The Sacred Plant of Ancient Egypt

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My personal recollection of Albert Hofmann is an after-dinner conversation with him at his comfortable Basel home in the late 1960s, during which I asked whether higher (butyl) or lower (methyl) groups in lysergic acid diethyl amide (LSD) would change its psychopharmacological properties. It was then I learned to my keen interest that the two ethyl groups were optimal, and that an aliphatic alteration in either direction would *lessen* potency. Later, it became apparent (Shulgin et al. 1978) that such structural optima characterized other important psychoactive molecules, for instance an extraordinary substance (Fig. 2, item 6) discovered by a Mack team in Germany in 1914, but never seriously noticed until after 1950.[1]

Albert Hofmann is one of the pioneers of ethnobotany in our times, having first discovered LSD or lysergic diethyl amide as well as its relation to the sacred morning glory seed *(ololiuqui)* of the Nahuatl peoples; and was also the first to synthesize psilocybin, the active principle of mushrooms revered in the cultures of various Central American and other peoples, specifically the species *P. psilocybe* and *P. cubensis* among others. He also contributed importantly to study going well toward demonstrating the presence of LSD-like alkaloids in the ergot-bearing grasses or grains used in the Eleusinian Mysteries of old Greece (Wasson et al. 1978, 1984)

The Legacy of Egypt

In this paper, we shall take the search back to the oldest sophisticated culture known in recorded history: Imperial Egypt, which was already ancient when Chinese shamans were just beginning to scratch the I-Ching oracles on burnt bones, and whose high art and theology (already so old that the language of the Fifth Dynasty Pyramid texts is archaic) antedate Sumer. Despite abortive attempts to denigrate Egypt's magnificent heritage, one need only compare texts and art of contemporaneous Sumer and Egypt to see the profound difference in sensitivity and artistic achievement.

[1]Its dextrorotatory form (+17.2° in ethanol) is much more psychoactive than the levorotatory isomer, showing that helical formations play essential roles in psychopharmacology.

Since the Orphic and Eleusinian doctrines are traced even by classical Greek writers to Egypt — home of the teaching that the soul's immortality is assured through appropriate and (literally) mysterious transformation of the psyche — it is logical to enquire whether ancient Egypt had a sacred plant deployed in that process. We know from the Sumer-Babylonian cuneiform tablets that the hero Gilgamesh sought such a plant, found it, and was then defeated at the last moment in his quest — reminding us of the stories of Isis and the baby son of the King and Queen of ancient Phoenicia, who also lost the immortality Isis could have conferred when the rites were interrupted through the queen-mother's fears (Demarest 1972), and that Dante in referring to that memorable legend used for the first time in modern language the remarkable word *trasumanar*, to "transhumanize."

Degenerate religions are based on a "God" (or gods) of terror, inspiring fear. The highest world religions without exception have taught that the more divine a being is, the greater the love we receive from that being — and that the highest divine state of consciousness would appear to us as ineffable and infinite love — an ocean of Love-Flame so to speak. In the light of this principle, the most profound theology of Ancient Egypt stands very high on the scale. Humans have the potentiality of becoming god-like, and are ultimately welcomed into the divine community with the tenderest love by Divine Mother and Father images. Ancient Egyptian doctrine was never absurdly and one-sidedly sexual (as is the tendency in the narrower, over-masculinized Judeo-Christian context) but always included the feminine aspect of divinity, Goddess with a capital G.

Indeed, the Roman Catholic prominence of the Virgin as a Goddess figure, *Regina Coeli*, Queen of Heaven springs directly from Isis-Sôthis via the Apocalyptic vision of Her standing on a moon, crowned with the sun, and a rainbow-like arc of twelve stars over he head. The very title *Regina Coeli* was taken over word for word from the large community in Rome who venerated Isis into Christian times — a title that in turn was simply the Latin translation of the Ancient Egyptian nwb-t pt, Queen of Heaven, one of the Great Goddess's titles. There were also two sets of second archetypes, that later in Christianized form became the fourteen stations of the Cross, as seen today on Roman Catholic votive lamps showing the above-described figure of the cosmic Virgin-Goddess with the two sets of seven Stations circling the lamp above and below her in two zones.

Since Isis-Sôthis was par excellence the agent of immortalization of the soul — of that metamorphic transformation that changed the larvalpupal (cocoon or mummy-swathe) form of Osiris into the winged (deification) Horus-imago — it is natural to seek some connection of this

process with the twelve stellar archetypes which in Ancient Egypt are called the "Twelve Star Gods". For it was She who was their Queen, as Horus was their Director.

The idea of a metamorphic destiny for humanity existed not only in Ancient Egypt and China (by a remarkable diffusion to the theurgic Taoism —imported from "The Jade Kingdom of the Western Moon" — that climaxed in T'ang times) but even manifests itself in modern Western culture. As early as 1922, the keen social critic Lewis Mumford wrote in a remarkable visionary passage which we abridge here:

> In the midst of the tepid and half-hearted discussions that continue to arise out of peace conferences, let us break in with the injunction to talk abc fundamentals — consider Utopia!
>
> The world within men's heads has undergone transformations which have disintegrated material things with the power and rapidity of radium. I shall take the liberty of calling this inner world our idol. I use it to stand for what the theologians would perhaps call the spiritual word in terms of which people pattern their behaviour.
>
> But if the physical environment is the earth, this world of ideas corresponds to the heavens. It is by means of the idle that the facts of the everyday world are brought together and assorted and sifted, and a new sort of reality is projected back again upon the external world to provide a condition for our release in the future, to change it so that one may have intercourse with on one's own terms.
>
> This utopia of reconstruction is what its name implies: a vision of a reconstituted environment which is better adapted to the nature and aims of the human beings who dwell within it than the actual one; and not merely better adapted to their actual nature, but better fitted to their possible developments.
>
> By a reconstructed environment I do not mean merely a physical thing. I mean, in addition, a new set of habits, a fresh scale of values, a different set os relationships and institutions, and possibly an alteration of the physical and mental characteristics of the people chosen.
>
> — Mumford 1922

Bold as this passage still seems, it pales in comparison with the clarity of the Ancient Egyptian prototype —- nothing less than the quest and prescription for the release of humanity's nascent divinity, in turn enabling the rejoining of a world and an already functional community of highly advanced being who welcome the newcomers in joyous puissance.

The principal agent of their transformation was "the divine food", which like what some super royal jelly could do for bees, would simulate metamorphic neurosecretory organs in the human central nervous system and enable a superbiological process to take place to mature a higher model body than our present molecular one, a body that can transcend the dissolution of the molecular body at death and is capable of furnishing a sensorium to perceive and function in a world freer than the transient three-dimensional one in which we are currently confined. This was the ageless promise that Ancient Egypt held for most explicitly. And this is the essence of any religion worthy of the name that is to be more than a mere excuse for the seizure of societal power and control.

Theurgic Use of Divine Plants

Still closer to the truth of what may be possible for humankind comes the summer statement of Albert Hofmann (emphasis ours):

> Meditation begins at the limits of objective reality, at the farthest point yet reached by rational knowledge and perception. Meditation thus does not mean rejection of objective reality: on the contrary, it consists of a penetration to deeper dimensions of reality. It is not escape into an imaginary dream world; rather it seeks after the comprehensive truth of objective reality… As a result of the meditative penetration and broadening of the natural-scientific world view, a new, deepened reality consciousness would have to evolve, which would increasingly become the property of all humankind. This could become the basis of a new religiosity, which would not be based on belief in dogmas… but rather on perception.
>
> The characteristic property of (higher psychoactive substances) to suspend the boundaries between the experiencing self and the outer world in an ecstatic, emotional experience, makes it possible with their help, and *after suitable internal and external preparation* … to evoke a mystical experience according to plan, so to speak … Accordingly it seems feasible that in the future, with the help of (such substances), the mystical vision crowning meditation could be made accessible to an increasing number of practitioners… I see their (i.e. such substances) importance in the possibility of providing material aid to meditation aimed at the mystical experience of a deeper, comprehensive reality. Such a use accords entirely with their essence and working character… as sacred.
>
> — Albert Hoffmann, 1979:207-209

All this brings us to a key point in Ancient Egyptian ethnobotany: ingestion of the sacred material was designed not merely to give "a high" but to trigger and impel the *metamorphic process* leading to a theurgic transmutation of human nature into apotheosis, in which the previously merely mortal is to be, using Meister Eckhart's graphic word, *vergottet*, i.e. "begodded". But that process, overseen by cosmic regents, the living archetypes of stellar powers, had to be *resonantly timed* with those powers. (For other details, the reader is referred to the recently published *Lion Path* (Musaios 1985) in which are deciphered the meanings of the Egyptian hieroglyphs and recondite theological passages in this regard.) Suffice to to quote some key passages from the *Book of Coming Forth Into Day* (miscalled the *Totenbuch or Book of the Dead*), from utterances 64 and 140, Brit.Mus. Papyrus No. 9900, sheets 23, 24, and Papyrus No. 10,477, sheet 30:

> I am Yesterday and Tomorrow, and have power to regenerate myself… the hitherto closed door is thrust open… and the radiance in my heart hath made it enduring. I can walk in my new immortal body… and go to the domain of the starry gods… now I can speak in accents to which they listen, and my language is that of the star Sirius.

But to attain the awareness of these star powers and benefit from them rewired a sedulous and rhythmic preparation of consciousness (cf. Coffin Texts 468: I embrace Sôthis in her hours) by means of resonantly timed ingestion of a sacred plant substance (cf. Fig. 1). It is a valuable principle in investigating Egyptian theology that later or even corrupted magical texts often enshrined bits and pieces of much older and more sacred texts, long venerated and held to be of great power even after their original meaning was partly or wholly forgotten. The Harris Magical Papyrus, written down in hieratic characters in 211 B.C.E., provides an excellent illustration of this principle; for in a spell to protect against evil beings' attacks, we find the amazing line shown in Figure 1 and translated and discussed in the caption.

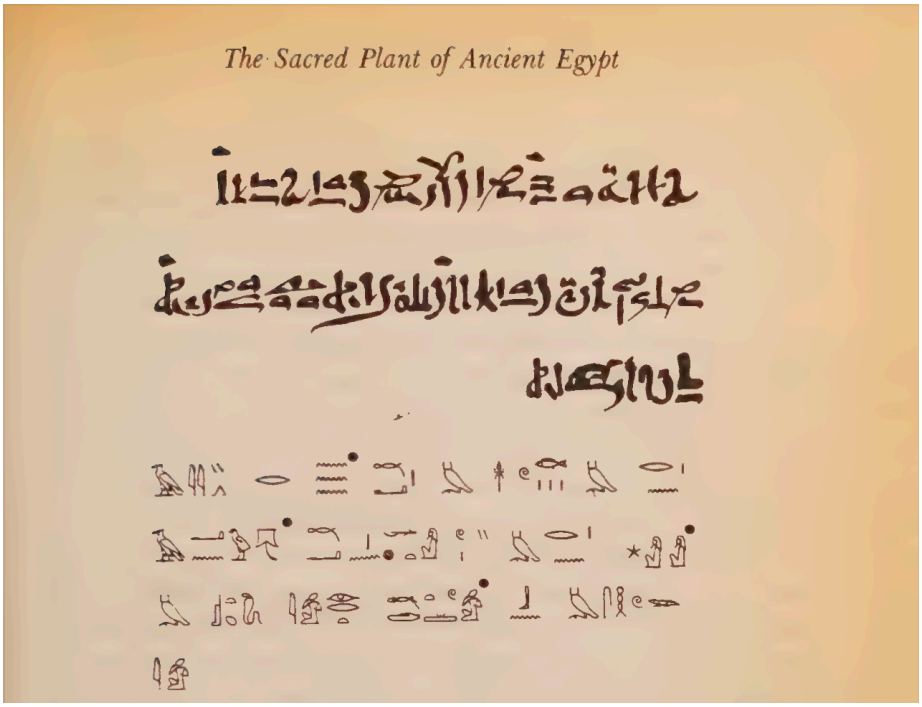


Figure 1: An important hieratic text (reads from right to left as in Arabic), line 11, column VII of the Harris Papyrus 501, dated 311 B.C.E. by its colophon (British Museum Papyrus No. 10.042), together with its hieroglyphic transcription emended from Budge (1910) by the author, printed to read: from left to right as in English. The translation of the key portion, the first two complete phrases (between the first and second, and second and third bullets), which preserves much older doctrine, reads: *A full measure of holy abdu fish* (which pilot the sacred boat carrying the divine egg-embryo) *to lead the speech of the ape-guides* (baboons, passing messages by mimicry, symbolized the reverberations of divine guidance); *and a like measure of the divine shrubs* (khat) *to prompt the speech of the star gods.* This passage is multum in parvo. The holy fish express the power of water; the apes' voices, of air; the shrubs, of earth; and the star gods, of fire — the four "elements" representing functional states of substance rather than objects. The holy plant and the star powers were one half of the process; the attention to one's higher self and the consequent "hearing" of the transmitted inner guidance were the other and just as essential half of the regenerative process. See *The Lion Path* (Musaios 1985:*passim*, and especially 117-120). Note that the glyph for *khat* is clearly shown in the second line of both the hieratic and hieroglyphic texts in the figure.

Thus, the sacred plants of Ancient Egypt, as in other later cultures, were regarded as food for the gods. Let us pursue the hint. We wind in the hieroglyphic texts explicit phrases (cs. Musaios 1985:84-86) pertaining to this matter: terms like "the sacred laboratory of Osiris", where plant principles were ground with mortar and pestle, weighed, and extracted; or "cuttings from the shrub from the lands of the gods", the nome or district of *Sopdu*, a name related to the resurrecting power of Horus in the world after death, or in this body before its death. Geographically, this district covered Western Arabia and the East African coastlands between the Nile and the Red Sea, i.e., Abyssinia (Ethiopia) or ancient Nubira. We read too o the "substance from the land of the gods", also called celestial food and essence of being (cf. Musaios 1985:84-85).

All that remains in living language is the Egyptian word *kht*, as in the hieratic papyrus already quoted, and in other places with tree or shrub and twig determinative, the two sometimes found combined. Undoubtedly, there was a specific name, now lost to us, but the plant was so essential to theurgic practice that it came to be called "*the* shrub" or "*the* tree", i.e. *khat*. The word was preserved in Nubia as the stele used Amharic *khat* (čat) (Leslau 1976) and in Kenya as the *khat* tree, the active principle extracted from which is called *mira'a* in Swahili (corrupted from the *m'iraj*, the mystical night journey, angel-guided, of Muhammad through the celestial regions to the very Throne of Allah). Among the Kikuyu, the principal people of Kenya, the plant principle is known as *murungu*, and the chewing of leaves and the brewing of them or of the flowers in tea, is still widely done in Arabia, Kenya, and by Galla tribesmen and muslims in Ethiopia.[2] Indeed, the fame of khat passes straight across Africa to Angola where, in the Lunyaneka language, it is known as *otyibota*.

Khat *(ht)* is an old word even in ancient Egyptian, going back to the Pyramid texts (e.g. Unas, line 555). It is hieroglyphically written as [ed: the author's original hieroglyphs, resembling twigs, cannot be typeset] or even as only the determinative and means twig, tree, shrub, branch, and by attribution, pole, staff and wood. With added determinative, the same word can also mean a heap or mound, and in particular the sacred staircase on the top of which Osiris sat enthroned (Musaios 1985:57) as each departed soul passed before him to have its posthumous fate decided (see, for example, the *Pr-mhrw*, miscalled "the Book of the Dead'', since its title means (the Book of) the Coming forth Into Day, utterance 22).

[2]Or what is left of it, since the locust-plague of totalitarianism seized it rapaciously, and expectedly rendered it the land of famine it is today.

Some Alkaloid Chemistry

The tree/shrub, which attains a height of 6-10 feet, is known in Western botany as *Catha edulis*, first identified and named to occidental science by the eighteenth century botanist-explorer Pehr Forskal (1732-1763), who was born in Helsingfors (Helsinki), he having named it after its ancient name of Khat (latinized to Catha) when he visited Arabia and Egypt, leaving behind his manuscript *Flora aegyptiaco-arabuca sive descriptiones plantarum quas per Aegyptum inferiorem et Arabiam felicem detexit*, which was posthumously edited after his untimely death by Carsten Niebuhr and published at Copenhagen by Méller in 1775. In this now rare work, Forskal identified and named for European botany not only the evergreen *Catha edulis*, but also the related species *Catha spinosa*, the "Catha" being simply a latinization of the ancient Egyptian word *ht* for a tree or woody substance that had been taken over into Arabic and still survives in Arabian and East Africa as *khat*, *kat*, or *qat* in various spellings. The first and most ancient form is reflected in the Amharic word for the plant at, the first letter being a palatalized and glottalized ejective (in which the flow of air is shut off by the glottis and then forcibly expelled through the constricted palate) (Leslau 1976:xiii).

In 1930, its perhaps most abundant alkaloid — cathine — was identified by O. Wolfes as *d*-norisoephedrine, which is a sympathomimetic and can produce states of euphoric and nonordinary consciousness. It is a substituted phenylmethylamine with a molecular: weight of 151.1 and, as the name-prefix indicates, it rotates a beam of light clockwise as seen by the viewer at the far end when the beam traverses the substance in solution. For a solution in ethyl alcohol, the specific rotation is +32.5°.

Since fresh *khat* leaves are known to be more psychophysiologically effective than the separate known alkaloids of the plant, there must be as yet unidentified principles. Besides *d*-noriso-ephedrine (cathine), *Catha edulis* contains *l*-ephedrine, *d*-isoephedrine, an as yet unidentified alkaloid cathinine, as well as cathidine A, B, C, and D, the last having been isolated as a tetra-ester of the hexa-alcohol cathol ($C_{15}H_{26}O_7$) (Cais et al. 1964). This plant and its principles have attracted little attention in Western ethnobotanical literature[3], yet it is on pharmacological record that even ordinary ephedrine in high doses can produce unusual visual, auditory, and tactile perceptions; and *d*-norisoephedrine (also less perspicuously called "pseudo" instead of iso) is a more powerful central ner-

[3]Although after the author's invited lecture on June 18, 1985 at the Esalen Institute, where the ancient lineage and ethnobotanical importance of *Catha edulis* were first announced, interest has augmented considerably; indeed, the well-known psychopharmacological chemist Alexander Shulgin, following the author's suggestion to him at Esalen, was at last report working on three plant specimens.

vous system stimulant than ephedrine. There is also the related detone cathone.

In Figure 2, one of the chief alkaloid components of the khat leaf is shown in relation to affiliated molecules and neurotransmitters, all rooted in amino acid structures fundamental in the genetic coding (cf. Figure 3) of both plant and animal life.

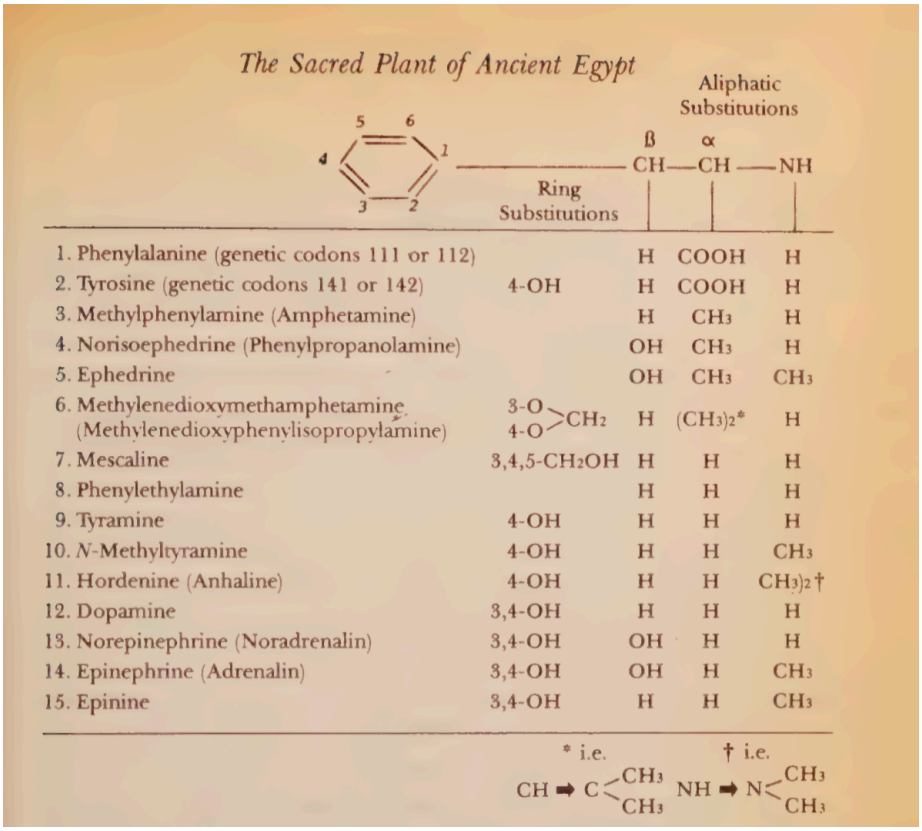
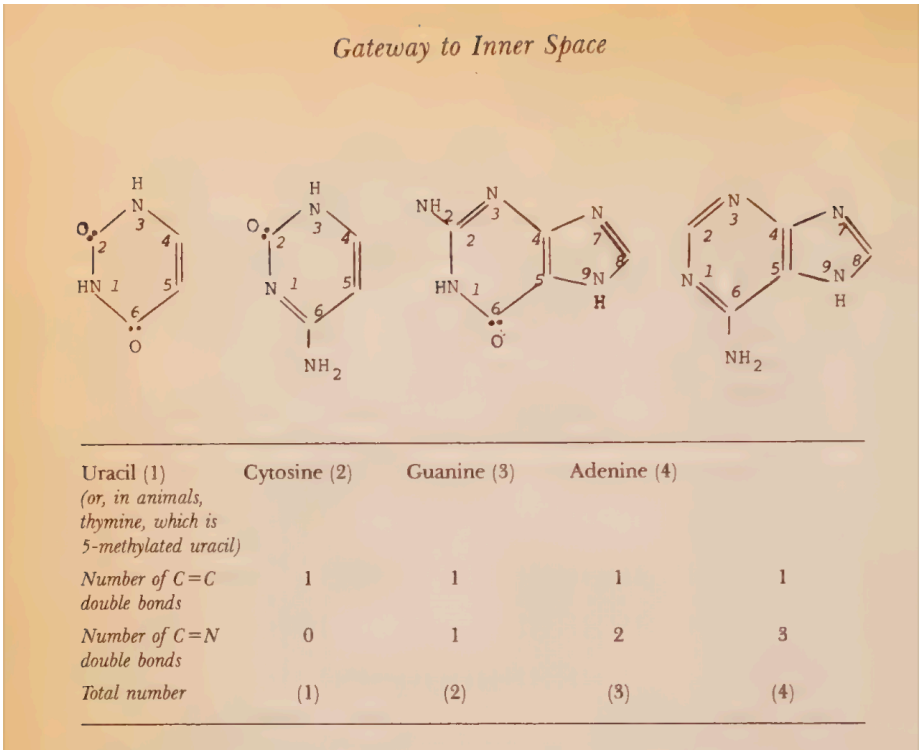


Figure 2: The structure of the essential amino acids (lines 1 and 2) from which lion-type molecules can be biosynthesized: lines 3-11 are thereby biosynthetically derivable psychoactive alkaloids and amines; 12-14 are structurally affiliated neurotransmitters, and 15 is an alkaloid almost identical with adrenalin. The naturally occurring amino acid phenylalanine has the genetic codes 111 or 112, where 1 here denotes uracil (or thymine in animals); 2, cytosine; 3, guanine; and 4, adenine, these digits being the numbers of CC and/or CN double bonds in the nucleotide (see Figure 3). Its most closely related amino acid is tyramine (line 2). These two principal amino acids serve as the biosynthetic precursors of phenolic plant alkaloids and related substituted phenylethylamines, many of which are powerfully psychoactive molecules. The figure, which comprises fifteen molecular structures, portrays graphically the close affiliations between some important amino acids, neurotransmitters, and plant alkaloids like ephedrine and phenylpropanolamine or noriso- ephedrine (also called norpseudoephedrine), one of the principal alkaloids of the khat tree, *Catha edulis*.



Uracil (1) *(or, in animals, thymine, which is 5-methylated uracil)*	Cytosine (2)	Guanine (3)	Adenine (4)	
Number of C=C double bonds	1	1	1	1
Number of C=N double bonds	0	1	2	3
Total number	(1)	(2)	(3)	(4)

Figure 3: The four nucleotide bases for the genetic code in plants arranged in order of their numbers of high energy (i.e. CC or CN) double bonds (the oxygen double bond is weaker, not in a ring, and not nearly so structurally important). Note that complementary base pairs in the double helix (Uracil + Adenine = 1+4 and Cytosine + Guanine = 2+3) sum to the same energy total, 5, and that is why they are complementary. This succinct method of classifying these genetically primal molecules by their potential energy levels was first announced by the author in a publication of the national Research Council of Italy (Musès 1965). It enables a mathematically concise and richly informative notation for the genetic code. Thus, two essential amino acids which furnish biosynthetic substrates for many plant alkaloids (including the lion-type psychoactive molecules) are phenylalanine (coded 111 or 112) and lysine (444 or 443). It is at once apparent, since 111 + 444 = 112 + 443 = 555) that these two biosynthetically primal amino acids form a complementary pair. Similarly, another such biosyntheticalfy important set, phenylalanine and tyrosine (141 or 142) are complementary in the central members of their codon triplets and identical in their first and third codon members.

The Three Paths

Far beyond technology, the real wonders of the world will continue to elude those who in ignorance disregard realities beyond the narrow bounds of their unaware preconditioning — and in particular, the reality of human metamorphosis. Ancient Egypt did not ignore that reality, however, and left a teaching based on three paths, each with its own fate and pharmacopoeia.

First, and most common, are the medicines of ordinary bodily therapy and their related path of birth, growth, dissolution, and eventual re-cycling of the molecular body we all know so well that many of us make the mistaken assumption that it is all there is to know of what being a human being means. That viewpoint constitutes what Egypt called the hippopotamus path and its related "hippo medicines" of ordinary therapy, which are admittedly very useful. Then there is the path *between* molecular-body re-cyclings that leads through the interincarnational realm called the *Duat* in Egyptian doctrine, the *Barzakh* or inter-state in Islam, and the *Bardo* in Tibetan Buddhism — roughly equivalent to the Dantesque *Purgatorio*, the place of cleansing. In Egypt, this path was called that of the divine cow, who ruled the heavens that nourished all things on earth; and it too had its own pharmacopoeia of "cow medicines" that could lead one, even during this life, into *Bardo*-type experiences — which could grant therapeutic visions or, in those not ready for positive therapy, destructive nightmares. It is interesting that the important "cow molecules", which involve richly visionary experience, contain an indole ring: DMT (Dimethyltryptamine) harmaline, ibogaine, LSD (Lysergic acid diethylamide), and psilocybin.

Finally, there was the lion path and its pharmacopoeia, those special elixirs that accelerated the metamorphic process towards an other than merely molecular type of body, a body able to function in a higher kind of objectivity, comprehending more than the quinto-sensory world and the "real-dream world of the *Duat/Barzakh/Bardo*. The lion path could prepare one to pass through the Duat after molecular dissolution, into a more enduring and more lastingly happier sphere. Then the Duat becomes what its ancient etymology prefigures: a place of dawning, that leads beyond itself as the dawn leads out of the night and into the day.

Catha Edulis *(Khat)*

The sequence of these three paths and their distinct character[4] were symbolized by the tradition of a threefold choice of Osirian couch in Ancient Egypt, almost miraculously preserved for us in Tut-ankh-amun's relatively undisturbed tomb (Fox 1951). Incidentally, the word "tomb" was not known in our nihilistic sense, being called in Egyptian the "chamber of transformations". The unique lion-path pharmacopoeia, providing functions to stimulate the human metamorphic process, and some of its bio-chemical roots and fruits, are exhibited in Figure 2. The old Egyptian usage devolved around item 4, along with related and as yet little investigated alkaloids found in the young leaves and branch shoots of *Catha edulis* as well as in its flowers (called "flowers of paradise"' in Yemen), from which a restorative tea is still made in Arabia. Details on the contemporaneous khat tradition are available, for example, in H. Hofmann et al. (1955), S. Prarirokh and E. Shellard (1962), and O. Sierung (1957).

The tradition of khat passed from the Ancient Egyptian into the Islamic pharmacopoeia. Extract of khat was, for example, prescribed by an able thirteenth century Islamic physician, Naguib ed-Din, to combat depressed states. And the well-known pseudonymous author, Isak Dinesen (the Baroness Tania von Blixen) herself used the leaves of the khat tree to gain creative vision and insight.

We have now resurrected what was well one of the most sacred plants in Ancient Egyptian culture and religious practice. The ancient Egyptians perhaps also knew of ergotized grass (tellingly called in French *l'ivraie*) which, as a friend and correspondent, the Egyptologist Jean-Claude Goyon, writes, appears to have been connected with *li'vresse d'Hathor*, the intoxication of Hathor, a ceremonial trance-state conducted by priests and priestesses of Isis-Hathor (Goyon 1985).

However, it is not a grass (much less a mushroom) to which the ancient hieroglyphic and hieratic texts refer (see Figure 1) when they speak of the divine plant that can manifest the gods and, in particular, the star gods. In these connections, the glyphs refer unmistakably to the leaved branches of a shrub or tree. The single candidate is the Khat tree, Catha edulis Forsk., now identified as the sacred plant of Ancient Egypt.

At the end of his invited foreword to the 1980 printing of the authoritative reference work by R. Schultes and A. Hofmann, *Botany and Chemistry of Hallucinogens*, Heinrich Klüver, the prominent psychologist and expert on mescaline, notes (p. xv) that "The well-nigh frenetic research activities in the field of psychoactive drugs have frequently

[4]First suspected by Alexandre Piankoff, whom the author met in 1957 in Cairo, although Piankoff did not surmise their full significance.

been pursued without considering recent advances along ethnopharmacological and ethnobotanical lines." By the same token, Schultes himself, specializing actually in Amazonian plants in Columbia (where he lived twelve years), does not have *kat*, *khat*, or *Catha edulis* in his index. And even Albert Hofmann mentions it only once in another book (Hofmann 1979), and then merely in a passing citation from the work of a researcher far ahead of his time, Ernst von Bibra, who briefly noted *kat* in 1855 under the casual rubric of "pleasurable" substances in the train of coffee and tobacco. Hofmann would have relied on Schultes to point it up ethnobotanically, but the latter remained unaware of it and hence Hofmann left it uninvestigated. It is time the hiatus is filled.

Another prominent writer, however, this time in the field of literature, was not at all unaware of *khat*. We refer again to the Baroness Tania von Blixen, better known by her nom de plume of Isak Dinesen. It is clear from Errol Trzebinski's fascinating biography[5] of the Baroness' high-born British lover, Denys Finch Hatton, that she used *khat* regularly to attain the creative states in which she wrote many of her stories; and one of them, "The Dreamers', specifically refers to it as *miraa*.

One looks in vain through all the plethora of standard (and non-standard) works on hallucinogens and ethnobotany since the 1950s for any mention, much less discussion, of the plant-shrub *Catha edulis*. That this plant has ancient cultural roots is attested by the extant prescriptions of it for emotional depression dating back to thirteenth century Islam — prescriptions that attest a far more ancient heritage. *Khat*-flower tea finds also old lineage in Saudi Arabia, which overlies the Ancient Egyptian nome or district called Sopdu, sacred to the deity of the same name, who is identical with Horus-in-the-Duat, Horus-Sokar, or Horus-of-Sôthis — the dark[6] counterpart and companion' of Isis-Sôthis, whose stellar form was the brightest of all our stars, Sirius.

The Guiding Vision

These linkages more than hint at an ancient astronomical awareness (preserved in the Egyptian-influenced Dogon tribe, as the work of ethnologists Germaine Dieterlen and Marcel Griaule has shown) of the "dark companion" star of Sirius discovered in modern times by Alvan G. Clark in Massachusetts on January 31, 1862, following the calculations of his colleague, Truman Safford. It was later (1960) established by van den Bos, working in South Africa, that the very dense Dark Companion of

[5]A book (*Silence Will Speak*) used as a source for the splendid 1985 film "Out of Africa', based on the life of the Baroness von Blixen.

[6]Black-and-gold-painted falcon-mummy cases were his icons.

Sothis circles her once in almost exactly fifty (50.09) years, their next nearest approach or periastron occurring in April, 1994.[7]

But for the essential human fact in all this, one must return to the earliest vision of Albert Hofmann, to what may be called the epitome of his spiritual autobiography:

> While still a child, I experienced … deeply euphoric moments on my rambles through forest and meadow. It was these experiences that shaped the main outlines of my worldview and convinced me of the existence of a miraculous, powerful, unfathomable reality that was hidden from everyday sight.
>
> Intrigued by the plant world since early childhood, I chose to specialize in research on the constituents of medicinal plants … In studying the literature connected with my work, I became aware of the great universal significance of visionary experience. It plays a dominant role, not only in mysticism and the history of religion, but also in the creative process in art, literature, and science.
>
> — Hofmann 1979, 1983

Here are the roots of a perennial value system, for without a sense of the sacred there is no valid approach to any psychoactive substances and their point is inevitably missed. Ancient Egypt knew that well, and can still point the way to nothing less than human metamorphosis.

[7]For more information on the interesting resonances between that periastron and the perihelion and rare crossing of Neptunes's orbit by Pluto, together with connections to Ancient Egyptian doctrine, see *The Lion Path* (Musaios) 1985: 21,77-82.