

The Forces of Organic Life—How Influenced by Chloroform in the Production of Anæsthesia and Death.

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Many years since—the writer is no longer young—the following incident was read, when or where not now recollected:—

An Englishman, after shipwreck, found himself on an island, among a people whose language he did not understand. This added so much to his other misfortunes and difficulties, that he conceived the idea that a common education in all civilized countries should include a universal language of signs, for the benefit of those who might possibly be thrown together speaking different languages. In due time he reached home, and immediately set about carrying his idea into practical effect. For this purpose he visited the great seats of learning in and about London, but met with little or no encouragement, save that at one of these he was informed that there was such a chair, with a professor, in Edinburgh. He at once hastened off to that city. Those in London who had told him this to get rid of him, finding him so much in earnest, wrote to some acquaintances connected with the University there, to humor his whim when he arrived, and give him an audience. On inquiry of the janitor at Edinburgh, he was informed that there was a professor of a universal language by signs, and that he would be in his rooms at a certain hour. The matter was taken in hand by a few students, who imposed the duty of acting the professor upon the rather sharp-witted janitor, who had lost an eye. At the appointed hour, the stranger was at the University, and was conducted to the professor's room. On entering he held up one finger. The janitor, in reply, held up three. There were other signs exchanged, but these two serve my present purpose. After being bowed out of the professor's room, he was met by the mischievous students, who eagerly inquired of him about his interview. The Englishman replied that on entering he held up one finger, to signify there was but one God. The professor had held up three, signifying that God existed in the three persons, of the Trinity, etc. Their next object was to obtain the janitor's account; who said that the Englishman was very personal and impudent, for on entering the room, he had held up one finger to signify that he, the janitor, had but one eye. In return, he said he had held up three fingers, to signify that they had three eyes between them.

The article on "Death from Chloroform," by Dr. Jones, of Circleville, O., recalled this incident to memory. Though our subjects are not identical, there is, nevertheless, a close relationship; sufficiently so, perhaps, to be practically treated as such. He thinks my theoretical explanation of the conversion of gravity into organic force, in resuscitation from impending death, due to overdoses of chloroform very absurd. That may be so; but it seems to me he fails to show it to be so, either by facts or

reasoning. That it was theoretical on my part is not an argument against the truth of the explanation given; for the only originator of action can be theory, and the choice lies between one that is haphazard, and one that is adopted on rational grounds.

Three facts are, however, recognized by both of us: One, that overdoses of chloroform have produced death; another, that by all quantities, small or large, life is often placed in jeopardy; third, that those so imperiled are frequently resuscitated.

Now, the actual death, or peril to life, after the inhalation of chloroform, and resuscitation from impending death, do not occur by chance or accident; but, like all other phenomena of organic life, are in obedience to invariable laws, and correct philosophic explanation of the events, hinges upon connecting them properly with laws governing organic dynamics. Permit me, therefore, space for further explanation.

From our articles, it is evident that Dr. Jones and myself look at organic dynamics from very different standpoints, or the conclusions we arrive at would hardly vary so much; for they are as diverse as the interpretations of holding up one and three fingers, respectively, by the shipwrecked Englishman and Edinburgh Janitor.

Through two decades of professional experience the human body and life were mysteries and therapeutics a muddle; though Horner, Jackson and Wood had explained them to me, as they had done to thousands before and since. It was somehow comprehended, though not very clearly, that human bodies were constructed out of the food eaten; but then there was so many isolated and contradictory facts in regard to it, all resting on equally good "authority" in such matters that I was contented to learn, in therapeutics, that "tetanus" had been "successfully treated with the calabar bean," or that "chestnut leaves" were good for "whooping-cough," etc. And so, chewing the cud of contentment, relied on "authority" in all matters professional; not, however, without many misgivings as to its propriety, and longings for a "more excellent way."

Some years since a review of a book was read whose subject was "The Correlation and Conservation of Forces." At that time I was somewhat anxiously casting about for a subject for a "valedictory address" to be delivered to the society which has so often honored me by electing me its presiding officer. No time was lost in obtaining the book, an American republication, as well as some English works, in fact, all that had been published on the subject at home and abroad. The society was notified several months in advance of the subjects of the valedictory, which was received as a pleasantry rather than as a matter of scientific interest; and so I was nick-named "The Forces." Though frequently inquired of about the "The Forces," nothing was said in reply but *badinage*, until the valedictory was read. It was received with much surprise; though the members are remarkable for their general and professional culture. In subsequent papers read to the society, or published, correlation of force has been pushed into practical medicine farther than by any other, no matter what his position in the world of science