A comparison of historical and current use of Salvia divinorum in the United States and Mexico

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Introduction

Many could agree that with the introduction of Westerners into indigenous regions of the world, settlers have taken advantage of sacred aspects of many cultures by throwing them into part of their everyday life. Examples of these can be hallucinogenic plants. For centuries, hallucinogenic plants were used for medicinal and religious purposes, such as being used specifically by shamans in cultures who would undergo a ceremony with hallucinogenic plants involved, in order to talk to gods or connect with other spiritual beings. Within the past few decades, however, many hallucinogenic plants have become more popular as recreational drugs. However, this doesn’t apply to every single hallucinogenic plant. Some hallucinogenic plants seem to be more popular as psychoactive drugs, when compared to others. In addition, other plants can have increasing popularity as psychoactive drugs in certain countries, while not being used at all for that purpose in other countries.

An example of this kind of plant is Salvia divinorum, most commonly known as salvia. Salvia is sometimes used as an alternative to marijuana and has grown in popularity in the United States, as have recreational drugs (Casselman et al., 2014). In Mexico, however, salvia has not become a popular recreational drug, which is unusual considering that is where it originated (Marushia, 2002). Mexican culture, although, might have something to say about why salvia is not a popular drug. This paper discusses the differences between historical and current use of S. divinorum, in both the United States and Mexico.

Place of origin

S. divinorum is a perennial psychoactive Mexican herb from the Lamiaceae family, known more commonly as the mint family, (Hanes, 2003) that originated in what is now known as Oaxaca, Mexico. Although there have been successful attempts to grow the plant in the United States, it is native to a region in Oaxaca, known as the Sierra Mazateca, where it grows wild on very humid ravines and isolated highlands (Diaz, 2013). S. divinorum flourishes in shaded, canopy, humid areas irregularly from October to June of each year (The Legal Status of Salvia divinorum). The Mazatec indigenous people of Mexico inhabit the area that S. divinorum is located and currently use the plant for ceremonial purposes (Reisfield, 1993). For them, the historical use of S. divinorum still remains unchanged.

The plant’s species name, “divinorum”, is said to mean “of the seer”, and refers to its traditional use in medicinal divination (Wasson, 1962). S. divinorum is located about 2km north of the village of Huautle de Jimenez at the edge of a coffee plantation (Reisfield, 1993). The plants are found growing alongside of stream banks or near other locations with water. The flowering of S. divinorum is determined by the amount of sunlight that goes through the canopy (The Legal Status of Salvia divinorum). This helps give it certain characteristics that make the hallucinogenic plant unique and sacred to the Mazatec people.

Structure and Characteristics

The S. divinorum plant structure consists of large green leaves with a yellow undertone. It can grow over three feet tall in height, with a hollow square stem. The S. divinorum flower, which blooms from October to June, grows in a cluster of six in a whorl shape (Wasson, 1962). The flowers are usually white with a hint of purple on them. S. divinorum produces very few seeds, with no pollen tube within the style. This suggests that the plants reproduce through selective breeding or through hybridization (Wasson, 1962). Since it is suggested that S. divinorum reproduces through hybridization or breeding, the chemistry of the plant must be a result of certain breeding methods that the Mazatec people use.

Chemistry and effects on living organisms

The chemical identification of S. divinorum was completed in the early 1980s. It was determined that the main ingredient responsible for the psychoactive effect of the plant is a neoclerodane diterpene, called salvinorin A (The Legal Status of Salvia divinorum). The side effects of salvinorin A include loss of control over physical movements, uncontrollable laughter, and vivid, colorful and often bizarre, dream- or film-like hallucinations. During these hallucinations, many users believe that they are being transported to different times and places. When S. divinorum is taken orally, it requires that the plant be in contact with oral mucosa or just be held in the mouth, for 15-30 minutes, in order to produce significant effects that will last up to an hour (Hanes, 2003).

Interactions between S. divinorum with animals in the wild seem to be opportunistic and the only pollination event observed is with a hummingbird (Lara et al., 2011). Although most studies only show effects of the S. divinorum on humans, there are recorded cases of its effects on animals. Recorded cases of scientific studies on animals show that they also experience effects similar to humans. Cats injected with extracts of S. divinorum showed some “hallucinatory” behaviors, such as staring and threat motions directed at unoccupied space (Diaz, 2013). Threat motion is the body language used by a cat when it feels threatened. Another study showed that the salvinorin A had a non-specific sedative effect on mice (Butelman et al., 2009). The study believed that the effect it had on mice was similar to mescaline. Currently, studies on animals have not showed any negative side effects that can help decide whether or not this hallucinogen can be legalized. Especially when one can look into the how the Mazatec people have used this plant for centuries.

Historical Use in Mexico

For centuries the Shamans of the Mazatec Indians of Oaxaca have used S. divinorum for divinatory and religious purposes. Additionally, it has been used in medicinal practices to treat diarrhea, headache, rheumatism, anemia, and a semimagical disease known as “panzón de Borrego”, or a swollen belly, which they believed to be caused by an evil sorcerer (Zawilska & Wojcieszak, 2013). While there are medicinal purposes for the plant within the Mazatec Indians, most of the S. divinorum use was religion based in order to induce shamanic visions. No study or paper has explained exactly when the plant originated. It has been known, though, that the Mazatec Indians have been present in the Sierra Mazateca since pre-Hispanic times and due to their secrecy with S. divinorum, many believe that the Mazatec are the true cultivators of S. divinorum (Marushia, 2003). There are various suggestions that other native groups used S. divinorum or that it was even brought over from other countries.

Other researchers show, however, that S. divinorum could also have been used in Aztec culture, due to a possible depiction on ancient Aztec murals (Wasson, 1962). The depiction of the plant in the Aztec murals could suggest that S. divinorum could be the mysterious hallucinogenic plant mentioned in Aztec murals as pipiltzintzintli or “little prince” (Marushia, 2002). The support for this suggestion is that S. divinorum lacks a true Mazatec name. Within the Mazatec Indians themselves, however, there were several types of specialists that would be involved in the process of using S. divinorum for various purposes (Heinrich et al., 1998). Healers (curanderos) would cure culture-bound syndromes with rituals. Midwives (parteras) would use it to accompany women during pregnancy, birth and childbirth, and experts in illnesses of the skeletonular system (hueros) would cure sprains, fractures, and bruises. This demonstrates that there wasn’t just one healer that would use the S. divinorum, there were many healers that had experience in several forms of treatment.

In Mexico, though, historical usage has mainly been concentrated on spiritual and religious purposes. When preparing for a shamanic hallucination ceremony, there is a lot of preparation for the person undergoing the ceremony. A shaman can be either a man or a woman and usually people are only brought to them if the villagers deem them worthy and with true intentions. Other traditional psychotropic plants that many of the shaman use for divinatory and healing practice are hallucinogenic mushrooms (Psilocybe spp), morning glory seeds (Rivea corymbosa), and wild tobacco (Nicotiana rustica). In order to undergo this ceremony, however, the person participating must take part in ritual preparation that involves a special fast, sexual abstinence, and ritual harvest of the plant (Diaz, 2013). The person who gathers the plant leaves for preparation does it with respect and care because of the mythical connection the plant is said to have. The dose of S. divinorum taken is calculated by a person’s body mass.

The shaman then starts chanting a long song in which she calls the supernatural idols, the forces of the canyon, the Holy Trinity, the Catholics saints, and the sun as supreme beings to protect the person undergoing the hallucinations and show them the way (Diaz, 2013). A translation of the song was documented in 1973, “Wind of the Mazatec house! Wind of the precipice! Let them pass well in their path. May the Sun rise well and
The plant undergoing the ritual is then instructed to drink the potion all at once and laid on a grass mat. The only light in the grass hut is the bonfire. Soon the person undergoing the ceremony will experience muscular sensations and chills, similar to a fever. After that they will begin to notice multiple faint noises that seem amplified, while at the same time slowly experiencing inner visual images slowly acquired that have a fascinating, automatic, colorful, and dynamic flow (Diaz, 2013). These hallucinogens are what have given S. divinorum its popularity within the Mazatec people and outsiders.

The secrecy surrounding the S. divinorum by the Mazatec Indians was a reason that ethnobotanists were not able to properly study the plants for decades (Marushia, 2002). When researchers first visited the area and obtained a sample of the S. divinorum plant from the Mazatec Indians, they were not allowed to actually visit the spot where the plant was growing. This gave researchers the idea that the plant that had been deliberately altered or selected by Mazatec Indians (Maruschka, 2002) and explains why it is believed to be cultivated hybridization.

The secrecy of this plant by the Mazatec Indians explains how sacred the plant is to them. They identify the plant with the Virgin Mary, Mother of Christ, and the Spanish common names for the S. divinorum demonstrate this relationship: Hojas de la Pastora, Hojas de Maria Pastora, La Hembra, and Hierba de Maria (Marushia, 2002). All of these translated to English mean “Leaves of the Shepherdess”, “Leaves of Mary Shepherdess”, “Sage of the Seers”, and “Diviners’ Sage”. However, other researchers claim that the names associated with S. divinorum come from a time of pre-Hispanic animal-god worship, because Mary is not traditionally considered a shepherdess in Christianity (Marushia, 2002). Many people undergoing this ritual are told, though, that they are supposed to have their spirit come in contact with the syncretic saint-like figure of the Pastora, because this is a form of communion with her leaves (Diaz, 2013).

Since the United States does not have a historical, religious, or sacred aspect to this plant, it could explain why there is such a huge popular demand for it as a psychoactive drug, unlike in Mexico. S. divinorum is, in the minds of the Mazatecs, only the most important of several plants and is known as la hembra, “the female” (Wasson, 1962). Any connection to the Virgin Mary, as mentioned above, can give the plant a sort of sacredness that it is not something for everyday use. Mexico has one of the most devout Catholic followings in the world and for them plants that can help form a relationship with the Virgin Mary is not something that should be used so commonly.

Research tells us how it is extremely rare that the Mazatec Indians be so open to strangers about the procedure during their hallucination ceremony. In allowing outsiders to view the process, the few willing infor-mants, curanderos or curanderas, are risking committing sacrilege and desecration in allowing outsiders to witness the sacred ceremonies. It is through these outsiders, however, that Western culture became aware of S. divinorum. In 1962, two researchers who became the most well known for their study of S. divinorum ventured out into a remote village towards the bottom of the Santo Domingo Canyon in the Mazatec Sierra of northern Oaxaca, Mexico and came back to the United States describing a plant that was used for ritual and psychothetic effect (Diaz, 2013), but they were not the first westerners to view the mythical S. divinorum plant.

**Discovery by Westerners**

How S. divinorum arrived in the United States is not as big of a mystery as, how, or when, it originated in Mexico. As mentioned before, in 1962 two ethno-phonarmacologists, Hofmann and Wasson started an expedition to Oaxaca, Mexico. Hofmann and Wasson were the first two scientists to collect a flowering specimen of S. divinorum, which would allow the identification of this species (Casselman et al., 2014). Even though Hofmann and Wasson brought the species back to the United States, they were not the first westerners to actually record seeing the plant for the first time.

In 1939 a researcher, named Johnson, described the plant in his academic literature titled “The Elements of Mazatec Witchcraft” (Cas-selman et al., 2014). By 1945, another westerner, named B. Reko, gave reports about a “magical plant” that was used by the Mazatecs in order to produce visions. A scientist, named Wellander, followed up on R. Reko’s sitting seven years later and reported that the “yerba de Maria” or “Maria’s Herb” was being used by “curanderos” in Oaxaca, Mexico (Casselman et al., 2014). The genus of the S. divinorum species was identified by a Mexican botanist named Pompa in 1957 who, at the time, was unable to collect a flowering specimen and could not identify the species.

**Introduction to the United States**

After Hofmann and Wasson were able to identify the species of the S. divinorum plant, they collected some of the leaf juice in an attempt to identify the psychoactive principal in the plant (Marushia, 2002). They were unsuccessful and they claimed that the psychoactive principle must be unstable. It wasn’t until 1982 that a research group headed by Alfredo Ortega was able to isolate and identify the main psychoactive component in the S. divinorum as salvinorin A (Casselman et al., 2014).

After the salvinorin A component was identified, researchers in the United States began to notice its potential for research purposes. However, once the psychoactive principal of the drug became known, propagation by individuals began. Psychiatrist and ecologist Sterling Bunnell did the first successful propagation of the plant within the United States. He was part of an expedition that brought back a living S. divinorum specimen to University of California at Davis from Oaxaca (Casselman et al., 2014).

Since the arrival of the plant into the United States, many “base-ment shamans” appeared and more attempts to isolate the psychoactive principle in S. divinorum emerged. These people would try to isolate and test the salvinorin A with a group of volunteers in order to determine site of absorption, effects, and dosage (Marushia, 2002). What they determined was that extended exposure, which was more then 10 minutes, to the mucus in the mouth, produced psychoactive effects in all of the volunteers, but if they just washed and swallowed the leaves, no hallucinogenic effects would be produced at all. This led the “basement shamans” to conclude that the gastrointestinal system breaks down the salvinorin A compound and that it must be held in the mouth and chewed (Marushia, 2002). When inhalation of the vaporized salvinorin A was tested, it proved to be the most efficient and dramatic method to produce hallucinations (Marushia, 2002).

Therefore, due to there being no religious connotation to the Westerners who began experimenting with the drug, it could offer an explanation why in Western culture, outside Mexico, more attention began to be placed solely on the hallucinogenic effect and not on the religious aspect of the drug. This can also be an explanation as to why the plant became so popular in the United States over the past years. Now young adults and adolescents have returned to natural hallucinogens in order to “expand consciousness.” Moreover, the internet has made S. divinorum widely and rapidly available worldwide (Marushia, 2002) and allowed it to become an extremely popular recreational drug in the United States.

**Current Use in the United States**

Drug trends fluctuate over time, wavering with social, cultural, and political elements of society (Kelly, 2011). One of the most up and coming drugs in the United States these past few years has been S. divinorum. A study conducted over a three-year period, from 2006-2009, showed the prevalence of S. divinorum being used nationally had increased moderately. A study conducted over a three-year period, from 2006-2009, showed the prevalence of S. divinorum being used nationally had increased moderately, suggesting a need to monitor the trend (Wu et al., 2011). Currently in the United States, experimental drug users on the internet can easily find S. divinorum and information about it. Many users refer to S. divinorum as “salvia” or other slang nicknames such as “Sally D” or “magic mint” (Kelly, 2011). Current non-traditional users of salvia have accessed the plant and its preparations outside a religious context mainly through “smart shops” and internet websites that specialize in selling psychotropic plants and extracts, paraphernalia, and dietary supplements (Gonzalez et al., 2006). In separating young adult users into two categories, those who live in urban areas and those who live in a suburban or rural area, there are different ways that acquiring the drug has been seen.

The young adults who lived in urban areas most often bought salvia from head shops, which always had a ready and plentiful supply and offered easy access (Kelly, 2011). Suburban and rural young adults relied more upon the internet as a key source of buying this substance (Kelly, 2011). Besides being used as a way to buy salvia, the internet was often a key resource for information gained among young adults who would seek out information regarding the drug’s side effects and legality by exploring websites with material on these topics. For many users, the first time they witnessed someone undergoing the effects of salvia was because of the internet. In addition to websites promoting salvia, hundreds of videos depicting teenagers and young adults using salvia have been posted on the
popular website YouTube (Miller et al., 2011).

For those young adults that acquired the plant, smoking extracts of salvia appears to be the most common form of use of the drug among recreational users, similar to smoking cannabis (Gonzalez et al., 2006). Although as of right now it remains illegal in most states, there are a few states where people are still able to purchase S. divinorum. Most students that were asked what they knew about Salvia had no idea about Mazatec Indians or that it even originated in Mexico. Many young users who have experimented with the plant claimed to have been seeking a safe method for meditative soul-searching and most believe that salvia was a safe alternative to marijuana after reading websites citing many scientific articles (Sumnall et al., 2011). However, the way that S. divinorum is marketed by some online retailers, for example flavored with fruit extracts, described as ‘horse kingdom tea’ to avoid national regulations, suggests that some products are being targeted at inexperienced users (Sumnall et al., 2011). This is problematic as inexperienced users should be encouraged to avoid ‘high strength’ extracts, and be extremely informed of the effects of S. divinorum (Sumnall et al., 2011).

When interviewing several students from Lake Forest College’s Biology Senior Seminar class about Natural Hallucinogens and asking why people would use S. divinorum, many responses centered on the theme of accessibility and legality. ‘People think it’s like a cheaper and more extreme version of weed’ (Quote by Taylor Jones, Biology Senior Seminar Student). “In Indiana it used to be legal and a lot of my high school friends would buy it instead of weed, because it was easier to get, plus you wouldn’t get in trouble” (Anonymous). When asked about why someone would be more likely to use S. divinorum instead of Peyote, another psychoactive plant found in the United States, many responded that “only Native Americans use that” or “it would be disrespectful for someone who was just trying to get high at Coachella to use it, because of how much it means to the Native Americans, similar to a headdress”. When interviewing those who didn’t take the senior seminar class and had no background knowledge about most natural hallucinogens, most students thought Salvia originated within the United States and had no religious connotation.

Many believed that even though it became popular as a recreational drug, it won’t be popular for long, because of the movement to legalize cannabis within the United States. Although there is a growing interest in Salvia in the United States, Kelly (2011) discovered that data presented from an ethnographic project to provide a qualitative profile of salvia use among young adult researchers, found that only 22.6% of those surveyed had even heard of S. divinorum. Furthermore, among those who had used the substance, 51% of users reported they would not try the substance again and 17% reported they definitely would try it. Most users reported primarily using salvia in home settings such as apartments and houses and most of them emphasized a need for a safe environment, in order to enable a smooth hallucinogenic trip (Zawil ska & Wojcieszak, 2013). Therefore, although there is an increasing trend in S. divinorum awareness within the United States, the natural hallucinogen does not appear to keep young adults interested, since less than half of them who had once tried the drug had used it again within the past year (Kelly, 2011).

When looking at college campuses, a place where students tend to have the most experimentation with drugs, it is particularly popular among the subpopulation of students who use Salvia that they also report using other illicit drugs, such as ecstasy and mushrooms (Khey et al., 2009). Self-reported depression and anxiety were also associated with recent salvia use. Former S. divinorum users had greater likelihoods of having past-year depression and a substance use disorder, usually alcohol or drugs, within the past year (Zawil ska & Wojcieszak, 2013). A survey conducted by Khey et al. (2008) about salvia usage, among a sample of college students at a large public university in the southwestern United States, showed that the most likely college-student salvia user has a profile that is familiar to illicit drugs risks: these are typically young males, who live on-campus, and have a fraternity membership. This is a very different profile to the Mazatec Indians in the Oaxaca region of Mexico who still remain one of the primary users of the S.divinorum plant in within Mexico.

**Current use in Mexico**

Compared to the United States, there is not as much of a heavy use of S.divinorum as a recreational drug in Mexico. In the 1980’s, however, there was a period when S.divinorum was being used as a recreational drug among Mexican teenagers (Marushia, 2002). Similarly to the past few years in the United States, Mexican teenagers would purchase the dried leaves and smoke them as a replacement for marijuana (Marushia, 2002). More recently though, there hasn’t been as much of a demand for salvia in Mexico and this can be due to a number of factors. Many Mexican youths believe that it is too much of a hassle to acquire a large number of fresh leaves, usually 75-100, that are required in order to obtain the intense experience of S.divinorum (Marushia, 2002). Also, once the fresh S. divinorum leaves are consumed, they leave an extremely bitter taste in the user’s mouth, which may induce vomiting. Lastly, the effects of S. divinorum have been considered unpredictable or disappointing.

Also in Mexico, one of the more popular hallucinogens, among all ages, is cannabis. When interviewing cousins in Mexico for the purpose of this paper and asking what were the most commonly used recreational drugs, the top three answers given were cannabis, magic mushrooms, and cocaine. When asked if they knew anyone who used Salvia, none of them knew anyone who avoided even tried it. Most agreed that cannabis was definitely the most popular, due to its easy accessibility and price.

One of the interviewees responded that the only time she had heard of Salvia being used in Mexico, by people who were not Mazatec Indians, was for tea. She explained that the tea would not be as potent as the potion mixed during the religious ceremonies and it had more of a calming effect then hallucinogenic. She did have knowledge, however, that Salvia was considered a sacred plant to the Mazatec Indians.

As mentioned before, many of the users who have undergone a shamanic ceremony with the Mazatec Indians have experienced visions of the Virgin Mary and the Virgin Mary is easily associated with the Catholic religion and Catholicism is the dominant religion in Mexico, with almost 80% of its inhabitants being Catholic. It is the world’s second largest Catholic country, surpassed only by Brazil.

Having such a huge Catholic population could be a huge reason behind why there is less use of S.divinorum in Mexico as a recreational drug. To use a plant that is associated with the Virgin Mary so commonly and recreationally would be seen as a form of disrespect to such an important aspect of Mexican life, the Catholic religion. Most reported cases of when the Virgin Mary appears to a person are during times of great need and there is such a tremendous amount of spiritual respect for her that to recreationally use a sacred natural hallucinogen, such as Salvia, for one’s own selfish pleasure would not be seen as appropriate.

Still for many regions in Mexico, medicinal plants are an important element of indigenous medical systems (Heinrich et al., 1998). Indigenous forms of medical treatment are still important, because there is a lack of biomedical facilities within these indigenous communities as these people distrust medical doctors (Heinrich et al., 1998). In order to study many of the plants that the indigenous people use, researchers would need to gain the trust of the indigenous people in order to collect samples to take back to their labs. Outside the Mazatec community in Mexico, currently, Salvia is being looked at in regards to medical research in order to help with various illnesses. We know from historical use that it can be used as an anointing for other illness such as diarrhea, headache, rheumatism, anemia, or a swollen belly (Zawil ska & Wojcieszak, 2013).

Other clinical studies that are occurring in Mexico that involve salvia are examining the use of medicinal plants among patients with diabetes mellitus type 2. The reason for this is that, even though it is necessary to seek adequate medical treatment for diabetes mellitus type 2, many patients still seek alternative treatment to pharmaceutical treatment (Romero-Cerecero et al., 2009). In Mexico, “herbolario”, or use of medicinal plants, is the most frequent alternative resource used by patients with diabetes mellitus type 2 (Romero-Cerecero et al., 2009). This, however, can be dangerous, because there can be different reactions or side effects when mixing medical plants with pharmaceutical medicine (Romero-Cerecero et al., 2009). Even though this hallucinogenic plant is still up and coming, the use of it as a pharmacological drug is still undefined (Marushia, 2002).

**Legal Status**

At the moment, S.divinorum is recognized as a valuable medicinal plant, but because of the alternating states of awareness that it produces, many people are still very wary of it. Within the United States, there are four categories on how its legal status can be determined. These are “illegal to manufacture, deliver, or sell salvinorin A, but legal to possess” which only applies to the state of Wisconsin; “Legal, but illegal to provide to underage persons,” which applies to California, Maine, and Maryland; “Only legal when not intended for human consumption,” which applies to Georgia, Louisiana, North Carolina, Tennessee, and West Virginia; lastly,
“Illegal,” which applies to all the rest of the 41 states (The Legal Status of Salvia divinorum).

In Mexico, there is no defining law on legality as it is used by the indigenous Mazatec for ceremonial purposes. Legalization of S. divinorum could be used to help penalize irresponsible use of the drug, which could help regulate it similarly to alcohol or tobacco. There’s also the other option with legalization, which would be to regulate it as a prescription medication, just like cannabis is in certain states of the United States. (The Legal Status of Salvia divinorum)

Legality of S. divinorum can help determine the range of usage within the United States and Mexico. It is well known that usage in the United States can be seen as mostly recreational between youths. Within Mexico, usage doesn’t seem to focus on recreational use as much as the United States, which is curious since it is the country of origin. Therefore, one would think that there would be more records of recreational use.

**Future of S. divinorum**

Even though researchers have begun to unfold a lot of the secrets that surround salvia, the ethno-botanical and biochemical properties of it are still considerably unknown to the general public. Although it has become known as recreational drug in the United States, there is a sense of knowledge within young adults in Mexico that the popularity of the natural hallucinogen will soon die down, because of the increased effect to legalize cannabis. S. divinorum does seem to have some similarities to other popular vision-inducing drugs, such as LSD. It also has many differences, which may prevent it from becoming a popular worldwide recreational drug similar to cocaine, marijuana, or LSD (Marushia, 2002). One of the biggest things observed from the historical use of Salvia is that it is not a social drug. When it was used with the Mazatec Indians, all of the ceremonies were conducted in dark shacks that would only be lit with a bonfire. Therefore, salvia cannot be used to its full effect in distracting surroundings, such as parties, where hallucinations can soon turn terrifying. Also, because the drug is not addictive, there is no need to use it regularly (Marushia, 2002). While the drug is still used recreationally in the United States, it will eventually lose popularity as it did in Mexico; although, not for the same reasons. The reason why it could have lost popularity in Mexico could be a result of the disrespect towards the Virgin Mary that came with using it as a recreational drug. Decline in the United States would be from the increasing popularity and legality of cannabis and the fact that salvia cannot be used as a party drug, leading users to get bored. Until then, many recreational users of S. divinorum should be more fully aware of the sacred connotations it has, along with the powerful side effects it can produce.

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