HASHISH.

By Leo Suppan.

CANNABIS SATIVA, of the family *Moraceae,* the plant from which hemp fibre and seed are derived, has been of economic importance to man from the very beginnings of history. The original home of the plant is probably the region about the Caspian Sea, for it is found there in the wild state, especially southward of the sea, as well as about Lencoran and Astarte. It is also found growing wild in certain districts of Siberia, on the Irtysch, south of the Baikal Sea, in Dahurie, Government Irkutsk, in the Ural, in Persia, in the Altai, in west China, in Kashgar, in Cahmir and in the Himalaya. The plant has been cultivated for centuries in India and other tropical countries, and has been introduced into other countries of the temperate regions where it is under cultivation chiefly for the sake of its fibre and to a less extent for its seed. Africa produces a considerable quantity, and Livingstone found it under cultivation in the regions of the Congo and the Zambesi. In the Himalya it grows at elevations as great as three thousand metres.

Cannabis sativa is an annual herb with stems one to three metres in height, angular and tomentose. The leaves are palmate compound, with five to seven linear-lanceolate leaflets, deeply serrate, the leaves being alternate on the upper part of the plant and opposite on the lower. The flowers are dioecious, yellow in color, the staminate occurring in pannicles and the pistillate in erect, simple spikes.

The cannabis growing in India differs in some slight botanical detail from that growing in other parts of the world. It is somewhat smaller than cannabis sativa of the temperate regions and contains a more profuse growth of glandular hairs, which gives it a distinct narcotic odor. Further, the Indian variety branches from the ground up to within two feet of the top, while the common plant grows three or four feet before it gives out branches. Also, the fruit of the Indian plant is smaller and rounder than that of ordinary cannabis sativa, and the plant yields no fibre that can be used as is the ordinary hemp fibre. These differences were noticed by Rhumphius in the seventeenth century, and induced Lamarck, about 1790, to claim for the Indian plant the rank of a distinct species, to which he gave the name *Cannabis indica.* Roxburgh, in his *Flora Indica,* and other distinguished botanists, however, regarded the differences between the plants so inconsiderable that they could not justify the classification made by Lamarck, and they, therefore, classified the Indian plant as a variety of *Cannabis sativa;* it now occurs in the classifications as *Cannabis sativa,* var. *Indica.*

From the standpoint of pharmacology, however, there is considerable difference between the two kinds of plants, the Indian being far more potent in those peculiar properties that characterize the species than is the hemp grown in Europe and other parts of the temperate zones. For this reason the Indian plant is designated a physiological variety of the species. It may be remarked, however, that even in India there is considerable variation in the potency, the plants growing at elevations of from six to eight thousand feet being far more active than those which grow in the plains.

Cannabis as a Drug.

The medicinal plant, *cannabis indica,* which is imported into America and European countries, is obtained from plants cultivated in various districts in India, chiefly on the farms north of Calcutta. The plants are grown in rows; collection taking place as soon as the flowering tops begin to assume a brownish color. The flowering tops of the pistillate plants are then cut off, the seeds shaken out, and the tops, after being allowed to dry, rolled and trodden in order to work the resinous matter which is present in the stems into the inflorescence. It is a practice of the Indian cultivators to allow the pistillate plants only to develop and to prune these in such a way as to encourage the development of the flowering branches, by which process the resin, which constitutes the active principle of the plant, is increased in quantity. There are various forms in which the drug occurs in commerce. The flowering tops or fruiting shoots of the female plant constitute the *Ganja* (Hindustani), *Quinnab* (Arabic), or *Gunza* of the London drug market. These tops are found in more or less compressed masses, the "flat" cannabis, comprising in some instances straight, stiff, woody stems, several inches long, which are surrounded by the inflorescence branching upward, in other instances of shorter, rounder and more succulent shoots, two to three inches long and somewhat more irregular in shape. In both forms the fresh drug has a grayish-brown color and a resinous or gummy appearance. *Bhang, Siddi* or *Sabzi* (Hindustani), *Quinnaq* or *Hashish* (Arabic), are the names given to the dried leaves and small stalks of the plant. They are of a dark green color, coarsely broken, and frequently contain a few of the fruits. When this form of the drug is fresh it has a peculiar narcotic odor. It has been reported that after the leaves which constitute *bhang* have been gathered, small shoots sprout from the stem from which they have been plucked, and that these, plucked off and dried, constitute the form of the drug called *ganja. Bhang* is one of the forms in which cannabis is employed by the Orientals to produce intoxication, it being taken either in the form of an infusion made by steeping the coarsely powdered leaves in cold water or by smoking it either with or without tobacco. *Charas,* or *Churus,* is the name given to the resin which exudes in minute drops from the yellow glands which occur on the inflorescence and parts of the stem, or from *bhang. Charas* is collected in various ways from the growing plant; one of these consists in rubbing the tops of the plants, when the seeds are ripe, in the hands and scraping off the resin when a sufficient quantity has been collected. Another method, which has, however, been abandoned in the main on account of its uncleanliness, consists in that the natives clothed in garments of leather walk about through the fields of the growing plant, the resin attaching itself to the leather from which it is from time to time scraped off; instead of this rather unsavory operation the gathering is now effected by rubbing the tops of the female plants for several hours with pieces of coarse woolen cloth, scraping off the adhering resin with a knife and forming it into little balls or long rods. A third method consists in collecting the dust which arises when piles of dried *bhang* are stirred, precautions being taken against inhalation of the dust in various ways. The production of *charas* by any one of these methods appears to be limited to plants produced at certain elevations. *Majoon* or *majun* is a form, or rather preparation, of the drug which does not enter into international commerce, at least for medicinal purposes. *Majun,* in the Persian "Maji-oun," is a general name for an electuary, of which more than seventy occur in the Persian materia medica, and, in the case of the cannabis, *majoon* is prepared by mixing *bhang* with flour and adding various other substances, some of them to give a pleasant flavor, others on account of their aphrodisiac or other medicinal effects. *Majoon* is a confection of a greenish color, and is in all probability the form of *cannabis* which the romancers who have written on the subject had in mind when they spoke of "hashish."

The Pharmacology of Cannabis.

In its medicinal action *cannabis indica*—usually given in the form of its pharmaceutical preparations—is a soporific, anodyne, antispasmodic and nervous stimulant. Its physiological phenomena exhibit a series of stages. The first effect is that of exhilaration and stimulation of the imagination, most remarkable hallucinations being produced in those who have partaken of it. Upon this follows a period of drowsiness and stupor, the heart becoming weak and its action slow and the pupil dilated. Cannabis has some advantages over opium as an anodyne in that it does not cause nausea, loss of appetite, a dry tongue, constipation or diminution of the secretions, which make it more acceptable in certain morbid states of the system. Its introduction into European medicine is comparatively recent, dating only from the early period of the nineteenth century, and is chiefly due to the now classical experiments made in Calcutta by O'Shaughnessy in 1838 and 1839.

The narcotic effect of cannabis appears to be somewhat different with the Orientals than with Europeans and, indeed, it differs with different individuals, its action being more or less dependent upon the "temperament" and even upon the occupation. On Orientals, large doses produce a cataleptic condition, in which the muscles are moderately contracted, but flexible and pliant, and the limbs retain any position or attitude in which they may be placed. Dr. O'Shaughnessy, in his epoch-making paper on cannabis gives the following illustrative cases observed by him in Calcutta: "At 2 p. m. a grain of the resin of hemp was given to a rheumatic patient. At 4 p. m. he was very talkative, sang, called loudly for an extra supply of food, and declared himself in perfect health. At 6 p. m. he was asleep. At 8 p. m. he was found insensible, but breathing with perfect regularity, his pulse and skin natural, and the pupils freely contractile on the approach of light. Happening by chance to lift up the patient's arm, the professional reader will judge of my astonishment when I found that it remained in the position in which I placed it. It required but a very brief examination of the limbs to find that the patient had by the influence of this narcotic been thrown into that strange and most extraordinary of all nervous conditions—the genuine *catalepsy* of the nosologist. We raised him to a sitting posture and placed his arms and legs in every imaginable attitude. A waxen figure could not be more pliant or more stationary in each position, no matter how contrary to the natural influence of gravity on the part. To all impressions he was meanwhile almost insensible. He continued in this state until 1 a. m. when consciousness and voluntary motion quickly returned. Another patient who had taken the same dose fell asleep, but was aroused by the noise of the ward. He seemed vastly amused at the strange aspects of the statue-like attitudes in which the first patient had been placed. On a sudden he uttered a loud peal of laughter, and exclaimed that four spirits were springing with his bed into the air. In vain we attempted to pacify him; his laughter became momentarily more and more uncontrollable. We now observed that the limbs were rather rigid, and in a few minutes more his legs and arms could be bent, and would remain in any desired position. He was moved to a separate room, where he soon became tranquil; his limbs in less than an hour regained their natural condition, and in two hours he expressed himself perfectly well and excessively hungry."

Dr. Pereira, in commenting on these passages, observes: "On Europeans I have never heard of a cataleptic state being produced by this drug. In a case of tetanus under my care in the London Hospital, and which was carefully watched by Dr. O'Shaughnessy and myself, the resinous extract of Indian hemp was given in increasing doses up to twenty grains. It caused stupor and cessation of spasms, but no perfect cataleptic state. The only tendency to this condition which was observed was when the arm of the patient was lifted and then cautiously let go, it fell slowly and gradually, not quickly, as it would have done under ordinary conditions. The patient was at this time quite insensible."

The nature of the intoxication produced on Orientals is thus summed up by Dr. Pereira: "The inebriation or delirium produced by it is usually of an agreeable or cheerful character, exciting the individuals to laugh, dance and sing and to commit various other extravagances—acting as an aphrodisiac and augmenting the appetite for food. In some it occasions a kind of reverie. It renders others excitable and quarrelsome and disposes to acts of violence. It has been stated that the men who attempted the assassination of Lord Cornwallis in India were intoxicated with Indian hemp." And he continues: "Dr. Hooke, in his account of Indian hemp (*bhang*), read to the Royal Society, December 18, 1689, notices the various odd tricks shown by persons while in the ecstacy caused by this plant; and adds that when this condition subsides, the patient finds himself mightily refreshed and exceedingly hungry. The general effects of Indian hemp on man, as stated by Dr. O'Shaughnessy from his own observations, are alleviation of pain (mostly), remarkable increase of the appetite, unequivocal aphrodesia, and great mental cheerfulness. Its most violent effects were delirium of a peculiar kind and a cataleptic state. Its effects on animals were analogous: he gave ten grains of Nepalese churrus dissolved in spirit to a middling-sized dog: 'In half an hour he became stupid and sleepy, dozing at intervals, starting up, wagging his tail as if extremely contented; he ate some food greedily; on being called to he staggered to and fro, and his face assumed a look of utter and helpless drunkenness. These symptoms lasted about two hours, and then gradually passed away. In six hours he was perfectly well and lively.' It would appear that Indian hemp acts more powerfully in India than in Europe. My experiments fully bear out this statement. Dr. O'Shaughnessy, when in England, satisfied himself of the difference of the effects of Indian hemp in this country and in Bengal; and he observes that while in India he had seen marked effects from half a grain of the extract, or even less, and had been accustomed to consider one grain and a half a large dose, in England he had given ten or twelve or more grains to produce the desired effect."

The constituents upon which the activity of cannabis depends are a resin and a volatile oil. The resin occurs to the extent of fifteen to twenty per cent, and is called *cannabin*. It is, in the dry state, a brown, amorphous powder, soluble in absolute alcohol. Two-thirds of a grain produces a powerful narcotic effect. A principle known as cannabinol has been obtained by Wood, Spivey and Esterfield by the fractional distillation of an ethereal extract of the exudate of cannabis indica (*charras*); it is an oily liquid of a red color, boiling at 265 degrees. Marshall, who examined this for its physiological properties, claimed that it is the principle which induces the characteristic effects of cannabis indica in man and lower animals.

Hemp has been cultivated for its fibre and oily seeds from a remote period. The ancient Chinese herbal called *Rha-ya*, which was written about the fifth century B. C., notices the fact that the hemp plant is of two kinds, one producing flowers and seed while the other produces flower but no seed. In Susruta, Charaka and other early Hindu works treating of medicine, hemp is mentioned under the name *B'hanga* as a remedy. Herodotus gives an account of the use of hemp among the ancient Scythians which is of

sufficient interest to justify quotation. Speaking of the Scythian burial ceremonies he says: "After the burial, those who engage in it have to purify themselves, which they do in the following way: First, they well soap and wash their heads; then, in order to cleanse their bodies, they act as follows: they make a booth by fixing in the ground three sticks inclined toward one another, and stretching round them woolen felts, which they arrange so as to fit as close as possible. Inside the booth a dish is placed upon the ground, into which they put a number of red-hot stones, and then add some hemp seed.

Historical.

"Hemp grows in Scythia: it is very like flax, only that it is a much coarser plant; some grows wild about the country, some is produced by cultivation; the Thracians make garments of it which closely resemble linen—so much so, indeed, that if a person has never seen hemp he is sure to think them all linen, and if he has, unless he is very experienced in such matters, he will not know of what material they are.

"The Scythians, as I said, take some of this hemp seed and, creeping under the felt coverings, throw it upon the red-hot stones; immediately it smokes and gives out such a vapor as no Grecian vapor-bath can exceed; the Scythians, delighted shout for joy, and this vapor serves them as a bath with water, for they never by an chance wash their bodies with water. Their women make a mixture of cypress, cedar and frankincense wood, which they pound into a paste upon a rough piece of stone, adding a little water to it. With this substance, which is of a thick consistency, they plaster their faces all over and, indeed, their whole bodies. A sweet odor is thereby imparted to them, and when they take off the plaster on the day following, their skin is clean and glossy."

The Greeks and Romans were, of course, familiar with the properties of hemp fibre, but they do not appear to have been acquainted with the medicinal and narcotic properties of the plant, at any rate in classical times. Royce has attempted to connect the "care-destroying Nepenthes" of the Greek poets with cannabis but this is merely a conjecture without sufficient grounds. Galen is the first of the ancient European writers to speak (De Aliment. Facult.) of the stupifying effects of cannabis "as the component of small cakes which were served out at the evening meal to stimulate the desire for drinking, but which, when taken in excess, easily go to the head and stupify." In Asia, however, the properties of cannabis appear to have been known in very early times, for there is no doubt that the "Gandachakini"—"Joy pills" mentioned by the earlier Sanskrit writers were prepared of cannabis, for a similar preparation is still used by the Hindus and Mongolians under the same name. In a Chinese record of the earlier part of the third century we find mentioned a substance by the name of "Mago," which produced anaesthesia and narcosis, and the East Indians speak of a historical substance "Errar"—"the Secret," to which the same properties were attributed; whether these substances were cannabis, as has been suggested, is doubtful. (I read not long ago, but cannot remember where, that "Mago" is an old name for opium.) The use of cannabis (*Bhang*) in India was especially noticed by Garcia da Orta in 1563, and the plant was subsequently pictured by Rheede, who described the drug and stated that it was extensively used on the Malabar Coast. It would seem to have been occasionally imported into Europe about that time, for Berlu, in his "Treasury of Drugs," published in 1690, describes it as coming from Bantam in the East Indies, and as being of "an infatuating quality and pernicious use."

Cannabis as an Intoxicant.

The use of hashish as an intoxicant forms one of the most interesting chapters in the history of human aberrations. It is no wonder that those who seek to throw off all vestiges of the dull grind of the everyday world by taking refuge in an artificial paradise—to borrow Baudelaire's term—and who know that their hallucinatory debauch will not exact a penalty in the form of the depression which follows upon the indulgence in opium, should have recourse to cannabis. And it is a further matter for wonder that such Europeans and Americans who give themselves up to indulgence in narcotics, should have been seduced by the juice of the poppy rather by the resin of the Indian hemp. It is a fact, however, that addiction to hashish is confined almost exclusively to the Orientals, and particularly to those of the Mohammedan faith.

The date at which it was first used for the purpose mentioned cannot be ascertained, but we are pretty sure that the hashish habit was unknown among the Arabians before the time of Mohammed. It was known to the people of India and Persia before that time, and its employment as an intoxicant appears to have spread from them to the Arabians with marvelous rapidity early in the Middle Ages. Of course the drug has its tradition. The origin of its use as a narcotic is given in an old legend which states that Hayder, a pious devotee and penitent and sheik of all sheiks, discovered a plant of which he partook. He imparted his discovery to his fellow-penitents, and they, following his example, partook also and became "exceedingly joyful." According to another tale the narcotic properties of the plant were discovered by a sheik named Biratzan, who became a Musselman in 622; the fame of its marvelous powers spread among the Persians and Arabians to India, Irak, Egypt and Syria, after, as was remarked, the time of Mohammed. Once introduced, the employment of hashish spread like wild fire, and it soon had its grip upon the people, for Ebn-Djezla, who died in 1021, writes of it, telling us that it is possessed of aphrodisiac properties, and that the leaves of it are frequently mixed with almonds, pistachios, sugar or honey, opium and oxymel, in order to make it more palatable, and that the roasting of cannabis renders it less toxic. The smoking and eating of hashish plays a role in the history of the famous band of marauders known as the Assassins (Hashischin, Mulahida, "Hashish-eaters"), a secret society formed for the purpose of murder and the overthrowing of things in general. The assassins were originally a sect of Ishmaelites, who carried on their devastations chiefly in the eleventh to the thirteenth centuries in Persia and Syria, established the caliphate of the Fatimites in Egypt, and carried on a campaign of terror against the Crusaders. The chief of the redoubtable brotherhood was Hassan, known in history as "The Old Man of the Mountain," who was defeated and slain by Hulago, Khan of the Mongols in 1256; in spite of this defeat, a remnant of the gang carried on its depredations in Syria until 1270. Hashish was employed by the sheiks of the assassins in order to inculcate strict obedience in their followers and make them the blind tools of their machinations. They put the novices to sleep with the drug, explaining to them that the dreams produced were a foretaste of paradise, which would be theirs to all eternity if they obediently followed the commands of their chief. It was the stimulant effect of the drug that imbued them with the fanatical courage they exhibited in the committing of their murders and their utter indifference to the terrors of death.

Hashish was and is taken both internally and smoked, both in the form of the herb and of preparations made

from it. Prosper Alpinus, writing in the sixteenth century, tells us that cannabis was made into a paste by the use of honey-water, which was then made into a bolus, and he also describes a confection and a drink, for which, however, according to his account, hemp *seed* was used. Prosper must be mistaken about the hemp seed, for it is not narcotic nor does it possess any medicinal properties whatever. Rumphius tells us that the Malays smoked cannabis mixed with tobacco, and he refers to its aphrodisiac properties, which were already known to the Persians.

Forms of the Intoxicant.

According to Ainslee three preparations of cannabis are in use in India; *Banghie,* a drink prepared from the leaves; *Majum,* a confection prepared from the leaves, poppy seed, stramonium seed, strychnos, sugar and milk; and *Subjah.* "One of the commonest methods of preparing these mixtures," says Flueckiger, "consists in extracting the fresh herb with butter, the latter taking up into solution the resin present in the plant. Various different preparations are made by adding to this butter-extract camphor, ambra, musk, cantharides, opium or other substances of a milder nature, like sugar, dates, figs, pistachios, almonds, ethereal oils and coloring substances, like chlorophyll or alkanna. In Algeria the powder of the tips of the female plants are boiled with honey and made into a confection, to which spices are added; sweet meats or other sweet substances, like dates, figs, grapes are also added to the confection in some cases. In Turkey and Egypt a mass of a greenish color is made by mixing the powdered herb with gum and sugar.

"All these preparations are made for the internal use of hashish. For smoking, the herb or the resin which is scratched off it (churus) is smoked either alone or mixed with tobacco."

Originally, that is, before the discovery of the tobacco pipe among the American Indians, the water pipe—narghile—was used for the smoking of hashish, and according to Niebuhr, consisted of a cocoanut or gourd combined with a clay pipe, a wooden tube and thick, flexible reed instead of the pipestem. The cocoanut was filled with water to such an extent that the tube dipped into it. The smoke passed through the water. At the present time the pipes have the familiar form and are chiefly of glass, the head being of meerschaum, the mouthpiece or tubes of amber, for it is forbidden the Mohammedans to put animal substances, like horn, ivory or bone, into the mouth. The Chinese have a peculiar form of waterpipe made of metal, of which the head is very small and from which only a few puffs can be drawn. At the present time many ordinary tobacco pipes are in use for smoking hashish, with the difference that the bowls are smaller. In Africa hashish is smoked in large water pipes, calabashes with clay bowls.

Regarding the smoking of hashish by certain tribes in South Africa, Martous writes: "The original method of smoking cannabis consisted in preparing a pipe bowl of unburned clay, placing this above and sidewise in a kind of large, hollowed, almost flask-formed gourd, and passing this apparatus around among the smokers; each smoker took a few draughts from the narrower end of the gourd, whereupon the narcotic symptoms soon followed and the individuals fell into a state of intoxication. The Hottentots and Bushmen smoke the Dakka leaves either unmixed or mixed with a little tobacco. The Bechuans have a peculiar way of smoking. They make two holes in the earth, each of about the size of a large pipe bowl, lay a stick from one hole to the other and cover this with clay; the stick is then withdrawn, leaving a channel between the holes. Into one of these holes tobacco is stuffed and ignited, whereupon the smokers lie down in turn on the belly, inhale the smoke deeply from the other hole, and drink a little water after the inhalation in order to get the smoke down. In order to have the sensual pleasure of smoking longer, the smokers of East Africa place small glowing stones in the leaves, which ensure slow combustion of the latter.

When anyone does a foolish or extravagant thing, the Wanyammesi in East Africa speak only the one word: "Njemu," *i. e.,* "Hemp!"

Let us now get a glimpse of the fantastic world in which the hashish taker lives and moves and has his being during the period of his intoxication. I quote first from Moreau's "Du Haschisch et d'Alienation Mentale," published at Tours in 1845. Moreau, who was himself a smoker of hashish, gives the following poetical account of the effects of the inhalation: "It is as if the sun shone upon every thought that passes through the mind, and every movement of the body becomes a well of joy; the thoughts are easily interrupted, but they remain clear and follow one another with rapidity and liveliness. The spirit has gained force and energy. The limits of possibilities of space and time are swept away, a second is a century, and with one step we pass through the world. Everything is filled with delicious perfumes and harmony, everything attains plasticity and life, movement and speech, even tones seem to become incorporate; everywhere appear the most wonderful visions. The symptoms set in in the following order: 1. Feeling of pleasure. 2. Disruption of the continuity of thought. 3. Errors in regard to space and time. 4. Development of hypersensitivity of the ear. 5. Fixed ideas, delirium. 6. Irresistible impulses. 7. Illusions and hallucinations."

The American Bayard Taylor had an experience of cannabis while on his travels in the East. On one occasion he took a teaspoonful and a half of a liquid extract—he neglects to state of what strength—and this was his experience when the effect of the drug became manifest, as described in his "Pictures of Palestine," published in 1855: "The sense of limitation—of the confinement of our senses within the bounds of flesh and blood—instantly fell away. The walls of my frame were burst outward, and tumbled into ruins; and without thinking what form I wore—losing sight of all idea of form—I felt that I existed throughout a vast extent of space. It is difficult to describe this sensation or the rapidity with which it mastered me. In the state of mental exaltation in which I was then plunged, all sensations as they rose suggested more or less coherent images. They presented themselves to me in a double form: one physical, and therefore to a certain extent tangible; the other spiritual, and therefore revealing itself in a succession of splendid metaphors. My curiosity was now in a way of being satisfied; the spirit (demon, shall I not rather say?) of Hasheesh had entire possession of me. The thrills which ran through my nervous system became more rapid and fierce, accompanied with sensations that steeped my whole being in unutterable rapture. I was encompassed by a sea of light, through which played the pure harmonious colors that are born of light. While endeavoring in broken expressions to describe my feelings to my friends, who sat looking upon me incredulously—not yet having been effected by the drug—I suddenly found myself at the foot of the great pyramid of Cheops. The tapering courses of yellow limestone gleamed like gold in the sun, and the pile rose so high that it seemed to lean for support on the blue arch of the sky. I wished to ascend it, and the wish alone placed me immediately upon its

apex, lifted thousands of feet above the wheat fields and palm-groves of Egypt. I cast my eyes downward, and, to my astonishment saw that it was built not of limestone, but of huge, square plugs of Cavendish tobacco. The most remarkable feature of these illusions was that at the time I was most completely under their influence, I knew myself to be seated in the tower of Antonio's Hotel in Damascus, knew that I had taken hashish, and that the strange, gorgeous and ludicrous fancies which possessed me were the effects of it."

Illusions Regarding Hashish.

In the hallucinations of hashish we discover the same limitations to the confines of experience that are found in our ordinary dreams, and in the wildest flights of our imagination, no matter how bizarre either may be. The elements are the same in each, only the combinations differ and the perceptions of the imaginary world are intensified. He who would seek in hashish a passport to a land utterly removed from the bounds of our mundane sphere, who would visualize a four-dimensional universe, with all it impies, would be disappointed. Baudelaire, who has given us an account of the effects of hashish as observed in himself and in others, speaks appositely on this point. "What does one experience What does one see?" he says in *Les Paradis Artificiels,* "Wonderful things, is it not so? Extraordinary spectacles? Is it very beautiful? And very dangerous? Such are the questions which are generally put to the adepts by the inexperienced with a curiosity mingled with fear. One would say a childish impatience to know, such as is exhibited by those who have never left the corner of their fireplace, when they find themselves in the presence of a man who has returned from strange and unexplored countries. They picture to themselves the intoxication of hashish as a land of wonders, a vast theatre of prestidigitation and juggling, where everything is miraculous and unforeseen. This is a prejudice, a complete mistake. In the intoxication of hashish there is nothing of the kind. We never pass out of the realm of the natural dream. The intoxication, throughout its duration, is nothing, indeed, but a vast dream, thanks to the intensity of its colors and the rapidity of its conceptions; but it retains always the peculiar tonality of the individual. The man has wished to dream, the dream possesses the man; but the dream is always the son of its father. The hallucinated spectator taxes his ingenuity to introduce the supernatural into his life and his thought; but he remains, after all, the same man augmented, the same number but raised to a high degree. He is subjugated, but to his misfortune; he is but himself, that is to say he expresses in his vision the dominating trait of his character. He has wished to play the angel, he is become a beast, a beast for the time very powerful, to be sure, if one can designate as power an excessive sensibility without the power of moderating it or profiting by it."

The question has frequently been raised as to whether the long continued use of hashish leads to permanent pathological conditions analogous to those produced by opium, and the question has been answered by both yes and no. Dr. Harrington Sainsbury, in his interesting book, "Drugs and the Drug Habit," expresses the following conclusive observation based upon experience: "The habit of Indian hemp, long continued, produces a chronic intoxication, marked by enfeeblement of the character and of the mind, together with a general depression of the physical powers. The victims become cachectic, and they are said to be liable to dropsy and to diseases of the lungs. There is a general impression that the continued use of hemp tends toward insanity of the maniacal or demented type.

"The habit does not seem to grow with the rapidity of the opium habit, a given quantity maintaining its effect for a longer period, and this enables a custom of small doses to prevail very extensively in the East without any apparent serious detriment. This is, of course, a relative advantage, but it only amounts to this, that hemp is less harmful than opium and morphia; that it may create a most pernicious habit is quite certain, as also that it tends to outgrow control upon a great scale."