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ART. I.—EDUCATION.

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A TRUE Anthropological System, must necessarily indicate the proper principles and methods of education. I propose, therefore, to sketch the Neurological System of Education, in contrast with the systems which have heretofore been in vogue.

That education is a very imperfect affair at present, no one can deny. It is tyrannical, it is painful, it is imperfect, it is abortive. Children are subjected to a degree of restraint, and to a harsh discipline, which often inspire them with hatred and disgust toward their teachers, their parents, and all who are accessory to the torturing process of "educating." Their wants and their wishes are thwarted; a painful system of constraint deprives them of locomotion, and punishes their natural gayety. Under the pretext of cultivating the intellect, the physical constitution is marred, the body is deprived of its proper development, and even that of the intellect itself is impeded and perverted. The intellect is cultivated—but it is to the neglect of the moral nature, the affections, and all the energies which render the character manly; it is cultivated at the expense, and to the destruction, of the physical health; and this intellect itself, to which all else is sacrificed, has but a feeble, artificial and unhealthy growth.

All this is wrong—all unnecessary. Education, rightly understood, is a natural and delightful process—producing pleasure both in those who bestow and in those who receive: producing unmingled good. Let us look at education as it should be. The brain and the entire constitution of man, present us with a number of parts, spontaneously active, desiring an opportunity for appro-

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priate exertion, and continually impelling us to seek their appropriate gratification. If a satisfactory sphere of exertion is furnished, and if suitable gratification is allowed, all the organs of man spontaneously advance and perfect themselves, as a tree attains its growth by sunshine and showers. If deprived of the opportunity of exertion, or deprived of its appropriate gratification, each organ fails to attain its appropriate development and power, and the constitution becomes crippled and imperfect. The art of education, then, consists simply in gratifying the natural demand for exertion and the natural demand for gratification: in other words, complying with the natural wants of the constitution. The muscular system, for example, demands opportunity for exertion, and requires its gratification in the proper objects, upon which it can be exercised. If we supply the proper field and objects for its exertion, the muscular system will infallibly develop itself to the highest degree, and thus present the example of a perfect *muscular education*.

All children are spontaneously active. Free them from restraint, give them the open fields and forests, with suitable companions, toys, implements, objects of chase, &c., and there will be no necessity for any species of compulsion or parental authority, to induce them to perfect their own muscular education. On the contrary, it will be exceedingly difficult to prevent them from successfully completing their physical development.

In this example we see the whole philosophy of education. Every organ *desires to be educated*; or, in other words, to attain its highest development and vigor. All that we have to do, is to furnish it the opportunity of gratifying its inherent love of education or growth. As the muscular system desires a field of exertion, which it is our duty to furnish, so the respiratory system desires an abundance of pure air, and will be sure to obtain it, if we do not refuse its gratification. The digestive system, in like manner, desires nourishing food, appropriate to the wants of the constitution. It rejects nauseous, poisonous, innutritious and unwholesome articles, and eagerly grasps or seeks its appropriate gratification in water, bread, milk, fruits, &c. If we furnish it the appropriate gratification, we are never required to exercise authority or any tyrannical restraint, to compel the child to gratify its own digestive apparatus, and to obtain a sufficient amount of nourishing food.

Thus admirably has nature provided for the physical perfection of the muscular, digestive and respiratory apparatus, by laws which are invariable in their operation and require from us only the opportunity and means of growth. All the faculties of the young, long for education. They demand but opportunity and means. Let us furnish these, and education is spontaneous.

It is commonly supposed, that the education of the intellect is a laborious process; that it is rather unnatural and requires a great amount of irksome labor, goaded on by the stern authority of parents or teachers. To this pernicious error, the happiness of the young has been sacrificed from time immemorial.

True education is never painful. It is a joyous, exhilarating process. It is the highest gratification of the individual. It is utterly untrue, that the young are averse to intellectual education, or require to be forced into the acquisition of knowledge. The intellectual organs have the same spontaneous activity as the muscular. Eagerly as the child delights to romp and play, his desire to acquire knowledge is no less eager. He is incessantly curious to see and hear everything around him. He is eager to learn all that we can tell him—to examine every flower or stone that is brought near him—every specimen of the arts and manufactures. He is eager, in short, to be practically acquainted with botany, mineralogy, geology, chemistry, natural philosophy, mechanics, astronomy, physiology, psychology, geography and history. His questions occupy the whole range of science; and if we do not repel his eager curiosity—if we but furnish him the intellectual food which he demands—he will continue, with increasing delight, to investigate all the sciences within his reach, and store up within his memory a great mass of physical and philosophical knowledge. It is not with a mere animal perception that he rests satisfied. He will first study a flower, as a botanist, by observing its form, proportions and color; but he would also inquire into its history, and he would further proceed, like a true philosopher, to inquire into the causes of vegetation. And indeed, in a few minutes, a child of active mind will exhaust our knowledge upon the subject, by searching questions, and compel us to acknowledge the extent of our ignorance. If the name of a celebrated man is mentioned, he eagerly inquires into his biography, into the history in which he figured, the locality in which he resided, and all the associations of his life. When he has looked up to the clouds and stars of the sky, he is eager to master all the details and profundities of meteorology and astronomy. When he observes peculiar sensations and phenomena in his own constitution, he is eager to become acquainted with the laws of physiology; and when he observes the conduct of his fellow beings, he is curious to understand the general principles of human nature, and the reasons for the peculiar conduct of different persons. When a novel machine is in operation before him, he is eager to understand its interior construction—to ascertain if he could possibly make anything similar. In short there is nothing in the whole range of science and philosophy, which he does not eagerly desire to learn, and endeavour to comprehend.

If we gratify this thirst for knowledge, he will progress with astonishing rapidity; and, before he is twelve years of age, we shall find that he has acquired a general knowledge of the sciences which belong to a liberal education, together with the outlines of history, philosophy, literature and language; in short, that he is well educated, having a greater amount of well-digested knowledge than is often possessed by young men who have gone through a regular course of education. Nor will this be a mere acquisition of knowledge. It will be accompanied by an extraordinary mental vigor, a power

of independent thought, of concentrated attention, and of efficient, persevering application, in which he will present a brilliant contrast to the victim of that mechanical routine which is now called education. A child, thus educated, will think for himself upon all subjects—will examine critically for the truth, and will manifest a clearness and soundness of judgment, which are, at present, too often deficient among the educated classes of society.

I have not exaggerated the results of a natural system of education. I speak from experience and from observation. In my own education, although these principles were not fully carried out, I was encouraged and assisted in the natural evolution of my mind, and before I was twelve years of age, had mastered the outlines of grammar, geography, history, mathematics, astronomy, chemistry, natural philosophy, mental philosophy, and political economy, and prepared to commence the study of law. Before attaining majority I had some experience in taking charge of the education of the young, upon similar principles, and found that similar results were generally attainable with the young by pursuing the natural system of education.

The natural is especially distinguished from the old or artificial method of education by the method of imparting knowledge. In our schools, at present, knowledge is derived almost exclusively from books. To obtain knowledge in this manner requires a laborious effort of the mind: first, to conceive the printed characters and their associated sounds, which are the primary objects of our attention; and, secondly, by the power of imagination, to realize the objects which those characters and sounds describe. Knowledge, being thus artificially acquired through the imagination, is, necessarily, imperfect, dim in its outlines, with a shadowy, unreal character, which distinguishes it widely from the knowledge of actual observation. The man of mere book-knowledge is distinguished from the man of actual knowledge, obtained by observation, in the indecisive, uncertain character of his ideas and opinions, and his incapacity to pursue any bold or decisive course, on account of the doubts and vagueness which invalidate his opinions.

Besides the artificial and shadowy character of book-knowledge, it is associated with the much more serious objections, that the acquisition of knowledge from books is an exceedingly irksome and laborious process: the intellectual powers are wearied and fatigued, rather than gratified—exhausted, rather than exercised. And while the intellectual faculties are thus exhausted by distasteful labor, the whole physical constitution is rapidly deteriorated by the sedentary habits which the study of books imposes. The ambitious student of books becomes feeble and puny in his muscular system; his lungs have no full and healthy development; his digestive powers become enfeebled, torpid or dyspeptic; his blood degenerates and loses its proper globulous constitution; he becomes liable to tuberculous disease or consumption, to neuralgia, melancholy, and a host of diseases of a low grade, in which the vital powers succumb without reaction.

Such has been the universal tendency of the artificial, book-worm system of education, which sacrifices all portions of the human constitution to the cultivation of the front lobe of the brain; and which cultivates the intellectual organs in an unnatural manner, depriving them of all elastic, original action—converting the brain of the living man into a mere store-house for the reception of the limited and erroneous knowledge of our predecessors. In the natural system of education books are regarded as an incidental assistance, not as the principal means of education.

Intellectual education consists in acquiring knowledge, and strengthening the intellectual powers. The best possible method of obtaining knowledge is to observe, for ourselves, the things which are to be known. The leading idea, therefore, of intellectual education, should be to enable the pupil to come into direct contact with everything we wish him to know—from the stars of heaven to the plants and strata of the earth: the elementary substances of chemistry, the ingenious combinations of mechanics, the diversified surface of the earth, the countenances of the living, the atmosphere and clouds, living animals, skeletons and fossil remains, musical sounds, foreign languages, races of men, statuary, architecture, &c., &c.—all that man can observe, or know or understand, should be brought before the child for his eager examination. And as there is much which he will not detect at a glance, or may not be able to discover, the voice of his teacher will pour into his ear, while he is drinking in knowledge by the eye, all the details of fact, and the philosophical explanations which are necessary to complete the fullness of his knowledge.

With what eager delight do children fly to their instructors when they expect such lessons? How striking the contrast between the natural and the artificial school? In the one, if the object of study is a steam-engine, the scholar laboriously studies the printed description (an irksome labor), filling his mind with an unintelligible jargon: perhaps, by force of verbal memory, he answers the principal questions; but it is obvious that he has no clear, sound knowledge. In the natural school, a model of the steam-engine itself, would be presented before him, in full operation; the whole would be analyzed; its parts, and their operations, described and illustrated by reference to familiar facts; and the intense curiosity of the child would be encouraged, until everything unintelligible would be mastered, and he would feel that he understood the engine as thoroughly as he understood the working of his top or wagon. The artificial teacher endeavors to communicate botany by means of books: he finds the labor so intense and irksome, that none but those whose minds have advanced toward maturity can make any progress; and even they obtain no positive or satisfactory knowledge. The natural teacher leads his students with him into the garden or the grove; he takes up the flowers and plants which are about him, describes their structure, and induces his pupils to examine them with critical accuracy. Students of botany, so taught, quickly be-

come acquainted, not only with the general appearances of plants, but with the names and functions of stamens, pistil, corol, stem, leaf, root, &c.; and learn to give every plant its scientific as well as its popular name. They learn, also, and understand the relations of the families of plants they meet with in their rambles; they become acquainted with the medical and dietetic value of each, and become, in short, learned practical botanists, at an age when parents and teachers would think it presumption even to suggest the study of the natural sciences.

The difference between the natural and artificial systems of acquiring knowledge, is exemplified in the acquisition of language. The children of every nation acquire its language, without being conscious that they are learning. But when young men would acquire the same language, what a formidable apparatus of grammars, lexicons and lessons! What tedious confinement and drudgery must they undergo!

Why should not children grow up into all species of knowledge, with the same ease and pleasure with which they grow into a knowledge of their mother tongue. Place the knowledge within their reach, and they will grasp it; their native language is within their reach, in the conversation by which they are surrounded, and they learn it spontaneously. If the society in which they grow up continually sounded in their ears the facts of natural science, they would be acquired with as much facility as the words and structure of language. Unfortunately society is so unintellectual, so uneducated, that the child, instead of inspiring knowledge with his native air, inhales the crudities, falsehoods, superstitions, malice, anger and all the petty details of vulgar life, in which he becomes thoroughly educated, instead of scientific knowledge!

But there is no desirable accomplishment, no department of science or philosophy, which is not accessible to our youth. There is no species of knowledge which they would not obtain with eager delight; for, as the knowledge which the educator wishes to impart to them, is not more difficult of attainment than the Greek or the German language, they would as easily grow up into this knowledge, as the children of the Greeks and Germans acquired unconsciously their native languages.

Let science and philosophy be the native language of the household; let the whole array of human knowledge be poured forth familiarly in the school-room from the lips of the living teachers; let children be continually surrounded by good humor, generosity, politeness, truthfulness, vigilance, philosophy and profound knowledge, and they must as necessarily acquire these qualities as they acquire the native language of their country.

The effect of adopting such a system as this, is that the child is at once emancipated *from all tyranny*: his teacher is his best friend and companion. He is eager to learn: from his teacher he learns all he would know. He is eager to play: in the school he finds his comrades, and in his teacher an elder brother, to assist and

guide his diversions. He delights to exercise his voice: in the school he will find the opportunity of indulging this wish in vocal gymnastics and in singing. He delights in companionship: in the school he finds companions who are always agreeable, because always agreeably occupied. He delights to review everything that is curious, and his teacher is ever presenting something new to his eyes, or finding, in familiar objects, some new feature of attraction. A school conducted on such principles, would be the most charming place which a child could possibly find; absence from it would be the severest punishment which could be inflicted upon him.

Fully possessed of these views, and knowing their practicability, I have been accustomed for many years to say, that if I were an autocrat, my first decree would be, "That no child should be sent to school;" in other words, that no teacher should have a pupil, unless, by adopting a natural system of education, he could present such attractions that the children would greatly prefer his society in the school, with all its intellectual gratifications, to the meager enjoyments of home, or the vagabond associations of the streets.

Can any one doubt the practicability of such a scheme of education? Can any one doubt that oral instruction will be three-times or five-times as efficient as instruction by books? If any one has such doubts, I would refer him to his own experience. Would he prefer to hear a lecture, illustrated by appropriate experiments, or to study a book upon the same subject? Would he prefer to converse with an eye witness of any fact, or to hear a published report? Would he prefer to read an astronomical description of an eclipse of the sun, or to see the fact with his own eyes? Would he be better instructed by reading a scientific description of a lion, or by looking at the animal? The superiority of observation over other means of acquiring knowledge, and the superiority of oral instruction over teaching by books, would seem too obvious to need illustration, were they not truths so universally disregarded in practical education.

The superiority of oral and visual instruction is strikingly illustrated at the present time, amongst all civilized nations, in the acquisition of professional knowledge. Young men, who are aiming to acquire the profession of medicine, might obtain all the essential knowledge of medical science, at a very small expense, from the standard text books of the profession; yet such is the known inferiority of book knowledge to that of oral and visual instruction, that no one, who aspires to a high stand in his profession, is contented with the former means of information; nor are they who fail to obtain the advantages of oral instruction regarded by the public as fully educated. All who, by any exertion, or by the assistance of their friends, can obtain the necessary means to pay for collegiate instruction, eagerly resort to the Medical College, in which they obtain oral instruction from men, generally, far inferior in reputation to those whose published works are accessible at a trifling expense. Experience has shown that a course of four

months' oral instruction, in a medical school, imparts a greater amount of knowledge than a course of eight or even twelve months study, unassisted by oral and visual instruction. In fact it is generally conceded, that no one is qualified for the practice of medicine, who has not had the benefit of visual instruction in clinical practice and dissection, assisted by the oral instruction of the living teacher, either a professor or private preceptor.

The incontestible superiority of oral instruction having thus been universally acknowledged, and being sought by all who wish to obtain thorough professional knowledge, it might be thought that there would be no hesitation in carrying out the same principle in all the details of education, which has been so successfully applied in the education of young men. But, unfortunately, reversing all the dictates of reason, we have provided for young men, who are capable of the laborious task-work of book study, the luxurious indulgence of oral instruction; while, for our tender young, who cannot bear confinement, who are incapable of appreciating the ideas disguised in printed language, and whose health is seriously injured by the confinement its study requires—for these tender and unresisting victims we have prepared a tyrannical system of ink and paper education! In the name of humanity, I ask, that if any portion of society be subjected to this sedentary task-work, it shall be the adults who are capable of undergoing its confinement and labor. If there be any indulgence in the way of relief from confinement and fatigue, let that indulgence be given to children, whose brain and muscular system are yet immature, and who require the utmost care that we do not thwart their physical growth.

If we love our children with an enlightened affection, we cannot but recoil from the idea of subjecting them to the barbarous despotism of the school-room. The laws of health and life are constantly violated in these juvenile prisons. No healthy child can bear such confinement without injury to its muscular structure and general development. Thousands are slowly tortured and killed in their school-prisons; and millions, in this confinement, lay the foundation for future debility and disease.

The whole of these barbarous contrivances are unnecessary as well as unjustifiable. Instead of assisting the intellectual progress of children, the artificial system of restraint is an incubus upon the mind. If I could visit, with proper authority, one of these primary-school relicts of barbarism, I should be pleased to go in when the children are weary, exhausted and disgusted with their labor—hating their teacher and their books, and longing for the open air; when the teacher himself is fatigued with his labor—conscious that his health is giving way, and yet compelled for a livelihood to maintain his tyranny over the children and himself; I should be pleased to go in, and tell them that their tortures were at an end—that they were free to lay aside their books, bound forth into the open grove and gather beneath a spreading tree, where we might

assemble as friends at the feast of knowledge. I would say to the teacher: You are harrassed by confinement; it is unnecessary. Leave the house, and ramble where you please with your pupils. You are weary with the unceasing vigilance—the scolding and the punishment which are necessary to maintain your authority and compel your pupils to perform their repulsive tasks. These are unnecessary. Give them real knowledge, and they will need no authority to compel them to study, or to follow your teachings. Their eyes are weak, their heads are aching, and their minds enfeebled, by constant application to books. It is all needless. Throw the books aside. Knowledge does not depend upon books. Knowledge is first in the mind of man before it gets into the book. Let us deal with knowledge itself, and not with its barren casket. Meet your pupils under the tree. Tell them that you are going to give them real knowledge, and that, in everything which they wish to know, you will gratify them if you can. Point to the trees and the grass, and give them a familiar lecture on botany. Call their attention to the stars, if any are visible, and explain to them the principles of astronomy. If their minds have been too apathetic, and have been deadened by their previous habits of mechanical routine, ask them questions in a familiar way, and urge them in return, to ask you about everything which they do not understand. When you have thus given them a taste of the feast of knowledge—when you have shown them how fascinating an interest belongs to even the most familiar objects—when you have shown them how vast the range of human knowledge, which even the little child may grasp, if he will—when you have excited their curiosity, and aroused their intellectual ambition—you will find your little friends accompanying you with a lively enthusiasm in your intellectual excursions. If you wish to go over the old subjects of study, and to convince their parents how much better they may be taught by the natural method, throw aside all the books in the school, excepting such as you may need for the assistance of your own memory. Take, for example, a book of geography in your hand, that you may occasionally be refreshed in reference to any little detail which may have been forgotten, and give your little pupils a talk about geography. Describe the surface of the surrounding country. Show them the cardinal points of the compass. Prolong your geographical ideas to the neighboring villages, mountains, and cities. Follow the little brook to the river, and the river to the ocean. Enlarge from the familiar to the remote. When you are beyond the reach of illustration by the eye, take a map of your town and county and explain to them its various localities, until they understand, fully, its entire significance. Let them, then, study maps of the state, of the United States, and of the world. But let all their knowledge start from that with which they are familiar, and proceed gradually from the known to the unknown. Let them learn by listening to your voice—by seeing everything that can be seen—and by an inquiry into the facts and reasons of everything which you present.

Your pupils themselves, and the parents, will be astonished at the amount of knowledge gained by this new method.

But there will be a better cause of rejoicing than the amount of their knowledge. You will observe an extraordinary development of mind. The reasoning faculties, judgment, memory and imagination—the powers of observation, attention and concentration, will all be developed. And the countenances of your pupils, instead of presenting a dull and melancholy monotony, will beam with a brilliant play of thought, and a pleasing radiance of good-humored happiness. At the same time, instead of being fatigued, peevish, and gloomy, their checks will glow with the ruddy hue of health. Your profession will be changed from an irksome labor to a daily delight. Your intellect will be agreeably excited in imparting the knowledge which you have acquired—in adapting it to the minds of the young—in meeting their eager and curious questions, and in calling up all the stores of your knowledge, to lend variety and interest to your lectures and conversations.

The exercises of oral instruction are eminently calculated to invigorate the constitution and the mind; and, although the profession of education is, at present, fatiguing and unhealthy, I have little doubt that it might be made, by the oral method of instruction, a successful means of renovating the health of the feeble invalid. The mind of the teacher would be continually interested, while his lungs would be exercised in speaking. His lessons would not partake of the usual monotonous character of school exercises, but would, necessarily, cover a wide and diversified range of objects. He would find it necessary to extend his studies through a vast field of science, to enable him to meet the incessant demands for knowledge in the active minds of the young; and, whenever, in consequence of the extreme youth of his pupils, they should be incapable of so long continued and so intense attention as he might desire, he should be ready to introduce interesting illustrations from biography and history.

Thus a teacher of active mind, might keep up a fascinating interest in the exercises of the school; and his pupils would hang upon his lips with the interest with which the Persian listens to a skillful story-teller, or with which the romantic young lady consumes the hours of the night in poring over the tragic novel. Truth, if rightly presented, may be made as interesting as fiction; and a teacher whose mind is well stored with knowledge, and who imparts it in a natural and vivid manner, will sustain an unflagging interest through every hour of his instructions. He whose mind is only stored with fragments of half-digested and uncertain knowledge—who recollects with difficulty, and understands imperfectly, what he has learned, will, of course, make but a poor teacher on the oral plan. But he who is master of his subject, and familiar with its details, will communicate his own clear, forcible conceptions to his listeners, and will make them feel, in a few moments, that they perfectly understand whatever he is talking about, however ob-

secure the subject, or however remote from their previous knowledge.

Perhaps some skeptical cynic might suppose that such a feast of knowledge would be too luxurious for the minds of the young, and might be disposed to begrudge them so happy a method of acquiring information. Others, too, who have grown gray in the old idea, that the culture of mind is a kind of forcing process—one of exhausting fatigue—may fear that when knowledge is imparted to it with so much ease and pleasure, the mind will not acquire the necessary discipline, or retain its knowledge with firmness. Preposterous delusion! Does the child, who has seen a living lion, retain a less accurate conception of the animal, than he who has read a description of it in a book? Was the mind less active and less vigorously engaged when examining the living object, than when deciphering another's conception of it from the printed page? On the contrary, the mind is never so vigorously and successfully engaged, as when it grapples with that which gives it real knowledge, and gives it in a congenial manner.

That mental exertion affords the best discipline to the mind which brings in the greatest amount of knowledge. The power of acquiring and understanding knowledge is the very thing which we wish. That power is acquired by exercise. The horse that is trained for the race course, is exercised over a smooth, firm and unobstructed ground, with a firm foundation, where his vigorous efforts are repaid by a rapid career. It is not thought necessary that he should be disciplined for a race, by floundering through the mud, or over broken ground and stony paths, where he is unable to make rapid progress. Nor is it any more necessary, to discipline the mind for a rapid career in the acquisition of knowledge, that it should be kept, for years, floundering along through the tedious drudgery of the schools.

The natural method of acquiring knowledge, is by the exercise of our senses upon nature, and by the exercise of our reflective powers upon our observations. This natural method, which may be compared to *walking*, furnishes the safest, the surest method of progress. A more luxurious method, which carries us along with greater speed, is that of oral instruction. This method, which may be compared to *riding*, is, undoubtedly, the easiest, most luxurious, and, if rightly conducted, the most successful method—although we are liable, like rail-way passengers, to meet with accidents, if our conductor be not the proper person, and to be carried to a different destination from what we anticipated. The third method of acquiring knowledge, through the medium of books, may be compared to *going on crutches*. The student of books, has neither the thing before him, which he wishes to study, nor the teacher who can describe its properties. He has merely a lame and imperfect substitute for the teacher—a mental pair of crutches, with which he must learn to work his passage through all the difficulties of the road. I should be in favor of throwing away, entirely, these

mental crutches, and learning, either directly from nature, or from a man of science, who concentrates the knowledge in his own mind, and conveys that knowledge, in the most speedy and efficient manner, to our own. In proportion as we would have our knowledge positive and free from delusion, we must observe—we must make own experiments and dissections—our own surveys and calculations—travels and researches. In proportion as we would have our knowledge extensive, we should obtain the assistance of many teachers, who can communicate to us all their acquisitions. In proportion as we would economize time, in our ordinary intellectual education, or transfer into our own minds what is well known to those about us, we must rely on the energies of the living teacher: but, in proportion as we would extend our researches over various subjects, upon which no living teacher is accessible, and, in reference to which, we have not the opportunity of making personal observation, it would become necessary that we should rely upon books. Books, then, are to be regarded simply as the substitutes for personal observation and oral instruction—to be used only where better means cannot be obtained.

In reference to the whole course of juvenile instruction, there is in reality no necessity for books. The teacher is, or should be, master of a sufficient amount of knowledge to meet all the demands of childhood; and should also have a sufficient amount of scientific apparatus within his reach, to exhibit every important fact in the physical sciences; and to present everything which needs illustration by specimens, drawings, models or experiments, in the most satisfactory manner. Books will be principally necessary for the teacher; because it is not probable that he will have access to sufficient opportunities of living instruction or of information direct from nature; or, that he will be able to carry in his mind a sufficient amount of learning to meet all the emergencies of such a course of instruction.

I am convinced that it would be quite a beneficial change, if the common schools of the United States should at once throw aside their crutches—if every book designed for the use of children should be at once consumed in the fire, and the pupils thus compelled to rely upon oral instruction alone. I do not, however, advocate the total rejection of books from the hands of children. On the contrary, I believe that the oral system of instruction would lead to a more efficient use of books, than is met with at present. When the instruction of the school has been delivered entirely in the oral manner, and when children have learned to read, which they will be exceedingly eager to do, when they find how much knowledge is to be obtained by reading, they will be exceedingly eager to get hold of books, which they are capable of understanding. And although books should be but sparingly used in the exercises of the school. I would have every common school provided with a Library of juvenile books, not to be used as task-books for the school, but as premiums and as favors to the children, allowing them to

take home one or more volume, that they might read something upon the subjects of their school exercises, or upon any subject about which their minds were much interested. If they were thus allowed frequently to take home a book, upon condition of making a verbal or written report, of the most interesting items of information it contained, they would thus soon be led into literary habits, and acquire not only the capacity for research, but a power of communicating their own ideas by pen or tongue, in a clear and comprehensive manner.

I know by experience, that children who are just learning to read, are not too young to take a lively interest in books, and beg, as a favor, to be permitted to carry home their school books to read at their leisure hours.

The great change, then, which our system of popular education demands, is a substitution of living for dead knowledge, the mind and voice of the teacher for the paper and ink of the book. In listening to a successful teacher, the child is continually expanding its mental horizon toward the wider sphere of thought presented to it, and its faculties are constantly, though agreeably, approximating the standard of adult strength. Whereas, in looking at the book, his mind is assimilated to the dull and lifeless character of the paper on which he is gazing. But in listening to the teacher, every fibre of his brain is aroused. The emotions are called out, the firmness and dignity of his character are aroused, the feelings are active; observation, memory, reason, fancy, all are in active play. And the power of analytical reasoning is no less active than the knowing and recollective faculties.

Thus the teacher who has in himself the fire of genius, will impart an irresistible enthusiasm to his pupils. The teacher who is amiable, calm and dignified, will inspire his own manliness into his pupils by the very sound of his voice falling upon their rapt attention; and will thus unconsciously so elevate the moral tone of the school, as to render it entirely unnecessary to recur to any species of punishment to maintain a proper discipline or decorum. The children, delighted in their occupations and exercising their reasoning powers, will soon learn to scorn all idle mischief and vulgar animality. The moral atmosphere of the school room will thus become so pure as to repress all vicious inclinations; and as new pupils are from time to time introduced, they will, by the power of association and sympathy, be speedily assimilated to the mass, and thus at once, reformed without perceiving the agency by which the change has been accomplished.

If there were no other motives for this revolution in our system of education than the benefit to the teacher himself, that alone should be sufficient to effect it. To be able to dispense with the untiring vigilance of the overseer, to find himself surrounded by friends in the children, to be able to lay aside the arbitrary discipline of the school room, to accompany his cheerful young friends into the fields and to join in their sports, to pour forth his knowledge on

all occasions, even in the midst of their plays and gymnastic exercises, without ever subjecting himself or his pupils to any degree of sedentary restraint, relieves the profession of all that is now irksome and repulsive. But in addition to this, to be able to indulge the most unbounded activity of his own mind, to be able to bring to bear upon the mind of the children all the knowledge which he may have obtained from various sources, to watch and encourage the growth of the independent intellect, and to find in his older pupils those whose mental activity invigorates his own, and whose researches sometimes extend beyond the bounds of his own knowledge—to find thus the prison-like lethargy of the school-house replaced by intellectual life and active exhilarating thought—can but impart a fascinating interest to his labors. Each little school will thus become a charming resort, like the ancient schools in which the Greek philosophers diffused their knowledge, in the lyceum and in the groves of the Ilyssus—each “academy,” what the first was, a garden for pleasant recreation, and for giving and receiving oral instruction, amidst the freshness and the beauty of nature, the free thought unconstrained by sedentary application.

Happy would it be, indeed, for the children of the present age, if our common schools were as destitute of books as the philosophical schools of Greece, before the age of printing, compelled to rely on natural methods alone, and therefore to seek and follow the living teacher. Could the little victims of common school despotism, assert their rights, as their elder brothers have done, against despotic forms of government, they might with great propriety rebel and expel their tyrannical autocrat, the teacher. The whole system of forced study in our schools, is a tyrannical invasion of the rights of children. The child is right in rebelling against the teacher: he is but demanding an inherent right. The laws of health and happiness are stamped upon his organization, and he is but endeavoring to obey them. The laws of health prescribe to young children an almost incessant muscular activity: these laws they are endeavoring to obey. Resistance to their scholastic tyranny, is obedience to the laws of Nature. The law of health requires joy, good humor, and the indulgence of a variety of feelings. The edict of the school prohibits the indulgence of the emotions, and requires an artificial, laborious, concentration of the attention; requires the unremitting action of the front lobe of the brain, and the temporary suspension of the whole moral and physical nature; a process repeated over and over again until the character and the physical constitution are equally enfeebled. The child rebels against this tyranny, this marring of his constitution. He is right. No system of education should be allowed, which would not be allowed and supported by the free and cheerful suffrages of the children to whom it is applied. No child should ever be compelled to go through a process of intellectual education, against which his natural instincts rebel; for he will never rebel against the proper acquisition of real knowledge. He rebels against the destruction of his constitution.

He rebels against a process, which benumbs three-fourths of his brain, which cramps and cripples his intellect. But, he never rebels against the proper and natural acquisition of knowledge: as soon would he rebel against a due supply of food and clothing. When the teacher is merely supplying a natural want, and thus gratifying the child, his labor consists in the natural exercise of his own intellect, not in the vigilance and hectoring of an overseer. He is free from care; his temper is not harrassed by frequent irritation; his mind is not stupified by contact with the exhausted dullness and indolence of his pupils. On the contrary, he feels his intellect strengthening, his knowledge increasing, his energy aroused by the interest of his pursuits, his mental ascendancy over his pupils and his moral power continually improving by exercise, so that he becomes better fitted to enter society and exercise an efficient influence in behalf of rational education.

In his daily labors, he will be cultivating the art of interesting and impressive conversation. His vocal exercises will not consist merely of a few questions, languidly proposed, alternating with rebukes and admonitions, but will rise to the character of earnest and eloquent lectures. Upon most of the subjects of his instruction, pupils of various ages may profit by the same course of lectures, if he expresses himself in a simple and natural manner. Hence he may instruct large classes orally, in which less subdivision and separation will be necessary than among those who rely upon books alone. The exercise of addressing these large classes and illustrating to the eye the subjects of the lectures, will not only be an animated and interesting scene, but will give a vigor and tone to the teacher's constitution, decidedly favorable to health and longevity.

Very soon the teacher will find that instead of exhausting himself in the effort to arouse sluggish minds, he has now a far different task. The minds of his pupils are springing forth in all the gay, restless activity of childhood, in the pursuit of knowledge, and his task will be to regulate and guide their activity, to teach them to concentrate their powers to the subject of investigation. A host of questions upon collateral subjects arise to the minds of the children, which must be postponed to some other occasion, and the number of pertinent questions which will be proposed, will maintain a habit of eager inquiry and investigation.

The principal objection that would probably at first occur against the plan of oral instruction, is the unusual amount of labor involved and increase of expense which might be anticipated, from the number of teachers requisite for different classes. But in truth these objections are fallacious. The voice of a single teacher may instruct a class of hundreds if necessary, and while oral instruction admits of much larger classes, it also requires much less uniformity of attainments and capacities among the members of each class. Oral instruction will, therefore, attain an economy in the larger size of classes and smaller number of books, which would provide the means for a liberal supply of suitable apparatus.

## ART. II.—PSYCHOMETRY.—(CONTINUED.)

FOR the practical illustration of Psychometry, I have selected, from the records of a number of experiments, the following reports. The opinions given were, in all cases, pronounced with impartiality by an individual who had no knowledge whatever of the manuscript from which he derived his impressions. Great care was taken, in all cases, that the psychometer should have no opportunity, by seeing the manuscript or hearing any conversation about it, of forming any idea that could bias his conclusions. Equal care was taken not to propose any question which, by its leading character, might modify his opinions. He was thrown upon his own resources and perceptions for the conclusions which he should express.

The reader will make due allowances for the imperfection of an opinion formed and expressed in the course of a few minutes, by means of an impression derived from a single autograph. The various phases which any character may present on different occasions—the difficulty of appreciating any one so fully as to describe his conduct under any emergency—and the difficulty of perfectly portraying our conception of the character, even when rightly conceived—should induce us to regard with great liberality any attempt to describe a character by means of such impressions.

It is necessary, too, that we bear in mind the different mental positions from which each surveys the character, and the different degrees of facility with which the same traits of character would be recognized by different individuals. In the following reports, the character of JOHN QUINCY ADAMS is given by a clergyman much disposed to admire such a character, and to express himself in glowing language. The opinions pronounced on Mr. Clay, by three individuals, illustrate their differences of character. Mr. S., a well educated young gentleman from the north, of mild, well balanced character, gives a judicious, moderate statement; Mrs. R., a lady of much ambition and force of character, with a good deal of philanthropy and radicalism, gives a bold, emphatic and critical sketch; Mrs. W., a lady of remarkable gentleness and amiability, accustomed to think well of all, is quite enchanted with her impressions of Mr. Clay, and finds him a much better man than she had previously supposed from the opinions which, as an abolitionist, she had formed.

There is much more fullness and life in the portraits, when the psychometer has a proper sympathy with the subject of his investigation. In the sketch of Dr. Channing, by Miss P.—of Dr. Harney, by F. R., and of Miss Martineau, by Miss N., we perceive this cordial appreciation.

The following reports are not presented as extraordinary examples of accurate portraiture, or remarkable success of experiments,

but rather as fair illustrations of what might be expected, under ordinary circumstances, with intelligent persons. They are given, not as decisions upon the characters of the parties, but as specimens of the new method of investigation—a method requiring repetition and caution to conduct to accurate results.

The reports are given as accurately as possible in the language of the speakers, as written down during the experiments. Many of the reports, from the freedom of their comments, or for other reasons, I should not consider suitable for publication, however interesting in private. Without pledging myself, or urging my readers to any undue reliance upon any single experiment, I would still attach much value to such opinions, when all the circumstances are duly weighed.

JOHN QUINCY ADAMS—by Rev. Mr. K., 1844.

After describing the influence proceeding from the contact of the letter in his hands, Mr. K. continued: "I find no disposition to **mirthfulness**. It is a serious character. I should say, he is deeply absorbed in great subjects, and very rarely has a smile upon his face. It is one whose whole mental energy and tenor of his thoughts are all given to the advancement of the happiness, welfare, freedom and prosperity of his country. I use the word **COUNTRY** emphatically, because such a mind cannot be engrossed or much affected by trifling or personal objects. It is a patriot, a statesman, a christian, a benefactor of man, and one who will leave a deep, a very deep, impression on the human mind and history. He is in public life, decidedly. He would be a man others would call forth and **confide** in. He would be true to every trust. He has a religious conscience. Decidedly he is not a political demagogue. He is rather of a phlegmatic character—has a solid intellect rather than showy. He is past the middle of life: the whole influence is **weakening**."

"His caution would produce suspicion of him. He would be vigilant, decided, firm, prudent, not passionate; ready to listen to all objections, a very keen observer of men, understands human nature thoroughly, would not allow self-interest to influence him, would be firm with opponents, sure that he was right and would go straight forward. Do not think he was eloquent, a man of few words and every word a bullet, to the point. He would not fight a duel."

"He has a good intellect, a well balanced character, is excitable and deeply moved by everything which might aim a blow at free institutions, both literary and political. I do not think he is a poet, he is lacking in the spirit of poetry. He has literary power; every subject would be finely treated; but he would not show the fire of **genius**."

"He is against everything disorganizing. He would harmonize and be drawn to men anxious for the security and permanence of our whole country. He is decidedly a whig. He is a perfect gentleman of the old school."

"He has a great deal of the character of JOHN QUINCY ADAMS,

more of John Adams—do not think his intellect equal to my conception of Webster. Such men as he and Clay would be glad to counsel together. He has the intellect of Calhoun; he has a broader reach of vision. He has such traits of character as belonged to John Quincy Adams, John Adams, John Davis, Judge Marshall, Judge Parsons and Judge Shaw.”

HENRY CLAY—by W. B. S., 1846.

(Q. How does it affect you?) “It is very agreeable, very bracing in its effects, makes me a little dizzy.”

“He is a man of very clear intellect, and rather a commanding one, quite warm in his feelings, and very earnest in whatever he undertakes to express. I suppose he is a politician, it’s natural he should be one—not a minister—not a literary man by profession; but has a good mind and likes to use it, to keep it actively employed. I do n’t think he has a gloomy character. He is rather pleasant in his disposition. His manners and personal appearance are easy, polite and graceful, elegant in delivery, chooses his language with taste, but is forcible—is a man of fine feelings and sentiments, although not a member of the church. He would not be guilty of anything low or base, he has a high sense of honor, is affable to all, is an eloquent speaker, not the most profound, an eloquent one, agreeable at least. In his domestic relations, happy and pleasant under ordinary circumstances. His affections are strong, he is kind and benevolent.”

(What sphere of life does he occupy?) “I suppose he occupies an elevated sphere, probably in political life.”

(What would his reputation be?) “He would be a popular man; he might have enemies, but they would recognize his good qualities. He is a man of passion and feeling; it might have led him into some excesses and youthful follies; may have been wild; nothing low or mean.”

(What is his greatest fault?) “His character is generally good, seems to have great confidence in his own opinion, but is open to advice; business qualities not very great, acquisitiveness not large. (What kind of business is he interested in?) In politics. (Does he live in town or country?) There is an impression that this letter is written by a prominent political character—an image of a country house arises.”

HENRY CLAY—by Mrs. R., 1844. Impressions derived from a letter addressed to a committee.

“In person, he is above the common size, and in talents above mediocrity. He has a good moral character, above mediocrity, being hopeful, conscientious, patriotic, honorable and benevolent. I do not mean that kind of benevolence which prompts persons to give alms to the poor—it is a benevolent, philanthropic feeling, shown in his desire to ameliorate the condition of man. He has moral ambition, but he has a good degree of love of power, and secretiveness. He would be what I would call a good wire-puller, and would make others act for him. He has both kinds of ambi-

tion, and wants to be very high. There is a great deal of self-esteem in it. He wants to be considered not only a great man, but a good man. I am under a good deal of restraint, as to speaking of the plans—take off a little secretiveness and I will talk to you.”

I touched her head on the appropriate organs to relieve her, when she continued: “You have relieved me from a load. His ambition is to be the great man of the nation. He carries it out in law-giving and advice-giving—in speaking to people and telling them what ought to be, and what he would do for them. He is a great planner. He has a good deal of perception and foresight. His private intercourse is honorable; he is agreeable in his circle. He exerts a great deal of influence upon those with whom he comes into contact, more in private circles than in public. He is liable to misleading his friends, because his judgment is not sound at all times, not being so good as his off-hand perceptions.”

“He is well-fitted for a counsellor or governor of a state or of a large institution. He is better fitted to direct than to carry out. He would make a better general than officer or soldier, and would exert a powerful influence over his men; they would reverence him and have great confidence in him. He would exert great influence in the political world, and make others do the work for him.”

“His capacities would be great as a statesman, but equally great as an orator, or as a jurist; but the capacity of the orator is most developed. He has a great flow of language, is pointed, uses a variety of gestures and has a great deal of artificial or acquired eloquence. Sometimes there is a great burst of feeling, which carries his audience away. He is a great observer of how his audience take his oratory, and takes advantage of the impressions he creates in speaking. His best field is before a mixed mass, a very large audience; a small circle is not enough for his ambition, he has all the talent necessary to make the mass consider him a great man. His ambition finds more food on such occasions.”

“He is a man of ardent temperament and irritable passions, but can control his temper. Naturally he is very passionate and irritable; habitually, he can be calm, placid and pleasing. In public speaking he has both the passionate and the pleasing.”

“He has more fondness for high living than he ought to have. I am sure he has never joined the temperance society, and expect he never will. He has religious feelings and yet he would be profane; he has a contradictory character. The worst that can be said of him is that he is secretive, ambitious, passionate and intemperate. He takes a little too much drink. (Q. Of what kind?) Not very particular as to kind or quality.”

“He is not selfish, beyond ambition and love of power; not selfish as to pecuniary affairs; he would not stop to do a mean act for pecuniary advantage. My head is tight here, as if the brain was about to burst the skull.”

“He has coarse and violent passions, but he has well trained

faculties to hide them. He is a coarse man, with a very polished exterior—like a beautiful painting on a coarse canvas. Yet he would be a good husband, father or relation, and would be rather generous to servants, so they would even like him, but would sometimes be passionate with them. He would make them love him and fear him.”

“The leading motives of his life are mixed; they are ambition mixed with a good deal of patriotism and philanthropy. The worst parts of his character would be very little seen or known. Upon the whole the influence of his public life would be good; he would be considered a great man. It seems to me he is alive and somewhere about seventy years of age, or within five years.”

HENRY CLAY—by Mrs. W., 1844.

“It is a person I like—there is something very clear, bright. It’s a person that thinks a great deal—that I should have perfect confidence in; he is a very happy person, it gives me a happy feeling.”

(We wish to know his character?) “I should give him a very high character indeed. It’s a person of a great deal of energy, of very cultivated mind, great strength of character, firmness. Isn’t he very straight, very upright? *He is* upright! He is a man of a great deal of benevolence, upright in all his dealings, fair; he can face any one. I feel a stronger impression from it than from any letter I ever took. I have not language to express it. I seem to feel all at once just what he is. He deserves to fill a very high office, he is very clear, he resembles you in that respect—he can decide anything very quickly, he is a noble man. He has great power of expressing his ideas. Is he a speaker—a public speaker? If he is, he’s very eloquent. You have no idea what an effect it has upon me, it gives me such a brightness. I should think he would be a delightful companion, a general favorite. If I am not reading him true, none of them can be true, for I feel this quicker altogether, the whole character, right off. It is a good character altogether, he is so noble in his nature. His principles are high; his standard, his aim, is high. He would be ready to answer anything, to decide anything quickly. He is so very clear, he would answer readily. He is a person that would do a great deal of good in whatever situation. He is a person of elegant, agreeable manners, pleasing to every one. I should think he was, as I said before, a great favorite. I am perfectly delighted with him. If it is n’t somebody that’s splendid, I’ll be dreadfully disappointed.”

“If you’ll ask me some questions, I’ll be ready to answer them. His spirit is in me.”

(What are his pursuits?) “He is a public character. I should think a speaker or writer; at any rate, something public. As far as I know what a president ought to be, I think he’s just the man. I would certainly make him President, if I was the only person to be consulted. I receive a decided impression from this letter. I never felt it so *very* strong. If I only had language, I could n’t stop talking—he must talk a great deal.”

(What kind of speaker is he?) "There would be perfect stillness when he is speaking. I've said before, that he is very eloquent. I think he'd interest a large public audience. I think he's a favorite speaker—brilliant."

(What are his aims in life?) "His aims are high, as I said before. I should think he's a very witty man—very lively in disposition. He's very unselfish; he aims rather to do others good than himself."

(As to temper, what do you say?) "I think he's irritable and quick, but he has an excellent disposition: he governs this temper very well, but he's very quick naturally; he's very excitable—very candid."

(Can you compare him with any other characters?) "I've compared him with you in the clearness of his ideas. He has this great strength of character and energy; he is not depressed in spirit, as most people are, who have such an intellect as he has. He is smiling; his feelings are ardent and lasting, true and earnest—he do n't do any thing half-way. I have an idea of his eloquence and intellect—his strength being like Daniel Webster—but Webster is not so smiling and cheerful. I would like to feel always such strength and energy as I have now."

(Is there no one else but Webster, whom you can compare him to?) "There's a great deal of firmness; he's a great thinker. I don't think; I can't compare him, I have too poor a memory—can't call up any body so as to compare him. He's a great man. I do n't know any body that he's like, altogether."

(I wish you to find some fault?) "What is that [touching the region of affection]? I feel a great heat there. He has great fondness for a country life—for the beauties of nature. Who is this? The faults do n't come to me; he's very quick tempered."

(How would this person compare with Mr. Clay?) "He's a better man than I thought Mr. Clay was. I should n't think such a person would keep slaves. This person seems more noble and elegant in his manners than I supposed Mr. Clay to be."

COL. JO. DAVIESS, of Kentucky, by Mrs. S.

"It's a gentleman of warm temperament and very active mind. I should think he was a man of very lofty sentiments and principles. I'm thinking of him as a proud, high-toned man—a man whose great pride would make him suffer a great deal. He is too proud to condescend in little things. His pride would keep him down where his talents would have raised him."

"A man of some distinction—very talented, but not in any very high office. He is too proud to want office. He's a man of correct principles and feelings—honorable in his dealings—has a nice sense of honor. He is a man of no ordinary kind—a man of profound mind—no common politician—he is a statesman. I like the influence of this letter better than any I ever had. It comes near my ideas of Mr. Calhoun; in some points it is superior to him."

(What are his pursuits?) "He is a professional man, a lawyer—

might be a statesman. (What sort of a speaker is he?) A man who would elicit the whole attention—would touch the heart of a refined audience. I think he's a man of eloquence. I would like to hear him speak. There is something very elevating in the feelings of this letter. (What of the strength of the character?) He has undaunted firmness, great affections, great warmth. He may be writing very positively. He was intent on what he wrote with great earnestness."

(Is he living, or dead?) "It resembles Judge Rowan. I have not felt at all that he is living or figuring now. When I took the letter, it caused me to sigh. I felt that the writer was an elevated soul—a spirit no longer with us—one that had departed. (Have you that feeling still?) Yes, more strongly than before."

JUDGE ROWAN, by G. C., Esq. Impressions derived from a political manuscript.

"A sedate character, dignified, elevated—no taste for levity. There is a love of investigation—a love of order and arrangement in investigations, as well as in other things. This person, as a lawyer or politician, would endeavor to convince by the most familiar and plain arguments. He would be powerful in debate, cogent in argument, and plain in his inductions and explanations. (What of his pursuits?) His mind is accustomed to legal investigations, and adapted to political. I think both, at times, had engaged his serious attention. (What is his rank as a lawyer?) Very high as a reasoner; he would stand first as among the most talented. He is not without very strong feelings, and has power to appeal to the passions. Yet declamation was not his habit. But he would arouse the feelings powerfully by the strength of his perceptions and force of elucidation; the passions would follow the judgment, and both would be aroused."

(What as a politician?) "He would exert his reasoning faculties, and attain a very high rank. His mind would be better adapted to the Senate than to the House of Representatives. I should think he had been in both, but preferred the Senate. (What of his manners?) They are bland and dignified. (Domestic character?) Very fine, kind, affable and dignified, not harsh. (As to females?) Most refined and elevated; he would have friends among them; they would like, respect and venerate him. (Is he living, or dead?) He is dead. (To whom would you compare him?) I have an impression that his mind is of the model of Judge Rowan's. (How is he as to parties?) He would analyze their principles, and act freely with that which he thought correct; he would not be led by either party into advocacy of principles he did not believe correct. He is an honest politician. He would not leave his party, but would not act with the party when he thought them wrong. He would be the peer of any man as a statesman or a lawyer."

Judge T., in giving his impressions from the autograph of Judge Rowan, described him as, in personal appearance, somewhat such a man as Webster—large, dignified, &c.; a calm, deep-thinking, pure-minded man, of far-reaching intellect, great pride, honor and

and honesty—a democrat in politics, but not carried away by party; a man of great depth of feeling, who would be “overwhelming” in eloquence when his feelings were aroused. In giving this opinion, the Judge himself, a very calm, methodical man, recognized, readily, the legal ability and moral elevation, but did not perceive the capacity as a speaker, until after some reflection. Not only the character of the psychometer, but the character of the autograph, is important as to the interest of the opinion pronounced. The psychometer partakes of the character of the writer, and modifies his style accordingly. The most eloquent and beautiful opinions which I have ever recorded, were pronounced upon the autograph of Judge Rowan, by a young lawyer of the south, and a lady, who made their investigation in conjunction, and expressed similar opinions in glowing language.

**MILITARY HEROES**—May, 1846.—A letter on public business, relating to the war, written by a distinguished old General, was placed upon the forehead of F. R., a young gentleman of education and talent. His remarks were: “I feel pleasant, self-satisfied—it excites the occiput and crown of the head—I could make a good fighting man now. I would like to see it going on. I feel *older* than I was just now, feel like an old man, in fact—yet I feel that same disposition to see fighting going on. *I know who it is*, from my feelings—it is General ———. There is no use guessing any more about it.”

Having thus truly detected the authorship of the letter, with so much certainty, that he refused to say anything more, I next placed upon his forehead an autograph from GENERAL WASHINGTON, he immediately proceeded, as follows:

“I feel a greater sensation in the perceptive organs over the eyes, a swelling of the nostrils and a feeling of defiance. I should judge he was a man of intellect. Certainly, when he took a course, he would pursue it to the end. Nothing can alter his determination, neither persuasion nor force.”

(Q. What pursuits and sphere of life is he fit for?)

“For a statesman—bold, independent, and straightforward. He would make a good soldier, too, if he had opportunity—a good commanding officer, who could plan well and perceive advantages. (What of his moral character?) He is a great man. He has a great deal of what I call force. (How does he compare with other men?) He has a great deal more force—greatly excels them in power—he is still planning, but on a larger scale—he thinks more profoundly, acts from greater motives and on a large scale. He is superior to the ordinary run of great men—might be estimated among the **first class**—a much greater man than Jackson, because he had more intellect, but he would resemble him in force of character. I feel the excitement extending back from the perceptive over the moral organs and crown of the head. I consider him a great patriot—a man of great justice—let justice be done though the heavens fall.”

(What is his appearance?) “Tall, commanding, he would look

more like my idea of GENERAL WASHINGTON, than any one else."

GENERAL WASHINGTON—by ———.

"This is decidedly an intellectual man—a man of considerable force of moral character, possessing those feelings which I conceive to be necessary to governing in the prosecution of great matters, either in the field or in legislation; a man of strong force of character. I should say, it (the letter) was a matter of more than ordinary interest. (What of his station or pursuits?) I can only say, that he was competent to any pursuits that required intellect and force of character to carry them out, either upon the battle-field, or in legislation. (What of his patriotism?) He was a patriot. (His manners?) A man of easy manners—ease combined with dignity and grace. (What form of government would he prefer?) I feel, that I should want a pretty strong government. He is not an agrarian but a liberal democrat, a good deal attached to old customs and usages. (Is he a Whig or Democrat?) I should say, he would oppose part of the whig and part of the democratic doctrine. He is neither a Clay whig nor a Jeffersonian democrat. The doctrine of instruction of Senators he would oppose. (What of his domestic character?) He is decidedly domestic. His intellectual and moral organs so predominate, as to make him a good citizen, neighbor, or husband. (What of his Love and Amativeness?) I do not perceive much Amativeness. I should think him not a very great lover of females. (What as to fighting, drinking or gambling?) He would fight, but he would not be disposed to get into difficulties. I have no idea of gambling or drinking. I doubt whether he was a religious character—should rather say he was not—should say he was a man, who respected religion and had a sort of practical religion more agreeable to himself, which he would prefer to the orthodox religion practiced by the churches."

REV. W. F. CHANNING—by Miss S. W.

"I feel perfectly calm. I have a burning heat in my forehead, across the middle of it."

"I do n't think the person is in perfect health. He is not very strong, physically—he had more strength of mind than body. He understands himself very well. He would be a good abolitionist—he would say: *Freedom for all mankind*. I think he's very warm, generous-hearted. I think he is entirely interested in the welfare of others—he is self-sacrificing—he would deny himself comforts for the benefit of others. Isn't he engaged in the anti-slavery cause?—it seems to me he is. He'll be a true friend to the slave. It seems to me he is a public lecturer, or something of that sort. It is a person I should be willing to trust myself with. I could rely upon his word; he has good judgment—he is not excitable—you would always know just where to find him. There is a great deal of romance about him. He is a great lover of nature—he would be very fond of poetry. He might write it; he has great strength of sentiment. I do n't think he's known as a poet, but I think he can

write poetry, very sweet and beautiful. He has beautiful ideas, and expresses them beautifully. I think he must be subject to fits of melancholy. I feel sad. He was a man of tender feelings, easily wounded. I would like him right well."

(What is his reputation?) "He has a very good reputation—but I do n't think his reputation is as high as he is deserving, with the literati."

(What are his occupations?) "He is engaged in public life—a public speaker."

(On what subject?) "He is better suited to speak upon anti-slavery, and all the reforms of the day. I think he'd be engaged in them."

(What kind of speaker is he?) "Naturally calm, but would get excited, and be much excited himself, more than his audience. He might be quite eloquent—he would leave a good impression with the people."

(What are his views in reference to religion?) "I do n't think he would want to be classed with any particular denomination, or confine himself to any sect—but he would feel the importance of religion. The line,

'Those who came to scoff remained to pray,'

seems to be in his mind."

(Is he a writer, or not?) "He does write."

(In what style?) "There's so much poetry and spirituality about him, that you would always feel in his writings. I should be affected considerably by his writing."

(How as to self-esteem and ambition?) "He is very ambitious, and has considerable self-esteem, but you would not call him haughty."

REV. W. E. CHANNING—by Miss P., January, 1844.

"Another sadness affects me—but it is not a moral sadness, but a holy, tender feeling. It deepens the other, contrasting the two men—not much physical force. I feel strength to bear the ills of life—not a strength to fight the battles, but a soaring above them—so high that they cannot reach me. This person would be considered a sort of abstraction by many. Some of his friends feel provoked that he does not make more of a stir; they are ambitious for him, but he knows best what is his soul's good. They are provoked at the very things for which they should revere him. He is spiritual. His choice would be private life; but, circumstances would call him somewhat into public. I think he might be a clergyman—he has moral courage. He would not be practical enough to take an active part in the reforms of the day, but he would aid them by writing. Those writings might not be sought after by the generality—might be tedious to many. He writes deeply—a merely receptive mind, without much activity, would not profit much by them—must be in a similar state to his to get at what he says. An appreciation of true wit—a contempt for vain attempts—would have a strange joy in what the unappreciating might call his vaga-

ries—'He has meat to eat which they know not of.' He is fitted for another sphere of existence—too sublimated for this. I reverence him—should feel his lightest word—it would dwell on my ear, and if I did not then understand, the means would come when I was prepared. The form of his sentences would be peculiar. Appreciates the fine arts—loves poetry—sonnets, perhaps. He loves philosophy. He cares for society differently from most. He is an observer—a thinker. His internal activity is great. He would hear beautiful music—internal harmonies—lives an inward life. He would not seek the society of the great, but of those who live more naturally. He is a dark-haired person—is not selfish, but so lost in his thought, as not to regard the comforts of others. His mind wears out his body. Better for him if his thoughts were less occupied—if he had to make more physical exertion. He makes me feel brighter, happier, stronger."

DR. J. M. HARNEY, of Kentucky, author of *Chrystallina, &c.*, was a man of decided poetical genius. In the earlier portion of his life his views of religion were skeptical, but in his latter years he embraced the Catholic religion. The following impression was derived from one of his familiar letters, by Dr. D. As the death of a patient, and other family matters are alluded to in the letter, it is probable he was fatigued when he wrote it.

"His feelings were by no means agreeable when he wrote this. His capacities were fine. He is a man of great depth of thought. His memory is good and very minute. His Ideality is large. He is fond of the sublime in nature. He has but little religion, if any."

(What of his bodily condition?) "It was in a state of languor and debility, such as I would have after sitting up a night or two. His respiration is hurried."

(In what manner would he display his intellect?) "In a subject that required great depth of thought. He combines Ideality with Causality. He would write or speak well on a subject admitting the display of those faculties."

(Would his writings be poetic or prosaic?) "Rather poetic. He is a man rather reserved in his manners. (What rank or reputation as a poetic writer?) I would not say the first—not like Byron—not his sensuality; he might be compared with Pollock. (In what does he resemble Pollock?) He would choose such subjects. Intellect overbalances the propensities. I should think he was a Christian—my sentiments have changed."

(As to Firmness and decision, what do you say?) "He was very firm and marked by decision. I think he was unhappy—frequently addicted to spells of melancholy—fond of literature. (What of the domestic relations?) An affectionate husband and parent."

DR. HARNEY—by F. R., 1846.

"I am impressed with the gorgeous beauties of nature: lofty mountains—lovely landscapes—tumultuous ocean. Nature appears in her most lovely panoply; my mind is on the mountain, the valley, the billow ocean, the distant city. I'm in the country. A

feeling of the sublime impels me to contemplate Deity through his works. It is the sunshine of poetic feeling—nothing morbid. No disposition to speculate on man. I'm far from the city, in the country. I feel as Coleridge in the vale of Chamouni, except that I see the ocean. I have the feelings of Byron in the Alps, except that I see no thunder and lightning."

"I think the writer has little of the epic—is not like Pope; he has the inspiration derived from the beauties of nature. He has a vein of chaste and delicate sentiment. He resembles Byron; he has more of the fire of poetry than Goldsmith. He is very much like Scott, but there is more softness. He has less philosophy than Shelley. He has a vein of sentiment: he is, perhaps, nearer to Bryant, than any I can perceive. He has originality, but not much invention. He is evidently a literary man, of taste for elegant literature and history. He'd speculate upon the nature of the human mind without becoming profound—would show off elegantly."

"I do not think he would make much of a politician. He likes solitude, or choice society; he has no disposition to electioneer, or mingle with the common herd. He writes because he loves to write; ambition is not predominant. He is agreeable in the domestic circle—not calculated to take care of house-hold affairs."

"He's a man of great firmness, high sense of integrity, great moral courage, conscientious and honorable; a man of great reserve, a sober cast of thought—cheerful."

(What is his reputation?) "I think, high, but not much known to fame; he certainly stands high with those that are acquainted with him."

(Is he a man of a family, or not?) "He's a man of family. His health is not always good; his mental exertion induces morbidity. There is certainly a greater development of the moral and intellectual organs than the physical."

(What are his views upon religious subjects?) "I v'e no doubt he was a skeptic when young; but, when he wrote this, he must have had religious feelings of an elevated kind. The contemplation of God through his works inspired him with reverence."

(What was his ultimate character?) "Religious, without much enthusiasm. The power of thought brought it to his mind. He must have had a great difficulty in believing any thing marvelous in religion. He must have had a great struggle: the establishment of two or three truths made others follow. He became a firm believer in the Scriptures."

(What condition at death?) "Resigned to will of Providence; his mind was made up—he had considered it—had full confidence of going to a better world. The immortal part predominated."

MADAME DE STAEL—by Miss S. W.

(What do you think of this person?) "I should think it is a person of very high intellect, indeed. (Male or female?) It does not seem to be a male; but if it is a female, it is a very uncommon person. If it's a female, she is very masculine."

(Give me a positive answer.) I think it's a female; she's a tremendous thinker. It is a very haughty person—very dictatorial; there is very great strength of mind. She is very fearless, indeed. She'd make a good president, or a good queen: any one would fear her, yet would respect her. Everything that she said would be law. I would n't dare disobey."

(What are her chief aims?) "She's a great writer—a very powerful woman."

(What of her moral character?) "I should think more of her mind—her intellect—than of her morals. She is a very hard person to understand. She would n't condescend to notice common people. I do n't think she's remarkably conscientious. I don't think there's any spirituality about her, at all. She thinks too much of worldly things. Her mind is wholly upon literary pursuits—nothing else. I think she's sincere. She might be rather satirical. She'd tell you just what she thought, whether you liked it or not. She is dignified, retiring, cold, distant. I never could get acquainted with her; I never should try to. Every body would respect her—every body would want to know her—very few would take any step toward intimacy with her. It seems as though my head would burst with thinking. She would think a great deal of having a high reputation; she desires fame; she's not very easily excited."

(What is her reputation?) "She is by no means a cypher in the world's estimation. She has a high reputation. She is deserving of it."

(Is she living, or dead?) "I can't tell. She never thought of death. I can only think of her in the world. I'm in doubt about it. (Why?) I do n't like to think of her as being dead. She would die like a hero—she would n't be afraid to die."

(Can you say any thing more of her moral character?) "There seems to be a vein of selfishness. She would do good when it came in her way, but would not put herself to any inconvenience. She would not be self-sacrificing. I should not fancy her in the domestic sphere. She might be harsh, jealous, irascible."

(What sort of wife?) "Not affectionate—determined to rule."

(Is she American or foreigner?) "I think she is a foreigner; certainly a most manly personage."

(What is the style of her writings?) "There would be a great deal of vehemence and loftiness: noble, rather pompous—no, not so much in writing as in common conversation. Her thoughts are perfectly natural; she writes without restraint. I can see her pen fly. I never knew such a woman; there's nobody on earth I can think of, that seems like her."

(Can you compare her to any one?) "No; I can compare her to some I have read of in novels, to Ma chere Mere, in 'the Neighbors,' one of those masculine women."

(You can't say whether she's living or dead?) "I think she's dead. (Why?) I do n't know; I do n't like to think of her as dead. There's nothing heavenly about her. She's better fitted for this

world, than for that holier sphere. She's not so moral as she ought to be; she has some morality without any religion."

(Have you heard of Madame de Stael?) "Yes. (How would the character suit her?) I think it is her—yes, I know it is."

MADAME DE STAEL—by Mrs. W., 1844.

"Unwilling to talk—seems as though it was impossible to speak. It makes me feel very sad, indeed. I should say it was a very great person—something glorious."

(Does it appear to be male, or female?) "I want to say a masculine female; a person of a great deal of energy, strength. Beautiful! I delight in it. What is that [touching the organ of sympathy]? Clear and beautiful! I feel this brightness, clearness, determination. A very fine character this appears to be—very determined, very proud and intellectual. Fame was this person's delight: 'Let fame sound the trumpet,' came into my mind. I feel, but I can't express—there is something noble and great about this person. I keep thinking it's a lady. I never saw such a person as this. I can't call it perfect, yet there's something about it so beautiful—it is not so perfect as some. It gives me a restless feeling; it is very highly intellectual, but can't be called perfect. I still feel this inclination to sit and think, above every thing that is around. The conversation do n't disturb me. (Can't you compare it with some other characters?) No. I hav n't read any like it. All these organs around the eye are very full. It is too intense—there is a pain. I've got into her way of thinking; it keeps down my spirits and speech. She's a person that thought a great deal of her own character; she felt herself above others—she was. She would like to command—to rule. I do n't think her principles are very good."

(What is the defect in her principles?) "I can't tell. I think they are all unsound."

"She seems so great, and yet so small. Her intellect is very great; her moral character and principles are not so great—small in comparison. There is too much intellect."

(How is she as a friend?) "She's a pretty good friend. She's not very intimate with any one—not very affectionate in her feelings. But I am surprised to think her principles are not better. I do n't think she'd mind telling a lie, or breaking a promise."

(How as to religion?) "She has n't much—she has a little. (Is she sensitive?) No. (A lover of liberty?) Yes; she always has it herself. (Has she philanthropy?) No, not much. (How is she regarded now?) She is thought of for her intellect; her faults are all hid by the brightness of her intellect. She's any thing but domestic. She writes more than she reads, though she has read a great deal. (What does she write?) Prose rather than poetry. There is a great deal of deep thought; the style is rather plain. She could write any thing. Her influence is rather exhausting."

HARRIET MARTINEAU—by Mrs. W.

"This is a lively person—very thoughtful, accustomed to think, of great intellect and good morals, happy, calm; it affects the fore-

head. (What is the reputation of this person?) It ought to be high—he is deserving of it. (Is it a gentleman or lady?) I think it is a gentleman, but I think there is a great deal of gentleness about him—a great deal of tenderness of feeling. (What degree of acquired knowledge?) He is acquiring every day and has acquired a great deal. (What of his pursuits?) I think he is very benevolent, a literary man, must be a writer, he is a great thinker, has great ideas, he is so very pleasant in his manners, very warm, ardent, sincere, his ideas are very brilliant, he is pure-hearted; his motives are good, he is at peace with himself. (To which is he better adapted, the sphere of a man or woman?) He is very delicate, very sensitive—he has deep feeling, sympathy—he is a true christian. He is better fitted for a woman, but has great energy. I should like to be with this person, she is humble. I do not know whether it is a gentleman or a lady. She is like a pearl."

Mrs. L. M. CHILD—by Bishop O.

"It seems to be sprightly, witty, humorous—a laughing girl, full of social feeling. Her sprightliness covers up a deep religious feeling. She would like to make sport for her friends, but there is nothing malicious about it. She has great philanthropy. She would be deeply interested in the sublime objects of Nature—has a great relish for such things. She would be seriously interested in music and the fine arts. Her animal spirits are great, but she would not jest upon sacred subjects—in such matters she is very sincere. She possesses very superior powers of mind, which would enable her to fill a wide space in the public eye, but does not seem to have the ambition for such distinction."

BOOTH, THE ACTOR—by Miss S. W., 1844.

"More excitement than Miss Martineau. It makes me tremble. I do not think it's very intellectual. I should think he might be rather wild—one of those ranters. He's very active, very bold—rather haughty. Why, what is he! He would like to make a good appearance in the world—to be admired. Flattery would hurt him—he can't bear it—he has too much self-esteem."

"He's a public man of some sort, but I do not know what to do with him. He can't be a lecturer. I do not think he has mind enough to write much. I must put him on the stage. That's the best place for him. It makes me tremble so. I can't think he's a very respectable character. He might be a great mimic—take any one off to perfection. Is he a play-actor? I do not know what else to do with him. I think he might be a good actor, but I do not think he'd be much off the stage. I do not think he's a very moral man. He's some great star. I thought, at first, he was very comical, but I do not think he is now. I think he'd take to tragedy. He has a good memory. He's an actor—has a very high reputation—people would make a great rush to see him."

(What do you say of the soundness of his mind?) "He is not a man of great or expanded mind. He's rather feeble-minded—he seems mysterious. (How is he regarded as to this matter?) I

do n't think he is perfectly sane. I feel in doubt about it; I can't tell. (Is he living, or dead?) I think he must be living."

ROBERT FULTON—by Mrs. P.

"I feel it up my arm—makes it ache—feeling of stupor has gone off; feel very cheerful—like the writer very well—pleasant, cheerful fellow—imaginative, kind-hearted: seems a young man, not attained to what he might be—feels as if he had the power to be any thing he chose to be—full of high hopes of achieving fame in some way, by doing good to his country. He is full of patriotism—not old enough yet to have lost his joyousness, and become disappointed at all. He will be successful.

"He is dead! There is a feeling of indescribable sadness, as if some one had been cut down in the bloom of youth, with bright prospects before him. He was full of noble feeling—had very fine intellectual capacity—full of beauty. I feel that he was too young to have achieved much: he had a consciousness of power, but was too young, or else had been carried away, and not turned his powers to account. I feel as if he had died before he accomplished any thing. I feel as if he had difficulties, and did not realize his dreams. He was rather a disappointed man. He died, disappointed, in the midst of his undertaking—disappointed in men, disappointed in life. He has left some fame—not what he might have left if he had lived and justice had been done him. He was an American—a northern man—dead some twenty years—belongs rather to the past than the present."

The letter upon which this opinion was pronounced, reads as follows:

"NEW-YORK, May 18, 1812.

"*Dear Law*—Have you forgot the Ganges? What active measures are you pursuing to carry your well-conceived and highly important plans into effect, as soon as possible? Time, you know, is precious. It is so important an object, that I am of the opinion one of your sons should immediately come here, and go from hence to England; and, if encouraged there, to India. What are our friends, the friends to science and the arts, doing for the patent law? Shall mind, which governs matter, have no protection, while a field of potatoes, the vulgar labor of mere vulgar hands, is barricaded in protecting laws? Shall war stare us in the face, and the laws give no inducement for genius to deal destruction to our enemies? If every member of Congress had the mind, the soul of a Lorenzo de Medicis, would not the country, by encouragement, exhibit works of genius which would give dignity to our character, and make us respected? Write me soon. Yours, &c.

"ROB'T. FULTON."

The lady by whom the foregoing opinion was pronounced, was remarkable rather for the delicacy and strength of her emotions, than for the power of investigating character. I give the experiment as an example of psychometric portraiture, frequently occurring, in which the leading impression or *tout ensemble* will be

painted, rather than the specific details of the character and life. The power of describing the general impression and sentiment, which is associated with the letter or the life of the writer, is much more common than the power of discovering the particular facts.

To a correct reasoner, these imperfect experiments constitute a complete demonstration of the psychometric power. Indeed, the most meagre of our experiments are sufficiently convincing, when impartially examined; for, in describing any individual, each trait or feature of his character would admit of at least a hundred different descriptions, of which only one would be true. The probabilities, therefore, are a hundred to one against the correctness of each statement; and the entire truth of the description, if it were mere guess work, would be a coincidence beyond the utmost range of probability. If an artist should attempt to paint the portrait of an unknown individual, without any hint by which to guide his fancy, it is perfectly certain that his fancy-sketch could not, by any admissible possibility, become a true portrait. If the portrait should prove a faithful one, it would be impossible to convince any one that the artist had never seen his subject, and knew not his name, country, age, sex, or pursuits. So, when a psychometric portrait proves correct, we are compelled to believe that the psychometer has had some means of satisfactory observation, and that a true portrait has not been painted by accident.

The demonstration of a psychometric experiment is so complete, that no objection can have any material weight, excepting one which is based upon its truth. It may be affirmed that the psychometer derives his impressions, not from the letter, but from the minds of those around him—that he has a sympathy with them, which enables him to interpret their views, independent of any impression from the paper. To those who have witnessed many mesmeric experiments, this suggestion has much plausibility; and I would not deny that, in some cases, the sentiments of those about him may influence a very sympathetic individual, and modify his conclusions; but these extraneous influences are not the source of his impressions. If he holds the letter in his hands, he recognizes its impression as commencing at the point of contact, and traversing the arm to the brain, giving him an idea of the character only after the brain has been impressed. If it is held on the forehead, he perceives the influence more readily, which is diffused from the letter over his head, and which affects distinctly the particular organs that are most highly excited. He perceives that the letter is the source of his impressions, and if it should be enveloped in paper, each additional fold of paper increases the difficulty of receiving the impression. The immediate contact of the writing is the most efficient means of communicating the impression, and the different portions of the manuscript frequently communicate different ideas, according to the tenor of the writer's thoughts.

The same opinions will be given by the psychometer in the presence of different persons, whether they have or have not any

idea of the character of the autograph. He can exercise the power as well alone, as he can exercise any of his other senses. He can take a letter, the moment it has been received from the post-office, and investigate its character alone, before he has opened it to learn its source or contents. The psychometric power is a power of independent perception, not derived from the opinions of those about us, but exerted like the sense of sight or smell, by our own independent action.

To demonstrate, more clearly, this independence of the psychometer, I have frequently had opinions pronounced upon autographs, without myself knowing the names until the close of the experiment. In such cases, the opinions were as bold and as accurate as when I knew the subject of the experiment. In 1844, I selected the autographs of Dr. Spurzheim, Sir Edward Lytton Bulwer, the novelist, and Ellen Tree, the actress, and placing them upon the table, requested Miss W. to examine and give her opinions of the manuscripts before her. She proceeded to investigate them without my knowing which of the three she had selected (herself totally ignorant of the nature of the autographs). When they were examined, at the conclusion of the experiment, I found that her opinions had been given as correctly as in other cases, having readily recognized one of the characters as a female, and the others as males.

The descriptions of Miss Tree and of Bulwer are here given; that of Dr. Spurzheim was equally satisfactory, but may be given more appropriately on some other occasion. It should be remarked, that from her puritanic sentiments and education, Miss W. was not calculated to sympathize with Bulwer or Miss Tree, and, therefore, did not give a favorable estimate. The object of publishing the report, is merely to show that an experiment, in which neither of the parties engaged (and no one else was present) has any knowledge of the autograph at the time, may be as successful as under any other circumstances.

**MISS ELLEN TREE**—by Miss W.

“Influence weak—not agreeable; perhaps not in good health. Think it is a lady. She is fit for a teacher, but is rather irritable in temper. She has little submission; she is domineering.”

(What sphere in life?) “Must be engaged in teaching, or something of that sort. (Teaching what?) I can’t imagine her teaching children—but it seems she’s some sort of a teacher. She is bold, haughty, and forward, and not very conscientious. She would not stop to think, if she was going to act right or wrong. She is not at all deceptive. She will act herself; if she is cross, she will act it out.”

(Can you tell any more about her pursuits?) “She seems one of that sort of people—seems to me rather a public—it seems rather theatrical. I don’t know whether that’s the exact word, but she seems just fit for a play-actress. I think she must be a play-actress; I can’t think of any thing else. If she were going to act, she would take some deep tragedy—there’s nothing comical about her.

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I think she would produce great excitement wherever she was. (Describe her capacities and character as an actress?) I should enjoy listening to her and seeing her act, very much. I should get very much excited. (Why?) It would seem to me like reality! (What grade of talent do you give her?) Medium. She has not a great mind. (What professional talent?) I do n't think she'd be fit for any thing but just what she is—a good actress. I do n't think she's particularly refined or modest."

(How does she appear before the public, and what reputation does she make?) "I think she would have the name of being a good actress. I think she might be a star. She is rather masculine, I think. I think she would act Richard the Third well, and be quite a noble character there; she is better suited for that than any thing else. I do n't like her character—she's bold and forward; there is nothing refined or modest about her. If she would settle down in private life, she would not be noticed much. She has a good memory. She could remember any thing, but she could n't write—she has n't mind enough. I do n't think she is much, except as a play-actress. I'd like her on the stage, but no where else."

EDWARD L. BULWER—by Miss W. (After Spurzheim.)

(Is it like the other?) "He's a calmer sort of being. I think the person would rather sit down and read and write, than any thing else. I think he's very serious, very thoughtful, very imaginative. He's not a very active man. I think he's a public man, but I do n't think he's a professional man or a politician. I guess he is n't very sociable; he's a solitary sort of being—he likes to be by himself and not be disturbed—he's very intellectual. I think people generally like him better than ———."

"I should n't altogether fancy him. (Why?) I do n't know what, but there's something about him rather repulsive. He can be very refined and polished, but he is n't always particular to be so; he's either a public speaker or writer. I've either heard him or read his writings. I do n't think he improves any by speaking or writing. I think he hurts himself in some way. I think he's a great lover of nature; he has a very fine way of describing it—would make you realize it."

"It's no one that I know. I only know him from something that I've heard or seen. He might preach up good doctrines, but he would n't always practice them. I think there's a great deal of romance about him. I think he's a writer, but I do n't think that what he'd write would benefit society much; he's more a writer of romance and fiction. It do n't seem he'd ever speak or write upon the reforms of the day. I do n't think I'd like him much; he do n't seem to take the right ground—he is n't refined enough."

(What's his domestic character?) "He's a great literary character. I can't think of any thing else. He's kind-hearted, and disposed to treat people well. I think he might be agreeable, but not very talkative. (How toward his wife?) He thinks more of his pen than of his wife—might preach up good doctrine, but would

not practice it. He'd always be kind and pleasant enough, but he's more engaged in other things."

(What are his leading aims and tendencies?) "I think he wants to please the people, whether it is true or not. I do n't think he's very conscientious. (Has he any philanthropy?) Yes, I think he has, not to a very great degree. (Is he republican, or aristocratic?) Rather aristocratic—very stately and dignified. (How as to taste in writing?) One would be excited in reading his writings, but I do n't think they would require a great deal of thought."

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### ART. III.—CRANIOLOGY AND CRANIOSCOPY.

(CONTINUED.)

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THE variety of impressions upon the internal surfaces of different crania is very instructive, when connected with their causes. It is generally admitted that the animal organs are more active and influential than the moral. Indeed, the present state of society, and the whole history of the human race, illustrate this predominance. Our social and political arrangements are based upon the fact, that selfishness is the predominant motive of mankind. But the general conformation of the human cranium does not sufficiently account for this predominance; for the basilar organs have not that general predominance of development which the selfish passions exhibit in the history of mankind. The explanation must be found in the different degrees of activity and intensity of action in the different organs, produced by the laws of nature, or arising from the constitution of society.

The constitution of society, at present, throws each individual upon his own resources, and requires him to pursue his own interests to the neglect of the welfare of others. If he should fail to give this assiduous attention to his own interests, and consequently should fall into want, he is punished, not only by physical suffering, but by the neglect and scorn of society; but, if he should pursue his own pecuniary interests, and gain wealth, even by the violation of justice and benevolence, he is respected and honored. Thus we are continually impelled, by the highest rewards and the severest penalties, to exercise the selfish rather than the virtuous faculties. But, aside from the structure of society, the laws of nature involve the same necessity, for paramount activity of the animal organs. The external senses, the muscular and other physiological powers are connected with the basis of the brain. Hence, while animal life continues, it is impossible that the activity of the basilar or-

gans should be suspended. The indispensable activity of the external senses, the regularly returning demands of hunger, and the restless impulses of the muscular system, maintain the basilar action in all cases, however torpid the superior regions of the brain may become. We need not, therefore, wonder that even heads of predominant coronal development should often manifest unworthy sentiments and degrading passions. The fact is explained, when upon examination of the interior of the skull, we find that, for many years, the sustained activity of the basilar organs has given them a decided growth, and produced an indentation of the cranium, while the torpid condition of the superior portions of the brain has left the internal table of the skull entirely smooth, and produced an unusual thickness of the bone over the inactive organs.

The facts presented in the study of Craniology, constitute an admirable illustration of the power of education. We find that the exterior table of the skull, which indicates the original plan of cerebral development, often differs widely from the interior table, which indicates the actual condition of the brain. If we examine the cranium of a man of depraved character, we find generally that the exterior of the skull, alone, does not tell the true story. The external form indicates the design of nature, and the place in society which he was adapted to fill; but it does not indicate, with certainty, that he was guilty of any crime. In the exterior conformation of almost all skulls, we find sufficient indications of the intellectual and moral organs to justify the belief that, under a proper system of education, the individual would be capable of complying with the laws of society and fundamental rules of a moral life. It is a great mistake to suppose that the heads of all criminals are marked by great deficiencies in the moral and intellectual regions. On the contrary, we frequently find that the head of a criminal will compare advantageously, in point of external development, with the heads of others who have never been known to violate the laws.

The head of Morgan Williams, a murderer, executed in Arkansas, of which this cut presents a correct profile, is one of striking symmetry, and of large development. When it was first presented to me, I should have given it a fine character, had I not reflected that the interior might tell a different story, and taken care to examine the thickness of the bone before pronouncing an opinion.



A collection of criminal crania is a melancholy commentary upon the system of society in which we live. We see, in the exterior forms of these crania, that nearly every one of these victims of law and social order was designed and fitted for a station of usefulness and happiness, so far as regards his natural constitution. We see, if Craniology can teach us any thing at all, that these wretched beings were originally endowed with the sense of duty and honor—with benevolence. reli-

gion, love, friendship, ambition, fancy, reason, and all the feelings and faculties that actuate our own lives. We see, too, that their nobler faculties have withered and died out—that the superior portions of the brain have been restrained, oppressed, deprived of their legitimate action, until the convolutions have been partially absorbed, and the bone has grown thick over the declining organs. I do not mean to say, that all criminals have good heads, but, simply, that they have, generally, a sufficient development for the purpose of leading a respectable life. But why have they not so lived? Why have their native endowments of virtue been allowed to perish?

That question must be answered by society at large. Why have we, the people of the United States of America, allowed so large a number of our people to grow up utterly uneducated? Why is it, that, in 1840, with a population of about seventeen millions, we had more than half a million adult whites, unable to read and write. The actual number was 549,693, out of a population of 6,439,699 adult whites over twenty years of age. *More than one twelfth of our adult white inhabitants are unable to read!* Of this mass of ignorant human beings, Virginia has 58,787; Tennessee, 58,531; N. Carolina, 56,609; New York, 44,452; Kentucky, 40,010; Indiana, 38,100; Ohio, 35,394; Pennsylvania, 33,940; Georgia, 30,717; Illinois, 27,502; Alabama, 22,592; South Carolina, 20,615. These are the States in which the greatest numbers of the ignorant are found.

Why have we tolerated this mass of ignorance? Why do we tolerate jails, in which all classes of the accused are thrown together, and in which the tender youths are placed under the daily instruction and influence of hardened criminals? Is it not because the great fundamental truths of the science of man have been overlooked, while moralists and religious teachers have contented themselves with abstract propositions and rules of life, regardless of their practical execution? Never can the vices and crimes of society be removed, until, by a careful study of the laws of the human constitution, we learn to understand their causes and their methods of prevention. The science of man is really the science of our duties; and they who are ignorant of its principles, whatever elevated sentiments of virtue or religion they may avow, must necessarily fail in properly carrying out their own best rules of life, either in reforming themselves or reforming society. There may be a few to whom the great laws of human nature are apparent by intuition; but as for the mass of mankind, all experience proves, that as a knowledge of the physiological laws is necessary to the preservation of health, so is a knowledge of the moral laws of human nature necessary to the moral rectitude and happiness of society.

A proper knowledge of what Neurology teaches concerning the human mind and brain, would rouse our legislators and the people to the necessity of vigorous action against the flood of crime which is continually flowing upon society from sources which are under our control.

Let us realize that, with very few exceptions, all human beings are capable of leading a virtuous life, and that if we preserve the proper tone of the moral organs, the welfare and virtue of society are secure. Let us, then, observe how large a portion of society are growing up under circumstances which must produce a torpid state of the moral faculties, and consequently prepare them for vice and crime. If, then, we should clearly perceive a method of saving them from this sad fate, would not humanity impel us to act—to improve our social arrangements, and to extend a thorough system of education to every human being?

How impressively are we taught this duty, when we contrast the interior deficiencies, indicated by the cranium, with an external form which seems beautiful and full of promise. In the crania of the lowest classes of society, the victims of social neglect, ignorant and brutish, we find indications of a remarkable torpor of the anterior-superior regions of the brain. At the locations of Ideality, Imagination and the refining social sentiments, the indications of torpor are exceedingly common. In a large majority of the patients who die in hospitals, the superior regions of the brain are in a torpid state. It is rare, indeed, to find in a cranium, obtained from such sources, a fair indication of the general activity of the brain; and it is equally rare to find one in which the basilar organs do not present the most unequivocal marks of activity.

The brain, in such cases, corresponds to the countenance. A countenance bearing marks of a rude and selfish nature—showing, instead of love and hope and friendship, the marks of avarice, anger, cunning, anxiety and gloom, will be accompanied in all cases by some indications of cerebral torpor in the anterior and superior regions.

I have often gazed with a melancholy interest upon craniological relics, on which the biography of some poor victim of neglect has been distinctly stamped. To the experienced cranioscopist, the skull presents as distinct a physiognomy as the countenance, and by the proper method of display, may be made to present as striking a picture. The method by which I have been accustomed, for the past twelve years to illustrate the condition of the brain and the cranium, is by means of a light from the interior, as exhibited in the accompanying engraving of the skull of a criminal.

A taper inserted through the great foramen of the basis of the skull, exhibits, at once, the thickness and thinness of the various portions of the bone. Wherever the bones are thin, or the unusual activity and growth of the brain has stamped their interior surface, the thinness of the cranium renders it translucent—while in the thicker portions, covering the more inactive organs, it appears decidedly opaque. Thus (in a dark apartment) if we display the skull with an interior light, the locality of each active organ becomes luminous, and it shines with a brilliance proportioned to the emanations of the organ in actual life—while the darkness of other portions of the skull shows where a cloud of adverse influences has

dimmed the fire of life and checked the glowing emanations of feeling.

It would be a noble contribution to science, if some indefatigable craniologist would thus take portraits of a hundred illuminated skulls, with full biographical sketches of the lives of the individuals, that we might trace in each the connection between the events of his life and the condition of his brain. In actual scientific value, such a publication would greatly surpass all the craniological publications of Morton, and other naturalists, in which the mere external form of the cranium is given, unconnected with any account of the life or peculiarities of the individual.

Owing to the unfortunate prejudice against the proper preservation of human remains, it would be difficult to obtain, for such a collection, any crania of much intellectual and moral interest. The illustrations would have to be drawn mainly from criminals, and from the lower classes of society, and, hence, would not present much fullness of biographical detail: but the time will doubtless arrive when no such prejudices will impede the study of man—when the examples of Spurzheim and others shall be followed, and we shall be enabled to study the remains of the wise and the good to learn the nature of their constitutions.

In examining the skull of Spurzheim, I have thought its indications remarkably interesting, when taken in connection with his life and the psychometric investigation of his character. The career of the great propagator of phrenology was brilliant and impressive. To review this career in connection with his cranium and the tests of psychometry, would present a novel view to my readers—but I have scarcely felt willing, as yet, to disturb the tranquility of his fame by the searching analysis of science.

At the present time, as society is now constituted, it is probable that a large proportion, if not a majority, of the human race would give decided indications of partial torpor in some portion of the brain. Youth is the period of activity and general growth. In old age, a shrinking of the brain and interior growth of the skull is a very common circumstance. In mature adult life, before the decline of the vital powers has commenced, all portions of the brain should be in a state of activity and very gradual growth, if they have not been obstructed by adverse influences.

Whenever, therefore, the cranium of one who died in the prime of life gives any local indications of cerebral torpor, I do not hesitate to infer the inactivity of the corresponding organs. A little more than ten years since, at Wetumpka, Alabama, the upper half or two-thirds of a cranium was shown me for my opinion of the character. The external form of the cranium indicated a good moral development; but in the middle of the moral region (Religion, Philanthropy, &c.) there was a very slight external depression, and the interior exhibited the usual indications of moral atrophy, not sufficiently advanced to produce any great thickness of the bone. but sufficient to show the unequal action of the brain. I had no

hesitation in saying that this man, in the out set of life, possessed the elements of a good moral character: he may have been conscientious, benevolent, and in all respects a good member of society; but he has undoubtedly degenerated, and, in his latter years, became profligate and immoral. This opinion was fully confirmed by the account of his life. He had been, in his earlier years, of an upright, steady and moral character, disposed not only to act properly himself, but to give good advice to young men about him, as to honorable and respectable deportment. But, for a few years before his death, he had fallen into bad company and become dissipated and quarrelsome to such an extent as to become rather a nuisance in the village, and finally lost his life in consequence of the injuries inflicted in one of his rencontres.

In this instance, the few years, during which the character had degenerated, were not sufficient to produce much thickness of the skull; but, when there has been a longer career of crime, and a greater degree of degradation has been attained, we often find the thickness of the upper portion of the skull remarkably increased. The most remarkable specimen of this degeneracy, which I have ever known, was in a negro woman of Alabama. Her cranium was so increased in thickness as to suggest, by its weight, the idea of a solid body, being nearly as heavy as a block of light wood of corresponding size. This woman was of so brutish a character, that she murdered her own child out of revenge against her master. She attacked the child in an open field, and murdered it with an axe, in order to inflict upon her master the injury arising from the loss of the young slave as property. A light, placed in the interior of the skull, exhibited a total opacity at every point but two, at which a faint gleam of light could be perceived. These were just above the cavity of the ear, and next to the sagittal suture—the localities which phrenologists have assigned to Firmness and Destructiveness.

In the skull of a murderer, executed at Raymond, Mississippi, John Lewis Geno, the superior portion of the cranium indicates a general torpor, while the entire basilar half is indented with the digital impressions of the convolutions. This man was remarkable, not only for acts of violence (having committed more than one homicide), but for theft, drunkenness and general profligacy. The effects of his drunkenness and debauchery were carried so far, that the basis of the middle lobe, in the neighborhood of Alimentiveness, had encroached upon the temporal and sphenoid bones, reducing some portions of their parietes to the thinness of a wafer, and actually piercing through their lamina at a small space on each side of the head.

The skull of a Frenchman (Durand), executed for murder at Plaquemine, Louisiana, presents similar marks of atrophy in the moral region, and activity in the basilar portion. This man, who had not so thoroughly been devoted to beastly vices, did not exhibit quite so active a growth of the basilar region, and so marked encroachments of the brain upon the bones of the skull; but, in con-

sequence of the greater breadth of his basilar region, he was no less fierce in his violence. He murdered his victim with an axe, and mocked his dying agonies. On his way to the scaffold, he jeered the spectators, and to the last resisted the officers of the law.

The skull which is delineated in the accompanying engraving, is that of one less advanced in the career of crime, but still decidedly criminal. The external conformation of the head is quite respectable, both as to intelligence and as to moral character. This man, M—, was born of a respectable family in Kentucky, and I know but little of the career which led to his ruin. He went to the south and led a gambling, profligate life, until he was convicted of a robbery at New Orleans, and sent to the Baton Rouge penitentiary. His firmness and pride of character rebelled against this fate, and he made some desperate efforts to escape on his way to the prison. He had not been long confined, before he organized a formidable rebellion, which he led with great courage. His comrades not possessing the same degree of resolution, the attempt was soon quelled by the guards and citizens who rushed in. In the struggle, when he had been pinned to the door by the bayonet of the officer of the guard, he was called upon to surrender, and feigned a compliance, but at the same moment fired his pistol, upon which he was knocked down and killed by a fracture of the skull.

In this instance, we perceive that the intellectual organs and the whole lateral and basilar regions are quite active. The lateral portion of the forehead, at the site of the planning and inventive faculties, although not largely developed, is remarkably active, as we might suppose it would be in one pursuing the desperate career of a gambler. All the acquisitive, cautious, cunning, combative and destructive portions of the brain are in full activity. It is remarkable that, notwithstanding the natural difference of thickness in the bones of the skull, these differences are overcome by the unusual growth of particular organs. The occipital bone, which presents the **thickest** exterior portion of the cranium, is generally, in criminal skulls, absorbed and reduced to translucency in its central portion. The parietal bone, which is usually quite thick in its lateral portions over the combative region, is rendered quite translucent in the present instance, and the only slight opacity, which we observe on the side of the head, is near the coronal suture, the region of Ideality, Purity, Modesty and Reverence.

On the superior surface of this cranium, we observe that the social or anterior portion of the moral region is quite active, the space above the forehead being quite translucent. From this, we learn that he still possessed the necessary politeness, imitation, humor, sympathy, pliability and friendliness of manners, for successful intercourse with the world—faculties which would be necessary in his roving, profligate life. But, on looking further back, we perceive that the more substantial moral faculties have all become torpid, while in the midst of the darkness which rests upon Conscientiousness, Love, Hope, Philanthropy and Religion, the organ of

Firmness gleams like a column of fire amid surrounding darkness. It is remarkable, that among the crania of criminals, we so generally find, whatever may be the torpor of the moral region, an active condition of the organ of Firmness impressed upon the parietal bones. This is the only organ in the superior region which is calculated to co-operate with the animal passions, and, hence, is the only superior organ that continues active, when Combativeness, Acquisitiveness, &c., rule the moral character.

The torpor in the region of Conscientiousness, which includes Temperance and Industry, shows that he had been leading a dishonorable life—living by fraud and crime. The torpor of Religion indicates the general profligacy of his career. The torpor of the region of Love arises from his long alienation from his paternal family and all the ties of home. His relations were disposed to discard him entirely, after he had disgraced himself by crime. The torpor in the region of Hope is what we might anticipate from his career. His life must have been gloomy and desperate, whatever occasional excitements and pleasures it may have afforded. A few years more of such a career would have darkened still further the coronal region, and extended the shadows of this moral death over portions of the benevolent and social region, as well as the upper portion of the temples.

From the appearance of the skull, I should suppose he was not over thirty years of age; and, from the progressive moral decline, I presume it was well for society that his career was arrested as it was, and his firmness, tact and daring energy, no longer employed against his fellow-beings.

The partial opacities of the side-head, which are less marked on the right side than on the left, do not cover any of the organs of violence or crime. The organs which they cover indicate a timid, submissive character. Hence, the opacities over the lateral organs contribute only to increase the reckless boldness of his disposition. As a natural consequence of his degraded life, we find that the region of self-respect and sense of character—the upper portion of the occiput, where phrenologists have located Self-esteem and Love of Approbation, is nearly as opaque as any of the moral regions. The opacity which is observed at the mastoid process, does not indicate any cerebral torpor, as it arises from the thickness of the bony prominence on the exterior surface of the skull. The opacity about the brow also arises from a bony prominence, which forms the superciliary arch.

The excitement and growth in the brain, by which these indentations and translucencies are produced, may be recognized in their progress by any close observer. The organs which are vigorously excited produce a fullness, tension, aching, or some other local sensation, by which we can recognize their condition and growth. In this way, a careful observer may learn the progress of development in his own brain, and the active or inactive condition of the organs, by the local sensations.

## ART. IV.—PERPETUAL MOTION.

Is it possible by any combination of machinery to produce a perpetual motion? This question, which has puzzled and deluded mankind from the earliest periods to the present time, is not in reality one of much intrinsic difficulty, when we understand thoroughly the laws of mechanical impulse and the various causes of motion.

It has been agreed among scientific men, that it is impossible, by any machinery whatever, to produce a perpetual motion, and that all attempts in that direction are based upon absurd delusions. Nevertheless, ingenious men have often deluded themselves, and sometimes their friends and a portion of the public, into the belief that they had constructed, or were about to construct, a machine possessing a perpetual self-moving power.

This delusion has arisen from an extravagant idea of the powers of mechanical combination. No mere combinations of mechanism, however ingenious—no arrangement of springs, levers, &c.—can possibly generate power. However complicated the machinery, whatever indication it may give to the confused, unscientific observer of perpetuating or reproducing motion, it is perfectly certain to those, who understand the laws of mechanics, that no such arrangements can possess any intrinsic moving power, or can possibly be capable of perpetuating the action of any force applied from the exterior. Matter arranged in any form of mechanism, is still absolutely inert. It moves only as it is moved; and when the acting force has become exhausted, it ceases to move.

Not understanding clearly these principles, mechanical inventors have often supposed that by the internal movements of their machinery, a power communicated to it might be effectually maintained in action without loss, or even with a positive increase of power. All such appearances are deceptive and based upon some inaccuracy in the estimates and calculations of the inventor.

So far, then, as mechanical combinations can affect it, we may assume that the production of perpetual motion is an utter impossibility. Yet if we can find a perpetual moving power, there can be no difficulty in producing a perpetual motion. Nature is full of such examples.

The revolutions of the earth, the movements of the atmosphere and ocean, the growth of vegetation and progress of animal life, are examples of self-moving machinery to the duration of which we perceive no necessary limits.

The question as to the practicability of perpetual motion, then, is simply this: Can we obtain command of any of those great agencies by which the perpetual movements of nature are maintained and apply them to our purposes? If we can do this, the

problem of perpetual motion is practically solved ; but in any other mode than this, the attempt would be utterly futile. Upon this principle, however, we may affirm that perpetual motion is a practicable thing. I do not know that it can ever be a matter of any great practical utility ; but as an amusing subject of scientific speculation, it occupied my mind many years since, when I succeeded in inventing an apparatus capable of producing what might, without impropriety, be called a Perpetual Motion. Such an apparatus could have no other value than as a scientific toy ; and I did not care to undergo the trouble of its construction, but communicated a brief statement of its discovery to the National Intelligencer.

The accomplishment of perpetual motion requires, that we avail ourselves of some of the same great forces by which the movements of the atmosphere and of vegetable and animal life are maintained. Such a power we find in the caloric emitted from the sun, destitute of which, the surface of the world would be congealed in motionless stillness, instead of presenting its present interesting variety of waves and winds, of animal and vegetable life.

If a suitable metallic apparatus be exposed to the ordinary changes of temperature from day to night and from summer to winter, the metallic substance will experience an endless succession of alternate movements of contraction and expansion, sufficient, if rightly managed, to propel any machinery which may be attached. A metallic bar will undergo a sensible contraction and expansion by the difference of temperature between midday and midnight. This difference, amounting often to twenty or thirty degrees, is not sufficient to produce any striking effects ; but, however small the amount of contraction and expansion, it is performed with irresistible energy. It might be necessary to make the expanding rod even a mile in length, to render its motion sufficiently extensive ; but, however limited and gradual the contraction or expansion might be, the immense force with which it is accomplished, will enable us to produce important mechanical results, as it is an easy matter to convert power into velocity or extent of motion. It is obvious that a metallic bar, let it move but an inch in twenty-four hours, if it move that much, with a force of a million of pounds, may become an important source of motive power.

The great length which would be required to obtain our power from a straight rod, suggests the convenience of a fluid metal. We are familiar with the fact, that a small amount of mercury contained in the bulb of a thermometer, will contract and expand in the annual variations of the season, sufficiently to propel a slender column of its own substance through a space of several inches. Acting upon these principles, let us make a reservoir of mercury, with a slender tube attached—a form thus resembling a thermometer. The rise and fall of the mercury in the tube, might propel a piston through a corresponding space. If the reservoir of mercury be sufficiently large in proportion to the connected tube, the ordinary changes

of temperature from midnight to midday, would be sufficient to propel the piston through a space of several inches, or even one or two feet. The motion of the piston, although occurring but once a day, would be performed with so much power, as to be capable of propelling whatever machinery might be appropriately attached.

Had this principle been adopted by the inventors of perpetual motion, they might have succeeded—at least in puzzling the savans and the public. Had an ingenious apparatus been constructed, apparently designed for the production of perpetual motion by mechanical arrangements, but really deriving its power from the contraction and expansion of mercury and other metals, there can be no doubt this would have successfully hoaxed the curious portion of the public.

There are not a few of those who stubbornly resist the improvement of psychological science—who believe nothing wonderful that relates to man—yet who are exceedingly credulous in all matters pertaining to physical science. This class of individuals, quite credulous as to new machines and perpetual motions, and not averse even to swallowing a “moon-hoax,” are frequently found among the stubborn disbelievers of all wonderful mental phenomena. It is not from the lack of credulity that they are averse to neurological science, but from the lack of perspicacity and elevation of thought. There is a good story of a sailor, who was relating to his old mother the ordinary incidents of an Eastern voyage, which proved to be so far beyond the old lady’s sphere of thought, as to excite her incredulity. She rebuked her son for attempting to impose upon her ignorance; upon which, Jack, good naturedly determining to accommodate his wares to the market, changed his tone, and informed the old lady, that when at anchor in the Red Sea, his shipmates had experienced great difficulty in heaving on board the anchor of the ship; and as soon as it appeared above water, they discovered, attached to one of its flukes, nothing less than one of the chariot-wheels of Pharaoh! As this story came within the usual range of the old lady’s ideas, she received it with great delight. Thus it is, that every year the wise and incredulous public is gulled by irrational pretended discoveries in mechanical and medical science, which are received without judgment and without criticism, while *the highest species of knowledge which has been developed in the nineteenth century*, is fiercely repelled by our colleges and academic institutions, and sneered at by the wittings of the periodical press. As the natural history of an Oriental voyage was too incredible for the old lady, so does any bold excursion beyond the ordinary range of science, excite the incredulity of the learned, no less at the present time than in the days of Columbus.

## Familiar Table-Talk.

DR. HARNEY.—Among the psychometric opinions in this number, is a sketch of Dr. Harney, the poet. To give the reader some idea of his style of mind, one of his poems, which has frequently been quoted, is here appended. Most of Dr. Harney's productions in manuscript have been lost since his death. A distinguished western poet, who had examined them, said, in a letter to a friend, "Dr. Harney was *more* than any of you have yet claimed for him, and I shall, one of these days, take great pleasure in making this manifest."

### FEVER DREAM.

A fever—scorched my body, fired my brain!  
Like lava, in Vesuvius, boiled my blood,  
Within the glowing caverns of my heart.  
I raged with thirst, and begged a cold, clear draught  
Of fountain water.—'Twas with tears, denied.

I drank a nauseous febrifuge, and slept;  
But rested not—harrassed with horrid dreams  
Of burning deserts, and of dusty plains,  
Mountains disgorging flames—forests on fire,  
Steam, sunshine, smoke, and boiling lakes—  
Hills of hot sand, and glowing stones, that seemed  
Embers, and ashes, of a burnt up world!

Thirst raged within me.—I sought the deepest vale,  
And called on all the rocks, and caves, for water;—  
I climbed a mountain, and from cliff to cliff,  
Pursued a flying cloud, howling for water:—  
I crushed the withered herbs, and gnawed dry roots,  
Still crying, Water! water!—While the cliffs and  
caves,

In horrid mockery, re-echoed "Water!"  
Below the mountain, gleamed a city, red  
With solar flame, upon the sandy bank  
Of a broad river.—"Soon, oh soon!" I cried,  
"I'll cool my burning body in that flood,  
And quaff my fill."—I ran—I reached the shore.—  
The river was dried up. Its oozy bed  
Was dust; and on its arid rocks, I saw  
The scaly myriads—fry beneath the sun!  
Where sunk the channel deepest, I beheld  
A stirring multitude of human forms,  
And heard a faint, wild, lamentable wail.  
Thither I sped, and joined the general cry  
Of—"water!" They had delved a spacious pit,  
In search of hidden fountains—sad, sad sight!  
I saw them rend the rocks up in their rage  
With mad impatience, calling on the earth  
To open, and yield up her cooling fountains.

Meanwhile the skies, on which they dared not  
gaze,

Stood o'er them like a canopy of brass—  
Undimmed by moisture. The red dog-star raged,  
And Phobus, from the house of Virgo, shot  
His scorching shafts. The thirsty multitude  
Grew still more frantic. Those, who dug the earth,  
Fell lifeless on the rocks they strained to upheave,  
And filled again, with their own carcasses,  
The pits they made—undoing their own work!  
Despair, at length, drove out the laborers,  
At sight of whom, a general groan—announced

The death of hope. Ah! now, no more was heard  
The cry of "water!" To the city next,  
Howling, we ran—all hurrying without aim:—  
Thence to the woods. The baked plain gaped  
for moisture,

And from its arid breast heaved smoke, that seemed  
The breath of furnace—ferce, volcanic fire,  
Or hot monsoon, that raises Syrian sands  
To clouds. Amid the forests, we espied  
A faint, and bleating herd. Sudden, a thrill,  
And horrid shout arose of—"Blood! blood! blood!"  
We fell upon them with the tiger's thirst,  
And drank up all the blood, that was not human

We were dyed in blood! Despair returned;  
The cry of blood was hushed, and dumb confusion  
reigned.

Even then, when hope was dead!—past hope—  
I heard a laugh! and saw a wretched man  
Rip his own veins, and, bleeding, drink  
With eager joy. The example seized on all—  
Each fell upon himself tearing his veins,  
Fiercely, in search of blood! And some there were,  
Who, having emptied their own veins, did seize  
Upon their neighbor's arms, and slew them for their  
blood—

Oh! happy then, were mothers, who gave suck.  
They dashed their little infants from their breasts,  
And their shrunk bosoms tortured, to extract  
The balmy juice, oh! exquisitely sweet  
To their parched tongues! 'Tis done!—now all is  
gone!

Blood, water, and the bosom's nectar,—all!  
"Rend, oh! ye lightnings! the sealed firmament.  
And flood a burning world.—Rain! rain! pour!  
pour!

Open—ye windows of high heaven! and pour  
The mighty deluge! Let us drown, and drink  
Luxurious death! Ye earthquakes, split the globe,  
The solid, rock-ribbed globe!—and lay all bare  
Its subterranean rivers, and fresh seas."

Thus raged the multitude. And many fell  
In fierce convulsions; many slew themselves.  
And now, I saw the city all in flames—  
The forest burning—and the very earth on fire!  
I saw the mountains open with a roar,  
Loud as the seven apocalyptic thunders,  
And seas of lava rolling headlong down,  
Through crackling forests, fierce and hot as hell,  
Down to the plain—I turned to fly,—and waked!

**MESMERIC EXHIBITIONS.**—Mr. Keely, who has been quite successful in attracting notice, and interesting the public mind, as a mesmeric operator, has recently been demonstrating his powers before a Cincinnati audience, during the month of April. From what I have seen of Mr. Keely and his operations, I was more favorably impressed, than by the popular rumors which I had previously heard. Mr. K., although not a scientific man, is a man of very good sense, who talks directly to the point, and conveys his ideas clearly. He does not profess philosophy, science or literature—but professes to verify and display the operation of the magnetic power of one individual over another, in a satisfactory manner. Conceiving that, although much has been *said* about magnetism, it is still necessary that more should be *done* to demonstrate its truth and satisfy the public, he has undertaken to give these demonstrations. The method which he adopts, and which, within the last few years, has become quite prevalent among the mesmeric operators of our country, is much more convenient and economical of labor than the old fashioned method of putting a patient to sleep by gazing in his eyes, or by passes over his head. A number of small coins are distributed among the audience, who are requested to hold them in their hands and gaze upon them steadily, until they experience a somnolent influence. This is a natural method of inducing the somnolent, or what has been called the mesmeric state, by which any number of individuals may somnolize themselves at once, without requiring any especial assistance from the operator, who superintends.

Somnolence is one of our natural faculties, the organ of which is located in the temples, about an inch behind the outer angle of the brow. Hence all human beings are capable of becoming somnolent, under the proper influences. The natural cause of wakefulness is the variety of impressions made by external objects; the loss of this variety causes somnolence. Fixing the eye on one object, or giving the ear to one monotonous tone, produces a somnolent influence upon any one. When the silver coins, used for this purpose, have been distributed and gazed upon by the members of the audience some fifteen or twenty minutes, several are found in a sufficiently somnolent state to be controlled by the operator, although no especial connection or sympathetic relation has been established between them.

Mr. K. then selects those who are most fully under the somnolent influence, and exhibits his power over them by giving commands which they are compelled to obey, and making assertions which they are compelled to believe. He will place one of the hands upon the head, and tell the subject that he cannot possibly remove it. The positive assurance is believed, and the subject finds that he cannot remove his hands by any effort of his will. He is in such a passive state that he is compelled to do as he is told, and to believe all that is said to him. If he is told emphatically that the cravat around his neck is a snake, he will throw it down and avoid

it with marks of terror; if he is told that the piece of money which is placed in his hand is red hot, he throws it down and complains of his hand being burnt; if he is told that the water he is drinking contains a dose of salts, he spits it out with marks of disgust; if told that he is the President of the United States, he personates the character; if any of his friends or family are introduced to him by a new name, he receives them in the new characters and denies all knowledge of their true names; if told that a glass of water is a glass of brandy, he drinks it as such, and becomes intoxicated accordingly. In short, he is governed entirely by his faith and imagination, and these are governed by Mr. K.

In addition to a great variety of amusing experiments, in which the patient is made to perform any part that the operator pleases, useful physiological results are produced upon the same principle, viz., stamping an impression upon the mind of the subject when he is in this passive, credulous condition, which impression will become realized by the power of the mind over the body. In this unlimited reliance upon the power of faith and imagination, Mr. Keely differs from the old-fashioned operators. In fact, it can scarcely be said that his operations are by means of animal magnetism. They exhibit, first, independent, self-produced, natural somnolence; and, second, the power of the mind over the body. The operator does not necessarily use any *animal magnetism*, for he relies not upon *nervauric* manipulations, but upon his voice, assertions and commands. He assures the patient that he has a pain in his shoulder, and the pain is felt; or, he assures him the pain is gone, and, lo! it actually disappears.

This doctoring by faith and imagination has, no doubt, a rather ludicrous air at first, and makes a mere puppet of the subject. Nevertheless, it has produced very striking results in the cure of diseases, as well as in the amusement of the public. These results are splendid demonstrations of the power of *imagination*, and the facility with which we may control the imagination by an imperative manner and make it execute our will.

In addition to the self-somnolizing process with the coin, Mr. K. increases the submissive pliability of his subjects by requiring them to fix their eyes upon the coin, and then waving it before them, in various directions, causing them to turn rapidly to follow his movements, until they become quite bewildered, and surrender passively to his guidance.

The most novel feature of Mr. K.'s experiments, is his plan of startling the patient by a sudden explosion of his voice, to assist the effect of his assertions and commands. For example, he will say, "When I count four, you will wake up and will be perfectly relieved of this pain;" or, "when I count four, you will wake up with a complete paralysis of your right arm: one—two—three—FOUR!" At the word **FOUR**, loudly uttered, the patient wakes, startled by the noise, and finds himself in the promised condition—if his faith and somnolence have been sufficient.



