tion from their merits to reconsider, if not to remodel, the system of organology which they propounded by the light which subsequent physiological inquiry and discovery have thrown upon the subject. In the prosecution of such inquiries, the inductive philosophy of Bacon must be our guide. For while it is never to be forgotten that a refined analysis discovered the harmony of the celestial motions, and conducted the immortal Newton through a maze of intricate phenomena to the great laws appointed for the government of the universe, it is melancholy to reflect for how many ages the opinions of one man were the measure of truth and reason, and, under the sovereignty of the sway of the Stagirite, how universal was the degradation of the human understanding.

But still it is gratifying after the lapse of ages to behold the father of experimental philosophy, the illustrious Bacon, clearly pointing out the absurdity of pretending to account for the phenomena of nature by syllogistic reasoning on hypothetical principles, and with a boldness becoming a genius of the first order, undertaking to give a new chart of human knowledge. Let us follow its guidance and tread in his footsteps. Already there are many labourers in the field, and much has been accomplished. A second Newton may arise among them to thread the labyrinth of metaphysical subtlety and transcendent philosophy with the logical acumen of a Locke, to collect and bind together the scattered and isolated links of the great chain of physiological discovery, to point out the bearings of the pathological facts of past experience, to interrogate nature herself upon the functional characters "written upon the nervous pulp" of the several ganglia, and to read her own replies in the living experiments which she has presented to us in the lower forms of animal existence, and thus to place the great doctrines of mind on the solid basis of a sound physiological psychology!

31, Norfolk Street, Strand, August 1st, 1855.

CASE OF FATAL POISONING BY GERMAN SAUSAGE.

By W. H. MICHAEL, Esq.

[Read before the Monmouthshire and South Wales Branch, June 28th, 1855.]

On March 22nd, 1855, I was desired to see a child living in Postern Lane, Swansea. Upon arriving at the house, I found a fine little boy, between 4 and 5 years of age, lying on his grandmother's lap. There were five other children. The father was a tailor, and the family was in great destitution. The mother had been given the evening previously a German sausage, of which the eldest son had partaken at once. This had made him ill through the night; vomiting and purging had taken place to a considerable extent. The little boy now ill had eaten some of the sausage (according to the statement of the mother, only one or two very thin slices) for breakfast, about two or three hours before I arrived, at 2 P.M. Shortly afterwards he had vomited. About half an hour before I saw him, convulsions had come on, which had alarmed his parents; he had also been violently purged. When I saw him, the general surface was cold; the limbs rigid; the teeth very firmly clenched; the pupils largely dilated, and insensible to stimulus; and he had occasional convulsive spasm of the lips. The lips were livid; the face was deadly pale; no pulse could be felt at the wrist; and the respirations were only three in the minute. He died in about ten or fifteen minutes, and about three hours after eating the sausage, as nearly as could be learnt from the confused statements of the mother.

The remaining portion of the sausage, which was one of the German smoked and dried kind, showed some incipient softening and decomposition (not putrefactive) at the surface; the interior both looked and smelt good. Careful analysis detected no traces of metallic poison. The mouldiness frequently spoken of by authors could not be seen.

The *post mortem* examination showed the stomach half full of pieces of sausage, floating in a pulpy mass, half digested, of the same. Considerable irritation and inflammation of the mucous coat existed, especially towards the pyloric orifice. The mucous coat of the small intestines was irritated throughout, small puncta of blood being observable over the surface, which was bathed in increased mucous secretion. The brain was congested, as were also the thoracic organs. The other portions of the body (which, although well formed, was much attenuated) were healthy.

I have taken the liberty of bringing this case before your notice, because, so far as I can learn, it is the first that is known to have occurred in England, although in Germany such cases are fearfully prevalent. In Wurtemberg alone, according to official returns, more than four hundred cases have occurred in the past fifty years, of which a hundred and fifty died. Of these, forty per cent. occurred in the month of April; and this has been put down as a matter of some importance in determining the character of the poison, which is said usually to manifest its symptoms in from twenty-four to forty-eight hours after ingestion; this, according to Christison, being due to the great difficulty with which the fat supposed to contain the poison is assimilated. Recent researches appear to have proved, contrary to what has long been supposed, and which rests mainly on prejudice, that unprepared meats, far advanced in the putrefactive process, or belonging to diseased animals, may be eaten with impunity. Information regarding this subject may be found in *Traité des Substances Alimentaires*, by M. Payer; also in researches at the Veterinary School at Alfort, by Messrs. Huzard, Renaud, and others; and in a narrative of M. Flourens, who relates that, in 1789, the poor of St. Germain's ate, without inconvenience, 700 or 800 horses, which had died from farcy and glanders. Becquerel also mentions the same in his *Manuel d'Hygiène*, of animals which died of contagious typhus in 1814, 1815, and 1816. It is evident, from all the facts recorded, that prepared and smoked meats, especially when eaten raw, also salted fish, cheese, musty fats, ham, etc., may become poison. Many cases have occurred where meat cooked has produced no ill effects, where the same raw has caused fatal poisoning. The works of Orfila, Christison, Chevalier, and Duchesne, also contain many examples. Christison, however, states, in opposition to what I have before remarked, that animals who have died of disease can cause poisoning; but this was in 1844, before the experiments at Alfort and elsewhere.

These poisonous symptoms have been attributed to metallic poisons; this is evidently disproved by Emmert (*Introductory Dissertation*, Tübingen: 1815): to the presence of hydrocyanic acid; but no investigator has succeeded in showing the presence of the cyanides; and the author of the hypothesis has himself abandoned it. Berres, Rumpelt, and Saladin, have attributed it to oxy-acetic acid; but this would quite fail, for the same poisons are developed in cheese and uncooked meats. Witting considers the result due to some empyreumatic acid; and Kastner, in his *Handbuch der angewandten Naturlehre*, to the acrolein produced by smoking. Kerner, who has written well on the subject, attributes it to nitro-phenylic acid; but this has been since discovered not to be poisonous; Weiss and Liebig, to an animal poison, such as typhoid miasm. The symptoms of putrid poisoning are, however, manifestly wanting, and have no analogy with an animal ferment; and it is notorious that gastric juice may determine and so alter the character of putrid animal matter as to make it innocuous. See the experiments of Dr. Bernard on the subject. Buchner, in his *Toxicologie*, says he has extracted a fatty poisonous acid; as also Schumann, in Horn's *Archives*. This, when dissolved in alcohol, and administered to a dog, caused death in thirteen days. Professor Schlossberger ascribes it to a basoid alkaloid; but this never appears to have been separated and examined, and moreover is contradicted by the fact that poisonous sausages have ever been observed to have an acid reaction. I have ventured

to think, in the absence of all other proof, that the poison may very possibly have a fungoid origin; but I must confess that I have no proofs to adduce on this matter. It is, however, evident that no really tenable hypothesis has been advanced, adequately supported by demonstration, to explain the causes and effects of these most distressing cases.

I am largely indebted for many of the foregoing remarks to a paper by M. E. Vanden Court, which was originally published in the *Journal de Chimie Medicale*, and since translated in the May, June, July, and August numbers of the *Chemist*, in the July number of which the author inclines to the belief that the poisonous effects may be due to "the presence of an elementary vegetable" (fungus or alga) which he names *sarcina botulina*.

Swansea, August 1855.

A CASE OF COLLAPSED MEMBRANÆ TYMPANORUM.

By THOMAS WESTROPP, Esq., Bristol.

IN the ASSOCIATION JOURNAL for May 18th, I endeavoured to describe one of the forms of deafness ordinarily met with, and admitting of much amelioration, if the surgeon will adopt simple, rational treatment, and the patient persevere untiringly in its adoption for a period varying from two to six weeks. Without any great pretence to novelty, I will put forward the details of a more aggravated case, in order to show what perseverance will sometimes do in the alleviation of a malady which is usually abandoned as hopeless by the practitioner of medicine, and allowed to fall into the hands of ignorant and unprincipled pretenders.

CASE. Catherine Cloe, aged 49 years, a washerwoman, applied at the King Street Ear and Eye Dispensary, on the 8th of March, complaining of deafness of both ears, and noises of all sorts, which distressed her much. When viewed through a speculum, each membrana tympani appeared whitish, thickened, and drawn inward. On applying a stethoscope to each ear, and desiring her to blow in the proper way, I found that the Eustachian tube on each side, more especially on the right, was scarcely pervious. Eustachian catheterism had been tried before she came to me, she said, with some little advantage; but, though this was a case that might be benefited by the operation, still it is scarcely advisable when more appropriate treatment is called for. Her bowels were rather habitually constipated, and prone to flatulence. She was advised to take two pills of aloes and assafetida on two alternate nights, and to apply a small blister behind both ears. I may here remark, that the popular custom of blistering behind the ears is too much in vogue with the profession, to the neglect of much additional treatment. I find now, as the result of considerable experience in ear disease, that patients who have been repeatedly blistered by others, and subsequently by myself, have received little or no benefit from it till other additional and more appropriate remedies have been superadded, and long and perseveringly tried. I sometimes meet with persons who have been for years occasionally applying blisters behind the ears, and taking medicines, both patent and *secundum artem*, to settle the stomach; and all without any material benefit. Again, there is one axiom that should be observed in dealing with persons suffering from ear affections, viz., to tell them candidly of the peculiar tediousness of their treatment, and honestly recommend them not to commence treatment at all unless they are determined to persevere regularly and unintermittingly till a fair trial of aural surgery has been had recourse to. The greatest limit of this acoustic ordeal I would set down at three months; but generally a month, or even less, will tell whether the case is likely to be amenable to treatment. I am now alluding to chronic affections which have existed from one to twenty or more years: of course acute cases are as much within the pale of art as any other acute affec-

tion. I syringed the ears, to clear out a little cerumen and flakes of loose cuticle, in order to brush each membrane with a five-grain solution of nitrate of silver. I applied a stronger solution to the pharynx, trying to reach above the velum pendulum palati, so as to get near the opening of each Eustachian tube.

March 14th. On applying a stethoscope over each auricle alternately, while the patient blew, air was heard to enter a little more freely through the right Eustachian tube; the left was much as before; the membranæ tympanorum were as before. I may here remark, that the solution of nitrate of silver does not usually blacken the membrana tympani; but, should any of it touch the outer orifice of the meatus, the usual discoloration is perceived in a day or two. I suppose the light does not generally get within freely enough. The pills had operated moderately; she felt better, having before suffered from tympanitis. I applied a little of a twenty-grain solution of nitrate of silver to each membrana tympani, and to the pharynx high up; and dressed the blister with an ointment containing strychnia and veratria. The patient was ordered to take a tablespoonful of infusion of cinchona bark, with the eighth of a grain of biniodide of mercury and a grain of iodide of potassium, twice a day.

March 13th. The stethoscopic phenomena remained much as before. The patient said she felt her throat much more comfortable; the hearing was much the same as on the last day. A solution of nitrate of silver was applied to the throat and membranes of the ear. Tincture of iodine was applied behind each ear; and the patient was ordered to apply a leech to the orifice of each meatus.

March 15th. The leeches had been applied, but too far out on the auricle; and, as she continued to complain greatly of tinnitus aurium, I prescribed a tablespoonful thrice a day, after food, of the following mixture.

R. Infusi cinchonæ ʒvij.
Solutionis hydrargyri bichloridi ʒi.
Tincturæ arnicæ montanæ ʒiij.
Tincturæ zingiberis ʒss. M.

She was also ordered to force tobacco smoke through the Eustachian tubes every night. Nitrate of silver solution was applied in both ears, and tincture of iodine behind the ears. She stated that the noises were much more annoying to her than the deafness.

March 20th. Tinnitus aurium was greatly lessened. She was ordered to continue the mixture; local treatment as before. As the right Eustachian tube was partly obstructed, I directed her to put a small blister under the right ear, between the sterno-mastoid muscle and the angle of the jaw. I have several times seen a blister in this locality do great service where deafness was complicated with throat affections.

March 22nd. The noises were still less; the right Eustachian tube was still obstructed. She had been using tobacco smoke, but, from not understanding how to force it into the ears, with no appreciable benefit. I dressed the blistered surface with veratria and strychnia ointment, and applied a solution of strychnia in both ears. The mixture was continued.

March 24th. She told me now, for the first time, that she had a fever about twenty years ago, and that she had been more or less deaf since. I sometimes wondered at the amount of permanent deafness being compatible with her first account, in which she stated that her ailment was only of two years' duration. I now found that a fresh attack came on then. Her hearing was now a little better than when she first came, though she could not hear my watch on touching the right ear with it. She said she could hear a louder one at home. The tinnitus was less; instead of being like the rolling of a cart, it now assumed a hissing character. She had ceased taking the arnica mixture, and was now directed to resume the biniodide of mercury, as at first. I dressed the blistered surface behind the right ear with veratria and strychnia ointment; this smarted a good deal, and delayed the healing; which was advantageous. She was now using the tobacco smoke properly.