TABULA · CLASSROOM PACK

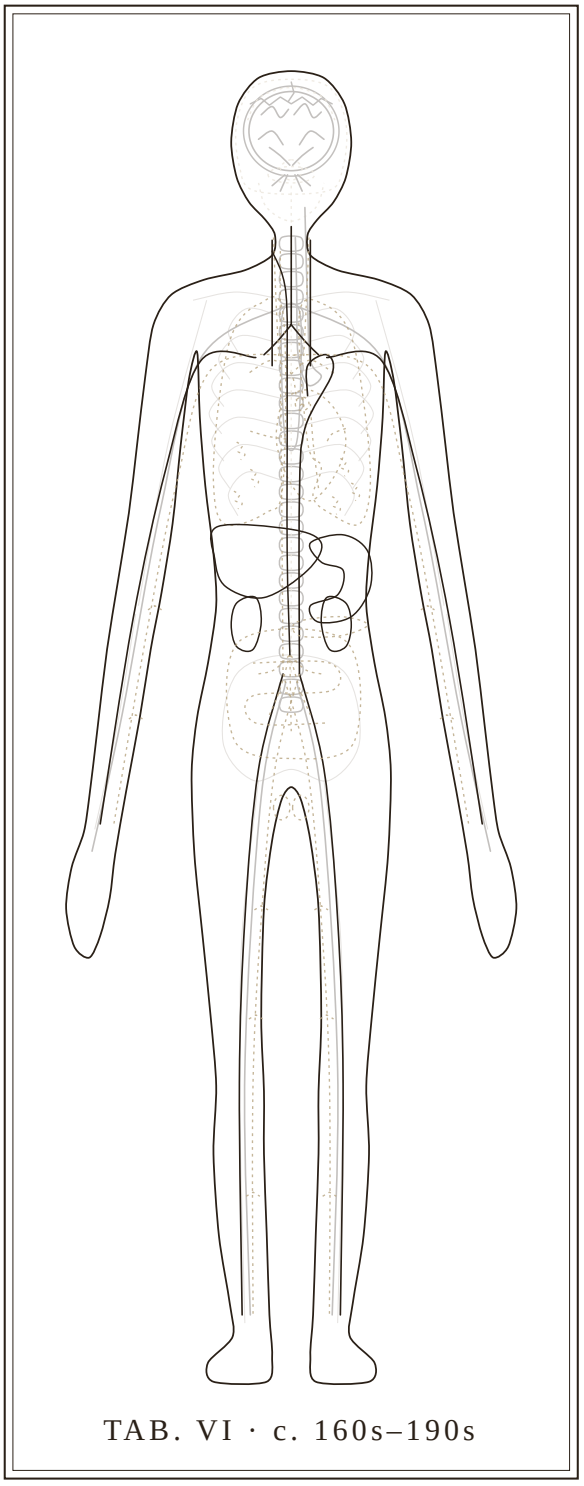
Galen vs Vesalius

Free sample pack

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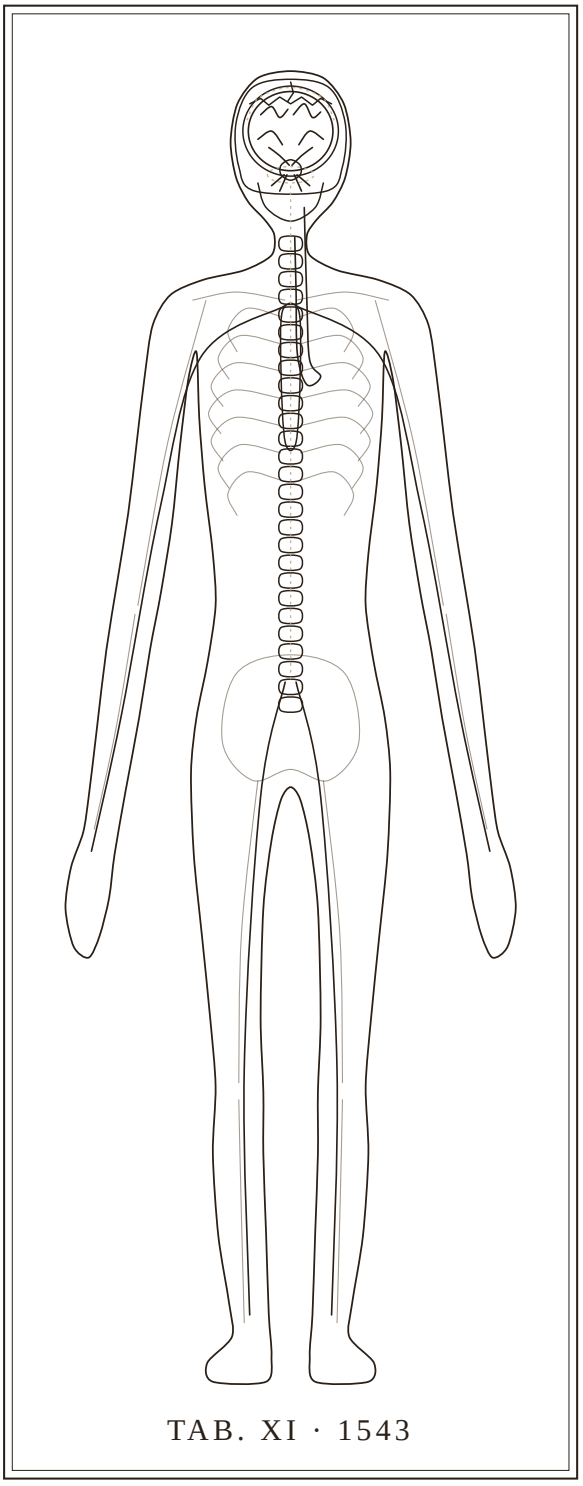
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TAB. VI · c. 160s–190s

The body as known in c. 160s–190s. Colour what was *understood*; outline what was only *described*.



TAB. XI · 1543

The body as known in 1543. Colour what was *understood*; outline what was only *described*.

Story cards

Tab. VI: Arteries carry blood (c. 160s–190s)

Tie off an artery at both ends, cut it, and look inside.

How they knew: A ligature experiment on living animals. Isolate a stretch of artery between two ties, then open it.

What it overturned: The Erasistratean view that arteries carry air-like pneuma, and that blood appears in them only when they are wounded.

Status: established

Tab. VII: The squealing pig falls silent (c. 160s–190s)

Before an audience in Rome, Galen cuts one nerve and a pig loses its voice.

How they knew: Public vivisection of a pig. Cut or tie the nerve, and listen.

What it overturned: The view that the voice is produced or controlled by the heart rather than by the brain through nerves.

Status: established

Tab. XI: Galen dissected apes (1543)

Vesalius shows that much of the anatomy everyone learned came from animals.

How they knew: Systematic human dissection, done by the professor himself, and recorded in large, exact woodcuts.

What it overturned: Several of Galen's statements about the human body, including the two-part lower jaw and the rete mirabile at the base of the brain, which came from animal anatomy.

Status: established

Spot the myth

For each statement, decide: was it *believed then, later overturned*, or is it *supported by the sources*?

1. Followers of Erasistratus held that the arteries carry an air-like pneuma, and that blood appears in a cut artery only because it rushes in from the veins.
2. A network of vessels at the base of the brain, the rete mirabile, refines vital spirit into animal spirit.
3. The human lower jaw is made of two bones joined at the chin.
4. Galen argued in a dedicated treatise that the arteries naturally contain blood, against Erasistratus and his followers.
5. Galen described the nerve that descends from the brain, loops back up and reaches the larynx, and demonstrated before an audience in Rome that cutting it silenced a squealing pig.
6. Vesalius published De humani corporis fabrica in Basel in 1543, illustrated with large woodcuts.

Discussion questions

1. Galen of Pergamon: what method did they use, and why did it convince (or fail to convince) people at the time?
2. What did people believe before Tab. VI, and why was that belief reasonable then?
3. Galen of Pergamon: what method did they use, and why did it convince (or fail to convince) people at the time?
4. What did people believe before Tab. VII, and why was that belief reasonable then?
5. Andreas Vesalius: what method did they use, and why did it convince (or fail to convince) people at the time?
6. What did people believe before Tab. XI, and why was that belief reasonable then?

Answer key and sources

1. believed then, later overturned `[arteries-pneuma#b]`
2. believed then, later overturned `[rete-mirabile#b]`
3. believed then, later overturned `[two-part-mandible#b]`
4. supported by the sources `[galen-arteries-blood#c1]`
5. supported by the sources `[galen-recurrent-laryngeal#c1]`
6. supported by the sources `[vesalius-fabrica#c1]`

Every claim in this pack

- `[galen-arteries-blood#c1]` Galen argued in a dedicated treatise that the arteries naturally contain blood, against Erasistratus and his followers. (established). Sources: Galen, Whether Blood Is Naturally Contained in the Arteries (2nd c. CE); David J. Furley, J. S. Wilkie, Galen on Respiration and the Arteries (1984); (19th-century correspondent), Exposition of a Libel upon the Memory of the Ancients (19th c.)
- `[galen-arteries-blood#c2]` His proof was to tie an exposed artery at two points, open the segment between the ligatures, and show it was full of blood. (established). Sources: Galen, Whether Blood Is Naturally Contained in the Arteries (2nd c. CE); (19th-century correspondent), Exposition of a Libel upon the Memory of the Ancients (19th c.); David J. Furley, J. S. Wilkie, Galen on Respiration and the Arteries (1984)
- `[galen-recurrent-laryngeal#c1]` Galen described the nerve that descends from the brain, loops back up and reaches the larynx, and demonstrated before an audience in Rome that cutting it

silenced a squealing pig. (established). Sources: E. L. Kaplan, G. I. Salti, M. Roncella, N. Fulton, M. Kadowaki, History of the recurrent laryngeal nerve: from Galen to Lahey (2009); Claire Bubb, Finding your pig's voice (Classics for All) (n.d.)

- `[galen-recurrent-laryngeal#c2]` Vesalius later repeated Galen's pig demonstration, tying and then releasing the recurrent laryngeal nerves. (established). Sources: E. L. Kaplan, G. I. Salti, M. Roncella, N. Fulton, M. Kadowaki, History of the recurrent laryngeal nerve: from Galen to Lahey (2009); Andreas Vesalius, De humani corporis fabrica libri septem (1543)
- `[galen-recurrent-laryngeal#c3]` Ancient and modern retellings differ on which nerves were tied in some of Galen's voice demonstrations; one account describes the intercostal nerves. (contested). Sources: Claire Bubb, Finding your pig's voice (Classics for All) (n.d.); E. L. Kaplan, G. I. Salti, M. Roncella, N. Fulton, M. Kadowaki, History of the recurrent laryngeal nerve: from Galen to Lahey (2009)
- `[vesalius-fabrica#c1]` Vesalius published De humani corporis fabrica in Basel in 1543, illustrated with large woodcuts. (established). Sources: Andreas Vesalius, De humani corporis fabrica libri septem (1543); The College of Physicians of Philadelphia Digital Library, Vesalius: Fabrica (Histories of Anatomy exhibit) (n.d.); Cambridge University Library, Vesalius exhibition (muscle-men landscape series; male and female nudes) (n.d.)
- `[vesalius-fabrica#c2]` Galen had described the lower jaw as two bones, based on animal anatomy; Vesalius showed that in humans it is a single bone. (established). Sources: Andreas Vesalius, De humani corporis fabrica libri septem (1543); The College of Physicians of Philadelphia Digital Library, Vesalius: Fabrica (Histories of Anatomy exhibit) (n.d.); Galen, On Bones for Beginners (2nd c. CE)
- `[vesalius-fabrica#c3]` Vesalius denied that the rete mirabile exists in humans, though the structure did not immediately disappear from anatomical writing after 1543. (contested). Sources: Sebastian Pranghofer, 'It could be Seen more Clearly in Unreasonable Animals than in Humans': The Representation of the Rete Mirabile in Early Modern Anatomy (2009); Andreas Vesalius, De humani corporis fabrica libri septem (1543); The College of Physicians of Philadelphia Digital Library, Vesalius: Fabrica (Histories of Anatomy exhibit) (n.d.)
- `[arteries-pneuma#b]` Erasistratus and his followers held that the arteries naturally contain pneuma rather than blood. (established). Sources: Galen, Whether Blood Is Naturally Contained in the Arteries (2nd c. CE); David J. Furley, J. S. Wilkie, Galen on Respiration and the Arteries (1984); (19th-century correspondent), Exposition of a Libel upon the Memory of the Ancients (19th c.)
- `[arteries-pneuma#c]` Galen showed by ligating an artery at two points that the isolated segment contains blood. (established). Sources: Galen, Whether Blood Is Naturally Contained in the Arteries (2nd c. CE); David J. Furley, J. S. Wilkie, Galen on Respiration and the Arteries (1984); (19th-century correspondent), Exposition of a Libel upon the Memory of the Ancients (19th c.)
- `[rete-mirabile#b]` Galen described a rete mirabile at the base of the brain, a structure found in animals such as sheep and oxen, as part of human anatomy. (established). Sources: Galen, De usu partium (On the Usefulness of the Parts) (2nd c. CE); Sebastian Pranghofer, 'It could be Seen more Clearly in Unreasonable Animals than in Humans': The Representation of the Rete Mirabile in Early Modern Anatomy (2009); The College of Physicians of Philadelphia Digital Library, Vesalius: Fabrica (Histories of Anatomy exhibit) (n.d.)
- `[rete-mirabile#c]` Vesalius denied that the rete mirabile exists in humans, though it lingered in some anatomical writing after 1543. (established). Sources: Andreas Vesalius, De humani corporis fabrica libri septem (1543); Sebastian Pranghofer, 'It could be Seen more Clearly in Unreasonable Animals than in Humans': The Representation of the Rete Mirabile in Early Modern Anatomy (2009); The College of Physicians of Philadelphia Digital Library, Vesalius: Fabrica (Histories of Anatomy exhibit) (n.d.)

- `[two-part-mandible#b]` Galen described the lower jaw as two bones, following animal anatomy. (established). Sources: Galen, On Bones for Beginners (2nd c. CE); The College of Physicians of Philadelphia Digital Library, Vesalius: Fabrica (Histories of Anatomy exhibit) (n.d.)
- `[two-part-mandible#c]` Vesalius showed that the human mandible is a single bone. (established). Sources: Andreas Vesalius, De humani corporis fabrica libri septem (1543); The College of Physicians of Philadelphia Digital Library, Vesalius: Fabrica (Histories of Anatomy exhibit) (n.d.)