

Bread of Heaven or Wines of Light: Entheogenic Legacies and Esoteric Cosmologies[†]

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Abstract—This is an article in two parts. The first part discusses current research in psychoactive preparations of ergot in various religious systems with a particular emphasis on Persian, Greek, Jewish and Islamic sources. Certain poems, hadith, and scriptural writings suggest an entheogenic heritage to various ancient sects that exerted and received philosophical and ritual influences over large distances and over time. Particularly, some esoteric Shia and Sufi writings are highly suggestive of a “celestial botany” that employed psychoactive plants for initiatory and ritual purposes. The second part will address current research methods that render ergot alkaloids nontoxic and entheogenic, a most crucial part of the discussion in the absence of a modern bioassay. This is essential, as without a chemical reality to support that such a preparation of entheogenic ergot is possible, all ergot theories concerning mystery traditions would remain largely speculative.

Keywords—entheogens, ergot, Islam, Shia, Sufi

Alas! the forbidden fruits were eaten,
And thereby the warm life of reason congealed.
A grain of wheat eclipsed the sun of Adam,
Like as the Dragon's tail dulls the brightness of the moon.

Rumi: Masnavi I Ma'nav (Whinfield 1979)

The academic world has been slow to acclimate themselves to the paradigm shifting research of scholars such as R. Gordon Wasson, Albert Hoffman and Carl Ruck. While their research is by no means orthodox, in the context of the origin of religions they are increasingly cited and discoursed upon by other classical scholars in a more accepting or at least familiar manner. These scholars have traced a shared cosmological and entheogenic influence from diverse cultures in the ancient world. This common heritage of mystery religions—an enshrining of the theophanic ecstasy of entheogens—centers on the safe use of potentially deadly

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plants and fungi. One of the most elegant theories involves the sacred use of ergot in rituals that might extend from Egypt to Greece, India and all over the ancient Middle East, surviving even into the Middle Ages. The first part of this article will follow the extended influences of these ancient cults into Islamic groups that are heir to the converging Gnostic traditions. While all these arguments are poetically convincing, proof has remained elusive, with skeptics citing the lack of a successful bioassay of any entheogenic preparation of ergot. The second part of this article (*Ergot as Entheogen*, written by Peter Webster) will address some of the current theories on how ergot could be consumed with relative safety and entheogenic effects, while describing what may well be the most plausible method.

ERGOT IN GREEK, JEWISH AND ISLAMIC GNOSIS

The many varieties of the Old World entheogenic theories of religion extend from the proto-Indo-Europeans and their roving mushroom cults to the equally fungally inspired mysteries of the ancient Greeks. It is these Greeks

who seemed to have enshrined the fungal infection of ergot into their highest religious and mythical representations, as discussed at length by scholars such as Wasson, Hofmann and Ruck (1992, 1978).¹ Calvert Watkins (1978) traces the ritual complex of these "famous grains" through Indo-European influences that extend from Hittite cults to Homeric and Eleusinian mysteries. Mott Greene (1992), disagreeing with Wasson, identifies the sacrament as the activity of the Soma function from a variety of ergotized grains mixed with milk and curds and strained with sheep's wool. Other scholars, such as Dan Merkur (2000), have then endeavored to trace this same ecstatic technology of ergot intoxication to the heart of the Judaic mystery traditions.²

Evidence supports the claim that ergot was known and employed in a ritual context in various mystery cults that stretched across the ancient world. These associations remain in the Jewish material of the Midrash and apparently continued to exert cosmological influences in the form of specific doctrines and theologies in the region. The many splintered factions and cults that preserved such esoteric traditions would be exemplified in a group like the Manicheans who have been linked with entheogenic rites (Ruck, Staples & Heinrich 2001). The mystical tenets and practices of the Manicheans, which Eisenman (1998) exhaustively demonstrates is the crucial link between the old Jewish mystics and the esoteric Muslims, are consistent with many traditions that were uniquely Shia. It appears that the early Shia, and later their direct spiritual heirs the Sufi, had retained either the ecstatic technology of ergot or a sacred reverence for the memory through both indigenous Persian traditions and Greek and Jewish mystery schools.³ As with Wasson's identification of the Soma as *Amanita muscaria*, the ergotized grain theory is attractive but the identification of an entheogen at the foundations of the given rites might prove the greater contribution.⁴

From agrarian cults of the "dying gods" to the theological implications of plants that both blessed and cursed, the cherished staple of grains would be expected to retain a complex symbolic dimension that shaped agrarian world orientation. The subtle difference between food, poison, and entheogen would no doubt have furrowed the brow of the earliest shamans and priests, who at first made use of them, then perhaps restricted this use to the elite. It is known that as early as the sixth century BC the Assyrians used ergotized rye as a chemical weapon to poison enemy wells, while its use in midwifery was also apparently known, lending further associations to this plant/fungi that could be homeopathically employed for abortions or possibly even as an aphrodisiac (Iverson 2001).⁵ The article "Mixing the Kykeon" by Webster, Perrine and Ruck (2000) rekindled an interest in the admittedly speculative field of esoteric technologies for preparing ergot as an entheogen for ritual use. Several poet/mystics have left subtle references that may indeed allude to a safe and religious use for ergot.

The short verse from the Persian poet Jalaluddin Rumi at the beginning of this article, identifying wheat as the forbidden fruit of Eden, generates interpretative exegeses where translators inadequately try to explain the reference as pure astronomical symbolism.⁶ Rumi was an ecstatic of the lawless dervishes and his verse reveals his thoughts on matters as heterodox and heretical as hashish, opium and wine and Tantric-type discussions of sex, even using examples of bestiality to elucidate esoteric doctrine.⁷ His poetry is laced with references and allusions to all manner of transgressions, understood as a pantheogenic meditation on the oneness of god/reality. The use of dance, music, and drugs in combination with more concentrated and prolonged meditations and fasts that are associated with Rumi and his disciples, and suggest a very exacting system of initiation that was to culminate in ecstatic theophany with Allah. To understand Rumi's poetic devices it is important to take Rumi beyond his classification of Islamic mystic and into the esoteric traditions that ultimately culminated into Sufism.⁸

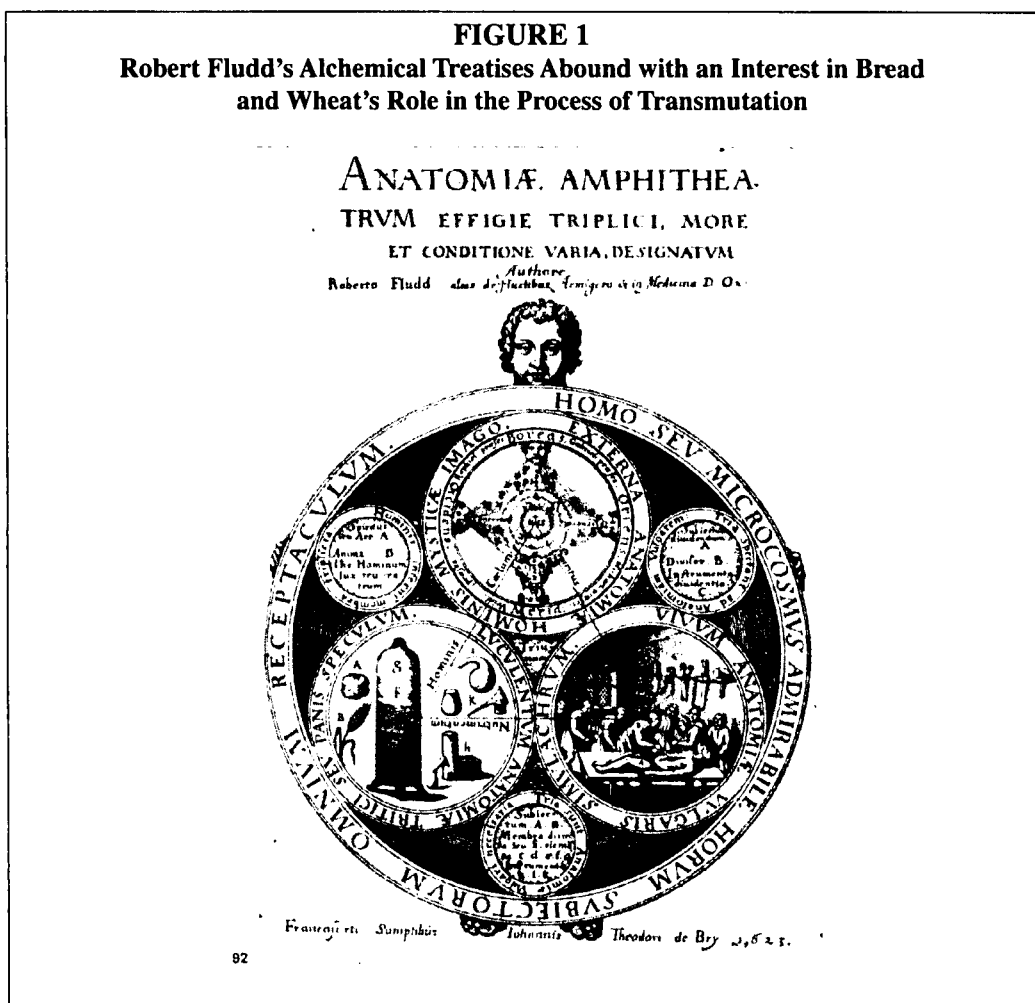
SUFISM AS SHIA Gnosticism

The history of Sufism is intimately bound up with that of Shia Gnosticism and both enjoyed an open expression during the early years of Islam. Upon the death of the Prophet, the Shia suffered extreme atrocities at the hands of the Sunni who, once the Prophet passed, reverted back to the old Meccan hierarchy. The murder of the Prophet's house or supporters (Shia), inspired the policy of *taqqiya* or "pious dissimulation" in times of trouble. But as the situation for the Shia sects grew worse this policy became crystalized in the concept of the Hidden Imam, or the Standing One, whose existence is necessary for the existence of the world. While this subject could fill even a lengthy volume, the critical point is that the concealing of the Imam and the esoteric intrigue that was attendant was a purely pragmatic strategy; one that Eisenman (1998) pays particular attention to as a link between these cults. The ghosts of the massacre of the Shia at Karbala permeate every tactical consideration of the Shia, even if it meant the internal struggle of Shia versus Shia.

Following the precedent of the Fiver Imams (the *Zaydi*), each consecutive Imam performs his function, often exoterically contradictory, in each community. The esoteric teaching of the Hidden Imams probably crystallized in the necessity of replacing and hiding their leaders from the continued inter-sect rivalry and Sunni persecution. The Sunni would demand to see the body of an Imam to confirm his death as cults and radical sects broke off on "rumors" and certainly deliberate plots, sometimes amounting to Shia versus Shia violence, to conceal the true real identity of the True Imam.

As the Twelver Shia claim, every Imam was murdered by the Sunni, and as the Alawi claim, the sixth Imam Jafar gave the mantle of authority to a "heretic" Syrian in the mid eighth century, who started the Alawi/Nusayri sect that combines

FIGURE 1
Robert Fludd's Alchemical Treatises Abound with an Interest in Bread
and Wheat's Role in the Process of Transmutation



Shia gnosis and esoteric Christianity. Attempts to find the true natures of these complicated webs of transmission are doomed to the speculative interpretation of a few sparse texts, some essays from Henry Corbin, some Nusayri-Alawi hadith and legendary traditions. Their hymnal literature (Bar-Asher & Kofsky 2002) is saturated with references to a "wine of light" that Corbin (1998) connects with a grail liturgy. Corbin's (1989) research also highlights the continued evolution of a "celestial botany" rooted in ancient Persian traditions, evidenced by the Shia's continued use of terms associated with a plant of immortality, or *haoma*. Though the identity of this plant is unknown, it would propel the adept through a "visionary geography" consistent with ancient Iranian traditions recast into esoteric Islamic teachings.

Whatever the final outcome of the Shia line, hotly disputed by the Ismaili and Twelver alike, the Shia Imams broke their public relationship with the Sufi with the eighth Imam al-Rida. There followed a clear policy change in esoteric matters, with Sufism in Shia context now being referred to as gnosis or "*irfan*." This was again a pragmatic tactic to cloud esoteric associations and dynamics, as the environment and sentiments towards the Shia from the Sunni grew more and more hostile and dangerous for the Imams. Some of the

more radical (*ghulat*) cults are linked with "pagan" or more properly, pre-Islamic traditions of fertility cults. Clearly there existed a sort of magus or Islamic occult adept/doctor or *hakim* who personified many of the diverse threads of esoteric and medical knowledge from all over the Middle East. Sufism might be viewed as essentially retaining the theological implications of the standing-one/Imam/microcosm of Shia and Jewish Gnosticism.

It may be through these *hakims*, from their Unani (of the Greeks) medicine, that either the ergot technology or the memory thereof survived and penetrated into various nearby Islamic and Jewish cults in close proximity. The alchemical arts associated with the various sects and Imams and Sufi saints would lend a further dimension to possible esoteric hermeneutics that reentered Europe when the Arabic alchemists like Jabir (Geber) were translated into Latin. The English alchemist and Kabbalist Robert Fludd (1574-1637), in addition to his fascination with the pineal gland, seems to have suspected something of this order in pondering the alembics and retorts. Certainly renaissance magicians like Fludd and Giordano Bruno (1548-1600) might have known of ergot and knew at least of semen retention and other Tantric arts as suggested by Couliano (1987).⁹ (see Figure 1)

SHIA MASTERS AND ROAMING ANARCHIST DERVISHES

The "sacred drift" of Islamic gnosis, in the various expressions of both Shia and Sufi mystics, clearly mixed with reciprocal influences from Persian and Jewish mystical traditions, much to the irritation of the prevailing orthodoxies. The heretical sects, while framed in history and especially to Western scholars through Sunni eyes and polemics, may just retain the real secrets of the Shia masters and roaming anarchist dervishes that later formalized into "proper" orders and militias with degree systems and symbolism. These features seeped into Masonic lore, possibly from Crusade contacts between the Knights Templars and the syncretic Alawi who fused the old Syrian astrotheology with Semitic mysticism. It is all these threads of influence that unite under the Sufi orders associated with Rumi.

These cultural exchanges resulted in occasional isolated oases of cosmological autonomy, such as in Basra, where the mystical syncretic Brethern of Purity (or the Ikwhan-al Safa) produced an encyclopedia of medical, alchemical and occult knowledge. These men composed hymns to the Greeks and placed them on par with their own revealed prophets and even the Prophet Mohammed himself. Their medicine, called Unani or "from the Greeks," was an essentially Indo-Iranian system that came with the proto-Indo-European invaders of Greece, only to be refined and instilled with local customs and, no doubt, entheogenic technologies.

The progression of Sufism from these early roving lycanthropic brotherhoods of Indo-Iranian warrior cults (Eliade 1972) into Greek inspired shamans and later mystery cults is by no means linear, nor should it be reduced to a potluck comparative religion exercise.¹⁰ What is relevant is to note that the Shia cults, and perhaps Jewish sects with which they shared traditions, retained the idea of wheat as the "tree of life" even though it does not really match the Biblical or Koranic descriptions. The pervasive inclusion of this motif in the fundamental creation myths of a number of radical and heretical cults could indicate either the technology of entheogenic ergot was still understood under the symbolic language of alchemy or that, again, the reference was gleaned and remembered.

Peter Lamborn Wilson, via personal correspondence, suggests that the representation of wheat as the "tree of life" might stem from Jewish folklore with a connection with Cain and his "crime" of agriculture which was refused by God. He suggests that the agrarian reality could well symbolize the fall from the relatively care-free days of tending Paleolithic herds; which found similar sympathies a similar outlook is found in the Greek myths as mentioned by Detienne (1944). Wilson further recalls a critical Jewish tradition that mentions a five grain head of wheat (barley?) which, as he notes, would likely indicate a *wild* strain, as cultivated grains were selectively cultivated to retain their seeds and thus would have more than five heads. This transition, one from

animal husbandry to selective cultivation, corresponded with a radical paradigm shift in post Neolithic societies that, as Detienne (1994) notes, becomes expressed in such rituals as those practiced at Eleusis and in the Gardens of Adonis.

THE MYSTICAL ADAM, WHEAT AND SACRED BREADS

A particular example suggestive of a technology of entheogenic ergot comes from the Ismaili or Sevener Shia, through Dr. Bernard Lewis (1938) who translated a manuscript from Egypt called *Kitabu'l-idah wa'l-Bayan*, by the Yemenite da'i Husain ibn 'Ali. The author, (Ali from here on), asks "why if the tree was good was Adam forbidden to eat of it, and if bad, why would Allah have it in the Garden?" The reason, Ali suggests, is that the tree had a dual nature, both good and evil. The good sense of the tree is Ilm Haqiqi, or true knowledge, "the divulgence of which is forbidden." Lewis proceeds to quote other interpretations such as the tree's rank of the Quaim (the Ismaili term for Mahdi, or representation of the Godhead), which brings absolute true knowledge, and the other suggestion that the tree or wheat is the Wasi (a general term with connotations of learning or or knowledge, here likely pertaining to occult knowledge) of Adam, who brings the Ta'wil, or esoteric interpretation of his (Adam's) Shari'a. The article then suggests that Iblis (the "devil" lit. "frustrated") poses as a prospective convert to obtain the secrets that Adam has been entrusted with; the parallels abound with Biblical traditions and the implications of the offerings of Cain and Abel, and the author states that Iblis spread mischief that ended in the murder of Abel by Cain. Lewis records the Ismaili tradition that Iblis is the tree, Adam being forbidden to disclose to him the secret wisdom contained therein. The argument then continues that the garden is a goal of future aspiration for the children of Adam, or a grade or degree of "da'wa." The esoteric explanation that follows is a beautiful discourse with concepts deeply reminiscent of Kabala, with a primordial Adam Ruhani, the Adam of spirit who is the demiurgic force that remains free of the dust of matter.

The "Garden is the 'Alamu'l-bda' (or preexisting immaterial world in contrast to the earthly garden) in which he was, together with the remaining seven intelligences" (Lewis 1938). The evil aspect is of the First Emanation (of the Fall, where spirit emanates into the earthly realm; there are seven intelligences or Words (Kalimat) of Qur'an, 11:35) where Iblis is the evil imagination—or perhaps better a "perverse" intellect, something akin to the Kabalistic da'ath—the secret eleventh Sephiroth that like a serpent slithers up the back of the Kabalistic Tree of Life. Lewis explains Ali's comments as being, "a disclosure of neo-Platonic theories of emanation codified in a complex system of initiation with degrees and levels of understanding as well as exploring a number of 'heretical' interpretations said to be held by the Ismaili, and he links certain theological opinions with the Druze." This

is the same cult that holds Mad Caliph Al-Hakim as divine and in occultation, and the Druze also suggest wheat as the tree of life.

Another source that is in print is the translation of the *Kitab el-Aswad Mas'haf Rish* or Black Book (Guest 1987) of the infamous Yezidis where the creation myth unfolds with a White Pearl of God's "precious essence." This pearl is on the back of the bird Anfar, until the first day there is the peacock angel Ta'us Malak, who is the chief of all. The creations of sheikhs and angels follows in various days of the week, followed by the seven heavens and mankind and other specifics involved in creation. The fruit and herb trees follow in the traditional fashion, though this version is quick to identify those faithful to Azazil, the peacock angel, which are of course the Yezidi. Gabriel follows the command to sequester Adam in the paradise that he might eat of every fruit and green herb, and "Only wheat is he not to eat." In a shocking twist, Adam eats the wheat, and Ta'us Malak with the coyness of a divinity asks of Adam, "Hast thou eaten of the wheat?" Adam denies it, but his swelling belly betrays him, another consequence mentioned in the Ismaili document above where the author wonders why this wouldn't be true of any species, the explanation of his not having the intestines to deal with the matter thus being insufficient. Daniel Merkur (2000) describes the dust of the threshing floor as an ordeal poison (i.e., substance used for an initiation ordeal), of which a "swollen belly" is a symptom. The telling poem "The Granary Floor" by Rumi further echos these associations where a donkey/initiate experiences the Sufi food of light in that context.

In the Yezidi version Adam after consumption is said to suffer because he has "no outlet." Another bird does the dirty work of instigating such an orifice and Adam has relief, and even Eve is created from under Adam's left armpit, contrasting with Ismaili traditions where she is created from a bit of clay taken from his foot while sleeping. The suggestion of wheat as the tree is a strange association for the obvious reason that wheat is not a tree. The possible ergot connection has not been suggested to the authors' knowledge, but could the traditions or Iranian gnosis have preserved some entheogenic heritage of which ergotized wheat was a principle element? Should the Wine of the Magi be similar to the Greek offerings, the *kykeon* of the Eleusian mysteries, then there is every reason to suggest that this wine and its properties would resonate in the symbolism of grain as staff of life and ritual entheogen.

The Islamic story of the Fall is consistent with that of the Midrash. "Now, before Adam's sin, wheat grew upon the finest tree of Paradise. Its trunk was of gold, its branches were of silver, and its leaves of emerald. From every branch there sprung seven ears of ruby; each ear contained five grains, and every grain was white as snow, sweet as honey, fragrant as musk, and as large as an ostrich's egg. [Clear references to psychedelic experience] Eve ate

one of these grains, and finding it more pleasant than all she had hitherto tasted, she took a second one and presented it to her husband. Adam resisted long—our doctors say, a whole hour of Paradise, which means 80 years of our time on earth; but when he observed that Eve remained fair and happy as before, he yielded to her importunity at last, and ate the second grain of wheat, which she had had constantly with her, and presented to him three times every day" (Weil 1863). And so, Israel was the land of "wheat and barley" (Deuteronomy 8:8). The Biblical and Koranic legends retain this theme from the Talmud to the Midrash to the Shia and Sufi sects of esoteric Islam. If this seems speculative, we have recourse to the spirit of *midrash* lit. "to seek out" the deeper meanings of a text. The Koran does not identify the tree but simply says it is forbidden (Koran 2:35).

RUMI AND INTOXICATING GRAINS

Rumi's mystical aspirations can now be seen to be an extension of a broader field of influences that unify under esoteric Islam. Most of what is known of these inspired mystics is deduced from the rich tradition of Persian wine-mysticism and erotic verse. Rumi has rightly come to personify the culmination of an extended lineage of ecstatic mysticism that developed, perhaps, just outside the orthodox consensus, as the entheogenic experience would negate much of the need for formal priests, shaykhs, mullahs or mediators. Rumi's verse can be read as a manual or ritual prompt with each verse having several meanings. As such, the incidences of Rumi's direct references to intoxicating grains after sections that proceed with material of a ritual nature could indicate an esoteric relationship.

As Rumi's work is quite extensive, it must suffice to recall the general tone of more of the "esoteric" poetry. Here there is a progression that begins with prayer and meditation all composed in verse that slowly ignites the ecstatic *zhikr* (ritual remembrance). The writings in question are the Odes or Ghazals of his Divan that poured forth with the meeting of his perfect other, the mysterious, possibly even nonexistent Shams-i-Tabriz in the mid thirteenth century. Verses like "God has given us a dark wine so potent that, drinking it, we leave the two worlds. God has put into the form hashish a power to deliver the taster from self-consciousness," (Barks 1997) are not to be dismissed, as some prohibition-minded scholars would have it, as simple metaphors for a higher spiritual understanding. This is not to deny this interpretation, but merely to validate it on another level, that these substances had benefits.

Rumi's verses in the context of *rubaiyat* that progress from meditations of instruments, prayers, reflections and recitations evolve into higher and higher discourse on the poetic ecstasy. An alternate translation of a critical Rumi poem is of the "hidden treasure" that unlocks the worlds with this verse:

Within one grain of wheat
A thousand stooks complete; A
hundred worlds, that lie Within
a needle's eye. (Arberry 1974)

The connotations of fire and wine in the following verse might indicate the crimson rust of the infected grain that is expressed in its liquefied potion form in verses composed after coming off the all night zhikr vigil:

The dawn is not yet up;
Ho, bring the morning cup!
The wine's bright lamp shall soon
Outshine both sun and moon.
Fetch me yon liquid flame,
Saki,
and with the same Set fire to
sullen gloom, And let it all
consume. (Arberry 1991)

As wine is prohibited to a Muslim, Rumi may be referring to a deliberate violation of Islamic law in the spirit of being God's intimate and drinking partner or that this "dark wine" is something entirely different. Given the preceding contexts of an entheogenic heritage and his own advocacy of divine inebriation, Rumi's metaphors and allusions begin to take on a more specific significance. The following verse is profoundly suggestive of an awareness of and the use of intoxicating grains:

If you bake bread with the wheat that grows on my grave
you'll become drunk with joy and even the oven will recite
ecstatic poems.
If you come to pay your respects
even my gravestone will invite you to dance
so don't come without your drum. (Kolin & Mafi 2001)

Rumi's reference to "a dark wine so potent that, drinking it, we leave the two worlds" (Barks 1997) could refer to wine whose potency has been enhanced by the addition of psychoactive herbs. The symptoms produced by consumption of darnel (grasses, from an old French word Darne, signifying stupefied) being analogous to those of alcoholic intoxication, liquors have been adulterated with darnel to add to their intoxicating qualities and its continuing use for this purpose was still suspected in the late nineteenth century USA. The Victorian journalist James Greenwood enumerated a few of the ingredients with which the beer-shop keeper rebrews his beer and the publican "doctors" his gin and rum and whisky. These include foxglove, henbane, nux vomica, opium, wormwood and yew leaves. Such preparations were not always adulteration or spiking; King's American Dispensatory includes a recipe for Wine of Ergot, (Vinum Ergotae USP), to be used during labor and in other instances, the dose being gradually increased if desirable. The use of intoxicating herbs to enhance or modify the effect of alcoholic beverages is extremely ancient. In Sufi poetry the wine shops are maintained by Zoroastrians and in

the important Zoroastrian scripture Arda Wiraz Namag the protagonist visits heaven and hell by means of a narcotic potion, wine mixed with *mang* which was probably henbane or cannabis. According to Gherardho Gnoli this was an integral part of Zoroastrian ecstatic practice aimed at opening the "eye of the soul" and so it was drunk by Arda Wiraz before his journey into the other world (Gnoli 1979). The Chinese made use of wine infused with henbane and cannabis as an anesthetic. In Azerbaijan, a former center of the Zoroastrian religion and homeland of the cannabis-using Scythians, medieval manuscripts also record the use of wine infused with a mixture of cannabis, opium and henbane.

Peter Lamborn Wilson's (1999) masterful translation of another Persian poet, Salman Savaji, might indicate that this was an insider secret to the highly potent wine of the mystics. The "Drunken Universe" begins: "In Preternity already the reflection of your ruby wine colored the cup . . ." and then "Lip of the cup crystallize with sugar from your garnet lips, the hidden secret of the jug poured out into Everybody's mouth" then "Adam saw the black mole on your wheat-colored cheek" all of which might describe the ergotized Fall when Eve sampled that fateful grain of wheat rather than the "fruit." This tradition may extend back to the merging of Semitic traditions of "wines" with the Saki or cup-bearer tradition of ecstatic wine poets.

As well as ergotized wheat there could be a link here to darnel, a weed that commonly grows among other cultivated grains, the Biblical "tares." It owes its importance to its growing amongst cultivated grains, especially wheat. Darnel's ground seeds may be eaten in bread made from the wheat flour contaminated with darnel harvested along with the wheat grain. From ancient times darnel's seeds have been known to produce intoxication similar to that of alcohol, hence its specific Latin name *Lolium tremulentum* and the French name, *Ivraie* from French *ivre* which means "drunk." The intoxicating properties of darnel are well known in the Middle East, particularly to shepherds who must have observed the effects of these loco-weeds on their flocks since time immemorial. One vernacular Arabic name for darnel means "horse's hashish." Darnel has been included in the recipes of Middle Eastern intoxicating compounds such as bars (potent psychoactive compounds usually with cannabis and darnel). The description by Van Linschoten (a sixteenth century traveler in the Near East) of the preparation of bengue, berge, bers (cannabis based compounds of psychoactive plants containing ingredients such as opium, datura, darnel, nux vomica) and so on, includes a mixture of darnel and hemp seeds in water called bosa. Such compounds of psychoactive vegetable drugs are discussed in some detail in a valuable reference work by Dr. Bellakhdar (1997), *La Pharmacopée Marocaine Traditionnelle: Médecine Arabe Ancienne et Savoirs Populaires*. Dr Bellakhdar refers to a couple of *Lolium* species essentially as locoweeds affecting animals, but does note that one vernacular name for darnel is also applied to species of *Phalaris* grass. Dr. Bellakhdar

also refers to majoun type preparations mixing harmal and *Peganum harmala* with datura. If harmal, which contains MAO inhibitors, is mixed with *Phalaris*, which contains DMT, it produces have a Middle Eastern version of the South American hallucinogenic brew ayahuasca.

Various untranslated poems and travelogues record instances of Sufi hermits subsisting on wild barley and "burnt grains." Both Dr. Bellakdhar and Maud Grieve (1971) agree that that it is uncertain whether the psychoactivity of *Lolium* is due to the plant's own chemistry or it being ergotized. Ergot is not the only fungal infection of grasses. Another fungal infection of the ears of maize, wheat, oats, and barley, and also various grasses, *Ustilago segetum*, is called burnt-ear. *Ustilago* has decided activity, its effects having been compared with those of ergot and *nux vomica* combined. It has been hypothesized that the Salem Witch affair was initiated because individuals ate bread products from ergot-infected rye. This caused the symptoms attributed to bewitchment. "Burnt grains" might refer to the process of beer making where malted grain is roasted before making up the mash (though this doesn't rule out the role of ergotised "beer"). Peter Webster questions the efficacy or even logic of the process of the fermentation of ergotised grains to produce an entheogenic brew.¹¹ However, Thomas Reidlinger (2002) has presented a theory that suggests both Greek and Egyptian knowledge and use of ergotized beers for ecstatic ritual theophany, though beer is really a misnomer as the actual process ends before fermentation.

The Sufi bands of roaming dervishes in many ways resemble the pre-Christan fertility cults described by Carlo Ginzburg (1991) in his *Ecstasies: Deciphering the Witches Sabbath*. The possibility of the ergot technology surviving amongst certain tribal cults convinced Ginzburg, who sees the erotic ecstasies of the "witches" as being possibly ergot induced. The parallels would then extend to the rebellious counter-culture of both "pagan" and "dervish" as being the antithesis of the prevailing pious faith, with the latter being called "God's Unruly Friends" (Karamustafa 1994). Their botanical knowledge, including the known and usual suspects of the Solanaceae family as well as opium and hashish, might well extend in their ritual pharmacopoeia to ergotized grains.

CONCLUSION

Fieldwork in Lebanon in the 1950s would even suggest that some cults retained the entheogenic use of ergot (Phillips 1958). Informants told Phillips that certain sects used ergot "to produce visions, or induce trances in some rites." She apparently pressed for details, "But they refused to explain." Phillips records similar statements for *Peganum Harmala* and *Datura* as used in ecstatic religious ceremonies. This serves as a precedent for these arguments, especially in a Shia Islamic country, for either the continued use of the LSD-like potions or at least the dim recollection of ergot's

entheogenic and holy status that then permeates esoteric cults even up to a fairly late period, such as these examples of mysticism that derive from primarily Greek, Jewish and Persian sources. The remarkable scholarship of Dr. Ruck and Dr. Merkur lend credence and provide a context for the continued use of sacramental infusions of ergotized grain. Merkur's work, in particular, details Kabbalists and mystics that continued the sacred traditions of the "manna" into the modern era. While these Sufi deductions are perhaps speculative they are not any more so than the understanding that Merkur uses of the wheat and the tares and the "hidden treasure" and the subsequent mentioning of similar themes in the Biblical and apocryphal texts, which he gives judicious treatment.¹⁰

PART 2: ERGOT AS ENTHEOGEN

It was over 20 years ago that I first came across the lines of Rumi's Masnavi I Ma'navi reproduced at the beginning of the preceding essay by Frederick Dannaway and Alan Piper. Immediately upon reading them it seemed a good guess that the medieval Sufi poet's reference to wheat as the forbidden fruit betrayed a still-lingering knowledge of one of the oldest and longest-enduring religious rites ever practiced, the yearly autumnal celebrations at Eleusis in ancient Greece. At that time, *The Road to Eleusis* (Wasson, Hofmann & Ruck 1978) had just recently been published, describing in detail a new theory about the Eleusinian Mysteries, and suggesting ergot as the long-secret component of the psychoactive beverage of the Celebrations, the kykeon. For a long time, however, I was unable to follow up my suspicion with further evidence, and even when in the early 1990s I decorated the homepage of the Psychedelic Library (<http://www.psychedelic-library.org/>) with Rumi's lines next to a head of grain infested with ergot (*Claviceps purpurea*), it attracted no comment or confirmation.

Only in the past year have I finally met Frederick Dannaway and Alan Piper thanks to the ever-widening "friend of a friend" web of Internet communications and found that references to wheat as the forbidden fruit are not at all rare. Quite the contrary. As we may infer from the previous essay such references may constitute further significant evidence supporting the Wasson, Hofmann and Ruck hypothesis, that the enlightening beverage consumed at the Eleusis Celebration was a psychoactive preparation made from ergotised grain.

The suggestion that ergot may have been a psychoactive constituent of a sacramental beverage or preparation has understandably been met with criticism, even total disbelief. A major problem, of course, is that this common parasite of food grains such as barley, rye, and wheat is toxic, sometimes extremely so in years when high alkaloid production is favored by ideal weather conditions. The history of medieval plagues of ergotism are seen as evidence that *C. purpurea* could hardly have been used as an otherwise benign psychoactive agent.

Since the publication of *The Road to Eleusis* over a quarter-century ago, scholarly opinion on the matter has divided itself into three camps: those who dismiss outright the idea that consciousness-altering drugs have been part and parcel of humankind's religious and social evolution since earliest times; those who admit the evidence of such a scenario but believe ergot could not have been suitably psychoactive and at the same time safe; and those of a third group who have tried to extend and improve upon the original suggestions of Wasson, Hofmann, and Ruck.

The first group of scholars—classicists, anthropologists, chemists, religious leaders and scholars, professors of various disciplines, et al.—although they are apparently a large majority of those who claim some expertise on such matters, may be dismissed completely as being sadly and willfully ignorant of the great body of evidence showing the essential and necessary connection of consciousness-altering plants and the entire history and prehistory of the human race. Whether these scholars have fallen under the spell of that great twentieth century crowd madness and destroyer of clear thinking, prohibitionism and support for the “war on drugs,” is an interesting hypothesis to be tested. But we can be certain that seeing drugs as the scourge of humanity has led to no small number of experts demonstrating a monumental narrow-mindedness concerning other scholars' work on the subject.

That fact of the matter is: the seeking of altered states of consciousness (ASCs) is a human universal as defined by the anthropologist Donald E. Brown (1991). Far from being a perversion or abnormal activity as today's prohibitionist mentality would have it, using intoxicants in the pursuit of altered consciousness is a biologically natural and normal behavior, and very likely has adaptive evolutionary value (Siegel 1989; Weil 1972). Such a universal and powerful drive is not even humanity's own, for it has most persuasively been shown by Giorgio Samorini (2000) that seeking out and ingesting consciousness-altering drugs is an important pursuit that appears across the entire animal kingdom, and thus we humans are the mere inheritors of this instinctive primary motivational force. So much for those who pine for a “drug-free” society, science, history, evolution, and religion.

The second group—those who are well aware of the importance of psychoactive drugs throughout history and prehistory but who question ergot's possible role and use—have suggested various other candidates for the Eleusis sacrament, the kykeon. I have countered their criticisms of the ergot hypothesis, and their suggestions for alternative psychoactive agents elsewhere (Webster, Perrine & Ruck 2000), and need not repeat those arguments here. What concerns me here is to restate and elaborate on certain observations I made in the above-cited article, particularly in reference to more recently presented ideas about other possible ways ergot might have been prepared for sacramental purposes. (Reidlinger 2002; Pyle ca. 2001). And in

light of the accumulating evidence for the ergot hypothesis of which the first part of this article is an important new development, my objective is to attempt to bring some consensus among our group of researchers—the third above-mentioned camp—concerning the most likely and most parsimonious hypotheses for producing a suitably psychoactive preparation from ergot. If the means to conduct some experimentation on these questions arise, hypotheses such as these should of course be the first to be tested. As it will be seen, these hypotheses are also very easy to test, more so than those of Reidlinger and Pyle.

Albert Hofmann had originally suggested in *The Road to Eleusis* that a simple water-extraction of *C. purpurea* might have accomplished a separation of the toxic alkaloids of the fungus (the ergopeptines) from the much smaller fraction of a simpler, water-soluble lysergic acid amide, ergonovine, which does apparently have some psychoactive activity, albeit somewhat disputed. Such a process, it was noted, would eliminate the toxicity of whole ergot.

In a more complex hypothesis, Reidlinger (2002) proposes that the kykeon might have been produced via a “double-decoction” process similar to a recently discovered beer-making technique used in ancient Egypt. I need not criticize Reidlinger's very imaginative and well-researched ideas—they certainly are worth pursuing experimentally if the opportunity arises—except to say that they have one major problem: the result of the process would still leave ergonovine as the essential psychoactive agent in the preparation. As Reidlinger himself notes, the self-tests by Hofmann with ergonovine leave considerable doubt as to its possible candidacy as an entheogen of sufficient and suitable effect to have resulted in a 2000-year history of highly successful use. Reidlinger is right on-track, however, in his observation that the toxic alkaloids of ergot—the ergopeptines of which ergotamine usually predominates—are the primary problem: they can cause ergotism, spontaneous abortion, and are not at all suitably psychoactive. Somehow they must have been excluded from the kykeon.

Another problem for the hypothesis that ergonovine was the psychoactive agent of the kykeon is that it is only a minor and quite variable constituent in the alkaloid mixture produced by *C. purpurea*, with alkaloid production itself quite variable according to weather conditions. *C. purpurea* production on barley (as opposed to rye) also appears to favor the ergopeptide (toxic) alkaloids, with ergonovine being even less present. (Kren & Cvak 1999) Thus simple water-extraction of ergot, or Reidlinger's double decoction process, would both have been—year-to-year—processes very unlikely to be reliable and reproducible, certainly not something that worked without a fault for 2000 years in a row.

I would add just one further note on Reidlinger's article. He certainly overestimates the toxicity of ergot and ergotamine when he suggests that the lack of trials with ergot according to these extraction recipes might be because of the

fear of toxic effects by potential experimenters. Ergotamine is widely used for various medical conditions (I myself use it for migraine) and it is well-established how much ergotamine one may take without risk, and how frequently. Also, it is well-established how much ergotamine may be contained in a sclerotia of ergot, so knowing these details would easily enable one to prepare a trial kykeon from ergot and sample it without risk, even if one did nothing to remove or otherwise neutralize the toxic components. More likely, in my opinion, those who might have tested a procedure for making a kykeon simply did not have a hypothesis convincing enough to them to merit carrying out a trial. Their hypotheses were more like preliminary stabs in the dark awaiting more concrete ideas for instructions for a kykeon recipe.

Another hypothesis as to how ergot might have been used has been proposed by Pyle (2001-2002), who suggests that ergot may have been fermented in solution to produce lysergic acid alkaloids. Indeed, with the increasing pharmaceutical demand for these products in the twentieth century, fermentation processes were developed to produce lysergic acid and several of its amides in saprophytic culture—the ergot mycelium being grown in nutrient-rich solutions to produce alkaloids without the sclerotia or fruiting bodies of ergot ever appearing. But these processes are highly technical, and the alkaloids produced are highly dependent on the isolation of certain sometimes rare strains of the fungus, requirements beyond the capabilities of the ancient Greeks to be sure. It may be possible to effect some fermentation of *C. purpurea* in a simple barley broth, but even if alkaloids were produced, they would still be primarily the toxic ergopeptines, with ergonovine as a possible minor product and the only candidate for possible psychoactivity. So we arrive back at the same problems we have as above.

Our own hypothesis for an ergot recipe, described in “Mixing the Kykeon” (Webster, Perrine & Ruck 2000), overcomes all these problems. Unlike suggestions for alternative psychoactives such as *Psilocybe* or opium made by some, it remains true to much of the evidence first presented in *The Road to Eleusis*, it overcomes the problem of toxicity of the ergopeptine alkaloids, and it does not depend on the disputed psychoactivity of ergonovine. The only way to make the alkaloids of ergot safe and psychoactive at the same time, and also to employ the major fraction of alkaloids (the otherwise toxic ergopeptines) is to process the ergot in a way that leads to the conversion of the ergopeptines to the simple amides ergine and isoergine. These two amides, mirror-images (epimers) of each other and always in approximate 50/50 equilibrium in solution, are the principal component of the ancient Central American entheogen *ololiuqui*, whose psychoactive properties cannot be in doubt. References showing the fact of this conversion and under what conditions it occurs, and discussion of the distinct possibility that the ancient Greeks may well have discovered it (the partial

hydrolysis of ergopeptine alkaloids) may be found in our article.

I mentioned above that this hypothesis is the easiest to test. It would suffice for preliminary results to digest powdered ergot with wood ash and water (as described in our essay). Trials would use various concentrations of ash, at various temperatures and for various lengths of time, and analyze the alkaloid spectrum and its changes using thin-layer chromatography. This would be very easy and economical to do. Once the optimum conditions had been established where the maximum conversion of the ergopeptines to ergine/isoergine was achieved, a trial kykeon could be prepared and tested without risk.

As a preliminary to these experiments, I have already made some self-trials using not whole ergot, but my anti-migraine medication. As mentioned above, this medication contains per tablet 1mg of ergotamine tartrate, the principal “toxic” ergopeptine in ergot. Note that one is allowed a maximum dose of five tablets—5mg of ergotamine—in one 24-hour period, and a maximum of 10mg per week. At the 5mg level one definitely feels strong vasoconstrictive effects in one’s extremities: cold hands and feet, even some tingling and formication. Yet at this dose there is absolutely no psychoactive effect, of course. The sometimes psychoactive effect of ergot with victims of ergotism required that one eat ergot-infested bread continuously for days, at quite a high dose; at this level the “psychoactivity” was not at all psychedelic or entheogenic, but totally infernal and often suicidal.

However, performing three trials with 1mg, 2mg, and 3mg of ergotamine, digested and heated with wood ash and water as per the recipe, I found definite psychoactivity in the resulting preparation. I would caution any who would like to repeat these trials that significant and prolonged gastric cramps were experienced as a side effect, and thus the recipe would surely need to be refined before the experience was one to be valued and repeated. It is a distinct possibility that the pennyroyal mint added to the original kykeon functioned to quell any such gastric disturbances. To discourage nonscholarly experimentation, I have also refrained from divulging two other essential conditions of my preparation using ergotamine tablets.

NOTES

1. See Wasson, Hofmann and Ruck 1978. There is, as nearly every scholar I have spoken with on the subject confirms, a profound sense of frustration at the difficulties in resolving the speculative nature of these affairs by an analytical chemist. Those scholars that favor a “mono-plant” theory, especially in the case of ergot, remain subject to criticism until this issue is resolved. This article is speculative, like all nascent theories, but when the confluence of associations is so prominent in the ancient world then this tends to further support the entheogenic technology of ergot.

2. See Merkur 2000, Wasson, Kramrisch, Ott & Ruck 1992 and Greene 1992 for the various ergot theories. As Corbin's (1989) research illustrates, the Shia maintained a specific plant-based angelic correspondence adapted from the Indo-Iranian haoma-soma complex. See coauthor Alan Piper's (2002) contextual work on Islamic entheogens.

3. Jewish poet and scholar Rodger Kamenetz writes "In a midrash we read, 'What kind of tree did Adam and Eve eat of? Wheat, according to Rabbi Meir.'" (www.shalomctr.org/node/234) He explained that bread made of wheat symbolizes wisdom. "R. Samuel put the following question to R. Ze'era: 'How can you say it was a grain wheat?' 'Nevertheless it was so,' R. Ze'era replied. R. Samuel argued: 'But scripture speaks of a tree.' R. Ze'era replied, 'In the garden of Eden stalks of wheat were like trees, for they grew to the height of cedars of Lebanon.' Perhaps Rabbi Ze'era was growing a tall tale, but R. Meir understood, that bread symbolizes wisdom."

4. The position of ergot as poison, medicine, aphrodisiac and entheogen might color many religious doctrines that emerged with the dawn of agriculture. The "Gnostic Trace" of an elite priesthood, who knew which grains to use and how to do so safely, would theologically justify or inform such ideas born of the agricultural philosophies of the fields of selective cultivation (elite, chosen), to the divine plan.

5. As Webster's paper illustrates, there is some skill needed in safely using such a potentially toxic substance. Until a single bioassay is completed of an entheogenic use of ergot, all this research is speculative.

6. More than a few scholars have dealt with this verse of forbidden fruits as an allusion to the dragon's tail eclipsing the moon. "In Sufism the dragon relates two astronomical nodes, two diametrically opposed points of intersection between the moon and the sun. Its head is the ascending node, its tail the descending node. An eclipse can only occur when both sun and moon stand at the nodes. To the mystic, the dragon symbolizes the place of encounter between the moon and the sun within. The dragon can either devour the moon, seen symbolically as the mystic's spiritual heart, or it can serve as the place or container of conception. By entering the dragon when the sun is in the nodes, the moon or the heart conceives. Thus, in full consciousness of the perils, one must enter the dragon to await the eclipse in its cosmic womb." (Bakhtiar 2005).

7. The Arabic version is referenced a little differently, so for ease, see Barks, 1997, p.181 for the teaching narrative "The Importance of Gourdcrafting" wherein a maidservant witnesses her mistress taking extreme license with a donkey. Wishing to imitate her, the maidservant takes the donkey's member, only without the necessary protective gourd that kept the erection "within bounds." The maidservant's severe internal damage from the no doubt significant organ is meant to caution the onlookers of the Sufi from imitating their extreme and dangerous practices.

8. For this discussion of Sufi Shia relations see the work of Seyyed Nasr (1999, 1993).

9. See Barks 1997 for granary floor/initiation that even in translation and abstracted retains a central context similar to ideas expressed by Merkur. See Eisenman (1998) for a discussion on the extended lore and legacy of the Imam/Standing-One/Hidden One that he connects from Old Testament Judaism through early Christian sects and Gnostics to Manicheans and into Shia Islam. Corbin (1998) suggests that the Islamic mystics influenced and formed the Kabala, not the other way around.

10. A query was passed to the Entheogen Review, which was then circulated to such entheogen luminaries as Ott, Samorini, Shulgin, etc. and none could cite a single bioassay of aqueous extraction of ergot, let alone one that produces the effects consistent with ritual inebriation. Perhaps some have tried and never lived to report their findings.

The toxicity of ergotized grains presents unique problems for these otherwise very convincing and often poetic theories. Mott Greene in his argument of the Soma as more of a function of the religious ecstasy represented across a broad range of ergot infected plants finds grasses actually named Soma in Sanskrit, *Eleusine coracana*. Greene (1992) quotes from Nadkarni's *Materia Medica* "The new grain is said to be powerfully narcotic and is eaten only by the poor who prepare it in various ways and from use are able to use it with impunity." He suggests this means they avoid ergotism. We wonder if this is a gastronomic clue suggesting that ancient cultures and perhaps then modern poor or isolated groups such as in the mountains of Lebanon, through continued use and exposure to ergot had a tolerance or natural resistance to the toxic effects.

11. Concerning suggestions that the ancients might have been able to ferment ergot to produce a psychoactive beer, i.e., grow the ergot mycelium in a broth so that alkaloids were produced in the process, today's scientific literature about how ergot is grown in saprophytic culture to produce lysergic acid alkaloids would seem to cast serious doubt on that possibility. The studies reveal several technical difficulties that would have been very difficult if not impossible for preindustrial people to overcome. A specially selected and difficult to isolate strain of ergot is required to get any significant yield of alkaloid at all. Modern microbiological methods and equipment are required to succeed in this endeavor. Techniques for selecting, propagating, inoculating, and growing the ergot mycelium in culture, the specifics of the nutrient broth, and other commercial matters are subject to patents and are valuable trade secrets developed over years by modern chemists and microbiologists. In addition, even if *Claviceps purpurea* were somehow successfully fermented by simple techniques, this ergot does not produce psychoactive alkaloids but rather the ergopeptine spectrum of alkaloids related to ergotamine. These alkaloids are the toxic ergotism-producing ones. Now maybe one might

believe one was fermenting ergot by cooking up a brew of some sort that turned out to be psychoactive, but in reality the process was only partially hydrolyzing the ergopeptine alkaloids therein. The process would not be growing or fermenting the ergot mycelium but merely converting the already-present toxic alkaloids to the ergine-isoergine mixture in a manner similar to the wood-ash recipe we suggest.

Indeed, in a private communication, Vladimir Kren of the Czech Institute of Microbiology informs us that the ergotamine-type alkaloids can be partially hydrolyzed by certain soil bacteria and enzymes, so there may well be more than one way the ancients could have converted the toxic alkaloids of *C. purpurea* to the psychoactive ones.

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