

THE OPEN COURT.

A WEEKLY JOURNAL

DEVOTED TO THE RELIGION OF SCIENCE.

No. 391. (VOL. IX.—8.)

CHICAGO, FEBRUARY 21, 1895.

{ One Dollar per Year,
{ Single Copies, 5 Cents.

COPYRIGHT BY THE OPEN COURT PUBLISHING Co.—Reprints are permitted only on condition of giving full credit to Author and Publisher.

A SERMON THAT MADE HISTORY.

BY MONCURE D. CONWAY.

BEFORE me is a pamphlet, its paper toned by time, bearing this title: "Religion and Patriotism the Constituents of a Good Soldier. A Sermon Preached to Captain Overton's Independent Company of Volunteers, raised in Hanover County, Virginia, August 17, 1755. By Samuel Davies, A. M., Minister of the Gospel there. Philadelphia, Printed: London; Re printed for J. Buckland, in Pater-noster Row, J. Ward at the King's Arms in Cornhill, and T. Field in Cheapside. 1756."¹ Samuel Davies, though canonised by his denomination as "the apostle of Presbyterianism in Virginia," is known to unsectarian history mainly by a prophetic note in this pamphlet concerning George Washington. This note has been often quoted, but in every instance that I have seen incorrectly dated, and deprived of some of its significance by loss of its connexion. It was not a part of the sermon, but a footnote added when the sermon was printed (1756). The sermon was delivered in a time of humiliation and panic. Braddock had just been defeated under circumstances involving disgrace to the British and peril to the Virginians. "Our Territories," cries the preacher, "are invaded by the Power, and Perfidy of France; our Frontiers ravaged by merciless Savages, and our Fellow-Subjects there murdered with all the horrid Arts of Indian and Popish Torture. Our General [Braddock], *unfortunately brave*, is fallen, an Army of 1300 choice Men routed, our fine Train of Artillery taken, and all this (Oh mortifying Thought!) all this by 4 or 500 dastardly, insidious Barbarians." He says the Colony had been unmanned by a "stupid security," and after the disaster fell "into the opposite Extreme of unmanly Despondence, and Consternation." It is observable that at this time (August 17, 1755) nothing was publicly known in the neighborhood of Colonel Washington (then in his twenty-fourth year) to relieve him of the general disgrace of the army whose retreat he had commanded. The preacher sees in the "50 or 60" volunteers before him the only hopeful sign. "Our Continent," he says, "is like to become the Seat of War; and we, for the future (till

the sundry *European* Nations that have planted Colonies in it, have fixed their Boundaries by the Sword) have no other Way left to defend our Rights and Privileges. And has God been pleased to diffuse some Sparks of this Martial Fire through our Country? I hope he has: And though it has been almost extinguished by so long a Peace, and a Deluge of Luxury and Pleasure, now I hope it begins to kindle: And may I not produce you, my Brethren, who are engaged in this Expedition as Instances of it?" It is at the end of this last-quoted sentence that an asterisk points to the famous footnote, from which in citations the first thirteen words are generally dropped. The whole footnote reads: "As a remarkable Instance of this, I may point out to the Public that heroic Youth Colonel *Washington*, whom I cannot but hope Providence has hitherto preserved in so Signal a Manner, for some important Service to his Country."

This prophetic footnote, as I have intimated, has lost some of its significance by quotation as part of the Sermon of 1755 instead of the pamphlet of 1756. For in that year following Braddock's defeat not only had the facts showing Colonel Washington's courage and skill come out, but the incompetency of British officers to defend the Colony (of whose frontiers they were ignorant) been demonstrated. For the first time the need of a Virginian commander was felt,—in which may now be discerned a first step in American Independence. In confirmation of this I will here insert a passage from a manuscript history of Virginia by Edmund Randolph, first Attorney-General of the United States, entrusted to my editorial care by the Virginia Historical Society.

"A new arrangement of rank, which humiliated the provincial officers of the highest grade to the command of the lowest commissioned officer of the crown, rendered his continuance in the regiment too harsh to be endured. He retired to Mount Vernon, which his brother by the paternal side, passing by his own full blood, had bequeathed to him. His economy, without which virtue itself is always in hazard, afforded nutriment to his character. But he did not long indulge in the occupation of his farm. General Braddock, who had been sent by the Duke of Cumberland, the commander in chief, to head the forces employed

¹I am indebted to Mr. W. F. Havemeyer of New York for the use of this rare pamphlet.

against the Indians and French, invited him into his family as a volunteer aid-de-camp. The fate of that brave but rash general, who had been taught a system unpliant to all reasoning which could accomodate itself to local circumstances and exceptions, might have been averted if Washington's advice had been received. As it was, he, in his debilitated state, could accomplish nothing more than by his own valor to lead from the field of slaughter into security the remains of the British army. Washington was now no longer forbidden by any rule of honor to accept the command of a new regiment, raised by Virginia. In his intercourse with Braddock, and his first and second military offices, he had continued to add to the inferences from his former conduct instances of vigilance, courage, comprehensiveness of purpose, and delicacy of feeling; and, in the enthusiastic language of a Presbyterian minister, he was announced a hero born to be the future saviour of his country."

Randolph wrote this about fifty-four years after Davies's sermon was printed. It will be seen that he had not the preacher's exact words before him, and probably the sermon had long ceased to circulate; but the prophecy in it concerning Washington had grown, and had become a tradition. It will be seen, however, that Davies's words which might have been prophecy in 1755 were in 1756 a declaration of public policy. An issue had come before the colony: the preacher was aiming to raise up a Virginian above the incompetent officers sent over by the crown, and had to name his man. And such was the position and power of Davies at that moment that his words concerning the youthful Colonel could hardly fail to do a great deal towards the policy which fulfilled his prophecy. It was a tremendous lift to the youth at a critical juncture, when he might easily have abandoned the military career altogether, such heavy losses and humiliations had he suffered. He had indeed written to his brother John Augustine Washington that he would never again enter the army on the former terms, but was prepared to serve his country as a common Virginian volunteer. (I have not the letter by me, but it will be found in Ford's *Writings of Washington*: I give its substance.) It was at this moment that the cheer was raised by the Presbyterian "apostle."

Samuel Davies was not a Virginian by birth, but had come into the colony to propagate Presbyterianism. It was held illegal at the time, 1748, or thereabout, to establish dissenting churches, and the impression made by this apostle's eloquence troubled the lawful clergy to such an extent that an injunction was issued against Davies. It is a curious incident that it should have fallen to Peyton Randolph, presently first president of the Continental Congress, to defend, in the outset of his career, the cause of intolerance.

At the age of twenty-seven (1748) he had become King's Attorney in Virginia, and this was his first important case. Samuel Davies, who conducted his own case, pleaded the Act of Toleration. The attorney claimed that the Toleration Act was for England, and did not extend to Virginia. "Then," replied Davies, "neither does the Act of Uniformity extend to Virginia." The case was sent to England for decision, and Davies was sustained. This triumph, together with his fervid eloquence, and the somnolent condition of the colonial church establishment, made him the religious leader of the colony. He so excited the religious spirit in Virginia that even many vestrymen were stirred into sympathy; among others, the elder Madison, who, probably because William and Mary College had become a centre of rationalism, sent his son James (afterwards President) to Princeton,—a circumstance which influenced the history of this country. And here I will quote again Edmund Randolph's manuscript, which contrasts the established church (his own) and Presbyterianism in Virginia at the beginning of the American Revolution:

"The Presbyterian clergy were indefatigable. Not depending upon the dead letter of written sermons, they understood the mechanism of haranguing, and have often been whetted in dispute on religious liberty, as nearly allied to civil. Those of the Church of England were planted on glebes, with comfortable houses, decent salaries, some perquisites, and a species of rank which was not wholly destitute of unction. To him who acquitted himself of parochial functions those comforts were secure, whether he ever converted a Deist, or softened the pangs of a sinner. He never asked himself whether he was felt by his audience. To this charge of lukewarmness there were some shining exceptions, and there were even a few who did not hesitate to confront the consequences of a revolution which boded no stability to them."

This is the testimony of one who to the end of his life remained a devout Episcopalian, as indeed did Davies's disciple, Patrick Henry, who might have remained a storekeeper in Hanover had not the "apostle" settled there. Of Henry, Randolph's manuscript says:

"[His] enthusiasm was nourished by his partiality for the dissenters from the established church. He often listened to them while they were waging their steady and finally effectual war against the burthens of that church, and from a repetition of his sympathy with the history of their sufferings he unlocked the human heart, and transferred into civil discussions many of the bold licences which prevailed in the religious."

When George Mason had prepared his Bill of Rights, the article on religious liberty was confided to

the motion of Patrick Henry, who combined membership in the establishment with a soul of dissent.

It will thus be seen that the arm thrown around Colonel Washington at the age of twenty-four, the arm of Samuel Davies, was a powerful one. In signalling a Virginian as hero and leader, the potent popular apostle unwittingly dealt the first heavy blow to British supremacy in that colony, and prepared the way for American leadership in all colonies. He was not animated by anti-British sentiment: his horror was the danger of subjugation by a papal power, France: his cry was for a competent defender.

In the State archives at Paris I lately found a letter written in 1776 by a French agent in America to his government, in which he says, "Presbyterianism is the soul of this revolution." It is remarkable how many of our revolutionary and republican fathers were inspired by Presbyterian preachers. Henry sat at the feet of Davies, Burr at those of the Rev. Aaron Burr, Madison at those of Witherspoon, Hamilton at those of Knox in the West Indies and Mason in New York. Presbyterianism had a tremendous score to settle with the British government. The time for settlement had not arrived, however, when Davies uttered his patriotic sermon in 1755. He is perfectly loyal, but arraigns the moral and religious condition of the whole country. I conclude with a characteristic passage:

"O my country, *is not thy wickedness great, and thine iniquities infinite?* Where is there a more sinful spot to be found on our guilty globe? Pass over the land, take a survey of the inhabitants, inspect into their conduct, and what do you see? what do you hear? You see gigantic forms of vice braving the skies, and bidding defiance to heaven and earth, while religion and virtue is obliged to retire, to avoid public contempt and insult. You see herds of drunkards swilling down their cups and drowning all *the man* within them. You hear the swearer venting his fury against God and man, trifling with that name which prostrate angels adore, and imprecating that damnation, under which the hardest devil in hell trembles and groans. You see avarice hoarding up her useless treasures, dishonest craft planning her schemes of unlawful gain, and oppression unmercifully grinding the face of the poor. You see prodigality squandering her stores, luxury spreading her table and unmanning her guests; vanity laughing aloud and dissolving in empty unthinking mirth, regardless of God and our country, of time and eternity; sensuality wallowing in brutal pleasures, and aspiring with inverted ambition, to sink as low as her four-footed brethren of the stall. You see cards more in use than the Bible, the backgammon table more frequented than the table of the Lord, plays and romances more read than the history of the blessed Jesus. You see trifling and even crim-

inal diversions become a serious business; the issue of a horse-race or a cock-fight more anxiously attended to than the fate of our country. You see thousands of poor slaves in a Christian country, the property of Christian masters, as they will be called, almost as ignorant of Christianity as when they left the wilds of Africa."

With which brave count in a long indictment I take leave of this historic sermon of an almost forgotten forerunner and inspirer of famous leaders.

THE GENERAL PHYLOGENY OF THE PROTISTS.¹

BY PROF. ERNST HAECKEL.

THE BEGINNING OF PHYLOGENY.

THE development of the world of organic forms on the terrestrial globe has not gone on from eternity, but had a finite *beginning*. For the organic life upon our planet could not have begun until the temperature on the solidified crust of the molten terrestrial ball had so far cooled off as to permit the aqueous vapors of the atmosphere to condense into *liquid* water. For the rise and preservation of organic life, liquid water is as indispensable as is the formation of those peculiar nitrogenous and albuminous carbon-compounds which we group together under the notion of plasma-bodies. The simplest living organism cannot subsist without a granule of glutinous, semifluid plasma containing liquid water in the characteristic aggregate, viscid state. The condition precedent of all beginning of organic life on earth is the appearance at some period in the terrestrial history of the appropriate physical conditions, especially a moderate temperature between freezing and boiling point. As the organic bodies of nature consist of the same substances as the inorganic, and as they are dissolved again on their death into the same substances, we must assume by the law of the conservation of matter that the former have sprung out from the latter by some natural process, which process is archigony.

Astronomy and cosmogony, geology and physiology, compel us with mathematical certitude to adopt the foregoing assumption, and necessitate at the same time a division of the history of our planet into two main chapters—an inorganic and an *organic* terrestrial history. The latter coincides in point of time with the ancestral history of the race. For we must assume that with the very first beginning of organic life and with the rise of the first living plasmic bodies, was begun that uninterrupted chain of *transformations* of plasmic individuals, to investigate which is the task of phylogeny.

The period in which the oldest, simplest organisms first began the marvellous exhibitions of organic vital motion and transformation, is probably not different,

¹ Being Paragraphs 31, 32, 33, and 34 of the new *Systematische Phylogenie*.

or, if at all, only remotely so, from that in which the earliest oceanic waves started their geoplastic play, and by the formation of mud laid the first foundations for the oldest Neptunian sediments of the earth's crust. Hence, since the latter are called the Laurentian sediments, we may place the beginning of the archizoic¹ age, or the first principal division of the organic history of the earth, at the beginning of the period in which the lowest and oldest Laurentian mud layers—the Hypo-Laurentian sediments—were deposited.

ARCHIGONY OR EQUIVOCAL GENERATION.

Of the various hypothetical theories respecting the origin of organic life on earth, which until very recently were at fierce war with one another, one only has proved itself tenable and not at variance with the fundamental principles of modern physics and physiology; namely, the hypothesis of *archigony* or "equivocal generation"² (understood, be it remarked, *in a definite and very restricted sense*). This hypothesis, which we hold to be the only natural one, is made up of the following assumptions: (1) the organisms with whose spontaneous generation organic life began were moners or probionts—"organisms without organs," very small homogeneous plasmic bodies devoid of anatomical structure. (2) The vital powers of these primordial moners, which were made up of like molecules of plasma, were restricted to assimilation and growth; if the growth went beyond a certain limit of cohesion the tiny granule was split up into two fragments (the beginning of propagation and hence of heredity). (3) The homogeneous plasm of this moner-body arose from inorganic combinations as an albuminate, by a synthetic chemical process: from water, carbonic acid, and ammonia—possibly with the cooperation of certain acids—nitric acid, cyanic acid, and others.

The supposition of archigony, as thus sharply defined, is the only hypothesis that explains *scientifically* the generation of organic life on our planet. It must not be confounded with those varied and mostly unscientific hypotheses which have been put together from time immemorial under the vague designation of *generatio æquivoca* or *spontanea*. For our modern hypothesis of archigony, which accords perfectly with the latest advances of physics and chemistry, nothing is required save the assumption that the physico-chemical process of *plasmotomy*³ or "carbon assimilation," the synthesis of plasma from simple inorganic combinations (water and ammonium carbonate), took place for the first time upon the first appearance in the his-

tory of the earth of the conditions favorable for it. The same process which the vegetal plasma of every green assimilating plant-cell daily performs under the influence of the sun's light, must, at some time or other, have begun spontaneously, when in the beginning of the Laurentian period the requisite physical and chemical conditions were established. This first spontaneous formation of albumen did not, in all probability, take place in the open water of the primeval Laurentian ocean, but somewhere on its coast, where the fine porous earth (mud, sand, clay), afforded favorable conditions for some intense molecular interaction between the solid, liquid, and gaseous substances.

The physical conditions of life on the surface of the earth were at the beginning of organic life beyond doubt very different from what they are at present. The hot atmosphere of the earth was saturated with aqueous vapors and carbonic acid gas; solar light and electricity operated under different conditions from what they do to-day; the tremendous masses of carbon which were subsequently fixed by the vegetable world in organised forms, then existed only in inorganic combinations. We may assume as very probable that the archizoic conditions favoring archigony lasted for a long period, and that accordingly moners were generated repeatedly by archigony at many different places of the earth's surface and at many different times. Whether, however, these processes of primitive spontaneous generation continued in subsequent times, say, after in the Palæozoic era a rich Fauna and Flora had developed, is extremely doubtful, as is also the question whether, as some assume, the same processes are still being repeated to-day. However, even if the archigony of moners *were* constantly repeated to-day, the process, owing to the minute size and the homogeneous constitution of the archigonous plasma granules, would probably be inaccessible both to observation and to experiment.

Theoretically, the following five stages may be distinguished in the hypothetical process of archigony: (1) By synthesis and reduction are produced from simple and solid inorganic combinations (water, carbonic acid, ammonia, nitric acid), nitrogenous carbon compounds; (2) the molecules of these nitro-carbonates assume the peculiar arrangement which is characteristic of the albumen bodies, in the broad sense; (3) the albumen molecules, enclosed in aqueous envelopes, come together and form crystalline aggregates of molecules—pleons or micellæ; (4) the crystalline albuminous micellæ (which are microscopically invisible) unite into aggregates, arranging themselves regularly within the same, and so form homogeneous microscopically visible plasma-granules, or plassonella; (5) the plassonella grow and increase by division; and the products of the division remaining united, larger indi-

¹*Archizoic*, relating to the first life.—*Tr.*

²The same as "spontaneous generation"—the supposed origin of living from non-living matter.—*Tr.*

³*Plasmotomy*, from two Greek words meaning the building up of plasma, referring to the process observable in plants.—*Tr.*

vidual plasma-bodies of homogeneous composition, moners, are formed.

MONERS AND MICELLÆ.

Moners we term exclusively those microscopically visible, lowest organisms whose homogeneous plasma-body shows as yet no trace of being composed of different constituents and possesses no anatomical structure. This last never arises except as the result of vital activity, and consequently could not have been present in the oldest living beings. Organisation is always the effect of the plasma-function, not its first cause. By archigony only moners could be produced—structureless “organisms without organs.”

In saying that moners are structureless, we must expressly add that the designation is to be understood anatomically and histologically only, and not physically; that is to say, we are unable, with any of our anatomical or microscopical instruments, to discern the least difference of formal composition in the homogeneous plasma of the moner body. But, on the other hand, we must assume theoretically that a very complicated *molecular structure* exists in every micella of it. For, chemically considered, the simplest albuminous molecule is an extremely composite formation. Still, those delicate structural relations, like the molecules themselves, lie far without the limits of our microscopic observation. When we think what physiological peculiarities are imprinted in the smallest and simplest visible protists (bacteria, monads, etc.), we are led to infer some corresponding complexity of their chemical molecular constitution. Yet whatever that is, it is totally without the reach of our present optical knowledge.

It is implied in this that we attribute no original, optically observable, fundamental structure to the plasma, as has been attempted in recent theories by the assumption of a granular or spumous¹ structure. The assumption of the modern granular hypothesis that the small homogeneous granules observable in the cytoplasm of many cells are the true elementary particles of all cells, is as erroneous, in our opinion, as that of the opposed spumous hypothesis which asserts that the honey-combed, foamy structure visible in the vacuolised cytoplasm² of many cells is a fundamental elementary structure originally appurtenant to the plasm. Both the granular and the spumous formations we regard as *secondary* products of the plasma differentiation.

Moreover, express caution is necessary, not to confound the hypothetical molecular micellar structure of the plasma with its frame-structure, which we can ob-

¹ *Spumous*, foam-like.

² *Cytoplasm*, cellular substance, usually regarded as synonymous with protoplasm; in Haeckel's terminology the plasma of the cellular *body* as distinguished from the plasma of the cellular *nucleus*, which is called karyoplasm.—*Tr.*

serve with powerful microscopes in the reticular plasma of many cells or in the free plasma-net of rhizopods. Of the various hypotheses that have been advanced regarding the minuter consistence of the plasma, we regard the micellar hypothesis or its modification, the plastidular hypothesis, as the one that comes nearest to the truth. According to that theory, the constituent micellæ arrange themselves in the homogeneous plasma in chains alongside one another (like the *Chromaceæ*, *Bacteria*, and other protists that form threads by *catenation*), and these plasma filaments or micellæ-chains form a network or framework whose meshes or interstices are filled with water. This micellar hypothesis explains most simply one of the most important physical or physiological properties of the plasma—its “solid-liquid aggregate condition” and its power of imbibition. We may regard the infinite manifoldness of the “configuration of this ideoplasm-net” as the elementary cause of the infinite variety of all organic forms. However, this micellous plasma-framework lies far without the limits of our optical knowledge, in the simplest moners as in all other organisms.

PLASSON AND PLASMA.

All the active vital functions of organisms are associated with one unvarying group of chemical combinations, called in the broadest sense of the term *plasma-bodies*. The rise of the countless different forms which the vegetable and animal world assumes is always the result of the *plasticity* or formative action of the plasma, that albuminoid *nitro-carbonate* which is involved in unceasing transformation and is capable of numberless modifications. This fundamental relation is a special case only of the highest physical law, that of the conservation of substance. It is formulated as follows: The plasma is the active material basis of all organic vital phenomena; or conversely, organic life is a function of the plasma. With respect to ancestral history this fundamental principle may be expressed thus: phylogeny is the history of plasmogenesis.

In the great majority of all organic bodies that can be subjected to direct investigation to-day, the plasma confronts us in many different modifications and appears as a highly developed product of countless phylogenetic molecular transformations effected in the ancestors of the present organisms during many millions of years. This follows also from the fact that nearly all elementary formations with few exceptions appear to us as cells, that is, as plastids or elementary organisms whose plasma now consists of two essentially different plasmatic substances—viz., of karyoplasm or *nucleus*, and of cytoplasm or *celleus*. The complex relations which obtain between these two main constituents of the cell-organism, and which appear most

prominently in the phenomena of karyokinesis¹ and mitosis² consequent upon cell division, and the almost universal distribution of these constant relations throughout the whole plant and animal kingdom (the lowest forms of plant and animal life alone excepted), show distinctly that the differentiation of the plasma into nucleus and celled, or into karyoplasm and cytoplasm is extremely ancient. It probably began in the Laurentian period in the first stage of organic life from functional adaptation, and was then transmitted by progressive heredity to all descendants.

This is corroborated by the fact that plastids devoid of nuclei still exist as independent organisms of the lowest rank—in the plant kingdom (*Chromacea*, *Phytomonera*) as well as in the animal (*Bacteria*, *Zoomonera*). We must regard these as survivals of that most ancient Laurentian moner group which arose by archigony, and with which organic life on earth began. As the absence of a nucleus in these simplest elementary organisms is to be regarded as original and hereditary, it appears appropriate to call plastids possessing no nucleus *cytodes*, as contrasted with true cells or nucleate plastids. The plasma of cytodes, therefore, may be appropriately termed *plasson*, or "formative" vital substance in its most primitive form. Its relation to cells may be formulated in this phylogenetic proposition: when the homogeneous plasson of the moners first differentiated itself into the inner solid *karyoplasm* and into the outer softer *cytoplasm*, the first real (nucleate) cell was produced from the simple cytode.

PITHECANTHROPOS.

PITHECANTHROPOS (or ape-man) is the name of an oil-painting made by no less an artist than Gabriel Max. The hand that painted one of the sweetest modern Madonnas has ventured to execute a more difficult work by presenting to us an ideal picture of the ancestor of man. Reproductions have been made by Hanfstengel in several sizes and are now to be had at our art-stores.

At first sight the picture is almost repulsive, as it shows a man, a woman, and a child naked and in apelike ugliness; but it gains on one's imagination the more its finer details are studied. One is impressed very soon with the moral strength of this Pre-Adamitic family. The features of both parents indicate that the struggle for existence is hard, but that they are fighting the battle of life courageously and boldly. The odds are great, but they have strength to conquer them.

Gabriel Max was equal to the great task of showing man at the beginning of his career in a low state,

¹*Karyokinesis*, a series of minute changes in the nucleus of the living cell when splitting up.—*Tr.*

²*Mitosis*, a subdivision of minute granular bodies in the plasma.—*Tr.*

but he understood how to make us comprehend that he represents not the downfall to a state of degradation, but the rise to a higher and nobler development of life. We can plainly see that these creatures, half animals, half men, contain in their aspirations the grand possibilities of humanity.

Whether or not the picture is correct in all its details, from the standpoint of the most recent results of anthropology, is of small concern; whether or not the hair of the woman's head is too long, whether or not the thumb-like great toes are in place, whether or not the color of the eyes is what it most probably was in the average individual of those distant ages, whether or not the term alalus or speechless is applicable to the pithecanthropos need not concern us much; there is unquestionably scope enough left for suggestions of all kinds. This much is certain, that the artist has understood how to portray the ancestors of man at the moment when their souls were blossoming out into that fuller mentality, which, with its intellectual depth and moral breadth, we call human. P. C.

A JAPANESE TRANSLATION OF "THE GOSPEL OF BUDDHA."

A FEW days ago we received from the Right Rev. Shaku Soyen, of Kamakura, Japan, the first copy of the Japanese edition of *The Gospel of Buddha*. It is a handsome volume, neatly printed in Japanese-Chinese characters, made up, not in the old-fashioned Chinese style, but in a modern form according to European custom. As in Hebrew Bibles, the beginning is where we should look for the end. Two hundred and thirty-two pages of English text cover three hundred and fifty-two of the Japanese version. The copy in our hands has been bound in black paper, with the title in gold on the face and at the back of the book; it opens easily at every page—a characteristic which our Western books rarely possess, for they close vigorously, unless they are held open with great effort, like the spring of a fox-trap. The preface, covering eight pages in Japanese, is written by Shaku Soyen, and from the English translation which he kindly forwarded us, we reproduce the following passages:

"Sakyamuni was born in India about three thousand years ago, but Buddhism existed long before his birth; Matô and Hôran introduced the sacred books into China when the country was governed by the Gokan dynasty, but Buddhism existed long before their introduction; Scimei¹ presented a Buddhist image and the sacred book to our Imperial court in the reign of Emperor Kimmei, but Buddhism existed long before this present, for Buddhism is not an invention of Sakyamuni, but the Truth of the world.

"The Truth of the world is not conditioned by time and space; it is infinitely great and infinitely small; it can embrace the whole universe, while it may be hidden in a hair.

¹During the reign of the Emperor Kimmei, in the year 555, A. D., the King of Kudara in Korea sent to Japan an envoy, bearing an image of Buddha and a copy of the Sutras.—*History of the Empire of Japan*, p. 47.

"Shintoism, Confucianism, Brahmanism, Christianity, and Mohammedanism, when considered from the standpoint of our Buddhist religion, are, in my opinion, but larger or smaller planets revolving around this brilliant sun of the Truth, though each of them claims to constitute a solar system of its own, quite different from others. For who is Confucius but another Bôdhisattva that appeared in China; and Jesus and Mohammed are Arhats in the West. Some religious doctrines are inferior to and less deep than others, and they were all preached according to the needs of the time in which their founders were born; but as far as they are consistent with the Truth, they may freely find their place within our Buddhist doctrines.

"If Brahmanism had not arisen in India, Buddhism would never have come into existence; if Confucianism had not taken a strong hold on the minds of the Chinese people, it would never have found its way into that empire; if Shintoism had not had its worshippers in our country, it would never have risen in the land of the "Rising Sun"; lastly, if Christ had not appeared, nor Mohammed, there would have been no Buddhism in the countries where those religious teachers are worshipped! For all these religions, I make bold to say, are nothing but so many conductors through which the "White Light" of Buddha is passing into the whole universe.

"The advanced state of modern science has contributed a great deal to make truth more and more clear, and there are many signs in the Western civilisation that it will welcome Buddhism. Originating from the indefatigable researches of some Sanskrit scholars, a new interest has been excited in the West to investigate the Eastern literature, history, and fine arts. Since, in addition, a new and powerful interest in comparative religion has become more and more general, the time is at hand in which Western scholars begin to see how brilliantly our Buddhism shines in all its glory. This is partly shown by the results of that great event, the late Parliament of Religions in America.

"Many Buddhist scriptures have been translated, both from Sanskrit and Chinese, by Western scholars, and a dozen of books relating to Buddhism have also made their appearance, but only a few of them are read in our country. They are Max Müller's *Nirvana*, Olcott's *A Buddhist Catechism*, Arnold's *The Light of Asia*, Swedenborg's *Buddhism*. Swedenborg entered the realm of Buddhism from his deep mysticism, Arnold from his beautiful poetical thoughts, Olcott from his mighty intellectual power, and Max Müller from his extensive knowledge of the elegant Sanskrit literature. Every one of them shines in his special department, according to the peculiar excellence of his genius. But as for the first and ultimate truth of Buddhism, I am not sure whether or not they have thoroughly understood it.

"Now in our country there exists the complete translation of the Buddhist *Tripitaka*, which have been constantly read by specialists for at least one thousand years. But their commentaries having become enormously numerous and their doctrines having become more and more subtle, the completeness of the *Tripitaka* which was a joyous pride to the ancients, has now caused many complaints among the scholars of to-day who are at a loss how to begin their study. Thus an eager demand for a concisely compiled work on Buddhism has arisen throughout the country, which it is our duty to satisfy. I hope this general demand will be satisfied by Dr. Carus's work.

"The reasons why I publish this Japanese translation of *The Gospel of Buddha*, which has been done in a very easy style by T. Suzuki, a fellow of the Takuhakuyen, are:

"(1) To make our readers know how much our Buddhism is understood by Western scholars; (2) to point out to beginners a short road of studying Buddhism; (3) to teach the masses the life of Sakyamuni and give them an outline of the general doctrines of Buddhism."

SCIENCE AND REFORM.

WEATHER SAINTS.

THE employees of our Government weather-observations often need the qualifications of a saint, as well as of a prophet. There are moralists who denounce the occasional failure of a prediction as a breach of contract, and rival observers who resent the publication of the official bulletin as a personal insult. "There is no end of complaints," said the manager of the Pittsburg signal station in an interview with a press correspondent. "People rush in here and tell us that their thermometers showed fifteen degrees below zero, when three and one-half was actually the lowest. They talk with the emphasis of personal conviction and would lose their temper altogether if I should try to explain the causes of the discrepancy. The main cause is 'calibration,' or faulty construction of the mercury tube"—illustrating his meaning by two drawings, one representing the strictly parallel lines of a correct instrument, the other resembling a river that widens into a lake and again assumes its natural volume—the tube of the twenty cent thermometer that produces results the bureau cannot hope to approach. "These inequalities do the mischief," said the observer. "If the tube widens at a certain point the mercury will move up and down slowly. If it is unduly contracted, it will show big extremes of temperature. The cheapest thermometer we use costs \$3.50. Nothing cheaper is reliable. These people come rushing in here. Their thermometers show one hundred and six degrees and they are proud of it. We can't rake up a hundred. Winter brings no relief. Cheap thermometers and their owners rush to the opposite extreme." Yet courteous treatment of well-dressed visitors is one of the principle office-rules.

THE ALCOHOL PROBLEM.

A few weeks ago a committee of American reformers announced their intention to investigate the liquor problem on the inductive principle of inquiry, by a series of personal experiments and an impartial comparison of the results. The list of their members includes such names as Prof. F. G. Peabody, J. J. McCook, Felix Adler and President Low of Columbia College—the chairman of the committee. The proximate object of the inquiry is the "effect of moderate drinking," and a widely distributed circular invites replies to the following questions: 1. "Is the regular consumption of a moderate quantity of whiskey, wine, or beer conducive to the maintenance of health and working power in any class of men? If so, in what class, and what is the average quantity thus useful?"—2. "What is the quantity of whiskey, wine, or beer which the average man in good health may consume daily without special risk of injuring his health? Does this vary in connexion with variations of age, of climate, or of occupation, and what are those variations?"—Considering the frequency of desultory methods applied to the study of the drink evil, the plan of the proposed investigation really seemed to promise important results, but by a strange oversight—or, shall we say, failure to recognise the chief significance of the intemperance peril, the circular includes no reference to the question which De Quincy discussed so impressively in his *Confessions of an Opium Eater*, viz., the frequent *progressiveness* of apparently harmless stimulant habits. Like the moderate use of opium, hashish, arsenic, tobacco, and chloral, the "moderate drinking" of alcoholic liquors implies the risk of a craving for a gradual increase of the dose—a fact explaining the apparent paradox that abstinence from all tonic drugs is easier than temperance.

A DOOMED NATION.

Whatever may be the temporary outcome of the Inter-Mongolian war, its military record will seal the doom of the Chinese Empire as an independent organisation. No such odds in the numerical strength of belligerents were ever heard of since the close of the Seven Years' War, nor such uniform success of the

minority since Bonaparte's first Italian campaign. King Frederic, like the Japanese invaders, entered the field against tenfold odds, but was, on the average beaten in every third battle. And though Napoleon gained sixteen following victories, his force in northern Italy never amounted to less than one-half of his Austrian adversaries, and he was, moreover, backed by the resources of a country quite as rich and populous as Austria and those of her Italian sympathisers taken together. In 1813 he fought as one against five, and was not only worsted but ruined. The present population of the Japanese archipelago has been estimated at 35,200,000; that of the Chinese Empire at 372,500,000,—the proportion being almost exactly that of France in her present extent, against all Europe combined, or of Chile against all the rest of South America. A nation so easily beaten, has forfeited its hope of peace. The result of the first Silesian war was the signal for a general attack upon the heritage of the Empress Queen. The victories of the Visigoths were followed by a mass-invasion of other warlike tribes, and the success of the Japanese aggressors will ultimately lead to the downfall of the South Mongolian colossus.

JURY FREAKS.

The occasional abuse of a time-honored institution should not be allowed to justify the demand for its abolishment; still it must be admitted that every now and then a glaring case of mis-trial seems to illustrate the correctness of Schopenhauer's arguments for the modification of the old English jury-system. A few years ago a young man of Uniontown, Pennsylvania, waylaid and murdered a lawyer who had killed his father in self-defence. It was proved that the vendetta outrage had not been committed in a moment of passion, since its perpetrator had prepared its success by a week of daily target-practice, but the jury nevertheless endorsed the act by rejecting the plea of emotional insanity and acquitting the assassin on general principles. As a natural consequence, their protégé came to regard himself a privileged personage and recently tested the tolerance of his fellowmen by two additional murders, the first of them committed on so frivolous a pretext that only the uncommon strength of the local bastille saved the young bloodhound from the vengeance of the infuriated populace. A less tragic, but in some respects still more remarkable, case occurred last month in Pittsburgh, where the attending physician of a charity hospital was convicted on a preposterously absurd charge of malpractice. The plaintiff, a pauper and alien, had been admitted to the hospital through the special kindness of the commissioners, and rewarded the doctor who had treated a compound fracture of his thigh-bone by suing him on the plea that the transaction had resulted in shortening the injured leg an inch and a half. It was proved that the defendant had not received a cent of compensation, either from the patient or the managers of the hospital. It was also proved by compurgators of unquestionable competence that the result of the cure was much more favorable than could have been expected from a record of averages; yet, in spite of all these facts, and in spite of their emphatic indorsement in the final charge of the court, the intelligent jury brought in a five-thousand-dollar verdict for the plaintiff.

SPECIALTY LITERATURE.

The enormous increase of the reading public within the last fifty years has evolved an astonishing number of "specialty periodicals." In the United States we have a *Granite-Cutters' Journal*, a *Modern Crematist*, a *Cementarian*, and an *American Journal of Numismatics*, and Dr. T. J. Bernardo, London, England, publishes a monthly devoted to the "study of the proper treatment of feeble-minded children."

POSTHUMOUS HERO-WORSHIP.

A French statesman shrewdly ascribes the recent revival of Napoleon-worship to the incapacity of his would-be imitators.

"The masses," he says, "need an ideal, and seeing nothing but imbecility in gorgeous uniforms all around, the vision of the victor of Marengo in his gray battle-cloak naturally rises before their inner eye." In France and Belgium there has been a simultaneous resurrection of Voltaire-worship, in Austria of Kossuth- veneration. The idea of universal progress is a very pleasant one, but it can do no harm to admit that in many parts of Europe the intellectual meteor-shower of 1775-1820 has been followed by an almost starless night, in which the thoughts of men naturally turn to the bright memories of the past.

VICTIMS OF NICOTINE.

The *litterateur* Stevenson is supposed to have weakened his constitution by mental overwork, but the main cause of his premature death was probably his excessive fondness for tobacco. Two years ago he already confessed that the bill of his cigar-dealer amounted to \$450 a year, and during the last six months of his life he smoked an average of forty cigarettes per day, and often as many as eighty in twenty-four hours. This hobby had afflicted him with chronic insomnia, which in turn he tried to cure, or at least palliate, by smoking all night, till narcosis of the brain brought on a sort of stupefaction and temporary loss of consciousness—for weeks his nearest approach to refreshing slumber. Dr. McCarthy of Liverpool warned him a year ago that he was burning the candle of life at both ends—for in the midst of his misery he tried to attend to his literary labors, but he stuck to nicotine as the only specific for the mitigation of his nervousness. For similar reasons Ex-President Grant and Crown Prince Friedrich of Prussia felt themselves unable to adopt the advice of their physicians when their passion for cigars had resulted in a chronic irritation of the respiratory organs.

FELIX L. OSWALD.

THE OPEN COURT

"THE MONON," 324 DEARBORN STREET.

CHICAGO, ILLINOIS, Post Office Drawer F.

E. C. HEGELER, PUBLISHER.

DR. PAUL CARUS, EDITOR

TERMS THROUGHOUT THE POSTAL UNION:

\$1.00 PER YEAR.

\$0.50 FOR SIX MONTHS.

N. B. Binding Cases for single yearly volumes of THE OPEN COURT will be supplied on order. Price, 75 cents each.

CONTENTS OF NO. 391.

A SERMON THAT MADE HISTORY. MONCURE D. CONWAY	4399
THE GENERAL PHYLOGENY OF THE PROTISTS. ERNST HAECKEL.....	4401
PITHECANTHROPOS. EDITOR.....	4404
A JAPANESE TRANSLATION OF "THE GOSPEL OF BUDDHA." EDITOR.....	4404
SCIENCE AND REFORM. Weather Saints. The Alcohol Problem. A Doomed Nation. Jury Freaks. Specialty Literature. Posthumous Hero-Worship. Victims of Nicotine. FELIX L. OSWALD.....	4405