

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

VOL. XLI (No. 6)

JUNE, 1927

(No. 853)

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The Open Court Publishing Company

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CHRISTIAN MISSIONS ON YANGTSE RIVER

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SHRINE AND LABORATORY: A SYNTHESIS

BY ARTHUR E. CHRISTY

Here was I nourished on the truths of old,
Here taught against new times to make me bold.

G. E. Woodbeery.

I

READING the journals of opinion, one is impressed by the fact that those who are suggesting panaceas for the ills of our world are stressing the importance of securing a happy synthesis, between the spirit that surrounds an Eastern shrine and the scientific facts discovered in a Western laboratory. One culture, they say, has devoted itself entirely to the infinite in man which is not satisfied by the fashion of the finite world that passes away. The result is that wretched millions live in poverty, without money or knowledge to prevent awful famines and plagues, without effective power to keep the invader from consuming resources and life. The civilization, on the other hand, which boasts of being "practical", is said to be without wisdom, without spiritual inspiration, and the chaotic condition of its peoples is the result of permitting a very vital need or function to go unsatisfied and eventually atrophy.

The remedy which is suggested is a blending of the mystic joy, the insight, of Upanishadic seers or St. Augustines and the output of those institutions where Bunsen burners and Bessemer crucibles are in use. The philosophers of the East are to lead Occidentals into the shrine room and show all that has been found there; the sociologists and scientific men of the West are to lead the Oriental into the laboratory and point short cuts to their systems. Then will follow, not the one sided culture of different hemispheres, but the better culture of tolerant, sympathetic men. If this is not done, the alter-

native held out is a bitter fight to extinction. No hope is expected from the religion of the nominally Christian West, critical as to the forms of theological expression and tinged with the spirit of the go-getter trying to "sell" his church. It is pointed out that even the atmosphere of many missionary compounds is one of bustle, social uplift and campaign headquarters.

As I read such articles, it has occurred to me that the most obvious persons in whom this desired synthesis is to be found would be the missionary's sons. It may not be perfect but it should be there. They have been reared in the East of hoary, mellow Thought and educated in the West of virile, sprawling Action. What has been blended of these two worlds into their minds? The question has persisted, and I have tried to put into words a few experiences which are typical, I am sure, of scores of missionaries' sons who have shared my fortunes.

II

Some of us who were born "East of Suez" face life with an "inheritance" that is unique. We are scattered throughout the world. In many colleges may be found one or two; in some of the larger universities perhaps as many as a score; in every profession we are numbered. In our fledgling days, when we were first immersed in American life we were a queer group. But there was reason enough. It takes a little while for the "young Chink" to forget himself; to lose the British accent learned perhaps at Chefoo, the pidgin English that sometimes crept out all unawares; to forget the ways of life as it was lived in the inland mission, where we were the only white boys within a radius of fifty miles and played foot-shuttlecock with the son of the native preacher instead of the games of American boyhood. One does feel in strange waters, when after a relatively short trip over the Pacific the atmosphere of non-hurry, the real root of contentment in China, is left far behind and the world is one of football, Fords and co-eds; when the sounds of the evening are not the gurgles of water-pipes that come from the group of coolies, cooks and colporteurs squatting in the courtyard, or the whine of the two-stringed Chinese fiddle but the jazz from the piano in the fraternity house. Some of our number become acclimated sooner than others. Those who do generally "make good" in a spectacular way. The old bamboo flute gives way to the saxophone. The Sunday sport sheets sometimes carry pictures of a football gladiator in

action, and what a contrast to the boy who a short time before spent hours by the side of the lotus pond with the scholar-butler of the family eating dried melon seeds, one by one, memorizing the maxims of the sages. Instead of the awkward youth in the long blue padded smock and native cloth shoes that he chose to wear because he did not wish to be dressed differently from his Asian playmates, there is not infrequently the lithe, well groomed, tuxedoed idol of the "prom". And when college is over, it may be back to the Orient in the oil or tobacco business; it may be medicine, the law or the stage; the diplomatic service or the father's calling to the gospel—it may be anything, just as with all youth.

There are those of us who just get along, who plod, who fall in love with Keats, who find with Chesterton that

"The happy men who lose their heads

They find their heads in heaven,"

who carry around an aspect of dreamy acquaintance with more Elysian territories than we can find in this land of our restless exile.

The missionary's son, after a few years in America, is very little different to all outward appearance, from any other undergraduate who may be seen striding across a college campus, or the men in the harness of this work-a-day world. Some of them have imaginations that never have been and never will be liberated by their births and childhood in some ancient city of Cathay or the Himalayan foothills. They never yearn to go "home" either in spirit or in person. They see the world with the Occidental eye. They are like the lad born near Niagara who found the shredded wheat factory the greatest wonder of his world. Never having received the "feel" for the Orient or enjoyed the flavor of life there, they cannot, now that they are away.

Others can never forget the ashy smell of old incense that the evening breeze brought with it as it sighed through the pines and gently touched the bells on the temple eaves. By starlight, by candlelight, by dreamlight, come memories of that soft hour between sunset and lamptime when the amah fondly told the old, old Chinese fairy tales and legends because mother was in prayer meeting and had little time for Mother Goose. In "the bustle of the noontide" the memory might fly over leagues of sea and sand to a quiet little rural shrine surrounded by its majestic old trees and an ineffable spirit of religious peace and lovely legends.

They were not effeminate lads, these boys. Frequently fists

flew, noses bled and eyes were blackened in vindication of their honor at being called "foreign devils" by a group of hostile native urchins. The ubiquitous Chinese queue of the Pre-Revolutionary days also offered its temptations, especially in prayer meetings at which attendance was compulsory. Mischievous youngsters quickly learn the art of tying together two or three queues of the kneeling worshippers, or if the prostrate are not close enough, the simpler trick of knotting the queue to a bench leg. The discomfiture of the victims when they arose from prayer was a reward for the thrashing meted out by the irate missionary father to save "face" before the converts. Very human boys they all were.

Sometimes this childhood world seems infinitely remote, sometimes very near. Most of us love to linger over these memories. The excitement of it all—life in the East! Fire eaters, sword swallows and snake charmers! Not the serious spreading of missionary propaganda that filled the day of one's father and mother. The trip to the city wall to fly kites: the stealthy, secret expedition down to the river bank to view the corpses of the bandits beheaded in the morning; even the long weary hours of "school" spent over that greatest bugbear in life, the Calvert lessons, with the maiden missionary apprentices assuming the teacher role; and in the afternoon the rides on the little gray donkey. If opportunity offered, the jaunt to the sweet-meat vender on the corner, followed by the group of native children from the compound, dressed in their speckled yellow costumes, bright red coats, mirror caps and pussy shoes with eyes and whiskers. And such an assortment to choose from, covered with flies to be sure, which the vender flecked off with a feather duster! The trays loaded with delightful "fodder", cakes, water-chestnuts, lichees, and candied ginger; dried water melon seeds, and candied crab apples and pickled leeks; sesame seeds, beetle nuts, peanuts and olives,—all precariously near the rubbish piles outside the doors, on which little black pigs lay fattening for the New Year feast. Chickens also scrambled from under one's feet in approaching the assortment. But sanitary scruples were not ours. Then back again to toys from Sears Roebuck. Unspeakable pride in exhibiting the ingenious jumping monkey. Smudgy white fingers showed dirty little yellow fingers how to wind the engine; and when the springs broke, tears filled the blue as well as the little, black slanting eyes, and yellow faces carried tear streaks as well as the white. Childish hearts of two races, offspring of two

"cultures", made one by the common bond of sorrow.

A more vivid memory yet! A seething mass of frenzied fanatics from a religious festival outside the compound wall. The same old superstition of early years. White men with blue eyes could see through the ground and had come to the Middle Kingdom to prospect for gold. Hospitals were butcheries. Witness the anatomical parts in bottles on the dispensary shelves! Cameras purloined the soul of the one whose picture was taken. Suspicion and distrust. Then the weary tale resulting from an indiscreet word in answer to a surly request of a ruffian group to enter the hospital and dispensary. An ignorant crowd forcing and pilfering its way gluttonously until it came to the store room. Five gallon jars of concentrated nitric, hydrochloric and sulphuric acid smashed on cement floors. Bare feet starting to wade through the mixture. And the awful aftermath—blood, rape and no quarter. One station of twenty missionaries completely wiped out. Then the spread of the fire, until it was at last without our own compound. Frantic, hurried disguise. And the whole family by devious routes, the children in the sole care of the kind old Christian amah and water carrier, safer with them than anywhere else, escape over the back wall to a house boat and a happy reunion far down the river, long after darkness had covered the world. Saved by the help of kindly natives.

Yet men will ask a missionary's son today how he feels about the race problem and seem incredulous when they are told.

III

A yearly occurrence in the inland station where I spent my growing years was the long awaited Dragon Boat Festival. No Poughkeepsie regattas were ever more thrilling than those races in which long barges with fish scales painted on their sides and grotesquely carved dragon heads on prows were paddled and raced by fifty men or more to the beat of the coxswain's drum. Dragons were very real things in life then. Dragons, mammoth, writhing, terrifying dragons lead the religious procession that passed down the street by the compound gate. It was from the old scholar, the language teacher of the new missionaries that the significance was learned, and a whole course in pagan philosophy, though dimly comprehended because the "years that bring the philosophic mind" had not come.

The universe was composed of two principles, Yang and Yin. The dragon was the symbol of Yang, the tiger of Yin. Water, mist

and clouds were the nature of the former, the terrestrial elements of the latter. The former was the male, the latter the female; and not only material things, the stars and the heavens, the earth and all the animal creation of the earth, but all ethical and moral good as well came from Yang and Yin. They were the fountain head of all admirable conduct, all qualities of pity and honor, intelligence and justice.

A primitive philosophy indeed, and of course shown to be absurd by father when he was asked. But to boys with a bit of the mystic in their embryonic souls there was a fascination in the thought. In other talks the old scholar said there was no opposition between man and the universe, between man's nature and the nature of trees and majestic mountains and flowers, that the mind, purified and disciplined by meditation would perceive unity and identity between man's life and the cosmic forces and realize it as a spiritual experience. The old man was the legatee of a fine spiritual tradition. His temper had much the same quality as Wordsworth's, quiet and untrumpeted, deep and awful as nature herself. He talked of all "thoughts that lead us out from ourselves into the universal life, hints from the infinite, whispers from secret sources, mountains, waters, mists, flowering trees, whatever told of powers and presences mightier than ourselves: these were the themes dwelt upon, cherished and preserved."

It would be a sacrilege to the memory of that blessed old man to attempt a philosophical evaluation of what he had to say. It was a culture of the spirit that he gave us, not a creed. Later in their expansion, many missionaries' sons have learned, as I have learned, that the Kingdom of Heaven is a temper and not a place. To some of us, the things he had to say have been of infinitely more value than the clerico-sociological exhortations we have received in the Occident of pathetic faith in quantity and numbers.

Perhaps the psychologists would say that many of us are pathologically out of gear somewhere, but in

"The weary and the heavy weight

Of all this unintelligible world,"

we live our lives on something like a Platonic philosophy, finding in the plethora of matter recurrent flashes of the Gleam, the Idea, like glints of gold in a lump of ore. The first tufts of violets in the spring, the happy laugh of a child, majestic music, graceful fancies of poets, kind deeds and warm hand clasps, in these that quality

of universality, which is the reason for their durability, which is the chief element in the beautiful, and a momentary inlet into the universal which is God.

It was an old pagan scholar, who probably bowed down to wood and stone, who burnt his incense in the shrine room, who first lead us to this source of pleasure.

IV

College at last. Imagine a very cosmopolitan group—a Chinese friend of my boyhood, Chang by name, who had come to America through the generosity of friends; a Hindoo named Parulekar, we called him "Parlorcar" in those days; and a quick witted little Japanese known to us all as Ishii. Add to this group three other American boys beside myself. All our home ties were broken; our parents were all in foreign worlds. The aliens of the group, need it be said, were solitary strangers here. It was indeed a group drawn together by "the fellowship of kindred minds". Added to this bond was a touch of sheer loneliness, and most of us were in the midst of that pathetic struggle which meets youths who are sent into the world, ignorant of modern ideas and destined to do battle with them alone. Several of our number had come from the quiet, strict, orthodox atmosphere of an isolated mission compound where piety was not always flavored by the salt of humor or the leaven of imagination. An interesting group of college lads, earnest, introspective, serious beyond their years because of their "inheritance". And such talk as flowed between them, often into the small hours of the night.

The Hindoo was wider read than any of us, a thing which we were tacitly reluctant to admit. Besides, he had a knack of finding passages in his literary browsings that mysteriously blended with our thought. At one of our sessions he brought out a volume of Francis Bacon and read from the preface to the "Instauratio Magna": "I have not sought, nor do I seek, either to force or to ensnare men's judgments, but I lead them to the things themselves, and the concordances of things, that they may see for themselves what they have, what they can dispute, what they can add to the common stock." He paused and closed his book.

Long we discussed the matter. We tried to imagine the result in the world if all men could ever be persuaded to go to the "things themselves and the concordances of things". How much of the present missionary program would of necessity be revised. An

ideal text, I thought, for those who strove for a synthesis of the shrine and laboratory, for the creation of the philosopher's stone.

"Finally", asked Parulekar, "isn't it paraphrased by the Bible in the verse 'Prove all things; hold fast that which is good?'"

Many other things that were said have slipped into the limbo where Time stores the matter it has robbed of our memories. Still fresh however, and blending superbly well, corroborating what we had been thinking, were the hours that followed, when Chang and I withdrew to attend a lecture on the "Three Religions of China" which was given by a returned veteran of "missionary wars". He took up Buddhism, Confucianism, and Taoism each in turn, describing their degeneracies, telling story after story to illustrate the debauched state of religion and public morals in China. Then after each catalog of the degradation of knavish priesthood and debauched practice, he concluded with the sentence: "And when Christ comes into the Chinese heart, Buddha goes out". Confucius and Lao Tze were evicted in their turn.

On our way home Chang was sullen and seething. Finally the fire broke out. He railed at the point of view of missionaries who tried to paint the picture of a civilization by darkening its shadows and obliterating the lights with an ignoring brush. The witches of Puritan New England, the Inquisition, the modern types of persecution—the intolerance, hypocritical moral codes that crushed the soul, the spiritual estrangements so prevalent on Main Street, all our faults of the past and present he cataloged in retaliation.

"All of us want a remedy for the sorrows of the world. We Chinese hunger for something besides life's meat and drink. So do you". His words came pouring out pell mell. "Buddha believed that it could be found in the destruction of desire, by renouncing the world and following the path of peace until death. What is the difference between that and Christ's words, 'If any one would come after me, let him deny himself, and take up his cross daily and follow me?' Never mind what philosophers have said regarding Nirvana and abnegation and unhealthy mental states. Is there any difference?"

I admitted that I saw little.

"Then why does Buddha have to be cast into outer darkness if Christ is to come in? Take Confucius. He said that the remedy was to be found within the world by fulfilling all its duties and leaving to a greater justice the future and its rewards. Where is the

hitch there with Christ's message? You might say that Confucius presented high ideals without the breath of spirit, a system for the head and not the heart. Yet he taught that from the highest in the land to the lowest worker in the field, personal virtue, cleanness of heart and hands, is to be held the thing of greatest value. He told us to cherish all that was good, to avoid evil living, to cultivate right feeling, to be true and faithful to our tasks. Do these things of Confucius have to go if Christ is to come in? These things have made China mellow. They have softened the harshness of our early barbarian conquerors, just as Christianity in the West. Where are his teachings incompatible with the gospel of Jesus?"

In his heated remonstrance he rushed on to Taoism. It was a religion shot through with superstition and rank practice, finding its devotees in the lowest classes, a reproach to his land. But Lao Tze had noble thoughts and lofty sentiments that had helped generations of his kinsmen in their struggles. Then Chang compared the missionary speaker's point of view with Christ's, who had tolerantly told Jews that he had never found such faith as in a certain Roman captain. He had set up a Samaritan as a model of human decency and chivalry which shamed a Hebrew priest and Levite. Surely he meant to say that in the higher realms of the spirit there were no boundaries. The difference was not in the teachings of the world's Holy Men, but in the narrowness of the structures their followers have built on their words. The prejudices of white men reminded him of the story of a Chinese miser who had valued his pearls and jade, but considered their value lessened if pearls and jade were found in other parts of the world. Was a Christian doctrine of less value if the same thing in the rough was found in China?

Why could not Christianity be presented as something beside a static set of doctrines by men who ignored the wisdom of Chinese sages? Who could blame the scholar class of his country for being "almost unreachable"? What a repugnant thought, the apostles of the gospel of love entering under the aegis of extra-territoriality! And once in, to set at naught the civilization and defy the laws of those they would help. I felt that I was getting the benefit of years of smouldering resentment and misunderstanding, the reaction of a cultured Oriental thinker to the whole system of missionary endeavor. I walked silently by his side, hoping he would continue. He did.

"You Americans have proven to me that it is easier for you to

give assent to the Apostles' creed than to love your enemies. It does not take as much Christlikeness to believe in the inerrancy of the scriptures as it does to live a brother with men of other colors. I've been asked to leave more than one barber shop and boarding house". He added the last with a note in his voice that told me the storm had spent itself.

"Well, Chang." I said, "now that you've told me what's wrong with Christianity as it's lived and preached, what is your verdict on the relative merits of the world's religions, as you see them. Try and forget what a rotten mess men have made of everything. Is any one superior?"

He walked on, long in silent thought. Finally he answered me.

"I'll be honest. I think Christianity is. Where it shows its peculiar genius is in its emphasis on the individual. I am not contradicting what I have said about the Nirvana which rightly understood means a going out, an extinction, not of life itself but earth born desire. Beautiful concept. But the Christian is greater. Complete self realization is not obtained by a formal and categorical repudiation of finite things but a self-eclipsing devotion to others, a living for others. In the East it's all impersonal—God, Nature, everything. Fine ethics and philosophy but rigidly impersonal in the last analysis. You know that to love and to be loved by a person more than anything else gives meaning and value to life. When Christ tells us that we are loved and valued by God Himself, it is all-transforming news. Christ pointed it out again and again in the lost sheep, the prodigal son. Ours is a system of betterment by tugging at our own boot straps. Christ has promised the grace of God to abet the believer, to be the Comforter. Can't you see what hope there is in that message for a man or woman fettered with caste or iron-clad tradition?"

I pushed my last question with eagerness.

"Chang, if we have something the world does not have, tell us, since you are a friend, how we should spread the news."

"In the first place," he answered, "not by trying to evangelize other systems. They have served their purpose; leave them alone. Not by going to war, singing "Onward, Christian Soldiers", as a power among powers, but by furnishing a meeting place of ideas, areas of mutual give and take, mutual comprehension, encouraging intellectual reciprocity, letting sympathy and kindness pass into action, just as Christ did on earth; example, not the propaganda of

a campaign. You can't go to war against the religion that has come down through the generations of millemiums to a man and not have him fight back."

I said goodnight to Chang that evening, simply, just as old friends do. And as I recall, I tossed on a sleepless bed, pondering about it and about.

A few days later I was in my room, again talking over old times with Chang, and following up the different digressions into which the long talk of that eventful evening which I have recorded had lead us. A gentle tap on the door and "Parlorcar" walked in. I could tell from the expression on his face that he had found something he wished to share with me. In his hand was a copy of Gilbert Murray's "Four Stages of Greek Religion".

"Here's something I want you to read. A pagan talking—Maximus of Tyre. Tell me what you think of it when you are through."

For Chang's benefit I read out loud.

"God Himself, the father and fashioner of all that is, older than the sun or sky, greater than time and eternity, and all the flow of being, is un-nameable by any law giver, unutterable by any voice, not to be seen by any eye. But we, being unable to apprehend his presence use the help of sounds, and names, and pictures, of beaten gold and ivory and silver, of plants and rivers, mountain peaks and torrents, yearning for the knowledge of Him, and in our weakness naming all that is beautiful in this world after His nature—just as happens to earthly lovers. To them the most beautiful sight will be the actual lineaments of the beloved, but for remembrance sake, they will be happy in the sight of a lyre, a little spear, a chair perhaps, or anything in the world that wakens the memory of the beloved. Why should I further examine and pass judgment about Images? Let me know what is divine: let them know: that is all. If a Greek is stirred to the remembrance of God by the art of Pheidias, an Egyptian by paying worship to animals, another man by a river, another by fire—I have no anger for their divergences: only let them know, let them love, let them remember."

Somehow these words jarred on my ear, accustomed from childhood to dull dogmatics. Instantly there arose before me the well remembered idols in temples, monstrous, Chinese beings towering high above me, some with frightful grimaces, some with benign mein. And a Taoist hell: life sized images of those who had found

fault with the weather or had cornered the grain market being licked by flames, or the gruesome spectacle of the makers of bad books and givers of poison being ground to pulp, like grain crushed between mill stones, by a bevy of devils. I was reluctant to commit myself entirely to the view of Maximus. One is so blinded by the degeneracies of what were once the expression of beautiful thoughts, deep religious yearnings. My Hindoo friend read my mind. Then he said something I have never forgotten.

"The Second Commandment, has a broader spirit than any Christian missionaries have ever given it. Some of them say that it forbids the worship of idols, some add false ideals. No doubt it does this but there is a good deal more. Our idols back home are the embodiment of what we feel are the attributes of God. What this commandment forbids is the crystallization of the Idea of God. If you are going to give full scope to its inner meaning the first clause must be modified. Instead of 'Thou shalt not make thyself any graven image', we must think of God as saying, 'Thou shalt not let thy mind rest in any mental image of me'."

I quoted a passage I was familiar with from childhood, the passage which speaks of a "form of Godliness denying the power thereof". I asked him if the Bible revelation of God was not the finest that had ever been given to mankind.

"Do you know", he countered, "what the puranas have to say about idol worship? You imply that the pantheons of gods you have seen in Chinese temples form the highest concepts Oriental sages have of God. A verse in the Siva Purana reads: 'The highest state is the natural realization of God's presence, the second in rank is meditation and contemplation, the third is the worship of symbols which are reminders of the supreme, and the fourth is the performance of ritual and pilgrimages to sacred places'. All missionaries have ever seen then, is third and fourth rate religion in the East."

He continued, speaking of Christ's terms, the "mustard seed", the "leaven", the "blade, then the full ear". Surely they implied an actual growth, a spiritual expansion. The Narcissus-like love of our own terms was not for him. He pointed out the inevitable Nemesis of endless disputation on the things of the spirit: a waning flame of faith and a chilling of all mutual charity. Devotees of the dead letter of tradition could never master the alphabet of spiritual progress. In this atmosphere rancour would never grow

chastened, hostility could never be overcome by love. Life and the spirit were perennial springs of novelties that could never be eternally or fully expressed by dogma. The sages of his land had spent centuries in their shrines, on Himalayan mountain tops, "sounding depth on depth, only to find still deeper depths, unfathomed and profound".

"Here you have intellectual curiosity, science and the laboratory," he said. "That is the genius of your West. But what's ours? Be still. Be still and know. How the world needs the two!"

We sat in silent thought, each deeply intent on all that had been said. Then Chang spoke.

"Did you ever hear that parable of Confucius' about the young pigs and their dead mother?"

Neither of us had.

"Well, it's something like this. Confucius is sent on a mission to a distant state. On his return he tells of having seen a litter of young pigs nestling close to their dead mother. After a while they looked at her, then all left the dead body and went off. For their mother did not look at them any more, nor did she seem any more to be of their kind. What they loved was their mother; not the body which contained her, but that which made the body what it was."

"And what's the moral, Chang?" I asked. "Dogma with the spirit and life squeezed out?"

"Exactly. You have seen enough of the world to know that men do not quibble over theological distinctions in the God that brings relief from pain and ignorance. We Chinese may not believe in some of the doctrines your missionaries teach in the hospital waiting rooms, but we do believe in the healing power of their medicines, and the religious zeal that has brought them there."

The story of many other things said and done in this group must remain in the oblivion of the unrecorded "things that were". The reactions of these Oriental minds to our social customs, to the discoveries of our laboratories, to the myriads of things in our press, and the good and pestilential winds of doctrine in the air, these form some of the most interesting things I have ever observed in this world.

Ishii, the Japanese in our group had come to America a Shintoist. His was a nimble wit and penetrating mind. Almost immediately upon his arrival at college he had taken a profound interest

in the history of religions and the new psychology. He read everything of Freud and about Freud. He devoured every volume on the new psychology that came within his reach. He read voraciously and with a marvellously retentive mind. Gradually he threw up all his belief in a supernatural universe. Some of us still had within a bit of the missionary zeal of our fathers and attempted to bring him back to what we called a "saner view". But we found him granite. His arguments generally went like this: "You have taught me to see that there can be no spiritual power in trees, rivers and fetishes. The same method of study you westerners have given me makes me ask where there is spirit at all. If you examine and analyze the universe, isn't everything in it material? And if, by your method of reasoning my religion is proven false, isn't the same method valid to prove your religion false?"

We found no answer that could convince him, though we talked to him of a better and finer revelation of the unseen world and God. Ishii remained adamant. Gradually it was tacitly decided to leave the matter to our Hindoo mystic. How well he succeeded I do not know, but some of the things he said in our group, while we were discussing Ishii's point of view and that of science were memorable. Scornfully Parulekar lashed us. We of the west were so preoccupied with "getting by", with having a "good time", with our materialistic thinking, that we had failed entirely in grasping the truth that our personal existence could never express itself adequately in terms of our outward relations with the men and women of our environment. We strove, he said, for chiefly a series of mechanical successes over persons and things; and he defied us to prove that any of our scientific inventions had made us any better in the deep essential things of life, that men in an unscientific age were any worse off than in a scientific, in these matters. He judged moral progress not by man's power over the forces of nature but by his control over the passions of his heart. To much of the new psychology that had upset Ishii he seemed impervious.

"You fellows seem perfectly satisfied", he said, "if the psychologists give a diagnosis of what is wrong with the world or a man. How about a prescription? Mighty few of them have been offering any. Now they are beginning to talk about 'untapped wells of health' or 'unexplored levels of sublimation'. Indian sages have been tapping those wells and climbing those levels for ages, and so have some of the Christian mystics. In St. Augustine's "Confes-

sions"—the thing there that he calls 'the eternal life of the saints', the mystic moment of joy and comprehension, it is the same as the 'God-realization' of our Hindoos.

"Some of the ideas of vedantins are posers for European thinkers, I know. For instance, they hold that by means of meditation and practice, they can reach successively wider intuitions. The Yogin even holds that by ascetism he can attain the power of seeing atoms. Western scientists would say that biasses and passions are an obstacle to the acquisition of truth. Possibly, in special cases, they might allow that civilization and science are built on renunciation in various stages, but how many would agree that systematic spiritual discipline would help a lot in facilitating the realization of the highest truths? They might credit something to auto-suggestion, but not one of them would claim to have tried the method or even be willing."

He failed to arouse in any of us the desire to be Yogins, but we turned with him, as I recall, from the complacent certitude that God could be a perfectly encompassed object for the work of psychological science, which could raise questions about the religious interpretation of life and the world but could not answer them. He was a logician and metaphysician in his bones. He was dauntless and fertile in speculation. The satirical attitude of modern intellects he held to be illuminating but containing little of the milk of human kindness. To him, they were dilettanti in the affairs of life and the world. Faultless in no way was he. Still many of us have counted it one of fortune's greatest gifts to have been able to read and think with him in those college years.

Now, to have been brought up among an Oriental people that actually believes its faith and shapes life by it, is to have lived in an atmosphere infinitely different from that of our western, half-hearted assent to creeds. Many of us would prefer the cycle of Cathay, with its food and drink that have come to us "without money and without price" to Tennyson's fifty years of Europe and its "practical" civilization. With the Cathayan sage we would rather say, "Better an earth-lined cave from which the stars are visible than a golden pagoda roofed over to shut out the sky."

It was the Hindoo who taught us to

"Hold on, hope hard in the subtle thing
That's spirit."

V

It is the religious nerve that is the irritable nerve. The air of to-day is rendolent with unrest and discontent. The East is arming against our Western insistence on policing its mind. Suffering from the worst sort of spiritual inertia ourselves, and justly accused of being the "flattest minded people on the fact of the earth", we have been attempting to foist on the Orient a narrowly doctrinal and sectarian Christianity. The Stevensonian phrase, "Man lives not by bread alone but mostly by catchwords" is only too true. Unintrospective wits that we are, many of us have judged the depth of a man's Christianity by the rate at which he ejaculated hallelujahs and amens. And without even the faith that survives the decay of dogma, we would clothe alien races in the habiliments of our own mind which we wear so hardly.

Certain it is, the journey to the mental antipodes is longer than the journey to the physical. The West has forced its way into the latter; we have been more than willing to take what it offered, and when it was not offered we have grabbed while the grabbing was good. The spiritual we have completely ignored.

The East will not forever passively permit itself to be trampled upon either by our platoons or our many forms of propaganda. Within the last years we have seen ample evidence of this. Further more, those of us who have lived and talked with the elite of the East, the leaders in the making in American colleges and universities, those of us who have tried to share mutual dreams for our "native" land, have come to feel that above all, the most needful thing in the world today, if we are to be saved from another blood-letting, is the creation of a spirit that would assure men of no variance in our policies and religious profession, that would not ignore many points in their civilization in which they can show Christian nations an example to be followed.

The East is far from spiritually perfect, and no missionary's son is blind to the disease that yearly exacts its heavy toll of life, the superstitions and practices that have fettered millions, crushing them under a weight too heavy for mortals to bear. It is not a weak minded eclecticism that the world needs. In the face of wars and rumors of wars, of religious factions locking horns, of dire physical calamity and need, "sorrow and resignation to sorrow are signs of soul anaemia and disease". Something must be done. The pose of the wise-acre who claims infallibility has too long been the West's.

It has repelled those we would help. We must recognize what the world holds in common of the eternal verities. Where the gospel of Christ, nominally accepted by the West, has given aught else, these things we must so live and practice that our lives will make them irresistably attractive and men will choose of their own accord. The spirit of the East, from which Christianity itself sprang, the spirit of the shrine must be synthesized with our "progress". Superior men of all races must make common cause against the fools, weaklings and dunderheads of the world. Generosity and pity, a deep understanding of man's slow struggles and the unequal movements of life will forbid intolerance. It can only express itself in Emerson's words, "I am primarily engaged to myself to be a public servant to all the gods, to demonstrate to all men that there is intelligence and good will at the heart of things, and ever higher and higher leadings."

SONGS AND SPEECHES OF THE PLAINS

BY DR. GEORGE H. DAUGHERTY, JR.

THE great plains area comprises a vast extent of rolling prairie stretching from north of the Canadian border to the Gulf of Mexico, and from the line of the Missouri river to the Rockies. This domain was formerly inhabited by the great buffalo herds and widely scattered bands of more or less nomadic hunters. It is estimated that the plains area was the home of at least thirty-one tribal groups. Of these, eleven were most typical: the Assinboine, Arapaho, Blackfoot, Crow, Cheyenne, Comanche, Gros Ventre, Kiowa, Kiowa-Apache, Sarsi and Teton-Dakota. These people ranged from north to south in the heart of the area, depending for subsistence almost entirely on the buffalo, and to a very limited extent on roots, berries, and wild fruits and grains. Wissler briefly characterizes other features of their culture: "absence of fishing; lack of agriculture [as a rule]; the tipi as a movable dwelling; transportation by land only, with the dog and travois (in historic times with the horse); want of basketry and pottery; no true weaving; clothing of buffalo and deer skins; . . ."¹

On the eastern border of the area were other tribes not quite so nomadic, and hence more advanced in the scale of culture. Among these were Arikara, Hidatsa, Iowa, Kansa, Mandan, Missouri, Omaha, Osage, Ota, Pawnee, Ponca, Santee-Dakota, Yankton-Dakota, and Wichita. These latter had achieved a limited use of pottery, some spinning and weaving of bags, and alternation of the tipi with larger and more permanent houses covered with grass, bark, or earth.²

Compositions have been selected representing the Teton-Sioux of the Black Hills region in South Dakota, and the Omaha, another

¹Wissler, "Material Cultures of the North American Indians", pp. 78-79.

²Wissler, *op. cit.*, *loc. cit.*

Siouan tribe previously mentioned as indigenous to north-eastern Nebraska, (See Wissler's Map).³ (1) The Siouan Indians have long been celebrated in American history as being among the most fierce and troublesome of all Indian peoples. Before the invasion of the white man, they were characterized by the same nomadic, hunting, and warlike spirit. At the time of the discovery it is estimated that 100,000 Sioux inhabited the territory between the Mississippi and the Rockies, and from the Red River divide in Arkansas on the south nearly to the Saskatchewan in the north. One branch of the stock extended across the Mississippi to Lake Michigan. Their tenure of the plains area was not ancient. There is some reason to believe that in post-glacial times they had migrated from the east in pursuit of the buffalo herds, dispossessing earlier resident tribes as they went.⁴ Once possessed of the plains area their shifting life brought them into continual conflict with each other, and with neighboring peoples. Their culture was therefore that of bellicose gypsies, in everlasting pursuit of the bison. "The men and animals lived in constant interaction, and many of the hunters acted and thought only as they were moved by their easy prey the buffalo."

The beliefs and ceremonies of the Sioux, not greatly different from other plains tribes, reflected their environment. All their beliefs were especially disposed to bloodshed, being genetically if not immediately related to war and hunting. Among these people hecastotheism was evident in their worship of objects and places: zootheism in the deification of mystic thunderbirds and various animals such as the wolf and buffalo. They also held some physitheistic beliefs in the mysterious powers of sun and winds. "On the whole it seems just to assign the Siouan mythology to the upper strata of zootheism, just verging on physitheism, with vestigial traces of hecastatheism."⁵

The songs of the Teton Sioux reflect quite adequately their prairies environment and nomadic life.⁶ Those celebrating the horse

³Note the name "Sioux" refers to all the tribes of this linguistic family. It has also been applied to one or more Siouan confederacies. A synonymous term is "Dakota".—McGee, "The Siouan Indians," p. 157 ff.

⁴McGee, *op. cit.*, p. 186.

⁵McGee, *op. cit.*, pp. 184-5.

⁶The Teton division of the Sioux formerly constituted more than one half of the entire tribe, and (during their residence in the west) seem always to have lived west of the Missouri river. They exceeded other Siouans in physical development and in wealth. Their distinctively tribal life came to an end with the last buffalo hunt in 1882. They are at present on the Standing Rock Reservation in North and South Dakota. Other bands are on the reservation at Sisseton, South Dakota.—Densmore, "Teton Sioux Music", pp. 1 ff.

are by far the most numerous, being 31.5 per cent of all songs making any mention of nature, and 56.6 per cent of all songs mentioning animals. This unusual proportion is eloquent testimony of the importance of the horse in the wandering life of the Sioux. Previous to the introduction of the horse in the late 18th century, they had to hunt on foot. Tramping up and down the prairies after buffalo herds must indeed have constituted a hazardous and meagerly rewarded existence. The horse afforded them a new means of conquest which enabled them to enter "on a career so facile that they increased and multiplied despite strife and imported disease."⁷ Horses eventually became the chief object of prairie warfare: and the number a man had was the standard of his wealth and position.

"The Crow-enemy,
if I see him
it is my intention to take his horses.
If I do this
it will be widely known."⁸

* * *

"Older sister, come out,
Horses I bring.
Come out,
One (of them) you may have."⁹

* * *

"Before the gathering of the clouds
the erratic (flight) I have caused.
My horse (as) a swallow
it was flying, running."¹⁰

* * *

"Daybreak appears
when a horse neighs."¹¹

* * *

"See them,
prancing they come:
Neighing they come,
a Horse nation.

⁷ McGee, *op. cit.*, p. 113.

⁸ Densmore, "Teton Sioux Music", p. 402.

⁹ *Ibid.*, p. 411.

¹⁰ *Ibid.*, p. 162.

¹¹ *Ibid.*, p. 300.

See them
prancing they come ;
neighing they come."¹²

Quotation of songs on all phases of prairie environment would be but a repetition of many of the themes already illustrated in preceding chapters. The following table, made on the basis of Teton Sioux songs collected by Miss Densmore, demonstrates influence of plains life.¹³ Of 195 songs with words, 102 contain mention of some manifestation of nature. The tables indicate relative percentages of themes in this nature group.

	Number	Pct.
Songs referring to animals	60	55.5
Songs referring to birds	12	11.1
Songs referring to the wind	14	12.9
Songs referring to sacred stones	13	12.
Songs referring to directions of the compass	12	11.1
Songs referring to water	1	.9
Songs referring to the earth, hills or prairie	19	17.6

It will be observed that some of the songs have been listed under two or more headings in cases where they contained two or more different references. Among animals (besides the horse) the buffalo, wolf, and bear figure prominently. The deer, elk and fox are also mentioned. Only one song has any reference to fish. The birds mentioned include owl, eagle, crane, hawk, crow, swallow, "thunder-bird", blackbird. Among songs referring to inanimate nature I have included all those in which reference to the earth is made, even though it be in such a fashion as the following:

"The old men say
The earth only endures.
You spoke truly
you are right,"¹⁴

which bespeaks the vivid impression made by the broad and everlasting prairies. Others of this group reflect the thoughts of the wanderer:

¹²*Ibid.*, p. 302.

¹³Densmore, "Teton Sioux Music", *Bulletin* 61, *Bureau American Ethnology*.

¹⁴*Ibid.*, p. 357.

“In all lands
 adventures I seek.
 Hence
 amid hardships I have walked.”¹⁵

Other objects of inanimate nature receiving notice are the sun (6 songs), the moon (3 songs), medicine root (5 songs), dawn and sunset (5 songs). There is only one song referring to water or streams, and one referring to trees. Clouds and the rainbow are each mentioned once.

Among the speeches and rituals of Siouan tribes the following contains in large measure the wild fierce spirit of the open prairie. It is an Omaha ritual invocation to the crow and wolf, recited on the occasion of conferring “the crow” war honor for distinguished bravery in battle.

“
 He! Great male wolf in ages past you were ‘moving’, *ecka!*
 Of soldiers you were a war leader, it has been said, *ecka!*
 Male crow, in ages long ago you were ‘moving’, *ecka!*
 Of soldiers you were a war leader, it has been said, *ecka!*
 Where were congregated our desire (herds of buffalo) you
 went, *ecka!*
 They (herds) were gathered leeward, where the wind blows
 you walked, it is said, *ecka!*
 Great grey wolf, thou wert then ‘moving’, *ecka!*
 Your pale face, it is said, peered over hill again and again
 as you walked, *ecka!*
 Your long tail blown by the wind as you passed on, it is said,
ecka!
 He! Male crow, you long ago were ‘moving’, *ecka!*
 The frayed feathers ruffled at your neck as you walked, it is
 said, *ecka!*
 The people cry ‘Ho!’ in admiration as you walk, so it was
 said, *ecka!*
 You shouted again and again back to them from the distance,
 it is said, *ecka!*
 Turning yourself again and again as joyfully you walked to
 leeward on the broad land, it is said, *ecka!*
 The herds of the animals, *ecka!*

¹⁵*Ibid.*, p. 340.

Verily you cause them to come near, *ecka!*

.....

Not even one may escape, *ecka!*

Verily close together do they stand, *ecka!*

Slaughtered were they, *ecka!*

He! many were carried home, *ecka!*

The field lay vast, it is said, *ecka!*

Ever toward leeward, Oh wolf, *ecka!*

For that purpose you walk, *ecka!*

A deserted place immediately becomes the scene of your
activity, *ecka!*

The buffalo lying dead, *ecka!*

In great flocks here and there crows gather together, *ecka!*

Verily, what is yours you eat and the food gives you new
life, *ecka!*

.....

Verily like to this do I desire for my children, *ecka!*

Verily I would make them to rejoice, that do I strive to bring
to pass, *ecka!*

Although I have first touched food with my mouth, *ecka!*

Nevertheless, the little ones, the children, *ecka!*

Their hearts would I make glad with my power, so you said,
it is said, *ecka!*"¹⁷

In this ritual is plainly expressed the Indian's wonder and admiration for these creatures, all-powerful in the prairie environment. After the battle, no matter which side was the victor, the wolf and crow remained in possession of the field. Without sharing in the labor of the hunt they always feasted royally afterward. In some cases they may have been of assistance to the hunters by indicating the presence of herds of buffalo. Certainly the startled flight of a flock of crows was a sure indication of a stealthily approaching enemy. It was most natural for the warriors to call upon these creatures for aid. "The refrain '*ecka!*' is equivalent to 'I desire', 'I ask', or 'I pray for'. It is ritualistic and responsive to that which precedes. Each line is not complete in itself, yet it conveys the picture, or a part of the picture of the help offered once for all time by the wolf and the crow, and tends to impress on the warrior his dependence on these supernatural helpers. In line [1], again in line

¹⁷Alice B. Fletcher, "The Omaha Tribe", *27th Ann. Rep. B. A. E.*, Part 1 pp. 443 ff.

[3], the wolf and the crow are said to be moving in times long past. This use of the word 'moving' brings the crow and wolf into mythical relationship with . . . the power that moves' that gives life to all things: the time when these creatures were 'moving' was in the distant past and their action had in it something of the creative character. The ritual also perpetuates the story of the time when the office of 'soldier' (those who were to guard the people and regulate the hunting) was created, as well as the mythical promise of the crow and the wolf to help men in battle and the hunt. . . .¹⁸

On the basis of the rather prosaic translation quoted above, I have attempted a rhymed version, in the hope of emphasizing some of the poetic force hidden in the original.

"Hark to the howl, over valley and hill,
Of the great gray Wolf with lust for the kill.
Wolf-god grim of the days gone by,
Answer to the screech of our fierce war-cry.
Prowl once more through the blood-soaked land!
Lead to the slaughter of the enemy band.

Great gray wolf, we have watched you still
Where the buffalo shivered in the lee of the hill.
We have hearkened to your voice in the shriek of the gale.

You passed like a demon with your wind blown tail;
And your pale face peered o'er the hill once again
As you gorged your fill of the buffalo slain.

Hark to the caw of the Great Male Crow,
As he ruffles his feathers, and the people cry, "Ho!"
He struts through the land with a haughty air
And turns his head to the tribesman's stare.
In an echoing call his voice comes back
While the warriors follow on his hunting track.

The buffalo tremble with a deadly fear.
None can escape when the Crow draws near!
They huddle together as they stand at bay,
And the slaughter goes on through the blood-red day.
The herd lies butchered, on the vast field spread;
And the crow flocks gather to feast on the dead.

¹⁸Fletcher, *op. cit.*, pp. 445 ff.

The Wolf-god prowls in the lonely place,
 Grinning through the dark with his lean gray face.
 The fat crows scatter and settle once again,
 To the carrion feast on the silent plain.
 And the waste lands tremble as the echoes fly
 Of the Wolf's long howl and the Crow-god's cry.

The tribesmen listen and exult to hear
 The call of the beasts, for it means good cheer.
 "Redskin children, we have heard your plea!
 The strength that is ours even yours shall be.
 With the fangs of the Wolf shall ye rend the foe.
 Ye shall gorge at the feast like the flocks of the Crow!"

The Sioux are now tame upon a reservation, their bloody career of foray and massacre ended for all time. The great prairies echo to the squawk of the klaxon instead of the dread war whoop; the modern adventurer may fare across the plains without fear of being pursued and scalped by any but the motorcycle police.

POETRY OF THE SOUTHWEST.

The Southwest Culture Area (Holmes, No. VI; Wissler, No. 8), covers the states of Arizona and New Mexico and some adjacent territory. It offers so wide a variety of problems that no attempt will be made in these pages to represent all phases of culture in the area. Instead, a brief sketch of the prevailing type of culture and environment will be given together with songs and speeches of one southwestern tribe, the Pima. These examples will, it is believed, serve to demonstrate the effect on the Indian mind of the arid environment and of the sedentary, agricultural life, as contrasted with the effect of the northern plains and forests, and the hunting existence.

The area "is in the main a region of plateaus, canyons, and cliffs; of limited fertile areas bordering stream courses, and broad stretches of arid, semi-desert."¹⁹ "The soil is largely fertile, that is, where there is any soil at all; it produces as soon as it can be moistened. Vegetation, therefore, bears the character that might be expected: it appears scant along the mountain bases, and often on the lower mountains themselves; and . . . affords singular associations of vegetal types, and great contrasts in what lives and blos-

¹⁹Holmes, "Areas of American Culture Characterization", p. 61.

soms in the same neighborhood." There are a few pine forests on the mountains, and much mezquite on the plains and in the canyons. Corn is raised in the river valleys. Animals include the panther, coyote, wolf, deer, bear, wild cat. Snakes were abundant. "Still, animal life is far from being prominent on the whole. Nature in the southwest is rather solemn than lively. Days may elapse ere the wanderer meets with anything else than a solitary crow, or a coyote, On smaller plains, droves of antelopes are occasionally encountered; the other large mammals, even deer, although plentiful in certain localities shun even the distant approach of man. There is a stillness prevailing which produces a feeling of quiet and solemnity well adapted to the frame of pine clad mountains, with their naked clefts and rents, or huge picturesque crags, from which one looks down on mesas and basins, beyond which the eye occasionally escapes towards an unbounded horizon, over arid valleys and barren plains, with the jagged outline of other ranges far away, where the dark blue sky seems to rise or to rest."²⁰ Two leading types of culture have evolved within this area, the Pueblo type and the Non-pueblo type.²¹ The former people all live in communities of stone or adobe houses; those of the latter class are either village Indians with less substantial dwellings, or else nomads. The cliffs in the south, abounding "in caves and deep recesses well adapted for habitation", undoubtedly led to the intelligent use of stone in building, "with the result that the building arts were more highly developed than in any section north of Middle Mexico."²² The pueblo tribes are confined to a strip of territory, the east end of which is in south eastern Arizona, thence south by east to the Rio Pecos in New Mexico, and south from Taos on the Rio Grande to about El Paso, in Texas. Originally the Pueblos continued far south, mingling with the Aztecs in Mexico.²³ The famous pueblos, or villages, consist of "buildings several stories in height, either of stone or adobe, communal in character, that is, intended to accomodate a whole gens or clan. . . ." The dwellings are compact, several stories high, with small rooms arranged in no fixed plan. The houses or groups of houses are placed in circular or rectangular form about open courts. Early pueblos were built on the terrace plan, the roof of one story being

²⁰A. F. Bandelier, *Final Report of Investigations among the Indians of the Southwestern United States*, Part I, Cambridge, 1890, pp. 24-5.

²¹Wissler, "Material Cultures of the North American Indians", p. 92.

²²Holmes, *op. cit.*, p. 81.

²³Miner, *The American Indians North of Mexico*, Cambridge, 1917, pp. 99 ff.

the promenade of the next. Entrance to the second story is usually effected by ladder, or by a hole in the roof.²⁴ In proximity to the pueblos are the "cliff houses", structures of stones carefully squared and laid in mortar. They are found in great numbers and over an area of wide extent in the deep canyons of the Colorado, Gila, and Upper Rio Grande and their numerous affluents. These singular structures are perched on ledges of precipices, which often descend thousands of feet almost perpendicularly. Access to many could only have been by rope or ladder. Prominent points in the surrounding terrain were often surmounted by watch towers. The disposition of these and the cliff houses proves that they were built as safe retreats from marauding enemies.²⁵

That the region has long been occupied is attested by the great numbers of substantial ruins. All tradition, material culture, and skeletal remains indicate that the modern town-building tribes are descendants of the ancient peoples. "There is nothing in any of the remains of the pueblos, or the cliff houses, or any other antiquities in that portion of our continent, which compels us to seek out other constructors for these than the ancestors of the various tribes which were found on the spot by the Spaniards of the sixteenth century, and by the armies of the United States in the middle of the nineteenth."²⁶

The distinctive type of culture is in itself a natural product of the environment. "It is a significant fact that these people do not all belong to the same linguistic stock. On the contrary, the 'Pueblo Indians' are members of a number of wholly disconnected stems, among them the Soshonean, Zunian, Tanoan, Piman, Yaman, and Keresan families. This proves that the Pueblo civilization is not due to any one unusually gifted lineage, but was a local product developed in independent tribes by the natural facilities offered by the locality. It is a spontaneous production of the soil, climate, and conditions which were unusually favorable to agricultural and sedentary occupations, and prompted various tribes to adopt them."²⁷

It is also important to note that there was not a vast difference

²⁴Brinton, *The American Race*, pp. 114 ff. and Miner, *The American Indian*, p. 102.

²⁵Brinton, *The American Race*, p. 114 ff. The situation here is, in a rude way, analogous to that on the north English border in medieval times. The cliff houses were the primitive prototypes of English castles which were erected to keep out the Scotch savages.

²⁶Brinton, *op. cit.*, p. 115. See also Holmes, *op. cit.*, p. 61.

²⁷Brinton, *op. cit.*, p. 116.

between the culture of the Pueblo tribes and that of other Indians within the area, or in truth in any other area. "Apart from the development of the art of architecture there was little in the culture of the Pueblo tribes to lift them above the level of the Algonkians."²⁸ Among the non-Pueblo tribes in the area are included the Ute, Paiute, Navaho, and Apache. Some of these may be new comers in the area.²⁹ Tribes such as the Pima, Papago, Yuma, Mariposa, lived in *North America*, p. 29 ff. in villages, though not of the Pueblo type.³⁰ "Thus in the widely diffused traits of agriculture, metate, pottery, and to a less degree the weaving of cloth with loom and spindle, former use of sandals, we have common cultural bonds between all the tribes in the Southwest, uniting them in one culture area."³¹

The Pima tribe, mentioned above, possesses a literature as interesting as any in the Southwest. The Pimans have from ancient times been residents of the Gilla river valley south of Phoenix, Arizona. A part of the tribe is also located on the Salt River Reservation north of Gila. Brinton thinks that they are the descendants of the builders of the famous "Casa Grande" pueblo ruins, and of other abandoned pueblo and cliff dwellings in the vicinity, from which they were driven by the Apache.³² Other authorities regard their culture as of a type transitional to that of the Pueblo builders.³³ In any event the tribe were noted for their intensive agriculture by irrigation and their industrious habits. In the face of alternate floods and droughts and the constant attacks by the marauding Apaches they were able to maintain themselves in fair prosperity. In the year 1858 they sold to the Overland Mail line a surplus of 100,000 pounds of wheat and vast quantities of beans, squashes, pumpkins, and melons. In 1862 their surplus wheat, sold to the government, was over a million pounds. At the present time they raise several varieties of maize (Indian corn) and numerous vegetables; and they produce several million pounds of wheat annually.³⁴

It is especially noteworthy that this tribe has always been friendly to the Americans. In the days before railroads they furnished aid to

²⁸Brinton, *op. cit.*, p. 117. See also Holmes, *op. cit.*, p. 62 and Wissler, *op. cit.*, p. 92.

²⁹Swanton and Dixon, "Primitive American History", in *Anthropology*

³⁰Wissler, *op. cit.*, p. 93.

³¹Wissler, *op. cit.*, p. 94.

³²Brinton, *op. cit.*, pp. 123-4.

³³Russel, "The Pima Indians", *26th Ann. Rcp. B. A. E.*, pp. 19-26. Wissler, *op. cit.*, *loc. cit.*

³⁴Russel, *op. cit.*, pp. 67, 89-91.

the California pioneers. They also rendered brave assistance to government troops fighting the Apaches.³⁵ Their services to the government did not, however, prevent their water supply being cut off in 1861 by an irrigation project (the Florence Canal), which left the tribe for some time in very hard, even desperate circumstances.³⁶

Among the most interesting pieces of Pima literature are their calendars, or chronological records. These annals are kept on notched sticks, and cover a period of over ninety years, dating from the season preceding the meteoric shower of November 13, 1833. There are traditions in the tribe of still older sticks which have been lost. The sticks are marked with notches, and a few crude figures for mnemonic devices; years are counted between harvests (in June). Russel has transcribed the record from two sticks which were "told" to him by their owners. The following extracts from his account will give some idea of the life of this tribe. The style and (from the modern point of view) some of the relatively trivial events noted are not unlike the monkish annals of medieval Europe. The constant forays are also reminiscent of medieval barbarism.

1834-35.

"Gila Crossing Salt River. One cold night in the spring a Pima . . . was irrigating his wheat field by moonlight. Without thought of enemies he built a fire to warm himself. This the Apaches saw and came about him in the thicket. Hearing the twigs cracking under their feet, he ran to the village and gave the alarm. The Pimas gathered in sufficient numbers to surround the Apaches, who attempted to reach the hills on their horses. Two horses stumbled into a gully, and their riders were killed before they could extricate themselves. The others were followed and all killed. In the words of the old tribesman, 'This was the only event of the year, and our people were undisturbed further in the practice of their customs.'"

1842-43.

Salt River. In the autumn the Yumas again came to attack the Maricopa village, but did not attempt to surprise it. They formed in line of battle opposite the Maricopas who were equally courageous. The war chiefs stood between the lines. Each man was armed with a club only. The Yuma chief said to his opponent: 'I am ready to have you strike me first if you can.' The Maricopa

³⁵Russel, *op. cit.*, p. 19.

³⁶Russel, *op. cit.*, pp. 32-33.

chief answered: 'It is for me to let you try your club on me, because you want to kill me, and you have traveled far to satisfy your heart.' In the personal combat which ensued the Yuma was killed, the sharp end of his opponent's club piercing his side. Then the fight became general, each attacking the man opposite him in the line. There were some Mohave Apaches with the Yumas who fought with bows and arrows. When they saw the line of Yumas wavering they deserted them. The Yumas retreated some distance and again made a stand, and the fight ended in an indecisive manner. . . . After the fight the Mohaves wanted to scalp the dead enemy, but the Yuma chief said no, they might scalp some Yumas by mistake, and they must wait until these had been gathered from the field."

1860-61

Gila Crossing. A plague which killed its victims in a single day prevailed throughout the villages. Three medicine men—who were suspected of causing the disease by their magic—were killed, 'and nobody was sick any more'.

1893-4.

Gila Crossing. The village of Hi atam and the Gila Maricopas held a dance together; but no one was killed. Tizwin [a native liquor] was made secretly at Gila Crossing, but no fatalities occurred.

The "prettiest woman in the village" died at Gila Crossing, and her husband was suspected of having caused her death.

A man was shot by another, who was drunk with whiskey."³⁷

Traditional set speeches constitute another important element of Pima literature. The following was and is recited by an appointed orator at the beginning of ceremonies intended to bring rain. It shows the profound importance attached to rain in the arid district; and also possesses a striking similarity of symbolism and concept to the Cherokee formula quoted on p. 15.

" When the earth was new, it was shaking and rough.³⁸ As you know, Black Mocking Bird lives in the west. I had considered my relationship to him and guessed what would be the right manner in which to address him. Because of my entreaty he was disposed to be friendly toward me.

Yes, Black Mocking Bird, if your plans for controlling the earth

³⁷Russel, *op. cit.*, pp. 34 ff.

³⁸A reference to occasional earthquakes in this district. D.

have failed, go far hence and leave the black wind and the black clouds behind you. Your people will henceforth entreat your assistance from a distance.

When the land was new I knew of a Blue Mocking Bird in the south, and I called on him also for help, and he came. He gave commands to control the mountains, trees, everything. But still the earth continued shaking."

Further entreaties to the "White Mocking Bird in the East" were also unavailing. The powers of the magician above "enveloped in darkness", "a Gray Spider in the West", and "a Black Measuring Worm that was friendly" served to quiet the earth somewhat. The arts of a certain "Blue Gopher" in the West were finally successful.

"He [Blue Gopher] placed a brand of fire down before me and a cigarette also. Lighting the cigarette he puffed smoke toward the east in a great white arch. The shadow of the arch crept across the earth beneath. A grassy carpet covers the earth. Scattering seed, he caused the corn with the large stalk, large leaf, full tassel to grow and ripen. Then he took it and stored it away. As the sun's rays extend to the plants, so our thoughts reached out to the time when we would enjoy the life-giving corn. With gladness we cooked and ate the corn, and, free from hunger and want, were happy. Your worthy sons and daughters, knowing nothing of the starvation periods, have been happy. The old men and the old women will have their lives prolonged yet day after day by the possession of corn.

People must unite in desiring rain. If it rains their land shall be as a garden, and they will not be as poor as they have been."³⁹

There are also conventional speeches recited by a war chief in making an appeal for followers. These speeches are presumably of a magic character, based on the supposed speeches of the gods at the time of the creation. A series of them was also recited at halts along the way toward the enemy camp. Each speech contains references to the supernatural powers invoked to aid the Pimas, and always ends with the destruction of the Apache, and the curious phrase, worthy of a peaceful and conservative people, "You may think this over, my relatives. The taking of life brings serious thoughts of the waste; the celebration of victory may become unpleasantly riotous."

The following is another typical selection which contains at least

³⁹*Ibid.*, pp. 347 ff.

one strikingly poetic figure.

“. . . my young men were preparing to fight. They rushed upon them [the enemy] like flying birds and swept them from the earth. Starting out upon my trail I reached the first water, whence I sent my swiftest young men to carry the message of victory to the old people at home. Before the Magician's door the earth was swept, and there my young men and women danced with headdresses and flowers on their heads. The wind arose and cutting off these ornaments, carried them to the sky and hung them there. The rain fell upon the high places, the clouds enveloped the mountains, the torrents descended upon the springs and fell upon the trees.”⁴⁰

All the tricks of desert warfare are revealed in these ancient orations. The following vivid description might well be envied by our best “wild west” writers.

“From the east a scout came to tell me that in the *brulés* the tracks of the Apaches show plainly. Yes, like foolish children, they wish to die with their daughters, sons, and valuable possessions.

Now a man with the strength and agility of the wild cat crept upon them from that side. And one with the sinuous silence of the gray snake glided upon them from the other side. Another crept up behind the shelter of trees. Render yourselves invisible upon the gray earth! Crawl through the arroyos, advance slowly. . . . The medicine man threw his spell upon the enemy and they slept. The Apache dreamed, and when he awakened he thought it was true that his younger brother and his uncles had been killed. . . . When he thought of these things he was frightened and tried to hide himself.

I sent the men with shield and club in two parties in the east and west direction to meet at the camp of the Apaches. Some went straight with me. There, gathered about a stump, are the Apaches. When our men heard of this from a messenger they sprang upon the enemy. We killed one who slipped upon the grass and fell down hill and another who stumbled upon a branch. We cleaned up every thing about the Apache camp. Animals and birds alone remained to prey upon the dead.

I turned back and my trail was downward. I reached home after slackening speed four times. . . . Then I came bringing the evidences of my victory. My land rejoiced and the mountain donned its headdress, the trees took on gladness.”⁴¹

⁴⁰*Ibid.*, p. 362.

⁴¹*Ibid.*, pp. 371-74.

The songs of the Pima are usually longer than others we have analyzed. Some of them are really quite poetic. Others remind one somewhat of Vachel Lindsay. The descriptions are sufficiently sustained so that the effect of the semi-desert environment is at once noticeable. Since a much smaller number of Pima songs have been transcribed, than of other tribes, they can not be classified according to themes, as were the songs of the Ojibway and Sioux. The following quotations will demonstrate the differences between the Southwest and other areas.

CIRCLING SONGS

"Accompanied by dancing and the beating of baskets. The dancers move in a circle made up of men and women alternately."

"I am circling like the Vulture
Staying, flying near the blue.

I am circling like the Vulture
Breathing, flying near the blue.

"Now the reddish bat rejoices
In the songs which we are singing.
He rejoices in the eagle down
With which we ornament our headdress."

* * *

"In the distant land of Eagle,
In the distant land of Eagle
Sounds the harmonious rolling
Of reverberating thunder."

* * *

"I ran into the swamp confused;
There I heard the tadpoles singing.
I ran into the swamp confused
Where the bark-clothed tadpoles sang

"In the West the dragonfly wanders,
Skimming the surfaces of the pools,
Touching only with his tail. He skims
With flapping and rustling wings.

"Thence I run as darkness gathers,
Wearing cactus flowers in my hair.
Thence I run as the darkness gathers,
In fluttering darkness to the singing place."⁴²

⁴²*Ibid.*, pp. 259, 292, 294, 295.

MEDICINE SONGS

"Darkness settles on the summit
 Of the great Stony mountain
 There circling round it settles
 On the great Stony mountain.

The ruddy beams like spider threads
 Across the sky came streaming.
 The reddish snakes like spider's web
 To the opposite side came flaming."

* * *

SONG OF THE BEAVER

"You talk about and fear me;
 You talk about and fear me.
 As like the sinuous snake
 I go upon the water.

I see that you go slowly;
 I see that you go slowly.
 Strong as the Sun among the trees
 You leave your mark upon them.

Younger brother, I am Beaver,
 I am the quick-eared Beaver
 That gnaws the trees of the forest,
 'Tis I who overthrow them."⁴³

* * *

LIGHTNING SONG

"See the destructive lightning
 Going to kill the distant tree.
 It is going, my younger brother,
 To split the distant tree.

.
 The lightning like reddish snakes
 Tries to lash and shiver the trees.
 The lightning tries to strike them,
 Yet it fails and they yet stand."

⁴³*Ibid.*, pp. 309 and 320.

BADGER SONG

“

The land is parched and burning
 The land is parched and burning
 Going and looking about me
 I see a narrow strip of green.

.

The light glow of evening
 The light glow of evening
 Comes as the quail fly slowly
 And it settles on the young.”⁴⁴

The preceding are merely samples of the poetry of the Southwest, picked not so much for merit as for incidental mention of animals, lightning, drought, and other accidents of the southwestern Indian's life. This particular field of aboriginal art has attracted much notice in late years. It is to be hoped that some one with talents sufficient will make a really representative and complete anthology of this poetry.

CONCLUSION

The objection may be raised to many of the selections quoted in this series of articles that they are not 'literary'; they do not always show the Indian as an artistic genius. True, he was seldom an artist, by civilized standards. He was a savage; and the whole purpose of the present work will have been served by the demonstration that he sang, talked, and shouted in truly savage fashion. The discerning eye will also see in these crude refrains and wild speeches and chants the same underlying interests that concern us all, the same motives and passions that sway the civilized man. Food and rest, hunting, war, the accumulation of valued property, friends, the enemy; these are what the Indian thought about. He felt the passions of love, hate, revenge; he feared death and the unknown forces of life. He imagined gods and worshipped them, and believed in the continued existence of his soul. These are likewise the really important affairs of the white man, proclaimed alike in *Beowulf*, in the *Cid*, and in the latest newspaper. That the rewards of our hunting are counted in dollars and that our temples are lofty does not alter the essence of their character. We still band

⁴⁴*Ibid.*, pp. 322, 323.

together for protection and for raids against the enemy, and we sing songs on the war path.

It is unfortunate that space does not permit treatment of tribes in other areas. The whaling chanties of the north Pacific Coast, the frigid songs of the Eskimo are all of intense interest. Still more important are the fragments of a great and truly artistic Mexican literature, stray survivors of the ferocious bigotry of the Spaniard. All these and the relics of many another tribe have been placed in readily accessible form by expert scientists. They only await the attention of the literary man.

The immediate problem was to discover whether any relation existed between the compositions of tribes inspired by similar, and by wholly different life conditions. The present analysis has been carried far enough to indicate the fundamental similarity of thought processes throughout the red race. All tribes, the most primitive and the most advanced, went through the same stages of mental development. Where the surroundings furnished the same subjects, the compositions reflecting them are similar. Wherever two tribes even in different environments underwent analogous experience their songs reflecting the experience bear strong resemblance. Perhaps most noteworthy in this respect are the songs of love, war, and hunting. The traditional speeches of the astute Iroquois and of the culturally advanced Pima, though differing somewhat as to subject, are similar in purpose and in tone. Both are historical, are used for the purpose of encouraging and heartening the people in public assemblies. The Pimas sage advice, "You may think this over, my relatives. The taking of life brings serious thoughts of the waste; the celebration of victory may become unpleasantly riotous," might well have been uttered by an Iroquois councillor. The songs of the Iroquois (not analyzed in this volume) include many which celebrate corn, beans, and other plants, much as do the songs of the Pima.⁴⁵

Where the environment was totally different, a different set of subjects appear, but treated in a fashion analogous to that characteristic of all other tribes in about the same stage of culture. The

⁴⁵Alex. T. Cringan, "Pagan Dance Songs of the Iroquois", *Archaeological Report*, 1899, *Being Part of Appendix to the Report of the Minister of Education, Ontario*, Toronto, 1900, pp. 168-189.

Mr. Cringan gives the music and the titles or subjects of a number of songs but unfortunately did not think it necessary to translate the whole text. Being unable to discover any extensive translations of Iroquois songs, the present writer was forced to omit these from detailed comparison.

songs of the Teton Sioux and those of the Ojibway are markedly similar, though each sang of some things almost unknown to the other. There is practically no mention of buffalo by the Ojibway, or of trees or lakes by the Sioux. The songs of both these tribes are quite different in length, style, and subject matter from those of the Pima, a tribe in a different environment, and on a somewhat higher level of culture.

Having gone thus far the present studies have fulfilled their mission. They may serve to point the direction for further and more detailed analyses of primitive literature. It is by such studies that the reasons for our own peculiar thoughts, passions, and beliefs may ultimately be explained: and the way will be made clear for the intelligent control of these, and the more rapid evolution of the race.

A NEW COSMIC HYPOTHESIS

BY CORNELIUS O'CONNOR

THE existence of an hitherto unknown cosmic law may be indicated by the remarkable correspondence between planetary distances and orbital velocities and the numbers in a natural series shown below. A clue also may be found there to the cause of Mercury's failure to conform exactly to the law of the inverse square and the physical reason for it. In a system otherwise vibrating uniformly, as shown in the series, Mercury's motion indicates that it functions as a factor of stability by interrupting the rhythm, thus averting the destructive effect of cumulative vibration mechanically due to rotation.

The series is similar to that discovered by Moseley in his investigations of atomic motions and suggests a common relation to electro-magnetism.

The numbers also correspond to vibration frequencies of the musical scale, which revives memory of the Pythagorean concept of the "Music of the Spheres."

	2					
	4	6				
	8	12	18			
	16	24	36	54		
	32	48	72	108	162	
Numbers. .	64	96	144	216	324	486
	Ven	Earth	Mars	Vesta	P.d.	Jupiter
Square Roots	8	9.8	12	14.7	18	22
	Jup.	Ptd.	Vesta	Mars	Earth	Venus

The numbers correspond to mean planetary distances from the

sun (in millions of miles) and the square roots to mean orbital velocities (in miles per second) of the planets taken in inverse order. The numbers for Saturn, Uranus and Neptune are as octaves of the series between Mars and Jupiter. The ratio of the numbers is 1.5 and the ratio of the square roots is 1.225, the cube of which corresponds to the ratio of periodic time in Kepler's laws.

Extending the proportions inward, numbers are derived which correspond to Mercury's maximum ($.66 \times 64 = 42.6$) and minimum ($.66 \times 42.6 = 28.4$) distances from the sun; as is also the mean orbital velocity of 29.8 M. P. S. The square root of the mean distance for Mercury is 5.95, which corresponds to Saturn's orbital velocity. The square roots of the next two numbers similarly derived, i. e., ($.66 \times 28.4 = 18.6$) and ($.66 \times 18.6 = 12.4$) are 4.3 and 3.5, which correspond respectively to the mean orbital velocities of Uranus and Neptune.

Comparison of the mean orbital velocities of the planets (in miles per second) as determined by astronomers and the square roots of the series in inverse sequence shows almost exact agreement.

Velocities:	29.7	21.8	18.5	15	12	..	8.1	6	4.25	3.45
Planets:	Mer.	Ven.	Earth	Mars	Ves.	Ptd.	Jup.	Sat.	Ur.	Nep.
Square Roots:	29.8	22	18	14.7	12	9.8	8	5.95	4.3	3.5

The significant correspondence between Mercury's actual orbit and two of the serial "orbits" suggests that the series may not be purely coincidental. If not mere chance, the assumption may be warranted that planetary distances and orbital velocities are governed by rotational vibration of the sun and are independent of planetary "mass"; and may indicate an electro-magnetic effect.

The rotating "rings" which surround wires carrying electricity are similar geometrically, if not physically, to the planetary orbits. It has been demonstrated that the speed of rotation of these "rings" diminishes with the distance from the wire just as do planetary velocities.

New significance may be given to Leverrier's search for bodies interior to Mercury, if we consider the possible existence of such magnetic "rings" around the sun.

Gilbert compared the earth to a giant magnet. Might not the sun be comparable to a giant electric "spark" spiralling through space and the planets to small magnets revolving around it in magnetic rings? Confirmation of such a view probably would resolve

present discrepancies between electronic and gravitational theories and thus unify several conflicting physical concepts.

To effect such a reconciliation, similarity must be shown between electro-magnetic and celestial motions, which probably can be done experimentally. It may simplify the subject to call these motions "spiro-circuitous," which is descriptive of the revolutions of the satellites around their primaries and of planets around the sun. Some simple experiments will illustrate analogous electro-magnetic motions.

In a shallow glass plate about ten inches in diameter and containing about an inch of water, float a small piece of cork pierced horizontally by a magnetized needle. Under the plate loop about two feet of No. 10 bare copper wire. When the ends of the wire are connected with the poles of ordinary dry cells, the needle will orientate above the wire and then move around the loop with the "current." Next superpose a similar plate and needle over the first, placing the wire on wooden strips supporting the upper plate. When the battery is connected, the needle in the upper plate will move around the loop with the current as usual and the needle in the lower plate will move in the opposite direction, or against the current flow.

When the distance between the wire and needles is increased, the positions of the latter will change in relation to the wire, indicating the widening of the spiral; and the speed around the loop will vary, becoming slower as the distance is increased, as do planetary velocities. These results indicate that positive and negative effects are simply tangential differences in direction of rotation of the surrounding rings and that magnetic lines are spiral accompanying effects of electric motion—rotating rings, the angles of which indicate a spiral twist.

Recent photographs of high voltage "sparks" show electrical lines or "rings" resembling the invisible magnetic rings which surround electric circuits. If we interpret them to be similar in character, we may infer that their velocity of rotation increases inward. Such interpretation would revolutionize present ideas of electricity.

Norman R. Campbell, the great English authority on electro-magnetism, says of magnetic lines: "They are just lines of force and nothing else, and are independent of surrounding bodies for their existence." Paraphrasing this expression, it might be said that magnetic rotating rings are "rotating rings—pure motion—and noth-

ing else;" and thus that "electricity is a system of similar rings of higher maximum rotational velocity."

Solar investigations made by J. C. Adams and others indicate that the interior of the sun is rotating faster than the surface. If the speed of rotation progresses uniformly inward in definite zones, velocities are developed which might explain electro-magnetic effects.

The slowest observed surface rotation on the sun, near the pole, is about one mile per second. If we take this to be the velocity of the outer one of a system of 432 zones or "rings" which increase inward in rotational velocity in arithmetical progression, 1, 2, 3, 4, etc. to 432 M. P. S., each zone having a width of 1000 miles, (comparable to the circumferential "rim" or band of a ring) the aggregate agrees with the observed diameter of the sun.

Applying inversely the law of centrifugal force, such a system might develop a radial force proceeding from the center (analogous to centrifugal force) equivalent to the square of 432 or 186,624 M. P. S., corresponding to the velocity of light and electro-magnetic effects.

The resulting magnetic "rings" surrounding such a system might then be considered as functions of the squares of the width of the zones (intensity) or as the squares of the product of these and corresponding velocities, which would yield planetary orbital distances in millions of miles. The total intensity of such a system would be governed by the size of the hypothetical zones or annular rings. A periodic conjunction of their position might result in a solar vibrating period of 4096 days, corresponding to the 11-year sun spot cycle.

Illustrating his concept of gravitation, Einstein presents an imaginary disc having a negative form of rotation. The force of repulsion being proportional only to the square of the velocities, he shows mathematically that if the disc be given an imaginary negative speed of rotation, ($v\sqrt{-1}$), centrifugal force will be transformed into centripetal force. The transformation is purely mathematical and has no material (three-dimensional) analogue, whereas the radial force developed by the hypothetical system of zones or rings with velocities increasing inward may have, both in the sun and in electricity. It would also radiate energy, which of course Einstein's disc will not.

Additional experiments disclose motions which correspond to some exceptional motions in the solar system. By crossing two needles at right angles through a piece of cork and floating them on water in a plate under which is placed a wire loop, the needles will move around the loop in a direction retrograde to the direction of the current when the battery is connected. The satellite Phoebe of Saturn and a satellite of Neptune have such retrograde motion. This may be inferred to be due to the eccentric inclination of their magnetic axes to the primaries.

The peculiar orbits of comets between Mars and Jupiter may be attributed to the great radio-activity of Jupiter conflicting with that of the sun. The distance factors for interplanetary perturbations and reactions of magnetic bodies coincide and by suitable substitution of such factors as magnetic "intensity" for gravitational "mass" similar mathematical results may be obtained in calculating cometary orbits. The erratic minor motions of the moon are conceivably due to the fluctuating intensity of solar electro-magnetic radiation, reacting on the earth and moon.

It is not necessary here to dwell upon the theory of the common magnet-matter which develops or retains a large percentage of electric motion. The reactions of solenoids are well known. Ampere demonstrated that currents moving in the same direction were attracted and those moving in opposite directions repelled one another. When it is also considered that a greater motion will impress itself upon a lesser, all the phenomena of attraction and repulsion may be accounted for.

It is possible that the Amperian molecular circuits in natural magnets have not the maximum velocity of electric motion, but develop such velocity through mechanical excitation. The maximum velocities of electricity are attainable also through acceleration of atomic or molecular motions by frictional or chemical means.

In order to include the electronic theory in a general hypothesis embracing the phenomena described, some revision of prevailing concepts is necessary.

If we consider the solar structure previously outlined, or some modification of it, we may also infer that the nucleus of an atom is a similar structure and that "electrons" are carried in magnetic orbits similar to the planetary orbits. The table of chemical elements shows a series of 92 corpuscles progressively decreasing in radiant energy from Radium to Hydrogen. It has been demonstrated ex-

perimentally that the force which ejects particles from radiant atoms is proportional to the frequency of vibration, a function of rotational motion. A series of hypothetical ring systems will numerically correspond to these experimental results.

If we assume radiation to be due to a force proceeding from the center of energy corpuscles, such as the hypothetical force already described, (analogous to centrifugal force) then the number of rings in atomic nuclei should vary accordingly. A numerical series decreasing serially in alternating groups of 8 can be worked out which will conform to the table of elements and to the hypothetical system of 432 rings and also include the classified octaves of energy "rays".

The foregoing speculations suggest an answer to the question "What is electricity?" Electricity might be defined as a complex form of rotational motions, occurring in nature, which develops radiant energy. It might be further described as a system of "rings" or zones of motion rotating around a curvilinear axis, the speeds of rotation increasing inward to the center in arithmetical progression and developing a radial force proportional to the square of the maximum velocity; and also developing a secondary effect called magnetism, manifested in accompanying rings rotating spiro-circuitously around the electric system producing it. The speed of rotation of these magnetic rings might be considered serially proportional to the square roots of their distance inversely from the electric system, distance being governed by the size of the electric rings or zones (a factor of intensity) of which it is a function. Where the size of the electric rings is negligible, the rotational velocities of the magnetic rings might be considered as serially proportional to vibrational frequencies (or their inverse square roots).

These motions are best illustrated by the motions of celestial bodies traceable in the solar system.

Such definition might imply that space is a plenum which becomes "electrified" by motion at high velocity, this motion conceivably being due to compression of the plenum by Omnipotent Cosmic Force.

A corollary of this concept is that natural motion is spiro-circuitous or spiral, the combination of rotation and translation, which accords with an Archimedean modification of the view held by Aristotle, who thought it circular. Finite time may be considered as a metrical attribute of such motion. The finite space-field in which

motion functions may or may not be curvilinear.

Kepler's laws suggest the true mathematical relationship between finite time, space and motion, the three inseparable factors of physical existence, in atomic and solar systems alike, and analogous to the three inseparable dimensions of material bodies.

Matter is inferentially a product of the triune entity, time-space-motion.

Gallileo's laws of motion and Newton's law of (cosmic) gravitation may be empirical formulations applicable to special classes of phenomena which are really governed by a higher law manifested in electro-magnetism.

There is nothing in all this to preclude the conception of Infinite Force exerted eternally in illimitable space.

MATTER AND AETHER

It is conceivable that in the laboratory of the sun, the infinitesimal corpuscles are formed and then radiated into space, where they collect in the magnetic planetary rings or orbits. Here molecular combinations of the atomic corpuscles (matter) pass through inorganic and organic colloids to biological organisms in permutative series, becoming more and more complex, up to sentient beings having sensory nerves that respond to various solar (and similar) vibrations, just as tuning forks respond to their appropriate vibration frequencies.

The corpuscles of highest frequencies, from infra-red, through ultra-violet light to Millikan rays, may form a super-atmosphere. This would correspond to the theoretical aether; a mixture like air, but composed of high frequency corpuscles which are vibrated by solar (and similar) rays. These vibrations, reflected by material bodies, react upon our perceptory nerves, producing the sensations of heat, light, etc., just as low frequency vibrations in air react upon the auditory nerves to produce the sensation of sound.

The principle biological divisions of genera and species, like musical notes and atomic systems, are related in a vibrational way, but are not necessarily derived one from another. Each has its own characteristic identity, the whole being governed by the law of forced vibrations.

An experimental arrangement of the table of elements conforming to the 432 ring system and to the Mendeleef table of groups and series starts thus:

8	3	24	}	Low Frequencies
	11	27		
16		32		
	19	35		

Helium40	43	48	51	56	59	64	67
Neon72	75	80	83	88	91	96	99

This progression runs through the atomic system in alternating series of 8 to 403, 411, 416, 419, 424, 427 and 432, the latter figures representing high frequency energy corpuscles including ultra violet "rays".

A corresponding solar series would be governed by the law of forced vibrations and the mechanical law that a "vibrating system not itself harmonic may nevertheless produce harmonic vibration."

The order of solar frequencies characteristic of atomic vibrations, of course, requires the use of units appropriate to the relative difference in the size of the sun. These units are conveniently derived from solar Time-Space-Motion relations:

Time—Number of seconds in day—86,400.

Space—Diameter of Sun—864,000 miles.

Motion—Periodic time of surface rotation—31.4 days, as observed for a period near the (magnetic) pole. The unit velocity of surface rotation is 1 M. P. S. Treating these relations in a purely numerical way we get:

$$\frac{864,000 \times \pi}{86,400} = 31.416$$

Thus the diameter of the sun numerically corresponds to 10 (days). From this we derive a unit day of 86,400 seconds, with which to compute frequencies, representing the number of complete revolutions each ring makes in one day. In this way we find the solar rings corresponding to the planetary harmonic series, frequencies being as the vibration numbers in the table. The innermost ring, has a diameter of 2000 miles (outer circumference) and rotational velocity 432 M. P. S. Hence

$$\frac{86,400 \times 432}{1000 \times 2\pi} = 5920; \quad \frac{86,400 \times 431}{2000 \times 2\pi} = 2900 \text{ Neptune, etc.}$$

For those who wish to compute the whole series, the mean of the next two rings is 1715, corresponding to Uranus. The following rings correspond to the other planets:

7 Saturn; 12 Jupiter; 18 Planetoid; 26 Vesta; 38 Mars; 55 Earth; 76 Venus. The mean of rings No. 106 and 142 is 35+, corresponding to Mercury. The mean used for Uranus may be considered as the inner and outer diameter of one ring, or as the mean of adjoining rings. The mean for Mercury, however, is derived from two rings not in juxtaposition.

To relate solar and atomic frequencies is a simple matter of arithmetic. The same rotational velocities being retained throughout, it is obvious that frequencies (revolutions of the rings) will vary as the diameters. Solar frequencies multiplied by 10^n , proportional to relative sizes, would correspond to frequencies of the smallest imaginable corpuscles of energy. The number of rings in any system would be the governing characteristic of given corpuscles (e. g., atoms). Thus, solar, atomic and other groups are members of the same family, alike in all but size.

The harmonic planetary intervals are analogous to the ratios of vibrating strings, but in inverse order, and seem to be governed chiefly by the frequencies of the two innermost rings, their ratio being as 2:1 approximately. The frequency of the 432nd ring is 5900 and of the 431st, 2900.

A similar rhythm is found in the 11-year sunspot cycle, which has a period of minimum activity of about 7.5 years; maximum activity 3.7 years; ratio 2:1. The vibration number corresponding to Neptune's distance, 2900, is little more than two-thirds of the whole cycle 4100 days, approximately. Thus the ratio between the solar cycle in days and the highest "ring" frequencies seems to be about 2:1 also.

The following "law of forced vibrations" may be applied: "If one part of any system connected either by material ties, or by mutual attractions of its members, be continually maintained by any cause, whether inherent in the constitution of the system or external to it, in a state of regular periodic motion, that motion will be propagated throughout the whole system and will give rise in every member of it, and in every part of each member, to periodic movements executed in similar periods with that to which they owe their origin, though not necessarily synchronous with them in their maxima and minima."

All the foregoing figures are worked out only experimentally, of course, to illustrate the general principle and a method for exploring the hypothesis. The square of the product of size and velocity of

rings corresponding to planetary distances might give better results.

If all scientific postulates and physical properties and forces of every kind are omitted, these figures develop an arithmetical analogue of a known geometrical design, a curious circumstance if it has no significance. In that respect it resembles Kepler's laws before they were interpreted by Newton or Moseley's natural series before it was applied to physical chemistry.

TABOOS OF FOOD AND DRINK

BY JACOB SINGER

IT is obvious that the chief concern of life, namely, food would be surrounded with many taboos calculated to preserve the force or fertility of the life-sustaining animals and plants. To the sophisticated editor of the early codes the reasons of food avoidance may be ascribed to psychological reasons (disgust) or may have the hygienic aim of safeguarding the health of the community. Such reasons come into being after the ancient superstitions were rationalized. That the food taboos "upon priests and kings are *a fortiori* more numerous and stringent than those upon ordinary persons" indicates that the primitive conception of holy (unapproachable) persons is responsible for these regulations. The motives lie beyond the notion of utility or sensual repugnance. In savage society we find these prohibitions in their unsophisticated guise, and whatever reason the untutored native can give is in accord with his idea of his relation to the supernatural forces that control his life. "The natives of Queensland", for instance, "burned all food left over from meals, to prevent sorcerers from getting hold of it and injuring them thereby. The Narrinyeri call such persons 'disease makers'. In Polynesia natives carry remains of food to streams which alone can annul the evil influence of the disease-maker. Greeks took a purgative to prevent 'the sacred food' (new corn) from being polluted by common food. In such primitive beliefs Crawley sees "the tendency to avoid mixing the different sorts of food, which plays a considerable part in Jewish sacred dietetics."¹

The rationalized taboos survived among cultured peoples either in the ritual or the "mores" purporting to serve hygienic or social ends. Priestly restrictions were widened in scope by Ezra who used them as part of a code applicable to the entire Jewish community. Under the influence of the Pharisees, who had lost faith in the

¹Hasting's, "Food", in *Encyclopedia of Religion and Ethics*.

corrupt priesthood of their day, the tendency to invest the layman with all the restraints of the priesthood accentuated this view.

FOODS:

These Biblical sources of the dietary laws, according to König, emanate from the 6th century B. C. The passages in Leviticus and Deuteronomy agree so fully that Marti and Oettli hold that both are based on a common source. Analogies are found among many peoples of the ancient world. Among the Egyptians some animals were forbidden which were considered clean by the Hebrews. The pig was forbidden except in the day of the full moon.² Theodor Wachter³ mentions the Scythians, Cappadocians, Syrians, Cretans, Cyprians and Libyians. The Egyptians abstained from the ass, the mouse and the gazelle.

According to Porphyrius,⁴ the Egyptians made the distinction between cloven and uncloven hoof.

Assyrian and Babylonian food taboos appear for certain days, e. g. "fish for the 9th of Iyar, pork for the 30th of Ab, beef for the 27th of Tishri."⁵

Among the Hindus, the distinction between clean and unclean foods appears as early as 1000 or 800 B. C.; but unlike the Jewish prohibitions, all flesh is banned. Domestic animals for the Hindus are unclean. Schrader⁶ shows the ethical and religious consequences of such taboos. By association with the doctrine of Karma, sentiments of sympathy for animals were fostered. Doubtless these higher speculations appear as concomitants of rationalization.

For the Greeks and Romans, (according to Wachter) animals are unclean which are not acceptable as sacrifice. The forbidden animals among the Pythagoreans have a strong resemblance to the Hebrew taboos. Wiegand holds that some of these interdictions

²Frazer, *Golden Bough*, "Taboo," pp. 291 ff; Lev. xi. 3; Clean and unclean animals have their origin in the heathen cults. (A. Weiner, *die Juedische Speisegesetze* (1895). Certain animals served as totems. *Analog ist das Verbot des Pferdenfleische—nusses fur die Christ. Germanen des Genusses von Esselfleisch fur die Christl. Araber.* (motive in Lev. xi. 44). For P. the origin is somewhat obscure. From such early taboos comes the feeling of repulsion and later the rationalized hygienic reasons. (Baentsch Com. Lev. to verse). Deut. xvi. 3. "Thou shalt not eat any abominable thing." J E has no law on this subject; in P. the parallel is Lev. xi. 2-23, characteristic of D.

³Reinheitsvorschriften in Griech. Kultus"—in his *Religionsgeschichte Versuche im Vorarbeiten* IX 1, 1010 p. 82 ff. de abstentia IV 7.

⁴Com. to Lev., p. 482, quoted by Knobel and Dillman.

⁵König, *Geschichte der Alttestamentische Religion*.

⁶*Indiens Literatur und Kulte.* Leipsic, 1887, p. 406.

have purely utilitarian reasons, e. g. the bull was a forbidden animal for sacrifice because he was needed for agriculture. The same authority explains the Hindu prohibitions on similar practical grounds. There is no question that the difference between taboo and an ordinary prohibition is marked. One grows out of the irrational fears of primitive man while the other is a quasi-police regulation. Society has found certain acts injurious and has designedly banned them. In the struggle for survival, those taboos best suited to the needs of society have been rationalized and retained. Even where the utilitarian consequences are obvious it is by no means certain that the origin of these "practical" regulations did not have deep roots in the soil of "taboo" superstitions. Beside the aspects of fear and utility go the emotional reactions and sentimental whims of peoples. The Egyptians, for instance, regarded the sheep as a repulsive animal, while with us it became a symbol of purity and innocence. The Athenians loathed goats, because of their destructive tendencies to plant life, especially the much prized olive trees.⁷ In Sparta the goat was offered to Hera and the dog was considered to be clean in some localities and unclean in others.

Regarding the origin of the food taboos among the Hebrews, a number of conjectures have been offered by scholars. W. Robertson Smith holds that the taboos are survivals of a time when animals were regarded as the abodes of spirits which were later shunned for religious reasons and were not to be killed on that account. M. J. Lagrange and Ed. König hold that the "survival" theory is unproven. Others, basing their views upon ethnological parallels connect the animal taboos with totemism as the underlying motive.⁸ Attempts to identify the clean with the holy are unconvincing, however. Ed. Meyer is of the opinion that animals are regarded "unclean" not because they are holy or sacred but just the reverse, because they are unholy. As further proof he adduces the example of the bull which was regarded as sacred in the Orient and still its flesh was not taboo for the Hebrews. Hence the "sacred animal" theory seems to be untenable.

In tracing the origin of taboo to totemism, Stade regards the differences between various tribes in the kind of animals tabooed. The Mosaic legislation is a composite of such diverse lists. Against this totemistic origin König⁹ contends that nowhere do we find the

⁷Wiegand, p. 425.

⁸Reuterskiöld, *Archiv für Religionswissenschaft*, XV, pp. 1-23.

⁹*Heilige Schriften*, I, p. 160.

prohibition to kill a certain animal in the Old Testament.

Another theory has it that certain animals regarded as sacred by the heathen were tabooed by Jews. This explanation is partly supported by Leviticus xxii. 23: "And ye shall not walk in the customs of the nation which I am casting out before you: for they did all these things and therefore I abhorred them." Against this theory we must consider certain animals as the bull and fish which were regarded as sacred by Egyptians and other neighboring peoples, but which were not unclean for the Jews. The prohibition in Leviticus is inspired by the separatistic motive which colors all of the priestly legislation.

Cumont ascribes hygienic reasons for food animal taboos.¹⁰ "Swine is not eaten for hygienic reasons. Mice and rats spread plague and are therefore unclean animals." Wiegand holds that the primal feeling of repulsion which certain animals excite either by their appearance or disgusting habits accounts for the origin of such taboos.

Certain animals are forbidden as food "because they are regarded as a portion of the gods themselves; they must not be eaten except by those who discerned in them the body of the gods, and who were entitled to share them intercommunion with the gods."¹¹ A number of food taboos is given by Sumner, "A Phoenician or an Egyptian would sooner eat man's flesh, than cow's flesh, a Jew would not eat swine's flesh"¹² Some Melanesians will not eat eels because they think there are ghosts in them. South African Bantus abominate fish. Some Australians will not eat pork. In explanation of these taboos, Crawley holds that "many are arbitrary while some have dietetic reasons often based on false analogies. The dangerous power transmittal by contact affects the food." To avoid the poison produced by the evil eye, food is covered. Especially guarded are those who partake of food in the presence of the opposite sex.¹³

Nearer to our own investigation is the interpretation given to the food taboos by W. R. Smith.¹⁴ The source of taboo is "reverential

¹⁰*Oriental Religions in Roman Paganism*, p. 142.

¹¹Wilkinson, *Ancient Egypt*, III, 404-6, quoted by Trumbull, *Blood Covenant*, p. 172. In ancient Peru, Reville says: "It should be noted that they only sacrifice edible animals, which is a clear proof that the intention was to feed the gods."

¹²Sumner, *Folkways*, pp. 338-9.

¹³Crawley, *Mystic Rose*, p. 168.

¹⁴W. R. Smith, *Religion of the Semites*.

dread." The notion that "unclean" is related to physical foulness is erroneous. The Hebrew word טָמֵא (tame) means "taboo." Among the heathen Semites the unclean animals, which it was pollution to eat, were simply holy animals. Biblical support for this contention is found in Isaiah lxx. 4-5.

"That sit among the graves,
And lodge in the vaults ;
That eat swine's flesh,

And broth of abominable things in their vessels :"

"He that killeth an ox is as if he slew a man ; He that sacrificeth a lamb, as if he broke a dog's neck".¹⁵ All these are connected with the sacrosanct mysteries of totem religions. The reference to the dog's neck points to the mode of killing without shedding blood.

"They that sanctify themselves and purify themselves

To go unto the gardens, Behind one in the midst,
Eating swine's flesh, and the detestable thing, and the mouse,
Shall be consumed together, saith the Lord."¹⁶

Now under the conditions of Eastern life, beef and mutton are not everyday food. In Canaan, as among the Arabs to this day, milk is the usual diet. "And there will be goats' milk enough for thy food, for the food of thy household : And maintenance for thy maidens."¹⁷ The slaughter of a victim for food marks a festal occasion and the old principle was modified to mean sacred occasions of natural joy.

"Except at a feast, or to entertain a guest, or in sacrifice before a local shrine, the Bedouin tastes no meat but the flesh of the gazelle or other game. This throws light on Deuteronomy xii. 16, 22, "the unclean and the clean may eat thereof, as of the gazelle, and as of the hart" which shows that in old Israel game was the only meat not eaten sacrificially." "That all legitimate slaughter is sacrifice appears in Arabia down to the time of Mohammed."¹⁸

"The king of Unyoro in Central Africa might not drink milk and eat beef at the same meal."¹⁹

SWINE :

The heathen Harranians sacrificed swine once a year. In

¹⁵Isaiah, lxxi. 3.

¹⁶Isaiah, lxxi. 71.

¹⁷Prov. xxvii. 27.

¹⁸W. K. Smith, *Old Testament in the Jewish Church*, p. 249 ff., also Wellhausen *Arabische Heidentum*, p. 114.

¹⁹Frazer, *Golden Bough*, "Taboo," vol. vi, part II, p. 292.

Cyprus were swine connected with the worship of the Semitic Aphrodite and Adonis. A reference to this pagan rite appears in Isaiah lxx. 4. The Egyptians considered the swine as unclean because the demon Set once appeared in the form of a pig. Mohammedans also refrain from eating swine.²⁰ "The pig was forbidden among the Egyptians. Pork was a forbidden food."²¹ Cheyne connects the prohibition with totemism.²² Among proper names in the Old Testament we have הֶזִיר (*Hezir*).²³ Other examples of names that bear traces of totemistic origin are: the "dog" כֶּלֶב (*Caleb*) the son of Jephunneh."²⁴ "He נָבֶל (*Nabel*) was of the house of Caleb."²⁵ "And Shaul died, and Baal-hanan the son of אַכְבָּר (*Akbar*) "mouse" reigned in his stead.²⁶ And Akbar, the son of Micaiah."²⁷ Elnathan the son of Akbor."²⁸ In Homer, the pig is called "divine", but in Crete it was not eaten. Among the Jews and Syrians swine was taboo. The pig was a consecrated offering in the temple of Hierapolis.

"The pig appears, from a find of bones of this animal at Gezer, to have been a sacrificial animal among the cave-dwellers. Its uncleanness among the Hebrews points to an ancient sanctity which obtained among the Canaanites. Perhaps it was connected with Hezir—a guild of priests."²⁹ The pig was forbidden to the Hebrews. "The swine as a domesticated animal was not known to the undispersed Semites or to the Sumerian population of Babylon."³⁰ On the other hand, its flesh was forbidden food to all the Semites.³¹ The inference therefore is that (1) it was after their dispersion that the Semites became acquainted with the pig as a domestic animal, (2) it was forbidden food from the time of its introduction and spread amongst them. The pig can only be housed

²⁰Hastings, *Dictionary of the Bible*. "Taboos," 11, pp. 38-9.

²¹Rawlinson, *History of Egypt*, 1-88.

²²Cheyne, *Commentary on Isaiah*, chapter 66.

²³I Chr. xxiv. 15; Neh. x. 21.

²⁴Num. xiii. 6. Perhaps here a clue of early Semitic totemism. W. R. Smith, "Kinship and Marriage in Early Arabia" (1885), *Religion of Semites*, p. 137 ff.

²⁵I Sam. xxv. 3.

²⁶Gen. xxxvi. 38.

²⁷II Kings, xxii. 12-14; Jer. xxvi. 22; xxxvi. 12; Ezek. viii. 10; Is. lxvi. 17.

²⁸II Kings, xxiv. 8.

²⁹Wood, "Religions of Canaan" in *Journal of Biblical Literature*, vol. XXXV, (1916) p. 243 ff.

³⁰Schrader, *Prehistoric Antiquities of the Aryan Peoples*, 261.

³¹W. R. Smith, *Religion of the Semites*, p. 218.

and reared amongst a settled, i. e., an agricultural population. The pig is associated especially with the worship of agricultural deities, e. g. Demeter, Adonis and Aphrodite. The inference again is that, as agriculture and religious rites associated with it spread together, it was in connection with some form of agricultural worship that the domestication of the pig found its way amongst the various branches of the Semitic race. Finally the pig was esteemed sacrosanct by some Semites and in Isaiah³² it is regarded as a heathen abomination. The inference then is that the worship with which the pig was associated did not find equal acceptance amongst all the Semites. Where it did find acceptance, the flesh was forbidden because it was sacred; where it did not, it was prohibited because of its association with the worship of false gods.³³

MILK AND MEAT:

"Thou shalt not seethe the kid in its mother's milk."³⁴ This is regarded by some Biblical scholars as part of the primitive Ten Commandments. Cheyne proposes the curious reading: "Thou shalt not clothe thyself with the garment of a 'Yerahme' elite woman."³⁵ That there is a humanitarian motive in this prohibition is not likely, if taken in connection with the entire tone of this legislation. Such prohibitions are not unique. Frazer assures us that many savage tribes forbid the eating of meat and milk.³⁶ Among the Nandi, for instance, "if milk is drunk, no meat may be eaten for twenty-four hours."³⁷ . . . "And in view of the evidence collected . . . the rules of this commandment . . . are parts of a common inheritance transmitted to the Jews from a time when their forefathers were nomadic herdsmen subsisting mainly, on milk of their cattle, and as afraid of diminishing the supply of it, as are the pastoral tribes of Africa at the present day."³⁸ If Frazer's contention is correct, then we should meet with a more inclusive prohibition in the Old Testament. It is true that Jewish practice bans all forms of meat and milk, and the rabbinical codes demand that two sets of dishes be

³²Isa. lxxv. 4; lxxvi. 3-16.

³³Jevons, *Introduction to History of Religion*, p. 118, note 3.

³⁴Ex. xxiii. 19; (E) Ex. xxxiv. 26 and Deut. xiv. 21. "A kid is not to be seethed in its mother's milk." This law is repeated verbatim from Ex. xxiii. 19b-xxiv. 26. The prohibition may have been aimed against the practice of using milk thus prepared as a charm for rendering fields and orchards more productive." Driver, *Commentary on Deuteronomy*.

³⁵*Traditions and Beliefs of Ancient Israel*, p. 565.

³⁶*Folklore in Old Testament*, III, p. 151 ff.

³⁷*Ibid.*, p. 153.

³⁸*Ibid.*, p. 154.

kept to separate milk and meat and all their products. Still the question remains, why the Pentateuchal law limits this prohibition to the kid and its mother's milk. There may be some specific reason. The aversion of pastoral tribes in Africa to boil milk for fear of injuring their cattle is based on the principle of sympathetic magic. The command against the mother's milk is doubly dangerous because milk and the kid are both of the same mother.³⁹

SACRIFICE:

Sacrifice was regarded as a tribute to the gods, but W. R. Smith rejects this hypothesis. It is primarily (1) a repast and (2) a repast in which the god and the devotee partake. This theory is rooted in a belief common among primitive peoples, that food consumed makes for kinship. Hence the essence of sacrifice is not "Renouncement," but "it is an act of alimentary communion."⁴⁰

"Sacrifice was not founded to create a bond of artificial kinship between man and his gods, but to maintain and renew the natural kinship which primitively united them."⁴¹ "Food taboos are often food-vows".⁴²

SALT:

"It is an everlasting covenant of salt before the Lord"⁴³

"And the priests shall cast salt upon them."⁴⁴

³⁹Similar superstition in Frazer *Folklore in the Old Testament*, III, 117 ff: "We can therefore understand why in the eyes of a primitive pastoral people the boiling of milk should seem a blacker crime than robbery and murder. For whereas robbery and murder harm only individuals, the boiling of milk, like the poisoning of wells, seems to threaten the existence of the whole tribe by cutting off its principle source of nourishment." *Folklore in the Old Testament*, III, pp. 124-5.

⁴⁰Durkheim, *The Elementary Forms of the Religious Life*, p. 290.

⁴¹*Ibid.*, p. 340; I Sam. xvi. 5; Ex. viii. 22; "And Moses said: It is not meet so to do; for we shall sacrifice the abomination on הַיְצִיבָהּ הַיְצִיבָהּ (*Toabat Mizraim*) of the Egyptians to the Lord our God."

"Agypten is tein Jahwe fremdes Land, jeder Versuch ihn da zu ernehren ware ein Greuel was dieses Land hervorbringt ist nicht kosher (Cf. I Sam. xxvi. 19.) Holzinger, Exodus, *Kurz. Hd. Com.*, loc. cit.

Ezek. xlv. 15: "But the priests the Levites, the sons of Zadok, that kept the charge of My sanctuary when the children of Israel went astray from Me, they shall come near Me to offer unto Me the fat and the blood, (both forbidden as foods) said the Lord God."

Deut. xii. 17: "Thou mayest not eat within thy gates the tithe of thy corn, or of thy wine, or of thine oil, or the firstlings of thy herd or of thy flock, nor any of the vows which thou vowest, nor the freewill-offerings, nor the offering of thy hand."

"But while flesh, not intended for sacrifice, may be eaten in any part of the land, tithes, firstlings, and other sacred dues may be partaken of only at the central sanctuary." Driver, *Commentary on Deuteronomy*.

⁴²Hopkins, *Origin and Evolution of Religion*, p. 151. ff.

⁴³Num. xviii. 19.

⁴⁴Ezek. xliii. 24.

LEAVINGS OF SACRIFICIAL OR TABOOED FOOD.

Food leavings are regarded as dangerous, hence the minute regulations concerning the safe disposal of such victuals. It is a common belief among savages that magic mischief may be wrought upon a man through the remains of the food he has partaken of, or the dishes out of which he has eaten. To avoid the risk of having the sorcerer secure the remains of food, it must be burnt. These ideas prevail particularly in Melanesia and in New Guinea. A similar superstition prevailed among the ancient Romans.⁴⁵ Indirectly this superstition served the ends of sanitation and cleanliness. The same food is by sympathetic magic united, though it may rest in different stomachs. Harm to the one will injure another who partook of the same food.⁴⁶ Burning is the safest method of removing the element of danger inherent in the sacred or tabooed food.

"And the flesh of the sacrifice of his peace offerings for thanksgiving shall be eaten on the day of his offerings; he shall not leave any of it until morning. . . . But that which remaineth of the flesh of the sacrifice on the third day shall be burnt with fire.⁴⁷ Among Semites it was necessary to eat all of the victim while it was still warm.⁴⁸

The same taboo is found in the regulation concerning manna, מַנְהוּ (Manhu).

"And Moses said unto them: Let no man leave of it till the morning."⁴⁹

"And no sin offering, whereof any of the blood is brought into the tent of meeting to make atonement in the holy place, shall be eaten: it shall be burnt with fire."⁵⁰

PASCHAL LAMB:

"And ye shall let nothing of it remain until the morning."⁵¹ Only those were permitted to partake of it who were "sanctified."⁵²

"And they roasted the passover with fire according to the ordinance; and the holy offerings sod they in pots, and in caldrons, and

⁴⁵Pliny, *Natural History*, XXVIII, 19.

⁴⁶Frazer, *Golden Bough*, "Taboo," p. 130.

⁴⁷W. R. Smith, *Religion of the Semites*, p. 386 ff.

⁴⁸*Ibid.*

⁴⁹Ex. xvi. 19.

⁵⁰Lev. vi. 23.

⁵¹Ex. xii. 10. (P) "Die Bestimmung, nichts bis zum Morgen übrig zu lassen, wird alte kultische Überlieferung sein (s. Wellh. Arab. Heidnt. 43 Anm. 1, auch 118 f. 119 Anm. 1) Holzinger Ex. p. 37. The regulation to permit nothing to remain until morning is a survival of the old cult.

⁵²I Chr. xxx. 17, 18; xxxv. 6.

in pans, and carried them quickly to all the children of the people."⁵³

FAT OF ANIMALS:

"Let the fat be made to smoke first of all, and then take as much as thy soul desireth. . . . And the sin of the young man was very great before the Lord: for the men dealt contemptuously with the offering of the Lord."⁵⁴

For there he offered the burnt-offerings, and the fat of the peace-offering.⁵⁵

The Hebrew חֶלֶב (*heleb*) (Syrian *helba*) is not only the omentum or midriff, but includes the fat and suet connected therewith. As the seat of emotion, it is especially holy: hence it was burned on the altar.⁵⁶

THE DOG:

The Carthaginians were forbidden to eat it. The dog was sacred for the Harranians and was connected with the *mystae*.⁵⁷ The dog appears in Semitic mythology.

FISH:

Certain fish were forbidden to all Syrians since they were sacred to Atargatis.⁵⁸

THE MOUSE:

The mouse is regarded as "abominable."⁵⁹ שֶׁרֶץ (*Sherez*). The Arabic "hamash" possesses supernatural or demonical qualities.⁶⁰

THE HORSE:

The horse was sacred to the sun-god at Rhodes: four horses were cast into the seas as a sacrifice to the sun. Pegasus, the winged horse, was a sacred symbol of the Carthaginians.

THE DOVE:

The dove was held as sacred by the Semites, who would avoid eating or touching it. The dove was sacrificed by the Romans to

⁵³II Chr. xxxv. 13; Lev. viii. 32: "And that which remaineth of the flesh and of the bread shall ye burn with fire." Mal. i. 7: "Ye offer polluted bread upon Mine altar." Prov. xx. 25. "It is a snare to a man rashly to say: 'Holy'. And after vows to make inquiry." Daniel. i. 8: "But Daniel purposed in his heart that he would not defile himself with the king's food, nor with the wine which he drank; therefore he requested of the chief of the officers that he might not defile himself." Deut. xiv. 3: "Thou shalt not eat any abominable thing." Ex. xxix. 34. "It shall not be eaten, because it is holy."

⁵⁴I Sam. ii. 16, 17.

⁵⁵II Chron. vii. 7; Gen. iv. 4; Lev. vii. 24, 31.

⁵⁶W. R. Smith, *Religion of the Semites*, p. 379, note 4.

⁵⁷*Ibid.*, p. 291.

⁵⁸*Ibid.*, pp. 292-293.

⁵⁹Is. lxvi.; Lev. xi. 41.

⁶⁰Ezek. viii. 10.

Venus.

These examples preserve the religious beliefs of antiquity. Taboos and sanctity are related; and comparative studies in savage life clarify the original notions. Domestic animals are regarded on the one hand, as the "friends and kinsmen of men", on the other hand as "sacred beings"; and are slain on rare occasions, at public and not at private sacrifices. The beliefs are distinctly prevalent among pastoral peoples. The Harranians sacrifice only male animals. The Golden Age was one when animals were not eaten. Unclean animals appear as sacrifices in the Old Testament only when Israelites began to believe that "The Lord hath forsaken His land."⁶¹

FISH :

"These ye shall eat of all that are in the waters whatsoever hath fins and scales may ye eat; and whatsoever hath not fins and scales ye shall not eat, it is unclean unto you."⁶²

Fish were eaten by the Israelites but not sacrificed: among their heathen neighbors, fish—or certain kinds of fish—were forbidden food, and were sacrificed in exceptional cases.⁶³

The fish taboo is known all over Syria.⁶⁴

FIRSTLINGS :

The first-fruits are consecrated to the gods or to the priests among many primitive peoples. "In the West African kingdom of Congo there was a supreme pontiff called 'Chitome or Chirombe', whom the negroes regarded as a god on earth and all powerful in heaven. Hence before they would taste the new crops they offered him the first-fruits, fearing that manifold misfortunes would befall them if they broke this rule."⁶⁵

"Among the aboriginal races of Central America . . . an image of their god, made with certain seeds from the first fruits of their temple gardens, with a certain gum . . . was partaken of by them reverently . . . under the name 'food of our soul'.⁶⁶

Curtiss repeats the tale of an Arab who sees Moses in a dream, and "cuts off the tips of the ear of the fattest sheep" and hangs it up to the ceiling to protect his property—and puts a little blood on the lintel of the house." The Beni Hamed say "that the first-born of the sheep belongs to Nebi Musa whose shrine is on the west side

⁶¹Ezek. viii. 10-12.

⁶²Deut. xiv. 9 f; Lv. xi. 9-12.

⁶³W. R. Smith, *Religion of the Semites*, p. 219.

⁶⁴*Ibid.*, p. 175, note 22ff.

⁶⁵Frazer, *Golden Bough*, "Taboo", p. 5.

⁶⁶Trumbull, *Blood-Covenant*, p. 176.

of the Dead Sea."⁶⁸

"The first-fruits of the harvest manifest the energy which they contain: here the totemic god acclaims himself in all the glory of his youth."⁶⁹

"This is why the first-fruits have always been regarded as a very sacred fruit, reserved for very holy things. So it is natural that the Australian uses it to regenerate himself spiritually."⁷⁰

"And there came a man from Baal-shalisha, and brought the man of God, bread of the first-fruits."⁷¹ That no harm came to the people from eating his "tabooed" food, is another miracle credited to Elisha: "and they did eat, and left thereof, according to the word of the Lord."⁷²

"Ye shall count the fruit thereof as forbidden: three years shall it be as forbidden unto you: it shall not be eaten."⁷³

"There is an element of 'danger' in the first of any fruits or meats, as in the ceremony of first-fruits amongst the Kaffirs and many other peoples."⁷⁴

"And Abel, he also brought of the firstlings of his flock and of the fat thereof."⁷⁵

"Cain", however, brought of the fruit of the ground an offering unto the Lord." The reason for God's preference of Abel's over Cain's offering is connected with the greater sanctity, hence desirability of the first-fruits. Cain shows no preference for the firstlings.⁷⁶

⁶⁸S. I. Curtiss, "Firstlings and Other Sacrifices," *Journal of Biblical Literature*, 22:45 ff.

⁶⁹Cf., Biblical parallel. Gen. xlix. 3.

⁷⁰Durkheim, *Elementary Forms of the Religious Life*. See also Frazer, *Golden Bough*, II, pp. 348 ff.

⁷¹II Kings iv. 42.

⁷²II Kings, iv. 44.

⁷³Lev. xix. 23. "Unbeschnitten d. h. unberührt, Tabu." (Baentsch, *Commentary on Leviticus*).

⁷⁴Crawley, *Mystic Rose*, p. 26.

⁷⁵Gen. iv. 4. Trich and Knobel connected it with בְּבוֹרִים (*bikkurim*) "firstlings." Dillmann points to differences in attitude or sincerity between worshippers; rejecting the firstlings hypothesis saying: "There can be no thought of mere errors of ritual in this pre-legalistic period," forgetting that firstling taboos belong precisely to the pre-legalistic age. See *Commentary on Genesis*, Dillmann, English translation, Edinburgh, 1897, p. 187.

⁷⁶Ex. xxii. 28. (E) According to Frazer (*Golden Bough*, II, p. 68 f.) and 373 f. Here the idea of a gift to God rather than communion (or sharing of the sacrificial meal) removes the offering from the earlier heathen rite. (Holzinger, *Commentary on Exodus*). "The firstborn of thy sons shalt thou give unto Me. Likewise shalt thou do with thine oxen, and with thy sheep" . . . "the eater of the first-fruits partakes sacramentally of the corn spirit." Ex. xxiii. 19.

"But the firstling of an ox, or the firstling of a sheep, or the firstling of a goat, thou shalt not redeem; they are holy."⁷⁷

"Of the first of your dough ye shall set apart a cake for a gift."⁷⁸

"All the firstling males that are born of thy herd and of thy flock thou shalt sanctify unto the Lord thy God; thou shalt do no work with the firstling of thine ox, nor shear the firstling of thy flock."⁷⁹

"Also the first-born of our sons, and of our cattle, as it is written in the Law, and the firstlings of our herds and our flocks, to bring to the house of our God, and that we should bring the first of our dough . . . and the fruit of all manner of trees, the wine and the oil, unto the priests."⁸⁰

Lev. ii. 12; Num. xviii. 12 f.; Lev. ii. 14; xxvii. 26. "The firstlings of cereals belong to the priest. Leaven is to be kept away from the altar, hence this meal offering is given to the priest. The "first-fruits corn in the ear parched with fire" being without leaven, may be offered on the altar. Num. iii. 13.

⁷⁷Num. xviii. 17. "The flesh of the firstborn is treated differently from that of the peace-offering; for whereas the greater part of the peace-offering could be eaten by any one ceremoniously clean (Lev. vii. 19-21), the whole of the flesh of the firstborn, like the right thigh and the breast of a peace-offering, is to be given over to the priests for consumption." Gray, *International Critical Commentary on Numbers*, ad. loc.

⁷⁸Num. xv. 20.

⁷⁹Deut. xv. 19. "The firstling males of oxen and of sheep are to be dedicated to Yahweh, and to be eaten annually by the owner and his household, at a sacrificial feast at the central sanctuary." The Codes in Ex. xiii. 11-16 and in J. E. Ex. xiii. 2, Num. xviii. 15-18 show some differences in details due to change in practice of different ages. See Driver Com. to Deut., p. 185 ff. Deut. xviii. 4; Deut. xx. 6. "And what man is there that hath planted a vineyard, and hath not used the fruit thereof?" חֵלְלוּ (*hillelo*)—to pollute; defile, profane: hence to remove the taboo of the firstling. "Hillelu"—"Not profaned it (the vineyard), treated it as common—the first produce of the vines being reserved as sacred, and not used by the owner." Driver, *Commentary on Deuteronomy*. Deut. xxvi. 2. "Thou shalt take of the first of all the fruit of the ground . . . which thou bring in from thy land that the Lord thy God giveth thee." Ps. lxxxix. 28; Ezek. xxix. 26-40.

⁸⁰Neh. x. 37, 38; xiii. 31; Jer. ii. 3, "Israel is the Lord's hallowed portion, His first-fruits of the increase; All that devour him shall be held guilty; evil shall come upon them," Saith the Lord. Ezek. xl. 14, "Nor alienate the first portion of the land; for it is holy unto the Lord." Prov. iii. 9; I Chr. v. 1, "For he was the first-born: but, forasmuch as he defiled his father's couch, his birth-right was given unto the sons of Joseph." Jos. vi. 26. "And Joshua charged the people with an oath at that time, saying: 'Cursed be the man before the Lord, that riseth up and buildeth this city, even Jericho: with the loss of his first-born shall he lay the foundation thereof, and with the loss of his youngest son shall he set up the gates of it.'" Gen. xxxii. 32. Thigh-vein: "Therefore the children of Israel eat not the sinew of the thigh-vein which is upon the hollow of the thigh unto this day; because he touched the hollow of Jacob's thigh." The "inan" or angel touched it; and it became taboo by contact.

DEMOCRACY AND DICTATORSHIP

BY ARTHUR SPATZ

THESE is hardly a problem which occupies the leading intellects in political science more than this one: which political system is to be preferred—democracy or dictatorship?

The catastrophic conclusion of the world war brought with it the resultant decline of democracy. With due consideration for the antique democracy, we are justified in regarding America as the mother of modern democracy. In this relation two facts have the same symptomatic or symbolic importance. The first one is Lafayette's crossing the Atlantic at the close of the American Revolution bearing the message from the democracy of America to the fellow-men of the great French Revolution. The second one is Wilson's crossing the Atlantic bearing his message of the fourteen points to exhausted Europe—this message destined to become the doctrine of democratic self-government in Europe.

Eight years of post-war life have shown us democracy passing the peak, having failed to become the salvation of the world which it was supposed to have been. Obviously the nations—for instance Czechoslovakia, Austria, Poland, etc.—supposedly liberated at the conclusion of the world war, are less happy in this period of democracy than they were before. A few examples taken at random will well illustrate this. The red ghost of Bolshevistic Dictatorship is a warning sign to the nations governed democratically. The dictatorship of Mussolini, and the terrorism of a Horthy are symptoms of a malady with which democracy is obviously afflicted. We can think as we will of the collapse of the recent British coal strike—but nobody, not even Baldwin, would undertake to consider this terrible loss to the British Commonwealth, this enervating civil war as the democratic expression of the people. The movements in China are chaotic and do not yet allow conclusions as to their final result:

despotism or democracy. Democracy is thus threatened wherever we look. And she is endangered especially in those countries where, in spite of her seemingly powerful position, she has failed to fulfil her tasks. Almost nowhere has democracy carried out her promise.

Everybody deeply concerned with the preservation of the political culture of this world is disquieted by the crisis of democracy—Democracy appeared to us as a matter of course. So much more we feel the blows it receives everywhere. The solution of the situation, which is much sought-after, can be found only by visualizing the essence of democracy. It is of great importance to meditate about the aims of democracy, and to examine the accuracy and usefulness of the means, by which she endeavors to realize these aims.

The principal purpose of democracy is to execute the will of the people through elected representatives. It was therefore one of the first tasks of democracy to remove the system of absolutism by the institution of universal suffrage. But it was already known, previous to the war, that the parliaments did not represent the proper means for enacting the will of the people—a fact becoming even more evident during the war, an event which could have hardly been the intention of so many nations. And events up to date seem to prove this conclusively.

The question necessarily arises: what is the purpose of parliamentary representation? Professor Jellinek, the founder of the modern theory of the state, and other scientists and political thinkers who agree with him, state the purpose of parliamentary representation to be the creation of a living body representing actively the will of the entire community. But are the existing parliaments truly of this sort? Can we justly regard them as real representatives of the will of the people?

In the light of most favorable observation, the parliaments of today represent the various shades of opinion among the electorate—i. e., the people. They still conform to Mirabeau's statement that parliaments *ont toujours les mêmes proportions que l'original*. But is the will of the people, supposedly represented by parliaments, merely a summary of the will of a mass of individuals? Is it not rational to believe this concerted will of the people to be a thing essentially new, a thing of higher order, a self-sustaining organism? Is it not that the wills of the individuals are subordinated to this concerted will of the people?

The analysis of the proposition will prove that the concerted will of the people is fundamentally divided into two parts of which the first one is essentially ideal, the second one resulting from empirical necessity.

The will by empirical necessity is a summation of the diversified and most often contradictory desires of the people, who are able to manifest these desires directly or indirectly. This is the proper domain of democracy where the politician may seek the will of his electorate. But does he really seek the facts, or are his suggestive questions merely asked to be answered to his complete satisfaction? Practise of the latter sort explains why the average man's common sense suspects so often the demagogue in the democrat. And while there is no true reason to deny to the democrats only the *bonafides*, it has to be admitted that demagogism is to the democrat not only a great danger, but also a welcome refuge in case of emergency. The close relation between democracy and demagogism is founded upon the very essence of the empirical will of the people.

Were the empirical will the true will of the people, then the existence of democracy would be justified—then democracy could grasp the problem of human society, being *de la nême proportion que l'original*. The justification of democracy depends therefore upon the question—which comes nearer the the true will of the people, the empirical or the ideal?

The ideal will of society is of the nature of a regulative principle. The empirical will is apparently the will that is,—the ideal the will that ought to be. It is the will *sub specie aeterni* in contrast to the will of the day. Whatever is regarded commonly to be the will of the people, is at best the will of a majority. This point of view is necessarily dependent on statistics and matters of everyday's experience. And because of this, democracy is denied the opportunity to view the will of the people from any other perspective. The ideal will of the people is beyond our conception, for it is a thing essentially different, the thing that ought to be—a problem beyond democracy's empirical practice. The ideal will of the people is—to emphasize it again—the only true will of society.

From this point of view the whole of society must be considered. "The whole is the creative principle", to use a term proper to the new Kant-ian philosophy, that links the individuals into a unity with purpose. The whole is more than the summation of the parts. It

is the synthesis which gives to each and every part the proper place in society. The whole is the fundamental principle which governs the life of society. This principle is independent from the general practise of suffrage and every-day politics which direct democracy. It can not be calculated. It must be conceived spiritually.

This conception applied to the reality of social life consequently leads to the dictatorship. The dictatorship stands above the personal interests of the individual. It is directed solely by the materialization of an ethical principle for the benefit of the community. Dictatorship refuses to consider individual desires while democracy must. It is the conscious and necessary exclusion of all the varying individual desires that forms the superiority of dictatorship to democracy. The purpose of dictatorial policy is the well-being of society. The dictator is justified by the necessity of social ethics.

A justification of this sort is admittedly not without danger to a steady course of political life. But it argues for the higher quality of dictatorship in that it rests upon this ethical positivism. To dictatorship negativism has necessarily greater danger than to democracy which looks indifferently upon right and wrong. The possibility of an aberration into negativism proves the positive quality of dictatorship—the exceptional declining more intensely than the average. Democracy is constant but insufficient. Dictatorship is variable but always complete—right or wrong. Which is the lesser evil? Which is preferable?

Democracy not only is, but remains the lesser evil in permanency. Dictatorship, though the major evil at times, endeavors to create the real good actively, while democracy responds only in reaction. Dictatorship liberates the individual by liberating the whole of society—and thus it solves the problem of personal liberty. Democracy aims to liberate the individual by application of majority-rule. Its liberation resulting from purely mechanical means, is merely separation—finally identical to isolation. It is liberation only in appearance—that of dictatorship in reality.

It is vain to expect democracy as analyzed above to contribute toward a betterment of our social life. We may expect, however, that the new conception of liberty in dictatorship will bring us the realization of our hopes of the ideal society. Let us face the necessity of rejuvenation of our social order. *Ducent fata volentem, nolentem trahunt.*

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