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AN IMAGINARY EXPERIMENT.

BY GEORGE M. MCCRIE.

THE late Miss Constance Naden, in one of her college essays, entitled *Scientific Idealism*, dwells instructively upon the supreme function of the human brain in the differentiation of sensation. Starting with the admitted fact that the same stimulus, applied to the different sensory nerves, is translated into the special language of each—an electric shock, for example, being perceived as a bright scintillation, a loud noise, a smell of phosphorus, or an acid or alkaline taste—she goes on to quote Doctors Luys and Rosenthal to the effect that the excitement, or stimulus, entering the different sensory nerves, is strictly uniform in character. As Dr. Rosenthal puts it, in his work on *Muscles and Nerves* (p. 283):

"When the excitement has entered the nerve it is always the same. That it afterwards elicits different sensations in us depends, again, on the character of the nerve-cells in which the nerve-fibres end. . . . The sensations which we receive from outward impressions are, therefore, not dependent on the nature of those impressions, but on the nature of our nerve-cells. We feel not that which acts upon our body, but only that which goes on in our brain."

Miss Naden continues:

"Thus, if light could be transmitted by the auditory, and sound by the optic nerve, color would affect us as music, and *vice versa*, so that a sonata by Beethoven might seem a picture by Raphael. We might then literally have a 'Symphony in Blue and Silver,' or a 'Nocturne in Black and Gold.' . . . From such data we may draw very curious conclusions, which, like the mathematical definition of a line or a point, will possess at least an abstract validity, though the conditions postulated may be such as can never exist in actual experience. Suppose every part of the optic thalami to be atrophied, with the sole exception of the olfactory ganglia and the corresponding cerebral area. Now imagine that all the nerves proceeding from the various peripheral organs were made to converge, and organically united with the surviving ganglia. What would be the result? The world would seem one great odor. We should smell with eyes, ears, fingers, and tongue."—(*Further Reliques of Constance Naden*, pp. 120, 215)

This noteworthy conclusion is doubtless in full accord with the argument of the distinguished authoress. The question is, is it not significantly suggestive of *something more*? Let us look at the matter a little more closely, in order to see to what ultimate conclusion this illustration of what may be called the Unification of the Senses may lead us. All that is necessary is to

grant the above-mentioned experiment as *theoretically* possible. As Miss Naden says, it may never exist in actual experience.

Let us imagine, then, a group of five persons, each of whom, in accordance with the conditions of the above-mentioned experiment, has had his senses focussed in one. The *first* of these individuals cognises the universe as one great odor—every sensation, with him, centres in the olfactory termination of the cerebral thalami. The *second*, having his sensations centralised in the auditory nerve-cells, knows the universe only as a concord or discord of sounds. To the *third*, the world and all that is therein is wholly visual. With the *fourth*, everything is a matter of taste; while the *fifth* lives in a sphere made up of tactile impressions and nothing more.

These five individuals, each possessing one sense, and one only, represent, jointly, a human organism having the ordinary number of senses. The testimony, however, of each of these persons varies essentially. An odor is nothing like a sound, nor can a tactile impression be reconciled with, or translated into, a visual object. The very conditions of the experiment bring us to the conclusion that the *stimulus* of the senses, in the case of all the five persons, is really and at bottom, uniform—one and the same in each case, and that the difference which exists, again in each case, arises internally, not externally.

When we inquire, then, which of these five individuals may be relied upon to give a veracious account of the universe-content, the answer must be: *none of them!* The stimulus granted uniform, and the testimony of each of the five being equally valid, we are driven to the conclusion that none of them give a reliable account of the universe-content as it really is,—in each case it is, so to speak, colored with the single sense which each of them possesses. But this means that, outside the sensorium of each and every one of us, the universe is composed neither of sound, color, odor, taste, or tactile impressions. And as everything which we perceive or conceive is made up of some or all of these, it follows that the universe-content, outside the sensorium, is wholly unknowable and inconceivable. In a word, we come to the modified agnosticism of Mr. Herbert Spencer. Upon the hypothesis

of a stimulus acting directly on the senses, the whole ground-work of modern physics and nine-tenths of modern psychology and philosophy is built. Yet the foundation upon which all this rests is, and must be, an unknown and unknowable one.

Latter-day science, committed irrevocably to the stimulus theory—which is just the old subject-object delusion in another dress, definitely announces the number of vibrations of—nobody knows what, which, impinging upon the retinal expanse, produces the sensation of light of a certain color. This is assuming the universe-content to consist, so far, of a tactile impression, or rather of one factor of a tactile impression. But, as we have just seen, of tactile impressions the universe cannot consist, and what one factor of a tactile impression may be no one can tell. One thing is certain: it cannot well be an odor, an object of vision, a taste, or a sound. What, then, can it be? Agnosticism is the only legitimate ending of *this* path. There is something behind phenomena which never can be known.

The above, I venture to affirm, is the legitimate outcome, the only logical one, of the stimulus theory in perception,—of the subject-object theory in physics and philosophy,—the result contains an unknown and unknowable quantity. I would go further, and say that it is of no avail to attack agnosticism, or to decry its logical basis, so long as, in one's own world-scheme, a trace of the fiction of subject-objectivity is suffered to remain. Subject-objectivity is the counterpart of animism. Animism looks upon all matter as dead unless it be enlivened by an indwelling *soul* which quickens it from *within*. Subject-objectivity looks upon the human organism as wholly inert unless it be roused by an appulse or stimulus from *without*. There is not much difference between these two conceptions. Both are fictions of the mind, and it were hard to say which is the more hurtful of the two.

For my own part, I wholly reject the stimulus theory, with its agnostic conclusion, on the ground that, in a rational and consistent world-scheme, there is no room for it. There is no gap in the world-order for it to fill. I find the universe of sense to be in such intimate *rapport* with my bodily organism—"nearer than breathing, closer than hands or feet"—that to interpose a stimulus is an intellectual impossibility. It amounts to postulating a stage or step, where there can be none, between brain and brain-function, between thinker and thought, between eye and vision. Take the case of the concept first, for example that of *redness*. This is only the recognition of a past percept. No one, in this case, seeks to interpose a stimulus between the brain and its function. In the case of the percept, then, which is only an *intense* and present concept, why should any stimulus be necessary?

It is of no avail to say that, while the concept is immaterial, the percept has its roots in materiality, for this is only introducing another concept—that of matter to adjust the supposed difference. Ultimately the question whether the world as felt and known be "think" or "thing"—percept or concept—is an idle one, for the "think" is but the thing thought, and the thing but the embodied thought, in an *intense* and present form. I can analyse my concepts, tracing them back to a past necessary percept. I can dissect my percepts, finding no breach of continuity between consciousness—my consciousness—and the farthest star. But in this process I can discover no gap or interval which a stimulus might be supposed to fill. Even were there such a *hiatus*, I am unable to form any conception of a vibration or appulse such as that which science postulates. No man hath seen a vibration at any time, and, as pointed out in the earlier portion of this paper, it cannot consist of anything known to me. Such intellectual representations of the unknown may be convenient in science, but they should never be raised to the rank of actually existing facts.

A very fair illustration of the manner in which the subject-object, or stimulus, theory besets even those who would reject its logical consequences, may be seen in the recent article entitled "Erect Vision," (*The Open Court*, Oct. 25, 1894) and in the editorial remarks thereon. Throughout article and comment alike, it seems to me that the same assumption is made—one not warranted by the facts—that it is the retinal image which is perceived. But is this really the case? If so, considering that the rods and cones of the Jacobean membrane are generally supposed to be the prime factors of vision, does it not seem rather odd thus to set one layer of the retina over against another, in the relation of subject and object? Surely one section of the retina cannot *see* another section—for that would be equivalent to saying that the former is the self, and the latter the not-self! The inverted retinal image is not, in any sense, seen or perceived by the percipient proper—it is only visible to another person looking at the retina of the percipient in a reflected light, or examining an excised eye upon which a reflexion is directed.

The rods and cones of the retina cannot, however, at this time of day, be accorded more than a subordinate place in the economy of vision. As we have already seen, the retinal apparatus may be employed to conduct, *inter alia* the sensation of sound to the auditory region of the cerebral thalami. Eye-gate may become ear-gate on occasion. For the true seat of vision we must look to the appropriate ganglia of the optic thalami—the "internal eyes" of M. Hirth. And herein consists the *reductio ad absurdum* of the inverted image theory. For if the rods and cones of the retina

be credited with *seeing* the inverted image on the retinal surface, must not that region of the brain, which is more directly responsible for vision see, in turn, what is seen by the rods and cones?

Again, were the retinal image really seen (erect or inverted, it does not matter which) by the percipient proper, the so-called stimulus of vision would be practically doubled. There would be (1) the supposititious vibration, affecting the retinal layer, and (2) the retinal image itself affecting the supposed subject.

Perception, however regarded, is an extremely complicated process, but it is a *continuum* nevertheless. The percipient "lives along the line" of his sensation. At no stage can we legitimately break up the process into factors, and say that this section acts or reacts, independently, upon another. As well might we seek to interpose a subject-objectivity between the sun and its light and heat. The, so-called, sensed object is but an extension, or prolongation, of the perceiving organism. Just as, in physics, the incessant flux of the material forbids us to define any organism as really isolated for a single instant, so, in philosophy, the flux of perception forbids us to distinguish the felt and known as object, from the feeler and knower as subject.

THE SOUL AND THE ALL.

MR. McCRIE alludes in his interesting article, "An Imaginary Experiment," to Mr. Glaser's article on "Erect Vision," and also to the editorial note on the same subject—both in No. 374 of *The Open Court*. He says:

"Throughout article and comment alike, it seems to me that the same assumption is made—one not warranted by the facts—that it is the retinal image which is perceived. . . . Does it not seem rather odd thus to set one layer of the retina over against the other, in the relation of subject and object?"

This gives a wrong impression of the proposition made in the editorial note referred to. First, we cannot say that the retinal picture is perceived or seen; for it is the object that is seen, and the retinal picture *is seeing*; but that is not all: "sight," as stated in the editorial note of No. 374, viz., the perception of an object through the organ of sight, "does not consist of a sensation in the retina alone, but of a very complex process comprising also the sensations of the adjustment of the muscles of the eye and a co-operation of the memory of innumerable other experiences."

The picture that appears in consciousness as the perception of a tree or a house standing erect before us is the product of a very complex co-operation, not only of the rods and cones alone, nor of a ganglion alone, either in the thalamus or the corpora quadrigemina, nor of the centre of vision in the occiput, but of all of them. The retina, however, and there is no question about it, furnishes the pictorial part of it. The retina

is seeing, which means that its structures are agitated by a peculiar commotion which according to its nature is accompanied with an analogous feeling.

Mr. McCrie says:

"For the true seat of vision we must look to the appropriate ganglia of the optic thalami—the 'internal eyes' of M. Hirth."

Where, however, is the proof that there are internal eyes in addition to external eyes? By eye we understand the organ of sight, the gate, not the co-ordinating centre of sight-perception. Professor Hirth's expression is allegorical and may have a proper meaning in its context, (for Professor Hirth is a man whose judgment on the question of personality appears to be sound,) but it is a dangerous simile when adduced to explain erect vision.¹

There is no internal agent, be it a cerebral structure or a psychic entity, which is looking out at the retinal image, but, on the contrary, the retinal image (which is an agitation of a peculiar form in the nervous substance of the layer of rods and cones) enters on the paths of the optic nerve and travels into the interior of the brain: the agitation of the retina is transmitted, in the same way and according to the same mechanical laws, as waves of water, or of air, or of electricity, are transmitted; and when they reach the various stations in which former waves of an analogous type have left traces, they stimulate these traces to a renewed activity, so as to revive their feelings. Further, the retinal agitation is somewhere co-ordinated with the agitation of other sensory nerves, which are attached to the oculomotors that give a certain position to the eye ball, laying down a definite direction of the line of vision, which may be upward, or downward, or sideways.

A spot in the upper region of the retina with the eyeballs turned downward is felt to correspond to a point in the direction downward which is the root of the tree, and another spot in the lower region of the retina with the eyeballs turned upward is felt to indicate a point in the upward direction which may be the top of the tree. Thus the site of the object is properly determined by the inverted sentient retina-image and there is no mystery about it. The problem originates only when we imagine that there is a self inside who looks at the retina image.

The difficulty that does not exist for us, ought to possess all its force for Mr. McCrie.

The problem of the nature of personality lies at the bottom of all psychological problems, so also of the problem of erect vision, which is only a misconception, originating in the assumption that something, or somebody inside the brain, the ego, a self, or a sentient ganglion, or one of the cerebral cells in the centre of vision, is looking at the retinal picture.

¹ See L. Arréat's translation of Hirth's work, *La Vue Plastique* (Paris: Alcan). We have not the space here to discuss Professor Hirth's views.

The soul does not originate in the interior, thence to proceed to its various gateways of sense finally to find "an extension or prolongation" (these are Mr. McCrie's very words) in the surrounding world of objects. On the contrary, the soul is born in the place of contact where subject and object meet. The seat of soul is first in the senses. The soul sits in the eye and especially in the retina, in the ear, in the tongue, in the nose, and in the tip of the finger. Starting from the place of contact with objects as sensation, the soul builds up perception, understanding, judgment, and reason.

The whole structure of the brain and all the marvelous functions superadded to sensation are later additions—a truth which in its physiological formulation appears in the statement that the origin of the nervous system, together with the muscles or the motory apparatus attached to it, is due to a differentiation of the ectoderm, the outer membrane or external skin.

Like Mr. McCrie and his masters, Dr. Lewins and Miss Naden, we also believe in the oneness of object and subject. Subject and object are relative terms. There are no subjects in themselves, for every subject is to other existences an object. We also believe that every psychical process is a continuum, which only in abstract thought can be broken up into factors. The heat of the sun and the light of the sun are separable in thought not in reality. But here seems to be the difference: To Mr. McCrie the soul extends its nature to build up the universe, while in our conception objects of the universe impress themselves upon sentiency, where they leave memory-traces and thus gradually build up the soul. His monism is the philosophy of an all-embracing self, a view which Dr. Lewins calls solipsism, or hylō-idealism.

Our monism is the recognition of the all-being of cosmic existence, of which the soul is a part and a product. He attains a unitary world-view by denying the existence of anything except self; we, by denying the existence of anything except the All, and parts of the All. In his theory the All is a creature of the self; in ours the self is a creature of the All. There the All is a part of the self, and self is the sovereign and supreme ruler of all things, while here the self is a part of the All, and the constitutional nature of the All, its laws and cosmic order, are the ultimate *raison d'être* of all things, affording us the methods of scientific explanation and the standard of right or wrong.

It is but fair to add that our disagreement with Dr. Lewins may after all be a difference of nomenclature. Our agreement is perhaps closer than it appears to one who bases his judgment mainly upon the terms employed by either of us. Dr. Lewins is a very keen and astute thinker, and we regret only that he has not sought closer contact with other philosophers and the

reading public. If he had elaborated his philosophy in a systematic shape, we should better understand his expressions, which often appear paradoxical to the people at large as well as to some of his friends and admirers.

P. C.

SCIENCE AND REFORM.

OVER-LEGISLATION.

THE revelations of the Lexow Committee illustrate the evils of ring-rule and party-despotism, but still more strikingly the mischievous tendencies of Over-Legislation. Our code of State laws—especially on the Atlantic seaboard—and of municipal regulations are still burdened with the relics of an age that submitted to a system of preposterous statutes, enacted for the protection of the clerical interest, and the attempt to enforce such restrictions in the sunlight of the nineteenth century begets a widespread mistrust in the competence of our legislative principles in general. The natural, and, indeed, almost inevitable, result is an epidemic of bribery. Baffled in their repeated attempts to abolish anachronistic by-laws, the masses naturally connived at methods tending to make them practically inoperative. That *modus vivendi*, however, though in some respects perhaps a lesser evil, was attended by the Nemesis of all compromise ethics. The temptation of the bribe-offerer and bribe-taker and the consensus of public tolerance began with the evasion of absurd and intolerably oppressive Sunday laws, and from harmless Sunday picnics gradually extended to alcohol orgies, houses of ill-fame, and gambling-hells.

MORAL SUNDAY SPORTS.

A Mexican correspondent of the Associated Press set all North America a-tittering at the freak of a wealthy alcalde, who treated his native town to a *matanza* of two vigorous bulls, "in honor of the festival of Santa Eulalia, virgin and martyr," but our Spanish-American neighbors can quote statistics in support of their claim that their arena sports keep idlers out of the rum-shops. From a certain point of view Phineas Barnum's "Great Moral Show" really deserved its name, and a revival of the Olympic prize-contests, with preparatory and legally encouraged exercises on Sunday afternoon would initiate an era of national regeneration. "I am a great friend of public amusements," said Dr. Samuel Johnson, "because they keep people from vice." Every baffled attack on the strongholds of vice is, indeed, a backset to the cause of moral reform, and there is little hope of progress till our philanthropists recognise the truth that they cannot fight the World and the Devil with Sabbath-school prize-pictures.

CLIMATIC CURIOSA.

The "cold continent" would be a pretty appropriate name for the New World of Columbus. The paradoxes of our winter climate were supposed to be limited to the region extending from the thirty-fifth parallel to the borders of the Arctic Circle, and Humboldt in his meteorological review of the Atlantic coast-lands asserts that "the difference between the east and west shores of that ocean (the Atlantic) becomes less as we approach the thirtieth degree of northern latitude, and almost disappears further south." But the recent ice-tornado swept from Labrador clean down to the south end of Florida, and on the morning of December 29 every signal-station east of the Mississippi River reported frost weather. At Cedar Keys it was only eighteen degrees above the Fahrenheit zero, and at Tampa—"Sunny Tampa of the Gulf Coast"—the mercury was down to sixteen degrees, i. e., fifteen below the freezing-point, and ice formed to the thickness of three and one-half inches. Now the parallel of Tampa, latitude N. 28,

is that of the Canary Islands and Port Cosseir, on the Red Sea, where the winter climate is so mild that the children of the natives run about in the costume of the Nereids the year round. Imagine the amazement of those aborigines on finding their fish-ponds frozen a quarter of a foot thick some fine morning! The thing would be, not only improbable, but impossible, a *thousand English miles further north*, on the shores of the Bay of Naples, where ice forms only in the shape of hailstones or tiny pellets at the base of a dew-drenched palm-leaf. In Memphis, Tennessee, a hundred miles further south than Tunis, Africa, they had eight inches of snow and a blizzard that killed pet rabbits in their hutches and froze semi-tropical fruit in brick-built store-houses. The discovery of the New World is said to have given the Caucasian race a new lease of life; but for all that it would have been wiser not to carry reliance on the mercy of Providence to the length of ruining the Mediterranean shore-lands so hopelessly.

THE POWER OF THE PRESS.

Macaulay's article in the *Edinburgh Review* is said to have diminished the sales of Robert Montgomery's poems some sixty per cent., and the series of exposures published by a modern English review under the title "Isis Very Much Unveiled," threatens to do the same for theosophical publications of the Mahatma type. The exposé amusingly illustrates the fact that distance not only "lends enchantment to the view," but an aspect of plausibility to the idea of enchantment. Thousands whose organs of mental digestion rejected Cock Lane ghost-stories, had welcomed the chance to satisfy their miracle-hunger with reports from distant India. A large proportion of these famished would-be-believers will now have to fall back on the old expedient of chronological distance. "I do wish we had not made this trip," said the candid daughter of a Texas millionaire, who had taken his family to the Holy Land; "I always used to dream of Palestine as a land where strange things might have happened, because it was so far away and perhaps so different from home. But these weeds just look like sagebrush and—excuse the remark—these 'hares' are just like our Bastrop County jack-rabbits." The Oriental Isis, unveiled, reveals many propensities of a Cook County medium.

AN EXPENSIVE THEORY.

Dr. Robert Koch confesses that the experiments conducted in testing his consumption remedy cost 500 days in time, 24,000 marks in money, and the lives of 3,580 guinea-pigs. The fate of those martyred rodents derives an additional shade of sadness from the fact that the hypothesis leading to their sacrifice, is now almost generally discredited.

"SPELIN."

The followers of Mohammed attribute the comparative failure of their creed to the fact that it found the important field of the North-Aryan countries already preoccupied, and Professor Bauer's world-language may owe its slow rate of progress to a similar circumstance. He appeared rather late in the arena of competition, but an hour's study of his pamphlet ought to suffice for the cure of a Volapük devotee. Bauer's *Spelin* combines all the advantages of the Schleyer system (regularity and phonetic consistency) with far greater simplicity and euphoniousness. Volapük contains scores of disgustingly cacophonous words of seven syllables—"compound barbarisms," as an English critic calls them, Spelin few words of more than three, and none of more than four, syllables. The whole system is founded on the "short, supple, and universally pronounceable" plan of Count Lesseps, and greatly facilitates its study by substituting prepositions for declensions. The only drawback on its numerous advantages seems the inventor's rather singular failure to obviate the bother of conjugations by the use of auxiliary verbs. FELIX L. OSWALD,

THE RELIGIOUS PARLIAMENT EXTENSION.

Report of the New Year's Reunion.

THE Committee of the World's Congress Extension decided to celebrate in a New Year's reunion the work of the World's Fair Auxiliary, which found its crowning success in the World's Parliament of Religions. This plan was decided upon a few days before Christmas, but in spite of the short notice the meeting held in the large theatre of the Auditorium was successful almost beyond expectation. The house was well filled, and the public was very attentive from the beginning to the end for more than two hours. The audience apparently did not consist of people who had come from sheer curiosity, but were earnest and showed great enthusiasm for the cause which had induced them to come.

The celebration opened with Sebastian Bach's "Fugue of St. Anne," which was played by Wilhelm Middleschulte, organist of the Cathedral of the Holy Name. After a hymn and an anthem sung by a chorus of more than one thousand students, under the leadership of Prof. William L. Tomlins, Mr. Bonney explained the purpose of the World's Congress Extension, which was to continue the work of the World's Congress Auxiliary,

"To make the whole world one in mental aim,
In art, in science, and in moral power,
In noble purpose, and in worthy deeds."

Three ladies spoke words of welcome, Mrs. Charles Henrotin, Vice-President of the Woman's Branch of the World's Congress Auxiliary; Mrs. Elizabeth Boynton Harbert, Chairman of the Woman's Committee of the World's Congress Extension; and Mrs. Caroline K. Sherman, Chairman of the Woman's Committee on Science and Philosophy. Mrs. Henrotin closed her remarks as follows:

"In this festive week, and on the threshold of a new year, certainly we who represent one of the most advanced movements of this century realise the beauty of the life which is opening out to the world; the associate mind, the many hearts beating as one for good and noble causes; and we send to all those in foreign lands, who visited our shores and communed with us, our fraternal greetings and warmest wishes for universal peace, and that we may live long enough to realise a little of the beautiful possibilities, which will be realised when all the nations of the world will counsel together for peace, and the workers will wed art to utility."

Mrs. Harbert spoke very enthusiastically, welcoming all classes represented in the World's Congresses, and expressed the principle under which they should co-operate in the following words:

"Recognising the interdependence and solidarity of humanity we will welcome light from every source, earnestly desiring to grow in knowledge of truth and the spirit of love, and to manifest the same by helpful service." She concluded with the following verse:

"Then onward march in Truth's crusade,
Earth's faltering ones invoke our aid,
The children of our schools and State
This coming of the loving wait.
Oh, doubting hearts, oh, tempted ones,
The shadows lift, the sunshine comes!
Freedom for each is best for all,
The golden rule our bugle-call,
While as to victory on we move
The banner over us is love."

The Rev. Dr. Gunsaulus insisted on the necessity of bringing man out of his insularity and out of his narrowness, to let him come into contact with the world. He said that this is the root of all culture, art, and science; and this must be our aim, to produce the world-man. In order to be a complete man one must have not only the Occident but the Orient. Our universe is circular in form. The only West we have left is actually the farthest East—

Japan. He concluded with a poem, which, we understand, was his own, on the circular motion of progress.¹

Dr. Henry Wade Rogers, President of the Northwestern University, said that the two greatest educational agencies are the Church and the University, one the mother of the other, and both together the root of European and American civilisation. If you wish to know the future you should become acquainted with the work in which our universities are engaged, and the growing generations will be guided by the thoughts that animate our students. The most important ideas ventilated at present in colleges are about religions, political, and civil liberties. Sociology is taught more than any other science. William von Humboldt once declared that whatever we wish to see introduced into the life of a nation must first be introduced into its schools. "If you can find out what the college men are thinking to-day, you can pretty accurately determine what will be the policy of to-morrow; and the American scholar of to-day is studying political institutions and the problem of good government more earnestly than he has ever done since the Constitution was framed.

Dr. Harper spoke of the progress of mankind through higher education. "Mankind of to-day is different from what it was two thousand years ago. The day is coming when, as a result of educational agencies of every kind, intellectual and religious, men will beat their swords into ploughshares and their spears into pruning-hooks, and nation will not lift sword against nation. With higher education comes higher civilisation, and one characteristic of the world-civilisation will be international and universal peace."

Professor Choyo, of the University of Tokio, spoke in Japanese, and the translation of his address was read by Mr. C. O. Boring, Chairman of the Committee of Arrangements. It was a glowing tribute to Japan, which he hoped would combine the civilisations of the East and of the West, and embody all the good qualities of the various other nations. He expressed especial thanks to the United States of America, which had been that power to which Japan was mostly indebted for progress.

The speeches were interrupted by Handel's "Glory to God in the Highest," excellently rendered by the Students' Musical Club, under Professor Tomlins. A number of short addresses followed, by the Rev. Drs. Bristol and Jenkin Lloyd Jones; Prof. William Haynes, Dean of Notre Dame University; Dr. John M. Coulter, President of Lake Forest University; Dr. R. N. Foster, Chairman of the General Committee of the World's Fair Auxiliary on Science and Philosophy; and Dr. L. P. Mercer. Every one of them spoke to the point, and we may add that Dr. Bristol and Dr. Coulter seemed especially strong in emphasising the monistic idea of religious thought.

Among the messages from absent friends letters were read from Cardinal Gibbons, Archbishop Ireland, H. Dharmapala, Shaku Soyen, Zitsnzen Ashitsu, the Rev. Joseph Cooke, Prince Wolkonsky, and George T. Candlin, Christian missionary to China.

The celebration closed with that most powerful religious psalm, Handel's "Hallelujah," and a benediction spoken by Dr. John Henry Barrows, Chairman of the World's Parliament of Religions.

The mere fact that a celebration of this character took place, that it was held in the largest theatre of Chicago, which is perhaps the largest assembling place in the world, that it was frequented by an enthusiastic crowd of most intelligent and attentive hearers, and that churchmen of all denominations, indeed of the most various religions, took an active part in it or sent their cordial greetings, is a most auspicious sign of the times, and a harbinger of great promise.

P. C.

¹Dr. Gunsaulus will be interested in reading Dr. Carl Gustav Carus's expositions of the spiral lines of progress as a cosmic law, as discussed at length in his *Physis*.

HEAVEN AND HELL.

BY WILLIAM HERBERT CARRUTH.

The preacher paused at paragraph eight,
In the midst of Paradise;—
From One to Six he had painted the fate
Of the victims of wilful vice;—
And now he allured to a nobler life
With visions of future bliss,
Where ease shall atone for present strife,
And the next world balance this.

But ere he could take up caput Nine
Some one opened the outer door,
And heads were turned down the main aisle line
At the sound of feet on the floor;
A woman with eyes that brooked no bar
Strode through the gallery arch,
In her right hand bearing a water-jar
And in her left a torch.

The preacher lifted his solemn eyes
And mildly shook his head;
He gazed at the woman in grieved surprise
Who had broken his sermon's thread;
He raised his voice while she still was far
And hoped to stay her march:
"What would you here with your water-jar,
And what would you here with the torch?"

"A shame," she cried, "on your coward creed!
And have you no faith in man?
I bear this witness 'gainst fear and greed,
I burn and quench as I can:
The torch I bear to set Heaven afire
And the water to put out Hell,
That men may cease to do good for hire,
And the evil from fear to quell."

She came near the altar and swung her torch,
And dashed the water around,
Then turned and passed through aisle and through porch,
While the people sat spell-bound.
She walks the earth with her emblems dire
And she works her mission well:
The torch to set high Heaven afire
And the water to put out Hell.

CORRESPONDENCE.

Association for Advancement of Woman.

To the Editor of The Open Court:

THE A. A. W. (Association for Advancement of Woman) held its annual congress at Knoxville, Tenn. For three days private sessions for members were held in the mornings and public ones in the afternoons and evenings. The papers and discussions treated of matters vitally affecting the welfare of women. The audiences were large and seemed deeply interested in these subjects, which were new to many of them. Although the matter of woman suffrage was not the special topic of any paper, it was frequently alluded to, and met a much more cordial response than was anticipated. But the amount of earnest thought and liberal feeling that was aroused was perhaps most fully shown by the invitations to speak on Sunday. Mrs. Julia Ward Howe preached a sermon on "The Eleventh Hour" in the largest and oldest Presbyterian church in the city, to an audience which was said to be

the largest ever gathered there, and which indeed overflowed its bounds. In the evening, Mrs. H. T. Wolcott was invited to repeat her paper on "Waifdom," given at the congress, in a Presbyterian church. As this paper treated questions of heredity and moral duty in a very brave and firm manner, it was certainly an act of courageous liberality to ask for its repetition in a church of this venerable sect.

Mrs. Antoinette Brown Blackwell was also invited to preach in the Congregational church, while two or three other ladies met a small company of earnest men and women who were endeavoring to establish a Unitarian church. Their proposed platform was quite broad enough to satisfy the Western Conference. So the question of women's right to speak and preach in the churches seemed to find a very practical solution in this Southern city.

The equally important question of the advancement of the colored portion of our population did not receive so much direct attention here as elsewhere, although it was occasionally referred to, and I regret to say that we had no time to visit the public schools of the city, as we much desired to do. On Saturday, however, we saw at Maryville, about twenty miles from Knoxville, a very interesting college. It is co-educative in the full sense, since it admits not only colored people, but also women to its advantages. The college is seventy-five years old and was originally established for the education of missionaries. It has had a hard struggle through the stormy times of the war, but is now reviving and is doing very good work. The teachers whom we saw were active, intelligent, earnest men and women. The number of colored pupils is very small, and drawn mostly from the vicinity, and they appeared to be well treated. But the great value of the school is in the opportunity it offers of a fairly good education to the poor whites of the neighboring country at a very small expense. The stories told of the eagerness of some of these people to get an education are very touching. One girl walked nearly a hundred miles, most of the time alone, in order to reach Maryville. The poverty of these districts is very severe, and its effects might be seen in many of the faces before us. The situation of the college, on a high hill, is very delightful, and the climate most healthy, so that families have removed to Maryville for the benefit of the air and at the same time to have the opportunity to live and educate their families at small expense. The tuition is only ten dollars per year, and by means of the co-operative club board is reduced to \$1.25 per week. Other incidentals need not amount to more than about \$20 per year.

While there is undoubtedly a strong evangelical influence in this institution, yet as it meets the wants of a large class of very needy pupils, and gives to them much broader education than they would elsewhere receive, I cannot but count it among the helps to progress which we find springing up everywhere. I should also say that the State University of Tennessee has opened its doors to women, and that a bright class of thirty-six girls are reaping its advantages.

So we left East Tennessee, feeling that it had joined the great army of progress, and that its new material prosperity would be accompanied with moral and intellectual advancement. I will not delay to speak of the great refreshment of a day at Chattanooga and the delightful trip to Lookout Mountain. While we remembered the fearful fight above the clouds, we rejoiced that the smoke of battle had passed, and did not grieve that the smoke of the factory was rising in the valleys, giving promise of new industrial life and happiness to a redeemed people.

Again Atlanta was a surprise and delight after all that had been said of its rapid progress. That it will become the Chicago of the South seems very probable, and they are making extensive preparations for an international fair next year.

The city is also remarkable for the institutions for the education of the colored people, and these especially engaged our atten-

tion. Clark University is admirable for the extent and excellence of its mechanical work, and we saw fine specimens, especially of carriage-building and harness-making. The Theological School, which is in connexion with it, is the most highly endowed institution of its kind in the South, and appears to be doing a great work. We are so accustomed to look on the narrow side of theology as a matter of doctrine having little bearing on practical life, that I think that we do not always sufficiently estimate the value of this training in the mental and spiritual development of the negro race. When I heard a class reciting from the Greek Testament, I realised for the first time what a step in theological education it is to know the Bible as a translation, instead of looking upon it as a direct revelation from Heaven, coming down to us in the very shape in which we have read or heard it from childhood. An educated ministry, whatever may be the special dogmas which individuals may profess and teach, is a very important thing for the South, and along with the educational progress will come the elevation of the moral standard, which is confessedly very low among the class of preachers who have taken up the work spontaneously to satisfy the emotional demands of the negro population in their days of suffering and ignorance.

But at the University of Atlanta we found perhaps the highest water-mark of intellectual advancement for the negro. There is much misunderstanding about the work of this college, for many suppose that its aim is to give a showy training in what the people used to call "high studies," to the neglect of a sound and thorough practical education. On the contrary, the aim is very clear and definite, to fit the best class of the race to become their leaders in intellectual and moral education and in industrial work. It is one of the most interesting and encouraging signs of the work of education for the colored people that the different colleges have each their distinctive merits, thus showing a real vitality and the pursuit of methods that have arisen, not from old theories, but from a perception of immediate needs.

The founders of Atlanta University, and I am glad to say that they were not alone in doing so, very early saw that the great need of the people would soon be of good teachers who while in advance of their people in education would yet understand and sympathise with them. It was also important to establish the capacity of the negro for high intellectual work and to set an example that would act as a stimulus through the whole ranks and encourage every one to hope for better and better achievement. This course was entirely in the line which was found to be necessary by the New England Freedman's Society and the other large organisations. But it was also found in the beginning that the elementary work was so deficient that in order to train good teachers a preparatory department was added. It is hoped that by the improvement in the public schools, which is largely secured by this very normal work, that this preparation may soon be left to them and the work of the University be confined to the higher grades. The statistics show that a very large proportion of the graduates are engaged in teaching, others in preaching, while some have gone into other business but spread the sound ideas of education they have learned through the community.

Industrial work has also been added to the course. It is not carried on so largely as at Clarke nor is there so much agricultural work as at Tuskegee, but the work done has been of the most thorough and finished character and shows that they know how to apply an educated brain to mechanical work. In sewing and cooking the girls have been well trained and it is said that the effect not only upon themselves but their families has been very beneficial. It is with the greatest regret that the trustees have found themselves obliged to suspend this industrial work for this year owing to the extreme pressure of the times and the difficulty of raising money to meet the current expenses. The ladies visiting the school could hardly restrain their eagerness to restore these

industries when they saw the admirable arrangements for teaching them and the good work that had been done. In no way could the cause of Industrial Education be so well and cheaply served as by setting these wheels in motion again. Atlanta University is true to the great principle of co-education not only by admitting both men and women to its privileges, but according to the liberal constitution of the society which first established it by making no distinction in color or race. Unwilling as many are to admit it, this is really the keystone of the whole problem. You cannot enter any one of these schools without seeing that it is impossible to make the distinction, unless by accepting the absurd rule that one drop of black blood in a thousand makes a colored man, and nine hundred and ninety nine do not make a white man. It is only on the broad firm principle that every man must be judged by his character and his deeds that a democratic society and a prosperous commonwealth can be founded.

In this respect Atlanta and Berea and all other schools which maintain this standard through all opposition, are doing the greatest service.

There is already a jealousy arising in many minds that the colored people are getting the advance in education, and while it is exciting a fierce antagonism among the illiterate and vulgar, it is stimulating the more thoughtful minds to take more interest in the lower classes of the white population and to enlarge and improve the public school system for them. Although this is connected with some very unfair and unwise plans of legislation in regard to the public colored schools it yet will lead to important results. In an educated community the prejudices of race will die away much more rapidly, and a fair competition as well as a kind co-operation tends to enkindle respect and affection towards others. In this connection I must speak of the admirable good taste and gentlemanly and lady-like deportment which prevails throughout this University. It is no mere surface polish but a genuine spirit of simplicity, good feeling, and mutual respect for others. I cannot leave this subject without a brief memorial word for the admirable teacher who received us so kindly, and made our visit so interesting and profitable to us, and who within a few short weeks afterwards was stricken down by typhoid fever and has left a vacancy which it will be very hard to fill. Professor Hincks was next in position to President Bumstead, and in the long absences of the latter, unfortunately made necessary by the need of collecting money at the North, he took charge of the school and while admirably fulfilling its work he made himself beloved and respected by all, as one of the teachers wrote, "we are overwhelmed with grief at Professor Hincks's death." Of the private loss to his family and circle of friends I will not try to speak.

My letter is already long, but I must tell of our visit to Tuskegee, the final goal of our journey, and in many ways the most interesting spot of all. We were first surprised to find quite a large and flourishing town, and to learn that it had been an educational centre for white people before the war. The Normal and Agricultural school has a large tract of land and many excellent buildings mostly erected by the work of the pupils. Being in the black belt, so called not because of the ignorance or poverty of the people, but because the colored population outnumber the whites, it affords in many respects a good opportunity for bringing up these people to a higher industrial and social condition with a free development of their own powers. But it is exactly here that the advantages of the college training I have spoken of are shown, since the teachers who are all colored, have mainly been educated at Atlanta, Fiske, or similar schools. Mr. Washington, the able and accomplished principal, is himself a graduate of Hampton. By admirable arrangements, the boys can carry on their industrial education, with a small amount of study, and lay by enough to give themselves a few years in the school, so that at the end of the term they have acquired habits of industry and knowledge of some

trade, as well as a good useful, intellectual education, and have had the benefit of life in an earnest, well ordered community where all are respected, and they do not feel lowered in their own eyes by the contempt of others. Under the care of two very intelligent instructors, they are practically learning to struggle with all the difficulties of their poor, worn out soil, while they are led by intelligent experiments in new products, to consider its future possibilities and the best methods of supplying the people around them with the first great necessary of life, abundant and suitable food. Many varieties of mechanical work are also carried on on the same principles and the little settlement presents a most pleasing spectacle of a well-ordered and prosperous community, where all are working for the common good and working out great problems which will be settled for the benefit of the whole race.

Withal there is a cheerful air of happiness and an outflow of poetry and sentiment characteristic of the race, which gives one a sense of the rich addition which they are to make to the American stock. I shall never forget the beauty of the morning as the sun shone into my window and lighted up the November landscape with its last fading colors, when suddenly like the songs of the oriole and the robin in the spring, came from all around the morning song of the people expressing their welcome to us and their joy on the new day opening to them. It was a prophecy of the new life of this people redeemed from the night of oppression and ready to take their part in the labor and the joy of the new era that is coming.

EDNAH D. CHENEY.

BOOK NOTICES.

Mr. William M. Salter has published the first number of a new periodical called *The Cause*, which will represent the interests of The Society for Ethical Culture of Philadelphia.

Mr. Parke Godwin's *Commemorative Addresses* on George William Curtis, Edwin Booth, Louis Kossuth, John James Audubon, and William Cullen Bryant have just been published by Harper & Brothers, New York. Parke Godwin is one of the most classic writers and orators of North America. His speeches are full of thought, distinguished by moral earnestness, soundness of judgment, and a lofty nobility of sentiment; they are worth studying were it only for the sake of their artistic adequacy of expression and general literary perfection.

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