



A brief eulogy for lost anatomical names

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The torcular Herophili. The foramina of Morgagni. The pouch of Douglas. The ligaments of Cooper. The space of Disse. These are anatomical terms that reference real objects of the body. Anatomists have now re-christened these objects with more precise, less laudatory names—the confluence of the sinuses, the sternocostal triangle, the rectouterine space, the suspensory ligaments of the breast, the perisinusoidal space—that offer anatomical precision in their description.

These lost anatomical names chart a history of discoveries, and a mapping of the knowledge of the body in time. These physicians have been my teachers' teachers' teachers. Beyond honorifics, what could be learned from the eponymous of the body's holes, relations, passageways?

Consider the left recurrent laryngeal nerve. The left recurrent laryngeal descends (first as a branch of the vagus nerve) down from the brain along the carotid arteries, departs from the vagus and passes under the aortic arch, then travels back up to innervate the larynx. The descriptive name illustrates which side of the body it

travels, its unique direction of travel, and what body part it innervates. What could be simpler? Yet, this nerve used to be called Galen's nerve.^{1,2,3}

It was springtime in Rome, a pleasant season, before the mosquitos and the suffocating heat of summer, when the aristocrats would withdraw to their airy hilltop villas.⁴ Down the Sacred Way, a central business avenue, toward the marketplaces of the old Roman forum and the newer Imperial forum, the merchants and shoppers and sightseers streamed. Sighting the Colosseum to the right, they walked under the triumphal Arch of Titus and past the shops and the high-cost storerooms for rent. Passing between the neighboring buildings 200 meters away from the Arch, some ducked into the colonnaded walls of the Temple of Peace (like the Arch, built from the spoils of the sack of Jerusalem 93 years earlier) to emerge on a large grassy and sunlit forum within. Within the Temple courtyard intellectuals gathered to review issues of the day and debate. Galen the physician, a Greek who arrived six or seven months earlier from Pergamum in the eastern Mediterranean, was giving a public demonstration.

Among those present inside the forum of the Temple of Peace were philosophers focusing on causation and

Roman magistrates, one of whom was related by marriage to the reigning co-emperors, Lucius Verus and Marcus Aurelius. To the philosophers, Galen set a challenge: what was the organ of consciousness in the body? Was it the brain, as Plato thought? Or, the heart, as Aristotle postulated?⁵ The dissection of the recurrent laryngeal nerves promised to decide the issue. A live pig lay supine on the dissecting table. Bound with rope knotted through the holes perforated in the board, the pig screamed as Galen approached with the lancet. And who can tell a Roman pig apart from a Greek one when they both scream “*gru gru?*”^{6,7}

Against the noise and screams that echoed off the colonnaded stones, like the good anatomist he was, Galen dissected quickly and exposed the thin runny laryngeal nerves of both right and left to show they originated with the vagus from the brain. And still, the pig heaved against the ropes and still breath came through its throat, then suddenly there was no voice but merely wind passing through the still-intact throat.

Galen ligated the nerves with a little string and showed their function of controlling the voicebox. The mechanistic conclusion lay open before the philosophers and Roman magistrates: the thin white wires tracing from the brain gave voice. The brain, not the heart, was the source of volition and conscious command. The phonation scene was important enough in the mythos of anatomical dissection that Andreas Vesalius left it as the last illustration in his own magisterial anatomy nearly 1,400 years later (a Galenic detail Vesalius’ readers were sure to note, since his own animal of dissection was a dog).⁸

An anatomist is less likely to be led astray by the simple description left recurrent laryngeal nerve than the eponymous Galen’s left nerve. Still, the lesson in these eponymic structures is not honorific to its discoverer so much as an example of means to obtaining scientific truth. We learn to emulate models of investigation as we progress in scientific study, a rough and ready pedagogical approach that Thomas Kuhn elaborated into a philosophy of science.

We can still learn from reading Herophilus to understand the ventricles, from Sir Astley Cooper to understand the anatomy of the breast, and from Joseph Disse to understand hepatocyte histology. As for the recurrent laryngeal nerves, Galen’s demonstration that the connection of the nerves relates to their function is a lesson that still resonates in surgery.

John Keats, the English poet who died and is buried in Rome, knew no Greek. He trained as a surgeon at

Guy’s Hospital in London and must have learned both his descriptive and eponymous Latin anatomy well.¹⁰ In his poetry, he hit upon the spirit of discovery in what it is like to travel on a teacher’s tracks and yet see for yourself for the first time:

Much have I travell’ d in the Realms of Gold,
And many goodly states, and kingdoms seen;
Round many Western islands have I been
Which Bards in fealty to Apollo hold.
Oft of one wide expanse had I been told
Which deep-brow’ d Homer ruled as his Demesne;
Yet could I never judge what Men could mean,
Till I heard Chapman speak out loud, and bold:
Then felt I like some Watcher of the Skies
When a new Planet swims into his ken,
Or like stout Cortez, when with wond’ring eyes
He star’d at the Pacific, and all his men
Look’ d at each other with a wild surmise—
Silent, upon a peak in Darien.

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