CANNABIS SATIVA: A PLANT WITH MULTIPLE UTILITIES, MISUNDERSTOOD, AND A VICTIM OF CONTROVERSIAL HYPOCRISY

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Abstract
Cannabis Sativa, also known as marijuana, is a plant grown all over the world, and has been in use for more than 10,000 years ago, during the stone-age. The term ''marijuana’’ is thought to be based on the Portuguese word ’’mariguango’’, which translates as intoxicant. Initially the plant was grown for its fiber but later for its psychoactive properties, thus its popularity, particularly, among the youths, who use it for recreational purposes. Though Cannabis sativa is useful industrially, medically, and recreationally, it remained a schedule 1 drug and banned by the government of America for controversial and hypocritical reasons, which experts debunked. This ban prevented humanity from harnessing the inherent values of cannabis sativa for sustainable development .In spite of the ban, though, major cities in America, such San Francisco, Colorado and Washington operate tea pads, where marijuana is supplied and used freely by HIV/AIDS, Cancer, Glaucoma and other patients. Therefore, this paper concludes that Cannabis sativa is beneficial to humanity, and so ,it was recommended that the ban placed on the drug be lifted forthwith , for it to be legally produced, distributed ,sold and used for sustainable development;and that more researches be conducted on Cannabis sativa to further enhance the agricultural, medical, recreational, and industrial opportunities in the plant for human development.

Keywords: cannabis sativa, marijuana, glaucoma, cachexia, tea pads, HIV/AIDS, cancer

INTRODUCTION
Cannabis Sativa is one of the most vilified plants in modern history. Cannabis Sativa, also known as marijuana, is grown all over the world. The plant has been recognized over 10,000 years ago for its fiber and psychoactive properties (Maisto, Galizio and Connors, 1999). The production of very strong fiber from the stem added to the popularity of Cannabis Sativa among farmers. Later, marijuana’s psychoactive properties were discovered, and this further added to the acceptance and popularity of the plant, among the American youths, along with its medical, industrial, and recreational utilities (Insel and Roth, 2006; Nahas, 1973, Maisto, Galizio, and Connors, 1999).

However, the purported effects of the psychoactive properties of marijuana attracted vilification and condemnation of the plant, to the extent that its production, circulation, sales and use were banned all over the world, except, of recent, in Uruguay. Though, the utilities of marijuana are not in doubt, the controversial and hypocritical criminalization of the plant had prevented humanity from availing itself of the uses of the plant. Marijuana is effective in the management of HIV/AIDS, Cancer, asthma – diseases that have no known cure for now, and the synthesis, tetrahydrocannabinol (THC) is used for treating cachexia, nausea, pains, glaucoma, and for easing childbirth (Cohen and Andrysiak, 1982; Plasse et al. 1991, Martin et al. 1993; Naisto, Gaalizio, and Connors 1999). Even though, patients claimed that smoked marijuana act faster, and more efficacious (Maisto Galizio and Connors 1999), the drug remained a schedule 1 drug according to American formulary.

Therefore the drug remained banned and criminalized all over the world except in Uruguay, and huge sums of money, efforts, human and material resources that could have been diverted of other sustainable developmental ventures, are being expended in enforcing the ban, particularly, in the developing nations, including Nigeria, despite the fact that major cities in America; like San Francisco, Washington and Colorado operate tea pads, where marijuana is supplied free of charge, or at reduced prices to victims of HIV, Cancer and other related health problems for which marijuana is found helpful (Maisto, Galizio and Connors 1999). Marijuana is smoked freely in these tea pads without molestation, while the police and law enforcement agents look the other way. Moreover, most of the deleterious claims arrogated to marijuana use were debunked by research findings (10M, 1982; Cherek, Roache, Egli, Davis, Spiga and Cowan, 1973; Brick, 1990; Carter, 1980; Carter and Doughty, 1976; Comitas, 1976; Page, 1983). So it becomes very pertinent to explore the positive, and beneficial uses of marijuana for sustainable development, in the light of emerging incurable diseases.

On the other hand, tobacco which has no major medical benefit, but which predisposes individuals to numerous health problems such as cancers, coughs, bronchitis etc; are produced, sold and used freely. This paper therefore examined the brief history of Cannabis Sativa, the controversial hypocrisies surrounding the drug, the medical, recreational and industrial utilities of the drug and made recommendations.

The motivation for this paper stemmed from the vilification of cannabis sativa and the negative attitude towards the plant worldwide as a result of as deliberate portrayal of the plant as being totally bad. This negative
attitude was due to misinformation. This paper therefore attempted to debunk this mis-information and put cannabis sativa in the right perspective. This paper also highlighted the social, economic and medical values of this plant with a view of using the cannabis sativa for sustainable development worldwide.

However, this paper has limitations because of the age long belief that cannabis sativa predisposes people to so many health problems, both mental, social and physiological, and that it is prone to crimes and violence. Another serious limitation cannabis sativa is facing is that America classified the drug as schedule I and this makes the production, circulation and consumption prohibited all over the world except, recently in Uruguay. Of equal importance, is the fact that information is very death concerning the medical, agricultural and economic utilities of cannabis sativa with a view to achieving global sustainable development,

**Brief History of Marijuana**

Cannabis Sativa, also known as marijuana is a plant that has been in use, according to Abe (1980), for more than 10,000 years ago, during the stone age. The term “Marijuana” is thought to be based on the Portuguese word “marijuana”, which translates as intoxicant (Maisto, Galizio, and Connors, 1999). The Cannabis plant most commonly is known today as a potent psychoactive substance, but for many years, it was harvested primarily for its fiber. These strong hemp fibers were employed in the production of rope, clothes, and ship sails. Archeologists at a Taiwanese site have discovered pots made of fibers, presumed to be from the cannabis plant.

Although used for several centuries in other parts of the world for its mind-altering properties, it was not until the first third of this century that its psychoactive properties were recognized in the United States. After that, the hemp plant has been, more often, harvested for its psychoactive effects. The earliest known references to the use of cannabis for its pharmacological properties are attributed to Shen Nung about 2800 B.C. Shen Nung was a mythical Chinese emperor, and pharmacist who purportedly shared with his subjects knowledge of the medicinal uses of Cannabis. It has been speculated cannabis was used in this period in China for its sedative properties, treating pain and illness, countering the influences of evil spirits, and its general psychoactive effects (Abe, 1980, Nahas, 1973).

Cannabis use gradually spread from China to surrounding Asian countries. Of particular note, according to Maisto, Galizio and Connors (1999), was its adoption in India, where Cannabis served a cultural, and religious function. The Artharva Veda, one of the oldest books of Hinduism, includes it as one of the five sacred plants (Aldrich, 1977). This provided the plant with the protection and reverence engendered by cultural, and religious acceptance.

The use of cannabis was introduced to Great Britain primarily by William O’ Shaughnessy, an Irish physician. In India, he observed the medical applications of Cannabis, and described them in his writings. Suggestions regarding the use of cannabis were described in France by Dr. Jacques Moreau, a physician who thought it could be used in the treatment of mental illness (Blooomquist, 19971). Subsequently, the use and effects of cannabis were described in much detail in the works of a number of French authors.

However, the presence of cannabis in the New World dates to 1545, when it was brought to Chile by the Spaniards, and from there to the North America colonies, where the plant was raised for fiber by the James-town Settlers in Virginia in 1611. Not long later, the crop was entrenched as a basic staple crop, and was cultivated by George Washington, among many others. Cannabis was harvested in New England starting in 1629, it remained a core U.S. crop until after the civil war. The center of this hemp production was Kentucky, where it was a major crop product for decades.

Following the lead of European doctor, American physicians use cannabis in the 1800s as a general all-purpose medication (Nahas, 1973). By the 1850s, marijuana was listed in the United States pharmacopoeia, a listing of legitimate therapeutics, it remained listed until 1942.

**Controversial Issues over Marijuana**

There is no plant in recent times that has attracted more denigrating controversies than cannabis sativa. Despite these controversies, the cultivation, circulation, sales, and consumption of marijuana flourishes all over the world. This assertion aptly supported Schwarz (1969) who affirmed that whatever the scientific knowledge that emerges from present or future studies, it must be recognized that illicit use of this drug continues to increase, and that it is becoming increasingly difficult to control its use.

Marijuana is known to produce a number of physiological effects on the user, most of those actions are different for different users, not only in strength or intensity of the effect, but also in duration. While the effects are recreational and thus pleasurable, some people claim it is deleterious. While some people opine that marijuana induces violence, others insinuate that it leads to crime and criminal tendencies. Sequel to those perceived deleterious effects of marijuana, Marijuana Tax Act was imposed in America in 1937, limiting the use of the drug.

The imposition of the Tax Act in America notwithstanding, the LaGuardia Commission Report was created by the New York Academy of Medicine at the request of New York City Mayor, Fiorello LaGuardia to investigate whether marijuana was dangerous. This study, second in scope only to the Indian Hemp Drugs Commission, among many others, was a truly multi-disciplinary report. The study included coordinated input by physicians, psychologists, pharmacologists, and
sociologists. Data were gathered on marijuana use and effects in tea pads, as well as in laboratory settings. The general findings of the study were that, marijuana use was not particularly harmful to the user or to society at large (Maisto, Galizio and Connors, 1999).

The report also failed to find evidence for the claim that aggression, violence, and belligerence were common consequences of marijuana smoking (Maisto, Galizio and Connors, 1999). Though this report was not intended to suggest that marijuana did not induce psychoactive effects. A number of individual changes were noted, including in more extreme form, of mental confusion and excitement of a deleterious nature, with periods of laughter land of anxiety.

However, these effects are not serious enough to ban the production, distribution, sales and use of marijuana when compared with other more dangerous drugs which are in circulation and which enjoys official and societal patronage such as alcohol and tobacco. Alcohol not only predisposes victims to serious health problems like cancer, high blood pressure, stroke, heart attack etc. but it also causes serious social problems (Insel and Roth, 2006). Yet, alcohol of all brands, are still produced, sold and consumed freely all over the world. Another is tobacco which has no known medical use, but which is harmful to human health. This drug is known to cause cancer of the lungs, coughs, still birth, high blood pressure, and many other diseases, yet it is not banned (Insel and Roth 2006, Brannon and Feist, 2007).

Unlike alcohol and tobacco, a report focusing on medical uses of marijuana, prepared by an advisory panel, convened in 1997 by the National Institutes of Health (Workshop on the Medical Utility of Marijuana, 1997), reported that there were sufficient indications that marijuana has medicinal benefits for at least several disorders, and that the National Institutes of Health should support research in this area. For instance, Cannabis Sativa is known to be used in the treatment of glaucoma (Hepler and Etrus, 1976); Nausea and Vomiting (Martin et al, 1993); Cachexia (Plasse et al. 1991); to facilitate and reduce pains in child birth (Martin et-al 1993) etc. Nevertheless, more research is needed in this area and all governments should support such research.

Though many issues surrounds the use of marijuana, however, Maisto, Galizio and Connors (1999) presented three hypothesized social and environmental consequences of cannabis use that have received attention, and that have generated controversies over marijuana; the role of marijuana in enhancing interpersonal skills; the effect of marijuana on aggression and violence; and the role of marijuana use in what has been called, the amotivational syndrome. People claim that marijuana use enhances their social skills, and allows them to be more competent in social situations, this claim has not been supported by the available research. Rather, Maisto, Galizio and Connors (1999) opined that what seems to occur is that the user is either; more relaxed in the situation and thus, perceives less anxiety; or interprets his or her behaviour differently while under the influence of marijuana. In any event, it does not appear marijuana significantly enhances competence in social situations.

Another controversy is that marijuana causes the user to be aggressive and violent. The overwhelming conclusion drawn from the available data, including surveys, laboratory investigations, and field studies; is that cannabis use is not causally related to increase in aggression (IOM, 1982). When aggression is observed, it probably is more a function of the beliefs and characteristics of the individual drug user (Cherek, Roache, Egli, Davis, Spiga, and Cowan, 1993). In fact, levels of aggression actually decrease following marijuana use.

The third, and perhaps most controversial social and environmental consequence of cannabis use is the amotivational syndrome. The term was independently used in the late 1960s by McGlothlin and West (1968); and Smith (1968) to describe the clinical observation “that regular marijuana use, may contribute to the development of more passive, inward turning, amotivational personality characteristics” (McGlothlin and West, 1968). Although the clustering of these characteristics may not be totally ruled out, the causal influence of cannabis is not clear (Brick 1990), also NIDA (1982), observed the infrequent occurrence of the syndrome. In addition, anthropological investigations of heavy cannabis users in other countries generally have not found the presence of the amotivational syndrome (Carter, 1980; Carter and Doughty, 1976; Comitas, 1976; Page, 1983), and laboratory studies on cannabis use in humans have not supported the hypothesized syndrome (Foltin, Fischman, Brady, Kelly, Bernstein, and Nellis, 1989; Foltin, Fischman, Brady, Bernstein, Cогriotti, Nellis, and Kelly 1990). Further, the amotivational syndrome has been seen in youths who do not use marijuana and is often not seen in other daily users of marijuana.

Beneficial Uses of Marijuana

Many experts, including Nicoll and Alger, (2004); Insel and Roth (2006); and Ayenigbara (2012); agreed that marijuana has beneficial effects.

The synthetic products such as Levontradol, Nabilone, and Marinol, that chemically resemble the cannabinoids, have been used in current treatment efforts (Sussman et al, 1996; Ungerleider and Andrysiak, 1985). These synthetics are used because they provide the active elements of THC in a more stable manner. Besides, synthetics also, can provide better solubility. Unfortunately, the disadvantage of the synthetics is the absence of the rapid effect experienced when marijuana is smoked. When synthetic THC is taken orally, it is broken down prior, to entering the blood stream, and absorption thus is delayed.

Nevertheless, marijuana may be prescribed, in synthetic form, for the treatment these disorders.
GLAUCOMA
Glaucoma is a health problem affecting the eyes. It is a generic term used to denote ocular diseases involving increases in intraocular pressure. This pressure according to Maisto, Galizio and Connors (1999) damages the optic nerve and represent the leading cause of blindness in the United States. According to them, over 2 million Americans over age 35 have developed glaucoma, and an estimated 300,000 new cases are diagnosed yearly. While drug and surgical interventions are available, their effectiveness is variable.

Cannabis has been shown to decrease intraocular pressure, though patients experience side effects, regardless of whether the cannabis was administered orally, through injection, or by smoking (Hepler and Petrus, 1976). The mechanism of decrease of intraocular pressure according to Cohen and Andrysiak (1982), suggests that cannabis dilates the vessels that drains excess fluids from the eyeball. This draining is thought to prevent fluid build-up and the resultant pressure that causes optic nerve damage.

NAUSEA AND VOMITING
Cannabis and THC synthetics have been used to counter the nausea, and vomiting frequently associated with chemotherapy, and some radiation treatments for cancers. These side effects, which may last for several hours or even several days, according to Maisto, Galizio and Connors (1999), often are not ameliorated by traditional antiemetic medications. Researchers however found antinausea and antivomiting effects of THC, usually administered orally, and results were favourable. This result further supported anecdotal reports by chemotherapy patients, that their private use of marijuana had reduced the aversive side effects of their treatment.

Also, there are indications that children undergoing cancer chemotherapy may, particularly, benefit from orally administered high doses of cannabinoids (Martin et al. 1993). More studies have included the use of THC synthetics, such as Nabilone (Maisto, Galizio, and Connors, 1999). The side effects notwithstanding, many patients undergoing chemotherapy find the THC side effects an acceptable price to pay unfortunately, research in this area may not be conducted, despite the values of marijuana, because marijuana not in synthetic form, remains a schedule 1 drug.

CACHEXIA
Cachexia is a disorder in which an individual physiologically wastes away, often due to HIV infections, cancer, and many other medical problems. Based on anecdotal reports that marijuana use is associated with increased frequency, and amount of eating, thus improving appetite, it has been proposed that marijuana be used with patients with cachexia to stimulate weight gain. These anecdotal reports have some empirical support, Plasse et al (1991) found a relationship between marijuana ingestion and appetite. Accordingly, some individuals experiencing disorders that include cachexia have been turning to marijuana to stem the tide of weight loss and to gain weight. However, more research is needed to determine how beneficial marijuana use actually is in this regard.

In addition, Maisto, Galizio and Connors (1999) Campbell et al (2001) observed that cannabis, and the THC synthetics have been used to a much lesser extent in the treatment of pain, muscle spasticity, convulsant activity, insomnia, hypertension, asthma, and depression. Marijuana was also discovered to have been used by Israeli scientists to speed the birth process, and to ease the associated pains. Indications that cannabis had been used during childbirth had been found in Egyptian Papyri and Assyrian tablets (Martin et al; 1993). It was even speculated that cannabis was used in the period of 2800 B.C in China for its sedative properties, treating pain and illness, countering the influences of evil spirits, and its general psychoactive effects (Abel, 1980, Nahas, 1973). It was further revealed that the Paris physician Jacques Moreau used Cannabis in the mid – 1800s to treat mental illnesses, in addition to Dr. William O’ Shaughnessy who in 1838 described the use of cannabis for a number of health problems, including rheumatism, pain, rabies, convulsions, and cholera (Maisto, Galizio and Connors, 1999).

INDUSTRIAL USES
Marijuana, for many years was harvested primarily for its strong fibers. These strong fibers, according to experts, (Maisto, Galizio and Cannors, 1999), were employed in the production of Pots, ropes, clothes and ship sails. It was also speculated that marijuana fibers were employed in building houses in South Africa. All along, marijuana was cultivated mainly for its fiber, and it generated employment opportunities for the farmers. The distribution, and sales of the fiber, the ropes, pots and other by products also generated revenue for the farmers, and the government. If legalized, the cannabis fiber may generate ample employment and revenue, particularly, for the developing nations that are struggling to make ends meet.

RECREATIONAL VALUE
Besides the use of cannabis for therapeutic and commercial purposes, marijuana is also used for recreation, particularly, among the youths. The drug is popular among the youths because, it is readily available, it is cheap, and the usage conforms with the youth socio-psychological characteristics, that of comradeship. For example, Maisto, Galizio, and Connors (1999), observed that marijuana smokers derive greater satisfaction when they smoke in the presence of others. Their attitude when smoking in the joint (tee pad), is that of a relaxed individual, free from the anxieties and cares of the realities of life. The smoker readily engages in conversation with strangers, discussing freely, his pleasant reactions to the drug. The smoking joint takes on the atmosphere of a very congenial social club.

Similarly, legend had it that, in the evening, after dinner, both young and cold in India would sit round burning logs of wood, and scoop dried marijuana into the fire. As
they inhale the smoke, the youth would dance round the burning fire, under the intoxicative effect of marijuana, to the admiration of the elders, and to the enjoyment and contentment of all. Perhaps, this might be one of the reasons why marijuana was so popular in India that this plant was provided with the protection and reverence engendered by culture and religious acceptance (Aldrich, 1977).

Furthermore, observations of the researchers revealed that adolescents claim that they smoke marijuana when the spirit is low and bored, and also for courage to face difficult situations. Long distance drivers claim they smoke marijuana to provide them with energy and to keep them awake while driving, and soldiers claim they use marijuana when preparing for operations, for courage, and to face difficult situations. Though the veracity of these claims could only be ascertained through research, if marijuana is legalized.

CONCLUSION AND RECOMMENDATION

Consequent upon literature review, this paper concludes that Cannabis Sativa is beneficial to humanity, and that the reasons adduced for banning it are controversial, and hypocritical. The paper further concludes that, if properly harnessed, Cannabis Sativa may generate more employment opportunities, raise more revenue, and benefit the health sector worldwide for sustainable development,

Therefore, this paper recommends that:

i. The ban placed on Cannabis Sativa be lifted forthwith, for it to be legally produced, distributed, sold and used for sustainable development.

ii. More research should be conducted on Cannabis Sativa to enhance the medical, recreational, and industrial opportunities inherent in the plant for sustainable development.

REFERENCES


