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NOTE ON EARLY VIVISECTION IN EDINBURGH.

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I should like to be allowed to revert to the subject of the earliest experiments on living animals in Edinburgh, alluded to in my lecture on "John Reid," published in this Journal, November 1900.

Much depends on what we precisely mean by "experiments" on animals, for if any kind of human interference with the liberty of an animal is an "experiment,"—if, for instance, starving or hypnotising is an experiment,—then neither Reid's nor Whytt's were the earliest. Professor Robert Whytt's book[1] was published in Edinburgh in 1751. Dr. Charles Alston, Professor of Botany and Materia Medica in the University of Edinburgh, administered opium to frogs and dogs in the "Physic Garden at Holyrood" in August 1733.[2] Alston and his "colleague, Mr. Monro," and a Mr. Robert Fullarton, also examined under the microscope the webs of these opium-poisoned frogs. Alston made post-mortem examinations on the animals, but, as far as appears in his writings, no dissections on living animals (vivisections) were performed.

The curious research of Edward Stevens, printed in 1777, as his M.D. Thesis,[3] and dedicated to Alexander Monro, was done in Edinburgh. He utilised the services of a juggler, who swallowed perforated metal balls filled with meat, which, on being regurgitated, were found to have the meat more or less digested out of them. Stevens also caused dogs to swallow similar balls filled with sponge, which, on being withdrawn, were found to have the sponges soaked with gastric juice. Stevens describes at least twenty-five "experiments" in the paper, and is believed to have been the first to conduct artificial gastric digestion—digestion *in vitro*.

The order of experiments on animals in Edinburgh before Reid would therefore be—Alston's, 1733; Whytt's, from (say) 1740 onwards; Steven's, from (say) 1770 onwards. If, however, by "experiment" we mean vivisection in its strict acceptation, and confine ourselves—as I did implicitly in the lecture on Reid—to vivisection on warm-blooded animals, very often without any drug administered to them, then, I think, remembering these conditions, that Reid's experiments (1836) were the earliest in Edinburgh.

[1] "An Essay on the Vital and other Involuntary Motions of Animals."

[2] "Medical Essays," Edinburgh, 1742, vol. v. pt. i. p. 153. He reports that Mr. Monro injected opium into the crural vein of a dog.

[3] "De alimentorum concoctione."