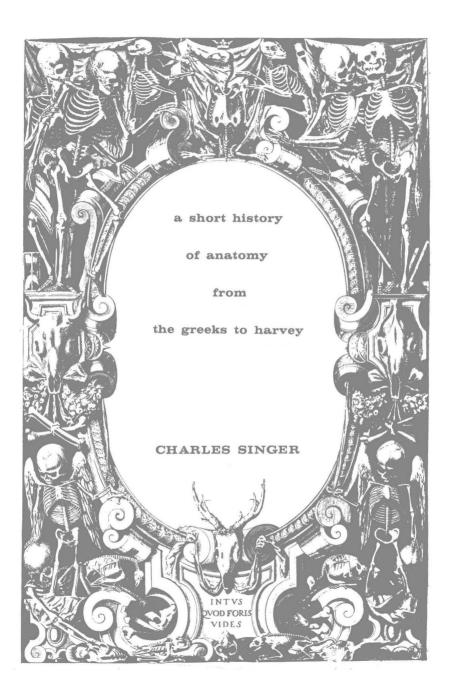


A SHORT HISTORY OF ANATOMY

PHYSIOLOGY FROM THE GREEKS TO HARVEY

by Charles Singer





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ANDREAE VESALII BRVXELLENSIS, SCHOLAE medicorum Patauinæprofessoris, de Humani corporis fabrica Libri septem. Maiest. Galliarum Regis, ac Senatus Veneti gr

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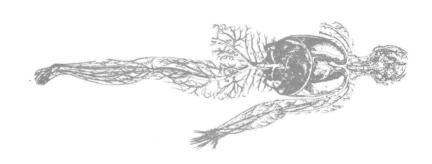
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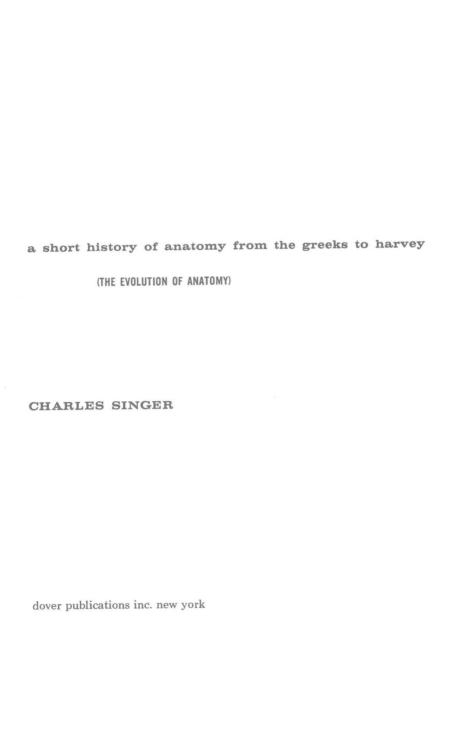
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For out of olde feldes, as men seith
Cometh al this new corn fro yeer to yere;
And out of olde bokes, in good feith,
Cometh al this new science that men lere.

CHAUCER: The Parlement of Foules, lines 22-25.





The historiated Title page of this volume is taken from the work of GIULIO CASSERIO, De vocis auditusque organis, historia anatomica, first printed at Ferrara in the year 1601.

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PREFACE TO SECOND EDITION

This work has been out of print for many years. I long hoped that someone more competent than I would cover the ground more completely. This has not happened and, since the demand for the book has continued, it is here revised with a number of minor adjustments. I would express the hope that this new edition may rouse sufficient practical interest in the subject to induce someone to undertake a more comprehensive work. The literature in English is now more copious than it was when the first edition was published over thirty years ago. Works by some of the leading figures in the history of anatomy — Vesalius, Galen, Coiter, Mondino, Leonardo — are now available in English translation, and I am in hope that this new edition may turn my readers' attention at least to these.

CHARLES SINGER

"Kilmarth" Par, Cornwall 26th. May 1956

PREFACE

I HAVE to return thanks first to the College of Physicians and its President who invited me to give the Fitzpatrick Lectures and next to three colleagues who helped me in their preparation.

Association with Professor Platt has been a very great stimulus; to him I owe inestimable help in acquiring such knowledge of ancient Medicine as I may possess; his great sympathy with Science and with its History has been a source of inspiration to many, but I have been unusually privileged in being permitted to draw on that store of exact knowledge of Greek on which his varied learning was based as on a rock. He read this book in manuscript and it is a very great grief to me that he has not lived to see it printed. The first two Chapters owe a debt to him on almost every page. For the last two chapters I have received similar generous help from Emeritus Professor Sir George Thane, whose unrivalled knowledge of every department of Anatomy and of its literature, has been unweariedly placed at my disposal. I have enjoyed every advantage afforded by the magnificent Anatomical Institute of Professor Elliot Smith from the time that it was built, and especially I have had the fullest use of its very fine collection of old anatomical books deposited there. This collection was bequeathed to University College by William Sharpey, who once held the chair that has since been occupied by Professors Sir George Thane and Elliot Smith. My Fitzpatrick Lectures were themselves based on a course given to some of Professor Elliot Smith's more advanced pupils, and I have to thank him for help at many points and for sympathy and understanding throughout.

A number of other colleagues have aided me in various directions. Mr. T. L. Poulton, artist to the Anatomical Department at University College, has made drawings for me which are reproduced in Figs. 24, 26, and 28. The other drawings, maps, and tracings are the work of my secretary, Miss E. Biden, or of myself. Dr. H. H. Woollard, Assistant Professor of Anatomy at University College, London, has read the book in proof and corrected points of nomenclature. Dr. H. A. Harris, Senior Demonstrator of Anatomy at

University College, London, has advised me on certain other anatomical matters. Dr. C. F. Sonntag, Demonstrator of Anatomy at University College, London, has helped me with information on simian Anatomy. He has also provided me with the hand of a Barbary ape, the dissection of which (Fig. 27) has been the work of Dr. Kozinski, of the University of Wilna, who is at present engaged in research at University College. Miss Margaret Murray, Reader in Egyptology at University College, London, drew my attention to the Egyptian material reproduced in Figs. 5, 6, 7, and 8.

Mr. W. G. Spencer, O.B.E., has most generously placed at my disposal the blocks from which are printed the full page figures from Vesalius. I have also to thank Messrs. Bell & Son, the Oxford University Press, and Messrs. John Wright, of Bristol, for the use of a number of clichées. Sir Arthur Evans drew my attention to the arm of Cretan origin shown in Fig. 4; he also kindly gave me the photograph from which that figure has been drawn. Professor K. Sudhoff has been good enough to supply me with the photographs from which Plate XIV is taken.

Lastly, I have to thank the Honorary Librarians of the Royal College of Physicians of London and the Royal Society of Medicine for unusual facilities for the study and photography of some of the treasures under their charge.

The main task in preparing this account of the History of Anatomy has been the investigation of sources. I do not think I have referred to any book or manuscript without having myself examined either the original or a direct photograph or facsimile. Suggestions, however, have been derived from the few general accounts of the History of Anatomy that have so far appeared. Of these the most useful are still the detailed but somewhat confused work of Baron Portal, which appeared as long ago as 1770, and the unfinished but very creditable attempt of Lauth in 1815. There is also the fine bibliography of Albrecht von Haller dating from the years 1774-7. The inaccurate treatise of Burggraeve, which had run through three editions by 1880, I have found to be the source of many errors that have since gained currency. I have found it useless for practical purposes. A great number of facts concerning the History of Anatomy are conveniently catalogued by von Töply in the second volume of Puschmann, Neuburger, and Pagel's Handbuch der

Geschichte der Medizin, which appeared in 1903. There are naturally many memoirs dealing with special aspects of Anatomy or on special periods of anatomical study, which I have read for the purpose of this book. Among such works are those of Albertotti, F. Baker, Cervetto, Choulant, F. I. Cole, Corner, Corradi, Del Gaizo, Daremberg, Duhem, Duval. Ferckel. Fonahn, A. Forster, M. Foster, Garrison, Hirschberg, Holländer, Holl, Holma, Hyrtl, Ilberg, Jackschath, Jastrow, Klebs, Locy, Littré, Macalister, MacMurrich, Martinotti, Marx, Medici, Milne, Moores-Ball, Miss M. Murray, Neuberger, Nicaise, Pagel, Petrie, Pilcher, Piumati, D'Arcy Power, Puschmann, Redeker, Regnault, Roth, Schöne, Seailles, Seidel, C. G. Seligmann, W. G. Spencer, Spielmann, Stieda, Streeter, Sudhoff, Tarrasch, De Toni, von Töply, Walsh, Walston, Washburn, Wegener, Wellmann, Weyermann, Wickersheimer, W. Wright, and many others. There are also a few sketches of the subject as a whole, either in the form of Introductions to anatomical treatises or short independent pamphlets or lectures. Perhaps the best of the latter class was one printed just a century ago. It was delivered by Matthew Baillie in 1785 as an Introductory Lecture to the course in Anatomy at the Great Windmill Street School founded by Baillie's uncle, William Hunter. This lecture will be found in a rare little book entitled Lectures and Observations on Medicine by the late Matthew Baillie, M.D., published posthumously by Baillie's executors and privately issued in 1825 in a very small edition.

In composing this short History of Anatomy I have been concerned to keep it within compassable limits. Unprogressive anatomical movements and periods are therefore but lightly touched upon, attention being concentrated on the line of definite advance. It appeared both unnecessary and undesirable to make any division between Physiology and Anatomy, at least in the period under consideration. As the narrative of the little book ends early in the seventeenth century, no mention has been made of the beginnings of Iatrochemistry in the persons of Paracelsus, van Helmont, and their followers, since the movement they represent did not become important until the second part of the seventeenth century. The volume closes with Harvey. The new physiological movement, together with later anatomical developments will be treated in a separate work.

In discussing individual writers I have made no attempt at consistence in the treatment of names. I have sometimes spoken of a man by the name his mother called him, as with *Mondino*; sometimes I have used the Latinized form as with *Vesalius*; sometimes I have used the conventional title as with *Galen*. In all this I have been guided by what I conceive to be the reader's ease.

"Vivitur ingenio, caetera mortis erunt," It is his genius that yet walks the earth: all else of him may go down into silence, is the motto which Vesalius himself has chosen for the most beautiful of all his figures (Fig. 103). Let him be taken at his word! I have sought to treat him and the great men who went before and after him as they would be treated. Prompted alike by personal inclination, by necessity for brevity, and by the suggestion of Vesalius I have considered only the actual contributions to knowledge that these men have made, seeking to treat the History of Anatomy as a secular conversation between great minds, a debate of men of genius continued through the ages. If the writing of History cannot establish such continuity of ideas it can work nothing effectual. The reader who seeks information concerning the ancestry after the flesh or the details of the domestic life of these anatomical heroes, should turn to one of the several large dictionaries of medical biography.

With a view to the greatest possible compression, references, quotations, and bibliography are omitted from this preliminary sketch. They must await a more extensive work on the History of Anatomy. It has, however, been necessary to deal with a number of contentious matters, especially in Chapters I and III. On such points I have often ventured to take my own line. This is done not in any dogmatic spirit but simply for the sake of brevity. I trust, especially, the reader will not regard me as too arbitrary in my dating and treatment of the documents of the Hippocratic Collection. Such topics need lengthy discussion of a kind that appeals to few. It therefore seemed best to leave aside all documentation from such a work as this. It may be that there are readers who will be not ungrateful for the postponement.

CHARLES SINGER.

Anatomical Institute, University College, London. May 26, 1925.

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