Molars

The Number of Teeth

The Distinction between Teeth and the

The Teeth Have Sensation

Other Bones

Appendix A: 1555 Version of the First Two

Why It Consists of Many Bones, Both Light

Appendix B: How to Distinguish the Maxillary

Why It Consists of Many Bones, Both Light

Spots in the Posterior Area of the Jaw

the Maxillae

Bones

Hollow

and Hollow

Paragraphs of the Narrative Section

a Single Bone

Man Has the Shortest Jaw

Breadth, Thinness, Depressions, and Rough

Foramina of the Maxilla

picture of the special cartilage in the joint of

Other Bones

and Its Characters

are enumerated at the end of the chapter

are the main points of the narrative

of the maxilla

An example of the typeface Basel Antiqua

The Fabric of the Human Body uses fresh high-resolution digital scans of the original woodcut illustrations used in De humani corporis fabrica. Different colors allow easy identification of notes relevant to both the 1543 and 1555 editions. For a set of sample pages go to

www.vesalius-fabrica.com/samplepages

The translation of De humani corporis fabrica is faithful to the actual language of Vesalius, telling the reader a great deal about the way he thought, which is essential in that rhetoric and language are crucial elements of the book. To read an example by translator Daniel Garrison visit

www.vesalius-fabrica.com/translation

The Fabric of the Human Body translates both the 1543 and 1555 editions, with added notes regarding the 1546 Epistle on the China Root, the 1538 Tabulae sex, the 1539 Venesection Letter, and Vesalius’ notes for a never published third edition of De humani corporis fabrica. You can learn more about the handwritten notes under

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The Fabric of the Human Body, like the original 1543 edition, has been printed in Basel. The typeface Basel Antiqua, a modern rendition of a distinctive 16th-century typeface, has been created for this publication.

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“Vesalius took great care with the typeface and figures in the _Fabrica_ produced beautifully by the printer Oporinus. Karger Publishers have devoted similar attention to the text and images by their newly designed typeface and enhanced illustrations. This, combined with the English translation of both the 1543 and 1555 editions, brings this landmark publication in the history of medicine back to life for the modern reader.”

Sachiko Kusukawa
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