stated by Herodotus to have been the practice in embalming human bodies, that the stomach and intestines were not removed, as upon examining the interior parts of the last-mentioned Ibis, Mr. Pearson met with a soft spongy substance, containing several scarabæi in an imperfect state. These, he supposes, had been taken as the food of the bird, and were not digested at the time of its death. He also observes, that as larvæ of dermestides and other insects have been detected among the dust and bones of the mummy of an Ibis, it may be presumed that this bird was not always in a fresh state at the time when it was embalmed.

Observations on the singular Figure of the Planet Saturn. By William Herschel, *LL.D. F.R.S.* Read June 20, 1805. [*Phil. Trans.* 1805, *p.* 272.]

Notwithstanding the variety of extraordinary phenomena already observed respecting the planet Saturn, there remains, Dr. Herschel says, a singularity which distinguishes the figure of Saturn from that of all the other planets.

He had, in the year 1776, observed that the body of Saturn was not exactly round, and had found in the year 1781 that it was flattened at the poles, at least as much as Jupiter. In the year 1789 he measured the equatorial and polar diameters, and supposing there could be no other particularity in the figure of the planet, ascribed a certain irregularity he perceived in other parts of the body, to the interference of the ring.

Dr. Herschel now relates a series of observations made in the months of April, May, and June, of the present year, of which the following are the most remarkable.

April 12.—The flattening of the polar regions appeared not so gradual as in Jupiter, and seemed not to begin till at a high latitude.

April 18.—The situation of the four points of the greatest curvature was measured with Dr. Herschel's angular micrometer, power 527. Their latitude was found to be 46° 38′; but as neither of the cross wires could be in the parallel, no great accuracy, Dr. Herschel says, could be expected.

April 19.—Ten-feet reflector, power 400. The figure of Saturn was somewhat like a parallelogram, with the four corners rounded off deeply. A measure of the position of the four points of the greatest curvature, taken this night, gave their latitude 45° 44′·5.

May the 5th, 12th, and 13th.—Ten-feet reflector, with different powers. Jupiter and Saturn were viewed alternately, and compared. A greater curvature was evident at the polar and equatorial regions of Jupiter than at those regions in Saturn. These alternate observations were many times repeated, and the oftener the planets were compared, the more striking appeared the difference in their shape.

May 26.—Ten-feet reflector, power 400. The difference in the three diameters of Saturn was evident without measurement. That which passes through the points of the greatest curvature being the largest; the equatorial diameter the next; and the polar diameter the smallest.

June 1.—Two measures of the latitude of the greatest curvature were taken, by setting the fixed thread of the micrometer to the direction of the ring. The mean of these was 43° 20′.

June 2nd.—The two planets were viewed alternately, with powers of 300, of 200, and of 160; and even with the lowest of these, the difference in the figure of the planets was very evident.

The telescopic appearance of Saturn was then compared with a figure drawn from the measures Dr. Herschel had taken, combined with the proportion between the equatorial and polar diameters determined in the year 1789. From these a corrected figure was formed, of which an exact copy is given. The dimensions of it, in proportional parts, are,—

Diameter of the greatest curvature	36
Equatorial diameter	35
Polar diameter	32
Latitude of the longest diameter	43° 20′

These observations, Dr. Herschel thinks, may tend, in some measure, to ascertain the quantity of matter in the ring and its solidity; they also afford a new instance of the effect of gravitation on the figure of planets; for in the present case the opposite influence of two centripetal, and two centrifugal forces, must be considered.

On the magnetic Attraction of Oxides of Iron. By Timothy Lane, *Esq. F.R.S.* Read June 20, 1805. [*Phil. Trans.* 1805, *p.* 281.]

Mr. Lane having observed that hardened iron is not so readily attracted by the magnet as soft iron, was proceeding to make some experiments on the subject, when he was led, by Mr. Hatchett's paper on Magnetical Pyrites, &c., to examine what magnetical properties iron possessed when free from inflammable matter. For this purpose he procured some of the precipitate sold at Apothecaries' Hall under the name of *Ferrum precipitatum,* and which is prepared by adding purified kali to a solution of sulphate of iron. This precipitate, the author says, has no magnetic particles; nor, when exposed to a clear red heat, does it acquire any, except when smoke or flame have access to it. The solar heat, when concentrated to the degree at which glass melts, does not render this oxide magnetic, provided it be protected by glass from the dust floating in the air; if not so protected, many of the particles become magnetic.

Mr. Lane then rubbed various portions of the oxide, in a glass mortar, with different combustible substances, namely, coal, sulphur, charcoal, camphor, ether, alcohol, &c., but found the oxide was not thereby rendered magnetic, without the assistance of a degree of heat equal to that of melting lead; with that degree, however, it became magnetic. Hydrogen, when aided by a red heat, had the same effect. Charcoal and cinders, well burnt, were found to require a longer continuance of the heat, to have their full effect on