

# THE THEOSOPHICAL PATH

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THE very true beginning of Wisdom is the desire of discipline; and the care of discipline is love.—*Wisdom of Solomon*, VI, 17.

## DISCIPLINE: by H. Travers, M. A.



THOSE who can look back for, say, forty years to their childhood, and who are competent to reflect profitably on the drama of their own life, may very likely have arrived at the conclusion that they owe a great deal to wholesome discipline accorded them in their tender years. This discipline was both strict and detailed; not sketchy and theoretical, but practical and concerned with minute points. Through its benign and persistent application they learned to accomplish instinctively many things which they never would have learned to do by their own free will, and to which they owe much of their present happiness and efficiency. In all probability such a retrospective glance over one's early life will reveal influences of a very mixed and complex character; but among them all, two kinds of influence will be seen to stand out in marked contrast with one another — those influences which tended towards discipline and self-control, and those which tended towards laxity and self-indulgence. In many cases the life of boyhood has been divided, as it were, into alternating biological strata, representing periods spent at school and periods spent at home; the former characterized by health and general well-being, and the latter by lassitude and ennui. Perhaps again there was a strict father and a weak mother, or perhaps the variations between strictness and weakness were represented by successive nurses or teachers. And another thought that occurs is that our lives seem to have been largely molded by a series of women; for the women had the priority over the men in the time at which their influence was brought to bear, and also their kind of discipline applies much more

fully to those all-important matters of detail — even, as some might say, vulgar detail.

And nowadays we hear of people proposing to leave children to themselves, to let the teachers be guided by the children, and to make the children's caprices the lodestar to pilot them through adolescence. No particular system is referred to here; it is not necessary to do so, for there are many such systems; it is a regular fad. But what, in view of the results gleaned from our retrospect over our own life, can we expect from the application of such a system? What effect would it have produced on us? We may thank our stars that there were still a few people when we were young, who, whether on account of their religion or their inherited views, did believe that children needed firm discipline and constant watchfulness.

Possibly the long continuance of an age of material prosperity and security has instilled into people's minds too soft and rose-colored a view of life, and caused them to forget that life contains many things that call for sterling qualities of character in order to meet them. This of course will not be interpreted as an argument for war. Humanity must be in a bad way if such a calamity as war is needed in order to set them straight. Nevertheless, as the war has come, it may be used as an opportunity; and even an attack of fever may serve its purpose in causing a man to attend to his health.

Of course the root of all the trouble about lack of discipline is *self-indulgence on the part of the parent*. One may as well come straight to the point without mincing matters, nor would it be consistent in us to "spare the rod" on the present occasion. It does require real honest love and self-sacrifice to care for one's child in the way that its real interests, and our duties, demand that we should. And we flinch from this effort; and if we are not honest enough to avow our own weakness even to ourselves, we delude ourselves with sophistries. Perhaps we may even go the length of inventing new theories of education to justify our action, or of welcoming such theories when offered to our acceptance by other people. And it is not necessary to impute deliberate hypocrisy, for the heart of man is very subtle and able to deceive itself; so that a man may be, as it were, honestly self-deceived until he comes to look himself right in the face.

Issues have been so confused that discipline is often supposed to be synonymous with unkindness; and those who argue thus can support their case by referring to instances of unwise and undue severity.

But the sort of discipline advocated here is that which is kind, wise and beneficent. But kindness does not consist in yielding to whims and desires. One hardly knows just what philosophy of life is supposed to rule mankind today, and can therefore scarcely be prepared to state what this philosophy teaches on the subject of desires and passions. But certain philosophies that are as old as the world have taught that desire and passion are the eternal bane to human happiness. Are we then to let these weeds grow up in the natures of our children, or shall we show the children how to exterminate them.

Even the strait old-fashioned religious views which insisted so strongly that every child had a soul that was more important than its body, were better, despite their narrowness, than some ideas that prevail today; for it is to be doubted whether we nowadays accept the soul at all. We are fond of being called scientific and practical, but it would be better still if we *were* actually so, as then we might know something about that most scientific and practical of all facts — the *duality of human nature*. What is certain is that we shall never be able to bring up our children until we do recognize it and act on it.

The object of discipline is to protect the child against its own weaknesses. This is our duty as parents, guardians, teachers. That is why we are here in those capacities; and if we fail in them, we would be better elsewhere. A parent is privileged to be the guardian of a Soul during a most critical period of its age-long career. The parent is supposed to be endowed with love to inspire him with the ardor for his duty, and with a modicum of intelligence to help him in discharging that duty. But very often he seems to think that the things will come right of themselves, or that "Nature" will attend to matters. It might be proper to ask whether he expects to bring up his child like a human being or like a bird in a nest. So soon as we build a house and sleep in a bed and eat cooked food, we depart from Nature and make unto ourselves another and perhaps higher law; so that logic demands that we should make up to the child for that whereof we have deprived it. We cannot have it both ways; we cannot defy Nature and yet leave all to Nature. We must make up our mind whether we are savages or civilized people; because in the latter case we are supposed to have special powers to use. In short, the matter sums itself up thus: the nature of an animal or a savage may be a sufficient guide; but in man the natural instincts have been so much modified and perverted by long generations of sophisticated

living that the instincts are as likely as not to lead astray, *unless guided by that great prerogative which man has — his intelligence and his conscience.*

It is concluded, then, that it will not do to saddle Dame Nature\* with those duties which we would like to shirk. But there is really no need to put the matter on argumentative grounds, for it is settled easily enough by matters of fact. All we have to do is to see what comes of letting things slide. But then, again, perhaps we may happen to be blind; and this brings up another important point.

Looking back once more on our own childhood, we may perhaps find that there was a great lack of sympathy and mutual understanding between our youthful self and those grown-ups. At all events this often happens. In some cases it is probably not too much to say that there is no task harder than that of trying to tell a parent something which he does not wish to know. Children have committed suicide in default of an aid which was not forthcoming; and it is indeed hard to say how much some children would suffer sooner than attempt to seek consolation by confiding their troubles to a parent. All this means that the child leads a double life, the more important half of which is quite unknown to the parent; and that the parent acquiesces in this (convenient) state of affairs. What does this imply as regards the possibility of child-study? It means that *the real trouble with education is deficiency on the part of parents.* As to the unfortunate and hard-worked teachers, there is no need to blame them, because the parents will do that.

Probably the first thing which parents need is *earnestness*. They need plenty of wisdom too, but that cannot come unless they are in earnest. Upon what motive shall we seek to ground this earnestness? Suppose we say, Love — love for the child. What more enthralling study could we name than that of love? It is the name of impulses that range all the way from the infinite Compassion and

\*The word "Nature" is often used very vaguely, and as though it were the name of a second deity. In a book on chemistry we find that "Nature" has most beneficently ordained that ice shall be lighter than water; an idea which seems to us to imply that Dame Nature has stepped in to correct the mistakes of the other deity, who would otherwise have frozen up all Nature's fishes like almonds in taffy. The truth is that man, whatever theories he may worship, has to recognize facts; and "Nature" is the name he has given to the cosmic intelligence that rules the lower animate kingdoms. But there is a higher Nature — that which acts through the higher part of man himself; and unless man is to degenerate into an irresponsible savage, he must rule his life and bring up his children in the light of this higher Nature.

the Divine Harmony down to the various forms of self-love. Man is engaged in learning how to refine the pure gold of Love from its dross. He seeks the ideal in many forms, mistaking the shadow for the substance, and falling in love with his idol; but each time he grasps the form, hoping thereby to seize the god within, the divinity escapes and leaves him clutching the dead form. And then the pilgrim has to begin his search anew. Most of us give up the search when we reach middle age; which is one of the illusions due to our materialistic philosophy of life; for we ought to be strong enough to disregard the ageing of the body and to rest our hopes and endeavors in the Soul's eternal existence.

But let us suppose that a parent has resolved to try and realize the meaning of parental love. The first step would be to separate it from all tinge of self-love; to desire only the welfare of the child, irrespective of the parent's personal desires. Some idea must be formed as to what the child is to do in life; and here is a matter that calls for much reflection. The best thing you can give your child is *character*; and character is not developed by candy — whether sugar candy or moral candy. Character means discipline, and discipline means self-discipline. The choice between an arbitrary and unwise rule and no rule at all is an evil alternative, and the source of law and order is a common recognition by parent and child of the eternal laws that regulate human life. It is a grievous mistake, however, to think that the child can obey those laws unaided; for he is thrown on the protection of his parents in things moral just as he is in things physical. No more than we can abandon him to the winds of heaven, can we leave him unguided and unprotected amid the weaknesses and temptations of the flesh into which the Soul has incarnated. Forces both selfish and unselfish are innate in the child, whose nature is dual. If a parent is so ignorant and unwise that his control is worse than useless, this is a very regrettable state of affairs, and must be amended not by withdrawing all control but by substituting a better control.

Discipline is another name for order and harmony, hence for happiness and well-being; and the only true discipline is self-discipline. It is the sacred duty of parents to point the way to self-discipline, that the child may be protected by its own higher nature against those tendencies which the parents themselves have been instrumental in transmitting. There are forces in human nature which are growing so rapidly that they threaten the permanence of our civilization, re-

sulting in a continuous increase in wasting diseases, as the statistics prove; and these forces we know no way to stem. What are we to do? We shall be driven by necessity to listen to the words of wisdom and hearken to those who can show us how to set our feet once more on the old path of discipline and self-mastery. The lack of discipline means slavery — to our faults; self-discipline means freedom, like an auto with a good brake. “Solomon,” as seen in the quotation at the head of this article, connects together Wisdom, Love and Discipline; and all his writings are in praise of discipline and in scorn of laxity, which he identifies with folly.

### THE KEYS TO SYMBOLISM: by T. H.



CORRESPONDENT who is interested in symbolism regrets that (as he states) the keys thereto should be hidden away in inaccessible books and manuscripts. But we take leave to question whether the unraveling of symbolism is really a matter of ransacking libraries or cajoling the guardians of mysterious Oriental shrines. It may be a question of deeper study of an introspective and contemplative kind. What if those keys are hidden, not in some cave with a perpetual lamp burning in it, but in the recesses of our own undeveloped mentality, whence they can be brought forth only by deeper digging in those recesses? For aught we know, our own mind may be such a mystic cave, with lamp and genii all complete, and awaiting only the man with the “Open sesame.” Writing is symbolism; and when a doctor writes a prescription on paper, one man will take it to the drug-store, and another man will roll it up into a pill and swallow it. If I write you out a fine thought from Marcus Aurelius, you can either wear it around your neck on a ribbon, or you can read, mark, learn, and inwardly digest it. It depends on your ability. That engineer would be considered a simpleton who should wear an algebraic formula on his bosom instead of reading it and applying it in the construction of the bridge; and an algebraic formula is a symbol. Musical scores can doubtless be admired as pictures (by lunatics), but they are better used when changed into the harmony of sweet sounds.

Why, then, in view of all this, should I wear a svastika or a cross around my neck? It may be efficacious thus used, but the thing is a

wild shot, and as a rule I do it on the off-chance. In any case, would it not be better if I could use the symbol as the doctor uses the medical hieroglyphics, the musician his crabbed score, or the engineer his  $x$ 's and  $y$ 's? And suppose I decide to try and do this, how am I to learn? Shall I go to Tibet and seek a complacent Lama, or to some famous library and unearth a mouldering manuscript? That would be one way, but the manuscript could only give me words — more words; and the Lama, if he too would give me more than words, would require from me a discipline and much arduous practical study.

The ancient symbolism, as one is told and believes, constitutes a sort of algebraic compression of knowledge about the secrets of nature and life; the knowledge which it enshrines is precisely that kind of knowledge which cannot be imparted by books and mere oral teaching. For real knowledge is not the opinions of others conveyed to us by words and accepted on faith. We do well to accept such aid from those whom we have found competent to help us thus, but we can never really know anything until we have verified it out of our own inner consciousness. And so I may glean any amount of learned information as to the meaning and origin of a cross or a Solomon's Seal or the numerical value of the Sacred Name in Hebrew, and yet feel sure there is much more, very much more, to be learned by an intimate study of life and human nature. The Cross represents four elements balanced around a stable center; to know what these four elements are, and how to balance them, I must study my own nature. I know from Solomon's Seal that there are two "triangles" somewhere in my make-up; and at that point of knowledge (or ignorance) I shall likely stick unless I decide to find out by practical experience what those triangles are.



ACCORDING to Theosophy, the Sanskrit word Antaskarana (or Antahkarana) means the *path* or bridge between the Higher and Lower Manas — between the divine *Ego*, and the *personal* Soul of man. It serves as a medium of communication between the two, and conveys from the Lower to the Higher Ego all those personal impressions and thoughts of men which can, by their nature, be assimilated and stored by the undying Entity, and be thus made immortal with it, these being the only elements of the evanescent *Personality* that survive death and time.

It thus stands to reason that only that which is noble, spiritual and divine in man can testify in Eternity to his having lived.—*H. P. Blavatsky*

**MALAGA: by C. J. Ryan**

MALAGA is the second most important port in Spain, ranking next to Barcelona. It contains 132,000 persons. It is beautifully situated in the southern province of Andalusia, on the coast of the Mediterranean. Its bay has been compared to that of Naples, but the climate is superior, being one of the mildest and most equable in Europe. The rainfall is but sixteen inches, and is spread over an average of only thirty-nine days. The sky is generally cloudless, and, on the whole, the climate resembles that of Southern California. From the sea, the panorama of city, hills and mountains is impressive. De Amicis says:

On the right is a rocky mountain, upon whose summit and down one of whose sides are the blackened ruins of the Castle of Gibralfaro, famous for the desperate resistance offered by the Moors to the army of Ferdinand and Isabella; and on the slopes of the mountain is the cathedral, which rises majestically above all the surrounding buildings. . . . Between the castle and the church, and in front and on the sides of the mountain, there is a multitude, or to express myself à la Victor Hugo, a canaille of smoky houses, placed one above the other, at random, as if they had been thrown down like rocks from a height. On the left of the cathedral, along the shore, is a row of houses, ash, violet and yellowish in color, with a white line around the windows and doors, which remind one of the villages on the Ligurian Riviera. Beyond lies a garland of green and reddish hills, that enclose the city like the walls of an amphitheater; on the right and left, along the sea-shore, are other mountains, hills and rocks, as far as the eye can see.

The newer part of the city is built upon land reclaimed from the sea, and has broad streets with ordinary houses; the rest of the city is a confusion of tortuous streets with no particular distinction. Few Moorish houses remain, but there is a fine horseshoe arch, once the entrance gate to the city; and here and there a large square with gardens or fountains is to be found. A mountain torrent runs through the city during the rainy season, but for the greater part of the year it is dry. The dry bed is converted into a market-place, and occasionally, when an unexpected freshet comes down from the hills, it carries everything with it to the sea. The vegetation of the environs resembles that of Southern California. Pines and palm-trees grow side by side with the graceful pepper-tree and the tropical banana; oranges, lemons and grape-vines are fenced round with gigantic cacti; geraniums and honeysuckles flourish luxuriantly. The grapes are chiefly dried in the sun for raisins, for which Malaga is, of course, famous.



The cathedral of Malaga is a prominent landmark, bold and picturesque in outline, but not attractive in detail, except the carving of the choir, which is interesting. It was begun in 1528 and is rather an example of the decadence of Spanish Renaissance than a credit to it, though the lofty bell-tower is well proportioned. The columns are of the unsatisfactory Composite Order, and one tower has been left unfinished in a strange way. The thirteenth-century Castle of Gibralfaro, with its romantic memories of the great siege, is in fair preservation. Malaga was one of the first Gothic cities to fall under the dominion of the Moors after the invasion of Spain in 710 A. D., and, for a while, it was the capital of a small independent kingdom; later it became part of Granada, and it played an important part in the last hopeless stand of the Moors before they were finally expelled from Spain. In 1487 it was taken by Ferdinand, after a long siege, under the pretense of reducing it for his Moorish ally, the younger Abû-'Abdullâh Zâkir, called Boabdil by the Christians, the would-be king of Granada, who had acknowledged Ferdinand as his overlord, but who afterwards resisted him in Granada until the Moorish cause was entirely lost.

### PEACE: by R. Machell



ALL this talk of peace seems to me ridiculous. What chance is there of establishing peace in a world where the people that are loudest in their denunciation of war are the most quarrelsome of all? It seems to me men are born fighters and they only talk peace when they think they are going to get the worst of the fight. And then this cry for disarmament: why it is just the old story of the wolves persuading the sheep to get rid of the sheep-dogs and then devouring the flock."

Some of the rest of the party added arguments in favor of war. One said it brought out all the best qualities in men, made them strong, active, intelligent and brave, besides teaching them to stand by one another, and to work together, and so on; in fact, it was a small anti-peace meeting, which, as it grew more unanimous also became more pugnacious, until it seemed that it would take some courage for a man to stand up in that group and say a word for peace. **B**ut there was one man, who seemed thoughtful and not much inclined to

join the general chorus in their contempt for the peace idea; he said nothing until his silence became the strongest voice in the noisy group, if one may say so.

Anyway, his silence attracted attention, and he was called on to join the debate, as they called it. When he did speak they all thought he was fooling, and began to protest; but he was one of those slow men that are not easily moved, and he just looked round and made a sort of half-conscious movement, that somehow seemed to have a soothing influence on the noisy ones, for he was as strong as he was slow and quiet.

“Fourth of July used to be a noisy time,” he said, and looked round at the rest. “I’ve heard thousands of people each making all the noise he could; there were bands too, each playing its own music and trying to drown the sound of the others, and then there were a lot of people killed and injured one way and another, and all to celebrate the glory of the nation. But of late the people have begun to think that a foolish game, and you know all the papers were full of talk of a ‘safe and quiet Fourth of July’: and now we are getting it. Everybody seemed to see that the time for the old noisy business was past. Well, boys, it looks to me as if it was about the same way with war. There’s a lot of good sense in what you say, but then it seems the time for war is past and we may as well try to see what the next move is to be.”

“Oh! Peace, holy Peace!” said one, mockingly.

The slow man began again.

“I remember when I was younger some of the boys wanted to get up a brass band, and we got enough instruments to go round, and distributed them. Each one went home and set to work to learn to play his instrument, and before long we all got together and started in; and if you had been there, you would have thought the old Fourth of July was as peaceful as a spring morning on a mountain side in comparison with the noise we made. Each one played his own part in his own way and tried to drown the rest. Some got mad because the others made so much noise they could not hear their own instrument, and then they stopped playing and abused one another; there were a few fights, and the rehearsal ended in everyone talking at once to explain what was wrong and how to put it right.”

Here the speaker stopped, and seemed inclined to settle down to his usual dreamy silence; but the rest had begun to take interest.

“Well, after a lot of talk one of the band said: ‘We want a leader,’ and that set them on a new tack. They all agreed at once that a leader was what they wanted, and they all agreed as to who the leader ought to be. That is, they all thought they knew the right man to lead; and of course when it came to a vote, each man got one vote, and that was his own. They were so much of one mind that there was no agreement possible. Then one of us suggested asking Dan Matthews the old bandmaster to take the job; and that was the beginning of the band.”

“What has all that got to do with peace and war? of course a band must have a leader, everyone knows that, but when you have peace you can do without leaders.”

“Just so! That’s what we thought when we got our instruments, but we soon learned that without a leader there was no way of keeping the players in time; and when each went his own way there was discord, confusion, noise, but no music. Now it seems to me peace is like music. It needs all the musicians to play together, and each one has to attend to his own part, and to his own instrument, and to leave the management of the whole band to the bandmaster. And I think some of the people that talk so much about all the world being at peace, and who think that all the different nations have got to be mixed up into one, might learn something from playing in a band. Because you see if all the players played the same instrument there would be no harmony. The more instruments there are, the richer the tone. And each instrument has to be played in its own particular way, and to have music written for it, that is no good for most of the others. And that’s just like the different nations with their different manners and customs and languages. You see they are just doing what we lads did when we tried to start our band. It takes a man a lot of study to understand all the instruments, and to be able to arrange the different parts for each to play, so as to get music out of the whole bunch when they come together. Men like old Dan are needed to teach a lot of untrained beginners how to play together so as to make music: and I think that there is likely to be very little peace in the world till the nations learn that lesson. But they are beginning to see that so long as each is playing his part to suit his own taste there can be no music. They are tired of discord, and want to hear a little music. That is something; the rest will come later.”

## GOLDEN THREADS IN THE TAPESTRY OF HISTORY: by Kenneth Morris

### PART TWO

#### CHAPTER V — THE GOLDEN AGE OF T'ANG



**A** GAP of some seventy years, during which Chinese genius was lying somewhat fallow, intervened between the close of the dawn-cycle of Southern illumination, and the opening of the great noon-cycle of Chinese history, the Golden Age of the T'ang Dynasty. How those seventy years were filled with splendors elsewhere: how the Crest Wave of Evolution, sunk for the time being in China, had risen in Corea and Japan, we shall see in a future chapter. In the twenties of the seventh century it had risen in China once more.

We have seen how, after the fall of the Hans in 220 A. D., a Tartar wave flowed south as far as the Yangtse, and brought in universal confusion for two hundred years. Then in 420 the tide began to turn, and civilization was restored in the south. During the next two centuries, Chinese influences were percolating into the northern Wei Empire; so that when the Duke of Suy, a Wei man, conquered the South and reunited China in 590, it was really a Chinese, not a Tartar empire that was created. His dynasty was short-lived, though vigorous; there were Tartar elements in it that did not make for culture; and the pure Chinese element throughout the empire was too strong to allow it to continue. Early in the seventh century, one of the greatest men in all history emerged as the champion of Chinese China: Li Shih-min, Prince of Chin. He overthrew the Suys, and in 618 put his father on the throne as Kao Tsu, first emperor of the T'ang dynasty. In 627, on the death of Kao Tsu, he came to the throne himself, as T'ai-Tsong—T'ai Tsong the Great—and the Golden Age began. The new China was born, the like of which had not been since the great age of the Hans.

It was no longer a question of an artistic Chinese South versus an austere semi-Tartar North; Tartarism had been wholly absorbed, and remained only as a new warlike vigor instilled in the Chinese blood, to manifest itself in the conquering march of Chinese armies, and in the titanic virility of Chinese art. The years of dissension and division had taught the people the value of unity, and a splendid nationalism sprang up. Men found themselves no longer Northern or Southern, Confucian or Taoist or Buddhist; but Chinese, glorying in the glory of the empire and the race. Again: at last there was peace

within the Middle Kingdom. To bring about quiet at home, T'ai-Tsong rolled the tide of war far beyond the frontiers. He created a standing army of nine hundred thousand, and therewith settled the Tartar question by conquering and annexing Tartary — to its great advantage. Attacked by the Tibetans, he conquered them, and gave them back their independence, Chinese civilization, and to their king, his daughter to wife. He sent his armies conquering over the Roof of the World as far as to the Caspian; always with splendid results both for the conquered and for the Chinese, as we shall see. Meanwhile peace and stable government brought a vast extension of commerce: ships went and came from India, Persia, Arabia and the Islands, and such wealth as she had never known before rolled into the lap of China. Life took on new and gorgeous hues; the glories of Han were revived and quickly surpassed a hundred times. The great cities were rebuilt on a nobler scale: Ch'ang-an (Singanfu) and afterwards Lo-yang, counted their inhabitants in millions. They were splendid of architecture, rich in vast public parks, in temples and colleges and museums, in many-storied palaces and floating pavilions; a hundred other cities, little less in size, rose in beauty and richness incredible, hummed with intellectual, artistic and commercial life. Silk was the common wear, and silk of the richest and most exquisite colors. There were great gardens everywhere, gardens public and private; adorned with superb vases in lovely cream-glazed pottery, or in pottery glowing with deep purples and shining yellows; and with trees, plum and pine, trained into dragon shapes so naturally, so artistically, that you would have said Nature had done it, and called it no fantastic work of man.

The mingling of all schools of thought, of all racial temperaments, in a common patriotism, fired further by quickening elements from abroad, produced a steadily increasing outblaze of genius. In every department of life, China stood far in advance of the rest of the world. T'ai-Tsong gave her peace to be herself, and she rose to the occasion royally.

It was in the second or third year of the reign of the great emperor, that you should have seen two men ride out from the capital, Ch'ang-an in Shensi, by the western gate, one evening; and the beginning of a journey among the most momentous recorded. The one of them is a priest from Tsin-chao who has been studying in the college Temples of Ch'ang-an; he is now returning home, and concerns neither

us nor history further. The other — ah, this is no common wanderer, no mere blazer of material trails, opener of markets, or explorer; every step of him forward is spiritual as well as physical; he is to tempt the vast unknown, the demon-haunted desert, the undiscovered “Western World,” “in search of the Law.”

Behold him: “a tall, handsome man with beautiful eyes and a good complexion; with a serious but benevolent expression, and a sedate, rather stately manner.” He is now twenty-six years old, and from his first childhood has been winning the love and admiration of all by his grave, sweet nature, his inflexible resolution, his quickness to learn; and soon, by his profound learning. There has been one great preoccupation in his years: the spiritual need of his countrymen; the imperative need, in this new and wonderful China, for inward quickening by the Truth itself; else what shall all outward splendor avail? That Truth had been revealed to mankind, twelve centuries before, by the Lord Buddha; tidings of it had come into the Middle Kingdom, and many sacred books had been brought in and translated. But somehow, discrepancies had arisen in these: there were passages unclear and passages contradictory; a new light and impulse were needed. Did he know nothing of the Esoteric Schools of Tao Hsin, the third, and reigning, Zen Patriarch; of Chih-i on the Tientai Mountain? One cannot say; he was sent forth by the Gods on a mission that should have its prime effect on art, on culture *per se*, and to add to the store of human knowledge certain important details in history and archaeology that we now have to thank him for, since without him they would have been lost. But it was the sacred impulse, and dreams and enlightening visions, that moved him; and so now he has gone forth in quest of Truth to the far West where of old it was revealed; on pilgrimage to those countries made sacred long since by the presence of the Lord of Mercy. He will seek the Law in India, that had been the native land of the Lion of the Law.

It is forbidden. T'ai Tsong, with an eye to future activities of his own and of his armies in that fountain of troubles, the western desert, has ordered that none of his subjects, pilgrim or merchant, shall wander thither; so now our Hiuen Tsang, called the Master of the Law, must first traverse half Shensi and all Kansuh before ever his pilgrimage may begin. It is wonderful to note the way he does it. He makes no secret of his intentions; where one magistrate stops him, he placidly makes a tangent, and passes through the district of an-

other; sometimes he gets through unnoticed, sometimes he converts the prefect, who then gives him godspeed and perhaps an escort, and will dare answer for it himself to T'ai-'I'song, if the need arises, for dear Religion's sake. At all events, one way or another, the Master of the Law gets through.

Behold him, then, arrived at the frontier itself, and setting out thence alone, on his lean old red nag, to cross the loneliness of Central Asia, skirt Tibet, and come down through Afghanistan and certain Persian provinces into that Western World which his Master made sacred. Watch him pushing on through desert, his path marked only by the bones of old-time travelers; his parched waterless days under the vast skies, amidst the limitless landscapes whereon no shadow falls, save from the wings of some

vultur on Imaus bred,  
Whose snowy ridge the roving Tartar bounds,

that

. . . . flies toward the springs  
Of Ganges or Hydaspes, Indian streams,  
But in his way lights on the barren plains  
Of Sericana, where Chineses drive  
With wind and sail their cany waggons light —

no Chineses were driving their wagons there in Hiuen Tsang's days, that is certain; it was still an undiscovered country; and the Master of the Law went forward alone, sometimes lying down, exhausted, to die of thirst; all very complacently, since he was still upon the Path, and had not turned aside. Whether in this or the next earth-life, what matters it? — the Sacred Land shall be reached. See him braving by day supernatural hosts "clad in felt and fur," with camels and horses innumerable, and glittering standards and lances; and plodding on through nights when the "demons and goblins raised firelights as many as the stars." — At last he comes to habitable regions again: Central Asian kingdoms long since buried beneath the sands: there, his fame as a Teacher having somehow preceded him across the desert, the kings do him great honor. One of them forbids him to proceed, eager to keep him there as Teacher for himself and his people; whereupon Hiuen Tsang refuses food and drink until the king gives in, and sends him on his way with an escort. Altogether indomitable, kindly, human and saintly, not without a sense of humor which he

displays at times, he pushes on against all obstacles, reaches his goal at last, and treads in the very footsteps of the Buddha, physically as he has all along striven to do spiritually. He visits the holy places, gathers a great collection of sacred texts, goes about teaching and preaching — for this tall, grave, lordly Chinaman is recognized as a saint even in India; his self-abnegation, holy life and valor unshakable have won him many disciples even among native scholars and priests. Indian princes make much of him; robbers, setting upon him in the wilds, depart, richer by no material silver or gold, having craved and obtained his blessing. So at last he sets forth with his collections for China; where he is received in all honor, lodged in a temple by T'ai-Tsong himself, and given a great staff of scholars to help him in the work of translating and arranging his texts.

What is it that he has accomplished, to give him so high a place in history? This, so far as we are concerned: given us all the knowledge we possess of the India of his day: the India in which Buddhism was receding before the Brahminical reaction, and destined soon to be driven out altogether. So far as concerns his own time and land, he brought in the first breath of a new inspiration, not only, or perhaps chiefly, in religion, but in Art as well. For he visited all the lands where of old the Hellenic beauty-instinct, traveling in the wake of Alexander's armies, met and fused itself with Buddhist devotion, and produced the Greco-Buddhistic Art of Gandhara and the Oxus region. The art-treasures of the Central Asian kingdoms, even then beginning to be imperiled by the gradual drying up of the atmosphere which has since made the sites of them a solitary waste, began to flow into China, and spurred up potently the growth of Chinese art; one main contributory cause of the marvelous flowering of the latter during the first half of the next century. Also he had opened a road for Buddhist saints and philosophers from India, whereby they might come to a promised land under the great and liberal T'angs, a refuge from the rising tide of Brahmin persecution that was now more and more driving them from the native land of their faith. T'ai-Tsong and his hosts, following soon for a great way in the footsteps of Hiuen Tsang, made the desert safe for travel; and China, that had become once more a national entity with the accession of his dynasty, now took to herself, and grew still more great upon, a thousand international influences brought in, directly or indirectly, by the Master of the Law. The tide of national life runs high, and then come in the quickening



international influences: and that is invariably the secret of the Grand Epochs, the Golden Ages of history. Write the name of Hiuen Tsang among those of the Messengers of the Gods who, impelled by the Theosophic urge, intervene to create or save their nations.

T'ai Tsong died in 649; the rest of the century was filled with the vigorous reigns of his son Kao Tsong, and of the Empress Wu Hou: a beneficent rule, even the latter's, in spite of certain eccentricities and even crimes of her own. We are to note that in this period, in 675, Shen Hsiu, he who said that the mind was like a mirror, became Patriarch of the North; and that Wu Hou, whose personal history and character were so strangely like those of the late Dowager Empress, admired him greatly, and perhaps profited by his influence — to a certain extent. — It was not, however, until she had been forced to abdicate, and the prince Li Lung-chi came to the throne as the Emperor Hsüan Tsung or Ming Huang, that the Golden Age of T'ang, in art and letters, culminated. The culmination endured from about the year 710 to 750.

The two Zen Patriarchs, the Northern and the Southern, had died; having appointed, at least openly, no successors. The Light of the world had passed, perhaps, into the inner core of their Movement; at least that Movement was not to be, patently, the inspiration of the greatness of an age, until Sung times, three hundred years later. The spiritual center of China was now the Tientai Monastery in the mountains of Cheh-kiang, where Chih-i, in the last quarter of the sixth century, had established his esoteric school. One hundred and thirty years after the Tientai Monastery was founded, the teachings of Chih-i manifested themselves as having taken hold upon the vanguard of the race; they became the inspiration and inner glory of the age, which was certainly one of the most brilliant in all the history of art. It was crowded with great poets, great painters; palpitating with splendor of life and artistic achievement; and through all the splendor of it we behold the Tientai Theosophy run like a golden thread, a current of divine life.

This Tientai-ism was, as we have said, a pure and glorious Theosophy; with trumpet-calls against the foes that lurk within. It imposed pledges of self-mastery on its neophytes: made them a kind of spiritual knight-errants, armed to aid the world. Theirs was to be no life of abstraction far from the madding crowd: salvation was to be achieved for humanity; self was to be renounced; self-salvation

was to be renounced; the perfect service of mankind was the goal. A doctrine of salvation by renunciation of salvation, Fenollosa calls it. It made intensely real and vivid the belief in Invisible Helpers: the Captains and great Generals in the Army of Light. It presented to the inner eye the actuality, the vibrant nearness of Buddhas and Bodhisattvas, vested in brightness beyond the noonday sun's. To Tientai flocked peasants from the rice-fields, students from the universities, sons of the nobility from the capital — Loyang since about 680 — there to make their vows, devote themselves and their lives wholly, passionately, to the cause of humanity, and prepare to go forth to work for human liberation. This had been going on since the days of Chih-i the first Teacher; now, after a hundred and thirty years of it, it bore fruit, carrying Chinese art to the greatest height it, or perhaps any art, ever attained. And when the greatness of the cycle culminated, Tientai battled superhumanly to perpetuate it, and effect the enduring salvation of the race.

For there was, there always is, need for such battling. There were elements in Chinese life that worked for a downfall; find the land and time when such evil elements have not existed. Empires attain to greatness, and fall; the causes of their fall are invariably the same, and to be looked for in the life of the people. Within the reign, within the personal life of the Emperor Hsüan Tsung we may read the whole story of achievement, decline, ruin. Benevolent and well-intentioned; for thirty years an excellent ruler; an intense lover of art and poetry, and himself a poet of no mean order: he had qualities which enabled him to lend full imperial encouragement to the divine illumination of his age; to give free vent and scope to its vast artistic impulses, so that the advance guard of human souls, seeking experience in incarnation, might reap for the time being wonderful harvests in the fields of Chinese life. But — he was weak morally, and that divine illumination could not touch him to save him. Tientai influences, powerful, fell short of omnipotence. Poets became winebibbers; Hsüan Tsung wasted his soul with Li Po and the "Immortals of the Wine Cup," with Yang Kuei-fei, the beautiful, the Helen of China; and the glory of T'ang departed.

But what a glory it was, during those wonderful thirty years of its culmination! Mr. Laurence Binyon has very justly compared Greek ideals in Art, as shown in popular legend, with the ideals expressed in the legends that come down to us from these spacious T'ang

days — very much to the advantage of the latter. We all know the tales of Zeuxis and Parrhasius and their painted grapes and curtains: an apotheosis, after all, of mere realism and imitative skill. Against these set parallel Chinese stories, and what a difference is in them! The dragon painted on the temple wall stops not at deceiving this one or that; the brush that gave him semblance, by heaven, it can give him life also! One last touch of it, and behold, away with him crashing through the roof, and soaring, after the fashion of his kind, into the blue empyrean. Here, art is magic: deals with the arcana and secret fountains of life. You are something different from the thing you were, after merely reading about that painted dragon — at least it is to be hoped so. And that was the understanding of Art among the common people, at all times the makers of legends. Wu Tao-tseu, greatest of the T'ang artists, painted a vast landscape for the emperor; and, when the time came for unveiling his masterpiece, walked up to the picture, and into the picture, and was seen walking away, growing smaller and smaller in the distance, the farther he went through the lovely landscape; ascending the painted hill in the background; coming at last to the painted temple that crowned it, and — vanishing within the temple portals, never to be seen on earth again. Ah, by heaven, they *knew*, did those wonderful Chinese people — that nation of artists inspired by Tientai Theosophy!

The story is symbolic, too; for this same Wu Tao-tseu stood to his age as its Teacher, the ambassador of the Gods to men. He preached, that is, painted, in public; was adored and understood by the multitude; thousands watched him as he covered the walls of temples and palaces with his vast pictures. Titanic pictures they were, in size and significance. Heaven and hell at war in space; battles of Dragons and demons; panoramas of the inner worlds; gracious, queenly Kwannon, the divine Lady of Compassion, descending on the foam of falling waters, to the protection of children that play on clouds in the midst of space, and are menaced in their play by some suggestion of unknown dark terror; Buddhas and spiritual potentates, only to look at which, ennoble and purifies you, so that, as Fenollosa puts it, "all that is small in one actually shrivels, and the picture grips you with a direct spiritual power." His work was symbolic; and his genius so elemental in its sweep, like the mountain storm; so clear and sunny in its vision, that the symbols he painted were vibrant with unsilenceable truth: revealing the dual nature of

man, the warfare of good and evil, the everlasting presence and governance of the Law. He may be called the Pencil of Tientai: it was the Tientai Theosophy, insisting upon the august nature of the human soul, its sublimity and valor, which made the full fruition of his genius possible. Nowhere shall you find the Grand Manner in art or literature, save where there is some inkling or reminiscence of the divinity of the soul; with the T'ang artists it was no guess or far memory, but the full, blazing sweep of knowledge. For Wu Tao-tseu was one of many: the greatest, because the most representative of a tribe whose name was legion, in which were to be found many hardly less than himself. They had such vision as the sculptors had in Egypt of old, who carved the mighty God-Kings, not as courtiers, for the glory of this Pharaoh or that; but as artist-Theosophists, for the glory of the human soul. Phidias saw this vision too: something of it: something of it — his predecessors had seen more. And Michelangelo and Leonardo saw it — dare one write, as through a glass darkly? Well, well, the more transcendent their genius; the greater glory to the souls of them, that they *did* see, and *would* speak, in spite of everything! What the great Greek saw, you may say, he saw through the veils of a certain growing externalism in the age, a tendency to see beauty only with the physical eye, that cannot see more than the outward parts of it; and what the great Florentines saw, they saw in spite of an age divided between sensuous irreligion and an orthodoxy that schemed and grasped; but the great Chinamen saw with soul vision that had been clarified, instructed and confirmed — not hindered or obscured — by the teachings they had received.

Well, the glory was to pass; Hsüan Tsung himself was to outlive it, and to die broken and ashamed. Wu Tao-tseu had walked away into the lovely distances of his own picture; there was no room left for him in an actual world whose old T'ang splendor was going down into a riot of luxury. In the terraced gardens of Teng-hiang-ting Hsuan Tsung drank and capped verses with his poets; affairs of state were nothing to him; in the green bloom by the fountain, a butterfly lights on the blossom in the hair of Yang Kuei-fei the beautiful; let all China wait while the emperor and the Immortals of the Wine Cup indite poems on that! Meanwhile there were intrigues and plottings at court; ambitious beneficiaries eager to subvert the Throne that had raised them, and stern patriotic T'ang generals mourning over the decay they saw and foresaw. Revolt broke out: Hsüan Tsung

fled with his mistress; his own followers rose against him, and compelled him to decree and witness her death; then himself to abdicate. That was in 755.

Down came the curtain then, upon the glories of T'ang. The rest of its history, as much thereof as must be told, is told soon. The spirit, the vigor, had gone, and left behind but their shadow and obverse side: those evil sub-surface forces which set in always, it would appear, when a period of ardent national striving gives place to one of brilliant national success. Genius produces splendor; under whose wing the cuckoo corruption is hatched. The Gods send their emissaries, hoping (against hope, one would imagine) that not a company of souls merely, but the whole of a civilization, may be lifted up and go forward. So Hsüen Tsang, Shen Hsui, the Tientai Masters, Wu Tao-tseu and his compeers, came to T'ang and labored. But the hour struck when the outward efforts of such as these had to cease; and China, for all her glorious attainment, was not prepared to go forward. After Hsüan Tsung, events took this course: the Confucianists rose as the censors and purifiers of morals, which by that time sadly needed purification. But they had no spiritual remedy, no pabulum of the soul to offer; only commendations to virtue, and the old ritual and codes of manners and behavior. With the narrowness of extreme Puritans, they ranged themselves not only against vice, but against Taoism and imagination, Buddhism and spiritual-artistic effort; — art, liberal thought, and progress as well. They succeeded, as such efforts always do, not in lifting the standard of life, not in sending a fire of purification through the Chinese heart; but in helping corruption towards the end of sterilizing, for the time being, Chinese genius. The T'angs held the throne until the beginning of the tenth century: the mere wraith of their former greatness. In the Tientai Mountains, in Chih-i's monastery — which is still there, and still considered one of the sacred places of China, by the way — the Light was yet shining; elsewhere, too, the seeds sown by the last Patriarchs of Zen were lying in the soil, waiting for the springtime of genius to return. But for upwards of two hundred years after the fall of Hsüan Tsung, so far as creation is concerned, China was more or less under Pralaya.

**SCIENTIFIC JOTTINGS: by The Busy Bee**

## WASTEFUL ILLUMINANTS



THE quality of light produced by illuminants is so small compared with what it ought to be, as to justify applying to it the name of by-product. This conclusion is arrived at after some tests carried out by a scientific man, who based his estimate of the efficiency of various illuminants on a comparison between the energy used in producing the light and the energy actually given out as light. He drew up a table showing the proportion of the output to the input, in the form of a percentage. This gives the kerosene lamp and the open-flame gas burner as having an efficiency of less than one-twentieth of one per cent! This seems almost incredible; and at the head of the list were the yellow-flame open arc and the quartz tube, with efficiencies of 7.2 and 6.8 per cent respectively. At this rate an approach to a perpetual lamp is conceivable, since a light which would waste no energy would burn more than 2000 times as long as a kerosene lamp. There is evidently much to be learned yet in the matter of illuminants. We have been throwing away \$19.99 in every \$20, which can hardly be called economy; and we are just learning how to reduce our loss to only nintey-three cents in the dollar.

Speaking of light, we see mention of the fact that flashes of light are produced when loaf sugar is broken, and can be seen in the dark. Loaf sugar is no longer broken in these days, but the effect can be obtained by crushing large sugar crystals in a nutcracker. It is a pleasant fancy to think that the flash represents the escape of the crystalline life at the death of the crystal; but we do not doubt there are other explanations, though alternative explanations do not necessarily exclude each other.

## NEW BACTERIAL FERTILIZER

From an English paper we learn some particulars of the wonderful new plant fertilizer to which has been given the name "humogen." The writer begins by recalling that bacteria are the most important elements of fertility, and that sterilized soil is dead, and will grow nothing, however rich it may be in mineral foods. Certain bacteria are "nitrogen fixers," having the power to take nitrogen from the air and add it to the soil; and certain plants, such as the sweet pea,

act as hosts to these bacteria, holding them in the nodules on their roots. Preparations of these nodules were made, but the results obtained from the use of these preparations were disappointing; and attention was turned to certain other bacteria, called "azotobacters." In seeking a medium for the cultivation of these, peat was selected; but the original peat, though rich in plant foods, has them not in available form. Therefore the peat had to be treated first, so as to make its foods available. This was done by inoculating the peat with some soil-bacteria which have the power of turning its humic acid into soluble humates. These bacteria were then killed off with steam, and thus treated, the peat was then inoculated with the azotobacters. The finished product is the humogen.

Chinese primulas, watered twice in six weeks with a solution of humogen in the proportion of 2 oz. to four gallons, presented an extraordinary contrast in size, foliage and flowers with untreated plants. A market gardener found that he could, by means of a top-dressing of a spoonful of peat, raise a plant in two months which would otherwise have required six. A thimble-potful of humogen was sprinkled on the surface of some 10-inch pots of arum lilies, and the weight of the plants doubled in a month. Seventy-two cucumbers were cut from twenty treated plants after a few weeks' growth.

Humogen has sixty times the nutrient value of an equal weight of the best two-year-old farmyard manure; but the results obtained cannot be accounted for wholly by the increased quantity of nutriment. It is thought the new factor is similar to what are known in animal physiology as "vitamines." Without vitamins no young creatures can grow, no mature ones remain in health, though the food teem ever so richly with the scientifically correct nutrients. They are present in milk, green vegetables, and fruit, and are effective in minute quantities.

The important point here is that no mineral substances will work without the bacteria, and that even the best foods feed not where living organisms do not abound. It has been truly said that the atonic theory of the universe is giving place to the bug theory. Are the instructions about food values, proteins, carbohydrates, etc., wrong after all? Have we been feeding invalids with so much coal and dead fuel, when one bacterium on a lump of sugar three times a day was all they needed?

It is still said in the chemistry books that oxygen and hydrogen

will combine directly to form water; but weightier authorities now assures us that this is a — prevarication. If the gases are perfectly pure, they will not combine — no, not even if heated. The presence of a trace of water, however, will enable them to combine. And there always has been a trace of water; that is, the gases have never been pure. In other words, the experiment has, until recently, *never been tried at all*. And the teachings of our text-books are based on imaginary experiments. No one knew what pure hydrogen and oxygen would do to each other, because no one had ever tried; they had always used wet hydrogen and oxygen — that is, dirty hydrogen and oxygen — in short, not hydrogen and oxygen at all, but these gases *plus* water. The gases will produce water, provided water is already present; otherwise they will not. And is this what our precious theory has come to at last? The scientific idea, doubtless derived from a misapplication of pure mathematics (the science of number and quantity), that two and two always make exactly four, breaks down in practice, when other things than mere number and quantity are considered. (See E. A. Poe, in the “Purloined Letter.”) Ammonia gas and hydrogen chloride are in the same fix; they will not combine directly; the presence of water is needed. Incandescent gas mantles will not glow if they should happen to be made of thoria; what is needed is impure thoria; in other words, not thoria at all, but something else. The impurity is a small percentage of ceria, but a greater proportion of the ceria does not produce the effect. Hence it is not the ceria but the impurity which produces the result. Luminous paints made from the sulphides of calcium, barium and strontium are absolute frauds, since they decline to luminesce unless certain impurities are present. They insist upon breaking the text-book law.

To revert to the soil — we see the same thing here; nothing comes off of itself, but needs to be touched off. The aforesaid application of mathematics in a limited sense (perhaps we say arithmetic or book-keeping) has yielded the view that, if we mix up certain elements, certain compounds will result, and that the compounds will be equivalent to the original elements. This method has been applied to the study of evolution — evolution of everything, from the amoeba to man, and from umbrellas to religions. Houses were evolved gradually and synthetically. A savage one day put one brick on the top of another. Then another savage added a third brick. Thus a pillar was made, and then two pillars were joined into a wall; and eventually a roof



was added, until at last the palace of today was evolved. On this principle we have been feeding the plants with mixtures of things, with the idea that two good things will be twice as good as one. But the plant does not seem to mind what kind of soil it is buried in; all it wants is the living organism. All this illustrates the ancient teaching that life and lives are at the root of every process in nature, and that a molecule of ammonium tartrate can never become a Shakespeare unless it is ensouled (a good many times, too) from outside.

#### EGYPTIAN MUMMY WHEAT

In the spring of 1908 the *Liverpool Weekly Mercury* published the following:

The accompanying sketch is a correct representation of the produce of one grain of Egyptian wheat obtained from a mummy. The seed was brought into this country from Thebes by the family of Sir W. Symonds, of Hampshire; and by them presented to Chamberlayne Chamberlayne, Esq., of Maughersbury House, Gloucestershire, and grown by Mr. R. Enock, of Stow-on-the-Wold. What



is most remarkable is the length of time that has elapsed since the corn from which the plant was produced grew; for, at the most reasonable computation, no less a time than 571 years B. C., or 2400 years have passed away since any record can be obtained of entombing mummies within the pits of Thebes. There were, at a very moderate computation, upwards of 1600 grains of corn in the fifteen stems produced.

The publication of this in the *New Century Path* at that time brought forth the following communication from a correspondent in Australia:

In relation to the question touched upon in a recent number of the *New Century Path*, as to whether Egyptian mummy wheat will germinate, my mother has often told us of some being given to her father which grew and matured. Grandfather had two ears of the wheat which he planted in the garden, and from

the seed next year planted more, and had finally five or six three-bushel bags of it. Giving up wheat sowing, the wheat was sold to a farmer in the vicinity. This happened forty years ago. Last year when my mother tried to get some for me which I wanted to send to Point Loma, it was discovered that there was none of it left at the old homestead. Mother has often described the wheat to us, saying it was not like our wheat but more like barley, with long whiskers between the grains, and that the grains were very closely packed in the ears, more so than in our usual wheat. The wheat was grown in the Western District of New South Wales at a well-known cattle station homestead.—*E. I. W.* Sydney, Australia.

#### SCIENTIFIC ABSTRACTIONS

Speaking of the difficulty of seeing how any material germ can be the hereditary transmitter of so many and so complicated faculties from parent to offspring, some biologists have suggested that the faculties are carried over, not by a material substance, but by some *arrangement* of cells, particles or molecules. But what, we would like to ask, is an arrangement? To our mind it is an abstraction. Can an arrangement be said to exist apart from a material substance? The same fallacy is met with in connexion with the repair of the physical body. A mole on the skin is reproduced from birth to death, although the particles of the body are continually changing, the cells dying and being renewed. The biologists would tell us that, though the materials perish and change, the *arrangement* persists and is transmitted and perpetuated. Now this *arrangement*, thus relatively immortal, is either an abstraction or else it is the inner plastic and invisible body upon which the physical atoms are molded. The kernel of the matter is that biologists are trying to evade the necessity of admitting the existence of such an inner body by elevating abstractions into realities. We remember one who said that the new cells in the brain "usurp the identity" of the old ones they replace; an expression which surely takes the palm. Should we describe a house as composed of bricks plus an arrangement? An arrangement implies the prior existence of a thinking mind; but to the scientific mind it often seems as though arrangements could be altogether "fortuitous" — another word involving a fallacy. It is supposed that, because certain properties in a molecule are accompanied by a certain arrangement of the atoms within that molecule, therefore the arrangement is the one and only cause of the properties; but it is equally logical (or illogical) to suppose that the arrangement is the *effect* of the qualities. The refusal to accept ultra-physical entities results in the

substitution therefor of abstractions. As Professor Bateson, in his address to the British Association, 1914, puts it, in speaking of the transmission of qualities:

What these elements, or factors as we call them, are we do not know. . . . It seems to me unlikely that they are in any simple or literal sense material particles. I suspect rather that their properties depend on some phenomenon of arrangement.

The language is vague: the qualification, "in any simple or literal sense," allows ample latitude; and instead of saying: "They are not material particles, but they *are* some phenomenon of arrangement," he says: "They are not material particles, but *their properties depend on* some phenomenon of arrangement." But the idea in his mind is clear. It is this: if the transmitted elements are not material particles, what are they? Searching his mind for something which is not material, and which yet can be transmitted, he gives us this expression, "some phenomenon of arrangement." This, we say, is a pure abstraction; but if anyone objects to the statement, they are welcome to the alternative—namely, that it is *not* an abstraction. Only, in that case, they should answer the question, "What is it? What is a phenomenon of arrangement?"

Cases like the above—and they are numerous—justify the remark that some of our modern science is highly metaphysical; but, as it is so by inadvertence and not by design, its metaphysics are very bad metaphysics. We are faced by the alternatives of defining a "phenomenon of arrangement" as a quality of some entity, or else as being an entity itself. One way out of the difficulty is to suggest that there are other kinds of matter besides physical matter; that things may be substantial without being spatially extended, or objective without being physically objective. We can say provisionally that the elements transmitted are "organic units," having form, substance and motion, but not coming within the ken of the bodily senses and the instruments employed to aid these. But it will be better to go further than this and to admit at once that the animal's body is not the animal, and that the animal himself evolves, while the body adapts itself to this evolution. The One Life manifests itself dually, throughout all nature, as force and form, or spirit and matter; and we must be prepared to admit other kinds of matter than the physical, and other modes of transmission besides reproduction.

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## PAPERS OF THE SCHOOL OF ANTIQUITY

THE SCHOOL OF ANTIQUITY shall be an Institution where the laws of universal nature and equity governing the physical, mental, moral and spiritual education will be taught on the broadest lines. Through this teaching the material and intellectual life of the age will be spiritualized and raised to its true dignity; thought will be liberated from the slavery of the senses; the waning energy in every heart will be reanimated in the search for truth; and the fast dying hope in the promise of life will be renewed to all peoples.—*From the School of Antiquity Constitution, New York, 1897.*

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### EARLY CHINESE PAINTING:\* by Professor William E. Gates, (School of Antiquity)



IN approaching any subject lying close to the heart of a race far removed from us in history, conventions and philosophy, and yet deeply conscious and creative within itself, all of which is more true of China than any other people we can name, we undertake to encounter and then to enter into fundamental differences of technique and purpose. These differences of externals and of methods are so very marked that we shall surely fail unless we begin with all the sympathetic and catholic spirit we can command; we must set out to look first for the *likenesses*, and not permit our attention or vision to be distracted by the curiosity of the differences.

Of no human subject is all this more true than of Art, that subject of a myriad definitions, all true from some point of view, none complete—that most intimate work of man whereby he ever seeks to create and translate his inner spiritual vision, at its highest formless and soundless, and almost timeless, into some visible material and speaking picture on earth.

From a dozen points of view, Art becomes an equilibrium of contending dualities. And in this subject above all we must seek the point of unity. However various the aspects of its expression, there is ever a something constant in human thought that keeps it one with itself in all climes. Nature, Art, Civilization are, each one, a unity always. Under many vestments, imposed by historic periods or by

\* The sixth lecture of a University Extension course lately arranged by Mme. Katherine Tingley to be given at Isis Theater, San Diego, under the auspices of the School of Antiquity, Point Loma, of which she is the Foundress-President. These lectures are being given by professors of the School of Antiquity, and others, and many of them are illustrated by lantern slides especially prepared from original and other material in the collections of the School of Antiquity and elsewhere. Other lectures will be published in due course.

different civilizations, the heart of man, the intimate home of his spirit, ever works out the same issues; the differences are all but accidents. Arts, civilizations, languages, natures, grow old; forms change, are outgrown, re-created, and re-born; but Nature, Civilization, Language, Art, are dowered with eternal youth, as they externalize and eternalize themselves in this equilibrium of contending or blending and co-operating dualities. When Art holds its true course and purpose, it awakes in the soul those higher emotions which neither time nor culture has ever greatly transformed.

The essence of Chinese art and technique is above all to be found in its early landscape paintings; there did the Chinese philosophers and artists, who have through all her periods of greatness been the real teachers and leaders of the people, put their understanding of the great Nature in whose heart and company they lived and kept their inspiration. And it is directly here that all the differences of externals and of methods, by the side of ours, are most marked. But their cause lies so much in the deeper differences of purpose and of inner vision, that they cannot be appreciated, much less judged, apart from an understanding of these latter.

It is natural that very marked differences of technique will exist as a result of the use of different materials and tools: the ground, whether stone, wood, plaster, paper, linen, canvas, or silk; the colors, mineral, vegetable, oil, fresco, pastel, water-color, ink and monochrome; the Western or the Oriental brush, the pencil, the pen. These and many others will inevitably develop great variance of handling and method, and will even, by their special adaptability to this or that, stimulate or subordinate entire schools of artistic expression. To enter into a study of Chinese painting by taking up these technical elements through which it is brought into being, would go far beyond an evening's talk; it would require whole volumes to do the matter any fair justice. The slightest possible reference to these subjects can therefore be permitted us; we must only remember that their influence is ever-present; they control the syntax of the expression. That they certainly do; but at the same time they do not hamper the expression itself, or restrict the thought and ideas behind, in the very least. Good English grammar is not good Greek; but the Greek sentence and the English are each the vehicle of the master's thought.

Two differences of technique must however be studied and *understood* before we can even begin to look with true appreciation at

Chinese painting. One is the much mentioned and little understood matter of the perspective, and the other that of the composition. These two points are closely interwoven, both find the origin and explanation partly in historical questions of the utensils and tools, the origins of art (so far as our present data go back), and also in the position in society of the philosopher-artist-statesman (rearrange those in any order), as well as very much indeed in the philosophy of nature and the relation in which men saw and thought of themselves, in and to the great whole. One very important and influential element in the development both of the perspective and the composition was the final *shape* of the painting, done on a roll of silk or strip of paper, and so giving rise to two forms in this regard — the hanging strip, called by the Japanese *kakemono*, and the unrolling scroll, the *makimono*. But we should make a great mistake here again if we should regard these two standard shapes as either a restriction to the artist, or a merely blindly conventional habit. Together and separately they had a conscious and intentional relation to the fundamental purposes of the art and the underlying philosophy and concepts of nature. Philosophy, the technique of perspective and of composition, and these two unrolling shapes were definitely interblended. Paintings in the West tend to a nearly square rectangle, in either direction; but this form would have been wholly inadequate to develop what had to be expressed in Chinese art and, in somewhat less degree, in Japanese. We shall see this clearly later.

But into the matter of perspective technique we must go definitely and critically; it is at the heart of the whole question. The common judgment, only just these past few years beginning to be counter-vailed, is that Chinese and Japanese painters, even the masters, were ignorant of any such thing as perspective. That is wholly false; we are not here dealing with an absence of perspective in paintings, but with two distinct and well-developed systems of perspective, the Western and the Eastern. And the Eastern is immeasurably the deeper, fuller, more developed and expressive. To see this we must analyse the growth of Western perspective, historically and philosophically — for it comes of both; and then study the rise of the Eastern in like fashion.

The purpose of painting is to represent or suggest something seen or conceived as being in space — in three dimensions, on a flat sur-

face, or in two dimensions. That requires a convention, of some sort; and however much we may forget the fact, it requires the appeal to both the imagination and sentiment, to fill out the picture and receive the message, even be it the simplest. Even a photograph does not show the thing as it is; it shows just one face of the object, as seen by a single eye placed at a single point; the imagination supplies the unseen rest of the shape. Feeling and sentiment are evoked, and modified by a changed position; yet in very limited degree, for the attention is primarily focused and arrested on the physical form and its reconstruction to the "mind's eye."

Perspective is a pictorial representation of distance, and the Western method of accomplishing this includes the reproduction to the eye of two incidental effects produced upon the eye by an object or objects at receding distances: the incident of increasing apparent smallness, and of the shadows that mark the sides of an object played upon by light falling from a single point. The distant object is not really smaller; the side of the object away from the light is not really darker; those are the sense impressions on the eye adopted as our conventional indications of "distance" and the "round." While the East, having other ideas and purposes in its art, has also other methods as we shall see.

Two elements entered historically into the growth of Western perspective methods, and each has grown on and continued to bind it, down to our present time. European perspective became definitely established in the fifteenth century on the revived basis of Greek geometrical science, and at the same time under the parallel influence of Greek sculpture, with its laws of harmonic form, and its supreme devotion to the human form, as such, as the paragon of beauty and proportion. All this has philosophy, the position of Man in nature, and even religion intimately interwoven. And its self-set goal is the physical world of form and sensuous perception.

From the renascent physical science of the day, and since, came and stayed on the tendency to photographic external accuracy; the eye and thought was tied to the physical form and constitution, and its details in every sense. In the effort to develop the representation along these lines, painting drew from sculpture its concepts of the "round" and the use of shadows to that end, *only*. From geometrical science Europe derived its "monocular" perspective, of a physical

object portrayed on a flat surface as seen by a single eye from a single point in space.

And then further, as art in Europe developed, the vigorous physical realism, and perhaps we might say — daily democracy, of the North, united with the Renaissance in the South, into an effort which we have glorified and justified, to ourselves, by calling it “ seeing life as it is.” Some paragraphs by a recent English writer, one of the very few so far that have justly entered into appreciation of the inspiration that underlies Chinese and Far Eastern art in general, are so aptly critical of this as to be worth our quoting. The sympathetic literature of this subject in the West is still in its earliest years, which only increases our obligation to the few who have led it: Rafaël Petrucci, Laurence Binyon and Ernest Fenollosa.

Realism in the North; in the South, scientific curiosity. In painters like Paolo Ucello we find the struggle to master perspective overshadowing the purely artistic quest for beauty, just as in our own time an intense interest in scientific discoveries about the nature of light has led a whole school of landscape to sacrifice fundamental qualities of design in a passionate endeavor to realize on canvas the vibration of sunlight.

It is the besetting vice of our Western life as a whole, so complex and entangled in materials, that we do not see things clearly; we are always mixing issues and confounding ends with means. We are so immersed in getting the means for enjoying life that we quite forget how to enjoy it, and what is called success is, oftener than not, defeat. So too, in current criticism of painting, we find it commonly assumed that an advance in science is of itself an advance in art; as if correct anatomy, a thorough knowledge of perspective, or a stringent application of optical laws were of the slightest value to art except as aids to the effective realization of an imaginative idea.

The painting of Asia limits itself severely. It leaves to sculpture and to architecture the effects proper to those arts. But it has not remained merely decorative; it is fully as mature as art, as is our own.

The very ease with which relief can be represented by shadows, as with us, has taken away from our painters the necessity for this concentration, and weakened their sense for expressive line.

Now we shall not understand any art if we do not constantly remember that it has to work always by and through conventions, methods and technique. This is equally true of West and of East. And just as we have already declared Art to be the equilibrium of contending dualities, whether those of human nature, of effort and environment, of sentiment and intelligence — so also has every master had to find the line of balance (the master finds the balance, where the



unskilled only can compromise) between the concept and the form, between the dominating essence, the message, and the limiting technique. Photography in art is not Art; and by sheer force the western painters were driven out of strict physical perspective toward a "perspective of idea or of sentiment." No object is seen truly from one single point in space; each man has to use his two eyes to judge mere distances alone. And so while Western art is based on the monocular theory of directed vision, it is the distinguishing mark of the true master that he more or less imperceptibly modifies his work to something like binocular viewing. And there is even a painting by Rubens in which the shadows are cast from two distinct directions. But the limitations on free action here are very great; our canons are those of scientific physical accuracy, and anything more than a very subtle adjustment becomes an impossible falsity.

We all know how strong has been the urge in later years towards breaking away from this tendency to live in the external in Art, to follow a triumphant Science and ask of a picture first of all perfection in correct portrayal. The difficulties were enormous; but much of the work of the best Impressionist school, frankly rejecting the sculptural and geometrical traditions, and seeking to suggest the service and the experience lying within the subject, was a distinct gain to Western life. The latest schools of Futurism, Vorticism and the like, as well as some much heralded sculpture, seem also to represent a reaction against the monocular limitations, offering a phantasmagoria of broken points of view; they fail because they are wholly materialist.

Perspective and composition grew in China from different historical origins. At its birth, so far as our records yet show us, there was still in use on the bas-reliefs the method of superposition of registers to give different planes of action. These bas-reliefs were also panoramic in their story; we see them in the Han sculptures of the Fourth century in China, and also their parallels, in a measure, both in Chaldea and Egypt. It is the supreme guerdon of Chinese painting that out of this non-artistic structure it developed the exquisite technique of combined composition and perspective afforded us by the canons of the *kakemono* and *makimono* art. In both directions the different sections of the panorama, upwards or sideways, were blended into one perfect unity; reaching from Heaven to Earth and Man, with one life shining through and binding all together into a harmonic relation that is the very essence of religion — as above, so below; or

else unrolling the action of Nature herself before our eyes in a succession of experiences to the soul.

But the differences we are dealing with are far more than historical and external; they are differences of method and purpose, conscious and intentional. We have not just to do with brushes and surfaces, but with a complete and whole philosophy of life and nature.

Ch'uen asked of Ch'eng-tseu, Can one obtain the Tao, to have it for oneself?

Your own body is not yours, how then can be the Tao?

If my body is not mine, whose is it?

It is the image reflected from above. Your life is not your own possession, it is the harmony delegated by above. Your individuality is not your own possession, it is the adaptability delegated from above. You move, but know not how. You dwell, but know not why. You taste the savor, but know not the cause. These are the operations of the laws of Heaven. How then can one possess Tao for himself? . . . The Present is the Infinite on the march, the sphere of what is relative. Relativity implies adjustment, and that adjustment is Art.

We began the subject by an emphasis upon the eternal unity of the human heart in every age and race; the essential unity too of Art and all its varied technique as the expressive means, bridging the inner and outer worlds, the thought and form. Were it not for this unity we might stand with unseeing eyes before this art of the Far East, for its point of view and ours are hemispheres apart. When the man of the East looks out upon things, he always looks at and for the problem of existence — mountain, earth, water, cloud and sky, plant, animal or insect, and himself; all are to him but a part of that problem. But in the West we do not even know whether there be any such thing as the problem of existence—the very words only suggest the bread-and-butter question to us. To the West, God is either separate quite from nature, or non-existent; the East sees Nature as the garment woven by the divine for itself, and man a conscious and immortal part of that, if he will. The philosophy of the East is impersonal, and Nature is man's friend. That of the West is individualistic and personal, and finds its last word in a cosmic theory of the "survival of the fittest"—in self-assertion and war. No wonder that we find the human form, and even the naked form the highest effort of Western art, and called "the form divine"; and Greek sculpture, in the round, the historical antetype of all that has been attempted since; while the supreme end of Chinese painting is the intimate study and contempla-

tion of Nature, and the interpretation of her inner flow and message.

The impress and interweaving of this philosophy with the whole of our subject is so full that we must let it develop out of the description and study of the pictures we must now come to viewing. But there is first another paragraph, written by Laurence Binyon whom we quoted once before, in relation to architecture in the East, which is so apt to our present point that I wish to read it here as an introduction to the real business of the evening—the reproductions of typical masterpieces in China, from the Fourth century and on. He says:

so far as I understand the architecture of Japan, for instance, I would say that it was conceived in a different spirit from our own; that a building was regarded less in itself than as a fusion of man's handiwork into Nature, the whole surroundings of the scene taking part, and perhaps the chief part, of the architect's conception.

This difference is rooted in philosophy of life, in mental habit and character. An opposition between man and Nature has been ingrained in Western thought . . . only very slowly and unwillingly has the man of the West taken trouble to consider the non-human life around him, and to consider it as a life lived for its own sake: for centuries he has heeded it only in so far as it has opposed his will or ministered to his needs and appetites. But in China and Japan, as in India, we find no barrier set up between the life of man and the life of the rest of God's creatures. The continuity of the universe, the perpetual stream of change through its matter, are accepted as things of Nature, felt in the heart and not merely learned as the conclusions of delving science. In the East, not the glory of the naked human form; not the proud and conscious assertion of human personality; but, instead of all these, all thoughts that lead us out from ourselves into the universal life, hints of the infinite, whispers from secret sources—mountains, waters, mists, flowering trees, whatever tells of powers and presences mightier than ourselves.

We are about to enter an art lasting with full vigor for more than a millennium, at least from Ku K'ai-chih in the Fourth century to Mu Hsi in the Sixteenth. But it is also the flower of a civilization whose unity and course we can trace with historical precision for another twelve hundred years before Ku K'ai-chih, and then with substantial clearness and meaning for another fourteen hundred years back of that, before we reach the more or less legendary age. The Chinese have always been great annalists, and the rights of almost unlimited independent thought, free speech and criticism even of the government have always (with rare interruptions) been re-

cognized prerogatives of the literati; the books are full of stories of philosophers like Chang Chih-ho, refusing to take office under a government they disapproved, and retiring to the mountains. The result has been a definiteness and certainty in their history which is far beyond that of any Western nation. The reliability of Chinese records two and a half millenniums ago has come to be now accepted by all the best Western students; and it may help us to appreciate this if we recall that though Confucius was born 551 B. C., his lineal descendant in the direct line still enjoys the one hereditary dukedom in China, granted only to the line of the sage.

Let us therefore here point a few dates as landmarks for our study. We can fix the line between the "marvelous" (which certainly means history written in parable and symbol), with the beginning of the Hsia dynasty and the emperors Yao, Shun and Yu, beginning about 2200 B. C., a millennium and a half before the reputed first Greek Olympiad, and the story of Romulus and Remus. The great Chao dynasty, the Confucian model whose principles are still a vital thread in China, began about 1150 B. C.; specific dates are recognized as being approximately close, by a substantial correlation of annals, and eclipse and other astronomical records, down to 842 B. C., after which a complete agreement exists, and (to quote Bushell) "Chinese dates can be accepted with entire confidence."

About this time also begins our extant and definite art tradition, as distinct from the philosophical and national principles whose controlling influence we will trace. But with the magnificent archaic ceremonial bronzes from the Chao period we find ourselves on solid artistic ground of a very high order, in both the form and decoration. In 604 Lao-tseu, the founder of Taoism, was born; in 551 Confucius — fifty years before Perikles. The Chao dynasty ended in 246; Ts'in Che Huang-ti attempted in 221 to destroy all books which served as supports of the critical literati, and ordained that his descendants should reign until the ten-thousandth generation; his son, succeeding in 209, was killed by a eunuch of the palace in 207, and his infant grandson in 206 was replaced by the great Han dynasty, from which the Chinese have ever since called themselves the "sons of Han."

Under this dynasty trade routes were opened to the West, to Persia and Rome, to Khotan and Turkestan, to India and Cochin China. The interplay of the oldest Chinese philosophy of nature, of its vivified spiritual Taoism, and practical harmonizing Confucian-

ism, we will see later in our study of the paintings themselves. And meanwhile into this realm of thought and feeling and aspiration there was added Buddhism, in 67 A. D. But this too, as we shall see, came not to destroy but to strengthen and fill out. The year 67 is the official date of its introduction, at the invitation of the emperor Ming-ti; but it was not until after the return of Hiuen Tsang from his great pilgrimage that it came to its full influence. The Han dynasty closed in 220, after which followed about four centuries of readjustment and inner ferment, politically; but that the nation was alive in the keenest sense is seen from the fact that the great artist Ku K'ai-chih belongs to the Fourth century, and in the Fifth we find fully established the six great canons of Hsieh Ho. Of actual paintings remaining from these centuries we have almost none; but canons never come into being until after a long and active period of vital growth, and the whole philosophy of Chinese art is summed up in these Six Canons; the ideals they then crystallized must have inspired whole generations of artists before them.

With the great T'ang era, 618 to 905, the influence of Buddhism had reached its full, and the three centuries are marked by extreme vigor, and by the definite development of the so-called Northern and Southern Schools. To give this period some illustration to aid our apprehension of its place, we might compare it to the Chaucerian period of English; and then we can think of the equally great Sung period, from 960 to 1280, as comparable in terms to an Elizabethan era, save that in each case we must measure the sustained strength of the periods not by one life or reign, but by the full life of the dynasty, three hundred years.

The Sung were succeeded by the Mongols, the Yüan dynasty; its meaning for art being a sort of accentuation of the Northern School, plus a meticulous refinement corresponding to a withdrawal from the grander side of nature, to greater luxury of living. This latter element became still more pronounced with the return of the ultra-Chinese Ming dynasty, in 1368, after barely eighty-eight years of Mongol rule. The Ming dynasty lasted until the coming of the Manchus in 1644; but we will close our subject for the evening with the Fifteenth century, the first hundred years of the Mings. Many good paintings were produced even after this time; but as a whole the vigor and purity of the style we have followed for 1200 years from Ku K'ai-chih ceases with this time. Yet not without great

masters to close the term; we will see some of Mu Hsi's pictures for ourselves, and his contemporary Lu Fu is referred to by M. Raffaël Petrucci as "equal to the greatest masters of Sung."

There are no known paintings extant earlier than the few we have of Ku K'ai-chih's; prior to that we must rely on literary evidences, on some bronzes and sculptures. According to the native historians, painting and calligraphy began 2700 B. C. Portraiture is definitely mentioned in the Fourteenth century B. C., references to it multiply and it must have been greatly cultivated. In early Han days other kinds of painting are known to have been common, and in the Third century of our era we have the name of one Wei Hsieh, as painter of "Taoist and Buddhist subjects."

In the Third century a certain Chang Hua wrote a treatise of "Admonitions of the Instructress of the Palace." This Ku K'ai-chih illustrated in a roll now in the British Museum. The beginning is lost, and the silk has been cared for and repaired with the utmost care. It bears many seals, including that of the great artist-emperor Hwei Tsong in the Eleventh century, and the emperor Ch'ien Lung in 1746, with a note by the latter's own hands, proclaiming it the best of the painter's remaining "four works." It has the seal of the imperial collection in the Eleventh century; and in the published catalog of that collection we find it listed, under the above title, the same as the roll itself now bears on its outside.

It is hardly believable, though only the fact, that we know more of Ku K'ai-chih's personality, sayings, paintings and life than of many painters of our own past century. We could spend our whole evening as we go through our pictures, either with the most interesting even though technical study of the various "points" of style and execution, or with delightful *causerie* about the painters and their times and subject. But all such we must forgo, save for just enough of this to follow the course of our subject. And since we can only look at the pictures themselves in photographic and mostly monochrome reproductions, I will prefer occasionally to allow others who have described them from direct viewing of the originals, pass on to us the inspiration received, in their own words. And so first of Ku K'ai-chih Mr. Laurence Binyon says that he

breathed an atmosphere of an age of civilized grace, of leisured thought, of refined culture. He deals in critical ideas. There is a modern tone in his comments on art. . . . There is an undercurrent of humor and playfulness per-

ceptible in the work, revealing something of the painter's personality. It was said of him that he was supreme in poetry, supreme in painting, and supreme in foolishness. We may conceive of him as an original nature, careless of the world's opinion, going his own way and rather enjoying the bewilderment of ordinary people at his behavior. He was noted for his way of eating sugar-cane: he began at the wrong end, and entered, as he expressed it, gradually into Paradise. He is said to have been a believer in magic.

He was especially famed for the spirituality and expressiveness of his portraits. Expression, not merely likeness, was what he aimed at. He remarked himself on the difficulty in portraiture of imparting to his subjects the air that each should have—in short, of revealing personality. The bloom and soft modeling of a young girl's face appealed to him less than features showing character and experience. "Painting a pretty girl is like carving in silver," he said; "it is no use trying to get a likeness here by elaboration; one must trust to a touch here and a stroke there to suggest the essence of her beauty." When he painted a certain noble character, he set him in a background of "lofty peaks and deep ravines," to harmonize with the lofty, great nature of the man.

Although written of Ku K'ai-chih, we can take the foregoing as equally indicative of every painter and every painting of the master schools throughout the whole period of Chinese art. Take these personal sentences, put with them the Six Canons of Hsieh Ho in the following century, understand them both, sympathetically; and with a few specific notations here and there, on points of line or stroke, contrast and tonality of ink or color, we are prepared to follow with that appreciative comprehension which will at least bring us in touch with the inspiration of that message which these Masters have sought to transmit.

These Six Canons, model for all who followed, are:

Rhythmic vitality—the life-movement of the spirit through the rhythm of things.

Organic structure—the creative spirit incarnating itself in a pictorial conception.

Conformity with nature. (We must understand these words in the Chinese sense: Nature is the ever-flowing, ever-producing, ever-manifesting life about and in us; really more the inner world than the mere external world of forms. And Conformity means—conformity, not just photographic accuracy, as we would be apt at first to interpret it according to Western objects in art.)

*Appropriate* coloring. (Here a similar note as before: the coloring must of course not be false, it must be real, true; but also it is the appropriate which is the true; the type and essence must be grasped from within, as a matter of the mind and not merely of the eye. We can see that coloring might be ex-

ternally accurate, and yet be really false; to see and give this is the mission of the art.)

Arrangement — which again means not merely sensuously beautiful arrangement, but one that recognizes the ever-living mission of painting to tell that Nature provides the experiences of the soul, and that the Superior World, the Inner Divine Meaning, is the inspiration and the Model of the other.

Transmission of classic models. (This Canon proves a long previous chain and inheritance of artistic tradition, the antetype of what we have left.)

The T'ang period, and indeed the whole of Chinese art and art-philosophy, finds its fullest expression and flower in three great artists, at the beginning of the Eighth century, Wu Tao-tseu, Wang Wei and Li Ssu-hsün, all contemporary, although the latter was born some fifty years the earlier. Li Ssu-hsün is much less essentially Chinese than the others, and his influence has been much less. Wang Wei was the founder of the Southern School, a creative artist of supreme ability, only surpassed by the almost incredible genius of Wu Tao-tseu; the latter stands by universal recognition not only of his countrymen of all periods since, but of the Japanese and Western critics as well, as being to Far Eastern art as Shakespeare to English drama, Dante to Italian literature. If I remember rightly, Fenollosa was inclined to call him the greatest artist of all time, ancient or modern, East or West. The influence of his study was so potent upon our already quoted Laurence Binyon that I must tell it here again, in the latter's own words.

Alas! of all the mighty works of Wu Tao-tzŭ none is known certainly to survive.\* Once, in a dream I myself beheld them all, but awoke with the memory of them faded in a confusion of gorgeous color, all except one, which remained with me, strangely distinct. A goddess-like form was standing between two pillars of the mountains, not less tall herself. I remember the beauty of the drawing of her hands, as their touch lingered on either summit; for her arms were extended, and between them, as her head bent forward, the deep mass of her hair was slowly slipping to her breast, half-hiding the one side of her face, which gazed downward. At her feet was a mist, hung above dim woods, and from human dwellings unseen the smoke rose faintly. The whole painting was of a rare translucent, glaucous tone. . . .

Wu Tao-tzŭ's fertility of imagination and his fiery swiftness of execution

\* Complete certainty is, in truth, not possible, so universal was the genius of successive artists painting all "in the style of the Master," and caring more for the work than to have their own name remembered—in the last word, the final mark of the true artist. The balance of opinion among connoisseurs does however accept a small number of existing paintings as due to Wu Tao-tseu's own brush. Three of these are shown herewith.



alike astounded his contemporaries. He is said to have painted over three hundred frescoes on the walls of temples alone. He was prodigal of various detail, but what chiefly impressed spectators was the overpowering reality of his creations. We cannot doubt that he possessed the T'ang ideal of the union of calligraphy with painting in an extraordinary degree. But though his calligraphic mastery was so wonderful, it was his imaginative realism and his tremendous powers of conception that made him supreme.

In the time of the T'angs, then, the deep-rooted philosophy of Nature, the ever-flowing robe and manifester of the inner divine worlds; the mysticism and conquering, shining intelligence of the Tao; the faith and devotion and divine compassion of Buddhism — all came to their full flower in a time of national vitality almost beyond comparison in known history. The Northern and Southern Schools took on their definite shape; these two schools were less geographical than elemental. The scenery of the south is the more mountainous and in itself much grander than the plains of the north; that a painter was of one or the other school was not a matter of his home or birth, but his style; and some indeed painted in either at will. So that the Northern School came to stand for fuller coloring, sterner and stronger compositions and sharper outline; the paintings were less mystical and airy. Mountain and nature greatness were there equally with the paintings of the South, but the greatness was closer, more immediately dominating; it was less grandiose and universal — less cosmic. These elements all appear in the work shown by Li Ssu-hsün, born in 651, and the founder of the School.

Of the paintings of Wang Wei quite a number have survived. In a Japanese temple is a painting at least in his style, said to have been brought over by Kobo-Daishi. The British Museum has a roll, seventeen feet long, dated in 1309, by Chao Mêng-fu, so in the style of Wang Wei as to give us the key to his technique. It is a continuous landscape, one scene melting into the next, just as Nature unrolls experiences for the soul which can see; and on the ground of the warm brown silk pass the half-clear, half-misty blues and greens which are Wang Wei's special introduction.

Another Chao Mêng-fu, which we show here, not less beautiful nor less illustrative of Wang Wei's character, was sent by the late Empress Dowager to M. Émile Guimet in acknowledgement of a special courtesy on the latter's part — returning to her some personally prized treasures looted from Peking, and later bought by him in Europe.

Wang Wei was an idealist; he has left us a treatise on perspective which shows itself to have been based on the closest observation of natural appearances, weather, and the shifting moods of nature. We have already seen how from the original historical principle of superposed planes and the panoramic rather than the single point of view, Eastern perspective from the very beginning was free from the geometric limitations of Greek traditions. To this Wang Wei developed and added tonality as the key and mark of distance, instead of artificially increasing smallness. In other words, the perspective is aerial, or atmospheric. It is just as true that objects in the distance grow more misty and softly defined, as it is that they appear to grow smaller. And the effect of this on the freedom given the artist is almost unlimited.

Wang Wei developed this method mainly by a mineral color of his own, known as *luo ts'ing*, whose shades go from malachite green to lapis-lazuli. As one comes toward the foreground the distant blues become through the layers of air the greens of the leaves and plants. And then by the addition of qualities which Chinese artists have ever cultivated as a prime element of technique, and which we may roughly describe as the variation from richness to mistiness or to clearness in the color as laid on, the whole gamut of depth and power lay under the artist's hand. It is due to the development of this, and also to the greater adaptability of the Eastern materials (that is, not only the pigments but the silk or paper grounds) that monochrome has gone so much further in the East than in the West. Tonality and not formality became the master power; and of Li-Long mien, who was to the later Sung period what Wu Tao-tseu was to the T'ang, we are told that he never painted in color save when copying earlier works.

As we look at the landscapes in which these qualities have been put by these master hands, the impression received is often so beautiful that it hurts; it appeals to the contemplative spirit; and yet it does this in moods of keenest, most poignant sensitiveness — never in sensuous self-submersion. The art rests more in the power of a hint to the imagination than in the satiety of completed forms. It brings us apparitions of beauty or power from the unknown; and it behooves us to be present. The suggestiveness and allusions are unparalleled, yet there is never any explicit factitious symbolism or allegory added in it. It inspires the one who looks, and neither narcotizes by sense touch, nor makes appeal to the curiosity.

We must remember that it is rhythm that holds the paramount place; not, be it observed, that *imitation* of nature which the general instinct of the Western races makes the root-concern of art. In this theory, every work of art is thought of as an incarnation of the genius of rhythm, manifesting the living spirit of things with a clearer beauty and intenser power than the gross impediments of complex matter allow to be transmitted to our senses in the visible world around us. A picture is conceived as a sort of apparition from a more real world of essential life. The object of art is not the outer representation, the seeming, but the informing spirit — we might say, the flaming pearl for which the mounting dragons rise.

Before passing on to Wu Tao-tseu and his influence on the later Sung period, we must note a piece of T'ang portrait painting, by Teng Châng-yeu of the Ninth century. Lu Tong-pin, the subject, was patriarch, master, legislator; he lived at the end of the Eighth century. In the first of these two portraits, that by Teng Châng-yeu, we see him in ordinary, personal human guise. Surely who could ask to go down to posterity showing more of dignity and grace than here! And then in the second painting, evidently derived from the former, and by an anonymous artist of the Fourteenth century, we see the legislator in his immortal form, less close and personal; more remote in himself, he seems to stand less a mover among men than a Helper of them at their need. That such was the artist's intent is shown by the long staff, the gourd holding the water of immortality, the magical fan hanging at his wrist. To the unseeing and unknowing these marks might pass telling nothing; the figure is a natural one.

As one looks at these two portraits one is moved to compare the Far Eastern ideal of constant life and action with that of the West. In the West we think that an ideal ceases to be such when it is put into realization; we even make an apothegm of that; but it is a heresy born of the thought of the desire-principle seeking for gratification, which ever dies and fails in the very moment of each successive attainment. But in the East the ideal *ever exists* behind; it comes out from Nature's heart only when we call it and put it into constant, flowing vital action, into very realization. Only the ideal *in practice* remains ever young, and when we cease to keep it in constant action, the background of what we do, it retires away to sleep; — not to final death, for it is in itself real, and only waits our call to life again.

In the same way, we seek in the West an objective completeness as

the goal in art; but in that very effort art eludes us; for it lies in the revelation and not in the objective completeness, and is ever flowing and passes on.

Of Wu Tao-tseu, the supreme T'ang master, we have already spoken. He was born just a few years after Wang Wei, about the year 700, near the capital Lo-Yang. Through all Chinese painting history we find recurring the calligraphic motive; purity and strength of line were held of first importance, and included stroke, value and fluidity of tone. All these qualities distinguish in a pre-eminent degree the work of the three great leaders, Ku K'ai-chih first, then Wu Tao-tseu in the T'ang, and lastly Li Long-mien in the Sung era. It was particularly striven for by all T'ang artists, and is again related to the strict recognition of the fact that a painting is by necessity on a flat surface, and so leaves to sculpture and architecture their own technique exclusively. Shadows and the "round" pertain to art in three dimensions, and the technique of their representation never is admitted to confuse the method here.

We must constantly remember that we have to do with a thoroughly conscious and *true* art; the more we study it we will find that its underlying philosophy is both living and deep, and that it is consistently and logically followed out. In the equilibrium of forces no misfitting directions are admitted; the composition grows as from a musical motif subject to all the special laws of the composition or method chosen for its expression. Indeed, a modern Italian critic, connoisseur of this art as much as of that of his native country, has called these unrolling landscapes, such as the Chao Mêng-fu we have shown, comparable to nothing so much as the sonatas of Beethoven.

Still another consequence of trueness to this calligraphic and plane surface technique, will be noted later in looking at a Twelfth-century painting by Ma Yüan. And to Wu Tao-tseu we will also return in coming to the specific Buddhist element, later.

As immediately following Ku K'ai-chih there came the Six Canons of Hsieh Ho, introducing the art of T'ang — so we have after Wu Tao-tseu the Injunctions of Kuo Hsi, to set the goal for Sung. Said he: "Penetrate the secrets of nature with wisdom; mark the differences between the evenings or mornings, and as they are in the four seasons: why in spring the mountains seem to smile, in summer to melt and blend with blues and greens, in autumn to be clear as a drop

of honey, and in winter wrap themselves in sleep. Cultivate a complete and universal spirit. Observe largely and comprehensively. Disengage the essential; *avoid* the trivial. Study airy phenomena, and the effects of gradual distance."

Of mountains Jao Tseu-jan also tells us, that they should have a breath and pulse as they were living beings, and not dead things. Seen in the light of this devotion, the pair of Spring and Summer landscapes here shown, by Wu Tao-tseu, take on a new meaning, and begin to give us the painter's message.

The great flower of Sung began with the middle of the Tenth century; the dynasty lasted from 960 to 1280. Of its capital, Hang-chao, Marco Polo tells us that it had 12,000 stone bridges; the lake inside the city was thirty miles in extent, with palaces at the use of citizens to give feasts or other entertainment; there were three hundred public hot baths. And so on, and on. The age had come to its crown; Sung art is built upon tones and the mastery of them; as its subjects were whatever is august and elemental, whether in peace or storm. Just as a touch of the types which painters and poets alike aim to express, we are told of the Eight Views of Hsiao and Hsiang:

The evening bell from a distant temple;  
 Sunset glow at a fishing village;  
 Fine weather after storm at a lonely mountain town;  
 Homeward bound boats off a distant coast;  
 The autumn moon over Lake Tung-t'ing;  
 Wild geese alighting on a sandy plain;  
 Night rain on the rivers Hsiao and Hsiang;  
 Evening snow on the hills.

As showing two masterpieces of this art, we will take first a painting by Mi Fu, of "Cloudy Mountains in Summer," and then a "Winter," by the great artist-emperor Huei Tsong. The Mi Fu is in the collection of the Marquis Kuroda, in Tokyo; by some critics it has been attributed to Kao Jan-hui, of the Yüan period in the Thirteenth century. If this be so, it only marks the wonderful vitality of the tradition.

Of the second painting, by the emperor, one must speak by association, and more fully. For in the West the suggestion of a picture, its appeal, is always to something personal to the beholder; an autumn picture makes us think of particular past autumns we remember; an evening bell, or the grace and sweetness of a flower, arouse our mem-

ories. If there are allegories, they are those we have previously associated with the subject — not what we recognize as the out-springing life. The mysticism, when we permit any, is whatever of mysticism (usually to be read mere dreaminess) there is in our own make-up, for the painting to arouse. We have a particular story in mind, and so paint a picture around it.

But in the East art seeks to interpret the life essence, the motion, the inspiration that lies within and behind the subject. In the West we try to paint as much as we can of the external forms; but in the East one tries to paint as little, that their very rhythm might pass untrammelled or bound, from line or airy depth to eye and soul. A Western painting suggests the experiences of the painter or the beholder, and we make it to do that — even the “Angelus” of Millet; but the Eastern painting reveals the experiences of nature, and it is made for that. If the Western is a mirror before the working eye or mind of man, the Eastern is an unbacked transparent lens of crystal set in a frame, through which to look into the working heart of Nature on the other side.

We spoke before of the calligraphic element. The beauty and sweep of line and stroke required for writing, is a constant element in painting; at times it is dominant, again sub-dominant, again evanescent and unseen; but its force and power is always there potentially.

In this connexion it is that we find the painter nearly always the litterateur, the poet. He is the one who, when writing the characters, causes that most marvelous of all artistic tools, the Chinese brush, to dance on the paper, so that the character which arises has attitude, a physiognomy, motion, life; a soul. And all these elements, put into the writing in intimate touch with a directing inspiration, speak again to every later looker or reader. There is nothing whatever like it or possible with western modes of writing. The Chinese character, like all hieroglyphic writing, speaks with its own soul directly to mind and soul. Each written word-character is in itself on the paper an organic thing, instead of a mere concourse of letters to which the meaning is attached. And when written by one master or another, it is in each instance a separate and speaking vital creation. It is designed, not just written.

You ask me whether this is not far-fetched; I answer that all Chinese litterateurs have and do actually apprehend and enjoy these qualities in every respect as fully as we apprehend the messages that

are sent by our artists into and out of our own poetry, pictures and music. And all three of those impulses and impressions, moreover, are combined both in Chinese writing and in Chinese painting. In this light let us look at this winter picture by the artist-emperor.

Another picture by the emperor is also worth including, since it represents his predecessor, Ming Huang, whose reign was the climax of the T'angs. We see him seated on a dais, instructing his son; later in his reign he wasted the shower of beauty that had descended upon the time with the coming of T'ai 't'song, of Hiuen Tsang and his Buddhist devotion and renunciation, of impulses from Greece, and Persia and India, of Tientai and Zen; it is told of him that he hung tiny golden bells on his favorite plants to frighten the birds that would harm them; that he would have his peonies watered by a fair maiden in rich attire, but the winter plum by a "pale, slender monk." There are many screens by Yeitoku in this country, both in the Boston Museum and in Mr. Freer's collection, of scenes of his court and its poetic revels under the presidency of the lovely and ill-fated Yang Kuei-fei. China has not always succeeded, any more than other nations; but the story only tells again how the painters who have been so great philosophers, have been her teachers and the keepers of her soul. Ming Huang reigned in the time of Wu Tao-tseu; and Chinese art tradition lived vital and effective another seven centuries; and may even now be only asleep.

One more landscape now from the Sung era, a "Villa and Pine Tree," by Ma Yüan of the Twelfth century, selected not only for its own beauty, but also as a hardly surpassable example of another phase of the art we are studying. It is the one already referred to in speaking of the constant trueness to type and motive, controlling every branch of the technique.

Contrast of light and shade is one of the great tests of mastery in every art. With us in the West it is developed by means of the shadows incidental to our methods of perspective and representation of the "round." It could not exist but for our admission of the sculptural element, the "three-dimensional," into our plane surface pictures. *Chiaroscuro*, our name for this quality, is thus tied to these conditions of shadow just as our form and distance is to monocular perspective; and this however much the master artist may draw on color combinations to help. The correspondence of *chiaroscuro* in Eastern art is a "light-dark" balance which does not derive at all from shadow, but

depends solely on the requirements of harmony and rhythm. When we remember that the art is always "a recognized representation on a flat surface"; the perspective aerial instead of geometric; the brush work always potentially at least calligraphic — bearing the rhythm of life and form in the stroke instead of the rounded flesh; as well as the great evolution of monochrome as a result of the attained fluidity or richness of the flat color — even brush-used ink, a thing hardly attempted in the West:— remembering all this, with many other harmonic qualities sought in Eastern composition, we will see the necessity for using a different term. This Fenollosa recognized, and so has given us the Japanese term *notan*. And so with this preface, we will let him also describe for us Ma Yüan's original in a way the photographic reproduction cannot possibly do.

Ma Yuan loved to paint the beautiful villas that surrounded the western lake, or were set like gems into the valleys that ran back into the mountains. A one-storey pavilion, open at the sides, but screenable by roll-up bamboo curtains, and edged with an irregular stone facing that dips into the waters of a river or lake. Behind a finely carved railing sits a Chinese gentleman with a round-bodied lute in his hand. We can trace the tiled floor and the solid cylindrical columns of the pavilion far back through the opening. There are beautiful tones of soft mauve and yellow in the hanging decorations. The roofs are beautifully tiled and are without that Tartar exaggeration in curve which modern Chinese drawing gives. Water-worn rocks painted in fine crisp outline, not unlike those of the Li-long-min landscape, edge the pond. Graceful sprays of bamboo cut springing curves across the roof-lines, and soft trees, of the oak or beech order, are spotted out into the mist at the back.

But the finest thing in the picture, and the most salient, is the large green pine tree — greens and soft browns — that rises from the foreground and springs high up in the air over the roofs, with the spirally resisting and tapering force of a rocket. Here individual pine needles are drawn, but so softly that you can hardly see them without a special focus. The counterpoint of the crossing pine and bamboo lines is magnificent; we cannot help recalling the Sung gentleman's idea of manliness, "firm as a pine, yet pliant as a willow." Here both trees, while contrasting, partake each of the quality of the other. The bamboo, like a great lady, has a gentler quality that will be found stronger when it comes to emergencies. The pine, though tough in fiber, as beseems a statesman's ability, has a perfect grace of finish in accordance with lovely manners.

These now bring our list of landscapes to an end for the evening, save one later to show the change and loss of power as the period came to its end under the Mongols in the Thirteenth century. Very many others might have been drawn upon as models of poetry, and grace,



and the love of nature and flowers and birds: of a singing tone of beauty in everything that lives. Such might have been a landscape by Hsia Kuei, of the Thirteenth century —

Where my pathway came to an end  
By the rising waters covered,  
I sat me down to watch the shapes  
In the mist that over it hovered.

Again we might lie awake with Wang An-shih, when —

It is midnight; all is silent in the house; the water-clock has stopped. But I am unable to sleep because of the beauty of the trembling shapes of the spring flowers, thrown by the moon on the blind.

That is not Shelley's arrowy odors darting through the brain; it is far removed from the narcotic glutting of sorrow

On the rainbow of the salt sand-wave,  
Or on the wealth of globéd peonies.

We might find indeed

Daffodils

That come before the swallow dares, and take  
The winds of March with beauty;

such indeed we will surely find, but not the sensuous delight conveyed in the lines that tell of

violets dim,  
But sweeter than the lids of Juno's eyes  
Or Cytherea's breath.

There we hear the Greek note, the personal element of human form worship.

Yet this does not mean that the Chinese painter could not or did not paint the human form with refinement and a mastery of conception and expression equal to anything the West has to show. We have already seen two examples of this in the portraits of Lu Tong-pin; we will close our study of the Sung era by four others, whose exquisite humanity and dignity and sweetness would be hard to equal, much less surpass.

With our Western humanistic methods and tendencies, these pictures speak to us much more directly than the landscapes, to whose principles and philosophy we are so little used. Li Long-mien was to Sung what Wu Tao-tseu was to T'ang: an inheritor of the latter's

tradition, he was a supreme master of line, and of this portrait by him of the Great Yuima one feels like saying once and for all that it is perhaps the greatest portrait ever painted by any artist. Criticise it one cannot. The Chinese artist is above all an impressionist. In the painting of living beings he demands first movement; just as in landscapes, space. If the persons in a picture are in repose, the sweep of their garments, the folds themselves indicate that the wearers are ready for action; that they have but just come to a rest; that they are about to move off. It is told of one painter that he never posed a subject for a picture; if a young girl, he caused her to dance. And towards this effect every line of drapery and surrounding rock will conspire, either by force of repetition or of contrast. The hermit sage in contemplation in a mountain retreat; the warrior in action; birds that are winged creatures rejoicing in their flight; flowers that are sensitive blossoms unfolding on pliant up-growing stems; the tiger, an embodied force, boundless in capacity for spring and fury: each is a force which in one mood or another nature loves.

And of Li Long-mien it was said that he had penetrated the heart of Nature, and his soul put itself in communion with all things, while his spirit comprehended the mysteries and all the ruses of the goddess.

The "Children at Play," by Su Han-chên, and the two paintings of "Ladies in a Palace," by Lin Sung-nein, both of the Thirteenth century, need no artistic criticism to tell their stories. The young girls, so evidently "discussing clothes," the child at play in the water tub, and the sweet and self-reliant womanliness of the guardian of the home — the nation's shrine — are all inimitably perfect.

Our subject for the evening draws to a close with the consideration of one other great element which has from the first been one of the mighty enlivening forces, which came in truth not to supplant but to enlarge and restore — Buddhism. And again we must compare the influences of the East and West.

Into the art of the West, founded on Greek beauty of form and rationalistic science, came at one critical period the limiting monocular, personal view-point. This was centered and fixed in religious matters by the personal salvation motive, special creation, fear of what is to come and death, and the separation of the soul of man from that of Nature. The future destiny of Europe was settled in the Third to the Sixth centuries of the Christian era. And finally it was clinched

by the purely external and formal development of so-called science in the latter days.

But no such qualities ever entered Chinese art or life. Into the ancient world, which dated back for its previous inspirations to the era of the Upanishads, and is represented in Chinese art by the whole cycle of paintings of philosophers enjoying nature, of which we have seen many illustrations this evening, and also by its oldest poetry, came the great religion of the East, itself a true restoration of the inner essence of the Upanishad philosophy of ages gone before, peopling the vastnesses of nature, already conceived of as living and flowing patterns to men of concord, action and rhythm, with beneficent protectors and lovers of the race; not specially created angels living in a far off point in space, but watchful spirits of Nature seeking to protect and guide, or else men themselves who had suffered and learned in the great task, and passed on, not to a personal selfish salvation but to the very renunciation of that, in order to become guides and helpers, or guardian stones in the wall to protect mankind from other forces that had also grown up to his hurt during the ages past.

Four or five paintings only are all we can show, within our time. Two of these are paintings of the symbol of divine Compassion, the abstraction of Love and Mercy, Avalokitesvara in India and Tibet, who about the Twelfth century becomes the feminine Kwan-yin. In this great figure personality is itself impersonal, and the divine union of justice and protection, of heart and mind, becomes symbolized by the blending sex, so that one cannot say in many pictures whether the figure is masculine or feminine. Though ultimately it becomes that sweetest and kindest of all the mother-goddesses of the world's races, the Chinese Kwan-yin — Kwannon, as usually called. The reproductions give the faintest idea of the originals, and we must again, as before, allow another to describe them — this time Ernest Fenollosa. Of the earlier Yen Li-pen, painted in the Seventh century, he says:

Rough rock of blue, green and gold, in a cave whose stalactites hang above the head. The Bodhisattva of Providence, it wears as in most T'ang, a slight mustache. The flesh of gold, the headdress an elaborate tiara of gems and flowers. The whole body enshrouded in an elaborate lace veil, from the tiara, in thin tones of cream over the heavy colors. An aspiring of the lines to the tip of the head. A crystal vase on a jutting slab of rock. Two halos, head, and body. In water at feet corals and lotus buds. A small Chinese child, hands raised up in prayer, to whom the glance bends graciously. Colors rich reds, carmines, orange, greens and blues, heightened with touches of gold.

And he thus describes the standing figure, dating from the Sung period for its actual painting, but going back to a Wu Tao-tseu original:

Standing, lace veil, descending from heaven in cloudlike mass that breaks into foam of water as it pierces space. A cloud curtain at the top. Below two boys playing on a bright cloud, trying to plant fresh lotus flowers in vases. Rolling from the right a sinister dark green cloud, stopped at the figure's feet. In the hand a wicker basket and a fish, a *tai*, symbol of spiritual sustenance. Colors less opulent than the other; strong red, blue and green on the boys. Kwan-Yin drapery subdued tones of these, tending to olives; fine patterning, and no gold anywhere.

One more Buddhist painting, showing this peopling of the realms of spiritual nature, bringing with it in technique some of that Greco-Buddhist influence which first came in with the T'angs and T'ai Tsong, and also is an example of that wonderful, brief century when Korean art rose to heights of grace and refinement that for a time placed it on the heights above even China and Japan, is this painting of a flying Angel from the frescoes of the Horiuji Temple in Japan. According to Fenollosa's judgment, which must here stand unquestioned, it was painted at the time of the rebuilding of that temple after the great fire of the year 680. It thus brings us through another channel the overshadowing wave which we have already seen to climax at Lo-Yang with Wu Tao-tseu and his contemporaries. It takes us back by another road to Ku K'ai-chih and Hsieh Ho, and shows the tradition passing in the two centuries after their time north to Korea, then to Japan; only to germinate and in due time re-flower in its own home, a guerdon to the faith and perseverance of the messenger Hiuen Tsang.

And now the fourth, the Gautama Śâkyamuni, by Wu Tao-tseu, in the Freer collection. There is another similar painting in the Tofukuji collection; the Freer copy Fenollosa must again describe to us — for our benefit, and as the reward of his own lifelong devotion:

Robe quiet smoldering red, in the gleaming orange portions heightened into gold. The extraordinary power lies in the line, the most spiky, splintery, modulating and solid of all the Wu Tao-tseu pieces. The solid masses of the head, aided by the rich *notan* of the colors, make it and the shoulders and the hands rise up like great cliffs of mountains. There is something elemental and ultimate; all that is small in one actually shrivels before the direct spiritual power as one faces it.

Our time for more is wanting. Under the Mongol or Yüan period, we can only show a single landscape, a pair of panels showing a "Sage in a Forest," enjoying Nature. It is an inheritor of the Northern School, with naught of the cosmic nor the airy and misty distances of nature. Strength of hand skill is left, but preciousity and over-refinement, the other side of the luxury and self-enjoyment then the mark of life at the capital. This is no poet-philosopher who could not bend his back for a salary — and was the more honored therefor by the ruler he refused; the inner essence has left the form, and the gods no longer are heard, however they may watch and wait afar for the time again.

Yet even so, pictures of this order are not all that we find. Many still kept much of the former purity and strength, and we even find it living in many pieces down to the present day. If the power of composition, the philosophy of Nature, and the Tao, were less understood, still in flowers *per se* we find its tradition preserved. The symbolism of plants as mirroring a living nature has stayed on, and its inspiration is a constant one. A "Bamboo" by Yüan Yang of the Fourteenth century, and a "Plum Branch in Flower, moved by the Breeze," by Lu Fu of the Fifteenth, are as flowers (all plants are flowers to the East) worthy of their art. It was in the Sung age that, we are told, plum branches were for the first time painted in ink, without color, though at times a very subdued color was added. One writer, Chinese, tells us that all the universe is contained in the blossoming plum branch, the emblem of virginity. And so the sensuous appeal of color grew to be left out. How far this flower worship went into the art and life of Japan, and how its Science came in to save the nation at a time when an over-accentuation of feudalism threatened the nation's balance, has been told elsewhere; but how fully all these beauties entered and sanctified the home-life of China is still almost unknown — outside of her own borders.

These two flower pictures, the first of the Yüan and the second of the Ming, must close our Chinese paintings for the evening, save for one single example by Wu Wei, taking us back by its masterly composition and tonality almost to the golden days of his predecessors. This "Fairy and Phoenix," of the Fifteenth century, and so well into the time of the Mings, is part of the Morrison collection in the British Museum. It is almost a monochrome, with just a tone of color.

Our evening among the Chinese paintings has come to an end, and

we must cease with one last example of a very different type, from a different nation indeed, and yet springing from the same vivifying influence of Buddhism which has been so great a part of all Chinese life — that religion whose spread was not by the sword, nor its sanction claimed for war or violence. The relations of China with Tibet have always been peculiarly close, and this painting of the life-scenes of the Buddha, reproducing the stories of the Lalita Vistara and the chapters of the Tibetan Kanjur, is (as told by its inscriptions) a shrine piece of a Tibetan monastery, and dates from about the Seventeenth century. It was later sent to Peking as a present, and from there reached Europe some years ago; whence it became part of one of the Point Loma collections. The whole of the work is miniature, the faces full of expression are smaller than the little finger-nail; and the colors a combination of tones and brilliancy that never wearies.

Of all this Chinese art and its influence on the life of the nation, — of its poet-philosophers, at once painters and teachers and statesmen, we must form this conclusion; they can certainly be judged by no less standard, for as with all great characters and Teachers of life, it is the standard they mark up to:

Social and human evolution is a complex of forces, and those forces are introduced from time to time into human affairs by the medium of individuals. The inspiration of these so introduced forces is to be judged by their permanence and their efficaciousness. And it is essential to their character of grandness and reality that they shall transcend the occasional and the immediate, and that their formative, directive and protective social influence shall grow with time. If they are great, they cannot and will not be understood at their birth. If they are comprehensible and acclaimed as panaceas in the time of confusion wherein they have been planted, rest assured that their temporary and evanescent character is at once betrayed. This has been true in all the ages of human evolution; and it also has its application today.



The enlargement of knowledge consists in a most minute acquaintance with the nature of things around us. A thorough acquaintance with the nature of things, renders knowledge deep and consummate; from hence proceed just ideas and desires; erroneous ideas once corrected, the affections of the soul move in a right direction; the passions thus rectified, the mind naturally obeys reason; and the empire of reason restored in the soul, domestic order follows of course; hence flows order throughout the whole province; and one province rightly governed, may be a model for the whole empire. From the Son of Heaven to the common people, one rule applies, that self-government is the root of all virtue.—*T'ai-Hio*.

## ANCIENT ASTRONOMY IN EGYPT, AND ITS SIGNIFICANCE:\* by Prof. F. J. Dick, M. Inst. C. E. (School of Antiquity)

Could we go back into the prehistoric times we should note that with successive ages came a gradual decline in spiritual knowledge as civilization succeeded civilization. But a turning point has been reached; men and women are again awakening to a knowledge of themselves and their possibilities, and are gradually moving on to a time when the ancient knowledge will be revived and become once more the possession of humanity.—*Katherine Tingley*



THE truthfulness of Herodotus having been so often vindicated within the last few decades, our respect for the accessible literature of antiquity ought surely in consequence to have been augmented. Meanwhile, the attempted generalizations of science regarding the antiquity of human culture and scientific knowledge are too often based upon disproportionate acquaintance with facts.

Now the subject of ancient astronomy brings us at once face to face with the enormous antiquity of at least one branch of highly specialized and scientific knowledge possessed by our archaic progenitors, thus enforcing the suggestion that a wide acquaintance with ancient sources of information ought to form a prerequisite to the inditing of treatises on the antiquity of highly civilized man. Remote vistas of aeons of civilization might thus escape being ignored.

For example, we find Iamblichus writing:

The Assyrians have not only preserved the memorials of seven and twenty myriads (27,000) of years, as Hipparchus says they have, but likewise of the whole planetary sidereal periods and periods of the seven rulers of the world.<sup>1</sup>

Well, 270,000 years is a fairly long time for astronomical records to have been kept, even though not entirely those of Assyrian astronomers. Might we not inquire: How long ought it to take the Bushmen of Australia (the degenerate remnants of a pre-Atlantean age) to “evolve” to a point enabling them not only to make, but also to preserve, exact astronomical observations for 270,000 years — including, mind you, the sidereal periods of the planets? Thousands, or millions of years? The Hindûs are said, on pretty good authority, to have had the complete records of thirty-three precessional circuits, this amounting to over 850,000 years. What kind of arboreal beings were they who could even begin such a record, to say nothing of maintaining it? The French astronomer Bailly proved that by applying their

1. Proclus, on Plato's *Timæus*, Bk. I.

\* The fourteenth lecture of the University Extension course for the season of 1915-1916, given in Isis Theater, San Diego, under the auspices of the School of Antiquity.

ancient methods to an interval of over 4383 years subsequent to a recorded eclipse 5018 years ago, the resulting place of the Moon differed by less than one minute of arc from that found by the modern tables of Cassini.<sup>2</sup>

If we must seek for untutored savages, need we look back for thousands of years? When Pythagoras spent twenty-two years of his life among the temple-teachers of Egypt, who taught the heliocentric system and perhaps more about astronomy than modern astronomy dreams of, could he have anticipated that, two thousand years later, human beings were to be imprisoned, tortured, burned or put to death in the name of religion, for merely believing the Earth turned on its axis and revolved around the Sun?

Atlantis, so-called, was the whole — and yet a very different — Earth, in the days of the Fourth Root-Race, whose great final teacher of astronomy was known as Asura-Maya. It is stated in *The Secret Doctrine* that:

The chronology and computations of the ancient initiates are based upon the Zodiacal records of India, and the works of Asura-Maya. The Atlantean Zodiacal records cannot err, as they were compiled under the guidance of those who first taught astronomy, among other things, to mankind.<sup>3</sup>

In the Purânas, Romakapura (in Atlantis) is given as the birth-place of Asura-Maya, fragments of whose works are said to be still extant. The *Sûrya-Siddhânta* represents a more or less correct fragment of ancient knowledge. One notes, however, that among various other *Siddhântas*, the *Romaka-Siddhânta* is supposed to be lost, like countless thousands of other priceless archaic treatises.<sup>4</sup>

Taking only the surface meaning of some of the numerous figures given in the *Sûrya-Siddhânta*, the number of sidereal lunar months per sidereal year would be 13.3688, the same as modern astronomy teaches, to the fourth decimal place; while as for Mars, its sidereal year would be 1.8808 times that of the Earth, again as with the moderns. When examined more carefully, with reference to the movement of a star called Revatî, many results of great interest follow, which have not, so far as known, been investigated by modern astronomers.

2. *Traité de l'Astronomie Indienne et Orientale*: Paris, 1787

Nevertheless, Bailly, Dupuis and others, relying on the purposely mutilated accounts of Hindû chronology, brought from India by certain too zealous and as unscrupulous missionaries, built up fantastic theories upon ancient chronology.

3. Vol. II, 49.

4. *Sûrya-Siddhânta*, Burgess, 277: New Haven, 1860.



For instance, the vernal equinox, with a mean regression of fifty seconds of arc in longitude annually, took 24,000 years to return to Revatî, with its four seconds of direct annual motion — which is deduced from widely separated data, covering a period of about 25,000 years. Thus there would be eighteen such circuits in 432,000 years (four apsidal revolutions of the Earth<sup>5</sup>), which is a particular measure of time considered by some to have had a newly commencing epoch at the time of the departure of Krishna, 5018 years ago, when the *Bhagavad-Gîtâ* was written. By the way, that book contains eighteen chapters. Strange to say, the star Revatî seems to have disappeared, although Revatî was also the name of the twenty-seventh lunar mansion.

The prior source of ancient Egypt's knowledge of astronomy was undoubtedly India. In Kullûka-Bhatta's *History of India*, it is stated that:

Under the reign of Viśvâmitra, first king of the dynasty of Soma-Vanga, in consequence of a battle which lasted five days, Manu-Vina, heir of the ancient kings, being abandoned by the Brâhmans, emigrated with all his companions, passing through Ârya, and the countries of Barria, till he came to the shores of Masra.

H. P. Blavatsky adds:

Unquestionably this Manu-Vina and Mena, the first Egyptian king, are identical.

Ârya, is Eran (Persia); Barria, is Arabia; and Masra, was the name of Cairo, which to this day is called *Masr*, Musr and Misro. Phœnician history names Maser as one of the ancestors of Hermes.<sup>6</sup>

The Ethiopians — old as were the Egyptians in arts and sciences — claimed priority of antiquity and learning. We can understand, then, how the Egyptian priests came to possess the Zodiacs of Asura-Maya, and how it came to pass that the original Dendera zodiac was painted on a ceiling of the former temple there, over 75,000 years ago; while, as Volney points out, in his *Ruins of Empires*, the Hellenic zodiac could not have been more than 15,000 years old.

Pomponius Mela wrote that the Egyptians preserved in written records the memory of the fact that the stars had completed four revolutions, or more than 100,000 years, during their history.<sup>7</sup> Pliny wrote that Epigenes assigned 720,000 years to the astronomical ob-

5. *General Astronomy*, Young, 138: New York, 1904.

6. *Isis Unveiled*, H. P. Blavatsky, Vol. I, 627.

7. *Ancient Fragments*, Cory: London, 1832.

servations of the Chaldaeans.<sup>8</sup> Again, the word “king” sometimes meant a whole race. Thus Polyhistor said that Berosus (whose works are believed to have dealt with a period of 200,000 years) referred to a certain historic period consisting of 120 sari, one saros being 1600 years; and Abydenus wrote of a first “king” who reigned for ten sari, equivalent to 36,000 years.<sup>9</sup>

One of the most successful attempts to unravel the mystery and meaning of the Great Pyramid was the couple of volumes written by Marsham Adams, published a few years ago, entitled *The Book of the Master*, and *The House of the Hidden Places*. These have been admitted to be a solution along important lines, tracing, as they do, a connexion between the ritual of the ancient Egyptian work entitled *The Coming Forth by Day* (generally now known as *The Book of the Dead*), and the interior design of the colossal edifice. Thirty years, however, before these two volumes saw the light, H. P. Blavatsky wrote:

Herodotus did not tell all, although he knew that the *real* purpose of the pyramid was very different from that which he assigns to it. Were it not for his religious scruples, he might have added that, externally [that is, physically] it symbolized the creative principle of nature, and illustrated also the principles of geometry, mathematics, astrology and astronomy. Internally, it was a majestic fane, in whose somber recesses were performed the Mysteries, and whose walls had often witnessed the initiation-scenes of members of the royal family.<sup>10</sup>

H. P. Blavatsky said it is impossible to fix the date of the pyramids by any of the rules of modern science.

Consequently, the attempt is perhaps natural to endeavor to fix the date of the Great Pyramid, to begin with, by discarding some of the hitherto accepted rules of modern science, including even the theory of the law — or the law of the theory — of gravitation; which, however, is already being questioned by many of the keenest scientific minds.

There would not be time to give even the briefest résumé of recent theories of matter, electrons, magnetons, ether and gravitation, or of the investigations regarding the latter of Professors Lodge, Jaumann, Crookes, Lorentz, Maxwell, Naumann, See, Seeliger, Le Sage, Kelvin, Föppl, Bjerknes, Larmor, Schuster, Schott, Messers. Emile Belot, Bachelet, Singer, Berens, and others. One or two points, however, must be noted, as introductory to what follows.

8. *Hist. Nat.*, lib. vii, c. 56. 9. *Anc. Frag.*, Cory. 10. *Isis Unveiled*, Vol. I, 519.

Professor Young, in *A Textbook of General Astronomy*, says, "The agreement," (with Newton's famous calculation regarding the Moon) "does not establish the theory, . . . because the forces might really differ as much in their nature as an electrical attraction and a magnetic."<sup>11</sup>

What is, or rather let us ask, what was the theory of the law of gravitation? That every particle in the whole universe attracts every other particle with a force varying directly as the masses, and inversely as the square of the distance. In *The Secret Doctrine*, H. P. Blavatsky turned her salvos of good-humored raillery on this, pointing out that even Newton himself, in his famous letter to Bentley, showed that he believed in nothing of the kind. And as Science now freely confesses that it neither knows what a "particle" is, nor even what "mass" is — except that the latter seems to be an implicit function of velocity — perhaps the raillery was justified.

Meantime, the prevailing phenomenon in the laboratories is one of emanation, or repulsion; and when attraction is observed, cohesive, electric, etc., it simply defies gravitational theory.

Sir Oliver Lodge, after telling us that we do not know what an electron is, goes on to say that the attraction or repulsion between two of them is One Thousand Millions of Millions times what the "gravitational force" ought to be!<sup>12</sup>

Does not a platinum crucible weigh less when warm, than when cold? Does not the newly invented theory of Isostasy suggest a serious defect in gravitational theory? Do not the phenomena of the occasional levitation of physical objects and even human beings, attested by some well-known scientists, point to the same conclusion?

Sir William Crookes, after repeating the famous Cavendish experiment, under crucial conditions, reported:

I have not been able to get distinct evidence of an independent force (not being in the nature of light or heat) urging the ball and mass together.

A key to the whole subject was suggested by H. P. Blavatsky nearly forty years ago, and a little attentive study shows it to be a more thoroughly scientific presentation of the question than can be discovered in anything since written, especially when read in relation to much else on the same and closely connected topics from her pen. Her words were:

11. Page 279.

12. *Harper's Magazine*, April, 1913.

The Earth is a magnet, charged with one form of electricity, say positive, which it evolves continually by spontaneous action in the interior, or center of motion. Organic or inorganic bodies, if left to themselves, will constantly and involuntarily charge themselves with and evolve the form of electricity opposite to the Earth's. Hence attraction.<sup>13</sup>

Here the words "magnet" and "form of electricity" obviously connote meanings as yet unfamiliar. But many gaps in the phenomena of radiation, etc., remain uninvestigated. Magnetism, as known through effects in steel, etc., may be found to be merely a specialized effect — like polarized light in a crystal, and other potent forms of real magnetism may be discovered — that is, isolated — including terrestrial attraction coming from the interior, and not from surface rocks. Evidently this attraction (which we call weight) may be found capable of increase or diminution, the "quantity of matter" remaining unaffected.

Putting interplanetary influences aside for the moment, the bearing of all this upon Ancient Astronomy is, that that the *historic* movements of the Earth, including certain peculiar graduated, and yet at times variable, inversions of the celestial poles, which by no means conform to current theory, can be better represented to our minds, and in the more or less empirical expressions of what we term celestial mechanics, as the result of an interplay between invisible solar emanations of a particular order, and what we may call the Earth's "electro-magnetic" emanations, always combined with the effects of gyroscopic action. The mystery of rotation itself is involved. But one cannot go into further detail at present, except to observe that one difficulty, which must sooner or later be recognized, is the actual *ontological* character of the invisible forces in operation. This reminds us of what M. Belot wrote, not long ago, in the *Revue Scientifique*,<sup>14</sup> as follows:

The universe had once [and why not now?] like every living organism, its arteries carrying material and movement to all the stars in formation, *like the blood in living organisms*; these arteries were the whirlwinds of cosmic materials, analogous to the filamentary nebulae of the Pleiades, binding between them the stars, the nuclei of the planets to those of their suns, etc., etc.

In 1889, H. P. Blavatsky said:

The Sun has but one distinct function: it gives the impulse of life to all that

13. *Isis Unveiled*, Vol. I, 23.

14. March 21, 1914.

lives and breathes under its light. The Sun is the throbbing heart of the system; each throb being *an impulse*. But this heart is invisible; no astronomer will ever see it. That which is concealed in this heart and that which we feel and see, its apparent flame and fire, to use a simile, are *the nerves governing the muscles of the solar system*, and nerves, moreover, outside of the body. The impulse is not mechanical, but a purely spiritual, nervous impulse.<sup>15</sup>

Movements, however complex, which when mentally isolated from noumenal causes, seem at first to obey merely mechanical laws, like an automobile round a race-track, nevertheless require Mechanics to control them. Current theory, in essence rather kinematic than truly dynamic, serves well enough for the preparation of the *Nautical Almanac*, when corrected as it is every year or two from actual observation, in order to find out where things really are. Density may be modified in meaning, seeing that in truth we know little about it. Similarly regarding the constants called "mass," as applied to planets, etc. Astronomical mathematics must have same tools to work with, even if they be what Huxley, and probably the author of *Science and Hypothesis*, Henri Poincaré, would have called "representative fictions."

According to current theory, tidal friction ought to result in an *increase* of obliquity to the ecliptic, whereas the facts are precisely opposite. Tidal friction, as a retarding force, has in consequence been sometimes denied; but this appears unreasonable. May not the forces actually at work be more potent than tidal friction? Again, perturbations are facts, and so Neptune was in our time rediscovered. But theory failed to discover its distance from the Sun, which turned out to be very different from that which Adams and Leverrier had imagined.

Now what are the facts, regarding the gradual inversion of the Poles? Primarily, that it is attested by the whole of antiquity. Thus the Egyptians informed Herodotus that the Poles of the Earth and of the Ecliptic had formerly coincided, and that even since their first Zodiacal records were commenced, the Poles had been three times within the plane of the Ecliptic, as the initiates taught.<sup>16</sup>

The *Book of Enoch*, a résumé of the history of the third, fourth and part of the fifth root-races, was held by Origen and Clement of Alexandria in the highest esteem. It is quoted copiously in the *Pistis Sophia*, a Gnostic fragment preserved in Coptic; it is also quoted in

15. *Transactions Blavatsky Lodge*, Vol. II, 24-5. 16. *The Secret Doctrine*, II, 368.

the *Zohar* and its most ancient Midrashim. And it makes reference to the Earth's axis having become greatly inclined at one time. And so on, in Sanskrit, Greek and Latin literature.

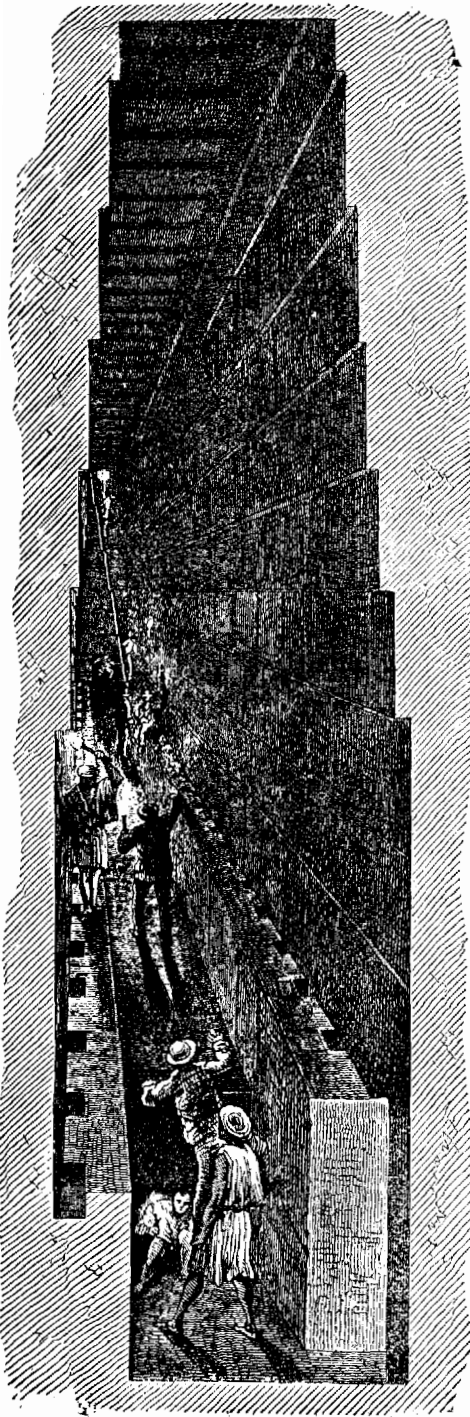
The text-books give an observation of the obliquity of the ecliptic made in China 3000 years ago. It was  $23^{\circ}54'$ . If we use the formula published in the *Nautical Almanac*, it should only have been  $23^{\circ}41'$ . But according to the general law indicated by the esoteric philosophy, namely, a change of four degrees per great precessional circuit, it should have been  $23^{\circ}54'$ , exactly as observed.

The meaning is, that the celestial pole, instead of describing a uniform circle in 26,000 years around the pole of the Earth's orbital plane at a mean distance of about  $23\frac{1}{2}$  degrees from it, actually describes a spiral, ending, after one complete revolution, four degrees nearer the ecliptic pole than at the start of the circuit.

This simple and unrecognized phenomena of the gradual inversion of the poles was well known to the ancients, as has already been indicated. It throws a vivid light on some of the methods adopted by the ancients for recording world-history. Although much in their zodiacs and symbolism still awaits our unraveling, a great deal in this direction has already been outlined by H. P. Blavatsky. It happened, too, that in the early years of the last century a man who, like Jakob Böhme, was a self-taught shoemaker, and who lived in Norwich, England, gained an insight into this law in a way perhaps difficult for us to understand — or it would be, were Reincarnation not another of the mysterious facts in nature. He may also have been a conscious or unconscious pupil of some teachers who were in Europe a century ago or more. And notwithstanding a number of errors, which a study of *The Secret Doctrine* tends to correct, Mackey's *Key of Urania*, published in 1820, is a most interesting little work on ancient astronomy, and a number of important passages are repeated with approval by H. P. Blavatsky.

A simple calculation shows that the equinoctial must have been perpendicular to the ecliptic somewhat over 430,000 years ago. For a considerable period before and after that epoch the climatic conditions in all parts not reasonably near the equator must have been violent in their severity. Many racial changes of habitat must have been going on for a long time.

A solitary instance may serve to illustrate the possibility that exists of interpreting certain ancient symbols and mythologies, when we



HALL OF THE ORBIT

we have succeeded in freeing our minds from the preconception that "prehistoric" humanity knew little of importance.

In the sixth book of Ovid's *Metamorphoses*, it says that Lycia had the Chimaera there, when the violent sun scorched the country. In the *Iliad* and elsewhere we read that Bellerophon, on Pegasus, conquered the Chimaera at the command of Iobates, king of Lycia. Now the Chimaera, modeled in bronze by the Etruscans,<sup>17</sup> consists of a lion with a dragon's tail, and with a goat's head growing out of the lion's back. The dragon's tail, in such a combination, means the south pole's position among the stars; which, as it here belongs to the lion, means that the constellation Leo was at that time at the south pole. The vomiting of fire by the monster alludes to the scorching heat of the summer sun in Capricorn, the goat. The winged Pegasus may be poetically emblematic of a ship; and Bellerophon, according to Pluche, is wholesome food. Under the then prevailing conditions the winter sun was invisible in Lycia for two months or more, and this marshy and mountain-encircled country must have been inundated with melted snow in spring, after which the sun shone without break in summer for a

17. See *THE THEOSOPHICAL PATH*, November 1915, for illustration.

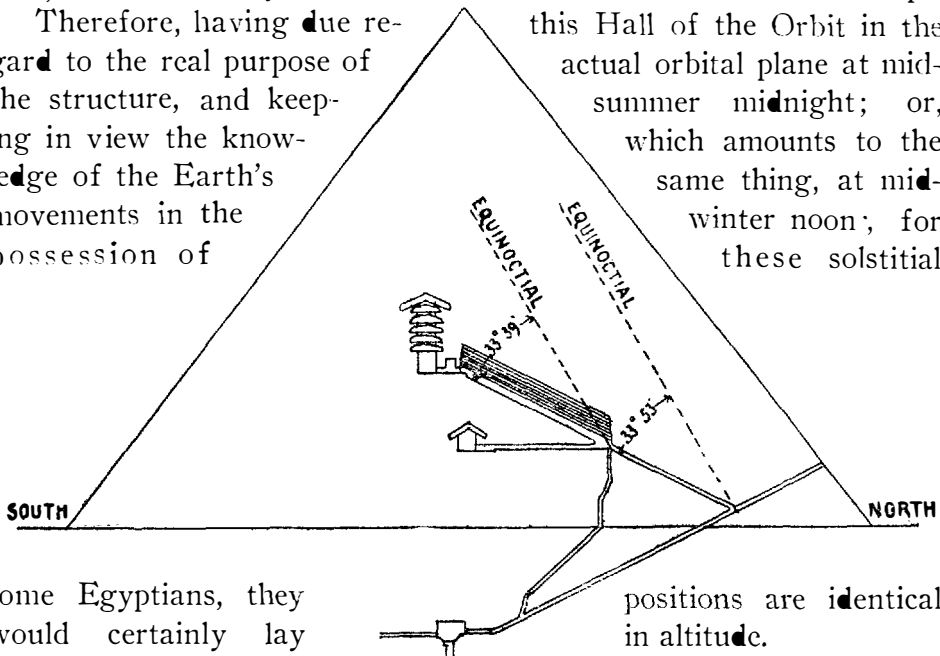
like interval. Lycia, which had no river, is in about 40° north latitude. The inhabitants of Lycia, then, at a remote period, were in their distress succored by a ruler of the time. Thus we have disguised history embodying a means for approximately determining the date.

This instance was selected because the Etruscan figure happened to be convenient at the moment. The interpretation is Mackey's. But *The Secret Doctrine* is a mine of information upon sidereal and cosmic glyphs. Moreover the wanderings of Latona, with which the foregoing episode is connected, are shown therein to symbolize events in early race migrations and history.<sup>18</sup>

Following the keys afforded us by Marsham Adams, we find that what is commonly entitled "the grand gallery" of the Great Pyramid was in ancient times known to some as the Hall of the Orbit. That it actually represented the Earth's orbital plane should be evident to the most casual observer, with the orbits of the seven planets indicated on the walls, the thirty-six decans of the Zodiac indicated on the roof, and the twenty-seven lunar mansions indicated on the ramps.

Therefore, having due regard to the real purpose of the structure, and keeping in view the knowledge of the Earth's movements in the possession of

this Hall of the Orbit in the actual orbital plane at mid-summer midnight; or, which amounts to the same thing, at mid-winter noon; for these solstitial



some Egyptians, they would certainly lay

positions are identical in altitude.

The ascending passage to the Hall of the Orbit is inclined to the horizon at 26°7', while the Hall of the Orbit is at 26°21'. It is probable, for reasons which cannot now be entered upon, that the latitude of the axis of the Great Pyramid was then precisely 30°, which is one and a third minutes of arc only, more than is now the case.



It would follow that at the date when the Great Pyramid was originally projected or commenced, the obliquity of the ecliptic was  $33^{\circ}53'$ , while at about the time of the completion of the work, the obliquity had diminished to  $33^{\circ}39'$ , corresponding to an interval of about 1500 years. The granite blocks for the upper chamber were probably dressed long before being put in place.

W. M. Flinders Petrie, in *The Pyramids and Temples of Gizeh*, notes that the construction-work of the descending and ascending passages was fully on a par with the wonderful accuracy of the masons who cut the granite blocks, including those for the upper chamber; and that the subsequent builders' work at the higher levels, even allowing for the effects of earthquakes, was of inferior quality, and in marked contrast to the prior lay-out of the main features, such as the level platform, base lengths, ascending and descending passages, etc.

Carrying the steady rate of change of mean obliquity, previously mentioned, of four degrees per great precessional circuit, back for 67,600 years prior to 1898, when the vernal equinox was about three degrees east of the star  $\lambda$  Virgo, the mean obliquity should then have been  $33^{\circ}53'$ .

Before proceeding to some further results of investigation regarding this date and that of the first of the earlier pyramids, we must talk a little about the stars in general. At 31,115 years prior to 1898, the mean vernal equinox southed less than a minute before Aldebaran reached the meridian, as nearly as can perhaps be estimated. And 5018 years ago it was about five minutes. For this and other reasons, probably 25,920 years is a fairly good approximation to the mean length of the great precessional circuit, during the periods we are considering.

Let us now glance at some ancient customs involving the Pleiades. In Japan, when the Pleiades culminate at midnight, they commemorate some great calamity which befel the world. The *Talmud* connects the Pleiades with a great destructive flood. They culminate at midnight on the 17th of November, a date observed, with the same significance, alike by the Aztecs, Hindûs, Japanese, Egyptians, Ceylonese, Persians and Peruvians. On the 17th of November, no petition was presented in vain to the kings of Persia. Prescott, in his *Conquest of Mexico*, speaks of a great festival held by the Mexicans in November, at the time of the midnight culmination of the Pleiades,

and the Spanish conquerors found in Mexico a tradition that the world was once destroyed when the Pleiades culminated at midnight.

At the end of every fifty-two years, and at that identical midnight moment of the year, the Aztecs still seemed to imagine the world might end, the entire population *passing the remainder of the night on their knees, awaiting their doom* — perhaps the most remarkable instance of race-memory on record. Equally extraordinary, however, is the fact that the Australian aborigines, at the midnight culmination of the Pleiades in November, hold a festival connected with the dead. Some masonic bodies of the present day hold memorial services to the dead in the middle of November.

The Druids, at the beginning of November, had a similar festival, which seems to have included the three consecutive days now called "All Hallow Eve," "All Saints' Day" and "All Souls'," clearly indicating a festival of the dead, and doubtless originally regulated, like all the others, by the Pleiades. Ethnologically, the fact that this festival is also celebrated at the same time and for the same reason in the Tonga Islands of the Fiji group, has especial significance. For the Tongas, as well as the Samoans and Tahitians, belong to the *very earliest of the surviving Atlantean sub-races*, and are of a higher stature than the rest of mankind.

Attention is drawn to the Pleiades, partly because of these historic associations, and partly because this small group, which begins the constellation Taurus or Apis, the Bull, happens to have held a supreme place in ancient astronomy and symbolism. In the temples of ancient Egypt, to know the age of Apis, signified to possess a clue to many a life-cycle.

Probably, then, we shall not be far wrong in placing the beginning of Taurus on the great circle through the pole of the ecliptic and the principal star in the Pleiades, Alcyone. In his valuable work, *The Gods of the Egyptians*, Dr. Budge is correct, as already suggested, in stating that the Dendera Zodiacs show in their details Greek influence. But these are not the original Zodiac of the ancient former temple at Dendera. The facts are that, in the earlier days of Egypt, only ten signs were known to the public, and Scorpio was joined to Virgo. But in the temples there were always two additional signs, and those among the Greeks who knew the facts made a change of name, though conveying symbolically the same ideas, making the former public Virgo-Scorpio into two, and adding Libra. The latter stands between

the macrocosmic symbolism of the first six, and the microcosmic of the last five. But H. P. Blavatsky pointed out long ago that the key to the Zodiac has to be turned seven times.<sup>19</sup>

Astronomically, the thirty-six decans seen in the rectangular Dendera zodiac were always distributed equally around the circle. Therefore, starting from Alcyone at  $0^\circ$  Taurus, we find Regulus at  $0^\circ$  Leo, Antares at  $10^\circ$  Scorpio, and Fomalhaut at  $4^\circ$  Aquarius. In what follows, *this* Zodiac is made the standard of reference.

At the time suggested for the commencement of the Great Pyramid, 67,600 years ago, we find the tenth degree of Libra at the vernal equinox, the summer solstice occurring in the tenth degree of Capricorn, which is found at the head of the rectangular Dendera Zodiac.

Now the first pyramids, according to an ancient commentary, were built at the beginning of a great precessional cycle, under  $\alpha$  Polaris, when it was at lowest culmination with reference to the actual pole, and on the same meridian both with that and Alcyone, which latter was higher than the pole.<sup>20</sup> The meaning is a little obscure, as giants are also mentioned, and it may be suspected that we have here a reference to Atlantean times. Nevertheless it is not improbable, having regard to Egyptian procedure in these matters, that something corresponding was done there, and at a corresponding time. Now we find the latest prior time at which Alcyone and  $\alpha$  Polaris were on the same meridian, the celestial pole being at the same time at nearly its furthest from  $\alpha$  Polaris, was when the summer solstice occurred in the eighth degree of Libra, 86,860 years prior to 1898. The pole would then be near to the spear-head of Boötes, Alcyone being higher in the south, at Gizeh, than the pole in the north.

Again, we find that, 9100 years prior to 1898, the summer solstice was in the eighth degree of Libra, thus concluding three great precessional cycles, which agrees with other data.<sup>21</sup>

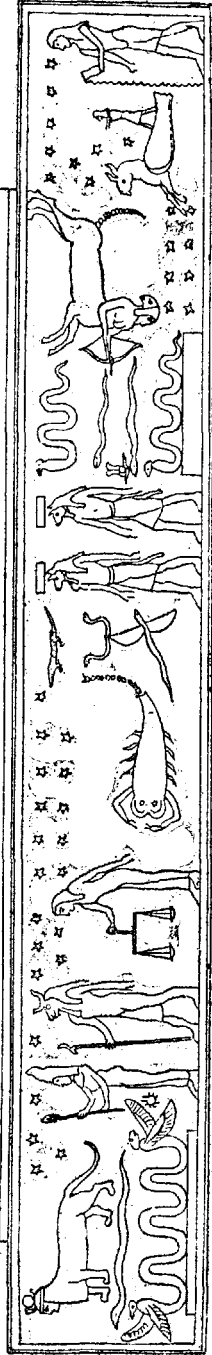
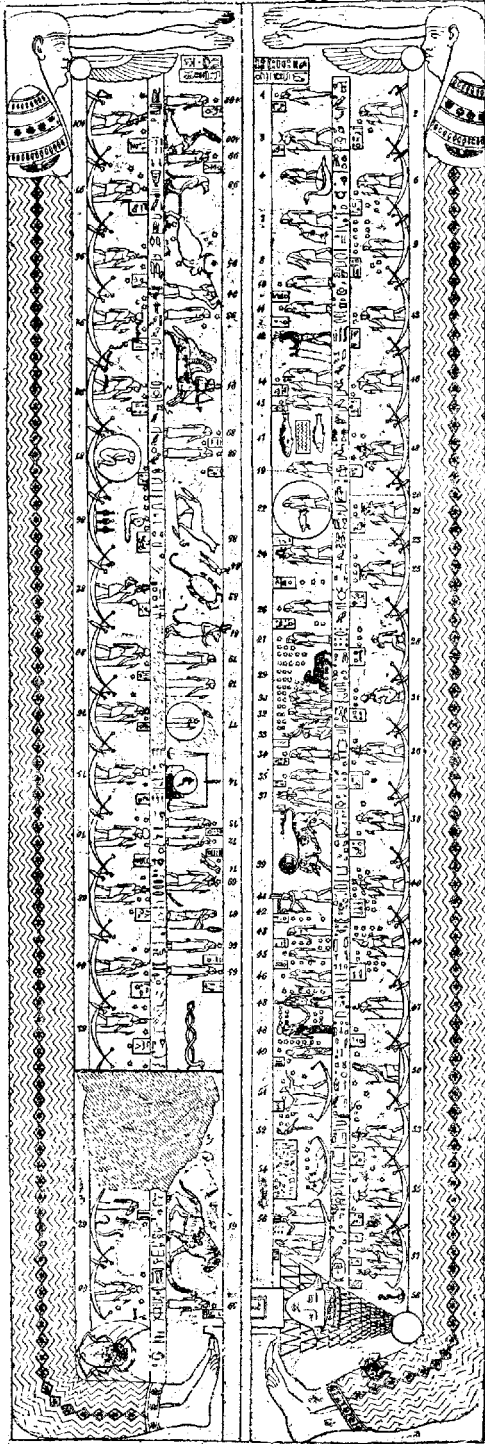
The figures thus ascertained also show close correspondence with the statement that "the Egyptians have on their zodiacs irrefutable proofs of records having embraced about 87,000 years."<sup>22</sup>

19. *Isis Unveiled*, II, 461.

20. *The Secret Doctrine*, H. P. Blavatsky, Vol. I, 435.

21. *Ibid.*, II, 330-1, 768. The word MINOR, line 7 from foot of page 768, is a misprint for MAJOR. As to "the further end of Ursa Major's tail," in the original sentence of *The Key of Urania* the words are, "the tip of Ursa Major's tail." Mackey here made a slip of  $180^\circ$ .

22. *Ibid.*, II, 332.



ZODIACS AT DENDERA AND ESNEH

Reverting to the Great Pyramid, Petrie found the pavement around the base so accurately leveled as to entail skill in the use of the best modern instruments to cope with the accuracy; while as to the long descending passage, where he used offset staffs from the theodolite line measuring to twentieths of an inch, he confessed he had not got within the limits of accuracy of the builders, adding that he would have to repeat the measurements with offsets measuring to *hundredths of an inch*. This is in reference, be it remembered, not to a small piece of mechanism one could lay upon a table, but to parts of a solid building of the heaviest kind of masonry covering thirteen acres of ground, and rising to a height, from lowest chamber to summit, of nearly six hundred feet.

The height from the pavement level to the intersection of the original casing surfaces is 5773.4 inches, as found, within minute limits of probable error, by Petrie. The base length being 9068.8 inches, it follows that the circuit of the base at pavement level is precisely the circumference of a circle of radius equal to the height. The long descending passage is inclined at the angle whose tangent is two, to the vertical axis — an angle which should be regarded as the fundamental one of solid geometry, inasmuch as six sphere diameters inclined at this mutual angle give rise at once to all the regular solids of Pythagoras, which are at the root, in a sense, of crystalline and flower structure. The upper granite chamber, whose length is precisely double the width, repeats this angle: and the height being half the floor diagonal, the cubic diagonal is exactly five times the half-width. It has been said of these primitive savages, the Egyptians, that their knowledge of geometry began where that of Euclid, seven myriads of years later, ended. Would it not be curious, if the same could be said of their astronomical and geodetic knowledge, as compared with ours?

Let us look for a moment into this. Had it not been for the enthusiasm of Piazzi Smyth, a former Astronomer-Royal for Scotland, we should probably not be in possession of Petrie's most careful survey, with every detail of instruments and methods described, and the probable limits of error calculated minutely in every instance. His measurements, though destroying some of Piazzi Smyth's theories, have established much of import. It was Petrie himself who drew attention to the close agreement between the double circuit of the Great Pyramid, at the pavement level as well as at the different levels of the

four corner-sockets, and the length of a minute of arc — that is, a geographical mile — as estimated in various ways.

Since then, the figure of the Earth has been the subject of laborious investigation, and the Hayford spheroid of 1909 is now adopted. On this basis we find the present length of one minute of latitude at the equator to be 72,555.8 inches. The double circuit of the Pyramid at pavement level, adopting Petrie's final results, is 72,550.4 inches, which is slightly less. This and other results, including the present latitude of the building, suggest clues to a proximate cause of earthquakes, if the equatorial radius has for long been gradually diminishing, and the polar increasing. Similar things have happened in the far remote past,<sup>23</sup> and as the planet, like all else in the universe, is alive, and not dead, it may be happening still. Powerful stresses would arise, accompanying changes in length of meridians and some circles of latitude. Puget Sound, the Grand Canyon and some results of the San Francisco earthquakes,<sup>24</sup> point to a similar conclusion.

How was it that the Egyptians always represented the Sun as blue? Nowadays it needs our Rayleighs to find this out. Why was granite employed in certain parts of the Pyramid? Only a few months have elapsed since peculiar radioactive qualities of granite were discovered.

At the time suggested for the foundation of the Great Pyramid, Sirius, or Sothis, had disappeared. It was then on the other side of the Milky Way, but invisible at Gizeh, owing to the position of the celestial pole among the stars. Some fifteen or twenty centuries later, Sothis reappeared, after the pyramid was finished. A few weeks ago, Professor Pupin<sup>25</sup> announced that we are stone-blind and stone-deaf to vast ranges of phenomena. Perhaps he might have added: and to certain stellar and planetary emanations also. However that may be, one reads that:

Sirius has a direct influence over the whole *living* heaven. It is found in connexion with every religion of antiquity, and with initiations in the Great Pyramid.

While on this point it may be worth noticing that a writer in *The English Mechanic*<sup>26</sup> has found, from a lengthy series of observations, that what we call magnetic storms are more prevalent when the

23. Cf. *The Secret Doctrine*, II, 325.

24. Cf. *Bulletin Seism. Soc. Amer.*, Vol. I, 34.

25. *Science*, December 10, 1915.

26. December 17, 1915.

Moon is near certain longitudes. And these longitudes are practically those of Alcyone, Regulus, Antares and Fomalhaut — the “royal stars” of the Persians.

The accompanying Egyptian figure shows the *cortège* of the Sun floating through space, with regions approaching from the north-east.<sup>27</sup> So they knew of the solar motion through space! At the time suggested for the foundation of the Great Pyramid, the pole



SOLAR CORTÈGE

would be near to the neck of Cygnus, the Swan. Should it be found that the Egyptians, among other reasons for the structure, wished to commemorate the fact that the Earth's axis was then pointing to the apex of the Sun's way (now estimated as nearer to Vega), we should be in possession of an element of the solar orbit.

Only one hundred and fifty years of something like exact observation, with new sources of error often appearing, is hardly enough for correct cosmic theory. Had it not been for the destructive spirit of vandals and fanatics we might now have a better knowledge of ancient astronomy. But what we do have should be enough to spur us on to more intelligent conceptions of cosmogony.

When we have deeper respect for the knowledge, character and achievements of our ancestors and their divine Teachers, and learn how to live in harmony — then help in scientific directions as well as in more important ways, may again come from those — “who first TAUGHT astronomy, among other things, to mankind.”

27. From *The Gods of Egypt*, Dr. Wallis Budge: London, 1904.