

3rd. That when the influence of the brain is cut off, the secretion of urine ceases, and the production of animal heat is discontinued, even though the blood is preserved of its florid red colour.

4th. That, on the contrary, the coldness of the air applied is communicated to the blood, and thereby diffused to distant parts of the body.

*On the Expansion of any Functions of Multinomials.* By Thomas Knight, Esq. Communicated by Humphry Davy, Esq. LL.D. Sec. R.S. Read June 7, 1810. [*Phil. Trans.* 1811, p. 49.]

As M. Arbogast is the only author who has cultivated this part of analysis with any great success, it appeared desirable to the author to take a different view of the same subject, in order to confirm Arbogast's results by a different mode of obtaining them.

His own method has also the further advantage of arriving at several new and remarkable theorems (particularly with respect to inverse derivation), which probably could not be found by the method of M. Arbogast.

As far as concerns the functions of a single multinomial, the rules are the same as those of Arbogast; but in the more difficult cases of double and triple multinomials and functions of any number of them, the methods of the author are professed to be new and expeditious; and they are demonstrated with a great degree of facility and simplicity, from the analogy which reigns throughout his manner of treating the subject, and which enables the reader more readily to retain the rules in his memory.

*On a Case of nervous Affection cured by Pressure of the Carotids; with some physiological Remarks.* By C. H. Parry, M.D. F.R.S. Read December 20, 1810. [*Phil. Trans.* 1811, p. 89.]

In the year 1788 Dr. Parry published, in the Memoirs of the Medical Society of London, an account of many symptoms, such as headache, vertigo, mania, dyspnoea, convulsions, and others usually denominated nervous, that had been removed by pressure on the carotid arteries, which the author conceives to have operated by diminishing a too violent impulse of blood into the vessels of the brain, and thereby obviating excessive irritation.

From various cases which have occurred to Dr. Parry since that period, he selects one which appears to him to afford a singular illustration of the principle. It is that of a lady, who, after having been exposed to severe cold for some time, was seized with numbness of the left side, succeeded by tingling of the left hand, and deafness of the left ear, succeeded by excessive sensibility to sound. These were followed by a feeling of contraction or stiffness of various muscles of that side, and subsequently flutterings and twitchings of the flexor muscles of the fore-arm and of the deltoid; not, however, so as to