

The Future Evolution of Man

By Edwin E. Slosson

Director
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IN THE present discussion of evolution both fundamentalists and evolutionists are wrong in one respect. They are looking in the wrong direction, toward the past instead of toward the future. Where men came from is not so important to find out as where man is going. When we take a trolley car we look for the signboard giving its terminal, not its starting point. What practical difference does it make to us to know whether man was made out of mud 5,933 years ago, or developed out of an anthropoid 500,000 years ago, or created out of nothing yesterday?

Whenever I read a book on evolution I end with the characteristic American remark: "Well, here we are! Where next?"

Generally the author does not even raise that very obvious and most important inquiry. He stops, like a continued story, at the most exciting point. But I at last find this question at the end of the biggest book on evolution that I have ever seen, *The Brain from Ape to Man*, by Frederick Tilney.

AFTER fifteen years of intensive study of brains, the author has come to the conclusion that "the brain of modern man represents some intermediate stage in the ultimate development of the master organ of life. And the greatest possibility for future progress lies in the future development of the frontal lobe."

He points out that the cave dwellers of the Cro-Magnon period, 30,000 years ago, had developed a brain equal to that of the civilized man of today, to judge from casts of the cranial cavity of their fossil skulls. The frescoes on the walls of their caves and their carvings in ivory and bone show that they cultivated the fine arts of drawing, sculpture, music and dancing.

Since then man has made amazing progress in gaining control over the forces and resources of nature. "Where he has stood still, perhaps even fallen behind, is in the manifest lack of control over his own nature." In other words, man has applied the principles of evolution to the development of improved forms of plants and animals, but he has neglected his own evolution.

The ape lost his chance of future development by taking the wrong road at the parting of the ways a million or more years ago. He sought to survive by thickening his skull, projecting his brows, strengthening his jaw, enlarging his limbs, and using all four hands; all of which schemes seem sensible.



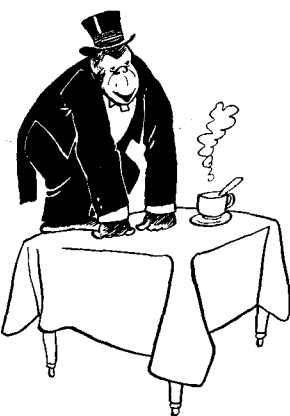
But man, by pursuing the opposite policy, sacrificing his hairy coat, some of his teeth and the use of his toes, and risking a thin skull and poorly protected eyes, has developed that apparently useless organ, the frontal brain, until he is able to manufacture clothing, weapons, and automobiles to overcome all the other animals. And the organ in which man has specialized still retains its plasticity and the possibility of indefinite development.

Professor Tilney, in his lecture on Laura Bridgman and Helen Keller before the Galton Society, pointed out that both women had only the sense of touch, yet by systematic training the former developed the ability of a high-school graduate and the latter would rank with highest grade college graduates.

And he concludes: "So I maintain that other sense areas can be built up in the same way. For since these women, with only a small portion of the brain in active commission, could make adjustments to life at least equal to the average, this must mean that the average brain, with all parts working, develops but a fraction of its potential power."

"Many brains could be made much more efficient by pursuing proper methods of development." Such development of the brain could not come through an increase of nerve cells, for the number of these is fixed at a child's birth. But the sheathing of the nerve fibers, the myelin, increases up to the age of forty. The brain serves as a sort of telephone central which depends for its speed in making connections upon the number of the wires and the quality of the insulation between them. By microscopical examination of brain structure, it has been found that in those areas which have been most used the fibers have developed an extra thickness of insulation.

It seems, then, that there are two ways of improving the mental capacity of the human race: (1) permanently, by growing a superior type by breeding from the most brainy instead of from the least; and (2) temporarily, by making better use of such brains as we have.



Bagatelle

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a person of education and culture, that her family would be in grief and desperate mourning for her, and that she herself, during the tiresome journey by land and sea and land again, had endured every possible discomfort and alarm, "consoled only by my company, Monseigneur."

Karl August, with folded arms, leaning inside the pavilion door, listened while the nun pleaded the cause of the Chinese lady, who showed no concern, but stood meekly, her hands in her sleeves.

"The least that you can do, Monseigneur, is to return her to her home. I am willing to accompany her to Chuchow."

"Why," he asked, "do you take such a considerable interest in a heathen, a creature held to be of less account than the heretics who are slaughtered like rats in Hungary?"

"She is a woman," replied the nun, "and for your deeds of violence of which you boast, may God forgive you!"

"You try my patience," said Karl August. "The Chinese woman is mine and I shall do as I please with her—I intend you no harm, but do not provoke me. I command much power."

"But I more," the nun defied him. "God, the Pope, and the Emperor are behind me."

Karl August was slightly uneasy at this. No slight to the church was ever tolerated in the Empire.

"If you attempt any harm to this noble maiden," added the nun, gently, "you will bring on yourself the retribution for all your crimes."

Karl August considered this amusing, but tiresome. He asked the nun if she understood Chinese—"if so, demand of the woman if she cannot be content here."

"I speak very little Chinese, but I can assure you that she will die of a broken heart and homesickness."

Karl August returned to the château, considering how he should, with some decorum, be rid of the nun. The situation was almost stupid, almost touched him with ridicule... he cursed van Dollart—the man was either a fool or malicious... the nun must go before Culembach knew of her presence... the Chinese woman must appear at the supper where and when he claimed his bet.

Meanwhile he sent down to the pavilion a palanquin containing all the Chinese garments and ornaments that he had been for years collecting and gave instructions for the Chinese woman to be elegantly maintained.

SO OCCUPIED was he with these affairs and with thinking of his new acquisition that he forgot his rendezvous at the chase until the hunt swept up to his door, Culembach calling out to him for a laggard, and the horns blowing in jolly fashion of reproach.

Culembach's sister, Hedwig Sophia, rode up and down the graveled space where the covered wagon had rested. Karl August came out on to the winged stairway to answer her greeting. He was to marry her in six weeks' time and since van Dollart's visit he had forgotten it. Warm-colored, yellow-haired, voluptuous, Hedwig Sophia smiled under her cockaded hat, waved her whip—had he not recalled the rendezvous of the chase? She loved him and this showed in her looks and gestures. She cared nothing for his reputation nor his wealth. She was infatuated with the man himself; she was a widow and had learned toleration of male failings; she was very jealous but even more prudent; rather than bore her lover she had resolved to endure his infidelities.

Hastily he joined the chase, excusing himself with van Dollart's visit—"some new fangles from the East."

"Anything for me?" smiled Hedwig Sophia.

"Everything for you," he lied, agreeably. They rode fast, side by side, down the wide *allée*; he wanted to marry his companion but he was thinking of the Chinese woman and considering that he might delay his marriage so as to have more leisure with his new mistress... Perhaps he would take her to Vesprim and enthrone her in the ice grottoes or amid the village of dwarfs—or even build her another pavilion there and a grove of silver birch trees. At the first courteous opportunity he outrode Hedwig Sophia and came up with her brother, who was leading the chase through the park of beech and chestnut. He told him that van Dollart had brought the Chinese woman, safe from Chuchow to Halstadt as a pearl shut in an oyster—trust the sly, grim puritan Dutchman, eh?

CULEMBACH was chagrined. Though a reigning prince he was not rich and the wager was high. He laughed and tried to undervalue the prize—a small, yellow, shrunken creature, he knew... such a one had been found abandoned in the Turkish camp outside Buda... Hesse-Darmstadt had been infatuated with her, but, for his part, he preferred to have his monstrosities in porcelain—"And, look you, Reckheim, I'll see her before I pay."

"She is beautiful," asserted Karl August, with a confidence odious to the other. "And most rare—different from any other woman you ever saw. I would not take for her twice what I paid. Tomorrow evening you shall see her—she is no more than seventeen and, in her own country, a princess."

Immediately he returned from the chase, Karl August, refusing the invitation of Hedwig Sophia to ride home with her, hastened to the pavilion called Bagatelle, in the Chinese garden. Lamps of porcelain and lacquer had been lit in the lattice windows; their thin, fine light made long elegant shadows from the delicate leaves of young bamboo and yellow maples; the twilight was hushed and luscious.

Karl August peered through the curtains. The Chinese woman was within. She had arrayed herself in one of the robes, coral red, orange yellow; she had made herself tea in one of his services of Wu Ts'ai or five-color ware with ruby-backed plates; she had set a branch of pearl-color maple in one of his bronze vases, and appeared at home and happy.

Karl August did not enter the pavilion; the nun was seated inside the door; her habit appeared grotesque among those Eastern trifles; her face appeared old, ugly, sad, compared with the face of the Chinese woman. As Karl August left Bagatelle he noticed that a wooden crucifix had been fastened over the curved horns, hung with bells, of the entrance. He began to be more uneasy, disturbed by sensations new to him. It was remarkable that he, who had committed so many lawless acts of violence, could not now commit another. It would really be easy to force away the nun; he was not, he assured himself, superstitious, and he did not believe in God—scandal could be avoided; why, then, this detestable hesitation?

He passed a disagreeable night. His mind dwelt most curiously on the

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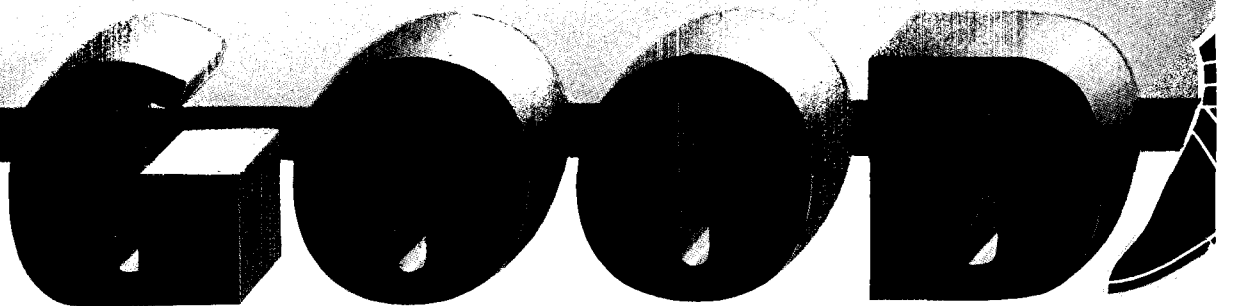
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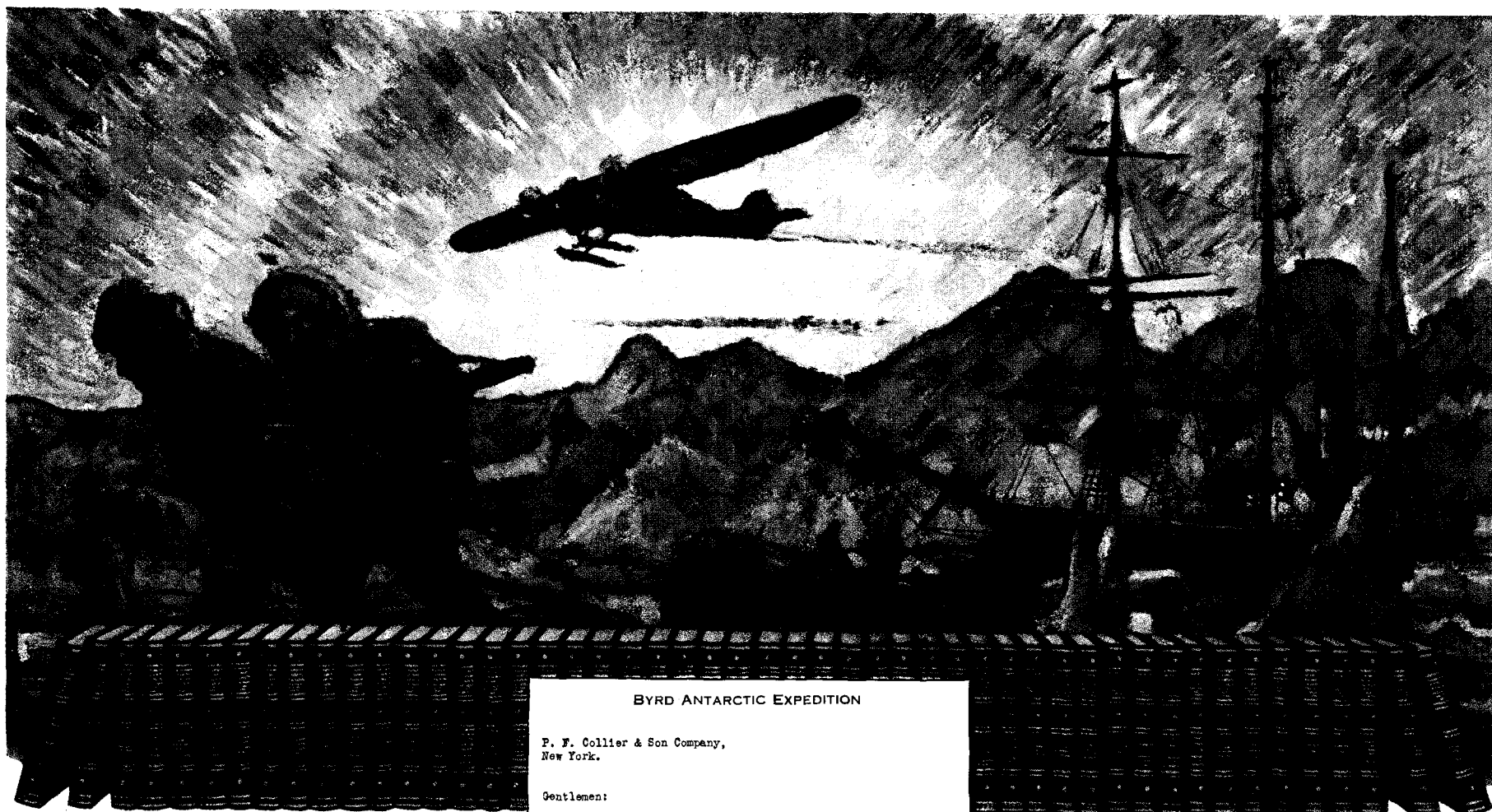
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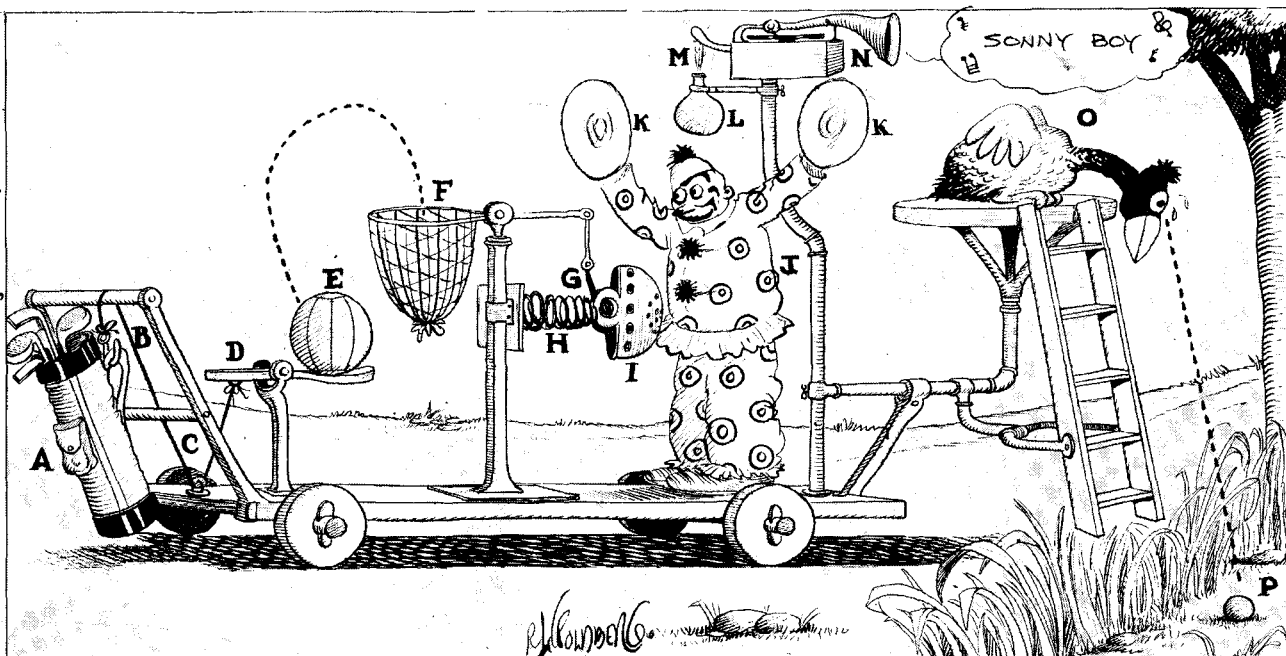
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{The Harvard Classics}

The Inventions of Professor Lucifer G. Butts, A.K.

By RUBE GOLDBERG

PROFESSOR BUTTS PUTS HIS HEAD IN A NUTCRACKER AND SQUEEZES OUT AN IDEA TO LOCATE LOST GOLF BALLS. HANG GOLF BAG (A) ON HOOK (B) WHICH PULLS CORD (C) AND TILTS PADDLE (D), TOSSEING BASKET BALL (E) INTO BASKET (F). WEIGHT OF BALL RELEASES HOOK (G) AND ALLOWS SPRING (H) TO PUSH HEAD-GUARD (I) INTO STOMACH OF TOY CLOWN (J) WHO CLAPS CYMBALS (K) ON RUBBER BULB (L), SQUIRTING STREAM OF WATER (M), WHICH STARTS PHONOGRAPH (N) PLAYING "SONNY BOY". SONG AWAKENS MOTHER LOVE IN SNOZZLE-BIRD (O). SHE LONGS FOR A SON AND LOOKS AROUND FOR AN EGG TO HATCH UNTIL SHE FINDS GOLF BALL (P) WHICH SHE NATURALLY MISTAKES FOR THE COVETED EGG. IF THE SNOZZLE-BIRD WANTS A DAUGHTER HAVE THE PHONOGRAPH PLAY "RAMONA".



Chinese woman. He believed she could give new variety to an emotion he had almost staled. She was more than beautiful, she had some magic. . . .

When a flying post brought news from Vesprim of a revolt among the heretics, Karl August was an angry man. He declared that the Emperor's business could wait until he had finished his own and sent orders to his lieutenant to burn and slay without pause or mercy.

TO PUNISH himself for his cowardice he kept away from the pavilion; but he sent a message to the nun that the Chinese woman must be sent up to the chateau that evening to sit beside him at his supper-table; the nun's reply was submissive, "But if she is not returned by eight o'clock I shall come to fetch her."

Karl August raged because he did not have the insolent woman removed; sulky and violent he meditated a revenge that would be the sterner for being deferred; he knew himself capable of complete cruelty; his uneasiness increased.

There were six gentlemen at the supper, companions in arms and pleasures; the windows were open on the monstrous moon, on the melody of caged nightingales, on the voices of Sienese boys singing to zithers, and on the steady recurrent splash of a fountain that was as monotonous as a heart-beat.

The decoration of the room was Chinese. The air was perfumed with cloves, nutmeg, cinnamon and attar of roses. In contrast to this exotic background the six guests showed robust and hearty, with their fair red faces, their curled powdered hair, their brightly-colored velvet and satin coats, their Paris paste and steel appointments cut to a diamond glitter.

The Chinese woman entered, carried in her palanquin; she could not stand for more than a moment on her tiny feet in the slippers stitched with sequins. She was placed carefully, as if she had been a doll, beside Aspremont-Reckheim.

The gentlemen all gazed eagerly at this curiosity—they were really not sure that she was alive. Her quilted outer robe of sea-green silk being removed by Karl August showed her dress of festival gold, a massed design of webs and blossoms in bullion threads, her sash of azure satin, stiffened with silver wires, her necklets of white jade, of smoked crystal, of scarlet cords with beads of rose quartz, tourmaline and chrysolite; above the smooth black bil-

lows of her hair quivered metallic flowers of silver, copper and gold that appeared finer than nature in filaments, pistils and petals that stirred with the least movement. All of the guests had traveled and each possessed a closet of curiosities, but none of them had ever seen any rarity like this wonder.

She bowed, and then spoke.

A little cascade of meaningless sound, soft, mellow as drowsy notes from the soft-plumed throat of a bird, fell from her vermilion lips. She bowed again, folded her hands into her sleeves, was silent.

They murmured surprise, admiration, envy. Culembach had his rix dollars bond ready; he slipped it along the table. Karl August pocketed it without satisfaction. He was tormented by the desire to know what the Chinese woman thought and felt, to possess her mind and soul as well as her person. Never had he heard anything so tantalizing as that soft incomprehensible speech. He had never failed, one way or another, with a woman before, but now he was baffled; he lowered where he should have been triumphant; and before the Lang-Yao clock struck eight he sent her away because of the intolerable nun who would, he was sure, keep her word.

CULEMBACH lingered after the others had gone. He began to praise the Chinese lady . . . he offered to buy her. . . .

"As a dilettante?" asked Karl August.

"As a man," said Culembach.

Karl August refused to consider any offer. Culembach said that he would give more than money; his Arab-Polish horse called *La Folie*, who was the most perfectly trained animal in the Empire, his pair of *bleu de roi* Sevres vases, which had taken three years to paint. As Karl August remained contemptuous Culembach offered his summer palace in the mountains that the other had often envied. On receiving an abrupt refusal the Margraf, a short-tempered man, purpled in the face. The two parted in dislike of each other. This was the first time that Karl August had quarreled with the brother of Hedwig Sophia.

The Margraf's offer had put the final value on the Chinese woman; she was

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indeed priceless; her owner could think of nothing for which he would surrender her. Yet he allowed the days to pass without disturbing her—because of the nun, because of some sacred magic which enclosed her, because of something in himself? He was being drawn into a new unimagined world. He did not know; he became melancholy, moody, yet excited and violent; if he could discover what the Chinese woman was thinking, if she was happy, if he could make her happy, what she was saying when she bowed and spoke sweetly, rapidly. . . .

CULEMBACH rode over frequently and tried to bargain for what he called this *bibelot de prix*. He also seemed fascinated by the Chinese woman whom, however, he had only seen once. The two men began to detest each other; the Margraf pointed out that General Aspremont-Reckheim's post was in Hungary—what leave had he to linger in Salzburg, while there was a revolt in his command?

Hedwig Sophia came too frequently to Halstadt; Karl August suspected her brother of making trouble; the lady longed too often to be taken to the pavilion, the pagoda, and on excuse or refusal became too sweetly submissive. She knew, of course, from her brother, about the Chinese woman, and she was sick with terror lest she should lose her lover. She was afraid of his abstracted air, his gloomy indifference to her caresses, his dark sullen face; she wished to marry him and go to Hungary to quell the rebellion—to please him she would have witnessed the slaughter of hundreds of heretics, but Karl August suspended all his affairs.

He gradually made a confidante of the nun; she was of his own world and intelligent; she appeared to like him, she was at least very tolerant; he endeavored to discover from her every scrap of information about the Chinese woman . . . her mind, her nature, her habits, what she believed, or wished, or feared. . . .

The nun knew very little; she could not, save for a word or two, understand her companion's speech, but she always declared that she was very homesick; at night she would weep and pray to a little crystal image that, to Aspremont-

Reckheim, was a toy, but to her a god. Always the nun ended:

"You must assuredly send her home, Monseigneur. It is your only chance to palliate a great wrong. No doubt you acted more in wantonness than malice, but now you understand that you have not bought a carving or a jewel, but a human creature."

"Give me some credit," Karl August would reply, bitterly, "that I have not molested her."

The nun had a smile for that.

"You cannot. You do not dare."

The haughty, violent man raged; he stared at himself in many mirrors; he had always disliked his person, inherited from a defeated people he had betrayed. No powder could efface that black hair, no art alter those straight fine features, no imperial uniform make him appear of the conquering race; a Magyar, one with those he crushed and slew . . . he had burnt a church once with a hundred worshippers within, and watched while his troopers thrust the wretches back into the flames . . . every face shrieking to death had been like his face . . . detestable, and giving him the air of a renegade; he passionately wished he were like Culembach, the dominant Northern stock . . . how did he appear to the Chinese woman?

SHE remained unchanged. Patiently she waited through the luscious autumn days. The lilies on the pond withered, the bamboos and maples shed their leaves, the sunshine took a mellow tinge; in meek resignation the Chinese woman waited; only her songs became more plaintive, her music the melody of an exile, and her slanting eyes glittered with tears as she prayed to her crystal god.

"Send her home before the winter," said the nun.

"Sell her to me," insisted Culembach.

"Marry me," implored Hedwig Sophia.

While the Emperor's commands came stern from Vienna:

"Go immediately to Hungary."

Aspremont-Reckheim did none of these things. He was entirely, and for the first time in his life, occupied with his own soul. He ascended to stormy heights and grovelled in murky depths. All his possessions became earthly baubles. The wind in the bare trees at night was of peculiar importance; the sight of the moon touched him to nothingness, and the vaporous sunshine was bitter-sweet to agony; he was in full pursuit of something flying beyond his

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