

probably will ever have at any future period of his existence precisely the same mental state as at this moment. Man, then, with all the rest of the world, is a changeable creature, and while sailing down the stream of Time is like a bubble upon the ocean wave, which reflects for a moment the variegated hues of the sunbeams and soon mingles with the general mass and is seen no more.

Change, indeed, is a primary law of nature, or, perhaps, more properly the necessary and universal result of those laws of nature, arising from the inherent properties with which the Creator has impressed mind and matter.

By these laws all the phenomena of the moral and physical world are controlled. There can be no change in matter without motion,—no motion without force, and no force without an adequate cause. So in the operations of mind, every mental condition depends upon impressions produced by the external world through the medium of sensation, or by being linked with some other mental state in the relation of cause and effect.

Design, Principle, System and Law are stamped upon every page of Nature's book. Every visible part of creation bears indubitable proof that nothing is beyond the control of law. And while change is a law of nature, the law of change is unchangeable. Science is a knowledge of the laws of nature,—the laws of nature are the laws of God. We have no evidence of change in the essence of mind or matter,—no evidence that the properties of the one or the attributes of the other do not remain as in the "beginning," unaffected by time.

Until within comparatively a short period of time a knowledge of the laws that govern the human system had been very imperfectly understood, and mankind groped through many centuries in darkness, ignorance, and superstition. Shortly after the immortal Harvey discovered the true circulation of the blood, the light of science soon burst upon the world with astonishing effulgence. Rapid progress has been made in every department of human knowledge. It has been shown that man, physical, is made up of only a very few of the most common materials in the world—three kinds of air or gas, Oxygen, Hydrogen, and Nitrogen, with a small quantity of a solid substance called Carbon, seven-eighths of the whole being gas, or in Chemical language, forty pounds of charcoal and nitrogen, and five and a half pails of water. Who would suppose

that a tub of water, tinged with a little charcoal, would make a man? These comparatively worthless materials, as common as the water of the sea or the air we breathe, have no beauty or comeliness of form in themselves, but when subjected to the laws of life there results the most complete and wonderful piece of mechanism that ever issued from the hands of the great Architect,—a structure whose mysterious organization eludes the sagacity of the most skillful anatomist, and the action, use, and design of many of its functions have baffled the profoundest researches of Philosophy.

I must say a few words on Animal Chemistry, and then leave the subject for the present.

We all know that within the last century—since the days of Lavoisier, Leibig, Dumas and Davy, more facts have been added to our knowledge of Animal Chemistry than during eighteen centuries before.

The design of Chemical Philosophy is to unfold the laws of the material world, so far as they are connected with our life, health and happiness, and thus enable us to fulfil the great mission of our present state of existence,—to teach us a knowledge of ourselves and a knowledge of those powers and forces in action around us,—to place in our hands the means of relieving suffering humanity, of increasing the comforts and enjoyments of life, of bringing the mighty powers of nature into subserviency to our will, as ministering servants to our wants and pleasures.

What infinite advantages the intelligent physician now possesses over those who have gone before him!

Instead of crude materials thrown together without any knowledge of their chemical action, and administered with as little conception of the nature of the disease to be removed, the scientific physician studies carefully the constitution and pathological condition of the patient, and understands, if possible, the true character of the disease. And then, with a thorough knowledge of the nature and chemical action of his remedies, he prescribes in accordance with the laws of science and of nature.

Every condition and occupation of life, from the beggar to the prince, from the humblest labor to the highest profession require a general knowledge of those principles of chemical science which are inseparably connected with the successful prosecution of labor, and the wants and pleasures of civilized life.

A large majority of mankind know more of the constitution of their horses or their dogs, than they do of their own physical nature.

Let us look again at man physically. Where do we find such perfect examples of the mechanical powers, as in the moving limbs and joints of the animal body? Where such a pneumatic apparatus as in the breathing chest? Where such a hydraulic engine as the heart and blood vessels, with perpetual and uniform pulsations, sending the crimson current

of life through a thousand pipes to all parts of the system? Where such an optical instrument as the eye? Where such a chemical laboratory as the stomach and digestive organs, by which the coarse materials in the shape of food, after having undergone mechanical division by mastication, are subjected to the most elaborate and refined analysis, each element being carefully selected and assigned to its proper place in the system, some forming the fluid and others the solid parts of the body, as bone, flesh, hair, &c. every particle as if a living thing, taking its own peculiar station, and faithfully performing its proper function?—in short, where do we find such beauty, variety, and perfection as here combined? When such a temple is dignified by the immortal spirit, what a structure is then completed! How wonderfully adapted is the mansion to its exalted tenant—what a mysterious connection between them—what mutual claims upon each other, distinct in some sense, yet united by the tenderest ties of sympathy!

It is the physician who has the charge of keeping in order this curious, this wonderful and complicated piece of mechanism; not indeed for the sake of the machine merely, but for the sake of the tenant. What wisdom and skill are required to determine the needful wants of the tenant,—to see that all the apparatus connected with this beautiful dwelling is in order,—to keep in good repair every apartment that may contribute in any way to the comfort of its occupant, until the time shall come to quit this earthly house for a more exalted and enduring mansion.

I know of no science that the philosophic mind can be engaged in to greater advantage than that of Physiology. We should be thoroughly acquainted with our constitutions,—understand the house we live in, and by so doing we may in a measure secure to ourselves the choicest of blessings, Health, without which all others are as evanescent as the dew of the morning.

"Know thyself" is a command that originated from the same great source from which all other commandments come, and while we have time, talent, and ability, let us make our lives useful by investigating nature's laws.

"Seize upon truth wherever found,  
On christian or on heathen ground."  
Friends of Education, may our motto be, in every sense of the word,—Onward

Below we give a list of subjects to be discussed at the next sitting of the Convention which will meet at Castleton, on the last Saturday in September next.—

*Grammar*—Messrs. J. Bell and W. Squier.

*Arithmetic*—Messrs. Brisbin and Henman.

*History*—Messrs. Macoun and McGrath.

*Geometry*—Mr. E. Scarlett.

*Geography*—Messrs. J. O'Sullivan, I. Squier, and E. D. Sherman.

*Essay*—*Mind and Matter*—Dr. Gould

*Debate*—Subject—*Is corporal punishment necessary to the good government of a school, or can a school be governed by moral suasion alone?*