

8. It must be granted that inductive reasoning is that species alone which ought to be admitted in the “interpretation of nature;” and it is very probable that the great Lord Bacon, who reformed philosophy, was capable of following his own rules: — has the explanation he has given of the “*form of heat*” ever been disproved by experiment and induction?

Intellectus humanus ex proprietate sua facile supponit majorem ordinem et aequalitatem in rebus, quam invenit: et cum multa sint in natura monodica et plena imparitatis, tamen affingit parallela, et correspondentia, et relativa, quae non sunt. — Hinc elementum ignis — introductum est ad constituendam quaternionem cum reliquis tribus, quae subjiciuntur sensui.—

Novum Organum, Lib. i. aph. xlv.

Air Street,

April 20, 1786.

XII. *Observations and Facts relative to the Practice of Inoculation of the Small-pox. Communicated in a Letter to Dr. Simmons, F. R. S. by Mr. John Covey, Apothecary at Basingstoke, in Hampshire.*

AS you have in the first part of the Medical Journal for 1786 communicated some observations

observations on the practice of inoculation for the small-pox, I take the liberty of sending you the following remarks on the same subject :

I should apprehend little effect could reasonably be expected from the experiment made by Dr. Houlston *. Variolous matter, taken on thread or cotton, carefully dried, and kept from the air, will retain its virtue for a considerable length of time, but how long I cannot pretend to determine, having never had occasion to make use of any that had been taken more than six weeks. That it would retain its virulency for any number of years, is, I think, greatly to be doubted. Matter taken without being dried and closely confined from the air, soon loses its efficacy.

The incisions sometimes have a partial inflammation for a few days, which then vanishes, without producing any illness; in this case the patient is certainly still liable to infection; but, I believe, it very rarely happens that there is any matter, or even ichor, in the incisions, in the present slight manner the same are made, without producing the small-pox; provided there was, I should much doubt the possibility

* See page 7.

of its communicating the distemper to others, by inoculation or otherwise. I am convinced that variolous pus, taken on a thread or lancet, or indeed any other extraneous matter, infused either by puncture or incision into the arm of a patient that has already had the small-pox, will frequently produce inflammation, more or less, where inserted; and so will matter that has lost its virulency, when infused into the arm of one who has not yet had the distemper. But I have constantly remarked, that when the punctured part inflames properly, and is attended with an efflorescence, rather inclining to a crimson colour, for some distance round the same, about the eleventh or twelfth day from the inoculation, although the patient should have very little illness, and no eruption, yet that he is secure from all future infection.

Whether matter taken from a patient in the situation described by Mr. Dawson is capable, in *general*, of communicating the distemper to others, or whether the same matter infused at a future period into the arm of the patient it was taken from, can produce in him the true small-pox, merits farther inquiry. The case recorded by Mr. Dawson is certainly a strong evidence in favour of the former opinion.

It

It is no uncommon circumstance, and the same has been frequently noticed; for nurses, or those employed near patients in bad kinds of small-pox, to have a few pustules, which mature and turn off in the same manner as the real small-pox, notwithstanding they have already passed through this distemper, and notwithstanding the eruption is preceded by no illness of any kind; but that matter taken from these eruptions will communicate the true distemper by inoculation, is a circumstance, I believe, till lately, not affirmed. I myself remember a man, much pitted with the small-pox, who, by his close attendance on his son, a fretful boy, under the natural distemper, of a bad kind, and, by frequently laying his face close to the child, had an eruption of seven or eight large pustules near one of his eyes, which passed through the usual progress, and he was blind with this eye two or three days, but without the attendance of any illness whatever. The circumstance related by Dr. Wright, of the six negroes inoculated with matter taken from a pustule on his own thumb, (he having formerly had the distemper) is a convincing proof of the possibility of the case, provided they had not taken the distemper in the natural way, a suf-

ficient time previous to this second inoculation, to defeat the effect thereof.

Baron Dimfdale has observed*, that, by inoculation, the small-pox, taken in the natural way, may be superseded even several days after the infection has been taken. This observation I have had several confirmations of; for although the infection very rarely fails of being communicated in the present mode of operation, yet this has sometimes occurred in my practice. In such cases I have constantly, as soon as it could be ascertained, made fresh punctures or incisions, which have been generally made on the fourth, fifth, or sixth day, and once in particular so late as the seventh day; in each of which cases the patients received the small-pox from the second inoculation, notwithstanding they were from the first liable to receive natural infection from other patients in the same house, in all stages of the distemper.

A case, somewhat similar to the one related by Mr. Mudge †, formerly occurred in my own practice. A young lady, who had a very fa-

* See Vol. II. page 164.

† Dissertation on the Small-pox, page 80.

vourable number of the small-pox from inoculation, was visited by some friends on the third day from the eruption, and imprudently drank two or three glasses of wine with them; in the evening of the same day I found her with a high fever, which was followed the ensuing morning by a plentiful crop of the distinct small-pox, evidently the production of her own indiscretion.

To these remarks I beg leave to add the following case:

Mrs. B. a married gentlewoman, thirty-seven years of age, was inoculated, with several others, on the 29th of March, 1785. The incisions shewing no sign of inflammation, she was again inoculated with fresh fluid matter the 1st of April following: this likewise producing no sign of its having taken effect, the operation was again repeated on the 4th, and seemingly with no better success; nevertheless, on the eighth day, reckoning from the first inoculation, she began to complain of head-ach, heat, and the other symptoms which usually precede the eruption of the small-pox. These complaints continued until the 12th, when she had about forty large pustules, and the illness entirely left her. These pustules matured
kindly,

kindly, and dried away on the seventh day from the eruption.

From this fact, I think it is evident that the variolous infection may be taken into the circulation from inoculation, although the incisions may shew no sign of inflammation whatever. That this lady's small-pox arose from the first inoculation, I believe, will admit of no doubt; for although the places of incision shewed not the least sign of inflammation from the beginning to the end, yet she sickened on the same day with her companions, and had the distemper in the fairest manner.

I do not remember to have read of a similar instance; neither has the like occurred to me in twenty-nine years extensive practice in this branch of our profession.

If you, Sir, shall think these observations worthy of being communicated to the public, you will do me a favour by inserting them in the London Medical Journal.

Basingstoke,

Hants,

May 8, 1786.