

The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the
Extension of the Religious Parliament Idea

Founded by EDWARD C. HEGELER

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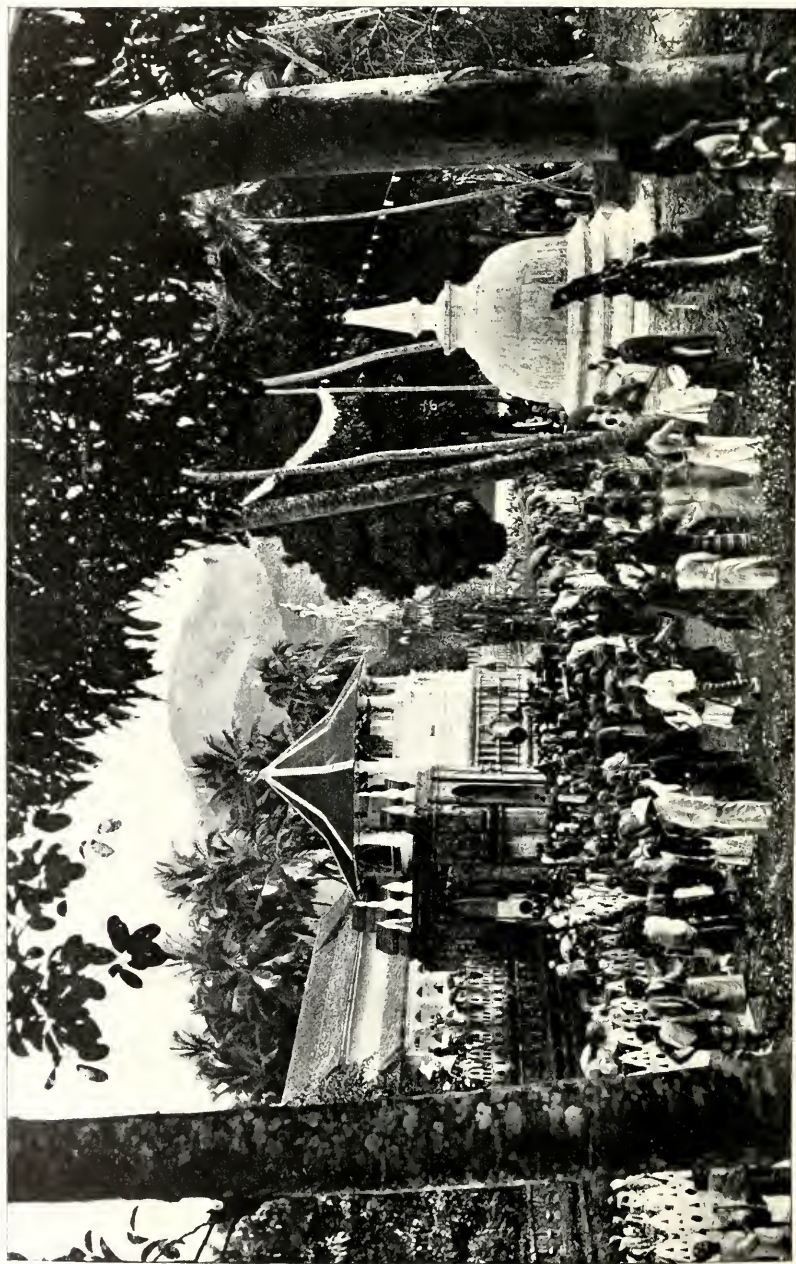
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BUDDHIST FESTIVAL "WORLD RENUNCIATION"

Frontispiece to The Open Court.

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THE AESTHETIC PHILOSOPHY OF JAPAN

BY W. G. BLAIRIE MURDOCK

FEW countries have created so much which is beautiful as Japan. It is widely supposed in the Occident, that in the fine arts she has never risen above the merely charming. It is common with Western people to speak of her, as being great in small things, nevertheless small in great. But if indeed, in the sphere of works which are frankly slight in inspiration, and tiny in dimension, Nippon has reflected a skill which has been unrivalled by other lands, she has by no means failed in the epic strain. It is in her castellated architecture, her old Buddhist paintings and sculptures, her chronicles of war and her dramas, that she has triumphantly soared to the heights. These are exploits, which as yet are little known in America or Europe. And, since so rich an achievement has been Japan's, a quite phenomenal interest pertains, to what the Japanese themselves have written in art criticism. Has the work of the Island Empire, in this field, been worthy of the fair things involved?

Scanning the West besides the East, it is soon perceived that a difference of the widest lies, between the two main classes of critical writing. There have been men who were apparently content, to hurl maledictions at what they considered bad, and to accord ecstatic eulogies to what they regarded as good. They dilated on glorious color, in music or painting; they expatiated on superb rhythm, in verse or sculpture. And prominent among critics of this variety, perhaps its very symbol, was Théophile Gautier. For if he wrote scarcely a phrase which is not engaging, he wrote hardly one which offers mental food. The writers of this description are only a little way removed, from those journalists of the daily press.

whose trade is to pass speedy verdicts on current books and pictures. But there have been men who, far from being satisfied with giving praise or blame to individual works, have made of criticism a form of philosophy. They have pondered on the enigma, which is constituted by the existence of art in the world, as mysterious a thing as the existence of mankind. They have given zealous meditation, with regard to what are veritably the bases of beauty, be it in lines or colors, words or notes. If Coleridge is the acknowledged high-priest, in criticism of this deeper and more speculative sort, if Schopenhauer touched it well furthermore, there come to mind also in this relation, the names of Goethe and Matthew Arnold, Walter Pater and Mr. Arthur Symons. What manner of philosophic ability, then, was shown by the Japanese critics of the arts?

Scion of a noble house, Ki no Taurayuki (833-946) was in the civil-service of the government. Like many if not most of the Japanese nobility of his time, he was acquainted with the Literature of China, where speculations on beauty had been written, long prior to his day. But if it is probable, that Ki derived from Chinese writings of that class, some of his ideas on aesthetics, he would appear to have been the earliest Japanese, to engage in writing in that sphere. He was himself a lyric poet, striking in his verse sometimes, an intensely strong note of human interest. In 905, he began to compile an anthology, *Kokinshu*, or Old and New Poems; and it is the preface by him to this book, which enshrines his critical beliefs.

The anthologist is severe on the versifiers of his own epoch. He says that their way as a rule is, rather to intend poetry than to achieve it; he speaks of the writings of some of them as "mere decoration"; and he compares those writings to a plant which bears no grain. Of a poetess of a little previous to his time, he observes that she has paths but not power; of two authors who also lived before him, he declares that the one shows deep emotion, yet lacks skill in wording, whereas with the other, the case is exactly the reverse. In his pages on poetic art in general, he speaks of song having been called forth, through the hearts of men overflowing, merely at the joy of being alive. He goes on to bring forward, as among the things which have evoked poetry, "the murmur of the cicada, recalling sorrowfully the memory of an absent friend", or the feeling of "sadness, because young girls grow up". Beyond doubt, the Japanese, as a nation, have a signally keen zest in the beauties

of nature. Whence it is not surprising to find, that Ki gives as being of the sources of poetry, "Joy in the loveliness of flowers, wonder at the notes of birds, tender welcome of the mists of Spring-tide". And having cited further things akin to those, he tells that people found it brought composure to their minds, to fashion verses on such themes.

Apparently nothing is known about Yoshida Kenko (1283-1350), save that he was a Buddhist priest. He lives by his *Tsurezure Gusa*, or Gleanings from Leisure, a volume of tiny essays on a wide variety of themes. And, as is normal in a book of that kind, there is a good deal of disclosing of the writer's ideas about the arts. Music is of those which he speaks about, and he quotes the words of one, Kagemochi, who would seem to have been a flautist: "You must add a little natural ability to what you have been taught about each stop, and put your heart into it as well". Talking of the poets of long ago, he eulogises their simplicity of phrase, with the consequent ease in understanding them, and he extols their depth of purport. When put into poetry, even the toil of the humble dweller among the mountains becomes beautiful," he says. The character of the Japanese language, with its curious if not unique demand for brevity in wording, has conduced to make the literature of Japan full of things which are hints, rather than statements. Speaking of religious sculpture, Kenko praises a certain carver of Buddhist images, "because his knife did not cut perfectly". And seemingly, what the writer desired to hint at there, is that fine work in the glyptic art is not very highly finished, but has a little roughness, as in a thing of nature's own fashioning.

It was in the 14th century, that there commenced the writing of the plays, whose generic name is *No* or Accomplishment. And it was notably these pieces which were meant, when it was said at the outset of these present pages, that her drama is of Japan's high triumphs. Kwanze Motokiyo (1375-1455) was in likelihood, the most fecund writer of *No* works: and he wrote a treatise on this art which he practiced, *Scami Jurokulu Shu*. It is his complaint, that there are many people who attend *No* performances, yet see only the externals, instead of grasping the inner significance, the things which are adumbrated. For knowledge of the kind which can be gained through the eyes, he adds, "comes not to all who see, but to him who sees well". Motokiyo speaks of the very great difficulty, of handling ably in a play, a subject which has not been

treated in dramatic literature before. He reminds playwrights, that to attain the terrifying is not necessarily to achieve the beautiful, for the two "are as far apart as black and white". In consonance with this advice, he adds words of warning, with regard to those plays in which a child is depicted, the critic saying that, in these cases, there is the danger of making the audience feel, that their emotions are being unduly assaulted. The perfect actor, he observes, is he who can please alike the learned and the uneducated. And he stresses the need of high moral character, in those who would play well in *No*: "Venerary, gambling and strong wine are strictly forbidden."

The decoration of swords was among the things, carried to an extraordinary height of loveliness in Japan. Whence such art attracted a good many critical writers, the best of whom, perhaps was Inaba Michitatsu. Himself a dealer in weapons, he lived towards the close of the 18th century; and the book by him is *Soken Kisho*, or Treatise on Sword-Furniture. Of one artist he declares that his creations remind "of white rails scattered over the broad bosom of the ocean, their outlines softened by the mists of Spring." Of another he maintains, that his work calls up the feeling which is known when, 'on an autumn evening, looking out under the blinds from the upper floor in a tall, riverside house, there is seen the rising of the moon." He praises a further man by reason of his art reflecting "that noble elevation of tone . . . which can never be imitated". He echoes these words when, dealing with art in general, he says that "the sculpture of a genius . . . is invariably permeated by a lofty spirit." Touching on the financial side of his topic, he expresses scorn for the artist who is always thinking about the reward which his work is to bring; and he adds that the true master "forgets all about bread-winning, through devotion to his art". He speaks against supposing, that the value of works of high beauty can be estimated in figures. And he asserts that, for a person to grow absorbed with the getting of money is to become the mere slave of the same.

If it may seem to some people, that Michitatsu's eulogies of sword-decorators are a little fantastic, it must be remembered that the work of these men, in endless cases, was definable less as sculpture in miniature, than as pictures executed by carving and inlaying. It was about the time *Soken Kisho* was written, that there began the prodigal output of color-prints, of Japan's exploits the one, which

nowadays enjoys the widest familiarity. The prints were frequently issued in the form of Albums, and of such was *Yehon Mushi Yerabi*, or the Picture-Book of Selected Insects, by Utamaro (1754-1806). He is among the most exquisite of Japanese pictorial artists, and in this book by him there is a preface by Toriyama Sekiyen, who was personally a print-designer. He talks here of Utamaro having contrived, to make the glitter of the firefly seem a reality. And, maintaining that pictorial art consists in rendering the heart of things, he claims that this is what the master has done, with the insect world.

The vast stream of color-prints, which flowed from the press as the 18th century passed into the 19th, was accompanied by nothing less than a torrent of prose fiction, and a writer of such was Ryutei Tanehiko (1783-1842). In the introduction to his story, *Ukiyogata Rokumai Byobu*, or Episodes of the Passing Hour, shown on Six Screens, there is an assault on the other novels of the author's time. He wisely attacks the predilection which they display, for handling the horrible, the supernatural, the surprising; and in his own story aforesaid, he practices what he had preached as critic, his pages being concerned with ordinary, domestic happenings. Tanehiko is the more interesting, because he was a close friend of the most widely distinguished of all Japanese, Hokusai. The novelist contributed a foreword, to the 11th volume of the album by that master, *Mangwa*, or Spontaneous Sketches. And, in this memento of a friendship, Tanehiko exalts those artists, "who adhere strictly to the . . . rules laid down by the old masters." It is those who adhere thus, he contends, who "succeed in delineating flowers, so as to make their beauty actually present, and in representing snow, so as to make us almost shudder with cold." Hokusai can do this, he exclaims, adding: "He knows how to get at the essence of whatsoever things he puts on paper, and he has the gift of conveying their significance, to those who scan his productions."

Another great admirer of Hokusai was Shikitee Samba (1757-1822), he too being a novelist. He wrote the preface for the 7th volume of *Mangwa*, which section of the album is composed of landscapes. And Samba tells here, how he saw "the beauty of flowers, the glory of autumnal woods, the gleam of winter's snow," how likewise he even heard the crashing of a waterfall; and then he awoke, for he had but been dreaming with *Mangwa* under his pillow! At the age of 75, Hokusai, still full of mental vitality, himself

enunciated some ideas about his art; and he said that, if only he was allowed to live to 110, he would reach so high a proficiency, that his every line or blot would be alive. Among the Japanese landscapists, it was few if any who rivalled the last of the great print-designers, Hiroshige (1797-1858), of albums by whom is *So Hitsu Gwafu*, or Speedy Sketches. And, in the 2nd volume of this book, there is a foreword by Honcho Gosamma, whose identity does not appear to be known. "The views," he says, "are true to nature, nevertheless so lofty in conception, that they make us feel like denizens of some other world."

It is greatly common, with those Western writers who descend on the art of Nippon, to assert that the artists knew aims and outlook, widely other from those of their Occidental brothers. But the foregoing passages, culled so as to give a representative idea of the tenor of Japanese criticism, are of the last value as demonstrating the affinity between Eastern and Western convictions with regard to high beauty. Motokiyo's statement, that fine moral character is needful in men, ere they can achieve great things in *No*, echoes the saying of Milton, that whoso would write a noble poem must be a noble person. Nor is it difficult to conceive a phrase, exactly analogous with that one by the Japanese dramatic critic, emanating from G. F. Watts or Ruskin. The latter might have spoken, with Turner as his subject, the eulogy offered by Gosamma to Hiroshige. And Tsurayuki's attack on certain verse, as being mere decoration, might well have been written by some Western commentator on Swineburne. With those Occidentals, who claim that the attitude and aspirations of the Eastern artists were distinct, from those of the Western, it is frequent to contend that the painters in Japan were preoccupied, primarily with this same thing, the merely decorative. And a sharp contradicting of this contention is formed, by the words of Sekiyen, Tanehiko and Samba. If the Japanese critical pages often seem slight, it will be found time and again, on scrutiny, that their seeming slightness is that of tempered steel. It is often said, that Japan has never produced a great sage, like Cakyamuni in India, or Confucius in China, but is not Japanese aesthetic philosophy rich in the sagacious? And it was fitting, that remarkable work should be done in that little sphere by Nippon, since perhaps there never was country, creating so many beautiful things, as were fashioned by her.

SOME FAMOUS CENTENARIANS

BY J. V. NASH

OF all the untold millions of men and women who have lived on this earth, who has survived the longest? There have been many claimants for the honor, but of the various well authenticated cases of extreme longevity in modern times that of Thomas Parr is in many ways the most noteworthy. Recently the Long Life Society of London has been reviving the memory of "Old Parr" in its campaign to lengthen the span of human life by means of simple living.

Incredible as "Old Parr's" age was reputed to be, it seems to be a well established historical fact. At any rate, it won for this humble English farm laborer the distinction of interment in Westminster Abbey, with the most illustrious of England's dead. There a tablet may still be seen, recalling that he was born in 1483—nine years before the discovery of America, and lived under ten English sovereigns, until the year of 1635—five years after the settlement of Boston in New England, and nearly twenty years after the death of Shakespeare.

The son of humble peasants, "Old Parr" worked as a laborer on a farm for well over a century. At 152 he was still going strong, and might, indeed, have lived many years longer, had he not been taken to London for an extended visit. There he was plunged into a round of feasting, late hours, and general excitement which brought about his death.

The case of "Old Parr" aroused widespread interest at the time, and he was the subject of many essays and sketches. One of the most curious of these was a pamphlet by John Taylor, known as "the Water Poet," published in 1635 and entitled: "The Olde, Olde, Very Olde Man; or, The Age, and Long Life of Thomas Parr, the Sonne of John Parr, of Winnington, in the Parish of Alberbury, in the county of Salopp (Shropshire), who was born in the reign of

King Edward the IVth, and is now living in the Strand, being aged 152 years and odd monthes. His manner of life and conversation in so long a pilgrimage; his marriages, and his bringing up to London about the end of September last, 1635."

This quaint old book, which is now very scarce, tells us the circumstances of the discovery of this celebrated centenarian, as follows:

"The right honourable Thomas Earl of Arundell and Surrey, earl marshall of England &c., being lately in Shropshire to visit some lands and manors, which his lordship holds in that county; or, for some other occasions of importance, the report of this aged man was certified to his honour; who hearing of so remarkable a piece of antiquity, his lordship was pleased to see him, and in his innate noble and Christian piety, he took him into his charitable tuition and protection; commanding a litter and two horses (for the more easy carriage of a man so enfeebled and worn with age) to be provided for him; also, that a daughter-in-law of his, named Lucye, should likewise attend him, and have a horse for her own riding with him; and to cheere up the olde man, and make him merry, there was an antique-faced fellow, called Jacke, or John the Foole, . . . that had also a horse for his carriage.

"These all were to be brought out of the country to London, by easie journies, the charges being allowed by his lordship; and likewise one of his honour's own servants, named Brian Kelly, to ride on horseback with them, and to attend and defray all manner of reckonings and expenses; all of which was done accordingly as followeth.

"Winnington is a hamlet in the parish of Alberbury near a place called the Welsh Poole, eight miles from Shrewsbury, from whence he was carried to Wim, a towne of the earle's aforesaid; and the next day to Sheffhall, a mannour house of his lordship's, where they likewise staid one night; from Sheffhall they came to Wolverhampton, and the next day to Brimicham, from thence to Coventry, and although Master Kelley had much to do to keepe the people off that pressed upon him, in all places where he came, yet at Coventry he was most opprest; for they came in such multitudes to see the olde man, that those who defended him were almost quite tyred and spent, and the aged man in danger to have been stifled; and in a word, the rabble was so unruly, that Brian was in doubt he should

bring his charge no further: so greedy are the vulgar to hearken to or to gaze after novelties.

"The trouble being over, the next day they passed to Daventry, to Stony Stratford, to Redburn, and so to London, where he is well entertained and accomodated with all things, having all the afore-said attendants, at the sole charge and cost of his lordship."

The author then proceeds to relate in verse the story of "Old Parr's" life of more than a century and a half. It was a certain John Parr, he explains, who:

"Begot this Thomas Parr, and born was hee
The yeare of fourteen hundred, eighty-three.
And as his father's living and his trade,
Was plough and cart, scithe, sickle, bill, and spade,
The harrow, mattock, flayle, rake, fork and goad,
And whip, and how to load and to unload,
Old Tom hath shew'd himself the son of John,
And from his father's function has not goen."

We are further informed of the following facts of the patriarch's life:

"Tom Parr hath liv'd, as by record appeares,
Nine monthes, one hundred and fifty and two yeares.
For by records, and true certificate,
From Shropshire late, relations doth relate,
That hee liv'd seventeen yeares with John his father,
And eighteen with a master, which I gather
To be full thirty-five: his sire's decease
Left him four yeares possession of a lease;
Which past, Lewis Porter, gentleman, did then
For twenty-one yeares grant his lease agen;
That lease expir'd, the son of Lewis, called John,
Let him the like lease, and that time, being done,
Then Hugh, the son of John (last nam'd before)
For one and twenty yeares, sold one lease more.
And lastly, he hath held from John, Hugh's son,
A lease for's life these fifty yeares outrun;
And till olde Thomas Parr, to earth again
Returne, the last lease must his own remaine."

"Old Parr" was twice married, but had attained the age of eighty

years before he led his first blushing bride to the altar. Parr's two romances are described by our poet thus:

“A tedious time a batchelour hee tarried,
 Full eighty years of age before he married—

 At th' age aforesaid hee first married was
 To Jane, John Taylor's daughter; and 'tis said,
 That shee (before hee had her) was a mayd.
 With her he liv'd yeares three times ten and two,
 And then shee dy'd (as all good wives will do).
 Shee dead, hee ten yeares did a widdower stay,
 Then once more ventred in the wedlock way; ,
 And in affection to his first wife Jane,
 He took another of that name againe—
 (With whom hee now doth live,) she was a widow
 To one nam'd Anthonk (and surnam'd Adda).
 She was (as by report it doth appeare)
 Of Gilsett's parish, in Montgom'ry-shiere,
 The daughter of John Floyde (corruptly Flood)
 Of ancient house, and gentle Cambrian blood.”

Descending again into prose, our author goes on to say: “Hee hath had two children by his first wife, a son and a daughter; the boye's name was John, and lived but ten weekes, the girle was named Joan, and she lived but three weekes.”

Granger's *Biographical History of England* says “At a hundred and twenty he married Catharine Milton his second wife, who had a child to him; and was, after that aera of his life, employed in threshing and other husbandry work. When he was about an hundred and fifty-two years of age, he was brought up to London, by Thomas, Earl of Arundel, and carried to court. The king (Charles I.) said to him: ‘You have lived longer than other men; what have you done more than other men? He replied: I did penance when I was an hundred years old.’”

Parr's physical appearance at the age of 152 is described in verse by Taylor:

“ . . . His limbs their strength have left,
 His teeth all gone (but one), his sight bereft,
 His sinews shrunk, his blood most chill and cold,

Small solace, imperfections manifold;
 Yet still his spirits possest his mortall trunk,
 Nor are his senses in his ruines shrunk;
 But that his hearing's quick, his stomachs good,
 Hee'll feed well, sleep well, well digest his food.
 Hee will speak heartily, laugh and be merry;
 Drink ale, and now and then a cup of sherry;
 Loves company, and understanding talke,
 And, on both sides held up, will sometimes walk.
 And, though old age his face with wrinkles fill,
 Hee hath been handsome, and is comely still:
 Well fac'd; and though his beard not oft corrected,
 Yet neate it grows, not like a beard neglected."

It was stated that "Old Parr" had outlived three whole generations of people in the community where he resided. An eye-witness described in the following couplet:

"From head to heel, his body hath all over
 A quick-set, thick-set, nat-rall hairy cover."

The fame of "Old Parr" was quickly noised abroad, and throngs came to look at him in his London lodgings. As already suggested, the excitement and high living into which he was thrown at such an unparalleled age, were doubtless the cause of his sudden taking off, which occurred on November 15, 1635. The death of Voltaire, a century and a half later, was superinduced by quite similar circumstances, following his triumphal return to Paris at the age of eighty-four after having lived for a generation in the quiet of the country.

After Parr's death, the famous scientist Harvey made a post-mortem examination of the body, and could discover no organic disease. The cartilages of the ribs were found not ossifying and were as elastic as those of a young man. The brain, however, had hardened, and the blood vessels were thickened and dry.

Extraordinary as was the length of life to which Parr attained, there are other cases on record, though probably not so well authenticated, of equal or even greater longevity.

Metchnikoff, who made a special study of the subject, cites numerous instances of lives that have stretched far beyond the century mark. A Russian newspaper of October 8, 1904, he says, carried an item regarding an old woman, one Thense Abalva, re-

siding in the village of Sba, in the Caucasus, who was reported to be about 180 years old, yet who was able to walk about and look after her household duties. The item went on to state: "Thense has never taken alcoholic liquors. She rises early in the morning and her chief food is barley-bread and buttermilk, taken after the churning of the cream."

He quotes the French writer Chemin, another inquirer on this subject, as authority for the case of one Marie Priou, who died in 1838, at the age of 158 years, and who had lived for a number of years entirely on cheese and goat's milk.

Another case cited by Metchnikoff is that of Drakenberg, who was born in Norway in 1626 and who died in 1772, at the age of 146. He was known as "the Old Man of the North." He was in active service as a sailor for ninety-one years, and he was the subject of much scientific interest in his day.

The longest record of all was that claimed for a certain Hungarian farmer, one Peter Zortay, said to have been born in 1539, and dying in 1724, at the age of 185.

Several years ago the newspapers of the United States called attention to an interesting case of extreme longevity in the mountain district of Kentucky. The individual in question—John Shell—was said to be about 131 years of age. There were some, however, who raised a doubt as to the genuineness of the age as claimed, and Shell's death ended public interest in the case.

It appears that a slightly larger number of women live beyond the century mark than that of men. Strangely enough, there are instances of seriously crippled persons reaching a great age. Such was the case of Nicoline Marc, a diminutive cripple, who died in France in 1760 at the age of 110, and of a Scotch-woman, Elspeth Wilson, a dwarf scarcely more than two feet high, who reached the age of 115.

Longevity also appears to be hereditary. A son of Thomas Parr is said to have died in 1761, at 127, in full possession of his faculties.

There seems to be no set rule that will insure longevity. Most of the cases noted, to be sure, have been those of persons in humble circumstances, and yet there have been wealthy centenarians, such as Sir Moses Montefiore, the Jewish philanthropist of London, who died in 1885, after having rounded out a century.

It is true also that most centenarians have lived a frugal, sober, hard-working life, but on the other hand some have led lives which

were a violation of nearly every law of health. Metchnikoff mentions the case of a centenarian named Politiman, born in 1685 and surviving until 1825, who, we are informed, was an habitual drunkard for over a hundred years. Then there was Elisabeth Durieux of Savoy, who attained the age of 114. It is said that she lived mainly on coffee, of which she consumed forty small cups a day. She is described as having been "genial and a boon table companion," whose coffee pot was always on the fire. Among smokers there was the widow Lazennec of LaCarrière, who lived to be 104, and had smoked a pipe since early youth.

Newspaper dispatches of Feb. 4, 1926, reported the death, at the age of one hundred and thirty-eight, of a Russian peasant named Ivan Tretva, residing near Rostov. He had been married three times, on the last occasion when in his one hundredth year. It is said that he was the father of twenty-four children, the oldest being a daughter aged one hundred and one. Ivan had never left the soil, had never been ill, and held his hair and teeth to the end. He asserted that he had fought in every war in which Russia was involved during a period of one hundred and eighteen years. If this statement is true, he was probably the last survivor of the Napoleonic wars.

Other newspaper items recently have told of a Turkish porter in Constantinople who is still earning his living by laborious work at the age of one hundred and fifty.

A well-known German physiologist, Pflager, held the opinion that the deciding factor in longevity is something "intrinsic in the constitution," which cannot be definitely explained and must be credited to heredity.

It was noted, however, that in the Balkan regions there was a surprisingly large number of centenarians. A check-up in 1896 showed that there were living in Serbia, Bulgaria, and Roumania, 5, 545 persons over 100 years of age. The diet of the simple folk in this part of the world was known to consist largely of buttermilk.

Professor Metchnikoff, who was a noted bacteriologist, Nobel prize winner, and associate director of the Pasteur Institute at Paris, reached the conclusion that it should not be uncommon for men and women to live to the age of 150 without loss of faculties. His researches in anatomy convinced him that the human mechanism was certainly calculated to last far longer than is usually the case.

Metchnikoff found that putrefaction in the intestines was one of the chief causes of premature bodily decay and death. This putre-

faction, he pointed out, could be prevented by lactic acid, an ingredient of sour milk, and he recommended the consumption of this sour milk, in which lactic acid had been produced by pure cultures of the Bulgarian bacillus. He advised, too, a life of general sobriety and "habits conforming to the rules of rational hygiene."

THE UNBELIEF OF AN UNBELIEVER

BY T. B. STORK

THIS paper is suggested by a recent article, "Why I am an Unbeliever."¹ The writer avows a disbelief in God, Immortality, the Divine inspiration of the Scriptures. Unfortunately while intimate, frank, and even engaging in his naïvete he fails to specify exactly what he means by disbelief. If his disbelief is no more than a statement of our ignorance of any material physical proof of these truths probably most of the thinking world including many commonly known as believers would agree with him. For of course there is no material physical proof to establish these truths. It might well be asked what competent physical proof would be possible. For my own part I cannot conceive the sort of physical proof that would suffice, nor can I conceive any capacity in myself to weigh such proof were it produced. The article seems to proceed on the assumption that the invisible is non-existent reminding one of the half educated Yokel who declared he would believe nothing that he could not see, to whom his Quaker friend made gentle retort, "Hast ever seen thine own brains?" Perhaps this is too flippantly smart for a serious discussion, however. Bacon's remark seems more fitting for so grave a theme: "My first admonition (which was also my prayer) is that men confine the sense within the limits of duty in respect of things divine; for the sense is like the sun which reveals the face of earth but seals and shuts up the face of heaven."²

The true philosophical attitude on the subject is well stated by Charles Bradlaugh, the English statesman: "The Atheist does not say there is no God but says I do not know what you mean by God. * * * I do not deny God because I cannot deny that which I have no conception of." This simply emphasizes the intellectual incapacity

¹In *The Forum*, December, 1926.

²Preface to *Novum Organum*.

of the human mind to conceive that dread all powerful being who governs the Universe. It does not declare that on the spiritual side there is no God nor any knowledge or evidence of his existence.

The difficulty of the unbeliever lies in his point of view. Assuming that these truths are of a material physical sort he demands material physical evidence of them, although as just remarked, it would be impossible for him to specify exactly what he means by such evidence. Spiritual truths call for spiritual proof, they are only spiritually discerned. This means that we must look for our proofs in an entirely different direction. In our own souls we must find what we can never discover in the external world of matter. There are a great many such truths both intellectual and spiritual whose only voucher is ourselves.

They may be called intellectual and spiritual compulsions that are impressed on us entirely independent of our own volition. We must accept them, to disbelieve them is impossible, such are the axioms, nothing comes from nothing (*nihil ex nihilo fit*), a straight line is the shortest distance between two points, twice two is four, and the like. Spiritual compulsions like intellectual compulsions prove themselves, they stand in no need of demonstration but are examples of the immediate apprehension of truth. Indeed it is hard to see how anything could ever get proved if there were no such self-proving propositions which afford a basis for the proof of others less self-evident. The process of proof must always start with some admitted truth. A universal skeptic could never prove anything. I cannot prove that twice two makes four, or that nothing comes from nothing, any more than I can prove that the idea of God comforts and satisfies my soul. If anyone denies these truths, there is nothing to be said, there is no possibility of proving them, they are examples of the immediate apprehension of truth.

Apart from these spiritual compulsions there are certain intellectual compulsions concerning God which deserve consideration, for God holds two aspects for the Ego, on the side of emotion, feeling, the spiritual side, there is the felt need of his care and omniscient supervision of our life. The idea of God answers the spiritual craving after something above and beyond ourselves to whom to look for comfort, help, in our perplexities and troubles, in fine to give us a reason for our life here, a life to the thoughtful full of mystery, pregnant with problems that are only solvable in God. The most pronounced Atheist would hardly deny the existence of this craving,

this compulsion of the soul, although he might not be able to find any external physical evidence of God's existence. It is not a question of external existence but of internal truth. To deny this craving is to deny the man's own existence, for these compulsions are the man himself, they are he, he is they. Whether externally true or not he is compelled to think twice two make four. While he cannot prove either of them by any external evidence, they are true for him and that is all we know or can know.

In a like manner were I asked to prove the inspiration of the Scriptures what more can be said than that they inspire me? What other proof in the nature of things could be adduced? I cannot otherwise prove my delight in a melody of Mozart or justify my enjoyment of a poem of Keats or Tennyson: they are quite inexplicable on any external physical basis of proof. Prove that Mozart never existed or that Keats was a mere invention of his publisher: it does not touch my emotions which for me are their truth. What other proof of their truth could the most radical unbeliever demand? He might deny that they produced these emotions in himself but that would not affect their truth as regards myself, that he got nothing from them is his loss, it does not affect me or their truth for me. The moment the unbeliever is pinned down to concrete practical details such as these the absurdity of his contention becomes apparent: for all these carry their credentials within themselves, they require nothing more. The coming of an angel or some other supernatural voucher would add nothing to their spiritual truth, nor can I imagine what sort of credentials could be expected from such messengers, credentials that would certify their authenticity, nor what criterion I possess for judging those credentials.

The intellectual compulsion is distinct from this. It requires us by the laws of our thinking to think a God, not an exclusively human conception,—that conception belongs to our spiritual compulsion which demands for our emotions an anthropomorphic conception—but as some mighty incomprehensible power, not in this aspect necessarily human, what is called philosophically, the Absolute, the Whole, of which men and all things are but parts bound together, united in it in some mysterious way of which we can form no intelligent conception. Man is thus compelled to think all things including himself as an organized whole governed by law informed with intelligence. It is impossible to think them as coming spontaneously out of nothing. Something must have caused them and must hold

them together and prescribe rules for their action. This instinct of unity as it might be called is universal in some shape with all men, civilized or savage. It is a thought of the Ages, this thought of some over-ruling power that holds all men under its rule and care. It is both a spiritual and an intellectual compulsion that takes many forms, the details varying with the spiritual and intellectual capacity of the thinker. The endeavor to think it has given us gods without number, Baal, Ashtaroth, Osiris, Jupiter, all expressions, different forms, of the underlying compulsion. The needs of the savage and the civilized, the ignorant and the educated vary spiritually and intellectually in details, but not in fundamentals. The spiritual truths that satisfy the Esquimaux or the African may not be in details the truth that a Philip Brooks or a Newman crave, but in essentials they are the same. The intellectual compulsions that rule the mind of an Einstein or a Newton probably would not be understood by a school boy, yet there lies latent in the mind of all three the compulsions that would compel all to think alike when they developed the capacity to think at all and to find satisfaction in precisely the same mathematical truths. These truths are entirely independent of their personal individual will, they are imposed upon that will by the over-ruling power that governs them and all things; they are the common property of all thinking beings. Observe, however, that this universality gives them no additional validity; that is derived solely from the individual personal compulsion of the mind itself, as something imposed upon it by a power beyond its control, something wrought into the constitution of the mind itself, an actual part of it. I am aware of the statement of the inspired writer: the fool has said in his heart there is no God, but he was an unmetaphysical fool, or he would have found in the constitution of his own mind these intellectual compulsions that demanded the existence of God as a prerequisite to their own validity and truth.

Even those consolations of our own unbeliever in his picture of the somewhat meagre pleasures of his life, truth and courage, have no meaning apart from God. How simple minded must that man be who rejoices in the words truth and courage without defining them or realizing that they have as much life and reality as an Indian Totem once you take away the belief in God. Such unbelief is the record of a confused mind that does not make the proper distinctions intellectually. For if he were to define these terms, truth and courage, he would see at once that they hark back in the last

analysis to God, the Absolute, the Whole. The core of all virtue is the subordination of the individual, the part, to the Whole, the Absolute, which we call God. It is this that makes virtue virtue, it is the virtue of all virtues. There is no meaning in virtue or in virtuous actions save as thus interpreted. It is the existence of God, undefined, impossible of human comprehension intellectually, and his relation to all created things that constitutes good and evil. And the first and only fundamental principle of this relation is the law that the individual, the part, must serve the Whole; in that service lies the meaning of his existence, the ultimate reason and end of his life. This service is at once the sacrifice and the salvation of the individual. To quote an eminent philosopher: "The mere individual nowhere exists, he is the creature of a theory * * * * the individual self in other words does not exist."³ What makes courage a virtue, therefore, is its sacrifice of self to the Whole, the setting aside of individual safety, pleasure, life, for the sake of the Whole represented, by a man's country, his friend, his family. A man might sacrifice these for his own selfish gratification by jumping into a raging torrent; that would be silly and meaningless, not the virtue of courage but the vice of madness. If he did it to save another's life the act would show true courage, it would be a service of the Whole at the sacrifice of self. Without God each individual exists only for himself; there is no obligation upon him toward any other man or thing for it is only by the bond which God creates that there is any relation between the individual parts and the Whole. Every man is his own law and it is a law of perfect absolute selfishness.

Even truth itself disappears, for truth,—assuming that scientific truth is meant by our undefining unbeliever—exists by reason of the assumption that the world is governed by law, that there is a fixed relation of all things to all things, which of course implies God as the Almighty power that prescribes that law. Our knowledge can never compass God; that exceeds our intellectual capacity. We cannot even imagine what that great mysterious power is that encompasses the Universe and that we call God, but we must think him in some shape if we think law into the apparent chaos of the world of phenomena.

Like the man who talked prose all his life without knowing it, our unbelieving friend has been talking in terms of God when he

³Pringle Patterson, *The Idea of God*, pp. 258-9.

talked of truth and courage, as I have been trying—very imperfectly I fear—to show.

Far be it from me to decry a wise skepticism, an intelligent unbelief that asks for proofs before yielding faith, such a skepticism is a great tool of human progress. It is the skepticism of Huxley who gave us the useful word Agnostic, of Bacon who made the distinguished but disturbing suggestion that possibly the uniformity of Nature was simply an imposition of the human mind on chaotic phenomena without any sufficient warrant. But a sweeping indiscriminating skepticism, a blind unbelief of all things is neither helpful nor justifiable of reason. Such a skepticism is well characterized by Mr. George H. Bonner in the 19th Century for January, 1927. "Atheism, Agnosticism and skepticism are not as sometimes imagined signs of intellectual maturity, but of intellectual adolescence. Spiritual realities are more real and, therefore, more certain than any particular thing or isolated fact. Our doubts * * * * have arisen not because our intellectual attainments are superior to those of the ancients but because we have not yet reached their level."

Such a skepticism leaves but a bleak world for the man who says to himself there is no God, when I die I shall die like a dog, the sublime message of the old prophets for me have no meaning, all that remains for me is to live and die like the animal I conceive myself to be; there is nothing for me but like the fool of the Scriptures, eat, drink, and be merry for to-morrow I die. My life is a little higher than the pig, an endless repetition of eating and drinking, the gratification of animal appetite until by reason of age they lose their zest and come to the blank nothing of extinction in all the hopelessness of age and decrepitude. When God disappears all the beauty and significance of life disappears with Him. It leaves a world bleak and drear as when at the going down of the sun all the brightness and color of the world fades away to sombre darkness. Art and all the higher joys of life take their significance from God. What is left of Greek tragedy, of the Iliad, of the Aeneid, of any of the great works of art, ancient or modern, if the sense of some mighty over-ruling power is taken away, if the world is only a huge go-as-you-please, a come-by-chance without rhyme or reason, with no law, no spiritual values established by a supreme law giver?

In spite of ourselves, fight as we may against them, spiritual truths, ideas of God, of immortality, permeate every moment of our lives, color our acts often without our conscious knowledge, spring-

ing upon us when we least expect from some hidden difficulty or trouble.

“ * * how can we guard our unbelief, make it bear fruit to us?—
the problem here.

Just when we are safest, there's a sunset touch,
A fancy from a flower bell, some one's death,
A chorus ending from Euripides,—
And that's enough for fifty hopes and fears
As old and new at once as Nature's self.”

Browning's *Bishop Blougram's Apology*.

HOW PRINTING CAME

BY HARRY K. HOBART

IT would be difficult to overestimate the importance of the revolution wrought by printing in intellectual life. It has been said that its invention divided the modern era from the Middle Ages. This opinion is supported by all historians, who agree in celebrating typography as a discovery of incalculable significance, as an immense benefit, as a fountain of youth perpetuating the world's thought, like an arch-saint of humanity, or, to use the expression of a workman poet, like a conqueror who has sprung full-grown from the earth with thirty soldiers.

By reviewing the primitive means previously used to record things past, or to allow thought to circulate from one point to another, we reach an understanding of the importance of the printing press to civilization. It is well known, how in ancient Peru, messages were transmitted by a system of cords, the knots and colors of which had a conventional meaning. Knots of one kind or another and notches on a piece of wood, served among primitive people the world over, as a means of silent communication.

Next, a man set in line, one beside the other, a sun, a house, a cow, a war-chariot, thus explaining by the succession of the figures as well as by their attitude, a series of facts and ideas. This was a great step forward, though the pictures were no better than a boy would draw with chalk on a wall. Then came a new step towards the invention of writing. The sign, already modified and shortened, that, for example, which represented the plan of a house, two squares, one on top of the other, came to represent a sound. Among the Hebrews and Phoenicians this was called Beth, the symbol which has become the letter B. Similar transpositions were made with other signs as the alphabet was gradually built up. Man had passed from ideographic writing to phonetic writing.

When syllables were finally separated into vowels and consonants it was a great day, for it marked a true social revolution. With some thirty signs, it was possible to represent the principle articulations of a human word. The effect was analogous to that which the printer was to produce some centuries later, for printing also separated and rendered movable characters intended to represent different sounds.

Rather than following further the various forms which the alphabet was to take with different people, let us describe the widely diverse materials on which men wrote, for it was due to the development of the proper writing materials that printing was made possible.

Sun-baked bricks were used among the Assyrians; stone and bronze on which official inscriptions were carved; flat bones of cows, sheep, camels; bits of polished wood; tablets colored with wax; animals' hides dried and colored. These last were an ancient specialty of the city of Pergama, whose name survives in our word parchment. The word vellum recalls the fact that a veal calf furnished the very choicest material for parchment-making.

At this time papyrus was employed in Egypt. This vegetable tissue was so fine and flexible that we have kept the word paper from it. Before the Christian era, outside the limits of the universe known to the ancients, China and Japan, countries which had outstripped Europe, understood how to make an excellent paper, either with rags or linen or cotton, or with the bark of certain trees, which were cultivated for the purpose, on which they were already printing newspapers and paper money.

The book existed even then, but in a different form from that to which we are accustomed. The manuscripts were strips written on one side only, which were twisted around a roll. They looked very much like our music rolls for player pianos. During the Middle Ages, when many things which had been put down by the Greeks and Romans were undergoing modifications, missals, antiphonaries and religious books slowly underwent a change. They became square in shape and were made up of leaves written on both sides, which were bound together and placed between two pieces of wood, leather, or metal. They were often heavy and cumbersome and dangerous to move as they weighed many pounds and could easily break or crush the limbs of anyone upon whom they fell.

· People who owned several books usually kept them chained to

great turn-tables, pretending that they were protecting them from thieves, in this way; but borrowers were a good deal more to be feared. In 1515, at Venice, it was estimated that, in the library founded by Cardinal Bessarion, some four hundred of the eight hundred volumes were lacking, having been borrowed and not returned. So there is nothing to be astonished about in the story that Louis XI, King of France, when borrowing an Arabic book from the faculty of medicine in Paris, was obliged to leave a silver goblet and, in addition, security from one of his courtiers.

During the same period, the instruments used by copyists and writers were improved. The goose-quill was substituted for the brush, the reed, or the stylus. Black ink came to have preference; red ink was reserved for book titles and chapter headings, and the makers of rubrics, whose business it was to color and ornament letters, formed a section apart from the writers. The illuminators were, as we would say to-day illustrators, many of them designers and miniaturists of great skill. Wood engravings completed the manuscripts, many of which were works of art, worthy of places in royal, imperial, and papal libraries.

The change of greatest importance produced during this period was the popularization of paper. It came from the depth of Asia and spread after the crusaders through the countries that border the Mediterranean. Moorish Spain was the chief center of manufacture in Europe, and the most ancient European specimens are preserved in the Escorial.

We must not forget that all the work was done by hand, except in paper mills run by water-power. Copying a manuscript occupied several men for several months, and after all this labor, one had merely a single copy. It is known that a work on ecclesiastical law, entitled *Les Canons de Gratien*, took twenty-one months of assiduous labor in copying. At that rate it would have taken 5,250 years to make an edition of 3000 copies. Prices corresponded with the labor involved and in consequence, the book was a luxury for the great lord and the prelate. This state of affairs, however, was to change entirely.

Coming from various directions, as is usually the case, there was a confluence of inventions, progressive discoveries; not a sudden leap from one system to another, but a slow series of transitory states. Modification of rag-paper was one of the conditions which made printing possible. The perfection of wood-engraving was

another. You find the word "printer" used in the Low Countries and in Linoges, for example, before there was any notion of printed books. Engraved plates, whose designs stood out in relief, and, when moistened with ink, could be transferred to paper, were used for playing cards, and by a similar process, whole images, with a line of verse on a single plate, were applied to the paper at a stroke. This is what one calls tabular or xylographic printing. It seems to have existed in Korea several centuries before the Christian era.

But the decisive discovery was the separation of the letters, which had hitherto marched in company; the creation of movable characters, first in wood, then in metal; and the means of aligning them as the words might require and of forcing them against the paper in a press, which was an imitation of the wine-press, cider-press, or oil-press.

From the time when printing actually began, in the middle of the fifteenth century, it was greeted with cries of anger and of enthusiasm. It was cursed by the army of copyists, whom it ruined; but by the rest of the population it was praised and celebrated as the art of arts and the science of sciences, a marvel more divine than human.

During its early existence it was thus the object of contradictory sentiments. Under its two essential forms it bore upon the past, present, and the future. Before everything else, it was the conservator of all that had been done and thought by generations past. It perpetuates the work of great minds that have passed on; it assures us that the phases through which human civilization has passed will continue to be known; it gives the half-blotted documents which have come down to us through the ages a life without limit.

Printing is no less useful to science. Thanks to it, the treasures of experience heaped up by our ancestors run no risk of being lost. Truth once acquired is ours forever. Thanks to it, humanity may be compared to a single man, who lives and grows without ceasing. It is the mother-invention of modern times, because it led to the birth of other inventions by scattering knowledge of what was already known.

That grand popularizer, the printing press, has reproduced by millions copies of the works of literature, the chants and legends of religion, the dreams of poets, the meditations of philosophers; all those products of human genius which constitute the delight and consolation of the educated, which people the solitude and fill the

silence with voices for the reader shut up in his study ; which charm, exalt, and inspire those newly come to the intellectual world.

The opponents of printing may be classified in three groups. First, the copyists and illuminators whose means of livelihood it took away. Second, the political and religious authorities whose power over the people it diminished and threatened. Lastly, the monarchs and the ruling classes whose "divine right" it finally overthrew.

Industrial progress sweeps on, like a regiment of shock-troops over the bodies of those who fall in the trenches . The exasperation of all those who are sacrificed is translated into outcry, indignation, and calumny. The first printers were called sorcerers, and children of the devil. As proof, it was pointed out that these printed copies which came from their mysterious workshops appeared with incredible speed and were exactly identical with one another. Would that be possible without infernal aid?

The theologians were prompt to take action. The bitter fight between the book and the church is the same as that between science and faith. It is the irreducible opposition of two methods ; the one which accepts nothing that cannot be proved and which desires free investigation of the truth ; and the other which proceeds by way of affirmations incapable of demonstration and which assumes to impose them in the name of divine authority incarnate in a holy text, a council, or a man.

There is no reason for being surprised if, in every country, the books and those who printed them, were exposed to interdiction, persecution, and the stake. They threatened to destroy, if not the spirit of religion, at least the blind belief in miracles and dogmas, which the contradiction of texts and the very diversity of the religions themselves, rendered suspicious to every reader endowed with reason and critical sense. Printing was a powerful worker for free thought, and their histories are closely linked. This is its honor, but a perilous honor, for which it has many times paid the price.

Kings and statesmen were not behind the prelates in feeling the menace. Urged on at first by ecclesiastical bodies, then stirred by a wish to defend themselves, they subjected the new art to rules, restrictions, censorship, and severe inflictions, among which were fines, imprisonments, and death. The booklet, pamphlet and newspapers when they were invented, were many times made to feel the judgment of the courts or the arbitrary will of governments. The

freedom of the press, often proclaimed, always incomplete, and always attacked, never reached its fullness except in rare moments during revolutionary epochs. Even then it was strangled, and in the calmest times has been able to maintain a legal existence only after heroic battles.

Truly enough, the press was many times used by scheming politicians, unprincipled scandal-mongers and other dishonorable people for purposes which brought printing into disrepute. People were disgusted by licentious novels, by monstrous books which dishonored literature, by the corrupting placards which covered the walls, and by the alluring drawings which attracted the eye and were a cynical invitation to debauchery. They protested against the flood of ink, which was too much like a river of mud. But must we condemn a thing because it may sink into abuse? If this were true, no human invention would escape. Must we abandon love because it can descend to a brutal and voluptuous appetite; or liberty because it can become license; or work because it ends in exhaustion; or life because it is full of sorrow and suffering?

Printing is an instrument of indefinite progress, which can, without any doubt, be turned from its true and beneficent function, but which, properly guided, has produced and will still produce that which will cheer and guide men, that which will render them masters of nature and of themselves, juster, better, and happier.

THROUGH SCIENCE UP TO GOD, OR COSMOLOGY

BY F. LINCOLN HUTCHINS

THERE is great need of a new synthesis, a new philosophy, a new orientation toward the cosmos in which we exist, a new statement of why and for what we live. This need is made imperative by the prodigious strides that the sciences have made during the past twenty-five years, which has made untenable the philosophies of the past. Particularly is this true of the science of psychology, which has brought into view an entirely new field that demands an entirely new synthesis. The application of Mendel's law; the flood of light that has been thrown upon the electron and its manifestations; the increased knowledge of the composition and effects of the endocrine glands; the investigations into the nature and operations of the nervous systems of all living things; all call for a new interpretation of the cosmos and of the impulses that control it. It is generally accepted that a revision of old philosophies is needed to bring them into line with the present state of knowledge; the conflicts between science and religious creeds are a proof of this need. Every individual person lives in a world of his own, his interpretations differ from the interpretations of others in all cases that are not subject to identical experiences, moreover, we react differently to stimulations from the same environment. Those who have a wide range of knowledge of the facts of science and a wide acquaintance with the conceptual theories of the past and present, exist in a vastly different atmosphere from that of the uncultivated man; a realization of this comes when we compare the conditions of the savage with those of the most highly cultivated person. Such differences are equally true of individuals in every state of culture. The differences arise from variations in the make-up and operations of the sensory system, through which all ratiocination is possible. This system consists of the nerve stuff that ex-

tends from the organs of the senses to cells in the spinal cord or cortex of the brain that have been organized by training or experience as focussing regions to receive the stimulations that are transmitted through the efferent nerves; thence the activity is transmitted to the efferent nerves which motivate the striped muscles and the energy is transformed into heat and motion. This system is a passive one, it merely transmits stimulations, it originates nothing of itself.

According to the latest discoveries in psychology the sensory operations may be briefly outlined as follows: a stimulation of the end organs of the senses induces an electro-chemical action which decomposes the fibrils that are affected; the energy existing in them is passed on to the synchronizing fibril in the connected neuron where a similar decomposition occurs and so on from neuron to neuron, the energy accumulating, from the series of decompositions and the sucking in of coadunate energies at every connection between neurons (synapses), until the accumulated energy reaches the centralizing cells that training and experience has established to receive them. By induction this energy is passed over from the afferent to the efferent system and passed on to the muscles where the energy is transformed into heat and motion. This transformation causes a feeling, an awareness of the activity and constitutes what we call "consciousness." The genesis of this sensory system is a purely environmental affair; the newly-born babe has no coördinated centres, he has no control of any definite movements of his muscles, his movements are uncontrolled, he has no conscious reaction to his surroundings, he knows not his father or his mother. Comprehension comes only through the establishment of focussing cells; these are formed through habitual reactions to stimulations of the sensory nerve cells; this coördination of focussing cells with the impulses in the neurons is brought about by customary coadjuvancy that is, as the energy from the fibrils tends to excite certain centres every repetition increases the strength of the association and the power of the fibrils. This increased energy arises from the fact that in sucking from the blood-stream the elements that restore the fibrils to their active condition there is accumulated an extra amount of substance to meet the next stimulation, exactly as the muscles acquire strength from exercise.

Concomitant with the discharge of energy from the sensory system caused by the stimulation of other end organs there is a stimu-

lation of certain of the auditory fibrils that actuate the vocal muscles, these serve to interpret the energy transformation. These interpretations take the form of words which are supposed to denominate sensations. These words are furnished by the language into which each person is born; it is inculcated by training in the home, school, contact with associates, reading, study and experience; it constitutes all of the knowledge we have, all that can be conceived. These auditory reactions are enmeshed with other reactions so that whenever either are stimulated the others are induced, that is, words will cause a reaction of the nerve fibres with which they have been closely associated, while the reactions from even the feeblest stimulation will draw into activity all of the reactions that have habitually been associated with it. This result has been named "memory" which is a misnomer if considered a function that has an enduring place in the brain cells. A clear understanding of the working of the sensory system will drive many words out of the vocabularies of cultured people, or invest them with radically different significations. Such a clarification or interpretation will go far to correct many beliefs that hang over from a more ignorant age. No longer would the word "mind" stand for an entity or objective reality; no longer would "mental characters" have any meaning; the words "will," "attention," and "conscience" would attain new meanings, while convictions would be known as interpretations of neural activities that had been fixed or established by the training and experience of the person who held them.

The interrelationships among all parts of the sensory system and their resulting effects upon the body is stated by Watson in the following:

"The brain and spinal cord with their various peripheral connections may be looked upon as a unitary aggregation of simple and complex reflex conduction systems such as we have just considered. The brain and cord connected on the one hand with the sense organs and on the other hand with the muscles and glands afford a multiple connection system between the various receptors and the various effectors. No matter how minute the sense organ structure is which is stimulated, the impulse arising there can travel to the central system and produce a response of the whole organism which is entirely out of proportion to the actual energy applied at the sense organ. In other words, a stimulus applied anywhere on the body produces not only a local segmental reflex action,

but it changes the system of tensions and secretions probably in every part of the body. (Footnote *Psychology*, By John B. Watson; p. 122.)

The reactions of the sensory system to stimulations and the inductions accompanying them may well be termed "patterns," but we know nothing as to what these patterns are, all that we know of them is the words by which they are interpreted, however the conception may differ from the real pattern itself. Every pattern carries energies that do not rise into the consciousness as we are aware of only the dominant energies, there is a fringe about these dominant energies of which in some cases we have an inkling and which color our conceptions.

To communicate ideas a person has to use words that are current among those to whom they are addressed. But language was coined in long past ages when all kinds of superstitions and fallacies were in vogue, and these, embedded in words of common use, persist and color the conclusions of today. Such language has no terms suitable to express the finer shades that persons are conscious of in the fringe about their dominant reactions; to use terms that are generally understandable distorts, covers-up, and misrepresents the actual patterns; acceptance of new ideas is prevented by the rigid definitions and general connotations of words. For every one will apply that connotation which their training and experience have imposed upon them. Those who are foreign to the language or to the culture of the utterer can have no conception of what he is saying because the words arouse no activity in the sensory system due to lack of previous associations; this also applies in all cases where the stimulation arouses different responses than the ones desired by the writer or speaker. We all live in different worlds of ideas and comprehensions as determined by our state of culture.

If the sensory system is clogged up with old beliefs so that it is made immune to new stimuli; if it is starved by lack of erudition; if debarred from scientific knowledge; if robbed of leisure to listen for the impulses that arise from within, it will fail to develop its real function and degenerate into a mere medium for support of superstitions, imposed beliefs and conventions. Technique is also a matter wholly confined to the sensory system, it is there that the aptitudes are acquired, it is only through the sensory that we know and believe. Aside from patterns that have been formed and es-

tablished by accurate investigations and actual experiences, our language misrepresents the true content of our patterns.

Back of these sensory patterns and their interpretations there is an unconscious, hereditary sympathetic system, with its separate nerves and tissues, which is the real self, the actual being. No definite patterns are formed in the sensory system in default of impulses from the elements that make up the temperament of the personality; curiosity, wonder, fear or self-interest of some sort is necessary before establishment of definite and enduring patterns; without impulses from this fundamental self, all stimulations are merely fleeting impressions, all interpretations that do not arouse an interest "go in one ear and out the other" leaving no trace behind. The fundamental character of a person determines his line of interests, and these must be satisfied if a wholesome life is to be had. Manifestation of the inner nature is the universal law of the universe and, in man, any violation of this law brings punishment in way of discomfort, disease, distortion, unhappiness, even to the extent of insanity and suicide.

This sympathetic system is the real self in each one of us, it is the "soul," the "spirit," the "heart," the "God within us;" it is the source of what is variously termed our "instincts," "feelings," "interests," "impulses," that govern our acts, our loves, and our passions; it is the foundation for all of our aptitudes.

These two systems, the sensory and the sympathetic, are distinct and separate systems which mutually influence each other. The sensory is ancillary to the sympathetic and more or less under its control, it is the means, the instrument through which the inner nature manifests itself. The sensory is a purely environmental creation, it is mainly self determined, while the sympathetic is wholly a hereditary creation. The question as to the effects of heredity and environment have been confused by failing to separate these two distinct departments in the human constitution.

As the physical development is covered by the conclusions of the various physical sciences we need not retrace that development, but may start with the origin and development of present day man. His origin is in the germplasm from which all creatures come and which carries the factors that have been incorporated in all forms that have existed in the past. The cell, from which each individual person develops, is a combination of the elements existing in both the ovum and the sperm, both of which carry minute particles

called chromosomes; these chromosomes join and split lengthwise before the cell grows into two daughter cells by being pinched in two. The resulting embryo is thus inoculated with equal quantities of the elements coming from the maternal and paternal lines of ancestry. Like elements in both lines serve to increase their power in the offspring, while unlike elements combine and produce new and different characteristics than those of the parents. These combinations produce the temperament of the child, the real nature of which is unknown except so far as it is revealed through manifestations. The working of the sympathetic system is, as yet, a mystery; it is wholly unconscious, that is, it has no sensory nerves to affect the consciousness. The heart may be cut without arousing any sensation, yet any interference with its regular operation will cause a feeling of discomfort. The same condition exists with respect to all other members of the viscera, particularly the ductless glands.

This hereditary sympathetic system is developed by the conflicts in adjustments to the environment or the social complex as induced by the impulses from the highest attributes. The progenitors, having existed and adjusted themselves to the ever-changing environment, carry forward from age to age the elements that have survived in these conflicts, therefore the inheritances of present day human beings reflect the results; only in abnormal cases will the surviving elements be lacking, although they may be inherited in different degrees, and the combination of chromosomes may produce a new character. Unless one inherits a dominant element pertaining to the acquirement of the fundamentals of any art, it is useless to try to cultivate it; if one has not the combination of chromosomes that enable one to respond to the essence of music one cannot become a musician, no matter how much energy is put into the acquirement of a technique; if a child is not born with the germs that develop a mathematical sense he will not make a mathematician, if the elements of courage be lacking nothing but a coward will result. Genius results when a child is endowed with a dominant passion; his whole interest, his absorbing love will be concentrated upon the acquirement of a technique to manifest that passion in his sympathetic system. No one can know what important impulses are buried up in the self of an individual when through ignorance, lack of opportunity, or defects in the sensory system prevent the manifestation of the inborn impulses. Such

development may be hindered or stopped by the environment in which the individual exists, for only in the free atmosphere of opportunity can persons develop the best that is within them. Erroneous interpretations, fostered and perpetuated by training of children into the social beliefs of the preceding generation, are fruitful hindrances to the attainment of unprejudiced and efficient working of the sensory system. A clear comprehension of the make up of human beings as it has evolved from simple elements through the stresses and conflict of existence, gives a clear understanding of the tortuous course humanity has pursued in "coming out of darkness into light;" all history is illuminated; and it is clearly seen that what has been was inevitable; that what is is the resultant of all past forces; it furnishes a basis upon which to postulate what ought to be; and shows what can be, nay; what must be in the future.

The synthetic philosopher, summing up all the evidences, can watch the electron developing the gasses, fluids and solids that constitute the physical universe; he can trace the sublimation of material forms until they become refined in slime and algae to the degree of acquiring the capacity of sensibility, introducing life upon this planet; he can trace the growth of this sensibility through the various forms of the lower animal world, until he reaches the human form with its ever growing capacity for the apprehension and manifestation of the highest qualities. In the electron he finds a manifestation of energy; he sees in the universality of the urge to manifest the inner nature another imperfectly recognized quality; he sees in beauty that "symmetry of wholeness" that satisfies the feelings; he sees the manifestations of order which governs all relations; he sees the universal aspiration for truth, for justice, harmony, and love; he sees in the evidences of self-preservation, reproduction, persistence, conservation of energy that quality that is known as immortality, which is further supported by "that pleasing hope, that fond desire," which has ever resided in the sympathetic system of mankind. He will conclude that the only real objects in the cosmos are the unknown, imponderable qualities, and that all material forms are but temporary, transcient instruments through which to secure a manifestation of those immortal qualities. He will realize that the development was not planned, that it was attended with many misfits, many forms that were not useful in manifesting the supreme qualities and hence discarded, that it was

a trial and error, a hit and miss process, the guide to the "survival of the fittest" was capacity to manifest even the least of the imponderable qualities. Would he not come to the conclusion that all evils, all violation of the supreme good, are the results from imperfect instruments which distort, unbalance or mistakenly apply the pure impulses that arise in the inner nature; for it is plainly evident that the unconscious urges of mankind have always been upon the side of the best good, however absurdly they have been expressed; expression is dependant upon language and language can rise no higher than the state of knowledge at the time it is coined and used by an imperfectly organized sensory system.

Would not such a philosopher, realizing the orderly progression from the manifestations of energy to the responses of the most sensitive human being, be justified in concluding that there was a Supreme Essence, above and through all forms, that is constituted of the imponderable qualities that are suggested in the manifestations of the highest attributes. The universal impulse is to assume the existence of a higher power, however heterogeneous the patterns that an uncultivated sensory system has formed and however language has misinterpreted those patterns. That the sympathetic system is saturated with this feeling is shown by the universal impulse to form theories of the nature of God, the basis upon which all religions have been founded, the main tenet of which is a belief in the existence of a supreme power as the creator and cause of all objects in the cosmos. Every one feels that beyond the limits of knowledge there is a cause for the phenomena that occur. The most pronounced atheist is obsessed with the feeling that this unknown power resides in energy, the conservation of which proves that it has always existed; he believes that all effects are but the natural results of impacts of energy upon environment; what he wars against are the various interpretations that have been advanced to describe or define that power, he is apt to ignore the fact that qualities exist that cannot be ascribed to the quality of energy. The agnostic, banishing from his sensory system all speculations, is content to rest upon scientific knowledge, he is satisfied in holding to the dictum that it is futile to speculate beyond the facts that science has discovered; he refuses to contemplate that which he says is unknowable, regardless of the manifestations of impulses from the inner nature which science has not yet touched. Both of these attitudes are contrary to all scientific formulas through which all of

the present scientific facts were obtained. The suppositions of astronomers led to the location and naming of planets before they had been discovered through their telescopes; they postulated dark stars which are not yet apparent to the senses. Chemists have discovered new elements by reason of suppositions that were entertained because of abnormal results from their experiments. The suppositions of Einstein are now being subjected to extensive scrutiny, out of which new facts will be established. In short, progress in all the sciences has been attained through speculations that had no tangible proof behind them; they were stimulations from the fringe surrounding the dominant impulses that affected the brain patterns.

The consistent Christian formulates a God to whom he ascribes all that his sensory patterns seem to tell him are the highest and best, finding an ecstasy in contemplating those qualities, which are in truth but the impulses which well up from his sympathetic system. So with all other religions which may be accounted for by a "feeling after God if haply we may find him."

Is not the Supreme Essence, as exemplified in the imponderable attributes, the God that humanity has always been seeking? Do we not find in all religions, in all writings that have gripped the feelings of many people, however much distorted and misinterpreted in language, befogged by ignorance and weaknesses of a poorly organized sensory system, as re-interpreted in accordance with the latest science, give proof of this indwelling Essence? Does not poetry, music and other fine arts, which appeal to and are supported by the inner feelings and impulses of man, proclaim that all embracing influence of the imponderable qualities? This is a God, divested of all anthropomorphic features, that can be revered, worshipped, loved and followed by the scientist, by the idealists, by the atheists and agnostics, by the ignorant and the learned, without violence to their acquirements and which will accord with their inner recognition of the "Beautiful, the Good, and the True?"

THE OUTLOOK FOR RELIGION

BY CURTIS W. REESE

A CURSORY survey shows religion in a rather bad plight. Even a thorough searching leaves an advocate of religion somewhat puzzled as to its future. Obviously this is a testing time for things ecclesiastical. Always there have been periodically crises in religion. Prophets have frequently dug new channels for the streams of faith, and reformers have often wrecked temples from sill to pinnacle. But the revolutionary process today seems to be vastly more determined than heretofore; and what is more significant, it is more thoroughgoing and intelligent.

I

One who wants to know how religion fares today need not look far from home. Everywhere are the evidences of lost power and prestige. Especially is this the case with the church and other organized expressions of religion.

How is the church viewed by the ordinary man? While the ordinary man is not an authority on theological matters, it is still true that the church cannot fare very well without him. His opinion, therefore, should be sought and valued. Now the ordinary man simply does not take the church seriously, nor does he take religion as he understands it seriously. There are, of course, notable exceptions, but this is the rule. The ordinary man really believes in "human kindness large among the sons of men", and he has the feeling that the order of things cosmic to some extent sustains such values. But he finds the church inactive or hostile to his specific aspirations for a larger life. He finds the church more active in devising prohibitions than in promoting life, liberty, and the pursuit of happiness. Consequently, while a certain strain of mysticism

may cause him to retain nominal relations with the church, his heart is not there.

It is likewise with authors of note. Where is the modern literature of commanding importance that glorifies the institutions of religion? In vain does one search the volumes of Hardy, Shaw, Wells, Hergesheimer, Drieser, and Lewis for evidence of confidence in the influence of organized religion. A frontal attack like Elmer Gantry follows a period of silent contempt as in *Main Street*.

The primary assumption of the enormous number of magazine articles dealing with religion is that the church and its allied institutions are not functioning adequately, that the ointment is verily infested with pestiferous insects. The attitude of the press is distinctly not favorable to the church.

But what is still more serious, competent, honest and devoted students of life, servants of humanity, frankly regard the church as a social problem. Witness Bertrand Russell. In London he delivers an address telling why he is not a Christian, and incidentally challenging the foundations of the old religions. Page the whole world of humanitarian leaders, and only a small percentage will be found actively interested in organized religion.

And of still more significance, the whole lot of scientists and philosophers are little more than patronizing when not actually hostile.

II

The causes of these gloomy phases of the present religious situation have been searched for by many persons both inside and outside the church and are fairly well understood.

1. The first and perhaps the greatest cause of the lack of vital interest in organized religion is the other-worldly emphasis which prevailed for so long. This world was a period of probation only. It was not to be considered home. It was a vale of tears. Real interest was centered on heaven and things to come. Poverty and disease were borne as temporary inconveniences. The day of compensation was ahead. In its neurotic phases this other-worldly emphasis sold all that it had and gave the poor or made no plans beyond the expected day of deliverance. Songs, prayer, sermons, books neglected the affairs of this world and emphasized other-world relations. One of the most famous of all sermons was entitled, "Sinners in the Hands of an Angry God."

The reverse swing of the pendulum was bound to come, and as is

usual it went too far in the other direction. The church became all-too-worldly in many respects; that is to say it took over cheap and tawdry methods of the world. In some instances the church became "gas stations" on the way to heaven. Instead of adapting divine things to human needs the church adapted things all-too-human to divine needs. The resulting impression was not that the world needs religion but that religion needs the world. Cheap sensations and lowered ideals will never bring religion back into power and influence. Religion must forswear the shallow and ephemeral and get a grasp on great issues of commanding importance in world affairs. Let there be no mistake on this point. Lowered standards do not bring success. Great causes make great men and great movements. It is now common-place to say that preaching is not what it once was. Without conceding too much we may grant that one cause of the decline of religious influence is the prevalence of mediocre preaching, and this in turn is due in part to the neglect of great issues.

In a period when industry has produced its greatest leaders, the church has been strikingly lacking in great leaders. Creative imagination in ecclesiastical affairs was never less in evidence than now.

All in all religion, especially in its organized expression, needs much searching of heart and mind—especially the latter.

In spite of these gloomy shadows on the surface, underneath mighty changes are taking place, and in my judgment religion is in a fair way to out distance its past record for good in human affairs.

1. Perhaps the most significant thing today is the redefinition of religion and the expansion of religious conceptions. The understanding of religion as the binding of man to a supernatural being is changing to the understanding of religion as the binding of man to those causes and ideals that have significance for his kind in personal and social quests. Whatever may prove to be the cosmic situation, there are gropings to be satisfied, there are loves to be fostered, there are friendships to be cultivated, there are physical and mental needs to be satisfied; and more and more we find the need for increased intelligence and more accurate technique in meeting these needs. Religion is man's effort to defeat whatever foes there are and to achieve whatever goals may be.

2. Along with this redefinition of religion is a corresponding expansion of religious concepts that bids fair to throw religion actively into every phase of human life. While these expanded conceptions

are commonplace in liberal circles, it is nevertheless profitable that we should from time to time focus attention upon them.

(1) The idea of the spiritual is coming to include the whole of life's aspirations, strivings, and achievements. Happily the whole dualistic arrangement is passing, we had God and the devil, heaven and hell, sacred and secular, spiritual and carnal; and these divisions were largely arbitrary and not moral in nature. But the old warfare between the sacred and the secular is drawing to a close. We are coming to see that the divine was never more sacred than when engaged in secular pursuits. The fireside and the more seemly aspect of home, the anvil and the less romantic tools of toil, the plow and the laboratory, the school and the press, the state, the nation, and the world, are all altars and crosses and incense and holies of holies when made so by noble purposes. Ecclesiastical practices and paraphernalia are never holy unless made so by the service of worthy ends.

Let it be understood that this change definitely is in the direction of more not less spirituality. There are those who cannot enjoy themselves in pleasant past-times without feeling God-forsaken. Also there are those who give no thought to the divine in ordinary diversion. Of the two groups the latter is to be preferred; but better still is the mind that consciously finds spiritual values throughout the whole of life, and this type of mind is increasing.

The most ardent anti-religious man cannot possibly object to spirituality when it comes to stand for the very values that he himself holds. The world will be spiritualized not by veiling the spiritual in mysteries and wonders, but by giving a divine glow to the pleasures and the tasks of ordinary life. Everything is holy that is consecrated to human well-being.

(2) Closely related to the expansion of the idea of the spiritual is the expansion of the attitude of reverence to include within its scope all that is humanly worthful. Skeptics have rightfully resented the seeming limitations of the reverent attitude to deity, and holy places and the like. But religion now specifically holds that there can be no true reverence for deific realms if there is none for human realms, that the essential processes of life are all to be revered, that all useful places should be viewed with wholesome reverence.

The old type of worship, confined largely to the Sunday hour in church, is discounted save when it eventuates in worshipful living

throughout the week. The formal reverence of the liturgies is giving way to the vital reverence of work and contemplation.

In fact the idea of reverence as an attitude is being overhauled. Reverence is growing into active creative anticipation. That is to say, reverence for childhood becomes the service of children. Reverence for beauty becomes the service of the beautiful. Reverence for truth becomes loyalty to true things. Passive worship is valid only when resulting in positive activity.

(3) The idea of salvation is coming to include society as well as individuals. Buddha left his wife and children in pursuit of personal salvation. Jesus refrained from assuming the responsibilities of a household. Ascetics innumerable have left society to find God in various places of seclusion. Fundamentalists still urge that religion has little or no social responsibility, that in his own good time and in his own way God will take care of the world.

But most of the great churches now have active departments of Social Relations. Many of the prominent leaders of the great denominations believe strongly in the need for social redemption. Consider the prophetic work of Walter Rauschenbusch, Francis Peabody, Harry Ward, George A. Coe, and others.

Well may evil doers insist that the church has no business in civic affairs, for when an enlightened church once goes in for civic righteousness then will evil doers have met their first real organized opposition.

(a) The world needs material salvation. Bread, clothing, shelter and cultural interests are fundamental in civilized life; and any social arrangement that increases the difficulty with which these values are attained is an ally of savagery. You cannot build civilization if hunger and nakedness and exposure to the cold blasts of winter constantly haunt the populace. It is a part of the business of religion to see that goods are honestly made, abundantly supplied, and economically distributed.

At a gas station I had presented a small bill in payment for oil when a little negro boy standing by opened his eyes in painful wonder and said, "My ain't some people rich." The eyes wandered off as if attending to nothing in particular and he added in an undertone as a sort of after thought, "Some people don't never be rich." I am prepared to say that it is the business of religion to make it impossible for the wail of poverty to ascend from the soul of a single child.

(b) The world needs political salvation. It would not be seemly for me to go beyond Chicago in pursuit of examples of political corruption, although no doubt such a pursuit would meet with success. There is ample political unrighteousness in Chicago to satisfy the most voracious reformer. Graft, murder, arson, bombing are frequent. Places of official responsibility seem to be subject to the influence of ordinary thugs and gunmen. The school system is victimized. And local policies are based on personal antipathies to King George. What could be more religious than a program of civic well-being in Chicago or in any other complex community?

There are international issues pressing for settlement. Debts, land laws, boundary lines, the wrongs done enslaved peoples are threatening to embroil the nations. The international situation needs religious attention and religious leaders are turning themselves in that direction, as evidenced by the extensive preparations now being made for a universal religious Peace Conference to be held in 1930. What could be more religious than the promotion of pacific and intelligent and just international relations?

(4) The idea of the natural is coming to include all the operations of life or being, here or beyond, here, now or beyond now. It was impossible to get very far with a satisfactory world view so long as the natural and supernatural were constantly clashing. A natural situation was likely to be bombed at any time by a supernatural explosive. Miracles were final proofs of the validity of the gospels. But miracles, together with the whole idea of the supernatural are passing into the limbo of magic and allied ideology. Religion is coming to be understood as the most natural thing in world. Whatever else religion may be it is the natural functioning of a normal person in the effort to achieve a full and free and socially useful life in ordinary circumstances. Growth in spiritual stature is as normal as growth in physical stature; in fact physical well-being and all things that go into its makeup are religiously valid.

Now obviously, religion as it is understood by liberals and as it is rapidly coming to be understood by others, is destined to wield an even greater force in human affairs. Like art, religion may free itself from institutions; like science, it may consciously plan its re-making; like philosophy, it may devote time to speculative interests; like governments it may try new social relationships. And in and through these phases of life and many others religion will grow greater through the years.

So life is coming to be viewed as a high venture in religion and religion as a large venture in life. Some lack faith in life and fall by the way; others depend upon ecclesiastical trapping and are mere camp followers of the elect; but happily there is an increasing host of those who march out under the wide open with banners of liberty and fraternity flung to the breeze, and to these religion is the supreme adventure.

It might even be that John on the Isle of Patmos was more prophetic than some have supposed when upon visioning the new Jerusalem coming down from God out of heaven, he said, "There was no temple therein." While I personally love the beauty of a temple and believe in organization as an essential form of life, I would not forget that religion is essentially free from the fortunes of temples and altars and crosses and holy places. Wherever is found nobility of aspiration or achievement, there is religion pure and undefiled.

LEGENDS CONCERNING THE BIRTH OF THE BUDDHA IN NON-CANONICAL LITERATURE

BY HOWARD W. OUTERBRIDGE

IF the accounts of the birth and early career of Sakyamuni are somewhat meager and disappointing in the Canonical books of the Pali scriptures, this lack is well made up when we come to the Sanscrit writings. Here there is a wealth of detail and vivid description which makes the stories most interesting. That they are far removed from the realm of history is also amply evident. Not only is the Buddha a prehistoric being whose incarnation is attended by signs and miracles, but the events which take place among the spirits in the unseen Tushita heaven are also described in detailed and vivid language.

It will be impossible to outline all the elements which these various stories contain. We must content ourselves with mentioning a few of the more outstanding legends which seem to be more or less common to the various Buddhist countries. We will follow the general plan of considering the most important works which have been translated into English, and which are probably the most representative types of the Buddhist teachings on the subject, that have come down to us. We give below a list of those which contain the most biographical material, with the approximate dates of their authorship.

1. Questions of King Milinda. (*S. B. E.*, XXXV-VI). 100 B. C.-200 A. D.
2. Lalita Vistara. (Translated by Mitra) C. 1st century A. D.
3. Buddha Charita. (*S. B. E.* XLIX) C. 1st century A. D.
4. Fo. Sho Hing Tsan King. (*S. B. E.* XIX) Chinese translation of Buddha Char.
5. Fo. Pen Hing Tsi King. (Romantic Hist. of Buddha, Beal) c. 1st century.

6. Jataka Tales Introduction. (Fausboll, trans. by R. Davids)
c. 5th century.
7. Thibetan Vinaya. (Rockhill's Life of Buddha) Date uncertain
but late.
8. Jina Charita, perhaps 12th century.
9. Malalankara Watthu, (The Legend of the Burmese Buddha,
translated by Bigandet) Perhaps the 15th century.

This list does not by any means exhaust the material, but will probably be sufficient for practical purposes, and will give us an idea as to how far the imaginations of Buddhist scholars have run in the process of apotheosis.

1. THE INVESTIGATIONS OR REFLECTIONS ON BIRTH.

It is interesting to find that in many of the legends of Buddha, there is a story to the effect that in his pre-existent state he actually investigated the various possibilities as to the time, place and manner of his birth, and made the choice of those conditions which seemed to him most suitable. The story takes different forms in the different traditions, but the general purport is the same.

While there is an unsolved problem as to the date of the various scriptures, the most original form of the story seems to be that which we find in the work known as the *Questions of King Milinda* (or Meander) where certain problems, which were probably practical problems to the devout Buddhist of the early Mahayana period, are taken up and discussed, in the form of a dialogue between King Milinda and a Buddhist teacher named Nagensa. The teacher quotes the Blessed One as the authority for his statements, claiming that he was taught these things in the Dhammata-dhammapariyaye, or *Discourse on Essential Conditions*,—a work which Rhys Davids, the greatest authority on the Pali Scriptures says he has been unable to find. While it is always possible that such a work really existed, and may yet come to light, it seems more probable that we have here an attempt to sanctify with the authority of the Master, a saying which had its origin in a later period, and was in consequence not included in the Pali Canon. The quotation is as follows:

“Long ago have his parents been destined for each Bodhisat, and the kind of tree he is to select for his Bo tree, and the Bhikkus who are to be his chief disciples, and the lad who is to be his son, and

the member of the order who is to be his special attendant. . . . When yet in the condition of a god in the Tushita heaven, the Bodhisat makes the eight great Investigations,—he investigates the time (of his appearance) and the continent, and the country, and the family, and the mother, and the period (in the womb) and the month (of his birth) and his renunciation.”⁴²

In the *Lalita Vistara*, the *Fo Pen Hing Tsi King*, the *Jataka Introduction*, and the *Thibetan and Burmese Legends* there are modifications or elaborations of this story of the Investigations. The *Lalita Vistara* tells of the Bodhisattva upon his throne in the Tushita heavens, meditating upon the four questions of the “time, continent, district and tribe” where he should be born. The reasons for the importance of these four things are as follows: The time must be when the world is at peace, and men know what is the nature of birth, decay, disease and death. The continent is of importance because Bodhisattvas do not take their birth in outlying continents, but are born in “*Jambudvipa*”. The country is important, because Bodhisattvas are not born in the country of savages, where men are born blind, dumb, uncivilized or ignorant,—but in the “middle country”. The family is also important, because they are not born of a low family, such as a basket-maker or a chariot-maker, but in the family of either a *Kshatriya* or a *Brahman*. In this case, since the *Kshatriyas* are in the ascendent, the Bodhisattva was born in a *Kshatriya* family. A discussion then occurs among the *Devas* as to which of the well-known families is most suitable, and the Buddha informs them that there are 64 qualities which the family must have, of which the Buddha is born, and 32 noble qualities in the mother into whose womb he will enter. The *Devas* then consider and conclude that it is only to the family of the king *Suddhodana* of the *Sakya* clan that all these qualities can belong, and only his wife, *Mayadevi*, the queen, fulfills all the requirements of the mother.⁴³

In the Chinese story translated by Beal,—the *Fo Pen Hing Tsi King*,—much the same account is given, with certain variations. The discussion takes the form of a dialogue between the “*Prabhapala Bodhisattva*” or the Buddha about to be, and one of the *Devas* in the Tushita heaven. Various towns and cities are discussed as pos-

⁴²*S. B. E.*, XXXV, pp. 170-2.

⁴³*Lalita Vistara*, translated by Mitra, Ch. III.

sible birth places, until at last one, almost forgotten, the city of Kapilavastu, where reigns Suddhodna, the king of the Satkyas, is suggested. This the Bodhivisattva agrees is the proper place, for here alone is a family possessing the 60 marks of excellence, and a mother with the 32 signs of female excellence, which are required.⁴⁴

In the Jataka Introduction, the Investigations take the form of "reflections" on the part of the Buddha concerning the "five" subjects, the Time, the Continent, the District, the Tribe, and the Mother. The order followed is much the same as before, with the variation in the number of problems investigated from eight, as in the Questions of King Milinda, or four as in the Lalita Vistara, to five in the Jatakas.

The Burmese Legend returns to the number of four. It pictures the Phralaong (Bodhisattva) in the "Tocita" heaven, surrounded by "nats" or intermediate beings who live in the heavens. The announcement that he was to be born upon earth has just been made, and he is meditating upon the "four" questions relative to the incarnation of the Buddha, viz. the Epoch or Time; the Place of appearance; the Race or Caste; and the Age and quality of the mother. The Present time is chosen because previously men have lived for over 100 years, and their passions have become so deeply rooted that it was useless to preach the law to them. Now, however, they live for only 100 years and are more easily influenced to the truth. The "great central island" where is the district of "Kapilawot" is chosen as the suitable place. Prince "Thoododana" of the Sakyans is selected as the father; and for his mother "one who during 100,000 worlds has lived in the practice of virtue,—the great and glorious Princess Maia."

These legends represent evidently a widespread and quite generally accepted tradition concerning the birth of the Buddha. As we have seen, there is no parallel tradition in the Pali Scriptures, and they did not make their appearance until four or five centuries after Sakyamuni's death. In other words, they appeared just at the time when Mahayana influences were beginning to be felt, and were one of the consequences of that stream. With the new conception of the person and nature of the Buddha, which we find there, it was easy and natural to let the imagination run to picturing scenes and

⁴⁴Beal's *Romantic History of Buddha*, p. 27.

conversations in the Tushita heaven, and the pre-incarnate splendour of the Eternal Buddha.

CONCEPTION AND BIRTH

We have already seen that there is a story in the *Digha Nikaya*⁴⁵ which tells how Sakyamuni described to his disciples the conditions under which "it is the rule" for a Buddha to be born. This seems to be the source of the later stories concerning his birth which we are about to study. The many points of similarity are so plain as to need no special mention as we proceed.

The *Lalita Vistara* gives a long account of the preparations in the Tushita heaven for the descent of the Bodhisattva. This finally takes place in the form of a white elephant,—or one of "yellowish white colour",—"with six tusks, well proportioned trunk and feet, blood-red veins, adamantine firmness of joints, and easy pace" which the queen Maya saw in a dream entering her womb. Upon awakening, she sends for her husband, the King, to come to the Asoka grove where she is, and relates to him the dream, asking for an explanation of its meaning. He sends for the learned Brahmins, who interpret the dream as meaning that a son will be born to them, who is to become a Buddha.

After ten months had elapsed the time for his birth arrived, and 32 omens are seen in the garden attached to the palace. Hither the Queen Maya resorts, when she realizes her time has come. Orders are given for the guarding and decoration of the garden, and she is borne along in a sort of triumphal procession to the place. The most extravagant language is used in attempting to picture the beauty, and the elaborate preparations which have been made for the coming of the holy child. Impossible numbers of attendants of all kinds accompany her. The earth is filled with sweet music and fragrant odours, which are wafted from rare and beautiful trees. Here in the garden the child is born from the right side of his mother, "with full memory, knowing everything, and undefiled." Sakra, the lord of the Devas, and Brahma, the lord of the whole earth, are present to receive the Bodhisattva in a beautiful piece of silk cloth. The child immediately takes seven steps toward the east, saying, "I shall be the easternmost (foremost) in all virtuous actions, the source of all goodness"; seven steps toward the south, saying,

⁴⁵See above, pages 36-38

"I shall be worthy of reward from gods and men" etc., etc. His birth is the signal for great upheavals of nature, and for many wonderful signs among men. Sickness and calamity cease, and great rejoicing and mirth takes place everywhere. Language is exhausted in attempting to describe the glory of the great procession which wends its way back from the garden to the palace of the King. Here he is later visited by the sage Asita, who predicts for the child a great career, because of the 32 signs of excellence upon his person. The story of his weeping follows, quite similar to that already related from the Mahavagga.⁴⁶

The Buddha Charita version is much more simple and less extravagant. It seems to represent an earlier tradition than that of the Lalita Vistara. The child takes seven steps, it is true, but only in one direction, uttering the words, "I am born for supreme knowledge, for the welfare of the world,—this is my last birth. Two streams of water then appear from heaven to bathe and refresh his body, and many natural phenomena bear witness to the greatness of the event which has taken place. The sage Asita also appears, and in a lengthy but prophetic address outlines the glorious career which awaits the young Prince. There is a trace of fear in the father's heart at the prospect of losing his son when he becomes a Buddha, suggestive of the tragedy which later breaks into the home. So, while the first part of the story is less developed, and more like the primitive Mahavagga tradition, the latter portion bears strong traces of Mahayana influence.

The two Chinese versions differ in details more or less, but add little that is new. The chief variation is found in the Fo Sho Hing Tsi King, which describes Maya as standing under a tree with a branch in her hand when she is delivered. The Jataka Introduction adds a further slight variation. It describes the Queen besporting herself in the Lumbini grove beneath a "sal" or sandal-wood tree, the branch of which she wanted to grasp. The branch bends for her, and while holding it in her hand, the pains come upon her and she is delivered. As in the other stories, the child is born free from any impurity, "pure and fair, and shining like a gem placed upon fine muslin of Benares".⁴⁷

Other slight variations are also found in this tradition, such for

⁴⁶See above, p. 35.

⁴⁷Cf. the Dgha Nikaya account related above.

instance as the visit of seven Brahmans after that of the sage, Asita. These Brahmans make certain prophesies concerning the future Bodhisattva, but are themselves too old, also, to see their prophesies fulfilled. Their sons later take Buddhist vows, however, and become the "Company of the Five Elders."

The Thibetan version gives a very brief and clear account of the stories related above, omitting some details and adding others. Asita the sage is accompanied by his nephew, Nalada, who later joined the disciples of the Buddha. The same story with some variations is found also in the Burmese legend.

3. EARLY LIFE AND TRAINING

As already mentioned, there are practically no references to the early life of Sakyamuni in the Pali Tripitaka, apart from the later Jataka Introduction. Even in the story of the career of Vipassi upon which many of the later traditions seem to be based, the references to early life and training of the Buddhas are of the very slightest. It is not till we come to the later scriptures, that we find any attempt to throw light upon the years which intervened between the birth of Sakyamuni and his great renunciation.

The Buddha Charita gives a beautiful picture of the youth as he grows up in the palace of his father. The queen mother, unable to sustain the joy brought by giving birth to so noble a son, "went to heaven that she might not die", and her sister undertakes the task of bringing up the child. His father's kingdom enjoys a period of unprecedented prosperity, of fruitful crops and increase of flocks and herds, as well as of justice and righteousness. The Prince meanwhile grows "in all due perfection like the moon in the fortnight of brightness". The King, ever mindful of the prophesies of the Sage is anxious to turn the Prince to sensual pleasures as a means of stopping him from "going to the forest". He seeks for him a bride of unblemished excellence, Yasodhara, and prepares for him a dwelling place apart, where no inauspicious sight might disturb his mind. He is surrounded by beauty and music, with lovely women to dance and wait on him. In the course of time a son is born to him by Yasodhara, greatly to the joy of the King, who sees in this one more link to bind his son to the home.

One day, however, the Prince expresses the desire to go out and see the woods in their spring verdure. The King causes the

road to be made beautiful, and removes all signs of sickness and death, and any sights or sounds which might disturb the happiness of his son. The path of the Prince is a sort of triumphal procession. The people everywhere come forth to greet him with praises and rejoicing. But the gods create an old man "to walk along on purpose to stir the heart of the King's son". The Prince asks the Chariot-driver who is this old man "whose limbs are bent down and hanging loose", and is told that it is old age which has thus broken him down, for he too once was young. "What!" he asks, "will this evil come upon me also?" Upon being told that it is the fate of all men, the Prince becomes deeply agitated, and orders the return of the chariot to the palace that he may meditate. Once more he goes forth and sees an old man diseased, with swollen belly, and his whole frame shaking. He is told that this is sickness, which is also common to all men, and again returns in agitation to the palace. His father, the King, is much disturbed by the failure of the guards to prevent such scenes, and very special preparations are made next time, in order to please and divert. Again, however his plans are foiled by the deities who carry a dead man past the Prince, that he may see it. Thus he learns that death, as well as old age, and disease are the common fate of all. On his return to the palace he is met by a band of beautiful women who dance about him with all the grace and beauty they can command, seeking to fascinate and ensnare him. They exhaust all possible means to beguile him, but he neither rejoices nor smiles, "thinking anxiously, 'One must die! These women can know nothing of death so they can sport and laugh'." Udayin, the King's agent, remonstrates with him for his coldness, but he replies that if old age, disease and death did not exist, he might enjoy these things.⁴⁸

The story as told in the *Fo Sho Hing Tsan King*, the Chinese version of the *Buddha Charita* is a very close replica of the original, differing only in minor details.

A very different and much more detailed tradition is that represented by the *Lalita Vistara*, and its Chinese translation the *Fo Pen Hing Tsi King*. (Beal's "Romantic History"). Space forbids that we should enter into all the details of the story. We will have to confine ourselves to giving a few of the main points which this tradition adds to the simpler and probably more original story of

⁴⁸*S. B. E.*, XLIX, *Buddha Charita*, Chaps. II-IV.

the Buddha Charita. (1) The visit to the temple when a child, is a tradition which the Lalita Vistara contains, though it is omitted from the Chinese version. The story is of little value except to indicate the extravagant degree to which apotheosis has been carried. It relates that when the Bodhisattva set his foot within the temple, all the images of the gods bent down and worshipped him, whereupon hundreds of thousands of gods and men burst into laughter, so that the city of Kapilavastu shook in six different ways, and the gods in the temple recited the Gathas.

(2) Another story told by both traditions is that of the adorning of the child with garlands and festoons of flowers. This was done upon the order of the King, in order that he might receive the praises of the people, but the story naively continues, "they were all eclipsed by the splendour of the Prince's body,—they did not sparkle nor glow nor look bright". The passage concluded with an exhortation, "Remove those ornaments, O ye inconsiderate people; insult not the intelligent one by these. He desires no artificial ornaments,—this being of noble object. Give away these nice looking ornaments to slaves."⁴⁹

(3) The story of the childhood of the Prince which deserves first place perhaps from the standpoint of interest and humor, is that of his attendance at school. The picture is painted in such extravagant colours we cannot but wonder if, even on such a sacred subject, the writer was not prompted by a sense of humour when penning the words. The story tells how the young Prince is taken to school accompanied by 10,000 boys, followed by 10,000 cars loaded with food and gold ingots and coins, while 8,000 maidens scattered flowers in the way. His arrival at School is marked by the prostration of the teacher, who is overcome by the beauty and glory of the Bodhisattva. Upon his recovery this new pupil asks him which of the sixty-four languages he is to be taught, and names them over one by one. Whereupon the Schoolmaster "wonderstruck and deprived of vanity and self-importance, recited these Gathas with a cheerful face. 'Wonderful this is of the Bodhisattva, the leader of men, that he should have learned every sastra on coming to school.'"⁵⁰

(4) The Lalita Vistara has also⁵¹ a story of an excursion to a farming village, where the young prince sits beneath a tree to medi-

⁴⁹Lalita Vistara, Ch. IX; also Beal's Romantic History, pv. 64-6.

⁵⁰Lalita Vistara, Ch. X.

⁵¹Ibid., Ch. XI.

tate, while some Devas stand and watch him in delight and wonder. When his father inquires for him, he is told that his son is sitting beneath a tree in the village, and wonderful to relate, the shade of the tree had continued to shelter him, not changing its position with the course of the sun. This legend is duplicated in the Chinese version, but is preceded there by two short tales to illustrate the compassion which he had toward the animal world. The first tells how he rescued a goose, which had been shot by Devadatta, his wicked cousin, but had not been killed. He protects it, drawing forth the arrow, and applying healing medicines to the wound, to signify, he says, "that when I have arrived at the condition of perfection to which I tend, I shall thus receive and protect all living creatures." The other story relates the serious meditations aroused in his mind, upon human suffering, after witnessing the strenuous toil of the men and oxen who are engaged in a plowing match. It is while engaged in these meditations that he sits under the Jambu tree, whose shade never leaves him, as related above.

4. BETROTHAL AND MARRIAGE

The story of the betrothal and marriage of the Prince to Yasodhara is told in much greater detail in the *Lalita Vistara* and its Chinese translation, than in the *Buddha Charita* and the *Fo Sho Hing Tsan King*. The *Lalita Vistara* tells of the King discussing with his courtiers the question of a suitable marriage for the Prince. He finally sends out the family Brahman Priest to search for a bride, "irrespective of caste, for the Prince is not anxious about race, or lineage, but about quality." The daughter of Dandapani, a Sakyan, is selected, but in order that the wishes of the Prince himself may be consulted, on an appointed day a large number of the most beautiful maidens are brought before him in procession, and to each he gives a string of flowers. Gopa, (or Yasodhara,) the daughter of Dandapani is the last to come, but, alas, all the flowers are given out, so the Prince gives her his ring. The King's spies, who are watching from a concealed place, report that she is the maiden of his choice.

Here however, a complication arises, for Dandapani is also a Rajah and is unwilling to give his daughter in marriage, even to a Prince, unless the Prince shall first exhibit his skill and strength in arms, as is the custom. The King is thrown into despair, for

the Prince has never practiced these things. The Prince however reassures him, and declares he can defeat all comers. A tournament is accordingly arranged for the seventh day, and Gopa is present with a flag to be given to the one who exhibits the greatest skill. On the way to the grounds, Devadatta, his cousin and rival, slaps a white elephant so forcefully that it falls dead upon the road. The hero Prince dismounts from his car and drags the elephant by the tail outside the walls,—thus winning the praise and admiration of the crowd.

The first contest is in writing, after which the Schoolmaster, "smiling with approval at the superiority of the Bodisattva" proclaims his excellence in "Gathas" or psalms. Then follows a contest in numbers in which not only are all the youths defeated, but "the astrologer-councilor, and the whole host of the Sakyans were pleased, exhilarated, delighted and wonderstruck. Each of these remained garbed in a single piece of cloth, and covered the Bodisattva with all their clothes and ornaments." The Prince then wrestles with 500 Sakyan youths, and with Devadatta, each of which he vanquishes individually, and finally the whole group at once, by his "majesty, vigour, prowess and firmness." In archery also, he is able to far surpass all his opponents, and even strings the bow of his grandfather, which no one else had ever been able to do. When he shot an arrow, it pierced the earth in falling to such a depth that it made a well,—called to this day the arrow-well. In other accomplishments also, the Prince displays such marvellous powers that Gopa is made his bride,—to the great joy of all.

The Chinese version very closely resembles the above in most respects, though it is in greater detail, and works in additional legends. One of these tells of Yasodhara in a previous existence; another, a story of a nobleman who became a skilful needlemaker in order that he might win the hand of a needlemaker's daughter. Parallel with the story of Yasodhara is that of another maiden who became the wife of the Prince, Gotami by name.⁵² In her case, however, it was she who made the choice of the Prince from among three competitors. In later years, after attaining enlightenment, the Buddha explains how in a previous existence he, as a lion, and Gotami, as a tigress had formed an alliance. Gotami together with Gopa or Yasodhara, and a woman named Manodara are spoken of

⁵²In the Pali Canon, Gotami is the name of his aunt and foster-mother.

as the three wives of Sakyamuni,—though the names differ in the various legends. Each of these lives in one of three places built by the King for his son, and in each of which the Prince stays for part of the night.

A high wall is built around the palace, with great gates, and guards are placed there to keep the Prince from wandering away into solitude.⁵³

The Excursions outside the Palace, as told in these traditions, follow much the same lines in general as those related above. There are two main differences, however, which need to be noted. *First*, the Chinese version gives a tradition of a series of dreams, seen by the King, and interpreted to him by the Brahmans as meaning that his son is to go away to a life of asceticism.⁵⁴ *Second*, instead of but three sights on the road the Prince sees four. The fourth is a Shaman or mendicant. While the Lalita Vistara only makes incidental mention of this, the Chinese version features it,—a later development, no doubt, attempting to explain the psychological processes by which the Prince became a mendicant, after his illumination. The Charioteer, in explaining the meaning of mendicancy to the Prince, says that those who adopt this form of life do good to all and are in sympathy with all. The mendicant himself explains that "It is one who has left the world and its ways, and has forsaken friends and home in order to find deliverance for himself, and desires nothing so much as by some expedient or other to give life to all creatures and to do harm to none."⁵⁵ The Prince thereupon descends from his chariot and worships the mendicant, and upon his return to the palace announces to his father that his purpose in life is to become a mendicant and seek Nirvana. This distresses his father, who remonstrates with him, but to no avail. Then follows the scene where the women, led by Udayin, seek in vain to beguile him.

The other traditions which we have in the Jataka Introduction, and the Thibetan and Burmese legends give a large variety of forms of these stories. Into these we need not enter here. For the most part, they are briefer than those outlined above, and leave out many minor details. The Burmese legend, for instance makes this competition with the other youths, not a condition of marriage, but a

⁵³Beal's *Romantic Legend* pp. 78-107.

⁵⁴Also mentioned incidentally in the *Lilata Vistara*.

⁵⁵For a fuller discussion see next chapter.

response to the the accusation that he is a weakling.⁵⁶ The Thibetan legend postpones the birth of Rahula till after the renunciation, etc., etc.⁵⁷

It is very difficult, with so large an amount of material before us, and necessarily in translated form, to attempt to disentangle the strands of which it is composed. There seem to be at least two streams of tradition, one of which is represented by the Buddha Charita and the Jataka Introduction, with their Chinese, Thibetan and Burmese counterparts, giving us on the whole a simpler and more primitive account. The other is represented by the Lalita Vistara and its Chinese translation or paraphrase, which is much more elaborate in its method. This suggestion is further carried out by the fact that the Lalita Vistara, which seems to have been well known and is frequently mentioned in early Buddhist history, deals mainly with the early period up to the Renunciation, and is not so interested in the later story of Sakyamuni's life. It is therefore definitely an attempt to popularize and extend the "information" about the early career or the "play" of the Buddha, knowledge of which the author evidently felt was of value.

The somewhat perplexing problem remains: Is the Lalita Vistara tradition to be thought of as a development of the simpler and more primitive traditions represented in the other stories? Or is it to be thought of as the original upon which the shorter records are based,—the curtailing of material being an accomodation in order to fit in with the writer's larger purpose of a complete history of the Buddha? A third possibility also exists. They may represent absolutely different traditions, mutually independent of each other, except as they may be based upon a still more primitive, and probably oral tradition. The large number of differences in minor detail would suggest the last of these three solutions as the most probable. The problem will not be solved however, till new data on the subject becomes available.

What is of more importance to us is the fact that these traditions are all of very late date. None of them, it would seem, go back farther than the first century A. D., and are at least five hundred years after the time of Sakyamuni. If it were possible to trace these fantastic legends to their source, it would be well worth while to do so. In the absence of sufficient data, however, we must decide for our-

⁵⁶Bigandett's *Legend of the Burmese Buddha*, Vol. I, p. 52.

⁵⁷Rockhill's *Life of Buddha*, p. 24.

selves whether we can place any value upon them. Historically, the value cannot be large. They serve however, as interesting sidelights upon the developing Mahayana view of the Buddha. Asvaghosha, the first to attempt to systematize the Mahayana doctrines lived during the latter half of the first century A. D. and belonged therefore to the very period in which some of these scriptures originated. The roots of both Mahayana Buddhism and the traditions which we have been studying lay still further back in the previous centuries however. We may expect to find a close relationship between these two movements to enlarge the scope and meaning of Buddhism.

THE SPIRITUAL NEED OF OUR AGE

BY VICTOR S. YARROS

WHAT are the peculiar ills of our age? Unrest and discontent are general, and there is much talk about decay and retrogression in the normal and spiritual realm. Yet science is constantly making new conquests and piling marvels upon marvels. Admittedly there is progress in many directions, not all of which are technical and material. The span of human life has been lengthened and is still being lengthened by improvements in sanitation, public and private health, hygiene and preventive medicine. The machine and the automatic tool are emancipating the wage-worker from drudgery and exhausting toil. Never has the average person had more leisure than he enjoys today, and the standards of living were never as high.

The idea of progress has been challenged, yet evidences of progress, illustrations and results of scientific progress, are to be seen on every hand. There may be no "law" of progress, no absolute *quaranty* of progress, but the human animal is so curious, so aggressive, so persistent, so alert and gifted that, with so many problems facing him, he simply cannot help learning, experimenting, applying his knowledge, making it a means of acquiring more and more knowledge. There are in human history periods of comparative stagnation and even of reaction, but, as a matter of fact, even such periods have been misinterpreted. They too had their victories and positive achievements. The stagnation was not complete, the reaction not absolute and hopeless. In the indictments of the present age there is, likewise, no doubt, much exaggeration and injustice. We cannot judge it impartially because we are of it and in it, and perhaps the verdict of the future historians will be far more favorable upon it than the estimate of the contemporary critics, pessimists and philosophers.

However, even sober minded and acute thinkers not addicted to extravagance or phrase-mongering hold that there is *something* wrong with our age spiritually, and it is proper and profitable to glance at some of the more moderate of the indictments in question.

Prof. A. N. Whitehead, for example, who has been endeavoring to give the age a new philosophy and at least the elements of a new religion, diagnoses the troubles of the time in the following sentence: "The new situation in the thought of today arises from the fact that scientific theory is outrunning common sense." Mr. Whitehead's metaphysical religion is itself an excellent example of this gulf between scientific or philosophic theory, on the one hand, and common sense on the other.

What does common sense make of the Relativity theory? How many persons of average intelligence grasp the quantum theory? How many understand the controversy between the new realists and the new idealists? How many study anthropology and the evolution of religious conceptions? How many know the status of the discussion concerning the descent of man?

It may be objected, of course, that the average person—or the mass of humanity—*never* concerned itself with such topics as those just mentioned, and that there is nothing new or disturbing in his or its ignorance and indifference. There is force in the objection, but it does not wholly dispose of the point made by Dr. Whitehead. Dense and childish superstitions are no longer possible to the average person: he is too intelligent to accept traditions blindly and repeat meaningless formulas; but he is not intelligent enough to acquire a scientific and philosophic substitute for the old and discarded superstitions or conventions. A little knowledge is proverbially dangerous, and yet the majority are condemned to the condition of little, unassimilated, useless knowledge.

Ignorance of mathematics, physics, chemistry, mechanics is not particularly harmful, of course. Millions enjoy the benefits of broadcasting without the faintest notion of the principles of wireless telegraphy, just as millions enjoy music without knowing the a b c of musical composition or the elementary principles of harmony, development and form. But in the realm of conduct and ethics ignorance or little knowledge is indeed a dangerous thing. Human beings cannot live without *some* philosophy of life, and those who renounce tradition and dogma need a substitute for the old staff of existence. The alternative to a rational substitute is often a half

formulated philosophy of despair—of pessimism and cynicism. It is a mistake to think that the cynics have no philosophy. They have one, though they deny the possibility of any. Theirs is the old philosophy of indifference and animal pleasure, of "Let us eat, drink and be merry, for tomorrow we may die!"

Science has supplied no new philosophy, and promises none for the near future. It has wrecked a number of pseudo-scientific philosophic systems, and by the very rate of its progress it has made synthetic philosophic systems impossible. How can you have a synthesis when the sciences to be comprehended and drawn upon change constantly and in a revolutionary way.

The bitter cry of earnest and thoughtful persons for a philosophy is heard on every side. In a recent article in *The Atlantic Monthly*, for example, a contributor—Bernard I. Bell—indicted modern education because of its neglect of philosophy. To quote at some length from the article:

"We have too largely abandoned philosophy. We have even degraded the word, until it has come to mean to most people merely a sort of sophistical playing with abstract ideas. Philosophy is properly defined as "a knowledge of general principles as explaining facts and existences." We are not at the moment, in our institutions of higher learning, paying much attention to explaining anything. As a result we are turning out physicians with no philosophy of health; lawyers with no philosophy of ethics; captains of business with no philosophy of industry; parsons with no philosophy of religion; and, in vast numbers, educators with no philosophy of education. * * *

"Inadequately guiding youth in the development of a vital philosophy, we are sending forth graduates with diffused minds, scarcely fit to take command of their own lives or to cooperate in the development of a social state; drifters into conformity and essential human futility; easy victims to specious crowd psychologies; followers of what seem easy ways out; Bolshevik or Fascist in every attitude. They esteem themselves only creatures of their environment and so they tend to become just that. * * *

"Science is only a way to dig out rough material, stuff which can be articulated only by philosophers. The correlation in each student's life of the scientific method and the facts it discovers for us, on the one hand, and the age-long spiritual aspirations and interpretations which constitute religion, on the other hand, is the proper determining purpose of the college. Its religious activity cannot consist merely in conduct-

ing some devotional exercises in the chapel or in giving courses on the literary value of the Bible. In all the teaching in every lecture room, seminar, laboratory, there must be the subconscious thought: 'No facts observed here are worth anything until the students have assimilated them, digested them, interpreted them. It is men and women that we are teaching—not these bits of knowledge. There are ultimates of which all this is only a reflection. Unless our teaching is enabling both us and our students more to understand the ultimates, that teaching is a waste of time.'

Very well said; but where is the scientific school that will venture today to claim knowledge of the ultimates and to teach them to critical minds? Ultimates and a philosophy of them cannot be made to order. We have been assured, indeed, that philosophy is being reconstructed, but, unfortunately, there is no agreement among philosophers either as to process of reconstruction or as to the principles and data to be confidently used in the process. Pragmatism, Psycho-analysis, Behaviorism, Organic Mechanism, the new Humanism are severally influencing the reconstruction of philosophy, but can anyone tell how far the process has been carried, what is supposed to be settled, and where we stand with regard to the ultimates—God, the Purpose of the Cosmos, Man's destiny and his relation to the rest of nature? No; no serious thinker will even try definitely to answer such questions. And some contemporary philosophers assert that philosophy does not and cannot deal with ultimates, and must limit itself to the humble task of helping men to solve their social and moral problems!

Some time ago a small western college, controlled by self-styled Fundamentalists, announced that no member of the faculty would be retained, and no new educator engaged to teach in that institution, unless the following essentials or ultimates were whole-heartedly subscribed to by him—the inerrancy and the inspired character of the Bible, the existence of a Supreme Being that rules the cosmos, the divinity of Jesus of Nazareth and his role as savior, and, finally, the resurrection of the physical body. Well, here is a set of doctrines or beliefs that constitute a solid and sufficient philosophy of life and conduct, *provided you can accept it!* While millions of educated and thinking people did accept it, or imagined they did, no trouble existed for them in the intellectual or moral domain; they had a complete guide to education, to professional relations, to domestic and social activities. But how many cultivated and enlightened persons

to-day really accept the essentials of the Fundamentalist creed? How many who can think at all believe in the inerrancy of the Bible—a proposition too silly to provoke serious criticism, seeing that no Bible writer makes any claim to infallibility? How many believe in the “physical” resurrection of the dead and attach any meaning to the formula?

It is unnecessary to pursue this line of questioning, however. The old anthropomorphic and naive theology is dead, and the philosophy that sprang from that theology is also dead. There is as yet nothing worthy of the name of philosophy to take the place of the one that is discarded and discredited. Teachers cannot teach something they do not themselves believe and grasp. The chaos complained of is inevitable. Yet the situation, as already said, is far from being satisfactory. Can, then, anything be done to end the chaos and solve the problem?

Yes, something can be done, if the orthodox theologian and the various fundamentalists and literalists will face the facts, admit defeat and cooperate with the Agnostics in building up modestly a philosophy and an ethics on the basis of scientific knowledge. It cannot be seriously alleged that Darwin, Spencer, Huxley, Tyndall and scores of other eminent Agnostics of their period had no philosophy to offer to their disciples and to the world, no high and noble principles of conduct, no ideals and standards calculated to elevate mankind to a plane which even the devout Christians would admire and commend. The Agnostic is neither a cynic nor a pessimist; he has no supernatural sanctions for his code, but he finds the natural sanctions sufficient. He believes in rational human happiness as the sole test and criterion of conduct, but his conception of rational happiness is broad enough to include every form of wise beneficence, negative and positive. He does not regard science as an idol to be worshipped, but he knows that most of the attacks upon science, or upon the alleged claims and pretensions of science, are conceived in error and misunderstanding. He is convinced that *science makes for moral order and moral progress*, and that the so called failures of science are really the failures of certain aspects of human nature.

Science cannot create or abolish passion. It can only serve as a guide to those who are able to control passion. Science cannot abolish hate, greed, malice, vanity, arrogance, jealousy, meanness. But it can and does trace the consequences of such attributes, and it can demonstrate the practical superiority of justice, kindness, sym-

pathy, charity. Science appeals to reason, but men blinded by passion and fear, by selfishness and lust, do not follow the light of reason and of science.

Science, for example, tells us that while there has been a definite increase in intellectual power of man in the last 100,000 years, or since Neanderthal times, there is no evidence of development or the socialization of the instincts. Is science to be blamed for stagnation of that part of human nature? Science gives us facts, generalizations, theories, principles and hypotheses: it cannot force us to act in accordance with its conclusions.

What then will modify and improve human nature? The answer is—Experience, individual and racial. Man must learn how to live in a society and how to reap the maximum of benefit from social and economic operation. He must learn to think in terms of international rather than national organization; he must adopt moral equivalents for warfare and wasteful competition. His education will be slow, but there is no known way to accelerate it, and there is no short cut to perfection. It is the business of the more progressive elements to convert the less progressive to sound views and to make it difficult for politicians and diplomats to pursue policies that are repugnant to reason and inimical to justice. Such educational efforts exemplify the best sort of propaganda—propaganda in the service of righteousness and brotherhood.

As to those who assert that neither science nor practical experience will *ever* moralize the individual and improve his conduct, and that religion and philosophy will have to be restored to their old status in order to save society and civilization from destruction, they should ask themselves candidly by what means their desideratum can possibly be brought about. Man has not gratuitously, wantonly, capriciously forsaken the old religion or the old philosophy; *he has simply outgrown them*. He cannot go back; he cannot reject the evidence and the logic which led him to abandon obviously immature, shallow, empty or meaningless phrases and pseudo-ideas. He must go forward, and, if possible, develop a more satisfactory philosophy than that of the Agnostic.

Meantime it is fallacious to complain of the march of science and to say, as a British philosophical writer said recently, that "each fresh advance in the application of science to practical affairs will be fraught with fresh danger to the race." Science cannot be a menace to the race unless intelligence itself is a menace. Inventions

and discoveries are applied constructively as well as destructively. Science makes war more and more horrible, but science also humanizes war and reduces its toll. Science reduces labor to automatism, but science also increases leisure and enriches the life of the humblest worker. Science even improves human nature, though indirectly, as Prof. T. H. Huxley admitted. It has given us Eugenics—as understood by the thoughtful—and enables us to control more and more our physical and material environment. Science furnishes us with powerful machines and automatic tools, but it does not rob human life of color, of variety, of complexity. On the contrary, it causes multiformity, emancipates individuality, stimulates competition by giving more and more human beings time for contemplation, reflection, observation and study.

Science is not enough, but *whatever may be added to science must be sound enough to withstand the scrutiny of scientifically trained minds.* We hear much about new tendencies in science, but these alleged new tendencies must not violate the spirit and methods of science. If they do, they represent reversions to superstition and quackery, and take the name of science in vain.

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