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

VOLUME XL (No. 8) AUGUST, 1926 (No. 843)

CONTENTS

The Open Court Publishing Company

122 S. Michigan Ave. Chicago, Illinois

Per copy, 20 cents (1 shilling). Yearly, $2.00 (in the U.P.U., 9s. 6d.)

Entered as Second-Class Matter March 26, 1887, at the Post Office at Chicago, Ill., under Act of March 3, 1879.

Cornell Studies in Philosophy

Published Under the General Editorial Supervision of the Professors in the Sage School of Philosophy in Cornell University

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THE GHOST DANCE: PRAYER (After Mooney)

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MYSTICISM AND ASSOCIATIVE SYMBOLS OF THOUGHT REVEALED IN INDIAN COMPOSITIONS

GEO. H. DAUGHERTY, JR.

ANY analysis of Indian ideas should be made with the understanding that the tribes did not by any means speak the same language. At the time of the first white invasions there were fifty-eight separate linguistic families on the continent, split up into a much larger number of tribes.[1] The members of each of these linguistic stocks spoke a language more distinct from that of any other stock than English and German.[2] It is not important to discuss all these linguistic families in detail. In the present volume reference will be made only to tribes of the Iroquoian, Algonquian, Siouan, and Piman families. Recent investigations reveal underlying similarities in the psychology and substructure of most of the fifty-eight languages. All evidence now points more strongly than ever to the original unity of the race. The latest developments indicate three basic groups of languages. Further research may even reduce these to one. The subsequent diversity of languages can be accounted for by the same influences which have largely made for variations in culture: i. e., different environments, and the isolation caused by the mutual hostility of the tribes.

It is remarkable that the present utterances of the Indians, coming as they do from widely separated tribes, convey even in their translated form a curiously unified impression. Few of them have any great degree of literary merit; yet even in the scientific translations there are many extraordinarily powerful and beautiful passages. In them one catches a faint echo of the thoughts and feel-

[1] A tribe among the North American Indians consisted of a body of individuals bound by blood ties, speaking a common dialect, with similar customs, ceremonies, beliefs, and organizations, both religious and political, and occupying a more or less definite territorial area. (Abridged from J. N. B. Hewitt, "Tribe," *Hodge*, II, p. 814.

[2] Frederick Burton, *American Primitive Music*, New York, 1909, pp. 3-4.

ings of our own forgotten ancestors. These crude, brief songs reflect a grim and awful wilderness pressing closely on all sides, the lurking place of ferocious human enemies and of dread animals with more than human power and cunning. All these primitive utterances express the fear of unknown, mysterious powers masked behind all natural objects: the lightning flash, a huge bird of fire who destroyed whole villages, with one mighty beat of his wings; "other fire-producing creatures, enormous horned serpents, who in turn shot the blue, harmless lightning upward. . . . Besides there were long serpents who lived in the waters and who, rearing their huge lengths straight upward at intervals, would allow themselves to fall over with a gigantic splash. There were the sharp-breasted snakes, suggested to native imagination by the tracks of lightning, snakes supposed to run straight along the surface of the ground cutting through roots and bushes as they went. There were bodiless snakes which rose whirling into the air on still mornings. . . . There were very little people who sometimes deprived travelers of their senses, and very big people who ate them."[3] All these mysterious, demon forces had to be placated with magic song and ritual, and rigid taboo, and they were of necessity invoked if any success was to be attained against enemy tribes. These manidos were quick to anger; their vengeance was more to be feared than that of the strongest warrior-nations.

It must not be thought, however, that the soul of the Indian was dominated by fear. He sang and chanted of the mysteries of life and death, of the joys and sorrows of his daily life. Always he exulted in his own might; boasting his deeds of valor, treachery, or rapine against the ever-present enemy. These songs and grandiloquent proclamations of war and peace made to the majestic red warriors grouped about the flaring council fire have a double value. They occasionally contain real poetry; and, when properly interpreted, they reveal the Indian much better than any number of crumbling stone tools or mouldy feathers in a museum.

In order to understand these ideas it is necessary to understand the terms in which the Indian thought. He did not think, as we do, in vocables expressed by arbitrary denotive characters; he thought in connotive or associative symbols, characteristic of all prescuptorial human culture. To the civilized man these symbols seem incongruous, extravagant, bizarre. To the Indian, however, there was a direct association between such unrelated things (to the civilized

[3] J. R. Swanton, "Tokulki of Tulsa," *American Indian Life,* pp. 142-143.

understanding) as directions, or points of the compass, and colors. As a result, directions and colors became synonymous in his understanding.[4]

To illustrate: the following is a translation of a Cherokee witch doctor's magical formula for securing victory to a war party. For the proper fee of blankets, guns, or other Indian valuables, the medicine man repeated this formula to make the warriors unvulnerable. In the original setting, the effect must have been weird in the extreme. One can imagine the line of grim and hideously painted braves, who hearkened motionless in the firelight to the wailing chant through the black, whispering woods:

"Huyi! Yu! Listen
Now, instantly we have lifted up the red war club.
Quickly his soul shall be without motion.
There under the earth
Where the black war clubs shall be moving about like ball sticks in the game,
There his soul shall be, never to reappear.
We cause it to be so.
He shall never go and lift up the war club.
We cause it to be so.
There under the earth the black war club
And the black fog have come together as one for their covering.
The black fog shall never be lifted from them.
We cause it to be so."

The preceding incantation was supposed to paralyze the enemy. For the benefit of his own men the shaman went on:

"Instantly shall their souls be moving about there in the seventh heaven.
Their souls shall never break in two.
So shall it be.
Quickly we have moved their souls on high
Where they shall be going about in peace.
You have shielded yourselves with the red war club.
Their souls shall never be knocked about.
Cause it to be so.

. . . . .

[4] J. W. Powell, "Administrative Report," *Thirteenth Annual Report, Bureau of American Ethnology*, 1891-2, pp. xxiii-xxiv.

Let them shield themselves with the white war whoop.
Instantly grant that they shall never become blue.
Yu!" [5]

The explanation of this extraordinary rigamarole lies first in the color symbolism. In the first part the shaman identifies himself with the warriors in lifting up the red war club, red being the symbol of success. The souls of his friends the shaman raises above to the regions of light where they shall be in peace, shielded by the red war club of success, and never touched by the blows of the enemy. "Breaking the soul in two" is equivalent to snapping the thread of life, the soul being regarded as an intangible something having length like a string or rod. The color red was always associated with the east, abode of red spirits, possibly being connected with the color of dawn. It acted as a weapon to strike the enemy, and also as a shield. Beads used in conjuring for long life, success in love or anything else were always red.

Black was typical of death, and the evil spirits in the west. In this case the shaman curses the enemy and puts their doomed souls into lower regions where the black war clubs continually knock them about. He also envelops them in a black fog which shall never lift. In some incantations the shaman tears out a man's soul, carries it far into the west, places it in a black coffin buried deep in black mud, with a black serpent coiled around it. This certainly reveals a poetic sombreness of soul quite worthy of Edgar Allen Poe.

Blue was emblematic of failure, disappointment, unsatisfied desire. "They shall never become blue," means that they shall never fail. In a love charm, the lover figuratively covered himself with red and prayed that his rival be blue. Blue spirits lived in the north. White denoted peace and happiness. On ceremonial or festival occasions, as at the green corn dance or the ball game, the people figuratively ate white food and afterwards returned on a white path to white houses. White was the color of the stone pipe of peace. White spirits lived in the south. The colors brown and yellow were used occasionally. The meaning of brown is not clear; but yellow was symbolic of trouble. Neither color referred to any particular point of the compass.[6]

[5] James Mooney, "Sacred Formulas of the Cherokees," *Seventh Annual Report, Bureau of American Ethnology*, pp. 388ff. It should be understood that to the Indian much of the importance of such a formula as this is lost in the translation. The very sound of the words and their order are important in magical formulae. The order of words and phrases in the present translation corresponds only roughly to the measures of the original as chanted or spoken.

[6] Mooney, *op. cit.*, pp. 390ff.

The second point of the symbolism in the preceding selection refers to the Indian game of ball, the souls of the enemy being doomed to infernal regions where they are knocked about like balls in a hockey game.[7]

Since directions and colors were habitually enumerated in a certain order, the smaller numerals were added to this associative system. Because it was highly important that every individual in the group should remember the connotive symbolism, most or all the tribes arranged themselves in a definite order when sitting about the camp fire in the family group. Thus even the littlest Indian came to know which numbers and colors were to be feared, or regarded as sources of help. The system, however, was much more complex in its further elaboration. In speaking particularly of the American Indians, J. W. Powell explains further: ". . . individual names are applied connotively in such manner as to indicate order or rank, which is synonymous with position in the camping group; and among many peoples tradition is crystallized and preserved . . . by means of a far-reaching connotive association in which direction, color, number, and names all play important parts. In many instances organs of the body enter into the system. . . . By means of this symbolism the social organization, the traditions, the myths, the ceremonials, the language, the industrial arts, and indeed all the activities of the American Indians are interwoven. . . ."[8] The symbolism of number and position is seen in the division of the Iowa tribe and others into two halves, the summer people and the winter people, each charged with duties appropriate to their seasons. Still other tribes symbolized their divisions as the earth people and the sky people.[9] Another instance of number symbolism occurs in the importance attached to the number four, which was identified with the points of the compass and the deities who changed the seasons and the weather. It was even represented by the symbol of the cross "whose four arms we see portrayed on the altar tablet of Palenque, on the robes of Mexican priests, in the hieroglyphs of

[7] The game of ball was played by large gangs of warriors. The equipment included bats (carried by each player) four feet long with a net at one end. The field was a half mile long. The ball was first thrown up in the middle; then both gangs tried to carry it past the opposite post. It was a wild game, usually attended with great excitement and numerous casualties. (William W. Warren, "History of the Ojibway Nation," *Collections of the Minnesota Historical Society*, Vol. V., St. Paul, 1897, pp. 202-3.

[8] J. W. Powell, *op. cit.*, pp. xxivff.

[9] J. O. Dorsey, "Siouan Sociology," *Fifteenth Annual Report, Bureau of American Ethnology*, pp. 238-9. See also Francis La Flesche, "The Osage Tribe," *Thirty-six Annual Report, Bureau of American Ethnology*, pp. 51-52, and Clark Wissler, *The American Indians*, p. 158.

the Algonkins, and in countless other connections."[10]

In this fashion everything the Indian saw or did was symbolic; and all his songs and stories were likewise symbolic. Space permits the enumeration here of only a few instances of this symbolism. Others will be pointed out as they may occur in the songs. All adornment, such as paint and feathers, had an esoteric meaning. Most of the tribes were expert in pictography; yet "to the Indian they [representations of men and animals] were mainly, if not wholly symbolic; for everything indicates that the primitive citizen had not yet broken the shackles of fetichistic symbolism, and had little concept of artistic portrayal for its own sake."[11] Names of things also had fetichistic powers.[12]

Among the Omaha tribe the highest honor for valor in war was the "Crow," the mark of which was a certain headdress of feathers of various sorts. This decoration was intended to symbolize an entire field of battle. The fluttering feathers represented birds fighting over dead bodies; certain arrow shafts in the decoration stood for lifeless enemies with arrows still remaining in them; and an eagle skin was associated with war and destruction and thunderstorms. Also attached to the decoration were the skin of a crow and the tail of a wolf. The wolf, the crow, and the eagle were among the symbolic animal deities of the Omaha, and were invoked for aid in war.

An extended explanation of the peculiar zoömorphic concepts of the Indians would require a separate volume. Indeed, it is doubted if any white man has ever completely fathomed them. The basis for these ideas is, however, not far to seek. As among us the lion is symbolic of strength and courage, and the fox of cunning, so various animals were considered by the Indian to possess certain paramount characteristics. Furthermore, the Indian regarded the animals as his fellow creatures, equal, even superior to himself in strength and intelligence. Certainly their hunting, mating, and other habits were not greatly different from his own. In addition they were provided with fur, claws, and other attributes which seemed to the savage distinctly superior.

[10] Brinton, *The American Race*, p. 53. Another example of this is the well-known Indian sign of the "swastika."

[11] McGee, "The Siouan Indians," *Fifteenth Annual Report, Bureau of American Ethnology*, p. 176.

[12] "Le nom est mystique, comme l'image est mystique, parce que la perception des objets, orientée autrement que la notre par les representations collectives est mystique." (Lucien Levy-Bruhl, *Les Foncions Mentales dans les Societes Inferieurs*, pp. 45-46.

The following quotation from an Ojibway council talk illustrates this attitude. Yellow-Otter, an old Indian chief is complaining to the government inspector that the government issue of clothes and food has been withheld and that the gold medal once given the chief is not an adequate substitute:

". . . Me—Yellow-Otter,
I'm going mak'um big-talk, 'Specto- Jone'.'

* * * * *

Before de w'ite man come across big-water,
In olden tam', de Eenzhun[13] got-um plenty clothes:
He mak'-um plenty suits wit' skins,—no holes.
Even Shing-oo's, dose weasel, Wah-boo's, dose rabbit,
Dey got-um better luck—two suits every year—
Summer, brown-yellow suit; winter, w'ite suit—
No got-um holes.
Ah-deek, dose caribou, dose deer, and moose,
In spring dey t'row away deir horns;
In summer dey get-um nice new hat—
No got-um holes.
Me—I'm big—smart man, smarter dan —weasel,
Smarter dan moose and fox and beaver—
I got-um golden medal on chest from big knife chief;[14]
Me—I'm only got-um one suit clothes
In two year—no-good clothes, no-good hats!"[15]

This speech is, of course, modern. The statement of Yellow-Otter that he is smarter than the animals is a reflection of missionary teachings, and is made to impress the inspector with the injustice of the situation. A primitive Indian would not have asserted his superiority so confidently, perhaps for fear of offending the animal named. It is doubtful whether this speaker actually believed that he was superior.

To the Indian the animals were even more than mere yellow-creatures. They possessed supernatural powers, were themselves the agents of still greater and more mysterious forces. The four stages of philosophic belief have been formidably defined:

[13] Indians.
[14] The president.
[15] Quoted from Lew Sarett, *The Box of God*, New York, pp. 63-65. Mr. Sarett assures me that the broken English dialect employed here reproduces the Indian ideas much better than would a smoother translation.

I. Hecastotheism, or the assigning of extra-natural or mysterious potencies to objects animate and inanimate.

II. Zootheism, the exaggeration and amplification to the supernatural of the powers of animate objects. This includes the deification of animals.

III. Physitheism, or the personification to omnipotence of the forces of nature. Greek mythology represents the highest type of this sort of belief.

IV. Psychotheism, including spiritual concepts and the development of belief in abstractions.

These terms are not so difficult as they sound. In the first stage the believer finds mysterious properties everywhere. Some objects, particularly those possessing the qualities of strength, hardness, and sharpness are considered especially potent and are used for charms. Out of belief in charms and fetiches arose the "medicine man," who controlled these charms. In the zootheistic stage the primitive man assigns exceptional powers to self-moving animals, which he considers as the tutelary daemons of an all-powerful set of supernatural forces back of everything in nature. The ultimate phase of this stage includes a hierarchy of animal gods (usually composed of the most notable animals in the immediate locale). Ancient animals are thought to have been stronger and wiser than those of the present. The leading beast-god even becomes a creator. Physitheism arises from noting analogies between characteristics of the beasts and those of various forces of nature, as the snake and lightning, the bear and thunder. It is perceived that natural agencies are stronger than animals. Finally the zooic concept fades and the sun becomes the chief anthropomorphic deity, perhaps with a dazzling mask. Eventually all leading agencies in nature are personified in anthropomorphic form.[16] Psychotheism is born of physitheism as the anthropomorphic concept of nature fades. None of the Ameri-

[16] The following quotation concerning the Tusayan Indians of the Southwest is illustrative: "By simple observation the untutored mind recognizes that rain follows lightning, and what more natural than that it should be looked upon as the effect? He therefore worships lightning because of this power. The course of the lightning in the sky is zig-zag as that of the snake, both kill when they strike. The lightning comes from the sky, the abode of the sun and rain god, and the simple reason of the Tusayan Indian supposes some connection between the lightning, snake, and rain. The sustenance of the primitive agriculturist comes from the earth, and if the soil is non-productive, the sun and rain are of no avail. The Tusayan Indian thus recognizes the potency of the earth and symbolically deifies it as the mother." (J. W. Fewkes, *The Tusayan Ritual, a Study of the Influence of Environment on Aboriginal Cults.* Reprinted from the Smithsonian Report for 1895, p. 691.)

can aborigines had reached this stage (before they were Christianized).[17]

These four stages of development overlap, blend, and coexist in all peoples, especially among the aborigines. No Indian tribe was discovered without zootheistic concepts, though among some of them hecastotheism was dominant. None were in the zootheistic stage without hecastotheistic vestiges. In all tribes at any stage traces of the previous stages are visible.[18]

When the Indian had recognized his soul through dreams and other psychical phenomena, he "immediately extended his concept to animals, plants, stones, all things, and thus everything was thought to have an intangible double soul. Man sought to ally himself with some one of these souls; if a hunter, some animal spirit, for instance, as an aid. This became his totem. . . ."[19] In the attempt to get in touch with some spirit ally the Indians attached great importance to dreams. Animals, inanimate fetiches, or even songs, perceived in dreams, were considered to be magic aids.[20] In some cases the Indian would not kill any animal belonging to the species of his "totem." More often, especially if the totem was of an edible variety, he would kill the animal, then apologize profusely for doing so, even offering a sacrifice to its spirit.[21]

[17] W. J. McGee, *The Siouan Indians*, pp. 178-182. Christianity, of course, represents the transition between the anthropomorphic and the purely psychotheistic stage.

[18] *Ibid.* A most interesting dissertation might be written on hecastotheistic beliefs still strongly prevalent among civilized white people. The habit of wearing "good luck" rings, now widely sold, is an instance. For further elaboration of this material, see J. W. Powell, "Introduction," in *Seventh Annual Report, Bureau of American Ethnology*, 1885-6, pp. xxxiv-xl; D. G. Brinton, *The American Race*, pp. 52-53; J. W. Fewkes, *The Tusayan Ritual, a Study of the Influence on Environment on Aboriginal Cults*, Washington, 1896, pp. 683-700.

[19] J. W. Fewkes, *op. cit.*, p. 688.

[20] Miss Frances Densmore, noted student of Indian lore and music, reports an Indian statement on this point: "The bear is quick-tempered and is fierce in many ways, and yet he pays attention to herbs which no other animal notices at all. . . . The bear is the only animal which eats roots from the earth and is also especially fond of acorns, June berries, and cherries. These three are frequently compounded in making medicine, and if a person is fond of cherries we say he is a bear. We consider the bear as chief of all animals in regard to herb medicine, and therefore it is understood that if a man dreams of a bear he will be expert in the use of herbs for curing illness." (Densmore, "Teton Sioux Music," *Bulletin* 61, *Bureau of American Ethnology*, p. 195.

[21] See Jones, *Ojibway Texts*, No. 58, p. 495ff. According to Indian belief, the game returns to its former self. "Though he has killed the moose and eaten its flesh, yet the moose still lives and moves and continues its life as before." (*Ibid.*, p. 595, note 5.)

In recounting his dream of elks and certain birds, an Indian said: "After this dream, my stronghold was in the east, but the west was also a source from which I could get help. All the birds and insects which I had seen in my

In the light of the preceding explanations the following ritual chant of the puma is significant. This chant is part of the initiation ritual of the Rite of the Chiefs, formerly the most important secret society of the Osage tribe. Among the Osages the puma was the ancestral totem of one of the leading gentes (family divisions) of the tribe. This animal was closely associated with the sun, the great life symbol, and the relentless fire of which charcoal is emblatic. In the ritual he is revealed as one manifestations of a mysterious supernatural being, "the one who had made of the puma his body." The power of the puma was related to that of the "great red boulder," also symbolic of strength. Other and lesser manifestations of this same supernatural deity or power were the black bear, related to the "great black boulder" and the power of night; the great white swan, related to the male star of the morning, and to the white boulder; and the male elk, drawing power from the yellow boulder and the evening star. This chant illustrates very well the zoomorphic and fetichistic concepts of the Indian, and the complex and symbolic interrelation of all the phenomena of his environment.

"Verily, at that time and place, it has been said, in this house,
The Hon-ga, a people who possess seven fireplaces,
Spake to the one who had made of the Puma his body,
Saying: O, grandfather,
We have nothing that is fit to use as a symbol.
The Puma quickly replied: O, little ones,
You say you have nothing that is fit to use as a symbol.
I am one who is fitted for use as a symbol.
Behold the male puma, that lieth upon the earth.
Verily, I am a person who has made of the male puma his body.
The knowledge of my courage has spread over the land.
Behold the god of day, that sitteth in the heavens.
Verily, I am a person who sitteth in the heavens.
When the little ones make of me their bodies,
They shall always be free from all causes of death as they travel the path of life.

dream were things on which I knew I should keep my mind and learn their ways. . . . The elk is brave, always helping the women [females], and in that way the elk has saved a large proportion of his tribe. In this I should follow the elk, remembering that the elk, the birds, and the insects are my helpers. I never killed an elk, nor ate of its flesh. The birds that continually fly in the air I would not kill. I may kill water birds and grass birds if suitable for food, but only these." (Densmore, *op. cit.*, p. 188.

"Behold the great red boulder, that sitteth upon the earth.
Verily, I am a person who draws to himself the power of the great boulder.
Behold the great red boulder, that sitteth upon the earth.
Even the great gods themselves
Stumble over me as I sit immovable as the great red boulder.
When the little ones make of me their bodies,
Even the great gods shall stumble over them and fall.
Even the great gods themselves
As they move over the earth pass around me as I sit immovable as the great red boulder.
When the little ones make of me their bodies,
Even the great gods themselves
Shall pass around them in forked lines as they travel the path of life.
Even the great gods themselves
Fear to stare me in the face with insolence.
When the little ones make of me their bodies,
Even the gods themselves
Shall fear to stare them in the face as they travel the path of life.

"Verily, at that time and place, it has been said, in this house,
He said to them: Behold the Black Bear, that is without a blemish, that lieth upon the earth.
Verily, I am a person who has made of the Black Bear his body.
Behold the god of night, that sitteth in the heavens.
Verily, I am a person who maketh the Black Bear to draw from the god of night its power.
Behold the great black boulder, that sitteth upon the earth.
Verily, I am a person who sitteth close to the great black boulder.
Behold the great black boulder, that sitteth upon the earth.
When the little ones make of the great black boulder their bodies,
Even the great gods themselves
Shall stumble over them and fall.
Even the gods themselves
As they move over the earth pass around me in forked lines as I sit immovable as the great black boulder.
When the little ones make of me their bodies,
Even the gods themselves
Shall pass around them in forked lines as they travel the path of life.

"Verily, at that time and place, it has been said, in this house,
He said to them: Behold the great white swan
Verily, I am a person who has made of the great white swan his body.
Behold, the god of night (the Wa-tse Do-ga, The Male Star, the morning star).
Verily, I am a person who has made of the god of night his body.
Behold the great white boulder, that sitteth upon the earth.
Verily, I am a person who has made of the great white boulder his body.
When the little ones make of me their bodies,
Even the gods themselves
Shall stumble over them and fall.
Even the gods themselves
As they move over the earth pass around me as I sit immovable as the great white boulder.
When the little ones make of me their bodies,
Even the gods themselves
Shall pass around them as they pass around the great white boulder.

"Verily, at that time and place, it has been said, in this house,
He said to them: Behold the male elk, that lieth upon the earth.
Behold the yellow boulder, that sitteth upon the earth.
Verily, I am a person who maketh the male elk to draw from the yellow boulder its power.
Behold Wa-tse Miga (the Female Star, the evening star).
Verily, I am a person who maketh the yellow boulder to draw from the evening star its power.
When the little ones make of me their bodies,
Even the gods themselves
Shall stumble over them and fall.
Even the gods themselves
As they move over the earth pass around me as I sit immovable as the great yellow boulder.
When the little ones make of me their bodies,
Even the gods themselves
Shall pass around them as they pass around the great yellow boulder.
Even the gods themselves
Fear to set teeth upon me in anger.
When the little ones make of me their bodies,
The gods themselves shall fear to set teeth upon them in anger."[22]

[22] Francis La Flesche, "The Osage Tribe," *Thirty-sixth Annual Report, Bureau of American Ethnology*, pp. 107-110.

The attempt of the Indian to communicate with the animals was not limited to mental experiences in dreams. It is on record that the warriors held long conversations with animals and received advice from them. A certain Ponca chief solemnly stated that leaders of war parties often relied on crows or wolves to foretell events. He related the following story about a chief who led a party against the Pawnee:

"One evening a wolf was heard howling and Shudegaxe (one of the chiefs) listened to it for a long time, when he said to his warriors, 'The wolf which you have heard howling has promised me success if I would vow to feast with him. I now give such vow and I will eat a part of the flesh of any enemy we may slay'." The story further relates that the party was successful and the chief ate some human flesh wrapped in buffalo fat.[23]

The foregoing chant of the puma illustrates also the superstitious attitude of the Indian toward the inanimate objects of his environment. He did not actually *worship* the objects which he held as fetiches or mentioned in his ceremonies. These objects, and the forces of nature—sun, earth, moon, stars, winds, water—all were exponents of mysterious, all-encompassing powers. These objects, as visible manifestations of these powers sometimes apprehended in human form, filled him with fears and the desire to propitiate them and induce friendly relations.[24]

One old chief expressed himself on this point as definitely as any Indian could: "Everything as it moves, now and then, here and there, makes stops. The bird as it flies stops in one place to make its nest, and in another to rest in its flight. A man when he goes forth stops where he wills. So the god has stopped. The moon, the stars, and the winds he has been with. The trees, the animals are all where he has stopped, and the Indian thinks of these places and sends his prayers there to reach the place where the god has stopped, and win help and a blessing.' . . . 'The tree is like a human being, for it has life and grows; so we pray to it and put our offerings on it that the god may help us'."[25]

[23] Alice C. Fletcher, "The Omaha Tribe," *Twenty-seventh Annual Report, Bureau of American Ethnology*, Part I, pp. 446ff. With all this veneration for animals there is something comic, and at the same time pathetic, in the impulse that led the primitive hunters to pluck out their beards. They considered that hair on the face made them look like animals; and they wished to differentiate themselves to that small extent, at least. (J. A. Mason, "The Chief Singers of the Tepecano," in *American Indian Life*, ed. by E. C. Parsons, New York, 1922, p. 212.

[24] Fletcher, *Peabody Museum Reports*, Vol. III, p. 276, note 1.

[25] Fletcher, *op. cit., loc. cit.*

"Matter to the Indian was not something which had given birth to mind, but something which had formerly been mind, something from which mind had been withdrawn, was quiescent, and out of which it might again be aroused. This mind was visibly manifested in the so-called 'living things,' as plants, and still more so animals. . . . Not that mind was attributed to one individuality, but that it was recognized as everywhere of the same nature.

"Its manifestations were not in all cases equally powerful. Its manifestation in the panther, bear, and bison was more powerful than the one in the raccoon, the rabbit, and the squirrel. Some 'inorganic' powers—as, for instance, the wind, the rivers, and the sea—were, however, even more powerful. Peculiarly powerful were the thunder and lightning. . . ."[26]

It is a mistake to suppose that the Indian had any idea of a Supreme Creator, in the Christian sense. When he spoke of the "Great Spirit," he was usually making a concession to the omnipresent missionaries. "Very far removed from this tremendous conception of one all-powerful deity was the Indian belief in a multitude of spirits that dwelt in animate and inanimate objects, to propitiate which was the chief object of his supplications and sacrifices. To none of his deities did the Indian ascribe moral good or evil. His religion was practical. The spirits were the source of good or bad fortune, whether on the hunting path or the war trail, in the pursuit of a wife, or in a ball game. If successful, he adored, offered sacrifices, and made valuable presents. If unsuccessful, he cast his manitou away and offered his faith to more powerful or more friendly deities.

"In this world of spirits the Indian dwelt in perpetual fear. He feared to offend the spirits of the mountains, of the dark wood, of the lake, of the prairie. The real Indian was a different creatures from the joyous and untrammeled savage pictured and envied by the poet and philosopher."[27]

Storms and lightning, to choose another instance of association, were related to war; and the god or spirit of thunder was the god of war. In the attempt to be friendly with this horrific power, the Indian was wont to claim relationship, as in the following Omaha chant to the thunder, here referred to as "grandfather."

[26] The personification of lightning in various forms of bird and serpent has already been referred to, pp. 10-12.

[27] H. W. Henshaw, "Popular Fallacies," *Hodge* II, p. 284.

"Behold how fearful your Grandfather appears!
Your Grandfather is fearful, terrible to see!
Behold how fearful is he, your Grandfather!
He lifts his long club, fearful is he.
Your Grandfather gives fear to see!
Behold how fearful to see, fearful to see!" [28]

Obviously there is something of the spirit here which prompted the concept of Jove and Thor, except that the Omahas did not definitely visualize the thunder in human form. They merely called him "grandfather" to be polite.[29]

This desire to propitiate the forces of nature gives a clue to a great deal in Indian life and thought. Everything was a mystery to be feared and propitiated by ritual, taboo, fasting, prayer, song, or any other fantastic observance he could think of. Every cult had two parts, the belief, or mythology, and the ritual, or act by which the mysterious supernatural power was controlled. "This livid strand runs through all supernatural ideas from those of the savage to the civilized man."[30]

The particular type of ceremony and the particular hierarchy of gods varied according to the environment. Zoomorphic forms were naturally chosen by the hunters; but among agricultural people, totems of corn, rain, and the like replaced the zoomorphic forms. "The forces of nature thus became totems, sun, moon, earth, some with animal, others with human personality. A totem of a family became a tutelary god and groups of tutelary gods with a regal head became a council of gods as among the old Greeks."[31] These beliefs roughly coincide with culture areas, although a few concepts migrated. The Eskimo lacks animal tales. In the eastern Allegheny region, meteors were personified by the Iroquois and Algonquian tribes as fire-dragons and flaming heads. In the northwest, among the Haida and Tlingit tribes, the raven was important; among the Nez Perces, the coyote.[32] Ritual proceedings reflected the dif-

[28] A. C. Fletcher, "The Omaha Tribe," *Twenty-seventh Annual Report, Bureau of American Ethnology*, pp. 433-6.

[29] Fletcher, *Peabody Reports*, III, p. 276, note 1.

[30] Dr. J. W. Fewkes, *The Tusayan Ritual*, pp. 683-4.

[31] *Ibid.*, pp. 688-9.

[32] W. H. Miner, *The American Indians North of Mexico*, p. 142ff. Among all Indian tribes those animaals were considered important who seemed to be successful in the struggle for existence, even when not harmful, or particularly powerful. Thus the crows always feasted on the slain after the battle or the hunt, though they had not shared in the toil of the slaughter. The wolf was

ferent beliefs." Thus the Pawnee had a human sacrifice and a whole yearly cycle of ceremonies centering around the cultivation of maize. On the lower Mississippi were temples to the sun. . . . In the plains area, beyond the encroachments of maize culture, we have the sun dance festival."[33]

Formal ceremonies were by no means the extent of the Indian's endeavor to ally himself with the unknown and terrible forces around him. His entire life was regulated by a series of extraordinary taboos, acts of self-torture, and personal sacrifice. The question of taboos fortunately lies without the bounds of this discussion.[34] Some mention must be made, however, of the "Shamans," "medicine men," or "witch doctors," individuals in every group who had greater ability than the rest to control the supernatural. These gentry were always willing to sell their superior spells and incantations for a consideration, usually a high one.[35] Occasionally these primitive priests achieved an organization, crude prototype of the great religious organizations of a more sophisticated culture. It is highly probable that in many or most of their performances and frauds they hypnotized themselves.[36] Since disease was always assigned to a demoniac cause, curing was entirely in the hands of the shamans. Their practices being usually most unhealthful, and it is a wonder that any seriously sick Indian ever survived. It is to be noted, however, that "medicine men who persistently failed to make cures were sometimes killed by the angry relatives of their deceased patients."[37]

In concluding this brief review of Indian ideas regarding the supernatural, it must be added that these included belief in a future

esteemed for similar reasons, and also for his presumed qualities of ferocity, with superstitious veneration, if they existed in sufficient numbers, or had some marked characteristic. There are many stories, for instance, with the rabbit as the hero—sometimes in the role of scape-goat, sometimes as trickster.

[33] Clark Wissler, *The American Indian*, p. 183. Two and a half centuries of association with the white man have not served completely to break down the old religious organizations of the Indian. Among the Ojibway the Midewiwin society still exists. Outwardly Christianized, many Indians even at the present day still cling stubbornly to the old beliefs, and put more faith in the medicine man than in the Christian missionary. (W. J. Hoffman, "The Midewiwin, or Grand Medicine Society of the Ojibway," *Seventh Annual Report, Bureau of American Ethnology*, p. 151ff.) The difficulty of obtaining the secretly cherished religious rituals has already been alluded to (p. 5).

[34] For discussion of taboos see W. J. McGee, "The Siouan Indians," *Fifteenth Annual Report, Bureau of American Ethnology*, pp. 176ff.

[35] See A. M. Stephen, "When John the Jeweler was Sick," in *American Indian Life*, pp. 153-157.

[36] J. A. Mason, "The Chief Singer of the Tepecano," *American Indian Life*, p. 216ff.

[37] A. L. Kroeber, "Earth Tounge, a Mojave," *American Indian Life*, p. 197.

existence. In most cases the nature and location of the land of the dead was but vaguely imagined; but mortuary rituals and articles placed with the deceased for future use indicate that the tribesman was presumed to continue a life analogous to his former one.[38] Furthermore, it does not appear "that belief in a future life had any marked influence on the daily life and conduct of the individual. The American Indian seems not to have evolved the idea of hell and a future punishment."[39] That refinement of self-torture was invented by the more ingenious white man.

One of the finest pieces of Indian literature which I have been able to discover is the following Iroquois song in commemoration of a warrior slain in battle. It expresses excellently the Indian's attitude toward death, his uncertainty as to the future of the soul:

"Oh, our brother! alas! he is dead—
He has gone; he will never return!
Friendless he died on the field of the slain,
Where his bones are yet lying unburied!
No tears of his sisters were there!
He fell in his prime, when his arm was most needed to keep us from danger!
Oh, where is his spirit? His spirit went naked,
And hungry it wanders, and thirsty,
And wounded it groans to return!
Oh, helpless and wretched our brother has gone!
No blanket nor food to nourish and warm him;
Nor candles to light him, nor weapons of war!
Oh, none of these comforts had he!
But well we remember his deeds!
The deer he could take on in the chase!
The panther shrunk back at the sight of his strength!
His enemies fell at his feet!
He was brave and courageous in war!
As the fawn he was harmless; his friendship was ardent;
His temper was gentle; his pity was great!
Oh, our friend, our companion is dead!
Our brother, our brother! alas, he is gone!
But why do we grieve for his loss?
In the strength of a warrior, undaunted, he left us,
To fight by the side of the chiefs!

[38] Brinton, *The American Race*, p. 54ff.
[39] H. W. Henshaw, "Popular Fallacies," *Hodge*, II, p. 289.

His war whoop was shrill!
His rifle well aimed laid his enemies low,
His tomahawk drank of their blood;
And his knife flayed their scalps while yet covered with gore!
And why do we mourn?
Though he fell on the field of the slain,
With glory he fell;
And his spirit went up to the land of his fathers in war!
Then why do we mourn?
With transports of joy they received him,
And fed him, and clothed him, and welcomed him there!
Oh, friends, he is happy; then dry up your tears.
His spirit has seen our distress,
And sent us a helper, whom with pleasure we greet.
Deh-he-wa-mis has come; then let us receive her with joy!
She is handsome and pleasant!
Oh, she is our sister, and gladly we welcome her here.
In the place of our brother she stands in our tribe.
With care we will guard her from trouble;
And may she be happy till her spirit shall leave us."[40]

If anything, this Iroquois song is more cheerful and positive about future welfare than most. Very vivid also is the unmoral nature of the philosophy here expressed. All the merits of the dead were the practical ones of strength, ferocity against enemies, and gentleness and loyalty to his friends. The whole piece has a truly Roman spirit. Particularly characteristic of the Iroquois is the latter part, in which the newly-adopted member of the tribe is welcomed. In all their literature the Iroquois expressed a practical resolution and determination of the living to carry on and perpetuate the tribal organization despite all misfortune, defeat, and death. One is reminded of the Romans in the face of Hannibal.

Somewhat more pessimistic but of the same general tone are the following Omaha war songs, here introduced for comparison. The Omahas, living in Nebraska near the Missouri river, were a much less advanced tribe than the New York and Pennsylvania Iroquois.

[40] Wm. Beauchamp, "Civil, Religious, and Mourning Councils and Ceremonies of Adoption of the New York Indians," *New York State Museum, Bulletin* 113, pp. 409-410, quoting James E. Seaver, *Deh-he-wa-mis; or the Life of Mary Jemison*, New York, 1842, pp. 57-59. It is well to recall that these flowing and metrical lines hardly represent true Indian *style*, though the ideas are undoubtedly genuine.

Nevertheless Omaha songs of death show a generic likeness to those of the Iroquois:

"There is no evading death.
The old men have not told that any one has found a way to pass around it.
The career of a leader is difficult of accomplishment."[41]
"No one has found a way to avoid death, to pass around it;
Those old men who have met it,
Who have reached the place where death stands waiting,
Have not pointed out a way to circumvent it.
Death is difficult to face!"[42]

The compositions quoted above indicate another phase of the Indian's point of view—his attitude toward himself. One can summarize it by saying that his world was strictly egocentric. "Among the Indians as among all prescriptorial peoples, the ego is paramount, and all things are described, much more largely than among cultured peoples, with reference to the describer and the place he occupies: Self, Here, and if need be, Now, and Then are the fundamental elements of primitive conception and description, and these elements are implied and exemplified rather than expressed in thought and utterance."[43]

I cannot forbear including one final selection to illustrate the egocentric attitude. It has been remarked (p. 28) that the Indian attached great importance to names, considering them to have magic power. It was the custom in the Omaha tribe for men on the war path to choose new and more bellicose names in order to augment their natural powers. Standing then, as it were, in the center of the Universe, the leader of the war party proclaimed aloud to the listening wilderness:

"Thou deity on either side, hear it; hear ye that he has taken another name. He is indeed speaking of having the name He-Fears-Not-a-Pawnee-When-He-Sees-Him. Ye deities on either side [darkness and the ground], I tell it and send it to you that you may hear it, haloo! O, Thunder, even you who are moving in a bad humor, I tell you and send it to you that you may hear it, haloo! O ye big rocks that move, I tell you and send it, etc. O ye big hills that move, I tell you, etc. O ye big trees that move I tell you, etc.

[41] Alice C. Fletcher, "The Omaha Tribe," p. 276.
[42] *Ibid.*, pp. 430-431.
[43] McGee, *The Siouan Indians*, p. 165.

O all ye big worms that move, O ye snakes that are in a bad humor, ye who move, I tell you, etc. All ye small animals, I tell you, etc."

To this address were added the following promises, and others of like nature:

"He speaks as he stands of striking down one in the very midst of the ranks of the foe, who shall stand in great fear of him!" "He is speaking of taking hold of one without a wound right in the midst of the foe!"[44]

Thus members of all tribes alike deified their animal associates, regarded the elements with mystic fear, assassinated and fought each other, fell in love, held councils, made harangues. Wherever the maize was cultivated there were corn songs and prayers for rain; wherever it rained, the thunder and lightning were apostrophied in various guises. Thus, among all the tribes there obtained a psychological unity, by which is meant similarity in procedure of thought.

[44] J. Owen Dorsey, "Omaha Sociology," *Third Annual Report, Bureau of American Ethnology*, p. 324ff. There is a certain grandiloquence to this that is faintly reminiscent of the *Benedicite Omnia Opera domini* of the Anglican prayer book.

SCIENCE, PHILOSOPHY, AND RELIGION

BY NORMAN BOARDMAN

THE fundamentalist-modernist controversy has reopened discussion of the so-called conflict between science and religion. This conflict is largely a matter of definition. If one wants to be so stupid as to define religion in terms that are incompatible with science, there is, of course, an inevitable conflict between these fields of interest. Thus if a man insists that religion is a matter of belief in spirits or authority of the scriptures, it is, by hypothesis, opposed to science. Science has no use for spirits and dogmatic authorities would only thwart its purpose at every turn.

There is no real conflict between science and religion. Fundamentalist and modernist are unable to get on common ground because of a fundamental difference in types of mind. The one has a dogmatic and authoritative, the other scientific and reflective outlook on life. The trouble with the fundamentalist is that he has not been scientific in his attitude toward the fundamental.[1] His fundamentals are not fundamental from the viewpoint of the modernist; they are ready-made, fixed and dogmatic. The modernist, in true scientific spirit, insists upon a more philosophic attitude toward his fundamentals. The problem for religion at this point, as he sees it, is that of discovering what is fundamental to religion rather than starting with the supposed fundamentals of religion and dubbing as irreligious everything which does not square with these ready-made fundamentals. The fundamentalist solves this problem by ignoring it; his fundamentals block inquiry by setting up barriers beyond which thought is not free to go. His attitude in the matter is therefore most unscientific, and it is not at all surprising that the modernist cannot go with him in accepting his fundamentals as fundamental. The two simply speak a different language. The modernist has no sympathy with the antiquated viewpoint of the fundamentalist and the fundamentalist is actually afraid of the

[1] For further discussion of this point see my article on "The Role of the Fundamental," *International Journal of Ethics*, Jan., 1923.

modernist's point of view. Hence to get them together is virtually impossible, outside of re-educating the fundamentalist.

Needless to say, our interest here in religion is from the standpoint of the modernist. Our problem is that of finding the fundamentals of religion rather than starting all other problems with them. We shall show how the difference between science, philosophy and religion is primarily one of attitudes and that these attitudes are supplementary rather than conflicting.

The phenomena of religion may be approached from two main angles, the metaphysical and the psychological. Of these viewpoints, the latter is the more fruitful one for our purpose. The religious and the scientific viewpoints were once competitors as offering a rational explanation of the universe. Both have their implications concerning reality, but both have been forced to abandon their claims at this point. If it is true that science has forced religion to give up its claims of explaining the universe, it is also true that philosophy, in some measure at least, has forced science to give up its claims on this score. In fact, modern science does not pretend ultimately to explain anything; it merely endeavors to find out and accurately describe what takes place in nature. The "how" and the "what" of things are as baffling for the scientist as they are for the philosopher. Thus religion and science are on the same plane so far as metaphysics is concerned.

The difference between the metaphysical outlooks of science and religion may be well described by Doctor Höffding's "circle of existence." Inscribing a circle of existence, religion would trace all events to the center while science endeavors only to establish the connections between events at the periphery of the circle. Its center is God from whom all causal series flow; the periphery is merely the series. Religion is interested in the universal cause while science confines itself to specific causes. A cause that explains everything does not explain anything from the standpoint of control. Hence a universal cause does not explain anything for scientific purposes. If you are ill and wish to regain your health, it does not help you any to know that God has caused your pain. As an intelligent individual, you naturally prefer the diagnosis and treatment of a competent physician, one who knows something definite about the relations between pain, disease, food, health, etc. You would not trust your body for surgical treatment to one who simply knew that God must be causing some kind of a pain somewhere in your physical anatomy. Specific relations are essential to science.

Although religion traces all events to the center of the circle, figuratively speaking, which it calls God, it cannot demonstrate His existence. It is not necessary here to consider the historical arguments for the existence of God. Suffice it to point out that they convince those who are already convinced, and need no convincing, but fail to convince those who most need it. They have never had a reputable standing in philosophy since the time of Immanuel Kant. One of Kant's great contributions to philosophy was that he showed once and for all time that the three great historical arguments, viz., the ontological, the cosmological and the teleological proofs, prove nothing so far as the existence of God is concerned. Since that famous "infidel," Robert C. Ingersoll, "with tears of pity put out the flames of hell," atheism has been regarded as somewhat of a dead issue, but there seem to be movements for its revival at the present time. This issue, like many other historic questions, was not so much settled as it was outgrown. Or, as someone has well said: "Philosophy does not so much solve questions as it does give us insight into what kind of questions we have a right to ask." It is a commonplace observation that the little child and the "man on the street," about whom philosophers are wont to talk, can ask questions that will stump the most profound of thinkers. Ofttimes our "plain man" attributes this to ignorance on the part of the philosopher while he in turn has a tendency to pity his friend for his naivette.

Of all the fields that modern psychology has invaded, none is more interesting or enlightening than that of religion. Some of these have been subject to exploitation but in the field of religion, psychological investigations have thrown light on many of the problems that have perplexed philosophers throughout the ages. It by no means follows from this that thought has come to rest on ultimate questions, but it is safe to say that a new light and a better understanding have come through the psychological approach than had hitherto been gained by all the metaphysical speculations put together.

With the encroachments of modern science upon dogmatic theology from the beginnings of the overthrow of scholasticism to the present time, efforts to bring religion up to date have never been found wanting. These may be found in such movements as the religion of humanity as expounded by the French positivists and the religion of morality as represented by our Ethical Culture Societies. Huxley's religion of Fortitude, Spinoza's religion of Contem-

plation and the religion of the Creative Imagination as represented by Santyana and Russell are other cases in point. William James' classification of philosophers into the "tender minded" and the "tough minded" groups cuts across these various types of religion. But what is the common element, not only in these new religions, but in the old mythical religions as well? What is the greatest common denominator of religion? In answer to these questions the psychologist has found a fruitful approach through the concept of value. Wherever religious phenomena occur the value of hypothesis seems to describe most adequately the facts under investigation. Whether it be the myths and cults of primitive religions, the elaborate theology and ritual of the medieval catholic church, or the more progressive movements in religion today, religion at all points is identified with values.

Religion is interested in values while science is a method for control of values. But religion is more than an interest in values; it is a consciousness and appreciation of the highest-felt social values. If religion were to be stripped of its beliefs, its rituals, its sacraments and all the elaborate customs that have grown up around it, this consciousness and appreciation of what the group actually regards as most significant and important would be found to be the essence of religion. The ceremonies and sacraments, the cults and dogmas, the myths and superstitions that have surrounded its rites are merely attempts on the part of the group to control the values that are felt to be of supreme worth in the life of the group. The difference between modernist and fundamentalist here is not so much a difference as to ends and purposes as it is in means and methods of control. For the fundamentalist, the beliefs and superstitions of the past which have grown up about religious values, have actually become those values themselves rather than the symbols of those values. The symbol has been taken for the thing. For the modernist, who goes deeper into the meaning of his world, many of the old traditions and much of their symbolism can be discarded without destroying the values for which they have stood. But to expect the fundamentalist to see this is asking too much for to him there is no distinction between the thing and the thing as symbolized. To destroy the old symbol is to destroy the value which it represents. Because science has encroached on some of the beliefs and traditions of the old religion, it does not follow from this that it is opposed to religious values. The modernist sees in science a most powerful ally of religion as the most effective means for controlling

his values while the fundamentalist sees an irreconcilable conflict between the two because science would deprive him of outworn methods of control.

Religion is not a matter of belief; it is a matter of living. A man's life and not his belief is his religion. Religion is a matter of belief only in so far as belief is essential to conduct. Thus if a man believes that it is right to kill, and is ready to act accordingly, such belief is an important matter; it makes a difference in his conduct. On the other hand, what difference does it make as to whether or not a man believes in the virgin birth? Does belief in this dogma make a difference in conduct either one way or the other? If so, it may be an important matter, but for the most part, it is a difference that does not make a difference, and a difference that does not make a difference is no difference at all. It is fair to state that belief in dogmas is necessary only in so far as a man needs a policeman to govern his conduct. If he needs one in order to make him behave himself, well and good, but it is hardly fair to argue from this that all people need policemen in order to make respectable citizens out of them. Just as there are those who will not respect the law under any consideration, so there are those for whom all the religious dogmas and superstitions in Christendom would have no effect in keeping within the bounds of decency. It is probably true that God has always been a much more effective policeman than man has been, but religion surely has some other service than the police function to render and perform for society.

It was Matthew Arnold who once said that "three-fourths of life consists of conduct" and to this a pragmatist has added "that the other fourth consists of something not very much different in character." Those who would ground religion in authority as the only means for guiding conduct aright do but deceive themselves as to its effectiveness. The spirit of the age is one of revolt against unreasoned authorities, and they who think that the youth of the day will be kept in the straight and narrow path through religious authorities are but dwelling in a fool's paradise. The revolt of the youth of the land is marked and evident as revealed by Judge Lindsey's startling but remarkable investigations. Religious forms and authorities will work both ways, but while they may be the saving grace for one there are probably a hundred cases in which they are of little or no avail, if not actually harmful. The story is told of Jonathan Edwards, who when his daughter's suitor approached him on the subject that was nearest his heart, could not become reconciled

to giving his consent. The suitor was surprised and wondered why he should meet with opposition from such a kindly gentleman as Brother Jonathan. But this was just the trouble. The clergyman was too kindly: he was frank and honest. The prospective son-in-law wanted to know what was the trouble. Had his daughter not been baptized? Had she not been saved? Had she not joined the church? Had all the sacraments not been administered upon her? Oh, yes, all these had been done but her father felt compelled to be truthful and admit that "the spirit of God frequently comes into the soul of one with whom nobody can live." On the other hand, there are cases in which authority is the only thing that will work. A friend of mine once related an incident in his experience that is apropos. A young fellow once told him that if it were not for his belief in hell he most certainly would go there. My friend took the fellow and reasoned with him, showing him that there is no such thing as hell outside of that which we sometimes experience on this terrestrial planet, and, sure enough, the fellow did go there. There was a time when superstition had some utility, as Hobbes pointed out, but that time is fast going for the mass of mankind. We cannot expect to educate people and dupe them at the same time; the two attitudes conflict. Superstition and fear of authority may work in some cases of course, but such methods are futile for the normal, healthy, active and aggressive youth of today. Knowledge, insight, understanding and information are the things demanded by the youth of today, and there is no realm so sacred that it is not subject to his investigation. It is simply a question as to whether he shall be guided and directed in his experiences with life or as to whether he shall be left to his own devices. Ignorance and fear are methods that have never worked and they are methods that stand the least chance of working today that they have at any other period in history.

Religion is a matter of conduct and hence the inseparable relation between it and morality. It is a kind of life; it is living for the highest-felt social values. In as much as all values are a product of social relationships, i. e., they must occur in society, all values, to some extent, are social in character but some are more social than others. It is not only the greatest and the best, the most social of values but it is the highest-felt social values with which religion becomes identified. The values for which religion stands are those that are actually felt as most important and significant to the group. The social value of conduct or an institution is determined by the

extent to which these further group purposes and interests are determined by the group in question. At this point it is necessary to make a distinction between values which are most worth while and of the highest type in character and those which are felt as such by the group. These may coincide, provided the group purpose be a social purpose. Because an institution is felt of supreme worth by a group it by no means follows from this that such is actually the case. A striking example of this may be found in the institution of war which has always received religious significance, despite its verbal condemnation in peace time. The high tension in society produced by a state of war necessarily gives that institution a tremendous religious significance from the standpoint of values that are felt at stake in the struggle. The point here is not as to whether the values are really worth while or as to whether they are actually at stake but as to the fact that they are felt as such. Religion can no longer afford to assume an attitude of condonation toward such an institution as war. War has become an anachronism in modern society and if religion continues to sanction it, it is thereby rendered the worst form of hypocrisy.[2] The blessings of the church upon another world war would render organized religion a mere mockery. It is to prevent the sanctioning of unworthy causes by religion that religion needs philosophy.

Because of its interest in social values, religion has a tendency to become conservative. As Lester Ward has well said: "It is the great conservative force that holds the social world in its orbit." It has always been the great conservator of human values. But religion must seek and find new values as well as conserve the old ones. In this age of rapid and strenuous living, there is little to be said for a force that is merely conservative. We are living in a changing world and religion only blocks progress and defeats its own best interests when it becomes too conservative. Why cling to empty husks after life has long since been snapped out of them by the march of progress? The appeal from providence to progress is an indicator of the new sphere for religion. Although progress is difficult to define, it is one of the outstanding characteristics of the modern world. Religion should become a more progressive force in society. It is only as it so becomes that it is vitalized. It needs to imbibe some of the spirit of the immortal Woodrow Wilson who once said that he would rather lose in a cause that he knew would

[2] For further discussion of war morality, see my paper entitled, *Do We Need a Moral Equivalent for War?*

win some day than to win in a cause that he knew must ultimately fail. Our fundamentalist and anti-league of nations' friends may well take warning at this point.

The greatest values are personal in character: hence the tendency of God to become personal. Thus He is good; He is righteous; He is merciful; He is just; He is benevolent; He is perfect, omniscient, omnipotent, and omnipresent. Why? Because these are the characteristics in human relations that we either most like to find or should like to find. In either case, we value them most, but for those of us who perhaps are of a more "tough-minded" nature, wisdom, power and presence will be sufficient as over against perfection, not only in these but in the moral attributes of the infinite God as well. "Tender-minded" folk will doubtless require the infinite God of the older theology but a finite God who possesses both the metaphysical and the moral attributes of the perfect God in relative degree, may be all that we have a right to expect. He needs our help much more than did the God of the old theology. But whichever He may be, both His metaphysical and His moral attributes may be accounted for by the value hypothesis. They are the finer and the nobler traits of human nature. Raise human values to a superior degree and you get divinity. That man is made in the image of God is only half the story: God is also made in the image of man. The power of God is like the power of an ideal. We make our own ideals but they turn around and make us. "Tell me the kind of god a man worships and I will tell you what he is" is true, but the reference is to his activities, his interests and his pursuits rather than to his mere beliefs and pretensions. Obviously the form is a dynamic and vital factor in the life of an individual whereas the latter is of no particular power in the molding of character. *God is the social ideal.*

Here someone may object to this "subjective religion" on the grounds that our God is merely psychological. What of His existence? This raises the question as to the relation between value and reality: a most interesting and perfectly legitimate question, but one that would take us somewhat beyond the limits of our present discussion. In passing, it might be well to point out, however, that the answer will depend somewhat on our conception of reality. Much confusion in the matter has doubtless been due to the tendency to think of reality in merely physical terms. *God is a social reality.* May not social realities be as real as physical existents? The tendency to think of reality in physical rather than social terms is prob-

ably due to the priority of development of the physical as compared with the social sciences. So far as metaphysics is concerned, however, physical existents have about as ghostly an appearance as social realities after the philosopher gets through with them. If anything, the latter seem to have the more respectable standing in the court of reality.

The old anthropomorphic conception of God as a ruler seated on his heavenly throne wearing a golden crown and wielding a golden sceptre is essentially autocratic in character and arose in the days when men believed in the subject-ruler relationship between the individual and the state. It is here interesting to note that although Christianity has always denounced materialism, it was unable to eliminate the element of gold, either from the picture of its heaven or the picture of its god, due to the fact that men do actually desire gold. Lack of "the root of all evil" has probably been responsible for as much evil in the world as has the possession of the root in super-abundance. The Christian religion still carries vestiges of its tribal and feudal origin in such terms as "The Master" and "The Lord." These were class distinctions that were recognized in the social order of the times and, like ruler, were attributed to the religious symbolism which reflected the social and political conceptions of the day. God should no longer be thought of as a ruler but rather as a companion and helper. He helps man to help himself. A more democratic conception of God is much more fitting for present-day religion. Such a conception might very appropriately regard Him as a fit candidate for President of the League of Nations and Chief Justice of the World Court.

Religion personifies; science depersonalizes. If you want to understand yourself you must treat yourself as a thing. Science says *it thinks*. It views nature as impersonal and man as a part of nature. Science naturalizes man and religion humanizes nature. Both processes are necessary. The difference between science, philosophy and religion is one of attitudes. If human nature were a simple affair we should not have these different viewpoints. Religion is an active, appreciative attitude toward value; philosophy is a critical, reflective attitude toward value; scence is non-valuational in its character. Philosophy applies a scientific method to value and thus becomes the meeting place of science and religion.

These are supplementary rather than conflicting attitudes. It is only by viewing them as such that harmony, proportion and perspective may be kept in life. If left to themselves without proper edu-

cation, they will have a tendency to pull apart just as will the intellectual, the emotional and the volitional aspects of self without such education. Just as it is quite possible for an individual to become unbalanced regarding these phases of the development of his personality, so is it perfectly possible for these dominant attitudes toward life as reflected in philosophy, science and religion to receive a disproportionate development in any given state of society. Indeed, the demands of an age of specialization such as the modern industrial world calls for, not only make such a development more dangerous than it has been at any other period in the history of civilization, but make imperative the preservation of balance in these attitudes if life and society are to continue and endure. An individual may be able to blunder his way through life with a lop-sided development of his personality, but the recent great war has taught us, or rather should have taught us, that it is no longer possible for civilization to endure with a corresponding lop-sided development of its philosophic, its scientific and its religious interests. Society must preserve a balance in these fields of interest if it is to protect itself against its own ultimate annihilation. This is the message of the greatest tragedy in history.

This is probably one of the greatest problems, if not the greatest problem, that confronts the world at the present time. The difficulty is not due to the fact that we do not have plenty of religion, plenty of science and plenty of philosophy. We are supplied with these in abundance, enough so at least to make this old world of ours quite a different place in which to live, and yet, behold the sorry spectacle of the human drama that is still ours to witness! Until the recent developments of modern science, man's ferocity at its best was somewhat harmless as his methods of destruction were unable to keep pace with his ferocity; but the situation is reversed today. Methods and implements of destruction have grown way beyond the resources and capacities of human nature for development of ferocity and hatred. Consequently it is necessary actually to whip nations into warfare at the present time. Even the whipping cannot fan the passions of men into a state of ferocity and hatred at all comparable with the destructiveness of the machines and devices they wield. Thus it is we find ourselves the victim of an institution because science, philosophy and religion are not free to perform their true functions and render their respective services to a needy mankind. A faculty psychology has always been more or less of a myth but a faculty world is a stern reality, and it is one

of the most serious problems for education at the present time.

We pride ourselves on our freedom and tolerance and yet social science is today in practically the same position as physical science in the days of Galileo and Copernicus, so far as its applications are concerned. With our knowledge of social science now extant we could make tremendous strides toward the solution of our social, political and economic problems, but we are not free to apply it. The corps of expert scientists that President Wilson had at work on the new peace was simply scrapped in the interests of "practical" politics. The result has been this period of exhaustion that we naively call "peace." It is true that we no longer give our heretics the rack and the thumb-screw or the stake as in the days of the renaissance: we have a much more cordial method of treatment. We simply quietly and politely deprive them of an opportunity to make a decent and respectable living. With the application of the physical sciences to industrial processes and the world of human relations still ruled by passion, prejudice and superstition, humanity today is facing the abyss of destruction.

Never has religion been in such a position to realize its values as it is at the present time. It has had to resort to other worldliness and project its values into another realm in the past, so hopeless was the condition of the world for their realization and so impotent was it in coping with its problems. But science has changed this outlook for religion if she will but co-operate with it. Religion needs science in order to actualize its values. *Through science the ideal may be made the real.* Science needs philosophy in order properly to direct its interests. Science is cold; it seeks neither the good nor the bad of its phenomena. It merely inquires as to how nature behaves but nature itself is neutral regarding value so far as science is concerned. The methods of science are as effective for pestilence and disease as they are for life and health, and without philosophy to guide this spirit of investigation, science will only enslave man rather than set him free as is its true mission. Religion needs philosophy to analyze its values; without such analysis it has a tendency to degenerate; it is apt to become all heat and no light. Philosophy gives light to religion and thus directs its energies into worthy and constructive enterprises. Philosophy needs religion in order to accomplish its purposes. Religion furnishes the necessary motor power for getting results in the world of action. It is the human dynamo, but like an automobile, it needs direction. Religion without science is impotent while science without religion is cold; science

without philosophy is brutal while philosophy without science is empty; philosophy without religion is sterile while religion without philosophy is blind.

Although modern society presents many more classes than are here represented by science, philosophy and religion, these attitudes are inter-penetrative and cut across various classes as they represent three dominant attitudes toward life. Men possess these attitudes in varying degrees and the work of the world necessitates a division of labor based on individual differences. We may find an interesting parallel in Plato's *Republic* in which justice consists of each individual doing that for which he is best fitted. Our philosopher is still our guide although Plato's dream of the days when philosophers should be kings has by no means been realized. Our warrior class has been succeeded by the man of action in the new crusader as the champion and protector of religious values. But he is a man of peace rather than a man of war, while our husbandmen have given way to the modern scientist who holds in his possession the secrets of nature and can make nature do his bidding. The analogy will hold still further for surely if ever the philosopher needed wisdom he needs it today and if ever the man of religion needed courage he needs it today. But it must be a new courage; it must be a civic rather than a military courage. The world is rich in military courage but it is sadly lacking in civic courage. Perhaps we might exchange the virtue of temperance for the patience of the scientist, but our picture is not complete until we emphasize, as Plato did, the fact that each must possess justice, for it is justice, alone, that can preserve the proper balance and harmony in society. Justice in the individual was a harmony of the virtues and so justice in society is a harmony of interests.

That religion is powerless to realize an ideal social order without the instrumentality of science is well illustrated by its failure to abolish the institution of war from the earth. For nearly two thousand years the gospel of The Prince of Peace has been preached throughout the civilized world, and yet, in the second decade of the twentieth century, the church of Christ found itself as helpless as a new-born babe to prevent that hell that was turned loose upon the world in August, 1914. Peace is not an impossible goal for humanity; it is more than a beautiful dream; it is a value that may become an actuality. It can be realized, provided we are willing to assume a scientific attitude toward it. Like every value in human experience, it has its price and this price is the reconstruction of ideas

that represent recognized values, values which, although they may not be recognized in the world of thought, are tacitly implied in the world of action. We cannot continue to think in one world and act in another and expect to get peace.

Another excellent illustration may be found in home life in connection with the value of love. Surely this is one of the greatest, if not the greatest, value that life affords. Yet without knowledge and insight into many of the subtleties of the marriage relation, the matrimonial ship may be destined for the rock-bound coast of unhappiness, despite the best of motives and intentions. This is but one instance in home relations but many might be cited. Health, birth control and food supply are other cases in point.

It is no more reasonable to suppose that all men are religious than it is to assume that they are all philosophers. It is probably true that men do not vary in their capacity for the appreciation of value quite to the extent that they do in their intellectual attainments, and yet there are those in whom this capacity approaches closely to the zero mark, if it does not actually reach it, just as there are those in whom the same condition obtains in the realm of the intellect. Some people are more religious than others because they possess a greater capacity for responding deeply to the nobler and richer interests of life. We are religious to the extent that we respond to the highest and best things in life. Since religion's prime interest is that of finding and conserving the most social of values, it is only natural that it should become interested in ultimate questions. It is at this point that its interests are closely related to the metaphysical aspects of philosophy. To restrict it to this capacity for enjoyment of another realm, as Burns does,[3] would seem to render it too esoteric in character.

The introduction of a philosophic element into religion brings with it, relative, as over against absolute standards in ethics and a practical, as over against the absolute absolute of the old religion. These in turn call for problematic attitudes and it is questionable as to whether the same enthusiasm can be gained for "practical absolutes" and "hypothetical imperatives" that has hitherto been gained for the "absolute absolutes" and "categorical imperatives" of the past. Some of the old religious enthusiasm will doubtless be lost. This is all too true, but what religion may lose in heat it will gain in light so that the loss has its compensating value. Perhaps only

[3] "The Old Religion and the New," *International Journal of Ethics*, Oct., 1924.

the combustible and inflammable heat may be lost in the transaction, and if so, who would want to revive it? However this may be, there is little to be said for a religion that does not square with life and life is but one problem after another. The late Professor Foster happily and expressively put it when he said that "Life is a matter of problemizing, reproblemizing and deproblemizing." Philosophy's contribution to religion at this point may well prove a blessing in disguise.

It may help religion to forget its petty theological controversies and its narrow sectarian disputes and see with Ingersoll his vision of *The Cooperative State* and ally itself with science for the making of this vision a reality:

"I see a world where thrones have crumbled and where kings are dust. The aristocracy of idleness has perished from the earth.

"I see a world without a slave. Man at last is free. Nature's forces have by science been enslaved. Lightning and light, wind and wave, frost and flame and all the secret subtle powers of earth and air are the tireless toilers for the human race.

"I see a world at peace adorned with every form of art, with music's myriad voices thrilled while lips are rich with words of love and truth—a world in which no exile sighs, no prisoner mourns; a world on which the gibbet's shadow does not fall; a world where labor reaps its full reward; where work and worth go hand in hand; where the poor girl in trying to win bread with the needle—the needle, that has been called 'the asp for the breast of the poor'—is not driven to the desperate choice of crime or death, or suicide or shame.

"I see a world without the beggars' outstretched palm, the miser's heartless, stony stare, the piteous wail of want, the livid lips of lies, the cruel eyes of scorn.

"I see a race without disease of flesh or brain—shapely and fair, the married harmony of form and function—and, as I look, life lengthens, joy deepens, love canopies the earth; and over all in the great dome, shines the eternal star of human hope."

It may not be a moral universe such as we should like to have it, but it is for most part at least, a universe that is capable of sustaining a moral order if we will but co-operate with it, even though such co-operation may require of us "the massing of interests against a reluctant cosmos." It is for the philosopher to see this, the scientist to show the way and the religionist to bring it about. "In union there is strength." The fundamentalist, who apparently

is more interested in where man came from than where the world is going, would have us believe that religious faith consists of believing things that are hard to believe, propositions that are an insult to our intelligence, while the modernist sees in religious faith the untold and unrealized possibilities of the universe for humankind. Science takes for its axiom the conservation of energy; religion takes for its axiom the conservation of value. Neither can prove its axiom. To believe that somehow or somewhere the values for which we live, the interests for which we strive and the ideals for which we struggle may be realized and conserved is all that religious faith requires of us.

AN ESSAY ON NON-MIRACLES

BY E. T. BREWSTER

NOT all people who believe that miracles occur, will agree as to what a miracle is. Still less will they agree as to the nature of non-miracle. Nevertheless, everybody seems to take it for granted that "non-miraculous" events are completely understood. All we have to do is to accounts for events of the other sort which we call "miraculous." But the problem is by no means so simple.

One point, however, everybody seems agreed on. A miracle is always "a violation of Natural Law," or else it is a case of a "higher Natural Law" "interfering with" or "setting aside" a "lower." But a non-miracle is thought to occur "by the operation of Natural Laws" and so does not have to be discussed at all.

It all sounds very simple—until one reflects that "natural law" is itself a highly ambiguous term, that has at least three distinct meanings. If one confuses these meanings, still more if one jumps back and forth rapidly from one meaning to another, one can spin out a long argument either for or against "miracles," according to the side he happens to choose. So the whole problem really turns on what one really means when he says "law of nature."

He may have in mind—though commonly he does not—an old pre-scientific folk sense, an epigramatic summing up of folk experience: All men are mortal; water seeks its level; a straight line is the shortest distance between two points; honesty is the best policy. All these statements are true as a matter of general commonplace observation. But nobody maintains that they are in any wise universally or absolutely true, so that, for example, dishonesty might not prove efficient under some conditions and a straight line take on unexpected properties in non-Euclidean space.

This is the sense of "law of nature" in Hume's *Essay on Miracles.* And of course, there goes with it the corresponding sense of "mir-

acle." It has always been a simple matter to refute "St. David" by pretending that he is using the two words in some other of their various meanings. But "law of nature," in this sense has neither scientific nor philosophical nor theological standing. It simply is a formulation of folk experience; the perfectly *naive* interpretation of things as they appear. Such laws of nature are necessarily "violated" whenever anything unusual happens.

In sharp contrast to this meaning is another, which like a good many of our important ideas we owe chiefly to Roman stoicism.

The universe, for the Stoic, is an original and self-existent chaos, which, at least in part, has been subdued to order by the divine *logos*. In other words, God orders the affairs of the cosmos very much as the Roman emperor orders the affairs of the civilized world. The Emperor issues edicts, and men obey. God lays down "laws" which "govern" the operations of nature. So far, then, as nature is rational and orderly it obeys these specific regulations of the divine reason.

But this idea of "law" as something imposed upon "matter" by the word of God, is evidently a very long step beyond the folk meaning of the same word. This says merely: things commonly happen thus and so. Probably they will happen the same way again. But maybe they will not. Who knows? As Hume put it, in effect, things have happened thus and so, with so few exceptions, if any, that it becomes the safer bet that people who think they happen otherwise are mistaken. But there is nowhere any idea of necessity or compulsion or any will of God to make anything happen one way or another. But the Stoic idea makes the whole affair much more serious. God has laid down the "law." The universe obeys. Only he who made the law can alter it. This is a noble idea; but like the other, it is quite pre-scientific.

It has persisted unchanged all down through the Christian ages to the present time. St. Augustine, for example, has "God the maker of all natures . . . from whom is all the law and number and order of nature." Spinoza especially played up the idea. Kepler is quoted as saying of his three Laws of Planetary Motion, "I think God's thoughts after him." Kepler was pre-Newtonian, and having virtually no idea at all of what we now call "mechanical causation," thought that the planets are carried round the sun by angels. His three famous laws, therefore, were literally verbal orders issued to the angels of the moon and earth and planets to act precisely so and so, until further notice.

One sees the same idea daily in all sorts of forms. "The laws of nature presuppose a Law-Giver." "God cannot be bound by his own laws." "The reign of Natural Law." Or as an eminent Modernist preacher puts it—he does not believe in miracles, but he has the pre-scientific idea of "law"—"I cannot believe that the laws of nature were ever violated; for the simple reason that God himself has taught me, as he is teaching all our sons and daughters in every modern university of the western world today that these laws are immutable throughout eternity. . . ."

The fallacy is, of course, obvious. Nobody has any possible way of finding out whether "these laws" *in the scientific sense of "law"* are or are not "immutable throughout eternity." The oldest of them has been checked up for only about three hundred years, which is a long way short of eternity. No law of science is known to hold exactly, and not a few of them have had to be abandoned because they have proved not to work at all. The trouble is that our eminent divine, like many another of his fellows, uses "law of nature" in the old Stoic sense; and then transfers this idea to scientific people, as if they use "law" in this Stoic sense—as they never do.

For the scientific meaning of "law of nature" ties up with the folk meaning of the word, not with the Stoic. A law of science, in the modern sense, is a formula, usually in mathematical terms, by means of which we can predict, often with a high degree of accuracy, what is most likely to happen in the future. "The entire task of science," writes the great chemist Ostwald, "is to establish such relations between measurable quantities that, some of these quantities being given, the others may be deduced." The laws of science are the technical devices, continually being expanded and improved, by which this end is more and more completely attained. Or as an uncommonly clear-headed theologian puts it, "Where as law was once thought of as a restraint imposed upon the universe from without and wielding an absolute power over nature, it is now thought of simply as our description of the behavior of phenomena."

See, then, what nonsense it makes when one attributes to scientific people the theological meaning of "natural law," and then interprets their language as if they really did ever use the term in that sense! The divine quoted above, having occasion to rebuke his bishop for his ignorance of modern ideas, went on to point out the impossibility that a human body which "weighed, let us say, one hundred and fifty pounds," could promenade the surface of the Sea of Galilee, "in utter defiance of the law of gravitation."

But the only "law of gravitation" that science knows anything about is the algebraic formula $F = \frac{G\,m\,m'}{d^2}$. The great Sir Isaac first wrote this out, and it proves most convenient for reckoning the time of the next eclipse, and the dates of Easter, and the weight of distant binary stars, and various other things that various persons want to know. But it does not cause eclipses nor Easter Sundays nor make the stars spin round. Therefore nobody can "defy" it. In fact, one does not "defy" anything algebraic. One defies bishops. Besides, the Relativists think the law of gravitation isn't true anyway!

What the Doctor of Divinity really means is that everybody, as a matter of folk experience, has to reckon with the *force of gravity*. Nobody really knows in the least why a human body which weighs, "let us say, a hundred and fifty pounds"—or even two hundred and fifty, for that matter—commonly sinks when it tries to walk on water, nor why it commonly does not sink when it walks on ice. But there is the general experience of the force of gravity. Newton analyzed, mathematically, our primitive folk idea of *force*. He set forth his highly important *theory* of Universal Gravitation, which has proved to fit a considerable number of facts, is part of conventional science, and may very well be true. He also formulated and tested his *law* of Gravitation, for the convenience of people who want to predict eclipses, date Easter Sunday, and the rest. But the "Law of Gravitation" has nothing to do with anybody's sinking in water. That misfortune can be accurately described in terms of gravity and Archimedes' Law and Pascal's Law, and various other scientific technicalities, none of which have the slightest bearing on the practical question. One simply sinks. Nobody knows why. All the "laws" do is to enable scientific people to tell without trying just what will sink and what will not, and how fast and how far. None of them have any "control" over anything. Our Modernist divine merely dragged in his Law of Gravitation by the ears, to make himself sound scientific, and to add another zest to the popular but cruel sport of bishop bating.

Miracles, in short, are "violations of natural law" only in the Stoic and theological sense of "natural law." The "laws of science" have no bearing on the matter at all. Questions of "force" in the scientific sense, may be involved. So also may questions of "matter," also in the scientific sense. We are continually discovering new properties of "matter" and we are continually gaining new con-

trol over "force." So one has always to use his judgment when confronted with a story of a new scientific achievement or an old miracle. But "law" in the scientific sense, is never involved in the credibility of any alleged "miracle" but only "law" in the theological sense.

Many a time, then, has the scientific world wished it had taken some other word than "law" for its predictive formulas, and let the clergy have the term to themselves. But the harm being done, the best we can make of a bad matter is to confine "natural law" and "law of nature" to the old Stoic compulsory sense, and to say "law of science" whenever we mean any one of the two or three hundred brief summaries of the facts of observation which we see in the scientific reference books.

In other words, this whole problem of miracles and non-miracles is entirely factitious. Events simply are. Nobody knows why.

I sit down to my typewriter and think "A." Forthwith, the proper finger hits the "A" key. But has anybody the remotest idea how a mental state operates to alter the position of bodies in the outer world? A recent discussion proposes to call this performance a miracle. Well, of course it is, in the sense that it is "a material change dictated by mind" and nobody knows how the trick is done. That is a perfectly good definition of "miracle"—only, where shall one look for a non-miracle?

But when I hit the "A" key, the "force"—whatever that may mean—sets in operation sundry springs and levers, until the letter prints. But no mortal knows why one body moves another, any more than he knows how an idea in his thought stream moves a body. The finger goes through the air; and it does not go through the key. The key is a rigid bar that is deformed inappreciably; and the ink ribbon is flexible and buckles under a like stress. These, I understand, are not miracles. But why not? Nobody has any idea whatever, why air and steel and silk do not behave alike.

All events, in short, are alike incomprehensible. Doubtless it is remarkable that the twig of a pair tree grafted on an apple, should still bear pears and not apples. But it is equally remarkable that trees growing out of the ground should bear either apples or pears instead of stones. Doubtless it is amazing that staves, cast from the hands of Pharaoh's magicians should alter instantly into serpents. But it is equally amazing that serpents eggs, let alone, should come slowly to a like end. It is all a question of what one is used to seeing and what one can prove to have happened.

Events, in other words, differ in frequency and in predictability. There is not the least evidence that they differ in their ultimate cause.

But now comes along the theologian and wants to put in a purely artificial division of events into miraculous and non-miraculous. Having done this, quite wantonly, he then finds himself needing deliverance out of six troubles, because he has to define his two categories, discover some difference between them, and explain their relation. If only he had not made the division in the first place, then the resulting difficulties would not be plaguing him now.

Not satisfied with making himself all this quite useless trouble, the theologian persists in adding to it by dragging in "the laws of science," which have nothing whatever to do with the matter. Having by this device manufactured a fresh set of factitious difficulties, he adds these on to—rather he multiplies these by— whatever difficulties arise from his own quite different meaning of the term. But why drag in "the laws of science" at all? If anybody thinks that God, as an all-wise being, will not lay down a "law" in the first place and then alter it, that is a purely theological question, on which natural science has absoutely nothing whatever to say on either side. And if anybody thinks that God, as all-powerful, can always do as he likes with his universe and "is not bound by his own laws," that is also a purely theological question, on which, once more, natural science has absolutely nothing to say on either side.

It is, therefore, most absurd to say, as is so often said in all sorts of forms, by people who ought to know better, that "Science denies the possibility of miracle." What scientific people deny—what scientific people must always deny—is the possibility of non-miracle.

That is to say, if one insists on thinking of a commonplace and presumably non-miraculous event as caused by "the operation of natural law"—or however else one chooses to express this widely prevalent idea—and if, in addition, one attaches to the term "law" the meaning that it has in every scientific textbook, then every scientific person in the world must of necessity make one reply: Any non-miraculous event, as so defined, is not only impossible, but unthinkable.

There are no non-miracles. Whether there are miracles, turns entirely on how one defines the word.

THE EVOLUTION OF ST. PETER'S KEYS

BY A. KAMPMEIER

IN 1918 Prof. A. Harnack published a dissertation in the reports of the Prussian Academy of Sciences, which has found little publicity on account of the war and the revolutions following it. It treated of the words: "Thou art Peter, and on this rock I will found my Church; and I will give thee the keys of heaven," which words are to be seen in large, conspicuous lettering on the inner walls of St. Peter's dome in Rome.

These words occur in Matt. xvi. 18-19, the only gospel that has them. In connection with them, the other words occur: "The gates of Hades shall not prevail against it." Harnack says: "Hades does not mean anything else but the abode of death. Hades and death are already parallels in the Greek translation of the Old Testament. In nowise whatever does Hades mean the infernal powers of the devil." For hell, as commonly understood, the gospels have another term in the original Gehenna." All Christian writers before Eusebius of Caesarea (270-340 A. D.) interpret Hades in this passage as meaning that Peter shall not see death before the coming of the Messianic reign. Likewise the Pagan writer, Porphgey and another, cited by Macarius Magnus, a Christian writer, who died 390 A. D. Also Jerome (345-420), the great upholder of Roman orthodoxy, secretary of pope Damascus and another of the Vulgate, the acknowledged Bible version of the Roman Church, knows this interpretation, although not sharing it himself. This interpretation is further confirmed by the last verse of the chapter, in which the words occur: "Verily I say unto you, there are some of those standing here who shall not taste death, till they see the son of man coming in his kingdom." As well known, it was the opinion of Jesus, as well as of whole primitive Christianity that the end of the world was very near.

The gospels (Mark xiii. 30; Matth. xxiv. 34; Luke xxi. 32) attribute the words to Jesus: "This generation, i. e., the one living at his time, shall not pass away, before the coming of the son of man." Nothing whatever is therefore promised to the Church, but to Peter, that is, that he shall not see death before that great event. This is also confirmed by the fact that some ancient readings have: "The gates of Hades shall not prevail against thee," i. e., Peter, not "it," i. e., "the Church."

Regarding the words: "Upon this rock I will found my Church" Harnack says that all Christian writers, till up to Origen (died 254) know nothing of the founding of the Church upon Peter. This is not quite an exact statement, in so far as that Terbullian (died 220), who gives the Matthew passage for the first time in full, refers it to the founding of the first Christian community in Jerusalem, as related in Acts II, by saying in his work *On modesty*, in chapter xxi.: "Peter was the first to unbar in Christian baptism the entrance to the heavenly kingdom, in which are loosed the sins, that were beforetime bound, and those, which have not been loosed, are bound." Because of the peculiarity involved in the words that Hades (death) shall not prevail against the Church, and that this is the only passage, in which Jesus speaks of his believers as his Church, Harnack assumes that they are an interpolation brought into the text at Rome, because the Roman Church has always tenaciously stuck to the prerogative, which Peter is said to have possessed, and that this happened about the times of emperor Hadnan 117-138.

But Harnack was not the first one, who takes this passage as an interpolation. Already before him Keim, H. Holtzmann, O. Pfeidever, Wernle and Merx had doubted its historicity. In 1904 J. Grill, professor at Tuebingen published *The Primacy of Peter*, in which he came to the conclusion that they was an insertion made in Rome about 190, in order to legitimize the Roman bishop scripturally as the rock, which is destined to secure the whole body of Christian believers in their possession of truth and salvation against heresy and abuse.

In 1910 the Roman Catholic professor of Theology, J. Schuitzer, at Munich published: *Has Jesus Founded the Papacy?* He argues: The coming of the Messianic kingdom in the near future was a predominating thought in the ideas of Jesus and his followers. Why then a Church, a papacy? Matthew is dependent upon Mark, now generally considered the oldest gospel, and the corrections in Matthew represent dogmatic gradations beyond Mark, which must be

doubled very much. Since Mark viii. 27, reports the Messianic confession of Peter, but knows nothing neither of the beatifying extolment of the same, nor reports the least of his elevation to a rock of foundation and a keeper of the keys of heaven, the words in Matthew must be considered incredible and suspected as a later insertion. The oldest of the Christian writers outside of the New Testament know nothing of a superior power of Peter. Further a monarchic episcopate can first be traced in Rome from the middle of the second century on. Irenaeus (died 220), who very strongly accentuates the precedence of the Roman church, sees in Peter and Paul the founders of the Roman church, but he knows nothing of Peter as the rock and keeper of the keys. The first trace of the words occurs in the dialogue of Justin Martyr with the Jew Trypho (written about 155), but it says nothing of Peter the rock and keeper of keys. Bishop Callistus of Rome (217-222) is the first one, who refers the words to Peter, as being the rock, and his power of loosing and binding to himself, and lays claim to it. Closing, Schuitzer says: Jesus has never spoken the words. They form the beginning of the falsifications, by which the claims of the popes of the Middle ages, gradually growing more and more, were to be sanctioned. Schuitzer got into trouble with the Roman see on account of his investigations and was excommunicated. He then entered the philosophical department of the University of Munich as professor of Church history and history of religion.

The conclusions of the investigators of the passage, that the words are not historic, will very probably be accepted by all unbiased as correct. There is also no doubt that the Roman episcopacy used the passage to its advantage. But whether the passage is a conscious interpolation made directly and especially by the Roman episcopate alone, to confirm its claims is doubtful. In general, the evolution of an idea travels a very tortuous and complicated way before it becomes fixed. Upon this way an interpretation of the terms, "keys of heaven," "binding and loosing" in the passage of Matthew, offered by W. Kochler, in Vol. VIII of *Archiv für Religious wissenschaft*, throws light, which I here make use of with my own additions. Hitherto no fully satisfactory explanation of those singular terms in the Matthew passage, pointing to a mediatorship of the Church, in order to get into the kingdom of heaven, has been given. This idea of a mediatorship of the Church seems to have been developed, in consequence of the fact that the imminent coming of the Messianic kingdom on earth, which Jesus and primitive

Christianity expected, did not become true, and that for that reason the kingdom of God was again placed in the beyond to come into which, the regulations of the Church as a means of salvation were developed.

Now it is a fact that already the older Pagan religions of the Egyptians, Babylonians, Persians and Greeks, did not only use the terms "keys and gates of Heaven and Hades," in a physical and cosmological, but also in a spiritual and moral sense, the latter being done especially in those Pagan cults which we call "mysteries," and which by their doctrines offered a means of salvation from the world of sense and evils to the initiated, such as the Orphic cults among the Greeks, and then especially Mithraism, the great competitor of Christianity. Helios has the keys to the gates of heaven, Pluto to those of Hades, Kronos in Mithraism has the keys to both, being represented with two keys in his statues. Likewise is the term "key-holder" applied to the priests and priestenes of the gods, among the ancient Greeks. The key is the standing symbol of priestenes in pictorial representations of them and on their graves. The Greek goddess, Dike (justice), is said to have the keys of heaven. This can be traced back centuries before the Christian era in the language of religious Greek cults. The old king Kelcos of Elensis, where the noted religious festival of the mysteries was held, had a daughter, Kleisidike, i. e., Dike with the keys. The goddess Dike herself, sits in heaven near the throne of Feus, looks down upon the mortals and only opens the gates of heaven to the worthy. The Mithraic Kronos, who had an especial place in the sanctuaries of the Mithra-worshippers, has the keys of heaven, to open and close its doors in order to let the souls descend and ascend. This idea already occurs before in Plato, who often quotes Orphic writings, dealing with the purification and ultimate immortality of the soul. According to him, the soul on earth, feeling itself as imprisoned in the body, is swayed by a desire to return to its original home, from which it has descended. According to the old Greek philosopher, Parmenides, truth lies behind the doors of heaven, and according to Chaldean-Persian theories, the world of the Gods is closed by fiery portals, which only open to the wise and pure. But the desire of salvation conquers the barriers. The soul reascends to heaven step by step, after many conflicts, which demons and spirits of darkness prepare for it, after having descended to earth through the doors of heaven. Just as Plutarch, though a Pagan, taught that there are good and bad demons, the former reaching out their hand

to the soul, drawing it upwards, supporting and strengthening it, when weak, while the latter oppose the soul and bear in themselves all the animal traits of mythology, which are responsible for the evils of the world. According to Babylonian-Persian ideas, there are seven doors to pass for the soul, each guarded by an archon, i. e., ruler. Woe to the soul if it does not know the password and magic formula. And in an Egyptian representation of the progress of the soul it reads: "Proudly the soul enters the door of heaven, received by the blessed, to remain with the Sun-god Atum and the stars in everlasting glory."

All such ideas appear again in one or the other way in the Gnostic writings, that host of the strangest mixture of Greek, Egyptian, Babylonian, Persian, Jewish and Christian speculations regarding creation, and the salvation of the soul, which sprang up with the coming of Christianity. They teach that the souls are bound in the bodies, and that if they wish to enter "the doors of light and life," they must be loosed from matter. That Christ brings the mystery, which looses the souls, and that when he leaves heaven to descend to earth, the guards at the doors of heaven, the archons, are "bound" and their "bonds" "loose" themselves; he needs no doorkeeper, the bonds of the doors open automatically. The terms "bind" and "loose" are only an amplification of the term "keys of heaven," and in the last end probably originally taken from the language of magic. The idea that powers or properties of man, or of the animal world, or of nature, or spirits, or even of Gods, can be bound by a magical knot, with accompanying conjuring formulas and unloosed, we find spread all over primitive humanity. We find such words as these in ancient magic papyri: "May every bond be loosed," or that the god conjured to open a door is described as loosing all bonds, or a magic stone as opening doors and breaking all bonds.

While, according to some Gnostic writings, Christ leaves the doors of heaven unhindered, according to them the archons have the power, as guards at the doors, to bind and loose souls. In consequence of these Gnostic views, Koehler gives from some of their writings, the Pistis Sophia and others, the following words, which would explain the terms of Matthew: "Therefore I have brought the keys of the mysteries into the world, to loose the sinner, who believe and obey me, in order that he, whom I have loosed in the world from the bonds and seals of the Aeons, i. e., cosmic rulers, and archons, may be loosed above from the bonds and seals of the archons; and in order that he, whom I have bound in the world

within the seals and vestures and orders of light, shall be bound in the land of light in the orders of the heritage of light." The Matthew passage has developed under the tension of Christianity over against the ancient religions, with their different mystical cults, also teaching and promising a way of salvation, especially over against Mithraism. The Church further also wished to shake off Gnosticism, that mixture of all kinds of older religious speculations and Christianity. It therefore put forth its own heavenly doorkeeper in Peter, whom, as it claimed, Christ himself had appointed, in contrast to the priests and representatives of other modes of salvation. But it did this in the mystical language of the older cults and Gnosticism, just as in many other ways it adapted itself to Pagan customs, for instance in decreeing the birthday of the Savior as being at the time of the winter-solstice, the rebirth of the Sun-god, or when later introducing holy water and incense into the churches, following the precedent of Pagan temple-service, etc., etc.

In the above quoted words of the Gnostic writing we then have an essentially authentic interpretation of the Matthew passage. The kernel is originally: What is bound or loosed here on earth, that prevails in heaven, and cannot be contested any more by hostile powers, even not in heaven. This authority makes Peter the doorkeeper of heaven, for through it he has the power to open heaven or to close it. And if we ask, wherein loosing and binding consists, we are led to the mysteries, perhaps especially baptism. Through it, the bonds, which demons had thrown about man, were loosed, in it one was bound in Christianity and had the master key to heaven, exactly as in the liturgy of Mithraism, heaven is opened to the initiated. As we have seen above, Terbullian had about the same view. To make its mysteries, especially baptism, capable of competition with the mysteries of the ancient world, Christianity has taken in the dress of antiquity. By this we understand how already the Church of the second century could confine the power of binding and loosing to the forgiving of sins in a juridical, church-governmental sense, to the authority, to loose excommunication, i. e., revoke it, or to bind, i. e., let it continue. This step was taken, after the Church had overcome the Gnostic crisis, and was then in no need any more of the dress of antiquity. It was not the only case of churchifying scripture.

In closing, we will touch on some interesting facts, which followed the idea of Peter having the keys, in spite of the churchifying of terms, which were originally taken from Paganism and magic.

The church could not completely wipe out the traces of the antique origin of the terms of the Matthew passage. In many folk songs of Europe, Peter has retrograded again into the weather maker, like the ancient-nature gods, Janus, the god of seasons, and Saburn, the old Italian god of agriculture, etc. The ferry money, which is given in the old Greek myth to Charon in Hades for transporting the departed souls over the Cocythus, is transformed into money given to Peter by the deceased, into whose coffin it is even laid nowadays still in some places. The binding and loosing power of Peter lived on in the antique sense that the keys are magic keys. In folk rhymes Peter is called to close the mouths of wolves and dogs with his keys. And in Norway many conjuring formulas begin: "I borrowed the heavenly key to find, may it be dwarfs and other trouble makers."

One more point. It is well known that ancient pictorial and sculptural representations of gods and mythological personalities have influenced Christian art. Christ as the good shepherd was represented in early Christian art in the form of the shepherd-god Hermes, and the halo, placed about the heads of the gods and deified persons, in ancient art, was placed about the head of Christ and the saints. Some therefore see in the representation of Peter in Christian art a resemblance to the ancient Italian god Janus and the Mithraic Kronos. These two gods, probably both confounded together, carry key and staff. Peter is the only one of the twelve apostles, who beside the keys is represented with a staff. The figure of the cock represented with the Mithraic Kronos, and the legend that Mithras was rock-begotten, may also have influenced the evolution of the key-bearership of Peter. But we guard against the supposition that Peter was therefore mythological as Mithras, for the historicity of Peter is too well established by the earliest writings of Christianity, the letters of Paul to the Galatians and the first one to the Corinthians. We can only say that mythological traits were transferred to Peter, to make him more acceptable to minds, which had been nurtured by myths for centuries. On the other hand, we may mention the curious fact that in nominal Christian countries ancient mythical personalities have become Christian saints, as if they were historical. In lower Italy even Venus became a Santa Venere.

FOLK-MUSIC OF THE KHASIS OF ASSAM

BY LILY STRICKLAND ANDERSON

THE beautiful hills of Assam are well worth the trouble it takes to reach them, for the traveller will be repaid by every variety of scenery from the paddy-fields of the lowlands, to the grass-covered moors that gradually merge into the richly-wooded mountains. After a long journey by train, one takes a ferry and crosses the Brahmaputra River to Gauhati, from whence the remainder of the journey must be made by motor. During the sixty-mile ascent one rises four thousand and nine hundred feet, traversing precarious roads, hair-pinned curves, and narrow turns that crowd the edges of deep precipices. The road, however, is a marvel of engineering, and made safer for the motorist by the fact that it is a one-way road and one is spared the dangers of passing cars on narrow mountain ways.

Once in Shillong, the summer capitol of the Assamese Government, one is happily surrounded by beautiful scenery, fine air and a variety of interesting drives among ever-changing and ever charming pictures of richly-timbered hills, streams, and waterfalls. The general type of the flora reminds one of the Blue Ridge Mountains of North Carolina, or of the Scottish Highlands.

Our chief interest, however, centers around the unique tribe of the Khasis people who inhabit this quite different part of India. Having become accustomed to the Hindus and Mohammedans of Bengal, one finds that the Khasis are a distinctly separate race, in history as well as religion, customs and manners. While most of the tribes of Assam are of Tibeto-Burman origin, so far anthropologists have been unable to come to any decision regarding the genesis of the Khasis, who, as an isolated remnant of some ancient race, have preserved their own laws, customs and independence, unchanged through the centuries.

The Khasis are chiefly remarkable for the fact that they represent one of the few Matriarchal systems extant today, and their

religion is a mixture of animism, pantheism and ancestor-worship. Some authorities state that the Khasis are probably of Mon-Anam descent, a pre-Aryan off-shoot of Turanian origin, who perhaps came from Burma through the Patkoi mountains. As they have neither inscriptive records, systems of writing or recorded history of any kind, one's investigations are balked at the outset, and one ends with speculative theories. Their language shows linguistic affinities with the Burmese, the Nagas and the Palaungs; and the sacredness of the snake in their religion shows them to have retained some of the ancient forms of Sun-worship. They are also believers in divination and magic and retain many evidences of Animism in their present-day religion. If their origin is shrouded in mystery, at least in their customs and manners of today, one may find extremely interesting subjects for study.

The women are the real rulers of the tribe, and the Khasi ancestry is traced through the mother and grandmother. She is the official head of the Clan, rules the family purse and the family lands which the male may till, but not own. In spite of these strange matriarchal customs, the Khasis seem to be a cheerful, industrious, and contented people. The country which they occupy has the appearance of a huge grave-yard as the custom of erecting monoliths, and memorial stones has existed for unknown years. One may come across these great slabs of granite in the most out-of-the-way places; in the market-place, on high-roads and by-roads and hidden among the thick foliage on the mountain side as on the grass plateaux which crown the higher hill tops.

They are a musical people and have a number of very interesting festivals on which occasions the tribe takes part in folk-dances at various times of the year. Music, with them, as with most primitive or aboriginal folk, is closely related to their religious as well as their secular and daily life. It is a recognized part of all ceremonials; of weddings, funerals, births, and all of the incidents of their life.

One of their chief festivals, called the Goat-Killing Festival, includes a great ceremonial dance in which the Siam, or ruler of the fifteen Khasis states, takes part dressed for the occasion in the national dance costume. In these dances, both men and women participate and the effect is brilliant in the fine natural setting of the hills, to which they add splashes of color in their vivid garments and jewelry.

The musical instruments used by the Khasis include a number with which we are familiar in Bengal and in other sections of India. They are partial to drums, gongs, cymbals, flutes, and the ever-important conch-shell horn. There are various varieties of the drums in use by the Khasis; the long cylindrical drum, the hour-glass or "monkey-drum," the tom-tom, and other drums of clay, or wood, which emit a hollow, flat tone.

Among the stringed instruments, there is a sort of guitar with silk strings and played with a wooden key; a one-stringed guitar which is picked with the finger and a kind of violin played with a bow.

The reed instruments include a wooden pipe, or flageolet, a bamboo flute, or Pan's-pipe and various clarionets These flutes are in more common use than the strings for every-day occasions, and one often meets some strolling Khasia along the hill paths playing a weird and plaintive tune on a little reed flute that gives a quaint and pastoral atmosphere to the picture.

Instruments of percussion are in great favor in all festivals, or ceremonial dancing. There are gongs, cymbals, and bells, made of metal and especially popular with the priests and priestesses in their religious rites. The chief wind instruments are the conch-shell horn, and the brass horn, used largely in ceremonial dances and not so much as a solo instrument. Lastly, there is the "Jew's harp!" No one knows how their queer instrument got into Assam, unless the "Wandering Jew" introduced it there. But it is nevertheless a popular instrument. According to authority "their use has been forbidden by the missionary, who considers their strain too seductive!" While we have never thought of calling a Jew's harp "seductive," we admit that the instrument is of great antiquity and interesting for that reason if no other.

What the instruments in use among the Khasis lack in quality, they make up in quantity of tone, for they are very partial to the brass and drums, especially on Festival occasions when the hills echo and re-echo to raucous blasts on brass horns and the boom of big drums.

Some of the most important religious ceremonies, which include music and dancing, take place on the top of Shillong Peak, the highest mountain in the district, and which is said to be the dwelling place of the mountain deity to whom they do honor. When the clan priest or Lyngdoh dies, and a new one is installed, all the people attend the ceremonies of inauguration on the mountain top, where

a goat and a cock are sacrificed under the sacred *Ka'la phiah* tree. The victims are offered to the God of the mountain and there are tribal songs and dances at which occasions the people wear the distinctive costumes peculiar to these festivities.

Another ceremony of interest is the Pujah (worship) ceremony performed in honor of the *U'lei lyngdoh*, or village tutelary deity. At this time, both the priests and the people take part in a tribal dance, armed with swords and shields, with a quiver of arrows, and decorated with cock's feathers and goat hair. Their dance is in the nature of a pantomine, in which the performers go through dignified measures of advance and retreat to the rhythmic music. This dance is said to be a survival of the old war dance of the Khasis, when it was customary to celebrate a victory by a dance in which both men and women joined. It was said that at these war dances it was customary to pile the decapitated heads of their enemies together and dance around them with yells and songs describing their fight. In pre-British days, these dances of the Clan, before and after battle, were considered very important. *U Syngkai Bamon*, the God of War, was propitiated with cock-sacrifices and offerings, and the dance took place around the altar upon which the warriors' weapons had been placed. This ancient dance still takes place yearly among the Khasis, the only difference being the absence of the enemies' heads.

The ceremonies incidental to death are also of great importance among this tribe. They continue according to old customs, and after the elaborate services to the dead have been performed, the funeral cortege starts on its way, accompanied by the wailing music of the Sharati (flutes) and slow beat of drums. The bodies are usually burned and the bones stored in mortuary urns and buried in stone cairns.

When anyone as important as a Siem dies, his body is pickled in lime juice and spirits and kept until the natives can accumulate enough money to afford the extravagant funeral rites demanded by their Tribals customs. The body is finally burned and the last obsequies celebrated by a great Pujah of sacrifices, offerings, dances and songs.

The Pujah-dance is performed by Khasi girls who dance at intervals during the day and night given to the occasion. The last ceremony takes place at the funeral pyre when both men and girls join in dancing around the stone platform whereon the pickled body of the Siem is slowly consumed by flames as the people chant the

"Passing-song." They have fireworks and fire a salute of arrows into the air. After the body is burned, the bones are collected and placed in a cairn when further ceremonies take place, this time dedicated to the spirit of the dead Siem.

Another great ceremonial dance is the "*Lympung*," a Festival lasting nine days and nights which forms an important part of the Khasis ancestor-worship. This is called the third death ceremony, and follows on the funeral pyre dance and the burial of bones of the dead. This ceremonial is performed by women at night and is accompanied by flutes and drums. It is customary, at this time, to set up stone memorials to the dead, whether of Siem or less important folk, for all the death ceremonials are the same and vary only in the degree of elaborateness.

The "Bethmpew" is a special dance that takes place on the night before the bones of the dead are deposited in the family ossuary. It is intended to drive away evil spirits, so that they may not disturb the last resting place of the dead. This dance, performed by males with sword and shields, takes place before the sepulchre, where songs and chants are sung.

The various Death Dances which I have mentioned are especially significant to a people who, as ancestor-worshippers, regard all death ceremonies as of vast importance. No rite must be neglected that may assist the passage of the spirits of the departed to rest in peace, and none of the dead escape the conspicuous attentions in death, that they may have lacked in life.

But there are many dances that have to do with the living. The principal dance of this nature is the *Nongkrem Dance* which is held at the great Khasi Festival in the spring of the year, usually in May. It takes place at the same time as the Goat-killing Festival in which the Siem must take part. Several days of pujah and religious ceremonies culminate in the sacrificial ceremony by the Siem. At this time twenty picked dancers perform a special dance at the Altar of *Ka Blei Synshar*, the presiding Deity of the crops and grain. She, as the Khasia Ceres, is importuned for luck in the coming season for the farmers.

The priests and priestesses have a special dance of their own, then men and women dance together, singing the chants dedicated to the Deity. In Khasi music, as in most Indian music, there is no harmony; the people sing in unison, accented by the instruments which follow the melody while the drums and cymbals emphasize the rhythm. All of these dances resemble the usual type of Folk-

dances where men and women join together in executing the old figures that have been handed down for generations.

The Khasis do their dancing in a leisurely manner; most of the steps are in slow time, and throughout the dances one is impressed by their dignity and seriousness. They have no conception of light and frivolous forms of dancing. Their own dances are important to them as part of their immemorial religious rites, and are entered into in a spirit of reverence and worship. They share the common qualities of the Tibetan Lama dances in their awkward, slow movements. They take one step at a time forward, or backward, jump or hop on one foot and gyrate with deliberation, their arms stretched out at angles, or moving in the strange cumbrous fashion of a diver in deep water. While to the stranger, they appear ungainly and weird, one is conscious that there is a certain charm about these dances, the charm that hangs about any ancient ceremonial which has so deep a hold on the hearts of the people who believe in them and who have kept their customs unchanged for centuries.

The drums, flutes, and brass produce a barbarous and strange sound; the gorgeous costumes of the dancing Khasis present a kaleidiscope of color, and in the outdoor day-time dances, the effect is increased by the natural scenery around them in some grassy dell surrounded by great hills and topped by blue skies. The Khasi girls wear long robes of silk or brocades of brilliant hues of peacock blues, rose, purple, yellow or green, and they are hung with heavy jewelry of gold and silver and coral beads. On their heads they wear elaborate ornaments of flowers and feathers in lighter shades, together with gold or silver crowns surmounted with tassels and chains.

The costumes of the men are no less ornate, and they add plumes and cock-feathers, goat-hair and fly-flaps to their head-dresses. They also wear swords and shields and execute mock combats with the instruments of war that are now relegated to peaceful dances. Like the Tibetan Devil Dancers, the Khasis sometimes wear fantastic masks, disguising themselves as tigers, monkeys, elephants, serpents or peacocks. The dances in which they use masks are supposed to be humorous and of a lighter character than the other dances, and the spectators seem to be highly delighted at the awkward motions of the dancers who strive to imitate the animals they represent.

Besides the ceremonial dances which are inevitably of a religious character, the Khasis have love-songs, hate-songs, songs of peace

and war and of everything pertaining to their daily life. Music plays an important part in their life whatever its nature. Their natural environment of pine-clad hills, lovely waterfalls, streams and wild flowers lend themselves to the poetic imagination, and encourage the traditions of fairy lore abounding in the hills of Assam.

Their music differs from that of the Hindus in that it has the elements of folk music and is used by both men and women. In India, except among the aboriginal tribes and the people of South India, most of the dancing is done by professional Nautch girls, or by the masked male dancers on the Festival of the Night of Shiva. Among those Hindus who follow the Carnetic school of music, and among the old Tamils, Madrasiis and Telegus, some of the ancient festivals, such as the Harvest Festival in Madras, comprises both male and female dancers. But in Bengal especially, dancing is exclusively the office of Temple dancers and free-lance Nautch girls, while to the men falls the hereditary professions of musicians and minstrels. Among the Mohammedans and Buddhists there is a great deal of dancing done by the men, but they usually do it alone. The Devil-Dances and Lama-Dances of Tibet, such as are practiced in the Himalayas, are performed by men alone. At the Mohammedan Festival of the New Moon, men, and especially Afghans, have a number of interesting dances. But in Assam the men and women share equally in the old traditional folk-dances which celebrate special occasions important to their religious calendar.

The shadows of yesterday hang over the people of today in the Hills of Assam. They are largely under the dominion of the dead, in that they follow all the traditions of the dead, and adhere to ancient customs century after century, unmoved by all the change around them. Perhaps that is why they are so interesting and unique to the stranger who wanders among them looking for something new, and finding it in the old.

In the deep glens and among the high peaks of the Khasia Hills the sound of the drum throbs in the same way that it did unknown generations agone; the muted song of the flute comes to one's ears on moonlight nights and carries one far away in fancy. In their music we hear the natural leisurely songs of a natural primal people, singing to their old Gods, in the same unchangeable, unknowable way that they have always done. We are fascinated by its very mystery, for if in the Western world we are slaves to time and change, we can appreciate, and even envy, a people for whom time does not exist.

MONISM AND REALITY

BY VICTOR A. ENDERSBY

THE philosopher's mind searches for an unitarian explanation of all phenomena, as persistently as water seeks its level. The background of racial consciousness is so permeated on its higher levels by this tendency, that the modern scientist is as sure of a monistic basis of matter as the ancient philosopher was certain of the indivisible nature of consciousness. Each has apparently found satisfactory evidence for the substantiation of his intuition as he went along.

Here we have an anomaly. It is in the nature of successful research that problems vanish from the lengthening path of experience. If monism is a fact in nature, amplified experimentation should result in the elimination of complexities and contradictions. Therefore it is strange that complexities and contradictions have been the fatality of experiment since its inception.

In the childhood days of science, theories which seemed substantiated by lines of fact within their own narrowly circumscribed field, were naively accepted without much regard to their interrelationship with the equally substantiated ones predominant in other fields. There was not enough comprehensive and correlative examination, for if the Universe is monistic, laws as well as facts have a common genesis, and the theories of one department cannot stand alone and separate from those of another. The impossibilities in certain physical theories seem to have maintained stance through many decades, solely through failure to perceive the vital necessity of cross-ties. The oldest, and at the same time most flagrant, contradictions in scientific theory seem not even to have been placed upon trial for their lives until the day of Einstein.

An ether so tenuous as to permit the passage of sidereal bodies without the slightest friction, and at the same time able to hang the weight of the earth upon the sun: obviously these two conceptions

implied different physical universes. Views so divergent as this give no assurance that either is any measurable approximation to reality. On the contrary, they prove that physical conceptions which cannot be true may exist and even be of great utility in the working of practical problems.

A second perplexity centers in the nature of light. Wave transmission through ether implies a discontinuous medium. If the force of gravitation is tension, as all astronomical and geometrical relationships indicate, it must necessarily be in a *continuous* medium; a conception not only in contradiction with the classic theory of light, but mentally inconceivable, especially and particularly to the physicist. Continuity likewise implies impenetrability. Materials are permeable, malleable, or ductile, because they are discontinuous, the particles capable of motion relative to one another. If cosmic ether were continuous, every body in space, from electron to star, would be held as immovably frozen, from all time and to all time, as flies in amber. Yet without a tensile material, not only would gravitation be impossible, but also the forces of cohesion, adhesion and magnetism.

Aside from all this, the proven spherical propagation of light cannot be mentally related to the phenomena of multifarious transverse vibration which are exposed by polarization. Small wonder that Einstein, bringing a mind prepared for the acceptation of a new cosmos, found sufficient evidence of its necessity. But has he improved matters? That is not certain. For the inconceivable ether he has substituted an equally inconceivable four dimensional space. For the anomalous resistant qualities of the ether, he has substituted a space which is capable of being warped or distorted by the presence of masses in it. His equations seemingly fit the facts better. Are they any nearer reality than the old conceptions? In any case, he has precipitated difficulties of an entirely new category; that is to say, a radical disagreement in physical experiments themselves.

Einstein's triumph was immediate and well nigh universal—a suddenness of revolution which betrays vividly the dawning scientific perception of preceding deficiencies. But attempted verification has brought forth a disconcerting number of discrepancies. Dr. Curtis, of the Alleghany Observatory,[1] claims that the shift of spectral lines is not that called for by Einstein. Dr. St. John, of the Mt. Wilson Observatory, agrees with Einstein, and explains away the conflict. Prof. Dayton C. Miller,[2] has discovered a well-defined ether drift.

[1] *Science*, May 9, 1924.
[2] *Science*, May 3, 1925.

This contradicts Einstein and the Michelson-Morley experiment upon which this theory was first based.[3] Dr. W. S. Adams corroborates Einstein's spectrum shift. Prof. A. A. Michelson has performed new experiments which also uphold him. Prof. Chas. L. R. E. Menges[4] seems to think that the Fizeau effect and the Zeeman experiments positively disprove Einstein's theory. Dr. Rudolph Tomaschek, of the University of Heidelberg,[5] repeats Dr. Miller's experiments, contradicts him, and favors Einstein.

In spite of this voyage through rough waters, the Einstein theory, leaving its wider range of cosmology, has found such safe harbor in atomic physics that it is not likely to be soon dislodged. Having become almost inseparably bound up with present conceptions of atomic action, becoming entangled with the most recent researches in radioactivity and the dissociation of matter, it has found itself portion of a twentieth-century set of conceptions which are becoming steadily more difficult. Physicists are beginning to believe that it is indispensable, but that some entirely new form of it must be worked out.[6]

Worst of all, classic theories of radiation have broken down, and science is forced back to the use of the corpuscular theory of light. One eminent representative sardonically remarks that, "The corpuscular theory is used on Mondays, Wednesdays and Fridays, and the undulatory theory on Tuesdays, Thursdays, and Saturdays." Slowly, but surely the minds of men, clinging barnacle-like to the seeming substantial realities known through eye and ear, are being forced adrift into strange currents of thought which may lead to new regions of mind altogether.

Painlève long ago held that the rotation of planetary bodies in space is an illusion. Says Professor Archibald Henderson: "Are we *all*, indeed, the victims of some strange fallacy?" Professor Walter D. Lambert,[7] admits that gravitation is a mystery. Queries the Editor of *The Scientific American*,[8] "Are the things about us real or are they illusions? Philosophers disagree. They admit that we cannot be sure. What we see as rocks and trees and houses may be merely imperfect reflections of some ultimate reality that men do not perceive."

Thus our methods of thought and experiment seem to lead inevit-

[3] *Science*, May 8, 1925
[4] *Science*, April 23, 1926.
[5] *Science*, March 26, 1926.
[6] *Science*, Jan. 29, 1926.
[7] *Scientific Monthly*, May, 1925.
[8] November, 1924.

ably to contradiction and mystery. It is the belief of the present writer, that the insistent trend of philosophy toward a monistic conception of the Universe, is a fundamentally true intuition, and that our perplexities have arisen from too little of that philosophic instinct applied to our experiments; that we are suffering the pains and penalties duly resulting from blasphemy against monism; not a knowing blasphemy, but one unconsciously impregnating the attitude of mind with which scientific problems are approached.

We search, and rightly so, for a single underlying reality of which all phenomena are modifications. In so doing, inadvertently we assume the attitude that there are *two* underlying realities. We experiment with the whole field of perception, but what is this "we" *which we place in contrast to that field?* It is consciousness, but what is that? Shall we assume that consciousness is independent of matter? Then we have a dualistic universe. Is consciousness a product of physico-chemical action? Then we assume a negation of the law of cause and effect. Sensations and emotions are entirely incommensurable with mechanical or chemical facts. Who can describe or understand feeling save in terms of feeling? Analysis of the mechanical processes correlated with a given sensation show nothing but a continued transmutation of one mechanical force into another, all purely spatial and temporal. Is matter a product of intelligence? If so, we have the same condition reversed. How could the intelligent give rise to the non-intelligent, the emotional generate the substantial, light produce darkness?

Consciousness is here. That is the one undeniable fact of human experience, the only one concerning which there can be no argument. Likewise something is here which is experienced by consciousness. This is a different matter. The nature of that experience is and has been the subject of interminable wrangles between members of every conceivable school of thought. If consciousness is not material, when and how did it become connected with matter in the course of the evolution of species? If matter is not conscious, in what possible way could immaterial consciousness ever act upon and gain ascendency over matter—an ascendency exhibited in every contraction of a voluntary muscle?

Is it not most logical to assume that all matter is conscious and but awaits the opportunity for expression through continually more complex structures? Then which is paramount? Consciousness itself or the reverse side of its manifestation, which is called matter? What is the cause of atomic motion? Blind mechanical force

or some limited form of consciousness obeying the laws of its own being?

There is but one category of actions which we know at first hand: the voluntary mental and physical actions of our own selves. In these, will, driven by emotion, feeling, or purpose, is certainly paramount. Yet fundamentally the action of will upon the carbon atoms in a muscle is no more explainable than would be the lifting of a block of coal by the glance of an eye. The mass which is moved is more complex in structure, but in terms of elementary composition, there is nothing to choose.

To assume that the electron in its orbit is governed by an intelligence of its own is not in the least to assume that that intelligence is of any kind imaginable to the human mind. It is impossible for us to enter to any degree into the mental processes even of the higher animals; far more so in the case of consciousnesses immeasurably more circumscribed even than these.

There is good evidence amid the facts of biology for the existence of conscious factors intimately bound up with matter, not only capable of controlling it but of reaching out and entering into "diplomatic relations" with neighboring chemical and physical lines of action. At least one well-qualified scientist has perceived this fact and dealt with it at great length.[9] Prof. Eldridge has exhibited the convergence of two lines of evidence. In evolution he shows the existence of innumerable developments, and of relationships between species which could not have come by natural selection; nor could they have otherwise arisen except through the initiative of intelligences capable of cross-co-ordinations. In contemporary physiological action he shows the operation of certain forces which are understandable only in terms of intelligence; namely, memory, foresight, and co-ordinative power, the capacity to link different lines of seemingly unconscious physico-chemical action. Such factors, he concludes, are intelligent, though not of the nature of human intelligence. Mind is connected with them, but not necessarily composed of them. Evidence for such powers tends toward the same conclusion as the ability of the human will to move the matter of the body; namely, intelligence as a directive force in all nature.

This likewise does away with another perplexity. Consciousness cannot be named in terms of space. We cannot give it form or size. It is physically the negation of every characteristic which we classically ascribe to matter. In point of direct experience, con-

[9] *The Organization of Life,* Prof. Seba Eldridge.

sciousness has power only over consciousness. To understand its power over matter, we have to assume that whenever consciousness moves or guides a muscle, it is because of the consciousness resident in the particles of that muscle. Conversely, sensation in a nucle can be felt and undertood by consciousness because of the materiality in that consciousness. All this reduces to a polar monism: no consciousness without matter, no matter without consciousness. This polarity I conceive to be not a matter of geometrical or spatial relationships, but qualitatively inherent in the primeval substance of the Universe. In other words, we might conceive of matter as dissipated—experiment has shown that matter can be so dissipated—leaving a primal residue still possessed of these dual potentialities. That is to say, consciousness, or potential intelligence, is indestructible, being a quality inherent in all nature; unevolved matter, its negative pole, is equally eternal.

One may gain an idea of the inseparability of substance and consciousness by the analogy of the magnet, which retains its opposite poles no matter how much fragmentation takes place. The atom is still polar, and most likely the electron as well.

This idea, of course, is a synthesis of monism and pantheism; and here we are in good company. Says Dr. Jonathan Wright,[10] "In Virgil, as in all ancient writers, we get a far franker acceptation than we do today, a much plainer indication of the all-pervading pantheism in the fundamental beliefs of men . . . it peeps out now and then, not in science alone where it has the support of physics, but in religious pedagogy."

Although it may not appear at first sight, this doctrine leads to a radical revision of our ideas of space. If the intelligent aspect of universal substance is the governing one, the material aspect must be conceived of as plastic and purely abstract except when made manifest as an instrument of consciousness. All material laws, therefore, are the laws according to which consciousness operates. Things-in-themselves, though having a real existence of their own, are ideas just as truly as are our conceptions of them. Space is therefore Leibnitzian rather than Cartesian—a mental concept. Many philosophers, in fact, have speculated in that direction. A real space of the nature of extension is inimical to complete monism. So soon as the idea of extension arises, it necessitates the idea of separateness and distinctions of quality. The perceiving consciousness stands at the center of its space and the radii of its observatory

[10] *Science*, Aug. 31, 1923.

powers are ended in all directions by the field of perception, which consists of entities seemingly of another order. Is it not possible that in the cosmos as a whole, the sense of separation, the loss of concious unity, is akin to what in the human mind is called forgetfulness, dullness, inattention, or suspension of awareness?

Herbert Nichols[11] believes that nothing exists save mind, more or less evolved. Minds or intelligences need not be spatially separated. They may be conceived as existing together, as thoughts exist in a single brain. Nichols has carried out experiments—whose repetition and checking would be highly advisable—going to show that form-perception is solely a matter of sense-education. The thing-in-itself produces the impression; the nature of the sense-education determines the form which that impression presents to the perceiving entity. He moreover shows that the time-space equations which govern material science can be replaced by energy-change equations. If we conceive "energy" in this sense as being the self-moving power of consciousness, the implication is obvious. If we correlate what is introspectively known of the workings of consciousness, with the visible phenomena of the Universe, a most promising avenue toward the solution of some of our difficulties is opened up. Contradictions and impossibilities seem to be inherent, as heretofore shown, in all physical conceptions of the Universe. On the other hand, we do know that the most contradictory ideas can live side by side in the human mind. Are any of the inconsistencies of the ether, for instance, or any of the Einsteinian perplexities, more striking than the state of mind in which a "fundamentalist" exists comfortably? There must be certain basic laws inherent in the nature of the universal substratum, probably few, and simple, and immutable. These laws must govern the workings of consciousness, and are probably as yet entirely unguessed, though forming the only absolute truth in the Universe.

Taking the physical cosmos as a conception composed of, and at the same time created by, a limitless number of mental entities of all degrees of evolution, physical laws and mental conceptions of those laws blend together. Law and conception alike may be considered as evolutionary and experimental. The contradictions we are now discovering may have their origin in some primeval paleo-psychic evolution during which developed conscious conceptions, whose contradictions could not in the nature of things become evident until some highly evolved form of self-consciousness, capable

[11] "A Crisis in Science," *The Monist*, July, 1923.

of synthesis of experience, and of introspection, had been developed, such as that of man himself. In other words, if we are to find unadulterated truth, we may have to look for it in the recondite laws governing intelligence, which are basic; and not in the apparent laws governing the physical world, which in a sense may be misconceptions of nature herself, as much as of mankind. This might appear to some as an anthropomorphization of nature. I regard it as *an impersonalization of consciousness instead.*

Following such a hypothesis, we have also a wider vision of cosmogenesis. It has been long held and is still believed by some, that energy transformations are all "one-way roads"—that the Universe is "running down" and will ultimately reach a state of quiescent petrifaction. I must confess that this view has always appealed to me as impossible. If it is assumed that the universe is evolving as a whole in any single direction, we face not only the achievement of a completion and a final end, but the formidable problem of an origin. If the Universe is running down, it obviously had a beginning. This throws us into the arms of special creation—a philosophic and scientific abomination.

Of late the discoveries of Professor W. D. MacMillan and others have brought about much speculation as to whether creation proceeds simultaneously with destruction; whether the path of the universe is undulatory or cyclic, rather than tending constantly up or constantly down. It is thought by many that while the matter of the stars is dissipating itself into energy, that energy in some way is recreating atoms in the depths of space.

The outstanding feature of ideation is its self-reproductive power. Given one or two insignificant ideas as a beginning, and the structure of thought which can be produced by an intelligent mind within a short time, approaches infinity in its ramifications. If creation is of the nature of changes in consciousness, there obviously can be no question of a beginning nor can any end be set. Whether cyclic or orthogenetic, the evolution of a conscious Universe has possibilities infinite in every sense, whether they be possibilities of time and space, of new material laws, or of entirely unimagined emotions, sensations or experiences. Intelligence is impersonal in nature; personality only a temporary phase of it. Science rightly revolted against anthropomorphism. Is it not possible that the true direction for that revolt should have been toward a conception of consciousness as impersonal, rather than the tendency to ignore it, which has actually arisen?

"It hath not yet been shown what we shall be." No one can say what has been achieved in the development of consciousness as connected with undiscovered and unguessed forms of substance, of which the ether—or ethers—may be an unexplored category. No one can say how far back into the primeval depths of space and time the consciousness of any single human being may have had genesis. Nor is there reason to suppose that its ultimate destiny in each case may be less than infinite. Hard as iron, microscopically circumscribed, are the limitations of those intelligences whose illusive forms we try to spy out by physical experiment. The organic kingdoms seem to form a vast tree of ever-expanding consciousness, which with man bursts into the flower of self-perception, with a consequent capacity for self-directive exercise of will. From that point may we not substitute geometrical progression of conscious development for the arithmetical type pertaining to the lower orders? It may ultimately be found that the true secret of self-evolution lies in an understanding of those heretofore mentioned laws of consciousness, still undiscovered, which underlie all physical manifestation. Or are they undiscovered? There is a strange unanimity among the older sages, with their insistence upon the reality and unity of consciousness as opposed to the illusions of matter. Perhaps we are far from having sounded the depths of their wisdom, or having understood their idiom.