"Grabbing the Gateway to Commercial Extensions and Therapeutic Practices- A Case Study of Cannabis in North-Eastern India (1826-1925)"

A dissertation submitted to the University of Hyderabad in partial fulfilment of the requirement for the award of the degree of

MASTER OF PHILOSOPHY

In

HISTORY

GITA BANIA

Department of History

School of Social Sciences

University of Hyderabad

Hyderabad-500046, India

June, 2019

DEPARTMENT OF HISTORY

UNIVERSITY OF HYDERABAD

DECLARATION

I hereby declare that the work embodied in this dissertation entitled **"Grabbing the Gateway to Commercial Extensions and Therapeutic Practices- A Case Study of Cannabis in North-Eastern India (1826-1925)"**is carried out by me under the supervision of Dr. B. Eswara Rao Department of History, University of Hyderabad. I certify that the work presented in this dissertation is, to the best of my knowledge and belief, original, except as acknowledged in the text, and that the material has not been submitted, either in whole or in part, for a degree at this or any other university.

Hyderabad **Gita Bania**

Date: Enroll No-17SHHL09

CERTIFICATE

(for M.Phil.dissertation)

This is to certify that the dissertation entitled**, "Grabbing the Gateway to Commercial Extensions and Therapeutic Practices- A Case Study of Cannabis in North-Eastern India (1826-1925)"** submitted by **Miss Gita Bania** bearing Regd.No 17SHHL09 in partial fulfilment of the requirements for the award of the degree of Master of Philosophy in History is a bonafide work carried out by her under my supervision and guidance which is Plagiarism free dissertation.

This dissertation has not been submitted previously in part or full to this or any other University or Institution for the award of any degree or diploma.

Supervisor Head of the Department/Centre Dean of the School

ACKNOWLEDGEMENT

First of all, I would like to extend my sincere gratitude to my supervisor Dr. B. Eswara Rao – of the School of Social Sciences, University of Hyderabad – for his wise counsel, patience and encouragement throughout the course. I would also like to thank Dr. Atlury Murali for his initial co-operation and guidance and providing me with a standard framework towards the subject for which I will be ever obliged to. This dissertation has also been enriched by the contribution of my family and friends helping me during the fieldworks and the lively discussions with researchers and professors from Gauhati University professed in medicinal history of the frontier. I also extend my hearty gratitude to Dr. Binoy Kr. Nath for inspiring me with the depth of my research topic. Also for my research, I received invaluable assistance from librarians and archivists in the following institutions in Assam, Directorate of Archives: Government of Assam, Guwahati District Library, Krishna Kanta Handique Library, ICHR: North-East Regional Centre, Nabin Chandra Bordoloi Library, Nagaon District Library, Government Ayurvedic College, Guwahati, Lakshminath Bezbaroa Library, Dibrugarh District Library, Mayong Village Museum and Research Centre, in West Bengal, Directorate of State Archives, Kolkata. Moreover, the global digitization of the archival sources in the recent times has also been of immense help.

This work is dedicated to my Father.

CONTENTS

Tables and Figures

Cautionary Note

The present work in no way promotes any intoxication of hemp drugs and neither of its derivatives which includes bhang, ganja, majum, marijuana and charas. The information of medicinal and nutritional values on cannabis as provided in this work does not intend to replace any professional healthcare. Cannabis is a highly complex drug which has to be dealt with care by professional scientists and physicians with immense scrutiny and under proper laboratorial conditions. In the traditional therapeutics of the frontier ‘raw cannabis’ was never employed owing to its highly complex nature. Medicinal cannabis was used as a combination drug i.e. it was either mixed with other herbs or healthy fats or being prepared as a concoction, tinctures, boiled and at times also burned for its pain relieving vapours. Therefore, no attempts should be made to treat any specified disease solely on self-knowledge or on the medicinal information as provided in this work.

Abstract

The Colonial economic drive in the North-Eastern frontier was facilitated by its potential spatial understanding and catalysed by a modern knowledge system with its multi-stranded networks of 'diffusionist' form of power acquisition. This dissertation specifically provides an insight into the 'pre-colonial' and 'colonial' shifts in the perceptions of production process from medicinal cannabis to that of an industrial and commercial commodity. The introduction of indigenous cannabis, in the process of the colonial search for hemp, revealed its extensive usages as a medicine and an intoxicant throughout Asia. This led to a shift in the colonial agenda, leading to a commercial boom through their apparent domination of hemp drugs (cannabis intoxicants) and the body of its users. Such domination was achieved through several phases of colonial policies of control and restrictions and through partial portrayal of cannabis emphasizing only its intoxicant aspect. Moreover, by 1920s, the British domination of the drug trade became a subject of great condemnation in the international circles which led to the League of Nation's Advisory Council on Opium (1924-1925) followed by two opium conferences. Although the main subject of discussion was opium, however, cannabis too exploded into the Second Opium Conference under Egyptian pressure, backed by US and China. These dissented nations demanded the trade of opium and hemp drugs to be completely outlawed. To this, Britain ended up putting harsher regulations on cannabis agreeing the halt of hemp drugs unless on the provision of a required certificate for medicinal and industrial usage. However, Britain on their part did not prohibit the drug completely but made it a complete governmental

possession coupled with charges of criminality linked with its private cultivation or trade. This mainly became a catalyst of providing Britain with their required agenda of engulfing the entire share to themselves by turning the table to serve their interest- providing a fatal blow to the indigenous usage of the drug including its importance in the traditional therapeutics and significantly compelling the native's reliance on the 'Raj'. This evident decline of cannabis in the traditional therapeutics and rather its fillip in the British Pharmaceutical Industries, coupled with the additional hike of the hemp drug production serving international markets resulted in the British accumulation of the lion's share. In this concern, an attempt has been made to critically analyse the colonial policies relating to cannabis alongwith its role in the colonial North-Eastern frontier, its usage for medical and non-medical purposes and the demonstration of subtle resistances by the natives when confronted with colonial shifts in the method of cannabis production for the period (1826-1925). In doing so, its main emphasis is on the 'War of 1812' and its long-term implications in India, which led to the influx of various surveys, researches and experiments on cannabis and finally the strategic portrayal of the 'Indian Hemp Drug Commission 1893-94(establishing the excessive usage of cannabis linked with insanity and crime)', and the 'International Conventions' which finally clubbed cannabis with opium and put a ban on its private cultivation, use and trade in 1925. A ban which significantly led to the conflict of the colonial state and people; carving out dual-responses from indigenous population, one representing general interest i.e. the indigenous population particularly the medical practitioners dwindling into insignificance under the new colonial order and the other sectional interest represented by the sectional elites.

INTRODUCTION

पञ्च राज्यानि वीरुधां सोमश्रेष्ठानि ब्रूमः।

दर्भो **भङ्गो** यवः सह ते नो मुञ्चन्त्व् अंहसः॥

"To the Five Plant Kingdoms, Where Lord Soma Rules, We Summon:

The Mighty Power of Darbha, Bhang and Barley, may uplift us from the woe."[1]

Atharva Veda 11.6.15

The usage of medicinal cannabis had been continuing throughout the ages.[2]This is evident from the various works of literature, ancient texts and medicinal compodium confirming the age-old usage of cannabis for medicinal, social, cultural and religious purposes throughout India. The ancient epic of Mahabharata described the mythological origin of cannabis which was created during the churning of Mount Mandara in the cosmic ocean by the gods and demons. The Mahanirban Tantra Sastra described cannabis as a 'joy-giver' and a 'destroyer of misery'.[3]A medicinal text by Vaidyasiromani Shri Rājavallabha namely 'Rājabhallabha Nighantu',[4] available in the revision of Narayanadāsa

[1] Sindhu Karpakal, 'Cannabis-One of the Sacred Plant in Atharva Veda', *LinkedIn*, July13, 2017, retrieved from https://www.linkedin.com/pulse-one-sacred-plant-atharva-veda-sindhu-karpal on 13-04-2019, 19:30.

[2] *In folk medicine the use of cannabis is still hereditarily practised amongst the 'Bez' and 'Bezenis' (folk medicine-men/women) of Mayong. Healers like Tilak Hazarika, Prabin Saikia, Haren Deka, Jayani Devi, Topeshwari Devi etc. said to have treated several cases of chronic pain, diarrheoa, skin diseases, rheumatism, digestive disorders, cattle diseases and many more with the various concoctions and pills made out from the cannabis plant.*

-Information collected through interviews by the researcher on April 8, 2018, Hilei-Kunda, Mayong, Assam.

[3] Dhiren Chandra Baruah, *Bhagawat Tattwa,* Sibsagar: published by Srimanta Sankar Sangha, January 2019, p.481.

[4] Shanthkumar Lucas, *Nighantus of Āyurveda,* New Delhi: Chaukhamba Publications, 2006, p.189.

Kaviraja (1760 A.D.) described cannabis as Indra's food which destroys leprosy, anxiety, creates vital power, internal heat, mental power and is considered to be an elixir of life. Rasa Sāstra an important branch of Ayurvēda dealing with materials consists of an important subject text known as Anandakanda. This text describes cannabis as attaining different colors in different ages of the world. From white, in the golden age to red, yellow and in the degenerate age of kaliyuga it turns green in color. A medical compodium by Samgadhara explains about the medicinal potentiality of cannabis used to treat cough, loss of appetite, wheezing and wasting diseases and to be taken as a concoction mixed with honey for healing anemia, weight loss, and diarrhea. Vangasena *(renowned Bengali scholar from the Pala period during circa 1050-1100)* author of Chikitsa Sarsamgraha mentioned cannabis for digestion, as an appetizer and an important herb for boosting the immune system. Cakrapanidata *(flourished under Nayanapala in Circa 1050)* in his medical vocabulary describes cannabis as possessing the qualities of '*katulva'* (acridity), '*tiktatva'* (pungency), '*kasayatra'* (astringency), '*vatakaphapahatva'* (removing phlegm), '*usnatva'* (heat), '*balyatva'* (strength-giver), '*medhakaritva'* (mental power), '*vakpradatva'* (speech-giver) and '*cresthadipanatva'* (as an excellent excitant).[5]

The medicinal plant of cannabis mainly belonged to the family of Cannabaceae, having three species viz. *cannabis sativa*, *cannabis indica* and *cannabis ruderalis*. According to Lamarck (French botanist), one characteristic which differentiated *cannabis sativa* from *indica* is that the latter consists of alternate leaf arrangement which contrasted with the opposite arrangement in *cannabis sativa*. *Cannabis indica* is a smaller and bushier plant with more

[5] Shivaharidas, 'Vedic Use of Cannabis', *Scribd*, 11 November, 2012, retrieved from https://www.scribd.com/doc/112883222/Vedic-Use-of -Cannabis on: 12-04-2019, 18:45.

marked branching consisting of harder stems and narrow leaflets. In 1753, biologists Carl Linnaeus classified *cannabis sativa* which possesses a higher level of *cannabidiol* (hereby CBD) and its plants are usually taller and less robust. In 1924, Janischevsky (botanist) described *cannabis ruderalis* as a new species which is low in Δ^9- Tetrahydrocannabinol (hereby Δ^9-THC).[6]

Fig1.1: Three Species of Cannabis: a) Cannabis Ruderalis, b) Cannabis Sativa and c) Cannabis Indica.

Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.247; *What is Auto flowering Cannabis?* retrieved from https://pin.it/2atgnjiv5zs7p on 14-12-2018, 09:55.

Cannabis had an age-old history of its usage as a medicinal and recreational herb not only in India but throughout other nations as well.

[6] Ernest Small, Perry Y. Jui and L. PP. Lefkovitch, 'A Numerical Taxonomic Analysis of Cannabis with Special Reference to Species Delimitation', *Systematic Botany, Vol. 1, No. 1 (Spring, 1976),* p. 68.

Cannabis had been long cultivated in Asia and Europe for both its medicinal and recreational potentialities.[7]In China, in the year 1921, Anderson discovered the Neolithic Culture remains at Yang-Shao Honan province and among the pottery remains some were decorated with impressions of cloth which was believed by Anderson to be hemp *(male derivative of cannabis).* Hemp was extensively used by the Chinese for making ropes, fishing nets, paper making and fabrics of all kinds. In the Li Chi (Records of Rites) and Chou Li (Rites of Chou), the use of hemp cloth was mentioned.[8] Moreover, the oldest surviving paper made from hemp fibers comes from China which dates back to 2000 years of age. Hemp seeds were also an important food grain amongst the ancient Chinese.[9] It was viewed that from India the usage of cannabis had extended to Persia and from the latter, argues Mr. Lane (*in his Manners and Customs of Modern Bgyptians*) that the Arabs acquired the practice of cannabis consumption. The Persians adopted the name of the plant from the Hindus, which, however, was not replicated by the Arabs. In Arab, cannabis is popularly known as 'hanab'.[10]

[7] I. A. Ross, *Medicinal Plants of the World*: *Chemical Constituents, Traditional and Modern Medicinal Uses*, Vol. 3, Totowa, NJ, ©Humana Press Inc., p. 30.

[8] Hui-Lin Li, 'An Archaeological and Historical Account of Cannabis in China', *Economic Botany, Vol. 28, No. 4 (Oct. - Dec., 1974), Springer on behalf of New York Botanical Garden Press,* p.443.

[9] Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press,2017, Canada, p.139.

[10] J. Crawfurd, 'On the History and Migration of Cultivated Narcotic Plants in Reference to Ethnology', *Transactions of the Ethnological Society of London, Vol. 7 (1869),* pp. 78-91.

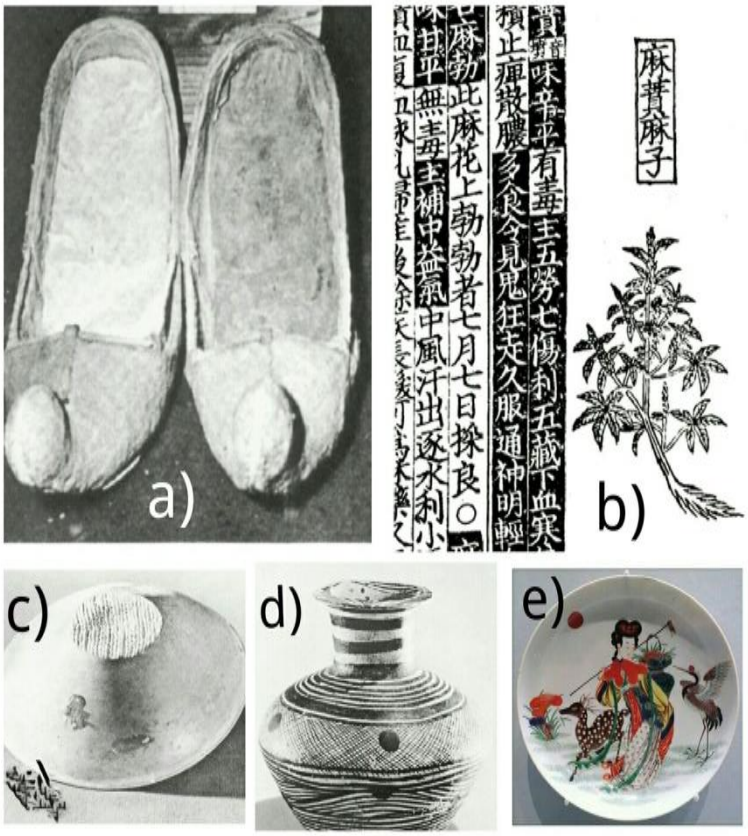


Figure 1.2: Various Chinese Belongings: a) hemp shoes found from a grave of Turfan, Singkiang, 721A.D, b) elucidations of the functions of cannabis from the *Cheng-lei-pên-ts'ao* edition of 1234 A.D, c) imprints of hemp cloth on Neolithic pottery bowl from *Pan-p'o Si-an*, d) Decoration of weaving on a Neolithic pottery Jar from *Pan-p'o Si-an*, e) a 1700-1800A.D porcelain dish with the portrayal of the Hemp Goddess Magu. Source: Hui-Lin Li, 'An Archaeological and Historical Account of Cannabis in China', *Economic Botany, Vol. 28, No. 4 (Oct. - Dec., 1974)*, pp.438,439,442,445; Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.32.

Cannabis also had an immensely religious and cultural significance in various parts of the globe.[11] In India, ancient Hindu texts like Shiva Purana and

[11] Greek historian, Herodotus described that cannabis cultivation was carried on by the Scythians who converted its fibers into linen cloth having similar resemblance with flax. Greek Physician and philosopher (in the Roman Empire) Galen described about the intoxicant power of cannabis when he mentioned that it was customary in his time to provide hemp seeds to the guests at banquets for hilarity and enjoyment. During the time of Pliny, the plant was largely used by the Romans for the manufacture of cordages. . The Ebers Papyrus described a plant known as 'shemshemet' which is often related to 'cannabis sativa' owing to its potentialities of producing fibers and medicine. In the US, the first and the second draft of American Declaration of Independence were also written in Hemp paper. Cannabis was also the emblem of the Egyptian Goddess Seshat- the Goddess of Knowledge. Statues of Greek Goddess Hera were adorned by

Kaskinda Purana explains about God Shiva's association with holy bhang. According to legends Goddess Parvati, the consort of Shiva, introduced intoxicated cannabis to him after which they invented the tantric yoga.[12]

In China, Magu is the Goddess of hemp possessing the 'elixir of life'. In Japan, the Goddess is known by the name of '*Mako*' and in Korea by the name of *'Mago'*. She is the Goddess of the Shandong's sacred Mount Tai where cannabis was to be gathered by her on the "seventh day of the seventh month".[13]

---

cannabis garlands referred to as 'Asterion'. Moreover, cannabis was also used as a delicacy in many places. Dried hemp leaves were also boiled in butter, oil and fats and induced into various confectioneries. It was also mixed with honey, figs or dates into an electuary. Another preparation was with the mixing of various spices like pepper, cloves, cinnamon, amber and musk. A confection known as 'dawamese' is popularly consumed amongst the Arabs. In Jamaica, cannabis tea mixed with its dried leaves and sticks were consumed for therapeutic purposes. It was also used as a health tonic and pepper-pot soup. Jamaican elderly women also recommended the newly born infants to be washed with cannabis leaves for preventing ailments and ensuring its healthy growth. Ernest Small, *Cannabis A Complete Guide*, 2017, p.278,141; M.C Cooke, *The Seven Sisters of Sleep: Popular History of the Seven Prevailing Narcotics of the World*, London: James Blackwood, Paternoster Row, 1860, p.10-12; Nola Evangelista, *Tokin' Women a 4,000 –Year Herstory, 2015* .pp. iv-v; Eirene Kai Hugieia, *Asterion: The God of Cannabis, The Cave of Oracle*, 11 February, 2014, retrieved from http://caveoforacle.wordpress.com/2014/02/11/asterion-the-god-of-cannabis/ on 14-12-2018, 10:17; Vera Rubin and Lambros Comitas, *Ganja in Jamaica: A Medical Anthropological Study of Chronic Marijuana Use,* The Hague, Paris: Mouton &Co., Publishers, 1975, pp.48,50.

[12] J.M Campbell, 'On the Religion of Hemp', in Tod H.Mikuriya (ed.). *Excerpts from the Indian Hemp Drug Commission Report*, San Fransisco: Published by Last Gasp of San Fransisco, November 1994, pp.27-28; Nola Evangelista, *Tokin' Women a 4,000 –Year Herstory*, Berkeley, CA: Evangelista Sista Press, 2015, pp. vi-vii.

[13] Ernest Small, *Cannabis A Complete Guide*, 2017, p.323; Nola Evangelista, *Tokin' Women a 4,000 –Year Herstory,2015,* pp. viii-ix.

Figure 1.3: a) Hindu deity Shiva preparing bhang, b) Goddess Parvati offering holy bhang to Shiva. Source: *Parvati Offers Bhang to Shiva*, *Exotic India*, retrieved from http://www.exoticindianart.com/m/product/paintings/parvati/parvati-offers-bhang-to-shiva-HB53 on 14-12-2018, 09:00.

Figure 1.4: Chinese Goddess of Cannabis

Source: *Her Holiness Princess Magu Goddess of Cannabis*, retrieved from http://www.wayofinfiniteharmony.org/wp-content/uploads/2009/12/Her-Holiness-Princess-Magu-Goddess-of-Cannabis.jpg on 14-12-2018, 13:01.

Moreover, among the Hmong community of China, the funeral dresses were made out of hemp and depending upon the number of children, the deceased had to be buried with the stacks of clothing. In ancient Japan, cannabis was used in the holy rituals at the Buddhist Temples and Shinto Shrines. The Japanese priests generally dressed in hemp robes and used cannabis for various religious ceremonies. Hemp garments were also worn by the Japanese wealthy classes as bathrobes known as '*Yukatabira'*. Their Emperor at the time of accession to the throne was bound to wear a hemp garment which symbolized purity in Shinto belief.[14]

Turning to the medicinal usages of cannabis, in China, it was used for treating wasting diseases, to cure blood, cool the temperature, pus discharge, cancer, etc. Chinese famous physician *Huato* (117-207 AD), according to the dynastic history, '*Hou-Han-Shu*,' was using a cannabis concoction called '*ma-fei-san'* to anesthetize his patients during their operations.[15] In India, the hot water extract of the dried plant was taken orally to relieve the pain of dysmenorrhea. It was also used to treat dyspepsia, gonorrhea and nerve stimulant. The hot water extract of the leaf was taken to treat menstrual pain. The paste of its leaves was applied for cuts, boils, and blisters. It was also taken for hydrocele, inflammation, piles[16] and to eliminate cough, bronchitis and other respiratory ailments. Its seeds were taken orally for diabetes, hysteria, and sleeplessness. Its fruit was used externally for treating delirium tremens, delirium fever, tetanus, and migraine. In Ayurveda, it was used for treating

[14] Ernest Small, *Cannabis A Complete Guide*, 2017., pp.130-140.

[15] I. A. Ross, *Medicinal Plants of the World.*, p. 30.

[16] *Materia Medica of Hindoostan: Artisans and Agriculturislists Nomenclature*, Madras: Madras Government Press, 1813, p.80.

various mental illnesses.[17] In Iran, it was used for pain associated with cancer, gastric cramps, arthritis and the fluid extract of the dried fruit of cannabis was taken orally for whooping cough. In Jamaica, the hot water extract of the flower, leaf and the twig was taken orally as an antispasmodic and anodyne. In Nepal, it was taken for headache, its leaf juice was applied externally as an antiseptic and its seeds were crushed and mixed with curd for dysentery. In South Africa, the hot water extract of the plant was taken for asthma.[18] In Jerusalem, a skeleton of a 14 years old girl was found in a 4th Century gravesite, who apparently died during childbirth. The ashes of the tomb consisted of cannabinoids which suggested that cannabis was burnt and used as a vapor to promote uterine contraction and reduce labor pains.[19] Moreover, the Herbal of Dioscorides (ca 40-90 AD) Greek physician, botanist and in the Records of Galen (200-216 AD) a Greek physician and surgeon, described the medicinal potentiality of cannabis.[20] In Egypt, cannabis was used as a potion for soothing and dispelling care.[21] The Muslims used the plant for treating asthma, dandruff, and urinary disorders. In Zoroastrian scriptures of ancient Persia, reference of cannabis has been made for miscarriages and for euphoria.[22]

---

[17] Mishra L.N and A. Balkrishna, 'Ayurvedic Plants in Brain Disorders: The Herbal Hope', *Journal of Traditional Medicine and Clinical Naturopathy*, *Patanjali Research Foundation, Uttrakhand, India*, May 17, 2017, retrieved from http://www.omicsonline.org/open-access/ayurvedic-plants-in-brain-disorders-the-herbal-hope.php?aid=89160 on 27-12-2018, 08:19 ; I. A. Ross, *Medicinal Plants of the World.*, p. 31.

[18] I. A. Ross, *Medicinal Plants of the World* .,p. 31.

[19] Ernest Small, *Cannabis A Complete Guide*, 2017., p.278.

[20] Ibid., p.279.

[21] M.C Cooke, *The Seven Sisters of Sleep*,1860., p.10.

[22] G. K. Sharma, 'Cannabis Folklore In The Himalayas', *Botanical Museum Leaflets, Harvard University, Vol. 25, No. 7 (October 30,1977)*, pp.203-215.

Regarding the usage of cannabis as various intoxicants, its earliest depiction in India has been associated with the Hindu God Shiva.[23] Another Treatise on cannabis described the history of the discovery of the herb when Haider *(the head of ascetics and self-chastener who lived on the mountain between Nishabor and Rama*) was introduced to the plant in the mountains. He went back and brought his other companions to the spot where all ate the plant and were over thrilled with laughter and joy.[24] In ancient Saraceus and amongst the modern Arabs in some parts of Syria and Turkey, cannabis intoxicant is used in the form of 'Hashish'.[25] Chinese medical pharmacopeia by Bents'ao (1st Century AD), stated cannabis as an important medicinal herb however, if excessively intoxicated causes 'seeing devils'.[26] Cannabis intoxication was also used for sacred purposes in Ancient Palestine, Assyria, Babylon and throughout the Caucasus region. The Kurgans of Romania smoked hemp seeds ritualistically for euphoric purposes. The Greek historian Herodotus described burning cannabis in the Scythian funeral ceremony.[27] Cannabis intoxication was also practiced in Zoroastrianism. In Poland, Lithuania and Russia vapors of hemp seeds were taken to relieve toothache and stress.[28] Moreover, Historian M.C Cooke beautifully illustrated the legend of *'Sleep and Her Seven Sisters'*

[23] J.M Campbell, *On the Religion of Hemp,* 1994., pp.27-28; Nola Evangelista, *Tokin' Women a 4,000 –Year Herstory,* 2015., pp.vi-vii.

[24] Ernest Small, *Cannabis A Complete Guide,*2017., p.225.

[25] Ibid.,p.225.

[26] Ibid.,p.223.

[27] Ibid.,p.237.

[28] Ibid.,p.238.

amongst whom cannabis was one, who infests upon her mortal subjects the gorgeous visions and illusions.[29]

However, it is significant to note that cannabis if used as medicine proves to be a blessing to mankind, but if it is abused as an intoxicant, causes severe health hazards. Couchlock is a term described to the effects of its chronic intoxication where a person becomes lethargic, experiences a decreased body temperature, dry mouth, increased heartbeat, reduced tear flow, and red eyes. Reece *(Professor of Health and Medical Sciences, Psychiatry, University of Western Australia*) remarked the effects of excessive cannabis intoxication as causing psychiatric, respiratory and cardiovascular disorders. Eva Hoch *(Head of the Cannabinoid Treatment and Research Group at the Department of Psychiatry, University of Munich)* concluded it as inducing panic attacks, psychotic symptoms, and nausea. Zeisser et al. (2012) described the adverse effects of cannabis intoxication causing panic and restlessness.[30] Dr. Prain (*British Curator of Herbarium, Royal Botanic Garden, Sibpur, 1887)* remarked its effects as an initial stimulation, exhilarant, sedative, and depressant.[31]

However, considering the present scenario, the contemporary society has now viewed the plant as a 'deemed taboo' and relates it as an 'evil-drug' with a sole recognition of its intoxicant side. This forms an imperative question regarding the trajectories involved behind such an unsettling metaphor related to cannabis? This work mainly seeks to trace the viewed embodiment of 'dangerous drug' as attained by cannabis taking its roots under the colonial

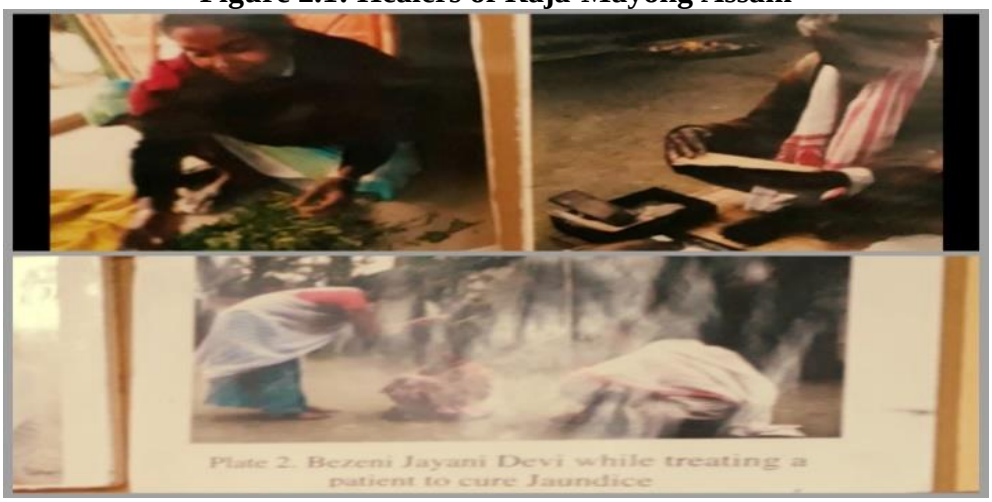
[29] M.C Cooke, *The Seven Sisters of Sleep*,1860., p.1-5.

[30] Ernest Small, *Cannabis A Complete Guide*,2017., pp.236-239.

[31] *Report of the Cultivation and Use of Ganja,* Calcutta: Printed at the Bengal Secretariat Press, 1893, p.74.

period, forming its initial shape towards the 19th Century and maturing under the Second Opium Conference, as impelled through the allied British policies of socio-economic and cultural penetrations, driven by their endeavour of maximum appropriation.

Figure 2.1: Healers of Raja-Mayong Assam



Source: Images procured from Mayong Village Museum and Research Centre, Morigaon District, Assam-782411

In the North-Eastern Frontier, cannabis was a locally produced plant and as per sources, the best were produced among the hill tribes of 'Nagas, Miris, Khasi, in the Sibsagar Frontier, Lakhimpur Frontier and in the Naga Hills, North Cachar Hills and Hill Tippera.'[32] The '*char*' lands (*bank of a river)* of the Brahmaputra Valley like *'Goroimari, Khuntoli, Anda-bhanga, Kasomora, and Moheshwara'* also produced cannabis for both medicinal and intoxicant purposes. It was used as an intoxicant among the hardworking classes, especially the farmers and tea coolies for instant refreshment and muscle

[32] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*, Calcutta: Office of the Superintendent of Government Printing Press, 1894, pp.530,531,535.

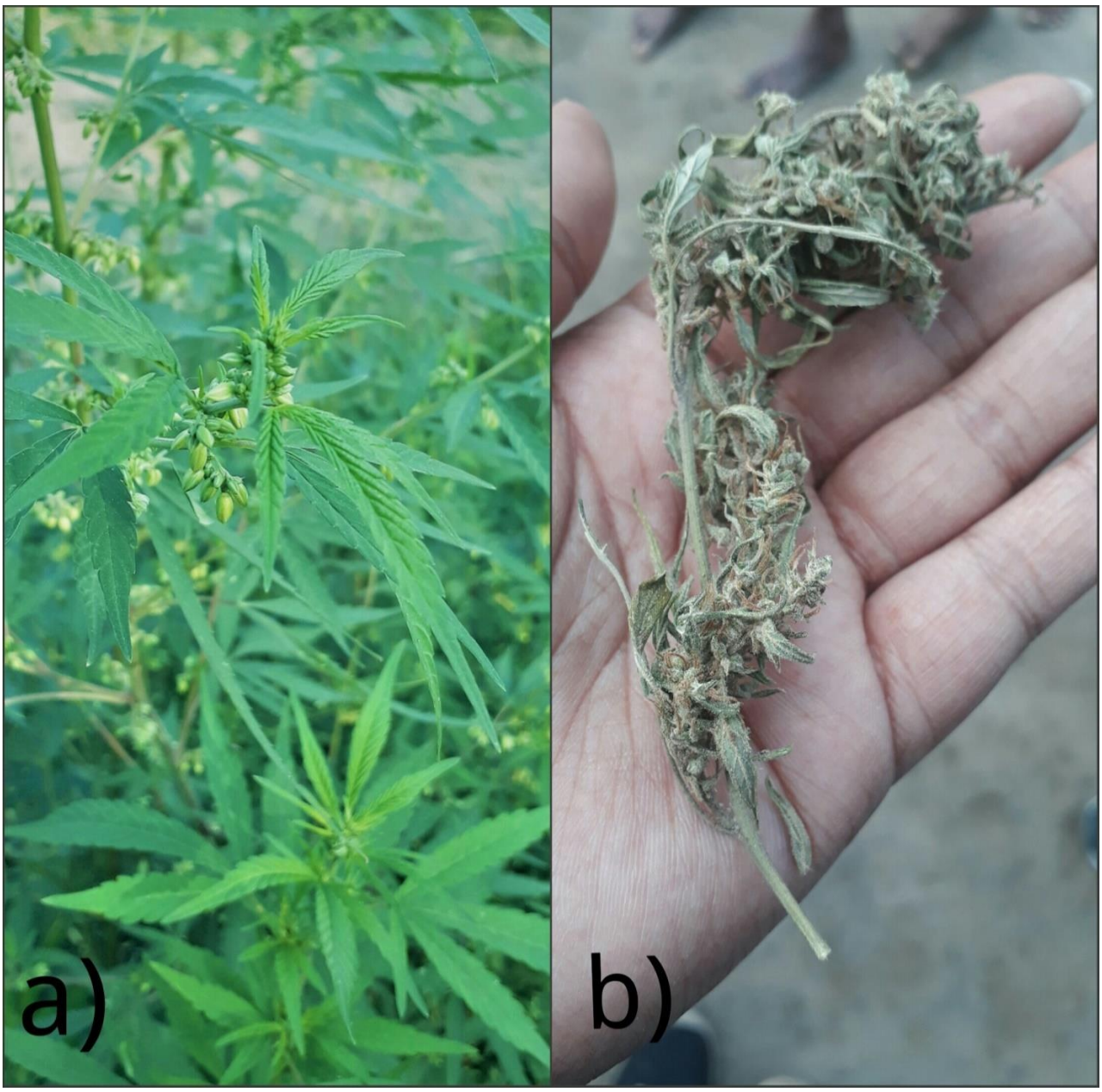
repairment from heavy exertion throughout the day.[33] While smoking cannabis, the smokers particularly used chillum (*a conical straight pipe made of clay*) known as '*bhangkhowa chillim'* in Assam.[34] This, however, turned out to take an adverse picture which after extensive researches, surveys (*conducted even before the Indian Hemp Drug Commission, alongside opium and other drugs*) and experiments by various colonial scientists, botanists, and servants proved cannabis as the 'true hemp'. These researches revealed its immense potentiality of contributing towards the British navy, industries, pharmacopeia and particularly to the British Indian revenues. To governmentalize such herb, a clear drawn projection was laid in the garb of IHDC towards the end of 19th Century, which endowed cannabis *(emphasizing on its excessive intoxication completely ignoring its medicinal, cultural and religious significance)* with a bad reputation, by linking its consumption with insanity and crime.[35] Such an issue later became a serious object of scrutiny amongst the world powers, bringing up its presumed ill-interpolation in the Second Opium Conference, 1925.

[33] Ibid., p.*529*; *Report of the Cultivation and use of Ganja*, Calcutta: Bengal Secretariat Press, 1893, p.66.

[34] *Notes on some Industries of Assam From 1884 to 1895*, Shillong: Printed at the Assam Secretariat Printing Office, 1896, p.130.

[35] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, USA: Oxford University Press, 2003, p.4.

Plate I : Image of Cannabis Sativa Linn. at Khuntoli, Assam[36]



a) Image of cannabis sativa linn. with its resinous buds and twigs, b) produced hemp drug (bhang) at Khuntoli, Assam. Source: *Image of Cannabis Sativa Linn. at Khuntoli, Assam*, collected by the author.

[36] See Plate I: "Image of Cannabis Sativa Linn. at Khuntoli, Assam", copyright by the author.

Figure 2.2: Russian Hemp for Fiber Production

Source: *Russian Hemp Growers*, 11 November, 2011, retrieved from http://englishrussia.com/2011/11/11/russian-hemp-growers/ on 20-10-2017, 16:45.

Hemp, a derivative of cannabis was mainly used in the European countries for fibers, making it an important commercial commodity. Between 1767 and 1782, 95.9% of hemp was imported from Russia to Britain which further increased by 1790s and between 1797 and 1806, the proportion of British imports of hemp from the Baltic further hiked up.[37] However, due to the Russian Blockade *(Russia bounded by the Treaty of Tilsit of putting a ban to all the Anglo-Russian trade)*, coupled with the Continental system as put forth by

[37] James Davey, *The Transformation of British Naval Strategy: Seapower and Supply in Northern Europe 1808-1812*, UK: The Boydell Press, 2012, p.20.

Napoleonic France,[38] Britain was in a dire commercial need to search for an alternative source of hemp supply in its colonies including India.[39] This was consequently achieved in colonial India with the consistent efforts of the Botanists, Company's Surveyors, Physicians, and Surgeons through which European hemp was recognized with the Indian cannabis.[40] With these imperative researches being achieved, the natural colonial drive of satiating their naval demands out of hemp fibers eventually took its shape through the execution of various colonial measures like that by the Board of Trade, [41]the execution of the Indian Hemp Drug Commission and the responsibility of hemp cultivation as undertaken by the 'agriculture and horticulture society.'[42]

However, cannabis, despite forming a great locus of curiosity and conflict within the British colonies and also at the international level, as a subject rarely gained ground in the pages of Indian historical researches. This dissertation thereby, aims to analyse the colonial economic drive of cannabis in the North-Eastern frontier, its usage for medical and non-medical purposes and the demonstration of subtle resistances by the natives when confronted with colonial shifts in the method of cannabis production for the period (1826-1925) i.e. with the advent of the British East India Company to the Brahmaputra Valley with

[38] Ibid., pp.13-31.

[39] John Gascoigne, *Science in the Service of the Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution,* Australia: Cambridge University Press, 1998, pp.118-120.

[40] J. Forbes, *Cordage, Clothing and Paper with an Account of the Cultivation and Preparation of Flax, Hemp and their Substitutes*, London: Printed by J.E Adlard, Bartholemew Close, 1855, p.252.

[41] John Gascoigne, *Science in the Service of the Empire,* 1998., pp.118-120.

[42] MacDonald Mackenzie, *Imperialism and the Natural World,* United Kingdom: Manchester University Press, 1990, p. 54.

the signing of the Treaty of Yandaboo in 1826 *(gradually engulfing the entire Frontier towards the beginning of the twentieth century)*; till the signing of the Second Opium Conference in 1925.[43] In doing so, its main emphasis is on the War of 1812[44] and its long-term implications in India, which led to the influx of various surveys, researches and experiments on cannabis and finally the strategic portrayal of the 'Indian Hemp Drug Commission 1893-94 *(establishing the excessive usage of cannabis linked with insanity and crime)*',[45] and the International Conventions which finally clubbed cannabis with opium and put a ban on its private cultivation, use and trade in 1925.[46]

A ban which significantly led to a conflict of the colonial state and people; carving out dual- responses from the indigenous population, one representing general interest i.e. the indigenous population particularly the medical practitioners dwindling into insignificance under the new colonial order and the other, sectional interest represented by the sectional elites. An emphasis would finally be laid on this colonial knowledge specifically in terms of the medicinal practices for the concerned period at the same time scrutinizing the linked strands towards the 'declining' medicinal cannabis being a part of the dwindling traditional therapeutic practices, undergoing various constraints and ceaseless conquests. This was coupled with the sectional interest running contradictory to general interest under the exploitative colonial paradigm in 19th Century North-East India.

[43] James H. Mills, *Cannabis Britannica-Empire*, 2003., pp.6-7.

[44] James Davey, *The Transformation of British Naval Strategy,* 2012., pp.20-34.

[45] *Report of the Indian Hemp Drug Commission 1893-94, Vol-I*, Simla: Government Central Printing Office, 1894.

[46] James H. Mills, *Cannabis Britannica-Empire*, 2003., p.161.

Review of Literature

Existing literature on cannabis, medicine, and agriculture with endowed general perceptions which informed about cannabis in terms of economic, political and cultural significance in the international, national and regional context provides a base to this dissertation.

For the distinction of the pre-modern Ahom Society declining to sustain with its contact with the modern colonial penetration, this study takes its insights from an important work on social power as Michael Mann puts forth the presence of four coordinates of power viz. ideology, economy, military and political whose consistent operations simultaneously holds the society intact.[47] His work has been used, for the understanding of a traditionally pre-modern society i.e. the Ahom kingdom, having monarchical embodiment of a heirophanic centre, deprived of proper scientific networks was not been able to penetrate into the veins of its territorial extensions leading to the rise of a more stronger ideology in the form of Neo-Vaishnavism (receiving mass obedience) during the 18th Century which led to the doom of the empire and a modern, with the socio-cultural and political penetration of the British colonial power into the region having strict intensive control [48] through an advanced military, establishment of scientific, economic and socially stratified institutions, under a defined cartographic territory, moulding the region to meet its capitalistic desires for maximum appropriation.

[47] Michael Mann, *Sources of Social Power Vol-I- A History of Power from the Beginning to A.D 1760,* USA: Cambridge University Press, 1986.

[48] Ibid., p.7; Surya Kumar Bhuyan, *Studies in the History of Assam*, Second Edition, New Delhi: Omsons Publications, 1985, p. 55.

General insights on medicine have been aptly drawn from David Arnold as he establishes a systematic model of the colonial form of knowledge system through the Company's surveyors who transversed the conquered territory amassed data organized by sciences of Botany, Geology, Zoologists, and Foresters. Various researches were undertaken by the Company's scientists as in the case of cannabis the dual structured experiments conducted on medicinal cannabis carried out by W.B O' Shaughnessy, Ainslie, Wood, Spivey, Easterfield (colonial botanists) and the experiments on cannabis fiber carried out by William Roxburgh, George Sinclair, and Dr. Prain. There were also vigorous works of appropriation of the indigenous knowledge systems by the Orientalists. This roarstallization of knowledge through various sources, ultimately contributed towards a shift, away from the indigenous medical systems *(criticized to be un-scientific, dominated by religion and superstitions*) to a position of a more 'dominant power structure'. Arnold argued that Basalla's notion of over-emphasis of science, technology, and medicine to be a result of European colonialization alone, whereas Basalla completely ignored the immense scientific traditions which enriched the Indian subcontinent. The evolution of colonial medicine to be a result of continued exchanges and borrowing from indigenous knowledge and practices which imbibed it with the inconsistent pull between the metropolitan science and its Indian colony-serving both the colonizers and the colonized.[49] The present work tries to understand the decline of medicinal cannabis in the traditional therapeutics partly being linked with the degeneration of the indigenous medical practices coming in contact with the emerging colonial medicine in the regional context. However, on the

[49] David Arnold, *The Cambridge History of India- Science, Technology and Medicine in Colonial India,* UK: Cambridge University Press, 2000, pp.26-91.

contrary, the significant contribution of the colonial natural knowledge uplifted the usage of cannabis in the British Pharmaceutical industries serving the international markets[50] under the contributions of various researchers like W.B O' Shaughnessy, Wood, Spivey and Easterfield with their initial discovery of its active ingredient 'cannabinol'.[51]

Another work of Arnold discusses colonial medicine which initially emerged to serve the British military and colonial servants, however in the long run opened up its fans to gradually engulf the entire colony through its role of reaching out to the masses while treating epidemics and diseases- A colonial policy of conquest and control of the body, stigmatized under its hegemonic rule, coherent to the bonded 'power and knowledge'.[52] This has been further laid in his other work that argues the necessity of such an expansion for disguising colonial exploitation balanced by their benevolent intention of wellbeing achieved through colonial medicine which was not possible through conquest alone. The present work draws on this understanding of subsequent penetration of colonial medicine in the Indian North-Eastern Frontier, where such penetration was one of a slow-paced one with the dominance of indigenous therapeutics shunned by herbal medicine like cannabis (*with its anti-malarial and anti-cholera properties*)[53] used for the cure of epidemic diseases. However, towards the end of the nineteenth century, colonial medicine obtained its

[50] Pratik Chakrabarti, *Medicine and Empiret 1600-1960,* China: Palgrave Macmillan, 2014, p.34.

[51] James H. Mills, Cannabis Britannica-Empire, 2003., pp.145-148.

[52] David Arnold, *Colonizing the Body- State, Medicine and Epidemic Disease in the Nineteenth Century India,* Berkeley, Los Angeles: University of California Press, 1993, pp. 1-10.

[53] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission,* Calcutta: Office of the Superintendent of Government Printing Press, 1894, pp.556, 530, 531.

stronghold in the frontier under subsequent Governmental Acts of 1894,[54] Poisons Act of 1904 and 1919[55] by breaking the usage of cannabis in the indigenous therapeutics, which was further restricted with the introduction of licence and druggist permits to hold medicinal cannabis by putting the practitioners under constant check.[56]

Colonial policies of breaking the native dependence on traditional therapeutics were further achieved under the patronage of uplifting tropical medicine. Pratik Chakrabarti who argued that the finding of the active ingredients of medicinal plants led to the outset of large-scale manufacturing of modern drugs in laboratory-based factories. This mainly contributed towards the extensive colonial export of raw materials to Europe and the US, boosted with the extraction of active ingredients which in turn was mainly marketed to the tropical colonies and the international markets.[57] At this juncture, medicinal cannabis came with the experiments of colonial scientists Wood, Spivey and Easterfield who came up with one of the active ingredients of cannabis which they named as 'cannabinol'. It was further confirmed by C.R Marshall the Professor of Medicine at the University of Cambridge and in 1903 revealed that the substance could be further broken down having possessed no power to

[54] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Assam State Archives, Third Edition, Simla: Government Central Printing Office, pp.4.

[55] Rabindra Nath Karmakar, *Forensic Medicine and Toxicology*, Kolkata: Academic Publishers, 2007, pp.58,59; *The Poisons Act, 1919- Indian Kanoon*, Central Government Act, retrieved from https://indiankanoon.org/doc/1399304 on: 20/05/2018, 12:03.

[56] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Ninth Edition, Simla: Government of India Press, p.28.

[57] Pratik Chakrabarti, *Medicine and Empiret 1600-1960*, 2014., p.34.

intoxicate.[58] Under their initial efforts cannabis later got successfully enlisted in the British Pharmaceutical Codex in 1934[59] with the discovery of its various constituents like '*Cannabinae Tannas'* a brownish powder which is obtained from an aqueous extract of cannabis with tannic acid mainly used to treat nervous insomnia, dysmenorrhoea, and menorrhagia. Another is '*Cannabinonum*', '*cannabinone*', a brown resin obtained from cannabis used for treating hysteria and insomnia. Other extracts of the plant were '*Extractum Cannabis'*, '*Cannabinonum*', '*Tinctura Cannabis*'etc. Cannabinoids found in the plant are mainly a group of twenty-one carbon compounds and apart from 'Cannabinol', there are others like '*Tetra Hydro Cannabinol*', '*Cannabidiol*', '*Cannabichromene*', '*Delta-8-THC CBD'* with the properties of analgesic, anti-inflammatory, anc anxiolytic activity without producing the psychoactive effect. An Era of 'Colonial Bioprospection'[60] which although gave a fillip to medicinal cannabis in British Pharmacopeia, however, led to a gradual decline of its usage in the traditional therapeutics of the colonial North-Eastern Frontier.

Seminal work on medicine of Poonam Bala, argues that the emergence of colonial medicine in Bengal witnessed different phases of consistent competitions and accommodation and rather not representing a sole struggle between the various systems.[61] Struggles which evolved to take different forms as in case of cannabis, it was viewed not merely as a drug but rather an

[58] James H. Mills, *Cannabis Britannica-Empire*, 2013., pp.145-148.

[59] *British Pharmaceutical Codex 1934*, Schaffer Library of Drug Policy, retrieved from http://www.druglibrary.org/schaffer/hemp/medical/brit34.html on: 20-05-2018, 14:28; Ernest Small, Cannabis A Complete Guide, Canada: CRC Press, 2017., p.279.

[60] Pratik Chakrabarti, *Medicine and Empiret 1600-1960*, 2014., p.34.

[61] Poonam Bala, *Imperialism and Medicine in Bengal- a Socio-Historical Perspective*, New Delhi: Sage Publications India Pvt, Ltd, 1991, pp.142-145.

endowed mechanism enriching traditional therapeutics of the frontier providing them with a coherent power which subsequently got monopolized under the colonial regime of controlling the natives, with the viewed motive of creating the native's reliance on the rule and consequently leading towards the paradigms of resistances as provided by the indigenous practitioners towards reviving the drug in the traditional therapeutics.

Poonam Bala's other work lays out the encounter between modern colonial medicine and the indigenous medical practices which mainly led to the depreciation of the latter in due course of time. This was eventually taken up by the nationalists who viewed the linkages of traditional therapeutics with the cultures of India's past and incorporated its revival in their nationalistic agenda viewing it as a strand of articulated Indian power. However, while emphasizing the role of the nationalists she lacked to recognize the prior attempts of indigenous resistances contributing towards various works on medicine and thereby thrusting their importance to the notice of the elites, who later took up the agenda of revival.[62] From here, I drew a part of my research argument where the nationalists alongwith their revival agenda of traditional therapeutics, raised their roar towards the overall ban on cannabis.[63] They neglected its significance in the traditional medical practices which led to the consolidation of the colonial hegemony itself. This contributed towards modernity not reflecting the 'general interests' but that of 'sectional ones.' Evidently, to a certain extent, they ignored the interests of the native medical practitioners which was dwindling into

[62] Poonam Bala, *Contesting Colonial Authority-Medicine and Indigenous Responses in the Nineteenth and Twentieth Century*, USA: Lexington Books, 2012, p.17

[63] Arun C. Bhuyan, *Political History of Assam*, Vol-ii, Assam: Publication Board Assam, 2008, p.36

insignificance under the partial policies of the British Government, coupled with the negligence of the elites.

A significant work on cannabis has been provided by Ernest Small in his comprehensive work summarizing historical, botanical, chemical, genetic, ecological, business, legal and medicinal overview of cannabis which plays an important role towards the upgradation and management of the drug. His argument is mainly based on the medicinal virtues and toxicology vices of cannabis supported by various authoritative reviews which, however, were also subjected to several controversies. The reviews mainly laid stress on the excessive use of cannabis as an intoxicant contributing to various health hazards. However, if it is used as a medicinal drug under specified dosages or tinctures has been proved to cure various ailments like cancer, cardiovascular diseases, hypertension, diabetes, epilepsy, HIV and AIDS, liver diseases, mental disorders like alzheimer, bipolar disorder, schizophrenia, brain injury, etc. Here he lays down several claims some criticizing 'crude cannabis' of possessing adverse health implications owing to the presence of Δ9-Tetrahydrocannabinol or THC (the main psychoactive component of cannabis), while others supporting the crude herb which proved to be more effective as a medicinal ingredient. However, as compared to the traditional medicinal usages of cannabis in colonial India, particularly in the North-Eastern frontier, cannabis was either used as a combination drug i.e. it was either mixed with other herbs or healthy fats or being prepared as a concoction, tinctures, boiled and at times also burned for its pain relieving vapours.[64] Neither the medicinal practices like Unani,

[64] Gunaram Khanikar, *Book on Traditional Herbal Medicine for Various Disease*, Guwahati: National Tekan Printers, 2011, pp.111,145-146; Ratan Kumar Katoki, *Ahom Rajatat Chikitsha*

Ayurveda (which lists several types of cannabis medicines like churna, modaka, vatika, leha, pāka, dugdhpaka, kvāta etc.)[65] nor Folk-Medicine used this powerful drug in its raw form to treat ailments owing to its strong psychoactive reaction.

The psychoactive side of cannabis has been dealt most efficiently by M.C. Cooke when he gave us a vital insight into the effects of the seven psychoactive plants. He starts with a beautiful legend, introducing these plants characterizing of '*Sleep and her Seven Sisters*' namely hemp (*cannabis*), opium (*papaver somniferum l.*), tobacco (*nicotiana*), coca (*erythroxyleem*), betel (*arechacatechu*), thornapple (*datura*) and the fly-agaric (*amanita muscaria l.*). Here, '*Sleep handles her sisters, the Minister of Dreams'* to aid them in providing gorgeous visions and illusions to the mortal subjects under their sway. Cooke, mainly argues that the usages of these nerve stimulants (although under moderation) differs from the general usages and patterns invented by the 'sober society' which believes that little wine, tea or coffee being harmless *(however, these also serve the same adherence of nerve stimulation),* criticizes the stimulants of nature itself serving for the very same purpose.[66] The pre-colonial Indian society possesses a history of using nerve stimulants like cannabis from time immemorial, as is evident from various texts of Atharvaveda, Susruta Samhita, Shiva Purana, Kaskinda Purana, Nidhan Puthis, etc.[67] Rasa Sastra, an

---

Sewa (Pratham Buranji), Guwahati: M.S Chandrakanta Press, 2009, pp.110-124; Tulasi Sonovāl, *Asamar Paramparāgata Loka-Cikitsā: Ek Ksetrabhittik Namunā Sangrah,* Second (ed.), Dibrugarh*:* Published by the Government of Assam, March, 2013, p.191.

[65] Shivaharidas, *Vedic Use of Cannabis.*

[66] M.C Cooke, *The Seven Sisters of Sleep, 1860.*

[67] J.M Campbell, 'On the Religion of Hemp', in Tod H.Mikuriya (ed.), *Excerpts from the Indian Hemp Drug Commission Report*, San Fransisco: Last Gasp of San Fransisco, November 1994,

important branch of Ayurveda consisting of various subject texts and one of them being Anandakanda, provides an elaborate description on cannabis. It characterizes cannabis users into ten types viz. the four castes, sages(muni), saints(siddha) yogis, old people, medical patients, children, impotent people and people under polygamy.[68] However, with the advent of the colonial Empire, acting under the policy of maximum hemp possession *(hemp is the male derivative of cannabis)* and revenue accumulation through dominating its cultivation and intoxicant constituents, introduced the Indian Hemp Drug Commission (hereby IHDC).[69] IHDC was mainly used as a colonial instrument to portray the link of cannabis consumption with insanity and crime leading to the governmentalization of the drug, serving colonial interests.

Regarding the use of cannabis in Britain and other European countries, Jack Herer's work provided a significant understanding of hemp *(male derivative of cannabis)* which formed an important commodity for various industrial productions, and its cultivation exacting surplus governmental revenues and most importantly serving the naval stores throughout the European countries. He also gives a clear depiction of the commercial and industrial cannabis which was required to produce 'ships' sails (from at least the 5th century BC), cordage, sailor's clothing, canvas shoes, etc. Therefore, cannabis evidently formed an important commodity for facilitating their naval expeditions. With the advent of the British East India Company in India, there

---

pp.27-28; Ralph T.H Griffith, *Hymns of the Atharvaveda*, Delhi: Munishiram Manohar Publishers, 1985, pp.58; Ranga Ranjan Das, *Folk Medicine and Traditional Markets: A Study in Assam*, PhD Thesis, Gauhati University, 2010, p.147.

[68] Shivaharidas, Vedic Use of Cannabis.

[69] *Report of the Indian Hemp Drug Commission 1893-94*, 1894. ; James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*., 2003., p.4.

were various researches undertaken by the Company's servants, scientists, surgeons, and botanists in pursue of hemp fibers which introduced them to the indigenous plant of cannabis. Having been the same European plant they termed it as the 'Indian Hemp' or 'True Hemp'. Herer in his work mainly argued on debunking the conspiracies plotted against hemp in the 1930s carried out by Henry Anslinger *(Head of the Federal Bureau of Narcotics US*) in collaboration with DuPont and Hearst Companies who were facing stiff competition from industrial hemp and finally attempts being made on putting a ban on it.[70]

A lesser known European history on hemp by James Davey, mainly argued about the sweeping transitional stage between 1808-1812 ensuring Britain with a standardized logistical system, emerging out from inadequate supply systems. The European crisis caused by the aftermath of the 'Revolutionary Wars', towards the acquisition of naval commodities like hemp, oak, timber etc. as a result of enmity between Great Britain and France. These powers induced their war time policies of interception, blockade and contraband against each other and their allies which paved the way towards the War of 1812.[71] Alan Frost's work provides a proper picture of Britain's maritime expansion, surpassing the Napoleonic challenges backed by the US and ultimately establishing itself as a global empire.[72]

[70] Jack Herer, *The Emperor Wears No Clothes*, USA: AhHa Publication, 2006, pp.169-176.

[71] James Davey, *The Transformation of British Naval Strategy: Seapower and Supply in Northern Europe 1808-1812*, UK: The Boydell Press, 2012, pp.20-34.

[72] Alan Frost, 'The Global Reach of the Empire: Britain's Maritime Expansion in the Indian and Pacific Oceans 1764-1815', Reviewed by H.V. Bowen, *The International History Review, Vol 26, No 4 December 2004*, pp.830-832, retrieved from http://www.jstor.org/stable/40110598 on: 18-03-2018, 07:48 .

Another significant work describing the importance of hemp trade in the international waters, towards the late eighteenth and early nineteenth century has been provided by Alfred W Crosby. As a Nationalist writer, he mainly emphasized about the elasticity of the Russo-American trade from the onset of American Republic, 1783, till the War of 1812. He mainly argued that the conflict of the two great powers of Napoleonic France and Alexander-I of Russia was mainly provoked by the American merchants who played a pivotal role in executing the fraudulent trade with Great Britain (denying Napoleon's Continental System set against Great Britain to devoid that country of naval stores particularly of **Russian hemp**). Russia on its part, as bounded by the Treaty of Tilsit, promised its ports to be closed to any English trade. The warning of Napoleon towards the ban of this fraudulent American trade, however, being denied by Alexander I (owing to Russia's beneficial trade in exchange of US gold) led to the outbreak of the War of 1812.[73] These scholars in their work clearly brought out Britain's global search for hemp during the period of Russian embargo, pressed under the dire situation in the international waters. Part of my research builds upon their works providing a detailed analysis of the colonizers' search of hemp and its substitutes in colonial North-Eastern Frontier and its long-term implications upon the gentry.

One important work on the colonial attempt towards the cultivation of hemp fibers in India has been provided by John Gascoigne's work on the life and activities of Joseph Banks (British naturalist and botanist), which argues that the distinguished space during which Banks emerged was being categorized to

[73]Alfred W. Crosby, America, Russia, Hemp and Napoleon: American Trade with Russia and the Baltic 1783-1812, US: Ohio State University Press, 1965.

be one of expansion and limitation owing to the reliance of the British society in the landowning oligarchy which under his supervision sprouted towards the path of progress with his advice on agriculture, settlement matters, voyages, and botany. He further throws light on Britain's sole reliance on Russian hemp which became a subject of great concern among the members of the committee for trade to look for the possible supply of hemp. Banks selected as the Privy Councillor to the Board of Trade with his expertise on hemp production finally in 1800 recommended the Committee to pursue a project towards the production of hemp on their own land as well as British controlled colonies including India. In this connection, there was the recruitment of six Lincolnshire hemp-dressers in 1801 by Banks mainly for directing the production of hemp in India which received a great impetus towards the mid of the 19th Century.[74]

The global search of hemp and its substitutes led to extensive botanical surveys and researches done on the subject throughout the British colonies. In India, the names of William Roxburgh, Dr. Prain, George Sinclair, W.B O' Shaughnessy requires special mention.

In an article *'On the Culture and Comparative Strength of Hemp and other Vegetable Fibers,*' William Roxburgh, described the strength of true hemp fiber (*cannabis)* along with the various substitutes like sunn (*criotalaria juncea*), coir, flax, *robinia cannabina* and many more. He also provided an important note on their cultivation and usages as per his experiments on it.[75] Similarly,

[74] John Gascoigne, *Science in the Service of the Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution,* London: Cambridge University Press, 1998, pp.118-120.

[75] William Roxburgh, '*On the Culture and Comparative Strength of Hemp and other Vegetable Fibers'*, in Thomas Gill ed. *Technical Repository containing Practical Information on Subjects*

W.B O' Shaughnessy, Professor of Chemistry and Materia Medica in the Medical College of Calcutta (*acting as a colonial physician with an additional task of inquiry and investigations of the flora, fauna, and resources of the British Empire*) efficiently described about the history of cannabis, botanical characteristics, chemical properties as well as its production, including its various derivatives and usages for both recreation and medications healing inflammation, neuralgic pains, fresh wounds, etc. along with its side effects of melancholy, dropsy. and over-dosage leading to temporary insanity.[76] Another significant colonial research on the subject was made by Dr. Prain by providing an insight into the botanical significance of the flower of cannabis sativa linn. The production of the various derivatives of cannabis which depends highly on the peculiarity of its flowers cannot be understood unless a proper scrutinization is done on the subject which was efficiently provided by Dr. Prain with its systematic depiction as well as pictorial representations incessantly required for a better understanding.[77]

While dealing with the changed status of cannabis, becoming a commercial commodity under the colonial regime, Sugata Bose proficiently explains about the plantation agriculture and the role of poor peasants driven under a colonial paradigm in Bengal during the period of Permanent Settlement

---

Connected with Discoveries and Improvements in the Useful Arts, Vol- VI, London: Published by T.Cadell Strand, 1824, pp.184-188.

[76] W.B O' Shaughnessy, *On the Preparations of Indian Hemp or Gunjah*, *Provincial Medical Journal and Retrospect of the Medical Sciences*, *Vol. 5, No. 122*, 1843, British Medical Journal (henceforth, BMJ), pp. 343-347 retrieved from http://www.jstor.org/stable/25491786 on: 20-08-2017, 13:28.

[77] Major D. Prain, *On the Morphology, Teratology and Diclinism of the Flowers of Cannabis*, Scientific Memoirs by the Officers of the Medical and Sanitary Department of the Government of India, Calcutta: Office of the Superintendent of the Government Printing,1904.

for securing their subsistence taking up the production of cash crops.[78] However, as in the case of ganja cultivation (*intoxicant derivative of cannabis*) in Ganja Mahal Bengal, it became an important source of cash for the payment of land rent as well as a source of funds for the purposes of festivals and weddings, while other crops were a means of subsistence income for the farmers.[79] But this was short-lived, as with the introduction of Permanent Settlement in 1793, there was the maximum appropriation of revenues which immense pressure upon the ryots and significantly wiping off the prior sections from the market by creating native dependence on the few British dominated circles which in turn would maintain their obeisance to the colonizers.[80]

Specific to cannabis in British Indian Empire, James H. Mills's important work on cannabis and insanity, argued that the established asylums in the British Indian colony became important sites of contestations and resistances of the natives against the Colonial policy of reformation and control.[81] He also traces the issue of cannabis consumption which caused insanity and crime as the Indian asylums were filled up with all the Ganja smokers which led to the establishment of the Indian Hemp Drug Commission (1893-94) which denied any such links and only suggested that the 'excessive intoxication should be

[78] Sugata Bose, *Peasant Labour and Colonial Capital: Rural Bengal Since 1770*, United Kingdom: Cambridge University Press, 1993.

[79] James H. Mills, Cannabis Britannica-Empire, 2003.,p.56.

[80] C.A Bayly, *Indian Society and the Making of the British Empire*, Newyork: Cambridge University Press, 1988, pp.65-66.

[81] *Indian Hemp Drug Commission: Enquiry as to the Connection Between Hemp Drugs and Insanity*, Vol.II, Assam State Archives, Simla: Government Central Printing Office, 1894, p.63; James H. Mills, *Madness, Cannabis and Colonialism: The Native Only Asylums of British India1857-1900*, London: Palgrave Macmillan Publication, 2000.

avoided' which causes temporary insanity.[82] The present work deals with the inter-relation of cannabis consumption with insanity and crime in the regional context by looking into case studies of mental asylum in Indian North-Eastern Frontier.

James H. Mills's another work stands out to give us a historical understanding by focusing on cannabis, its usage for commercial, industrial and medicinal purposes as well as projecting a lagness of the natives for its usage only as an 'intoxicant' and 'medicine.' Finally, he traces the series of consequences by placing cannabis in the economic, politics as well as policies of the British Indian Empire. Mills argues that the general distrust of Indian cannabis was due to various moral, cultural and political factors with deemed established perceptions, in the 19th Century colonial India owing to the extensive British acceptance of information about the drug (*believing its consumption being linked with insanity and crime*) of which they were ill-informed. This led to the process of governmentalizing cannabis. Mills romanticizes British policies of personal interests which, however, were strategically meted out to cannabis only after its extensive research, surveys and experiments. A well-arranged link which was followed by the establishment of the Indian Hemp Drug Commission of 1893-94 which although in its report denied any such association however was used as a pivotal weapon to governmentalize cannabis under its deceiving cloak. An issue which later on, also exploded in the International Drug Conventions, further imposing harsher laws on the drug and Britain

[82] *Report of the Indian Hemp Drug Commission 1893-94, Vol-I*, Simla: Government Central Printing Office 1894, pp.174-182.

accumulating the lion's share.[83] Although, Mills carved out a historical interpretation of the drug not undertaken by many, however, his work should not be regarded as the only kind which deprives the natives, rather emphasizing more from the viewpoint of 'Eurocentrism.'

From here I drew my research argument that beneath the surface of these colonial restrictions laid the various manifold struggles of the indigenous gentry, obstructing such insinuated hindrances towards their age-old usages of the drug. Subtle resistances which took its shape in the form of mass denial of hemp cultivation (*as a result of which hemp fibers were never been produced in India*), general use, trade and cultivation of the drug even after its ban.[84] The overall denial of the excise ganja consumption by the native of the North-Eastern frontier, masses opting for wild bhang[85] and the various indigenous medicinal texts on the potentiality of the herb[86] all directing their force against the acceptance of this selfish colonial strategy of seizing such a potentially magnificent plant of cannabis and its derivatives. This, however, was put to a backlog by the sectional elites of the frontier, raising a roar towards the overall

[83] James H. Mills, *Madness, Cannabis and Colonialism* , ,2000.pp. 4-7.

[84] *The Prevalence of Smuggling in Connection with the Cultivation of Gunjah*, Revenue Department, Excise Branch, File No 87B, Proceedings:1-231/32 of 1stFebruary 1886, p.7 ; *A Proposal for the Amendment of Bengal Excise Act 1878*, Financial Department, Excise Branch, File No. 7-8 of 3rd January 1881, (State Archives of West Bengal henceforth, SAWB)

[85] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Assam State Archives, Third Edition, Simla: Government Central Printing Office p.6; *Report of the Indian Hemp Drug Commission*, Appendices, Miscellaneous, Vol III, Simla: Printed at Government Central Printing Office,1894, pp.2,10,18,87; *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, Excise/ Opium , 1913, p.10, (Assam State Archve. henceforth ASA).

[86] Kishor Goswami, *Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact*, Proceedings of the Indian History Congress, Vol.II, Part-I, 2011, p.982, 983.

ban of cannabis and its derivatives[87]. By making such a selective appropriation to their so-called 'modernism', only representing sectional interest, they clearly ignored the struggles of the indigenous gentry grinding for subsistence under the exploitative colonial order. A selective appropriation which was not only bias in nature but also, on the contrary, it contributed towards the cause of colonial hegemony itself.

METHODOLOGY

The present work has been based on both primary and secondary sources. The primary sources/data has been collected from the Directorate of Archives: Government of Assam; Directorate of State Archives and Research Centre, Kolkata, West Bengal; National Library of India; Guwahati District Library and Nabin Chandra Bordoloi Library. Secondary sources have been collected from books, articles, reports accessed largely from Guwahati District Library, Krishna Kanta Handique Library, ICHR: North-East Regional Centre, Nagaon District Library, Government Ayurvedic College, Guwahati, Lakshminath Bezbaroa Library, Dibrugarh District Library, Mayong Village Museum, Indira Gandhi Memorial Library, University of Hyderabad and the various referred websites.

This dissertation while dealing with the viewed defamed and frequently neglected history of cannabis adopts a subaltern framework, tracing its socio-cultural significance in the context of Indian North-Eastern Frontier adhering to the traditional therapeutics of not being merely viewed as a drug but also a coherent power and form of obstruction to the initial penetration of colonial

[87] Arun C. Bhuyan, *Political History of Assam*, Vol-ii, Assam: Publication Board Assam: 2008, p.36.

medicine which had to be curtailed under the Raj. The subsequent mold of Indian cannabis to meet the colonial capitalist requirements and also marked by significant extensions of International events particularly the Russian Blockade, compelling Britain to search for an alternative source of hemp which would serve their naval markets. This led to the influx of explorations and amassed natural knowledge of the Empire revealing the similarities of Indian cannabis with European hemp and its usage as a medicine and intoxicant throughout Asia and Africa. Consequently, this led to the emergence of new arenas of experiments on the cultivation of cannabis intoxicants (*maintaining the Indian method)* as well as its fiber cultivation in the European method (*removing the female rich THC resins).* Initially, these experiments were carried on by George Sinclair at the Reshera Farm, Calcutta, William Roxburgh in the Calcutta Botanic Gardens. Their works later immensely contributed towards the cause of hemp fiber supply to Britain (*however, the fibers imported consisted of other alternatives of 'true hemp' like sunn hemp, jute, manilla hemp, sisal hemp, reah hemp, etc. as cannabis fibers were never successfully produced in India due to the resistances of the peasantry*) towards the end of the 19th Century. Moreover, experiments on medicinal cannabis were conducted by colonial scientists W.B.O' Shaughnessy, the discovery of its active ingredient by Wood, Spivey, and Easterfield *(also confirmed by C.R. Marshall)* [88] in the later years contributed towards the British Pharmaceutical Industries serving its tropical colonies as well as the international markets. As a result, the usage of cannabis in the traditional therapeutics degenerated and checked by the various Governmental Acts of 1894, 1904 and 1919, the introduction of licenses and

[88] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, 2003., pp.145-148.

druggist permits and finally a complete governmental grip over the drug in the Second Opium Conference of the year 1925. As a consequence, there were various resistances of the indigenous gentry, in different arenas operating simultaneously against the governmental laws as imposed on cannabis. These were in the form of subtle-resistances, for example, through the private cultivation, trade and use of the drug (even after its ban), natives opting for wild bhang instead of excise ganja in the North-Eastern Frontier, the overall denial of the cultivation of cannabis in the 'European' method, the consistent decline of ganja cultivation owing to Governmental oppressions, the unabated resistances of the natives inside the asylums, along with the grit of the indigenous practitioners in reviving medicinal cannabis in the traditional therapeutics of the Frontier.

RESEARCH QUESTION:

The present study deals with the following questions:

1. The significance of cannabis in the traditional therapeutics of the North-Eastern Frontier and European hemp with its significance as a naval store facilitating mercantile expansions?
2. The key differences between Indian cannabis and European hemp and their methods of cultivation?
3. What led to the outbreak of the war of 1812 and its subsequent impact on the British Indian colony?
4. Why there was a boost in the production of medicinal cannabis contributing towards British Pharmacopeia under the Raj and a consequent decline of its usage in the traditional therapeutics of the region coupled with its private cultivation, use or trade?

5. How and why cannabis got inculcated as a dangerous drug in the Second Opium Conference of 1925 and its impact on the native population?

OBJECTIVES OF STUDY:

Although cannabis became a locus of concern and controversy assuming a significant place in history, however, most of the works on drug histories had neglected its part confining their works to opium, cocaine, and alcohol. The major objective of this research work deals with the significance of medicinal cannabis in the traditional therapeutics of the North-Eastern Frontier with its significant changes during the colonial rule and considerable impact of its role on International grounds. This research work combines to analyze the following objects:

1. To analyze the colonial economic drive in the North-Eastern Frontier following the Treaty of Yandaboo in 1826 and their subsequent policies meted out towards cannabis.
2. To study the diverse usages of cannabis in pre-colonial India and around Europe and its allied significance in terms of socio-economic, and cultural aspects in India and its subsequent transformation under the colonial regime.
3. To study the various colonial researches done on Indian cannabis and to analyze the connection between the consumption of cannabis with insanity and crime backed by a scrutiny of the Indian Hemp Drug Commission (1893-1894).
4. To analyze the inclusion of cannabis in the Second opium conference as a dangerous drug and the rift of responses relating to the ban on cannabis among the elites and the traditional medical practitioners.

CHAPTERIZATION

This dissertation is divided into four chapters, besides an Introduction and a Conclusion. Chapter-2, discusses about the East India Company's interests in the North-Eastern Frontier facilitated by Gaurinath's invitation and the later British achievement over the Burmese in the Anglo-Burmese Wars concluded with the Treaty of Yandaboo in 1826, which gleaned them with a foothold over the Brahmaputra Valley and within a decade they engulfed the entire North-Eastern Frontier. A colonial penetration which brought about significant changes in the socio-economic, political and cultural spheres which in case of cannabis, became vivid with its crucial change to a commercial commodity. Turning to Chapter-3, it mainly deals with the contradicted usages of cannabis, where its medicinal and recreational purposes were shunned in India and other Asian countries; its commercial and industrial usages were carried on in Britain and other European countries. Chapter-4 explores the political significance of cannabis on International grounds, discussing about Britain's strategy of war-time interception targeting France and its allied powers, Napoleon's Continental System, the consequent Russian Blockade, and War of 1812 leading to Britain's global search of hemp fibers including in its colonies and extending the same to British India. This chapter also describes the various researches and experiments done on the subject by the colonial scientists like Dr. Prain, W.B O'Shaughnessy, George Sinclair, William Roxburgh, and their significant findings of active ingredient of cannabis which contributed towards the British Pharmacopeia which made India a locus of raw materials towards the end of 19th Century. The connection of cannabis with insanity and crime leading to the emergence of Indian Hemp Drug Commission (conducting the first-ever survey

on cannabis in India) and also about the inclusion of cannabis in the Second Opium Conference 1925, passing harsher laws on it. Chapter-5 traces the history of the decline of medicinal cannabis in traditional therapeutics linked with the emergence of colonial medicine in the region under successive Governmental policies boosted by the Acts of 1894, Poisons Act of 1904, 1919 and the Second Opium Conference in 1925. This was coupled with the age-old interventions, changes, and dominance of external factors leading to the over-powering of the pre-modern by the modern medical structures.

Chapter 2: Colonial Expansion and the Establishment Of Commercial Links

The 19th Century Industrial Revolution in England had led to an extensive survey of raw materials which was sought to be extracted from its colonies. For the purpose bands of explorers and surveyors conducted various explorations which also extended to the North-Eastern Frontier of India revealing the economic potentiality of the region. This also served as desired route for overseas markets which got a further boost with Britain's shift from a mercantile capitalism to Industrial capitalism aiming for a surplus appropriation. An evident transition which being different in genre reduced the indigenous inhabitants of the Frontier to the level of dire insignificance.[89] This was further developed with a decline in the European trade and with the establishment of alternative trade relations with the Asian Countries.[90]

1.1 East India Company's Trade with the Brahmaputra Valley prior to the Treaty of Yandaboo

Prior to the Anglo-Burmese war, the British carried on a flourishing trade in the Brahmaputra Valley, outset with the grant of Diwani of Bengal in 1765 which brought the East India Company close to the Frontier tracts.[91] This was followed by various surveys of the region, the first of which was undertaken

[89]Amlendu Guha, *Medieval and Early Colonial Assam Society, Polity and Economy*, Calcutta: K P Bagchi & Company, 1991, pp.xiii-xiv.

[90] Priyam Goswami, *The History of Assam-From Yandaboo to Partition(1826-1947)*, New Delhi: Orient Black Swan, 2012, p.1.

[91] Amlendu Guha, *Planter Raj to Swaraj, Freedom Struggle and Electoral Politics in Assam 1826-1947*, New Delhi: Indian Council of Historical Research, 1977,p.1.

by Major James Rennell an official of the Company. Although his project of exploration came to a halt with the refusal of permission by the Ahom ruler, however, other traders like James Mill of Ostend East India Company (the first trader to trade salt with Assam), Jean Baptist Chevalier Commander-in-Chief of the French settlement in Bengal, Paul Richard Pearkes an officer in charge of English settlements in Patna were able to try their luck and actively got involved in the Assam trade.[92] This did not last long with the significant turn of events when Mir Kasim the Nawab of Bengal complained to the Governor-General of the losses 'amounting to 4000 rupees in the trade with Assam, Rangamati, Kariabari because of the monopoly that the Company's employees had over the whole of trade.' This led the Court of Directors to send Robert Clive as the Governor of Bengal to put an end to this corruption. In this connection, Clive set up a Society of Trade in 1765 which was also granted a monopoly of trade in salt, betelnut and tobacco and at the same time to put a check on the corrupted practices of the civil officials by putting an end to the practice of private trade and acceptance of presents. As far as trading in the region was concerned the Committee of Trade appointed 11agents in India for the year 1765, three were to reside in the District of Rangpur, Hugh Ballie in Goalpara, Tom Lewis in Rangpur town and Hargreave in Chilmari. With this, the monopoly earlier enjoyed by the Company's officials were brought to an end by opening the trade to all.[93]

[92] Ramesh Chandra Kalita, *Assam in the Eighteenth Century*, New Delhi: Omsons Publications, 1992, p.51-61.

[93] Priyam Goswami, *The History of Assam-From Yandaboo to Partition (1826-1947), 2012.*, pp.11-13.

1.2 The Growing British Interests in the North-Eastern Frontier

As Assam and the Eastern Himalayan region shared their borders with China, Tibet, and Burma, it assumed great significance for its strategic location. As the naval warfare between England and France led to the depletion of naval stores like oak, timber, hemp it was mainly sought to be attained from Burma.[94] Turning to Tibet, they imported more than they exported, balanced up by means of gold and silver it became an important trading center for the British which continued until the reign of Ghurkha ruler Prithvi Narayan Shah who followed a closed-door policy. As the East India Company were in a deliberate need of continuing their trade relations with Tibet owing to the acquisition of gold to finance their China trade, an alternative trade route was mainly sought through Assam. This was coupled with their imperialistic designs of Eastward expansion which further took its momentum with the discovery of a more superior quality of local tea plant in 1839 in Upper Assam by a Scottish adventurer Robert Bruce, directed by Maniram Dewan and a local Singhpo Chief Bessa Gam, relieving the British of the sole possession of tea by China, where the Company's monopoly of its lucrative trade ended with the country after the renewal of the Charter of 1833.[95] This led to the decrease of the Company's drain of wealth to China and rather established a lucrative trade of opium from the colonial North-Eastern Frontier to the Chinese territories.[96]

---

[94] S.K Bhuyan, *Tunghungia Buranji- A History of Assam (1681-1826 A.D.)*, Delhi: Goyal Offset Printers, 1933, pp.212-213.

[95] Priyam Goswami, *The History of Assam-From Yandaboo to Partition (1826-1947*), 2012.,p.13.

[96] Priyam Goswami, *Assam in the Nineteenth Century- Industrialization and Colonial Penetration*, Panbazar, Guwahati: United Publishers, 1999, pp.6-7.

1.3 Political Instability and the Invitation of Gaurinath Singha

Meanwhile, the political instability of Assam forced Gaurinath Singha (*Ahom ruling prince)* to lay an appeal to the Governor-General of Bengal, Lord Cornwallis, pleading for aid to restore peace in the region in 1788.The Moamaria Civil War which took its shape by 1769, taking a political dimension mainly sought to reform the Ahom Government on a more humanitarian and egalitarian perspective based on the principles of Neo-Vaishnavism. During the period, the strict renderence of labor to the State in the form of paiks was made compulsory, increasing the burden of State's work on them which compelled many to escape from the situation by joining the Vaishnavite Satras. This general breach of Ahom law caused a series of persecutions of the Moamarias and the destruction of the Satras which were becoming centers of immense wealth.[97] Apart from these factors, the immediate cause behind the outbreak of the Moamaria Civil War was reached during the regime of Siva Singha. The invitation of Mayamara Mahanta to the royal premises and smearing off the blood of the sacrificed animal (dedicated to Goddess Durga) on his forehead as a 'tilak', came to be marked as an act of great humiliation which catalyzed the Civil War.[98]

The inconsistent complaints of the Commissioner of Cooch Behar and Collector of Rangpur to the Company's Government towards the disturbances and anarchy spilling over to Bengal and disrupting its key trade routes prompted the British interference in the region under the command of Thomas Welsh as a

[97] H.K Barpujari, *An Account of Assam and Her Administration (1603-1822A.D.),* Panbazar, Guwahati: Spectrum Publications, 1988, p. xxii.

[98] S L Baruah, *A Comprehensive History of Assam,* New Delhi: Munishiram Manoharlal Publishers Pvt. Ltd., 2009, pp.307-343.

benevolent 'savior of humanity'. Welsh on his expedition was specifically instructed by the Governor-General of India to send a report on the economic potentiality of the region. With the British provided aid, Gaurinath was successfully restored on the throne after thwarting the Burgandazes and Moamarias.[99] With this, Welsh also reported to the Governor- General that the restoration of peace in the region would result in an immense flow of wealth to the Company's finances also opening up new markets where it was estimated to sell atleast 10,000 lbs of salt in Assam alone, along with this he also sent details of the conflicting interests of nobility, persecutions of the Moamarias, the rebellious vassal chiefs and the refuge of the Ahom monarch in Guwahati, providing a picture of the degeneration of the Ahom Kingdom.[100] However, Welsh was called back under the tenure of Shore, the new Governor-General of Bengal, due to which Assam was again thrown back into the former state of turmoil with the renewed arrival of Burgandazes and the revolts led by the Moamarias, Singphos, and Khamtis.[101]

1.4 The Burmese Menace and the Arrival of the Presumed Saviours

After the death of Gaurinath Singha, his successors Kamleshwar Singha and Chandrakanta Singha proved to be weak and became a mere puppet in the hands of the Ahom Prime Minister Purnanda Burhagohain. This was despised bitterly by the King's Viceroy Badan Chandra Barphukan who sought a change in the state of affairs with the aid of Burmese in 1817 and finally reinstated

[99] V.R Trivedi, *Documents on Assam*, New Delhi: Omsons Publications, 1995, p.xi.

[100] H.K Barpujari, *An Account of Assam and Her Administration (1603-1822A.D)*, 1988., pp.xxi-xxii.

[101] Ramesh Chandra Kalita, *Assam in the Eighteenth Century*, 1992., p.86-93;Priyam Goswami, *The History of Assam-From Yandaboo to Partition(1826-1947*), 2012.,pp.13,14.

Chandrakanta to the throne. Shortly after this, however, Chandrakanta was deposed from his position being mutilated, which took off his eligibility to the throne according to the royal law of accession. In his place, Purandar Singha *(another royal claimant)* was enthroned. This led Chandrakanta to plead the Burmese, who again returned with a large force in 1819. However, this time the Burmese king was determined towards the inclusion of Assam as a part of the Burmese Kingdom. Being aware of the situation Chandrakanta sought British aid but got succumbed under Burmese pressure as General Minghimaha brought him to submission ending the Ahom rule in Assam.[102] Thus, began the Burmese acts of exploitation in the region creating a precarious situation for the inhabitants which came to be known as 'Manor Din' these state of affairs compelled the Civil Commissioner of Rangpur, David Scott to bring the situation out to the notice of the Company's Government as early as July 1822. Apart from the Burmese menace, the British commercial interests in the region were also hindered which finally led the Government to adopt a policy of strict intervention which revealed itself in the outbreak of the Anglo-Burmese Wars. In the series of conflict, the British achieved an upper hand against the Burmese and the first Anglo-Burmese war was brought to an end with the signing of the Treaty of Yandaboo in 1826.This treaty possessed several clauses where Article II stated that the King of Ava surrendered the principalities of Assam and its dependencies, Article III demarcated boundary lines between the two powers, Article IV and V stating the transfer of the provinces of Yeb, Tavoy, Mergui and

[102] Chandana Goswami, *Nationalism in Assam*, New Delhi: Mittal Publications, 2008, pp.7-10.

Tennasserim to the Company along with a war indemnation of Rs 1 Crore to be paid by the King of Ava.[103]

The British although initially claimed to be a benevolent protector against the Burmese menace, showed signs of penetration which became evident with the initial annexations of the kingdoms of Assam, Cachar, and Jayantia.[104] It was a colonial penetration which within a decade extended to engulf the entire North-Eastern Frontier into its imperial fold.[105] This served their mercantile interest in establishing their desired commercial links to China, Burma, and Tibet.

The pre-colonial Assam (*descendants of Tai people of South-East Asian origin, with the foundation been laid by Sukapha in 1228A.D*)[106] dominated by the Ahoms for 600 years mainly failed to strive further, owing to several factors among which one prominently stands out in the form of the Ahom's ideological power in a transcendence form of social authority which was seen among the former rulers adopting a heirophanic center. However, such power was lost in case of its later rulers, who were inadequate and unable to cope with a newly emerged stronger ideology in the form of Neo-Vaishnavism during the 18th Century.[107] This ideology possessed an ultimate divine meaning which the State

[103] *Extract Taken from Treatise of Yandaboo and Other Sanads between East India Company and Raja Ram Singh of Jynteah*, P.H.A, File No:14 of 1826, pp.1-2, Assam State Archives (henceforth, ASA).

[104] *The New Regime: Chapter One*, P.H.A, File No: Nil of 1826-1947, p.1 (ASA); Amlendu Guha, Planter *Raj to Swaraj, Freedom Struggle and Electoral Politics in Assam 1826-1947*, 1977.,

[105] Priyam Goswami, The History of Assam-From Yandaboo to Partition (1826-1947, 2012., p.1.

[106] Amlendu Guha, *Medieval and Early Colonial Assam Society, Polity and Economy*, Calcutta: K P Bagchi &Company, 1991, p.xiii.

[107] Edward Gait, *A History of Assam*, Delhi; Surjeet Publication, 2010, p.289.

failed to provide and claimed to be a secular organization bringing into its fold people of all caste and religion and thereby spreading over an extensive region through a diffused power[108] network achieving proper obedience which even surpassed other power co-ordinates as a whole; faith which posed to be an alternative to the existing concept of kingship and caste ideologies which weakened the monarchy leaving on a weakened vacuum to be taken over by the Burmese following a reign of terror or 'manor din'.[109]

Turning to the British East India Company, their ideology revealed itself in the form of mercantilism, through its penetration into the North-Eastern Frontier starting with the invitation of Gaurinath Singha.[110] The advance military dominance of the Company was evident in the Burmese war[111] and further penetration of the Frontier maintaining an intensive and later a diffused form of control for the reorganization of the diverse indigenous communities as a whole. The economic power relation mainly having a greater significance for social change could also be seen in the aspect of molding of the region to meet their capitalistic desires for maximum appropriation. Finally, an established centralized political power with the various diverse sub-societies, holding its colony together through the four coordinates of power as described by Mann as 'IEMP' i.e. Ideology, Economic, Military and Polity.[112]

---

[108] Michael Mann, *Sources of Social Power Vol-I- A History of Power from the Beginning to A.D 1760*, USA Cambridge University Press, 1986, p.10.

[109] Edward Gait, *A History of Assam*, 2010.,pp.236, 237.

[110] Priyam Goswami, *The History of Assam-From Yandaboo to Partition (1826-1947),2012.*,p.13.

[111] Edward Gait, *A History of Assam*, 2010., pp.332-340.

[112] Michael Mann, *Sources of Social Power Vol-I,1986.*,p.22.

Even prior to the Anglo-Burmese War, separate treatise were signed by David Scott with the rulers of Cachar and Jayantia which gave them the right of thrones in exchange of accepting the British supremacy and protection against external aggression.[113] In relation to Assam, David Scott the Agent to the Governor-General for the North-Eastern Frontier of Bengal made two recommendations to place an Ahom royal prince to the throne paying a subsidy and the area far of Bishwanath to be merged with Bengal.[114] However, it was turned down by the Company's Directors leading to the submission of another fresh proposal in 1828, which concluded the British retention of Lower Assam with the motive of meeting its war expenses in the region. Finally, on 7th March 1828, the annexation of Lower Assam took its shape coupled with the appointment of Neufville as the political agent to Upper Assam. This led to a series of upheavals against the British[115] which, however, was successfully altered by the latter. With this, the colonizers in October 1832, decided to assign Upper Assam to Purandar Singha a member of the Ahom royal family with the signing of the Treaty of Gauhati in 1833, 'where Purandar was required to pay the British an annual tribute of 50,000 rupees out of an estimated revenue of 120,000 rupees.'[116] However, Purandar having failed to pay the tribute owing to the economic bankruptcy caused by the war and 'Burmese menace', Upper Assam was ceded to the British on 16th October 1838. The cause provided

[113] *Treaty with Raja Ram Singh of Jynteah*, P.H.A , File No: XLIII of 1824, p.4 (ASA); *Treaty Concluded between David Scott Esq. Agent to the Governor-General on the part of the Honorable East India Company and Rajah Govinda Chunder Naryn of Cachar or Hemrumba*, P.H.A, File No: XL of 1824, p.5 (ASA).

[114] M.L Bose, *Social History of Assam*, New Delhi: Ashok Kumar Mittal, 1989, p.21.

[115] *Regarding British Dealings with Rajah Purander Singha and His Heirs*, P.H.A, File No: 147 of 1830, p.1 (ASA).

[116] Chandana Goswami, *Nationalism in Assam*, New Delhi: Mittal Publications, 2008, pp.11.

towards this transfer of power was, however, the misrule of the ruler who was finally to be pensioned off. Purandar at this act of breach put forth his grievances in a letter to Jenkins Agent to the Governor-General stating that

"…. I obtained about 1/10th part of the whole country and for this small division, I was bound to pay Rs.50,000 yearly. I had left off my ancestral wealth and thus carried on the business of my kingdom. Afterwards, when the ryots made many complaints against the large amount of Nalbunde, I wrote requesting to have it reduced. To this, I got no reply but was told that many complaints of injustice were made against me. I could have easily proved them false but instead, the country was taken from me…"[117]

The pension as offered to Purandar Singha was however refused by him with a vain hope of gaining his prior position. With this, the Company's imperialist maneuvre took further momentum and towards the end of 1839, the British established its firm position in Assam, Sadiya and Muttock territories. Simultaneously, the British also annexed its neighboring principalities of Cachar by 1854, Jayantia by March 1835, Khasi Hills by 1875, and Garo Hills by January 1873, Naga Hills by 1866, Lhota Nagas by 1875, Angami Nagas by 1878-80, Ao Nagas by 1889 after successive battles driven by their economic potentiality.[118]

The British penetration to the North-Eastern Frontier was one of the slow-paced one owing to the hostile terrain, climate and lack of communication

[117] *Regarding British Dealings with Rajah Purander Singha and His Heirs*, P.H.A, File No: 147 of 1830, pp.2-3 (ASA).

[118] Amlendu Guha, *Planter Raj to Swaraj, Freedom Struggle and Electoral Politics in Assam 1826-1947*, 1977.,p.2.

facilities. However, as compared to the pre-colonial state of isolation partly owing to its geographical location, [119]British penetration revealed significant changes in the socio-economic and political sphere in the region. These changes involved an improved means of transport and communication linking the remotest areas to the global markets serving the dual interest of maximum profit acquisition and raw materials. This was viewed with the development of tea plantations, coal mines, oil refineries connected through railways and roadways breaking the prior state of isolation of the region. This colonial penetration was not necessarily in terms of economy and polity but also socio-cultural which took shape with their new institutions, knowledge, ideas, technology, beliefs, and values.[120] This, however, was not yielded to the colonizers that easily as they were confronted with several obstructions one being the constant raids of the hill tribes in their territories, which became a matter of great concern. Owing to a weakened center towards the later Ahom regime, various tribes of the Frontier made frequent raids which were sought to be curbed through the posa system, adopting a conciliatory policy of granting lands to the tribes in the Duars from where they could easily access articles which were unavailable in the Hills. After British annexation of the Brahmaputra Valley, these raids became more frequent along with their claims of rights over the land in plains, payment from villages or rendered services of the paiks from the neighboring village causing great distress to the colonizers. Initially, the British followed the policy of conciliation by paying the Miris annually 12 maunds of salt and payment of

[119] Priyam Goswami, *Assam in the Nineteenth Century- Industrialization and Colonial Penetration*, 1999.,p.10.

[120] Priyam Goswami, The History of Assam-From Yandaboo to Partition (1826-1947),2012.,pp.2-4.

Rs.851-3-9. The Abors and Miris of Sesee Deemogee received a payment of Rs256-12-6. The Duflas of Chardowar and Baustolah were paid Rs. 392-1-6 with 24 maunds of salt and in return, they agreed to maintain peace in the plains.[121] However, this did not last long as situations deteriorated with the incessant raids and hiked up demands of the tribes which finally led the British to adopt a policy of strict intervention.[122]

In Manipur, after Gambhir Singh's death in 1834, the throne was passed on to its successive heirs. However, the main fissure occurred in 1890, when Tikendrajit the brother of ruler Surachandra led a revolt to thwart him from the throne and instituted his other brother, Kulachandra as the Maharaja without notifying the British Government.[123] This act was regarded as a 'breach of conduct by the Government of India.' The government thereby viewing Tikendrajit as the culprit ordered him to be deported which, however, was answered back by the latter through the execution of several British Officers. This led to a war, where the British having an upperhand executed the rebels and Nur Singh was made the regent to the infant son of the deceased ruler with the promise of payment of an annual tribute and recognizing the British supremacy.[124]

---

[121] A.J Moffatt Mills, *Report on the Province of Assam*, 2nd ed., Gauhati: Publication Board of Assam, 1984, p.53.

[122]Manilal Bose, *British Policy in the North-Eastern Frontier Agency*, New Delhi: Concept Publishing Company, 1979, pp.47,48, 51,53,56,57.

[123] Chander Seikher Panchani, *Manipur: Religion, Culture and Society*, New Delhi: Konark Publishers Pvt Ltd, 1987, p.26.

[124] Major General James Johnstone, *Manipur and the Naga Hills*, Delhi: Central Publishing House, 1983, p.88; E.W Dun, *Discovery of North-East India, Vol.6,* Manipur, Mittal: Publications, 2005, p.20.

The constant raids into British territories was also evident in case of Cachar by the Lushais, whose frequent attacks forced the Government to launch several military expedition in January 1850, 1862, 1869, 1871 and 1890 to bring them down coupled with the appointment of Captain H.R Browne as the political officer of Northern Lushai Hills, finally attaining success by 1895.[125]

Same was the case with Naga Hills, irritated by the frequent raids in Cachar and Sibsagar Districts of Upper Assam for their subsistence, the British demarcated their boundary and put forth the proposal of British protection in exchange of a house tax which led to the subjugation of 17 Naga villages by 1878. To deal with others, the British sent a military expedition and by the beginning of 1880s major portions of the Naga Hills came under the British control.[126] Even the Abors, Daflas, Akas, Miris and Mishmis were cowed down by 1912[127] and with successive administrative reforms in these hilly terrains; the colonial rule was being restored with their desired motive of grabbing the gateway to commercial extensions. A British penetration which came up with its own implications of facing stiff resistances as was evident from the rebellions of Gomdhar Konwar and Rupchand Konwar in1828 and 1829, Singphos living on the Burma border who rebelled in 1830-1831, Khasi War of independence as led by U.Tirot Singh were clear examples of native attempts directed towards the

[125] B.C Allen, *Gazetteer of the Khasi and Jaintia Hills, Garo Hills, Lushai Hills*, Delhi: Gian Publications,1980, pp.7-20.

[126] Visier Sanyu, *A History of Nagas and Nagaland: Dynamics of Oral Tradition in Village Formation*, New Delhi: Commonwealth Publishers, 1996, pp.88-110.

[127] Manilal Bose, *British Policy in the North-Eastern Frontier Agency*, 1979.,pp.48-92; Priyam Goswami, *The History of Assam-From Yandaboo to Partition(1826-1947)*, 2012.,pp.150-152.

expulsion of the alien rule.[128] Moreover, such annexation was imperative with the discovery of coal, tea and timber beyond the wastelands extending far from the plains which fell under the area of these tribes.[129]

The British aid to the scene followed by the Treaty of Yandaboo, although hailed to be signs of benevolent protection against the Burmese menace, however, proved otherwise. A colonial penetration which brought significant changes in the economic, political as well as socio-cultural spheres which in the case of cannabis became vivid with its crucial change to a commercial commodity providing a back thrust to its usage in the traditional therapeutics which itself got succumb under the specialized colonial medicine –forming an evident structure of cultural conquest. The shifts in mercantile capitalism to industrial capitalism which showed vivid changes in the colonial policies resulting in the influx of surveys and researches done by the explorers, surveyors, traders coupled with Welsh's report to the Governor-General on the spatial and economic potentiality of the Brahmaputra Valley aroused consequent British interest in the region. The inherent feasibility of its strategic location formed an important locus for the desired supply of raw materials, opening up new markets, significantly serving towards the establishment of commercial extensions to its neighboring countries and maintaining the defense of the Empire. This drove the colonial imperialist designs of Eastward expansion engulfing the entire North-Eastern Frontier.

---

[128] K.S Singh, *People of India-Meghalaya*, Vol-XXXII, Calcutta: Anthropological Survey of India, Published by Seagull Books, 1994, p.4 ;Amlendu Guha, *Planter Raj to Swaraj, Freedom Struggle and Electoral Politics in Assam 1826-1947*, 1977.,p.3.

[129] Ranja Bezbaruah, *The Pursuit of Colonial Interests in India's North-East*, Panbazar: EBH Publishers, 2010, pp.78-81.

The discovery of tea by Robert Bruce (British merchant and soldier) in 1824 during his visit to Rangpur gave way to the establishment of several tea gardens in Darrang and Kamrup.[130] By the year 1871, about 11,000,000 pounds of tea was manufactured in the province of Assam. This output increased to 37,000,000 pounds in 1881, 19,000,000 pounds in 1891, 141,000,000 pounds in 1900 and in the year 1903, it further increased to 145,000,000 pounds.[131] Moreover, valuable woods were also exported from the North-Eastern Frontier like *Sāl* (*Shorea Robusta*), *Jarul (Lagerstroemia Flos Reginae), Tita Sapa (Champaka), Nahor (Mesua Ferrea), Gomari (Gncina Arboae) ,Sam (Trtocarpus Chaplasha), Khair (Acacia Catechu), Gunserai (Cinnamonum Glanduliferum), and Sissu (Dalbergia Sissoo).*[132] Timber was mainly exported from Cachar District in Assam.[133] Rubber (Fisus Elastica) was exported from Darrang, Nowgong and Lakhimpur and the revenue derived from it accounted to Rs. 93000 in 1901.[134] Coal and petroleum were also exported from the frontier. In the year 1891, the total output of coal was estimated at around 147,000 tons which further increased to 239000 tons in 1903.[135] In addition to this, the Assam Oil Company was formed in April 1899 and by the year 1903, the total output of this Company was 63 tons of candles, 573 tons of paraffin wax, 1200000 gallons

[130] Gadapani Sharma, 'A Historical Background of Tea in Assam', Vol-I, *The Echo,* Assam, April, 2013, p.1, retrieved from www.theecho.in on 19-05-2019, 10:35

[131] B.C Allen, et al., *Gazetteer of Bengal and N.E India*, New Delhi: Kishan and Mittal Publications, 1857, p.70.

[132] Ibid., p.76.

[133] The Assam Provincial Banking Enquiry Committee 1929-30, Vol-II, Calcutta: The Government of India Printing Press, 1930, p.13.

[134] B.C Allen, et al., *Gazetteer of Bengal and N.E India*., p.78

[135] Ibid., p.79.

of kerosene oil and 89000 gallons of other oil.[136] In addition to this iron, gold, and *muga* silk were also amongst some of the valuable items which were exported from the frontier.[137] Statistics of various articles exported from the frontier under the colonial rule has been presented in the following table and charts:

Table-I: Articles Exported from Assam (value in lakhs)

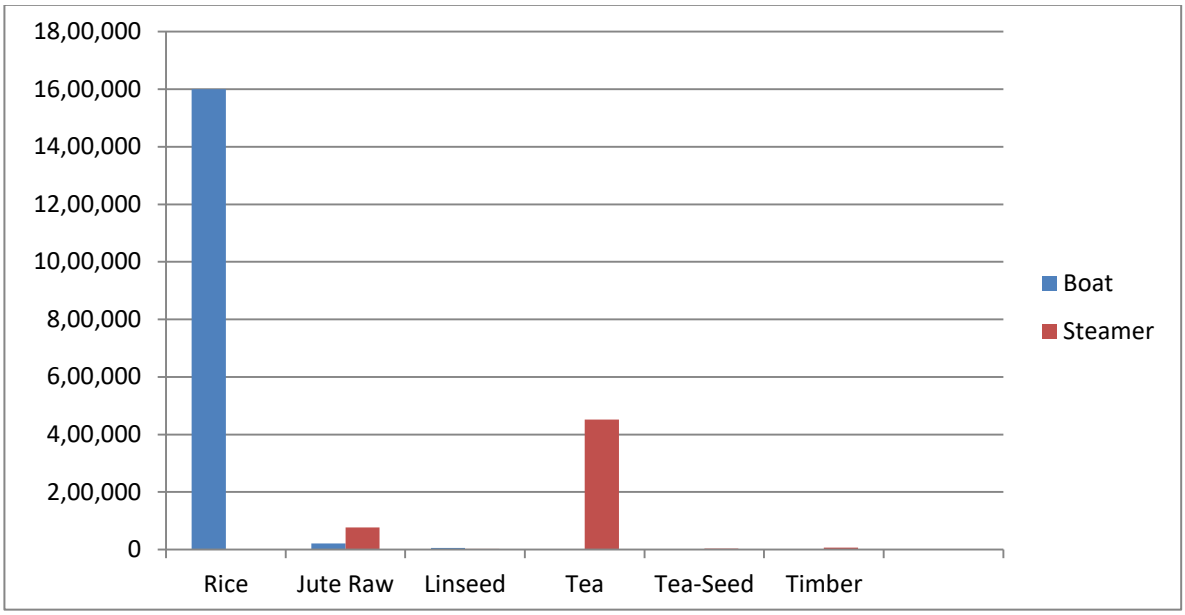
Year	Opium	Rubber	Coal	Wood, Teak
1913-14	342	79	69	79
1918-19	315	250	16	60
1919-20	196	169	83	125

Source: *The Assam Provincial Banking Inquiry Committee 1929-30,* Vol-II, Calcutta: The Government of India Printing Press, 1930, p.23

[136] Ibid., p.80.

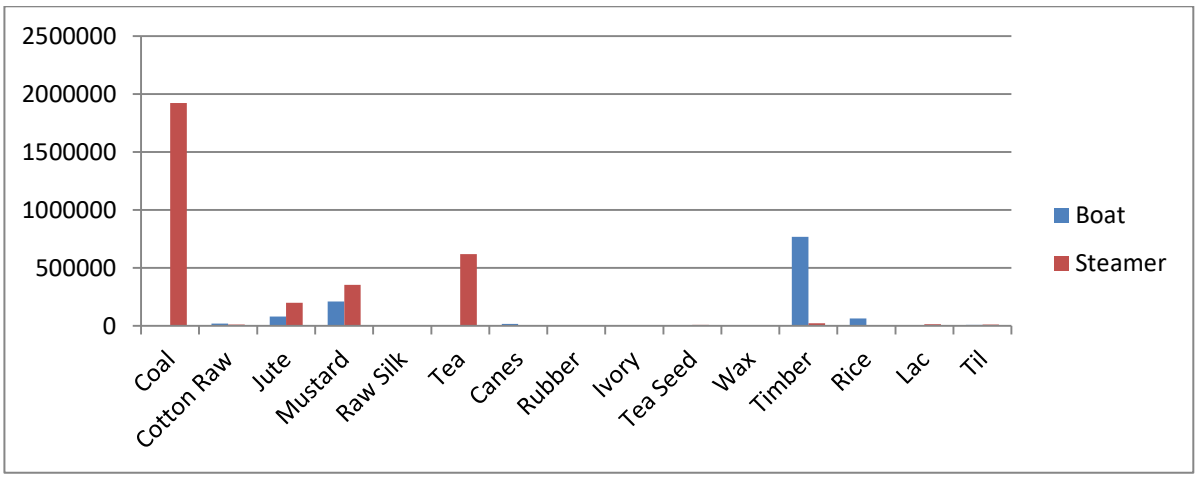
[137] Ibid., p.80.

Figure: 2.3 Principal Articles Exported from the Surma Valley by Boat and Steamer in Maunds (1895-96)



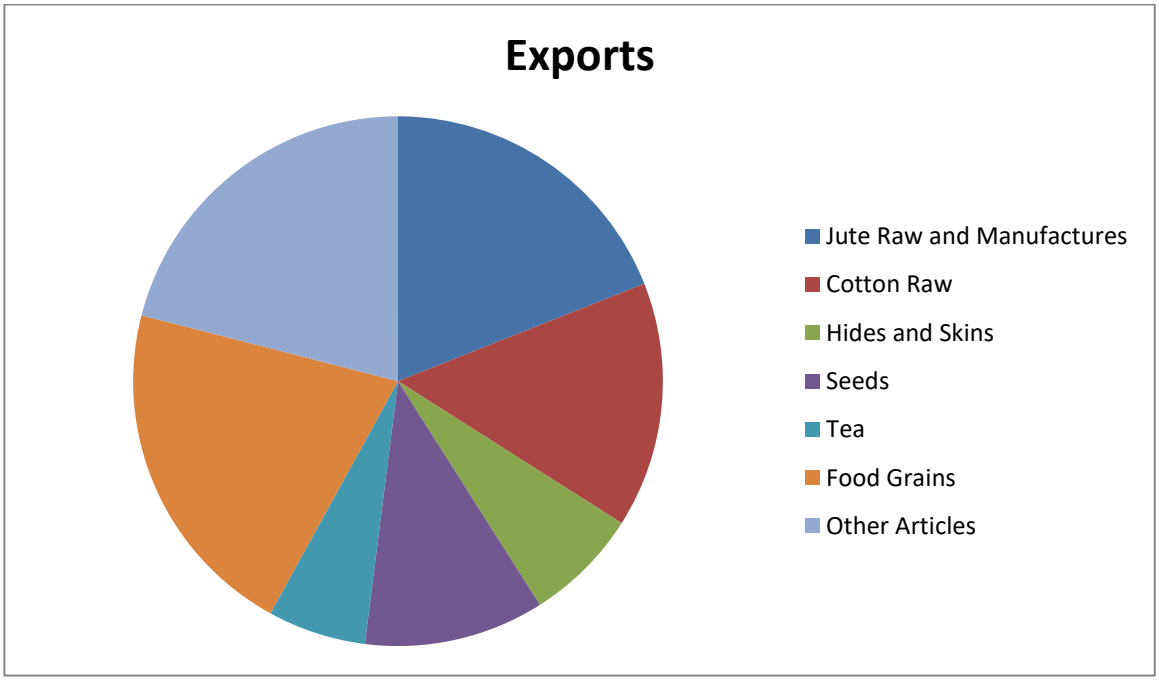
Source: F.J. Monahan, *River Borne Trade of the Province of Assam for the year 1896-97*.Calcutta: Office of the Superintendent of Government Printing India, 1897, p.15

Figure 2.4: Principal Articles Exported from the Brahmaputra Valley by Boat and Steamer in Maunds (1895-96)



Source: *F.J.* Monahan, *River Borne Trade of the Province of Assam for the year 1896-97*.Calcutta: Office of the Superintendent of Government Printing India, 1897, p.14

Figure 2.5: Articles Exported in the Pre-War Years 1909-10 to 1913-14



Source: *The Assam Provincial Inquiry Committee 1929-30*, Vol-II, Evidence, Calcutta: Government of India Printing Press, 1930

However, in case of cannabis, its private, cultivation, use or trade were prohibited in the frontier (except under special licenses) introducing excise hemp drugs (imported from Rajshahye, Bengal) meant for both medicinal and recreational purposes.[138] The plea put forward behind such a prohibition was that it would mainly prevent illegal manufacture, sale, and consumption of the drug.[139] However, such harsher laws on it paralyzed the indigenous usage of the drug which was consequently met with invigorated resistances of the natives operating simultaneously in various insinuated patterns forcing their efforts against such governmental restrictions.

[138] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Third Edition, Simla: Government Central Printing Office, p.6.

[139] Robert Pringle, 'Indian hemp (ganja) from a public health point of view: a paper to be read before the East India Association', LSE Selected Pamphlets, 1893, p.2

Chapter 3: Diverse Use of Cannabis

The geographical significance of the North-Eastern Frontier facilitates the growth of numerous medicinal plants efficiently used by the ethnic communities of the region.[140] It has been passed from generations through oral tradition not only as a drug but also through the inclusion of these herbs in their food. As in case of cannabis, the tender sativa leaves (vernacular name *bhang*),were mixed with other medicinal herbs like khutora (*amaranthus spinosus*), dhekia *(blechnum orientale*), jilmil sag (*chenopodium album*), manimuni (*centella asiatica)* etc.[141] to make a traditional assamese cuisine known as *'misol khak'* or 'mixed herbs.' Moreover, during festivals of Shivratri and Holi the preparation of *'ghota,'* a refreshing drink made out of bhang, jaggery and milk was common.[142] Bhang was also consumed in other religious ceremonies i.e. Nam and Bhanguri Seva in Assam.[143] During the reign of Ahom King Suhungmung, bhang was prepared by 80 men and gifted as a form of conciliation to Surya Narayan of Darrang.[144] Cannabis consumption is also evident in Uttrakhand where the traditional Kumaoni thali includes the sativa

[140] Hirendra Nath Sarma, *Traditional Medicines of Arunachal and Assam, Practise and Prospect*, Guwahati: Perfect Imagers, November, 2011, p.77.

[141] 'Medicinal Plants of Assam', *State Biodiversity Strategy and Action*, Assam, 2002, p.2 retrieved from www.aidcltd.com>pdf>Medicinal -Plants-of-Assam on 29-08-2017, 12:05.

[142] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*, Calcutta: Office of the Superintendent of Government Printing Press, 1894, p.530, Assam State Archives (henceforth, ASA).

[143] *Evidences Before the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, Excise, Opium, 1913, Witness no. 4, pp.4-5, (ASA).

[144] John Peter Wade, *Account Of Assam*, Calcutta: The Kuntaline Press, Bowbazar Street, 1800, p.237.

seeds to make '*bhang ki chutni (bhanga chutney),*' for its various health benefits.[145] They also used the juice of cannabis leaves as ear drops to relieve ear problems and used the paste of its leaves to cure piles.[146] Various delicacies were made out of medicinal cannabis like that of *'bhang pakoras*' as snacks which were small balls of dough made out of dried cannabis leaves and chick-pea flour, deep fried in mustard oil. Another delicacy was *'bhang paranthas'* made out of crushed cannabis seeds mixed with bread dough and shallow fried or baked. *'Bhang balls'* were also a popular snack made out of crushed bhang leaves molded into small balls and often sold in the markets during the summer season.[147] Bhang was also consumed in molasses and '*pan'* (betel leaf).[148] The popular concoction of bhang and honey was also taken orally to retain youth, vitality, and virility.[149] Herbal medicines like cannabis in pre-colonial North-Eastern Frontier was easily procurable as it was either grown locally or was easily gained from the '*dainik bazaar'(daily market)* and '*hat bazaar'(periodic market).*[150] Cannabis was also procured in fairs like '*Jonbeel mela'* which originated in the 15th Century during the Ahom reign which facilitated the

[145] Vinay Dobhal, *Bhang ki Chutni,* ed. Rashmi Binjola, June 30, 2009, retrieved from http://www.aboututtrakhand.com/Know-About-Dishes/Pahari-Dish-Bhang-Ki-Chutney.html on 17:05:2018,09:04.

[146]N. C. Shah and M. C. Joshi, 'An Ethnobotanical Study of the Kumaon Region of India', *Economic Botany,* Vol. 25, No. 4, December, 1971 , p.419.

[147] G. K. Sharma, 'Cannabis Folklore In The Himalayas', *Botanical Museum Leaflets*, Harvard University, Vol. 25, No. 7, October 30,1977, p.207.

[148] Alfred C. Reed, 'Medical Sketches in the Orient', *The Scientific Monthly*, Vol. 31, No. 3, September, 1930, pp.203-204.

[149]G. K. Sharma, 'Cannabis Folklore In The Himalayas', October 30, 1977., p.207.

[150] Ranga Ranjan Das, *Folk Medicine and Traditional Markets: A Study in Assam,* PhD Thesis, Gauhati University,2010, p.25.

exchange of various forest goods like herbs, vegetables, dried fish and so on through a traditional mode of trading – barter system.[151]

Figure 2.6: Various Indian Delicacies made of Cannabis- a) Bhang Thandai, b) Bhang Peda, c) Bhang ki Chutney, d) Bhang Gujiya, e) Bhang Balls.

Source: Archana Doshi, *Thandai Recipe-Spiced Festival Drink with Saffron and Dry Fruits*, retrieved from https://pin.it/gjfw6q4e5gpq55 on 15-12-2018, 17:08 ; Amrisha Sharma, *Bhang Peda: Holi Sweet Recipe*, retrieved from https://pin.it/dlgotnobdvnbka on 15-12-2018, 13:30 ;"BhangkiChutney", CannaEats, retrieved from http://www.cannaeats.com/munchies/bhang-kichutney on:15-12-2018,10:00 ; BhangGujiya,retrievedfromhttps://pin.it/lpekvfpm4qxs5lon:15-12-201,13:01;CBDBhangGoli,retrievedfrom http://jubaledibles.com/productcbd-bhang-goli-1-ball on: 15-12-2018,13:05

[151] *Festivals of the Tiwas*, p.107 retrieved from Shodganga.inflibnet.ac.in>bitstream on 15-11-2017, 10:20.

2.1 Traditional Therapeutics of North-Eastern Frontier:

The North-Eastern Frontier fosters the inhabitation of various tribes and ethnic communities having rich traditional knowledge in healing various ailments.[152] Assam alone fostered nine plain indigenous communities i.e. *Barmans, Boro, Kachari, Deori, Miri, Rabha, Sonowal Kachari, Lalung, Mech* and *Hojai*.[153] The indigenous inhabitants dwelling in difficult terrains mainly resorted to natural forms of medicinal practices specifically folk medicine derived from both plants and animals for treating various ailments.[154] W.W Hunter (ICS Official) remarked that the native physicians used both medicinal herbs and religious incantations to heal diseases.[155] The religious beliefs greatly influenced the medicinal practices of these ethnic communities ensuring health and prosperity. Diseases were mainly viewed as the wrath of the ancestors, spirits or the influence of planets and stars.[156] These were practiced by '*bezenis*', *'bez'*-magico-religious healers, *'deodha-shaman'*, herbalists, diviners, traditional birth attendants, folk healers *(practicing 'akhurik-chikitsa')*, etc.[157]

---

[152] Ramashankar, 'Traditional Healing Practices in North-East India', *Indian Journal of History of Science*, 2012, p.324, retrieved from http://www.insa.nic.in>IJHS>Vol50_2 on 12-10-2017, 10:30.

[153] *Selected Essays on Tribes and Castes of Assam*, Guwahati, First Edition, Published by Directorate of Assam Institute of Research for Tribals and Scheduled Castes, 2007, p.143.

[154] Hemanta Kumar Sharma, *Traditional Medicinal Plants in Mizoram, India*, Fitoterapia, 2001, p.1, retrieved from http://www.elsevier.com/locatte/fitote on: 12-10-2017, 15:09; Walter H. Lewis and Memory P.F Elvis, *Medical Botany: Plants Affecting Human Health*, Second Edition, New Jersey, Canada: John Wiley& Sons, Inc., 2003, p.4.

[155] W.W Hunter, A Statistical Account of Assam, Vol-I, London: Trübner& Co., 1879, p.100.

[156] *Selected Essays on Tribes and Castes of Assam*, First Edition, Guwahati: Published by Directorate of Assam Institute of Research for Tribals and Scheduled Castes, 2007, p.145.

[157] K.C Mahanta, *A Study of Ethno-Medicines in Assam- A General Perspective*, 1995, pp.106,108,112, retrieved from http://ww.krepublishers.com>JHE>06 on 21:05:2018, 22:05 ; Ramashankar, 'Traditional Healing Practices in North-East India', *Indian Journal of History of*

There were also the interconnected beliefs of karma or even divine act associated with various chronic and contaminated diseases. For instance, among the Hindu population in the region, '*Sitala*' or '*Ai-mother'* was held as the goddess of epidemic diseases like pox, cholera, measles, etc."[158] Among the Khasis, illness was linked with various spirits like that of '*Ka Rih*- the malaria devil', *'Ka Kham- cholera devil', 'Ka Taroh*- causing delirium fever' etc. The Jaintias related smallpox as the kiss of Goddess while Khasis viewed it with the spirit of '*Usien Niang Thylliew*.' Apart from these, diseases were also linked with the wrath of the ancestors or their descendants. Among the Assamese and the Khasis, the priest and the physician were often the same. The duties of '*Lyngdohs*' (priests) mainly consisted of conducting sacrifices at times of epidemics.[159] Among the Naga tribes of Manipur, sacrifices of dogs, fowls, eggs, pigs, etc. were used as a remedy for curing sickness. Among the *Tangkhuls,* the deity '*Kamyou'* is approached by sacrifice when men were ill.[160] In the Naga Hills, where the tribes practiced their religion of animistic type, sickness and misfortunes were generally ascribed to the evil spirits whom they pacify with sacrifices. [161] Divination was also resorted to cure ailments. Incantations and mantras were practiced which is evident from a mass of writings on mantras like that of '*Sapai Dharani Mantra, Karati Mantra,*

Science, 2012, pp.324-326 retrieved from http://www.insa.nic.in>IJHS>Vol50_2 on 12-10-2017, 10:30.

[158] Tahir Hussain Ansari, 'Diseases and Medicine in the Colonial Assam during 19th Century', *Journal of Business Management & Social-Science,* Vol 2, January 2013, p.2 ; Dhrubananda Das, *Khasi and Jaintia Medicine*, Guwahati: Drupad Publishers, 1994, p.3.

[159] Dhrubananda Das, *Khasi and Jaintia Medicine*, 1994.,pp.2-3.

[160] T.C Hodson, *The Naga Tribes of Manipur*, London: Macmillan & CO., Limited, 1911, pp.135,137.

[161] B.C Allen, *Gazetteer of Naga Hills and Manipur*, New Delhi; Mittal Publications, 1905, p.65.

Sarvadhak Mantra, Khetra Mantra' etc.[162] All these clearly depicts a picture of the domination of religion, culture and superstitious beliefs in these indigenous medical practices where illness was viewed to be caused by supernatural forces either by good or evil, calling for the roles of these indigenous healers to the scene.

The traditional practices of Ayurveda, Unani and Folk medicine thrived significantly in the Brahmaputra Valley and also in several hill districts particularly in Manipur among its Hindu inhabitants and also among its Muhammadan immigrants.[163]The Valley was dominated by the Ahom ruling dynasty in the pre-modern era which with their imperialistic policies brought the entire valley under their influential realm. They diplomatically dealt with its neighbouring hilly terrains through posa system,[164] various marriage alliances and integration through trade and commerce to avoid friction and thereby clearly witnessing an evident 'acculturation' in the process.[165] Moreover, as elephants and horses were an important part of the army, special care was taken of them. Various works like that of *'Ghora-Nidhana'* treatise on horses written by Sagarkhari, '*Ashwanidhana* of *Suryakhari Daivagya'* and *'Ghora Vyadhir Puthi'* were similar treatises on the treatment of horses. *'Hastirvidyarnava'* was

[162] D.P Barooah, *Assam District Gazetteer: Nowgong District*, Guwahati, Government of Assam, 1978, p.442.

[163] B.C Allen, *Gazetteer of Naga Hills and Manipur*, New Delhi: Mittal Publications, 1905, pp.61-65.

[164] Posa - a system of conciliating the tribes through the exchange of various useful articles produced in the plains in return of which they agreed to maintain peace; Priyam Goswami, *The History of Assam-From Yandaboo to Partition(1826-1947),* New Delhi: Orient Black Swan 2012, p.150.

[165] Surya Kumar Bhuyan, *Studies in the History of Assam*, Second Edition, New Delhi: Omsons Publications, 1985, pp. 48,49, 53.

the treatise on elephant written by Sukumar Barkath,[166] '*Bar Bilahi Nidhan-Puthi'*[167], a treatise of treatment of hawks known as *Senar Vyadhir* and so on. Ralph Fitch who visited the Koch Kingdom in the 16th Century refers to the existence of hospitals for all living creatures. Ayurveda was studied and also there was a medical center with the royal physician at the head. The Doobi grants of Bhaskarvarman (594-650 A.D) mention that even the kings cultivated the science of elephant lore. During the Ahom period, the royal physician was the *'Bezbarua'* who was also the head of the State Department of Medicines. The treatises on diseases and indigenous medicines were known as *'Nidhan Sastras,'* written by various Assamese authors revealing the richness of Assamese Pharmacopeia.[168] Such indigenous herbal medicine was practiced by the '*Kabiraj, Bediya, Bez,' etc.* although not with 'proper professionalism' in healing bodies during the period.[169] The main obstacle was due to the unabated domination of religion as well as lacking the knowledge of body anatomy and proper researches on the subject concerned for upgraded therapeutic practices.[170] Moreover, another form of traditional medicinal practice-'Unani', found its way into the region during the period of Ahom-Mughal friction.[171] Once the region was demarcated by the treaty of Asura-Ali (1639) meant to be dominated by their respective powers -the Ahoms and the Mughals, predominantly before the

[166] Edward Gait, A *History of Assam*, Delhi: Surjeet Publication, 2010, pp.279-282; D.P Barooah, *Assam District Gazetteer: Nowgong District*, Guwahati: Government of Assam, 1978, pp.441.

[167] Ranga Ranjan Das, *Folk Medicine and Traditional Markets: A Study in Assam*, PhD Thesis, Gauhati University, 2010, p.147.

[168] D.P Barooah, *Assam District Gazetteer*, 1978., p.441.

[169] Poonam Bala, *Imperialism and Medicine in Bengal-A Socio-Historical Perspective*, California: Sage Publication 1991, p.18.

[170] Ibid., pp.24-38.

[171] Edward Gait, *A History of Assam*,2010 .,pp.108-163

'Cold War' period,[172] alongwith Mir Jumla accompanied by Unani doctors during his expedition to Brahmaputra Valley between 1661-1663 witnessed evident commercial intercourses in the former condition and a revealed form of 'acculturation and assimilation' through which Unani gradually extended in the region.[173]

The healers like the '*Bediya, Hakim, Ojhas, Bez,'* etc. for healing bodies used various medicinal plants, one among such was 'Cannabis' and its derivatives. The Sanskrit word of cannabis is *'bhang'* or *'Indrasana'*. Cannabis is derieved from the word '*Sana',* which is borne by other languages.[174] For the first time, it was mentioned in the Atharvaveda as 'one of the five sacred plants on the planet Earth.' [175] Sushruta Samhita also mentioned the medicinal potentialities of the female plant of cannabis, forming an important herb in Ayurveda.[176] Its local names in the frontier are '*naga-mohini, kanjapro, bhang, ganja,'* etc. Its other names include '*harshini'*- delight giver, *'siddhi'*- success giver, '*virapattra'* (the leaf of heroes), '*Vijaya or Jaya'*(victorious), *capala* (the light-hearted), '*ajaya*' (the unconquered), '*ananda'* (the joyful) '*Usana or Sana* 'etc.[177] Bhang as a medicine was mainly used to treat chronic diarrheoa, as a

[172] Cold War Period among the Ahoms and the Mughals during 1639-1648 signified a period of no direct conflicts between these two powers and rather indirect aggressions in the form of boundary disputes, 'kheda' operations, extradition of political offenders, violation of personal liberty and privileges of the native inhabitants etc.

[173] Andrew De La Garza, *Mughals at War: Babur, Akbar and the Indian Military Revolution,(1500-1605*), Ohio State University, 2010, p.257.

[174] *Report of the Cultivation and use of Ganja,* Calcutta: Bengal Secretariat Press, 1893, p.43, State Archives of West Bengal (hereafter SAWB).

[175] Ralph T.H Griffith, *Hymns of the Atharvaveda*, Delhi: Munishiram Manohar Publishers, 1985, pp.58.

[176] *Report of the Cultivation and use of Ganja, 1893.*,p.45.

[177] Ibid.,46; *Shivaharidas, Vedic Use of Cannabis*, 2012., 18:45.

tonic to treat digestive disorders, treat cholera, cattle diseases and also possessing anti-malarial and anti-rheumatism properties.[178] It was prescribed by both '*kavirajas* and *hakims* as a medicine.'[179] Some *Kavirajas* mix purified bhang with other ingredients to prepare medicinal modaks.[180] In Unani, extracts of cannabis were used to cure asthma, urinary infections, loss of appetite, cancer, pain, dandruff, and inflammation.[181] This was further confirmed after an extensive survey Indian Hemp Drug Commission, which reported that:

> "*Almost two-third of the natives refer to the use of hemp drugs used by both the Yunani and Vedanti schools of native physicians and native doctors generally; about one-sixth referring to the use of ganja and one-third as a remedial and if it was to be based on witnesses it can clearly be established of its medicinal usage throughout the country*." [182]

2.2 Cannabis as a Medicine:

The usages of cannabis in folk-medicine, as a *'bon-dorob'* or 'medicinal herb' was profoundly common amongst the various communities with their own

[178] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*, Calcutta: Office of the Superintendent of Government Printing Press, 1894, pp.556,530,531, Assam State Archives (henceforth, ASA).

[179] R.N Chopra, I.C Chopra, *Glossary of Indian Medicinal Plants*, New Delhi: NISCAIR Press, 2009, p.49.

[180] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*., p.583.

[181] S.Mahdi, A.Jamal and Q.Nizaami, 'Fight Cancer with Herbs', in M.Z Abdin and Y.P Abrol (ed.) *Traditional System of Medicine*, New Delhi: Narosa Publishing House Pvt. Ltd., 2006, p. 248; Gabriel G. Nahas, *Marihuana-Deceptive Weed*, Newyork: Raven Press Publishers, 1973, p.2.

[182] *Report of the Indian Hemp Drug Commission 1893-94*, ASA, Vol-I, Simla: Government Central Printing Office 1894, pp.174-175.

vernacular names, According to Gunaram Khanikar a pioneer of assamese folk medicine, Assamese used bhang for treating skin diseases, sexual debility, insomnia, tetanus, inflammation and also used as an antiseptic.[183] In Meghalaya, the leaves and fruits of cannabis were used for treating various skin diseases.[184] Various indigenous tribes such as *Boro, Khoronia Kochari, and Rajbonshi*, etc. dwelling in the Brahmaputra Valley used the drug for the treatment of Diabetes;[185] the *Mao-Nagas* used Cannabis Sativa Linn.(*vernacular name-Kanjapro)* for treating bone fracture, sprain, muscle pain and even for cut and wounds;[186] in the Naga Hills (*vernacular name-naga mohini)*the *Sangtam, konyak* and *Ao tribes*, their medicine man known as *'arasentsur'* used the '*naga mohini'* as a tonic and anti-bacterial. They also used cannabis decoction during stomach pain and malaria.[187] The *Mishing* community in Assam in the Sub-Himalayan tract used cannabis sativa linn. (*bhang)* for treating loose motion.[188]

[183] Gunaram Khanikar, *Book on Traditional Herbal Medicine for Various Disease*, Guwahati: National Tekan Printers, 2011, pp.111,145-146.

[184] R. R. Rao, 'Ethnobotany of Meghalaya: Medicinal Plants Used by Khasi and Garo Tribes', *Economic Botany*, Vol. 35, No. 1 (Jan. - Mar., 1981), p.6.

[185] Jayashree Dutta and M.C Kalita, 'Ethno Anti-Diabetic Plants used by a Few Tribes of Rural Kamrup District, Assam', *International Journal of Pharmaceutical Sciences and Research*,2015 retrieved from https://ijpsr.com/bft-article/ethno-anti-diabetic-plants-used-by-a-few-tribes-of-rural-kamrup-district-assam/?view+fulltext on 9-11-2017, 08:03.

[186] Adani Lokho, 'The Folk Medicinal Plants of Mao Naga in Manipur, North East India' *International Journal of Scientific and Research Publications*, Vol-ii West Bengal, June 2012, p.2.

[187] Sapu Changkija, 'Folk Medicinal Plants of the Nagas in India', *Asian Folklore Studies*, Vol. 58, No. 1 (1999), pp.206,212.

[188] Rama Shankar and G.S Lavekar, 'Traditional Healing Practice and Folk Medicines used by Mishing Community of N-E India',Vol-3,*Journal of Ayurveda and Integrated Medicine*, 2012, p.126 retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC34872377 on 17-07-2017, 13:07.

It is evident from these sources that apart from its recreational purposes the drug was predominantly used for medicinal purpose in the region.

2.3 Industrial and Commercial Usages of Cannabis throughout Europe

Hemp a derivative of cannabis was mainly used for industrial, commercial and medicinal purposes, producing a wide variety of products in England and other European countries including in the US (as shown in figure 2.8).[189] It was increasingly used for cordage, sailor's clothing, their canvas shoes, even articles like 'ship charts, canvas, edible oil,[190] maps, logs, etc.'[191] It thereby, formed an important commodity in facilitating the colonial mercantile expeditions since the 15th Century onwards. A much-sought item in the European markets, it assumed almost ninety percent of all ship sails. Each ship required 60 tons of hemp ropes whereas larger ships required a total of 100 tons of hemp cordages every year.[192] America alone needed almost 50-100 tons of hemp made cordage, nets, sails, etc. as it undergoes rotting due to excessive sea salt and needs to be replaced every year or two.[193] Furthermore, in the US, hemp-based industries flourished in Kentucky, Missouri, and Illinois in 1840-1860.[194] In addition to this, eighty percent of all the textiles and fabrics in Britain came from hemp fibers from Russia.[195]

---

[189] Jack Herer , *The Emperor Wears No Clothes*, USA: AhHa Publication ,2006, p.5.

[190] Ernest Small, *Cannabis A Complete Guide*, Canada, CRC Press,2017, pp.11,94.

[191] Jack Herer , *The Emperor Wears No Clothes, 2006.*,p.8.

[192] Ernest Small, *Cannabis A Complete Guide*, 2017.,p.94.

[193] Jack Herer, *The Emperor Wears No Clothes*, 2006., p.7.

[194] Ernest Small, *Cannabis A Complete Guide*, 2017.,p.94.

[195] 'A List of Economic Plants Native or Suitable for Cultivation in the British Empire', *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew)*, Vol. 1917, No.7/8 (1917), pp. 283 ; Jack Herer , *The Emperor Wears No Clothes*, 2006.,p.8.

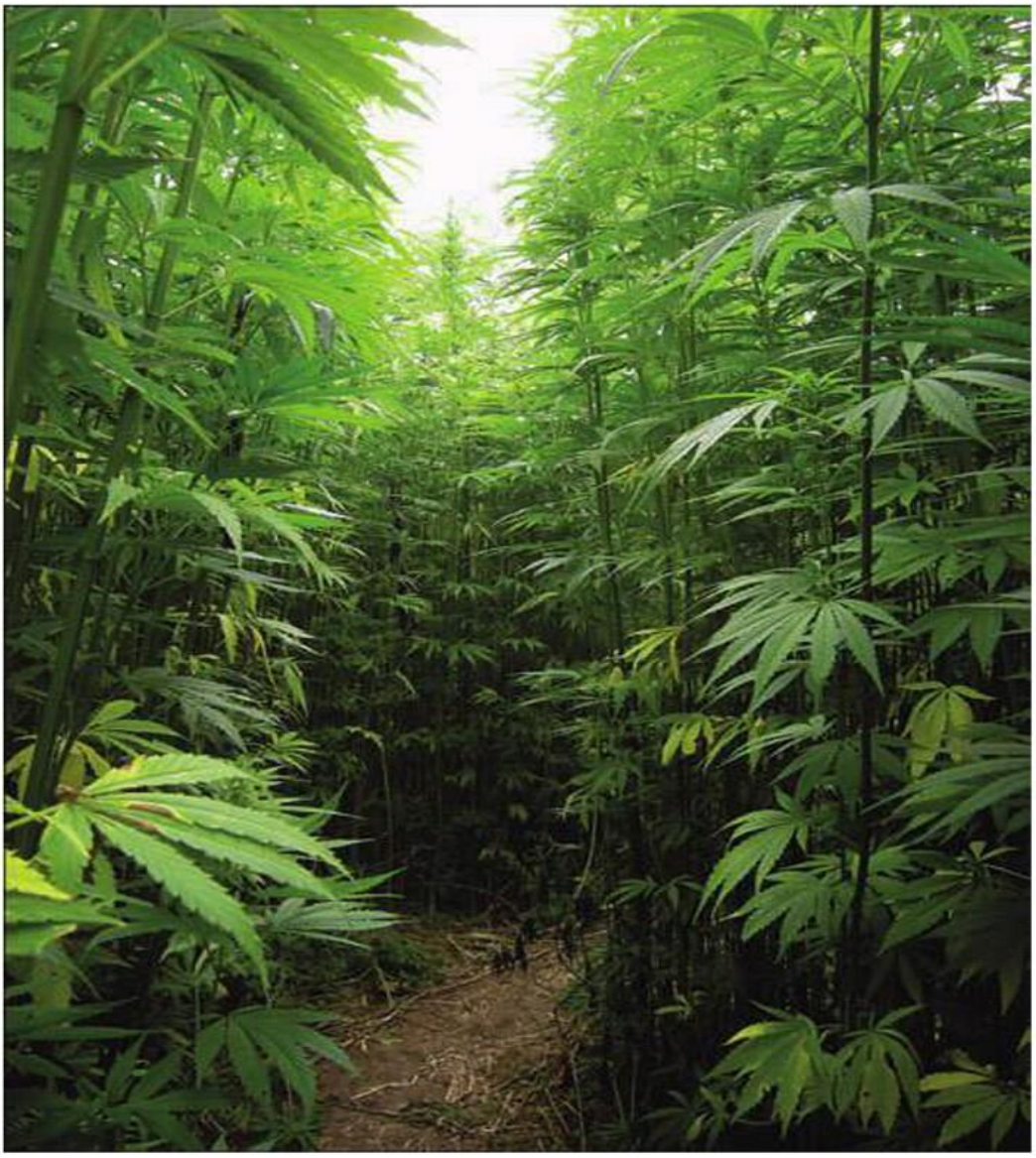


Figure 2.7: Hemp Field in Côtes-d'Amor Brittany, France (Europe's Largest Hemp Producer). Source: *Louisiana Legislature Proposes Bill for Production of Industrial Hemp*, 2009, retrieved from https://www.knoe.com/content/news/Louissiana-Legislator-Proposes-Bill-for-production-of-industrial-hemp-507790781.html on: 10-11-2018, 09:08

According to the *Report of the Cultivation and Use of Ganja 1893*, the main difference between the Indian cannabis and European hemp is that the former is mainly produced having resinous glands with a high amount of Δ^9-Tetrahydrocannabinol (Δ^9-THC) whereas the latter is the taller grown plants

meant for industrial purposes.[196] This mainly depends on the specific ways the plant has been grown. In the European method of hemp production, while the plant's vegetative functions are most active, it is allowed to increase in size with the materials absorbed to form new tissues with the plants grown close to each other. Once the plant is fully grown the excessive tissues are allowed to further girth up for the strengthening and thickening of the tissue walls which in turn produces the popularly demanded hemp fibers.[197] However, in the Indian method of cannabis production instead of allowing the settlement of new tissues for the strengthening of the plant, it is mainly grown thin placing them at a distance of 9 to 10 feet from each other.[198] This method mainly included the destroyal of the male plants (*responsible for fiber production*) which are less charged with resinous substances which on the other hand are actively present in the female plants favorable for producing intoxicants and medicines.[199]

The British Navy mainly required the first-grade fiber for the production of cordage known as 'clean hemp' which was the longest and strongest fibers. The second grade was known as 'outshot' which consisted of shorter and finer fibers that were suitable for canvas, while the third grade or the 'half clean' was mainly used for sacking.[200] The finest fibers were obtained after cleansing,

[196] *Report of the Cultivation and use of Ganja*, Calcutta: Bengal Secretariat Press, 1893, p.1 (ASA).

[197] Ibid., pp.1,2.

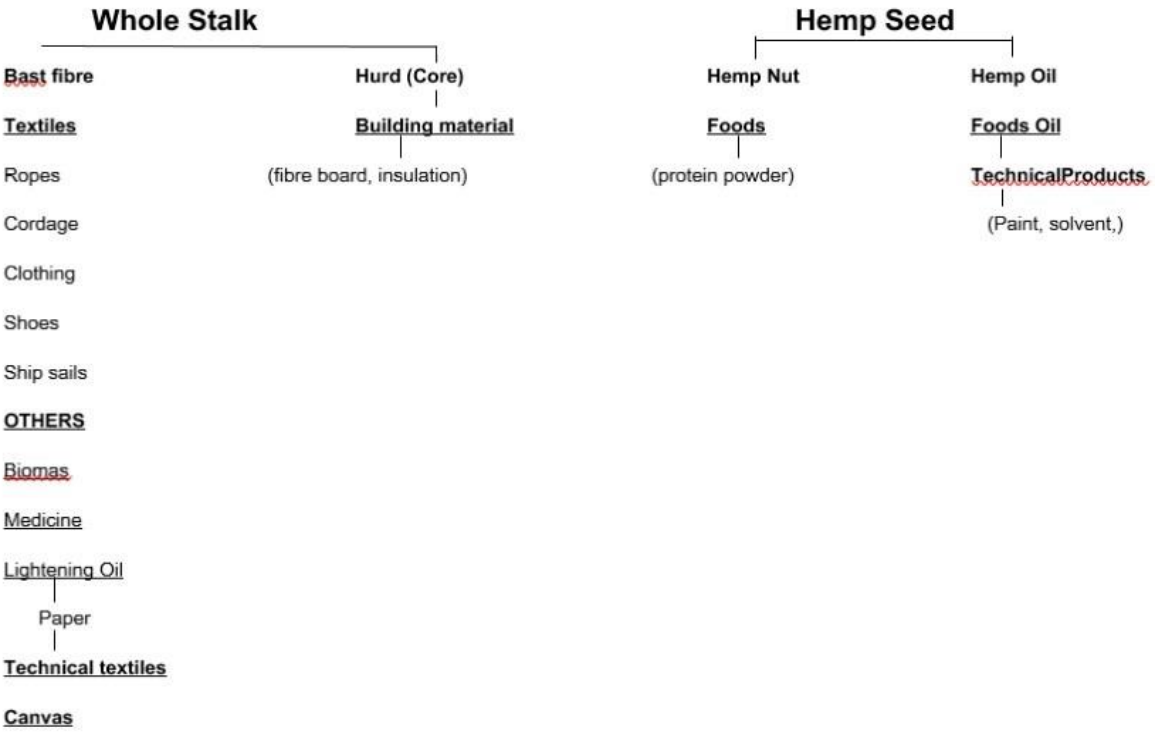
[198] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, USA: Oxford University Press, 2003, 2005, p.19.

[199] *Report of the Cultivation and use of Ganja, 1894.*,p.2, James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, 2003.,p.54.

[200] Nick Mattingly, *Natural knowledge and Sea Power: the Cultivation of Hemp in the British Imperial World*, PhD thesis, Southern Cross University, 2013, p.140 retrieved from http://epubs.scu.edu.au>theses 03-2018, 22:06.

boiling and removing the gummy and resinous matter after which the wood was broken and shaken out.[201] As the production of hemp fiber was a laborious and time-consuming task, Dr. James H. Dickson (British Industrialist) in the year of 1855 established a Company at Piedmont which included his patent machineries and liquid processes greatly reducing the number and cost of labor employed in the task.[202]

Figure 2.8: Uses of Industrial Hemp



Source: Jack Herer, *The Emperor Wears No Clothes*, USA: AhHa Publication 2006, pp.6-17.

[201] S.S Boyce, *Hemp Cannabis Sativa: A Practical Treatise on the Culture of Hemp for Seed and Fiber with a Sketch of the History and Nature of Hemp Plant*, New York: Mount Pleasant Printery, 1900, p.13.

[202] James H. Dickson, *The Fibre Plants of India, Africa and out Colonies*, London: Printed by Wilkes & Thornborough, 1864, p.233.

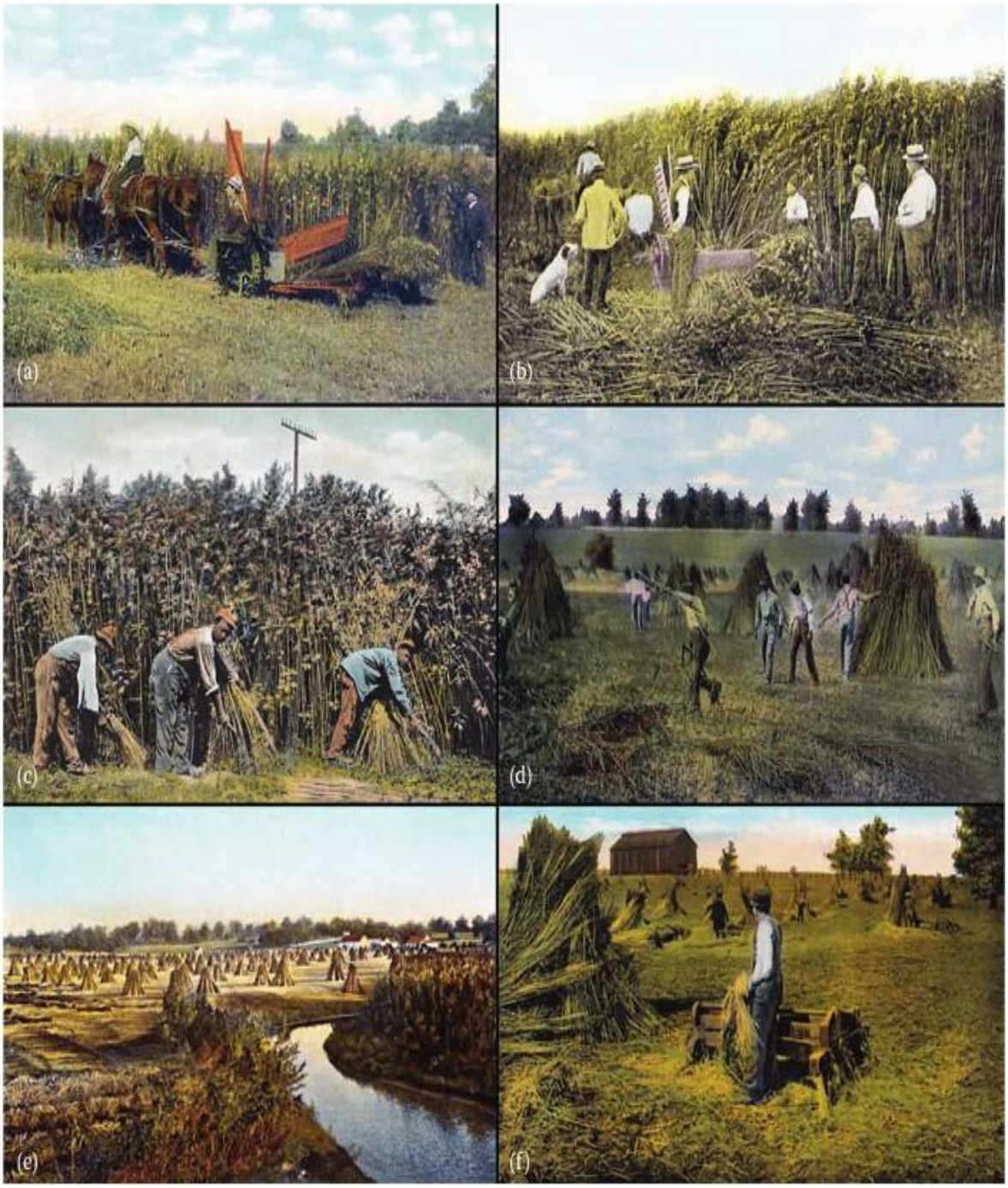


Figure 2.9: 20th Century Postcards portraying Cultivation of Hemp and its Extraction in Kentucky, (a, b) Machine-assisted harvesting. (c) Harvesting by hand. (d) Bundling cut stems into "shocks" for field retting. The shocks shed water like pup-tents, promoting even drying. (e) A field with hemp bundled into shocks. (f) Using a "hand break" to crudely separate fiber from stems. (Public domain illustrations) Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.97

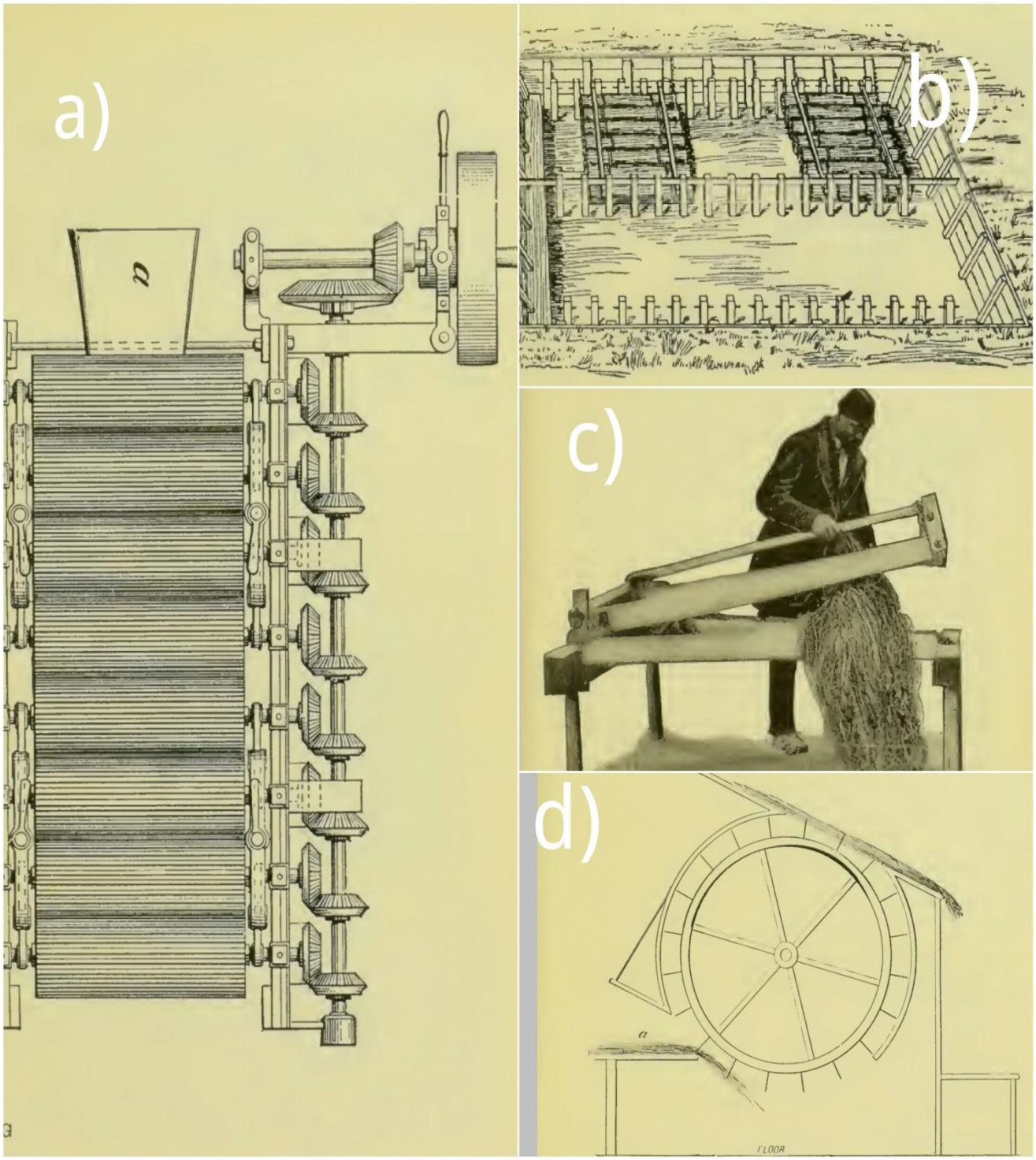


Figure 3: Various Machines and Techniques Involved In the Extraction of Hemp Fibers.

Source: S.S Boyce, *Hemp Cannabis Sativa: A Practical Treatise on the Culture of Hemp for Seed and Fiber with a Sketch of the History and Nature of Hemp Plant,* New York: Mount Pleasant Printery, 1900, pp.31, 41, 97, 107.

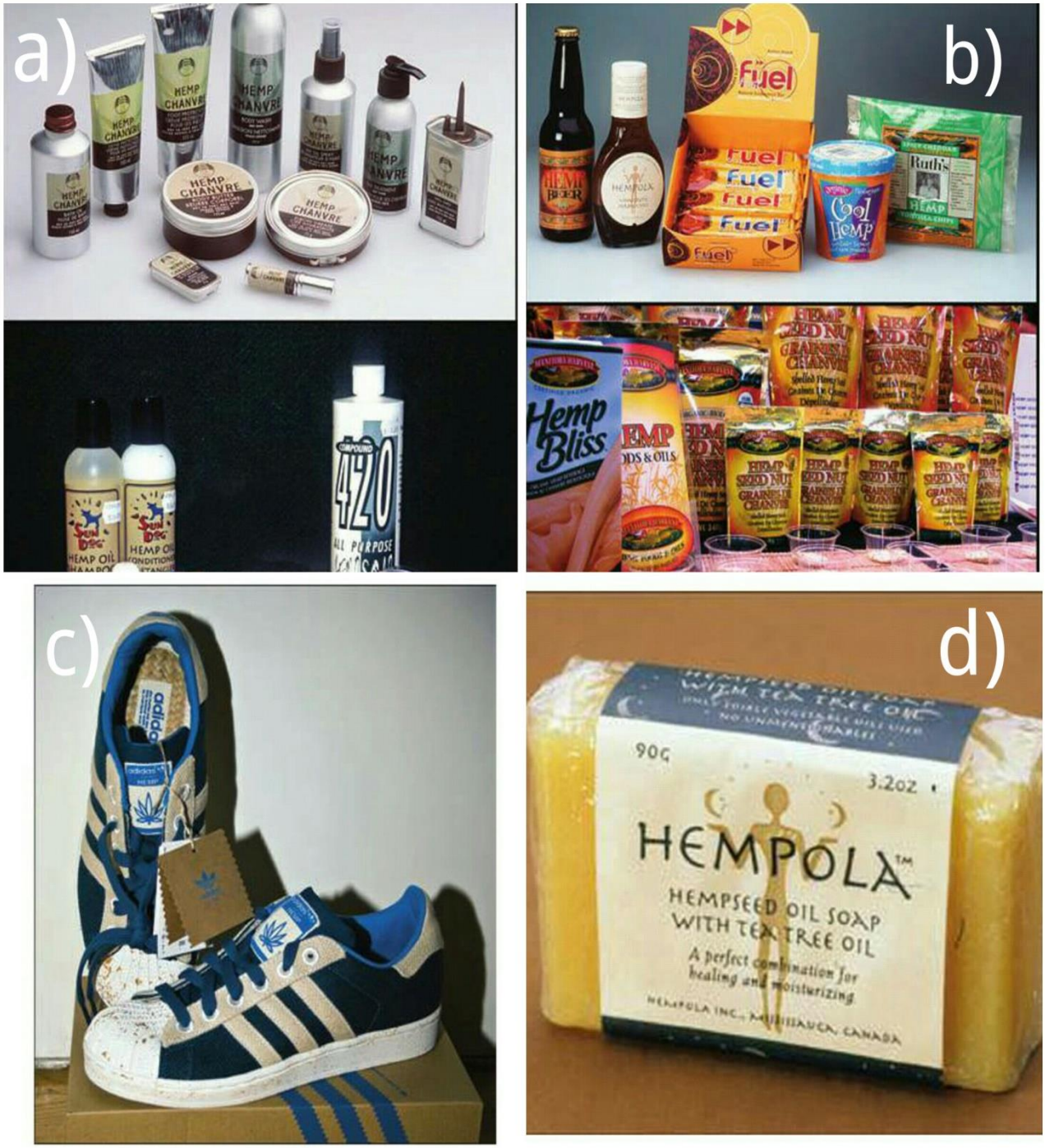


Figure 3.1: Various items made of Hemp(Cannabis Sativa): a) hemp made cosmetics, b) hemp made food items including energy bars, health drinks, nutritious hemp seeds and oil, c) addidas shoe made of hemp, d) hemp soap.

Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, pp.162, 166, 403

Figure 3.2: a) Clean Hemp Fibers, b) Cordages and Ropes made of Hemp

Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, pp.108, 114

2.4 Cultivation of Indian Hemp throughout US

The Dutch dominated the East India trade as well as the supply of various articles including Indian hemp to the West, during the 17th Century. In order to stop this dependence, the British controlled Navy from America, raided and captured some Indian hemp seeds from a Dutch ship for its desired

cultivation.[203] This led to the passing of marijuana law in 1619 at Jamestown Colony Virginia directing all the farmers to grow Indian hemp seeds[204] and it was followed by several strict laws on hemp cultivation in Massachusetts in 1631 and Connecticut in 1632.[205] The Government in order to encourage the hemp cultivation among the American farmers even made hemp a legal tender from 1631 till the 1800s and more strict and imperious laws were passed where peasants could be jailed who denies growing hemp during the shortage period.[206] These Governmental laws bore fruit by the early part of the twentieth century when 'Indian hemp was grown throughout the United States for fibers.'[207]

Figure3.3: Cutting of Hemp, Shocks, Stack and Fiber Spinning

Source: *Yearbook of U.S Dept. of Agriculture*, 1901, retrieved from http;//www.pinterest.com>pin on: 21-07-2018, 15:02

[203] Jack Jacobs, *The Story of Hemp in Virginia is an Old One*, The Virginia Gazette, retrieved from http://wwwvagazette.com/opinion/va-vg-edit-letters-maner-1209-story.html on 30-04-2018,22:03.

[204] Jack Herer , *The Emperor Wears No Clothes*, 2006.,p.3.

[205] Jack Jacobs, The Story of Hemp in Virginia is an Old One.

[206] Jack Herer , *The Emperor Wears No Clothes*, 2006.,p.3.

[207] Jack Jacobs, *The Story of Hemp in Virginia is an Old One*.

2.5 Hemp in Britain

As hemp assumed a fundamental place for Britain's mercantile expansions, Queen Elizabeth-I passed a mandatory decree in 1563 for the cultivation of hemp to the landowners with 60 acres or more, denying which would have to face subsequent fines.[208] Even British citizenship was provided to foreigners who would grow cannabis.[209] However, the situation was aggravated towards the 18th Century with the Russian blockade catalyzed by France's Continental system which resulted in Britain's consistent efforts towards finding sources of hemp or its substitutes in its colonies including India.[210] This is evident from the following statement:

"In 1793, the net profit from a bigha of wheat yielded only 7 annas while hemp cultivation could give from Rs. 3 to 7. Hemp had a clear edge over wheat. Its economic and military significance lay in its use for the rigging of ships. Russia had to stop its supply during the Napoleonic Wars and British shipping greatly suffered as the price of hemp, which in 1792 was 25 pounds per ton, rose to 118 pounds in 1808. India was therefore to look for the supply of hemp."[211]

In addition to this, the increasing demand for hemp in the European countries particularly in Britain and America became an impending cause behind the War of 1812.

---

[208] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928,* 2003.,p.18.

[209] Jack Herer , *The Emperor Wears No Clothes,* 2006.,p.3.

[210] James Davey, *The Transformation of British Naval Strategy: Seapower and Supply in Northern Europe 1808-1812,* The Boydell Press, 2012, UK, pp.13-31.

[211] MacDonald Mackenzie, *Imperialism and the Natural World,* United Kingdom, Manchester University Press, 1990, p.55.

In China, the Chinese used the extract of the plant as an anesthetic in some surgical operations.[212] The fibers of the *sativa* plant were also used for making the much-praised Chinese textiles, which led the British Government to grind towards the procurement of Chinese hemp. As discussed earlier cannabis was extensively used in the Asian countries for both medicinal potentialities and recreational purposes, the colonial grip over the North-Eastern Frontier facilitated the colonizer's much-desired opportunity for commercial extensions to these countries. This, however, came with its own implications which witnessed several changes with regards to cannabis, mainly to procure industrial and commercial hemp subjected to various governmental policies.

Figure 3.4: Chinese Hemp

Source: S.S Boyce, *Hemp Cannabis Sativa: A Practical Treatise on the Culture of Hemp for Seed and Fiber with a Sketch of the History and Nature of Hemp Plant*, New York: Mount Pleasant Printery, 1900, p.6.

[212] *Report of the Cultivation and use of Ganja, 1894.*, p.45.

Acting on the British requirement of hemp fibers, 'the Agriculture and Horticulture society' took up the work of hemp production in India.[213] However, such a task never met its successful ends owing to the resistances of the Indian cultivators refusing to cultivate cannabis fibers in the foreign method.

Thus, cannabis assumed a significant place in India as a medicinal and recreational drug but in Europe, it was as an industrial and medicinal commodity. The British East India Company with their established grip over its colony started the inception of molding cannabis for the procurement of true hemp. Such a policy, however, could not reach its successful ends as it was faced with subtle resistances from the gentry who not only disobeyed its cultivation but altogether broke the contemporary laws imposed on it by the Government. Although, subtle form of resistances, in the long run, it compelled the colonizers to search for alternative sources of procuring other substitutes of fibers leaving the 'true hemp.' Moreover, by the mid of 19th Century, the use of steam and petroleum motorized ships led to the reduction of the demand of hemp fibers for naval purposes. The hemp ropes retained water in its interior and to prevent the rotting, the ropes were tarred which was a laborious process. This, however, was substituted with abaca ropes which were much lighter and had great resistance in sea water proving to be more preferable for the navy. In addition to this, the invention of the modern cotton gin by Eli Whitney in 1793, cotton gradually became an important commodity in the clothing market subsequently reducing the demand for hemp fibers.[214]

[213]MacDonald Mackenzie, *Imperialism and the Natural World, 1990.*, p54.

[214] Ernest Small, *Cannabis A Complete Guide,* 2017., p.94.

Chapter 4: In Search for Cannabis- Commodity, Conquest, Therapeutics and Colonial Policies

4.1 The War of 1812

During the 18th Century, Britain mainly depended on the Baltic region for the procurement of the naval stores like hemp, riga, oak, etc. Almost 95.9% of hemp was imported to Britain between 1767 and 1782 which consistently increased in the succeeding years.[215] Following the outbreak of the French Revolutionary Wars in 1793, British navy followed their usual wartime policy of interception and blockades to France including its allies on the continent by intercepting their ships carrying naval stores to the enemy ports where even the League of Armed Neutrality became invalid. It reached heights when the British navy intercepted a Danish fleet headed to France in July 1800; although the matter was solved this act disgusted Czar Paul I of Russia who after the end of Russian coalition with Britain and Austria started its inclination towards France. Subsequently, in August 1800, it re-established the Armed Neutrality of 1780 with Denmark, Sweden, and Prussia declaring an official ban of trade with Britain.[216] This also at the same time was on the part of the desired Russian interest in Europe. By 16th December 1800, the embargo against Britain took its action and it became a matter of great distress for the Board of Trade in

[215] James Davey, *The Transformation of British Naval Strategy: Seapower and Supply in Northern Europe 1808-1812*, UK: The Boydell Press, 2012, p.20.

[216] Ibid., p.28.

England, who were hard-pressed under the situation to search for alternative sources of naval stores particularly hemp both in Britain and in its colonies.[217]

The blockade finally resulted in the Copenhagen campaign of 1801, where the British had a crushing victory and even Paul-I was murdered on 1st March, in the same year bringing the Armed Neutrality to a halt. However, situations further deteriorated when the new Czar of Russia, Alexander signed the Treaty of Tilsit with France, which included her in the continental system which cut off all Russian trade relations with Britain and its allies.[218]The main strategy of Napoleonic France regime was to devoid England of Russian hemp and Britain strained under the situation would end the embargo against France and its allies. Operating on this treaty, Denmark and Prussia shut their ports which led to the infamous bombardment of Copenhagen, followed by the Danish surrender in September 1807. [219]

Meanwhile, Britain resumed its policy of interception but with diplomacy by confiscating American ships to deliver Russian hemp to the British ports between 1807-1810. This, in the year 1808, caused Napoleon to insist the Czar to end their trade with the US, owing to the illegal traders working for Great Britain. The Czar being lured by the exchange of US gold did not pay any heed to the request which ultimately resulted in the War of 1812. Driven by the manifestation of further extension, US also sided up with Napoleon on Moscow

[217]James Davey, *The Transformation of British Naval Strategy*, 2012., p.23.
Nick Mattingly, *Natural knowledge and Sea Power : the cultivation of hemp in the British imperial world*, PhD thesis, Southern Cross University, 2013, p.143.

[218] James Davey, *The Transformation of British Naval Strategy: Seapower and Supply in Northern Europe 1808-1812*, 2012.,p.30.

[219] Ibid., p.31.

against Russia in the War. After a series of friction, Napoleon faced a crushing defeat in the hands of Russia,[220] and this also led to the removal of the Russian embargo against Great Britain.

4.2 Britain's Search for Hemp in India and the Experiments on Cannabis

The British although by 1815, emerged as a global empire with the defeat of Napoleon at Waterloo,[221] however the Russian blockade, already hard-pressed the country with a severe crisis of naval stores which directed Britain towards the search of hemp and its substitutes. In this connection, Joseph Banks the Privy Councillor of the Board of Trade with his expertise on hemp production finally in 1800 recommended the Committee to pursue a project towards the production of hemp on their own lands as well as in the British controlled colonies including India.[222] As a part of it, Britain identified the vast tracts of uncultivated land in the province of Bengal, Bihar, and Benaras and considered it as an ideal for the purpose. Therefore, the Board of Trade awarded George Sinclair (*Botanist*) five hundred pounds to start an experimental farm at Reshera Bengal.[223]Alongwith it the Court of Directors on the experiments on hemp cultivation to be successful in India, commissioned Robert Wisset the Company's clerk to compile a pamphlet of instruction which would mainly train

[220] Jack Herer, *The Emperor Wears No Clothes,* USA: AhHa Publication, 2006, pp.83.

[221]Alan Frost, 'The Global Reach of the Empire: Britain's Maritime Expansion in the Indian and Pacific Oceans 1764-1815', Reviewed by H.V. Bowen ,*The International History Review*, Vol 26, No 4 December 2004, pp.830-832.

[222] John Gascoigne, *Science in the Service of the Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution*, Australia, Cambridge University Press, 1998, pp.118-120.

[223] Nick Mattingly, *Natural knowledge and Sea Power*, 2013., pp.114-116.

the Indian cultivators for European hemp cultivation.[224]For the purpose, there was also the recruitment of six Lincolnshire hemp-dressers mainly for directing and supervising the production of hemp in India.[225] William Roxburgh, the Superintendent of the Calcutta Botanic Garden (1793-1813), who had already worked on the project of hemp cultivation along with the various substitutes like *sunn (criotalaria juncea), coir, flax, robinia cannabina* and many more, at the Coromandel Coast as well as at the Calcutta Botanical Garden, believed that these efforts of the botanists like Sinclair would encourage the natives to cultivate cannabis in the European method for the production of fibers in India.[226]

However, the first Asian alternative which caught British attention was the Chinese textiles made out of *cannabis sativa* whose fibers were claimed to be stronger by the British mariners. Therefore, in the year 1785, a small package of *sativa* seeds was delivered to Sir Joseph Banks, *(British Botanist)* for breeding and distribution purpose. Banks viewed that the Calcutta Botanic Garden would serve as a useful site for the growth of tropical plants and as the perfect place for plants sourced from China particularly the Chinese hemp. However, the scheme proved to be short-lived, according to Hawkesbury's *(A Rope-maker at Woolwich Yard)* Experiment, comparing the strength of Chinese

[224] Ibid., p.124.

[225] John Gascoigne, *Science in the Service of the Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution*, 1998., pp.117-120.

[226] William Roxburgh, 'On the Culture and Comparative Strength of Hemp and other Vegetable Fibers', Thomas Gill (ed.) *Technical Repository containing Practical Information on Subjects Connected with Discoveries and Improvements in the Useful Arts* ,Vol- VI, London: T.Cadell Strand, 1824, pp.184-188.

hemp with the Russian counterpart, the former turned to be of inferior quality and the project was abolished.[227]

The pursued desire for hemp led to the influx of researches undertaken by the Company's Botanists, Surgeons, and Scientists. Among the researches undertaken on cannabis the names of Robert Hooke, Dr. Prain and W.B O' Shaughnessy requires special mention.

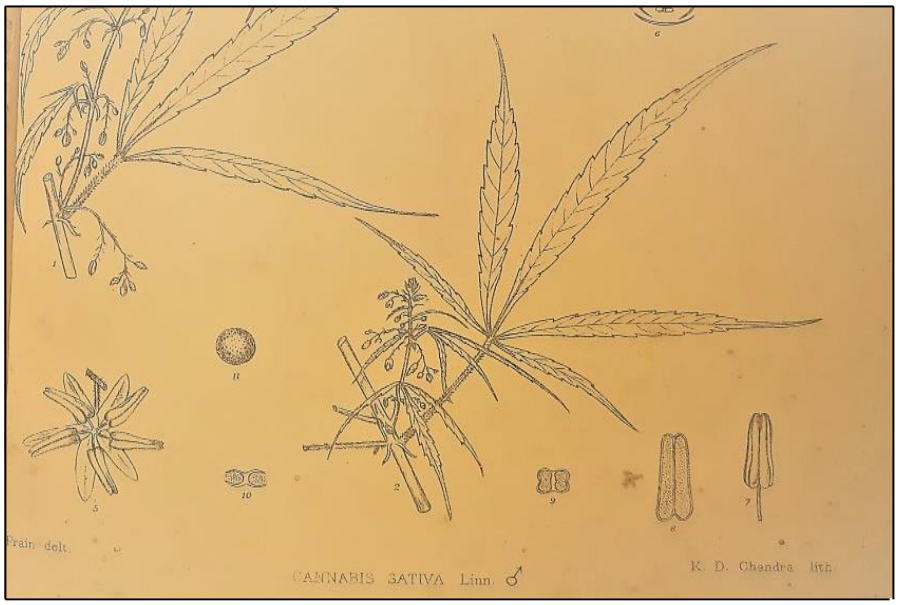
The first report on 'Bangue' submitted to the Royal Society was by Robert Hooke on 18th December 1689, which indicated the medicinal usage and effects of cannabis mainly to treat 'distempers of the head and stomach.'[228] The cultivation of the various derivatives of cannabis which depended highly on the peculiarity of its flowers could not be understood properly unless a scrutinization was done on the subject. This was efficiently conducted by Dr. Prain (British Curator of Herbarium, Royal Botanic Garden, Sibpur, 1887), with proper depictions of cannabis as showed in **Figure 3.5**.[229]

[227] Nick Mattingly, *Natural knowledge and Sea Power,* 2013., pp.107-108.

[228] Allan Chapman, *England's Leonardo: Robert Hooke and the Seventeenth Century Scientific Revolution*, London: IOP Publishing Ltd, 2005, p.116.

[229] Major D. Prain, *On the Morphology, Teratology and Diclinism of the Flowers of Cannabis*, Scientific Memoirs by the Officers of the Medical and Sanitary Department of the Government of India, Calcutta: Office of the Superintendent of the Government Printing,1904, pp.4-32 (Assam State Archives, henceforth, ASA).

Figure 3.5: On the Morphology of Cannabis Sativa Linn.



Source: Major D. Prain, "On the Morphology, Teratology and Diclinism of the Flowers of Cannabis", Calcutta, Office of the Superintendent of the Government Printing, 1904, p.34, Plate I

Moreover, during the 17th century, there was the colonial search of valuable tropical plants with the process being termed as 'colonial bioprospecting'[230] within their territorial possessions. This mainly aimed to grow these plants on a large scale for greater commercial profits and at the same time also contributed towards their hunt for tropical medicines which involved the collection, study, and classification of exotic medicinal plants. In case of cannabis, various specimens of the plant were sent to the Director of the Royal Botanical Garden, Calcutta, from various States of the British Indian colony throughout the 19th Century for experimental and research purposes.[231]

[230] Pratik Chakrabarti, *Medicine and Empiret 1600-1960*,China: Palgrave Macmillan,2014, p.20.

[231] *Cannabis Sativa Linn*., *India*, G.P-15, 153/5, Central National Herbarium, Royal Botanical Garden, Calcutta.

Figure 3.6: Various Specimens of Cannabis Sativa. Linn

a) Specimen of cannabis sativa linn. sent from Khandua as a part of the survey of IHDC (dated:28-10-1893), b) Specimen of cannabis sativa linn. sent from 'Ganja Mahal', Naugaon, Bengal (dated:1-03-1893). Source: Cannabis Sativa Linn., India, G.P-15, 153/5, Central National Herbarium, Royal Botanical Garden, Calcutta.

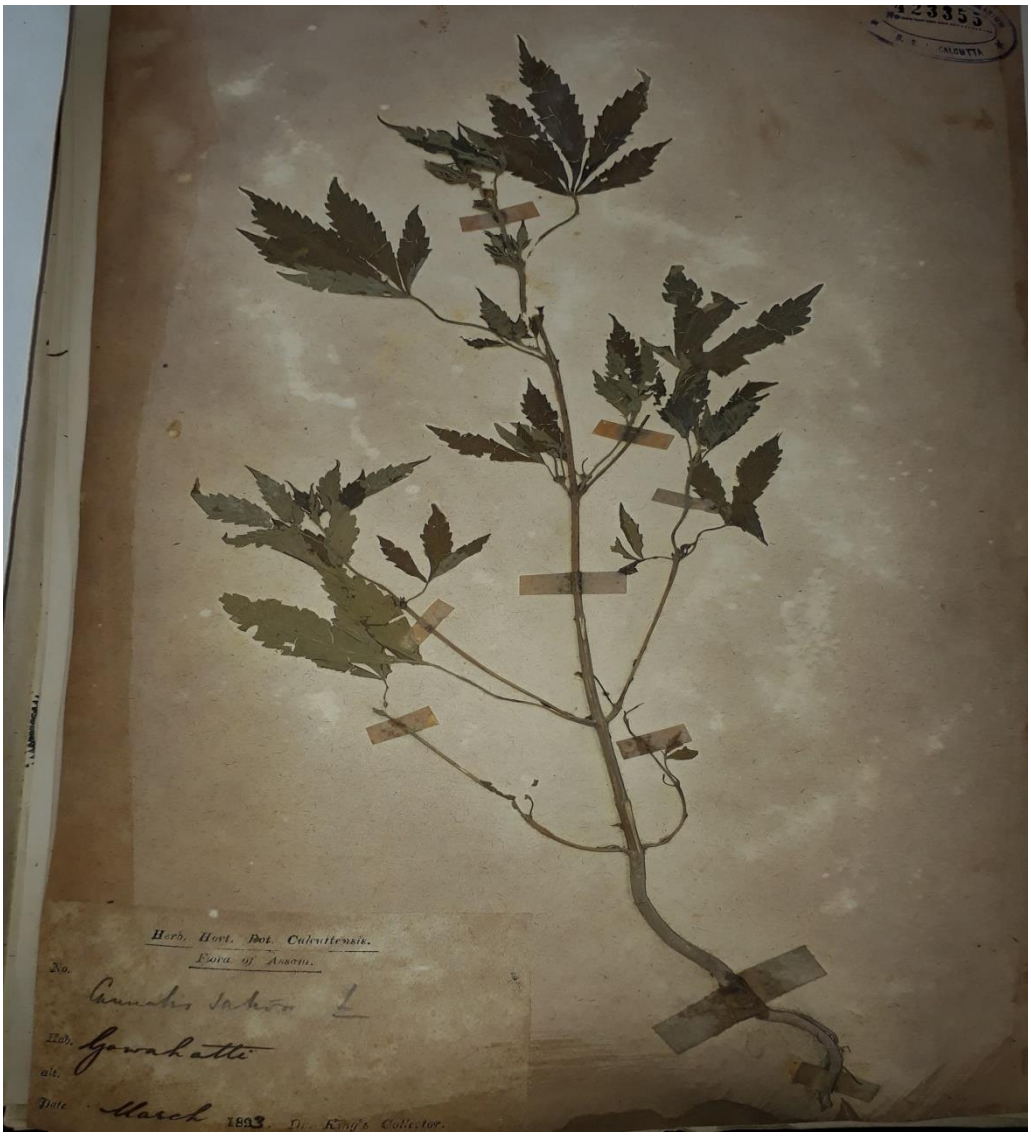
Figure3.7

a) Specimen of cannabis sativa linn. sent from Assam(date: unknown), b)Specimen of cannabis sativa linn. sent from Goalpara, Assam(03-07-1894)
Source: Cannabis Sativa Linn., India, G.P-15, 153/5, Central National Herbarium, Royal Botanical Garden, Calcutta.

Figure 3.8

a) Specimen of cannabis sativa linn. sent from Khasi Hills (date: June, 1876), b) Specimen of cannabis sativa linn. sent from Khasi Hills (date: July, 1878). Source: Cannabis Sativa Linn., India, G.P-15, 153/5, Central National Herbarium, Royal Botanical Garden, Calcutta.

Figure 3.9



A specimen of cannabis sativa linn. sent from Guwahati, Assam (dated: March, 1893). Source: Cannabis Sativa Linn., India, G.P-15, 153/5, Central National Herbarium, Royal Botanical Garden, Calcutta**.**

The above images revealed diverse patterns in the structuring of the plant of cannabis collected from different places of British India. Such differences were mainly due to the diverse ecological conditions which have been adapted by the plant in supporting its growth.[232] Most of the images of the plant showed

[232] Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.1.

its THC *(Δ 9- Tetrahydrocannabinol)* infused resinous buds, twigs and leaves favorably sown in the tropical climate for medicinal and recreational purposes.

The first European to make a compilation of the Indian materia medica was D'Orta in his book '*Coloquios dos simples e drogas he cousas medicinais da India.*' This work gave a description of '*bangue'* consumed by the Indians for veneral acts as well as also used by the officers of the armies and soldiers for instant refreshment and sleep. Another work on bhang, *The Natural History of India* by Christoval Acosta described the use of bhang for enhancing appetite and treating insomnia. Robert James author of *Medicinal History* also mentioned similar accounts of '*bangue'* with the same stories of 'soldiers, sex and sleep.' All these texts revealed a repeated trend of the same accounts which however lacked proper knowledge on the medicinal usage of cannabis prior to the 19th Century. Finally, a halt in this trend was brought by Ainslie's work of *Materia Medica of Hindoostan*. Being a Superintendent Surgeon in Madras with also an attached duty of scrutinizing the materia medica of the empire, he described the use of medicinal cannabis for treating piles, diarrhea and also as a painkiller.[233] However, the most descriptive and significant account provided on the subject was mainly done by W.B O' Shaughnessy Professor of Materia Medica, Medical College of Calcutta in his work *On the Preparations of Indian Hemp or Gunjah (cannabis indica).* This work described the history of hemp, its usage, botanical characteristic, chemical properties, as well as its production including its various derivatives. It also described the usages of cannabis for refreshment, intoxication and medicinal potentialities healing inflammation, neuralgic pain,

[233] James H. Mills, Cannabis Britannica-Empire, Trade and Prohibition 1800-1928, 2003., pp.34-35.

tetanus, external application on wounds, etc. and with side effects like melancholy, dropsy, and over-dosages leading to temporary insanity.[234] The report of Shaughnessy led to an influx of researches and experiments conducted by several scientists, chemists, and pharmacologists on medicinal cannabis. Scientist like W.Ley in his *Observations on Cannabis Indica or Indian Hemp* described the beneficial effects of the moderate use of medicinal cannabis as a relevation of the muscles, free perspiration on the skin and increase of appetite; in cholera. He also reported its usage for the reduction of cramps, sickness, and purging. In rheumatism, it relieved pain and inflammation. In tetanus, it provided a cure to both men and horses and it was also useful in spasmodic asthma, delirium tremens and also relieve hydrophobia.[235] Cannabis was also provided to Messrs. Squire & Sons, Messrs. Burroughs & Wellcome Manufacturing Druggists, London for medicinal and experimental purposes.[236] The Sanitary Commissioner of Hyderabad in the year of 6th November 1871, reported the use of medicinal cannabis for producing appetite, reverie, sleep and also an aphrodisiac and antispasmodic.[237] Babu Deno Nath, Sub-Assistant Surgeon of Akyab described the use of cannabis to relieve pain and used by the

[234] W.B O' Shaughnessy, 'On the Preparations of Indian Hemp or Gunjah', *Provincial Medical Journal and Retrospect of the Medical Sciences*, Vol. 5, No. 122, 1843, pp. 343-347.

[235] W. Ley, *Observations on the Cannabis Indica, or Indian Hemp, Provincial Medical Journal and Retrospect of the Medical Sciences*, Vol. 5, No. 129, March 18, 1843, p.487.

[236] *Messrs. Squire & Sons, London for Medical and Experimental Purposes*, Finance Department, Separate Revenue, Proceeding: B.139-40, File No: E 1G/2 of May 1902, State Archives of West Bengal,(henceforth, SAWB); *Remission of-which it was intended to forward to Messrs. Burroughs & Wellcome Manufacturing Druggists, London for Manufacturing and experimenting Purposes,* Finance Department, Separate Revenue, Proceeding:B.14-15, File No: E 1G/8 of June 1897, (SAWB).

[237] *Medicinal Effects of Ganja or Bhang*, Proceedings of the Government of Bengal, Section-IV: Hemp Drugs, Revenue Department, Excise Branch, 6th November, 1871, (SAWB).

native physicians for treating diarrhea, dysentery, and cholera. He further explained that the 'users of cannabis were in good health and had a great appetite with a strong power of digestion'.[238] H.S Thomas, the Collector of South Canara also shared the same view with regards to the medicinal potentialities of the drug.[239] R. Rowan Lees another British scientist stated the use of medicinal cannabis for the treatment of phthisis pulmonalis, relieving cough, aids patients by stimulating and exhilarating qualities and also helps in indigestion.[240] Two pharmaceutical chemists named Messrs Rankin and Borland prepared and gave some fluid aqueous extracts of the flowering tops of female plant of cannabis which Lees suggested to avoid as far as possible owing to its intoxicant resins.[241] Jacques Joseph Moreau a French physician in his *Du Haschischet de L' Alienation Mentale: Etudes Pdychologiques* (1845) also noted the use of cannabis, propounded theories on the drug and described its consequent effects. Moreau was also credited with introducing cannabis to Theophile Gautier (French journalist and novelist) and through him to Charles Baudelaire (French poet and essayist), Victor Hugo (French poet, novelist, and dramatist) and Honore de Balzac (French novelist).[242]

[238] *Medicinal Properties of Ganja*, Proceedings of the Government of Bengal, Section-IV: Hemp Drugs, Revenue Department, Excise Branch, Proceeding: 67A, (SAWB).

[239] *Medicinal Properties of Ganja and Other Hemp Drugs*, Proceedings of the Government of Bengal, Section-IV: Hemp Drugs, Revenue Department, Excise Branch, 30th November, 1872, (SAWB).

[240] R. Cowan Lees, 'Cannabis Sativa Seu Indica: Indian Hemp', The British Medical Journal, Vol. 1, No. 1780, Feb. 9, 1895, p.301.

[241] Ibid., p.301.

[242] John Frederick Logan, 'The Age of Intoxication', Yale French Studies, *Intoxication and Literature*, Yale University Press, 1974, p.91.

Regarding the preservation of the intoxicants of cannabis in a neutral atmosphere, experiments were conducted by Mr. Jenks, Chemical Examiner for Customs and Excise, Bengal. He preserved a 1917 sample of ganja for 2 years and 8 months which was examined by the local smokers and was proved to be in a satisfactory state. As a result, he also suggested for the construction of air-tight godowns to the Ganja Cultivators' & Cooperative Society, Bengal for the preservation of ganja meant for sale during deficit period.[243] Experiment on the preservation of ganja was also made by Dr. Prain (Curator of Herbarium, Royal Botanic Garden, Sibpur) suggesting the preservation of the flower-tops of cannabis which were to be converted into homogenous cakes and sun-dried until bearing the characteristics of ordinary ganja.[244]

[243] *Procedures Regarding Preservation of Ganja,* Proceedings of the Government of Bengal, Finance Department, Excise Branch, December, 1920, p.18-19, (SAWB) .

[244] *Report of the Cultivation and Use of Ganja,* National Library of India, Bengal Secretariat Press, 1893, Calcutta, p.36.

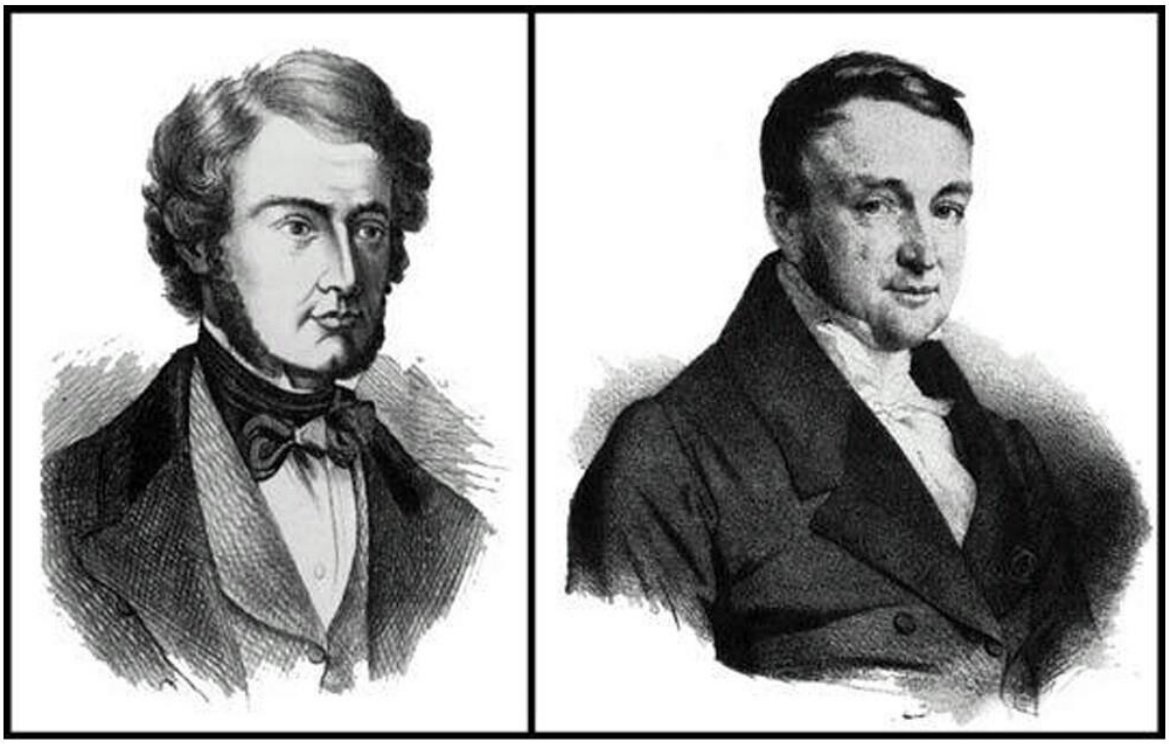


Figure 4: Left: Irish Scientist W.B O' Shaughnessy, Professor of Chemistry and Materia Medica at the Medical College of Calcutta. He was the first to systematically elucidate about medicinal cannabis and its effects. Right: French Psychiatrist Jacques-Joseph Moreau, in his work *'Du Haschischet de L' Alienation Mentale: Etudes Pdychologiques'* (1845), explained about the beneficial use of cannabis as a psychotomimetic drug, Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.279

Another significant figure on the research of cannabis germplasm was a Russian geneticist and agronomist named Nikolai Ivanovich Vavilov (1887-1943), who was responsible for bringing out the importance of collecting and preserving cannabis germplasm that can be used by the cultivators for growing new crops and improving the old ones. He also made efforts towards the largest collection of the germplasm of *cannabis sativa* in the world which is located in the Vavilov Research Institute, Petersburg, Russia. However, in the 1930s his scientific conclusions were challenged by a scientist and bureaucrat T.D

Lysenko whose ideology suited the totalitarian, Communist Soviet Union under the dictatorship of Joseph Stalin. This led to the imprisonment of Vavilov in 1940 and finally, he died in the year 1943.[245]

Figure 4.1: Russian geneticist and agronomist Nikolai Ivanovich Vavilov (1887–1943).

Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, pp.14

The discovery of the active ingredients of medicinal plants led to outset of the large-scale manufacturing of modern drugs in laboratory-based factories. This mainly contributed to the extensive colonial exports of raw materials to Europe and the US. Finally, the manufactured drugs were being mainly supplied to the international markets as well as to the British Colonies.[246] In the mid-19th Century, investigations into the chemistry of cannabis began which was

[245] Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.428.

[246] Pratik Chakrabarti, *Medicine and Empiret 1600-1960*, China: Palgrave Macmillan, 2014, p.34.

followed by a major trend in the chemical research with the quest of its active ingredients.[247] At this point, the British scientist played a significant role in the research of the chemical constituents of cannabis.[248] Several writings and experiments on cannabis were conducted by Fleming, William Roxburgh (*Scottish Surgeon and Botanist and the Superintendent of the Calcutta Botanic Garden (1793-1813),* Ainslie, W.B O'Shaughnessy, etc. However, it was Shaughnessy's work which marked the beginning of cannabis research and in the second half of the 20thCentury; this trend was termed as 'cannabinoid research' which further evolved into 'endocannabinoid research.'[249] Cannabinoids are mainly found in cannabis which is a group of 21 carbon compounds. These successful experiments and researches conducted by various scientists led to the inclusion of cannabis to the list of British Pharmacopeia as it got successfully enlisted in the British Pharmaceutical Codex in 1934.[250] Moreover, in the year of 1850 cannabis also got included in the US Pharmaceutical Codex as a medicinal drug. Cannabis tinctures were prepared by Sears Roebuck Catalogues from 1900 onwards. Till the World War II, cannabis was used as an antispasmodic, analgesic, treated insomnia, anorexia, asthama,

[247] Natalya M. Kogan and Raphael Mechoulam, *Cannabinoids in health and disease*, Hebrew University of Jerusalem, Israel, 2007, p.413 retrieved from www.dialogues-cns.org on 19-05-2018, 13:05.

[248] Ibid., p.414.

[249] Vincenzo Di Marzo, 'A Brief History of Cannabinoid and Endocannabinoid Pharmacology as Inspired by the Work of British Scientists', *Trends in Pharmacological Sciences*, Vol.xx No.xx Monthxxxx, Italy, p.1, retrieved from http://www.sciencedirect.com on 20-05-2018, 13:19.

[250] Edward J. Waring, 'Remarks On A Few Articles Of The Indian Materia Medical', *The British Medical Journal*, Vol. 1, No. 1275, Jun. 6, 1885, p. 1145; Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press,2017, p.279; 'British Pharmaceutical Codex 1934', *Schaffer Library of Drug Policy*, retrieved from http://www.druglibrary.org/schaffer/hemp/medical/brit34.html on: 20-05-2018, 14:28.

sexual dysfunction, menstrual bleeding, inflamed tonsils, migraine, etc.[251] J.R Reynolds's article 'On the Therapeutical Uses And Toxic Effects of Cannabis Indica' published in the journal *The Lancet*, recommended cannabis for depression, dysmenorrhea, neuralgic and epilepsy.[252] However, after the World War II, the use of medicinal cannabis declined because of the introduction of new medicines like vaccines, alternative pain killers, hypodermic syringes and most significantly owing to the accelerated criminalization of the drug.[253] In the drug literature of the Pre-Second World War, herbal cannabis was known largely by the pharmacological phrase 'cannabis flos' or cannabis flower.[254] The first investigator to obtain an extract from the leaves and flowers of cannabis was Schlesinger in the year 1840. After a few years, another scientist Dcourtive successfully extracted a dark resin from cannabis which he named as '*cannabin*'.[255] This was followed by the experiments of the British scientists Wood, Spivey and Easterfield who came up with one of the active ingredients of cannabis which they named as '*cannabinol.'* This was further confirmed by C.R Marshall, the Professor of Medicine at the University of Cambridge in 1903. He reported that the substance could be further broken down having possessed no power to intoxicate.[256] After the discovery of '*cannabinol'* by Woods and his colleagues, Robert Cahn (British Metallurgist) elucidated most of its

[251] Gabriel G. Nahas, *Marihuana-Deceptive Weed*, Newyork: Raven Press Publishers, 1973, p.7;

[252] Vera Rubin and Lambros Comitas, *Ganja in Jamaica: A Medical Anthropological Study of Chronic Marijuana Use*, The Hague, Paris: Mouton &Co., Publishers, 1975, p.12.

[253] Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press,2017, p.280.

[254] Ibid., p.2.

[255] Natalya M. Kogan and Raphael Mechoulam, *Cannabinoids in health and disease*, 2007., p.414.

[256] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928,* USA: Oxford University Press, 2003, pp.145-148.

structure.[257] Based on the experiments of these scientists, Alex Todd (of the UK, an Organic Chemist, and Noble Laureate) and Roger Adams (of the US, Organic Chemist) fully identified the structure of *'cannabinol'* in the late 1930s and early 1940s respectively. However, in the late 19th and early 20th Century, owing to the lack of efficient techniques, it was very difficult to isolate Δ^{9}-Tetrahydrocannabinol, as it is a part of a huge group of cannabinoids and all of them boil at more or less the same temperature.[258] In the year 1940, another compound was separated which was known as *'cannabidiol'* this was further re-isolated in the form of a crystalline compound and its structure being elucidated.[259] In the later years, the cannabis constituents were further isolated forming a lot of compounds such as '*cannabigerol*', '*cannabichromene*', '*cannabicyclol*', '*cannabinoid acids*', 'Δ^{8}*-THC CBD*'and finally in the year 1964, Δ^{9}-tetrahydrocannabinol (Δ^{9}-THC) was isolated. [260] Most of these constituents had the properties of analgesic, anti-cancer, anti-inflammatory, anc anxiolytic activity without producing the psychoactive effect.[261] Soon after the isolation of THC, the component was synthesized and was widely available. These achievements led to an influx of publication of Δ^{9}-THC as well as

[257] Vincenzo Di Marzo, 'A Brief History of Cannabinoid and Endocannabinoid Pharmacology .

[258] S M Crowther, L A Reynolds and E M Tansey, 'The Medicalization of Cannabis', *Wellcome Witnesses to Twentieth Century Medicine,* vol. 40, London: Wellcome Trust Centre for the History of Medicine at UCL, 2010, p.8.

[259] Natalya M. Kogan and Raphael Mechoulam, *Cannabinoids in health and disease*, 2007.,p.414, retrieved from www.dialogues-cns.org on 19-05-2018,13:05.

[260] S M Crowther, L A Reynolds and E M Tansey, 'The Medicalization of Cannabis', 2010., p.8

[261] 'Cannabis and Cannabinoids(PDQ) Health Professional Version', *National Cancer Institute*, USA, retrieved from http:www.cancer.gov/about-cancer/treatment/cam/hp/cannabis/pdq on: 20-10-2017, 22:37.

'*cannabidiol'* (CBD).[262] There are two main cannabinoids (CB) receptors, CB_1 is located in the central nervous system and the CB_2 receptors are found on the periphery on cells with immune functions and gastrointestinal tract and also found in the central nervous system in low density.[263] The propensity of the CBD was substantiated when CB_1 receptor showed a role in boosting metabolism, control of central appetite and bodyweight regulation. Rimonabant present in cannabis specifically reduces sweet rather than regular food intake. In patients with AIDS and Cancer, Dronabinol is prescribed which is associated with improvement of appetite. At the same time, it was also found to be beneficial for patients with anorexia improving their appetite. It was also found to be safe in cases of HIV, Alzheimer, and Cancer. Furthermore, cannabinoids have a beneficial effect in controlling chemotherapy sickness.[264] Various other constituents of cannabis were *'Cannabinae Tannas'*, a brownish powder which is obtained from an aqueous extract of cannabis with tannic acid mainly used to treat nervous insomnia, dysmenorrhoea, and menorrhagia. Another is *'Cannabinonum', 'cannabinone'*, a brown resin obtained from cannabis used for treating hysteria and insomnia. Other extracts of the plant were '*Extractum Cannabis'*, '*Cannabinonum', 'Tinctura Cannabis*'etc'.[265]

---

[262] Natalya M. Kogan and Raphael Mechoulam, *Cannabinoids in health and disease*, 2007.,.p.414, retrieved from http//:www.dialogues-cns.org on: 19-05-2018,13:05.

[263] 'Cannabidiol (CBD), Pre-Review Report', Agenda Item 5.2, *Expert Committee on Drug Dependence, Thirty-ninth Meeting*, Geneva, World Health Organization, 6-10 November 2017, p.12.

[264] Natalya M. Kogan and Raphael Mechoulam, "Cannabinoids in health and disease", 2007., pp.415-416.

[265] *British Pharmaceutical Codex 1934*, Schaffer Library of Drug Policy, retrieved from http://www.druglibrary.org/schaffer/hemp/medical/brit34.html on: 20-05-2018, 14:28.

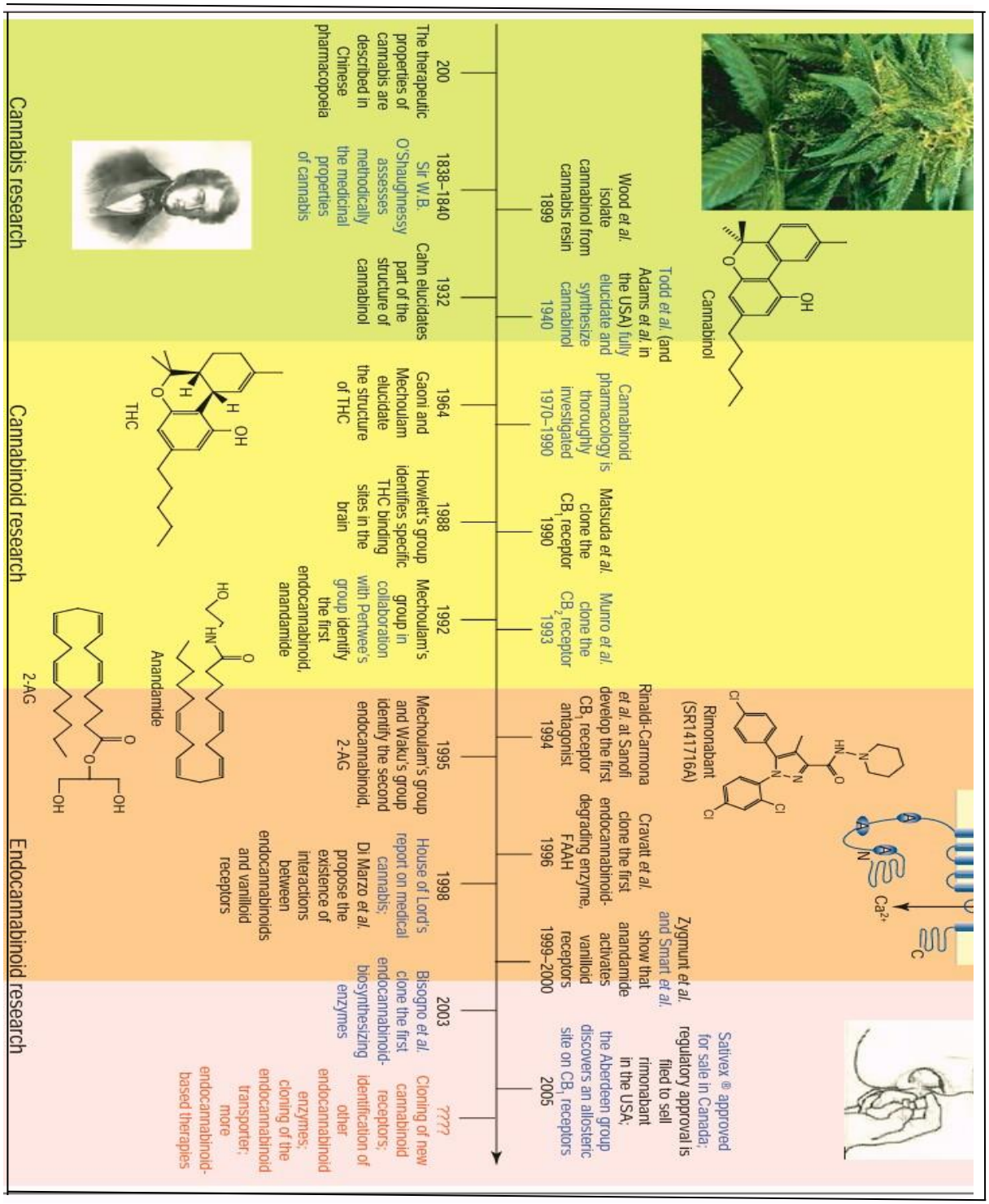


Figure 4.2: Chart Showing the Chronology of Cannabinoid and Endocannabinoid Research and its subsequent contribution to the Pharmaceutical Industry. Source: Vincenzo Di Marzo, 'A Brief History of Cannabinoid and Endocannabinoid Pharmacology as Inspired by the Work of British Scientists', *Trends in Pharmacological Sciences*, Vol.xx No.xx Monthxxxx, Italy, p.2, retrieved from http://www.sciencedirect.com on: 20-05-2018, 13:19.

Figure 4.3: Medications made out of Cannabis Extracts: a) Tincture of Cannabis b) Medicinal Cannabis Bottles of the 19th Century displayed in the Hash, Marijuana & Hemp Museum in Amsterdam, c) Cannabis Flos, d) First Cannabis Spray to become Sativex. Source: Ernest Small, "Cannabis A Complete Guide", Canada: CRC Press, 2017, pp.3, 280; S M Crowther, L A Reynolds and E M Tansey, The Medicalization of Cannabis, *Wellcome Witnesses to Twentieth Century Medicine*, vol. 40, London: Wellcome Trust Centre for the History of Medicine at UCL, 2010, p.3,280,289

Figure 4.4: a) Sativex Spray, the first cannabinoid and Endocannabinoid medicine to treat multiple sclerosis, b) Marinol® and Cesamet®, the first cannabinoid based medicine developed in 1980s for the treatment of nausea and weight-loss in cancer and AIDS patients . Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, pp.289, 297.

Figure 4.5: Medicinal Cannabis Growth Facilities in Tweed Inc. (Smith Falls, Ontario, Canada). **Photo courtesy of Steve Naraine,** Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.359.

Figure:4.6 :Medicinal Cannabis Growth Facilities in GW Pharmaceuticals (U.K.) with permission of GW Pharmaceuticals plc. Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.352.

Figure 4.7: Medicinal Cannabis Production by Bedrocan. Since 2001, they are the sole authorized national supplier of medical cannabis to the Netherlands Government. Source: Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press, 2017, p.357.

The researches so undertaken revealed the usages of cannabis or 'Indian hemp' for medicines, fibers *(with its recognition with the European hemp)* [266] as well as intoxication, which assumed an important place in both domestic and in the international markets. The colonizers thereby, took it to their interest, by dominating the cultivation, production (*varying from medicine and hemp drugs for intoxication*), sale and trade of cannabis, connecting the remotest markets to the international ones.[267] This, however, was applicable in matters of producing intoxicating drugs and the laboratorial extraction of the active ingredients of the plant contributing towards British Pharmacopeia.[268] Moreover, India like its other colonies acted only as the supplier of raw material, facilitated by the established communications, producing and exporting hemp fibers to British industries.[269]

[266] Nick Mattingly, *Natural knowledge and Sea Power: the cultivation of hemp in the British imperial world*, PhD thesis, Southern Cross University, 2013, pp.114-120, retrieved from http://epubs.scu.edu.au>theses on: 03-2018, 22:06.

[267] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*,USA: Oxford University Press, 2003, pp.6, James H. Mills, *Control and Consumption in Britain, 1928-2008*, UK: Oxford University Press, 2013, pp.51,52; Barney Warf, 'An Historical Geography of Cannabis', *American Geographical Society of Newyork*, October, 2014, p.428 retrieved from onlinelibrary.wiley.com>doi>pdf on: 12-10-2017, 10:04.

[268]*Report of the Indian Hemp Drug Commission 1893-94*, Vol-I, Simla: Government Central Printing Office 1894, p.100; James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, USA: Oxford University Press, 2003, pp.145-148;*Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Ninth ed., Simla: Government of India Press, pp.28; *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*, Calcutta: Office of the Superintendent of Government Printing Press, 1894, p.536.

[269] *FBI Register of British Manufacturers 1952-53*, Federation of British Industries, Twenty-Fifth Edition, Great Britain: The Chapel River Press, 1952, pp.208, 457, 487, 565, 660, 813.

4.3Colonial Boost to Hemp Fibers and Hemp Drugs in India

The cultivation of both hemp drugs and hemp fibers were encouraged in colonial India. The Company paid small premiums to the Indian farmers adopting the fiber cultivation and the Company in turn, had to supply the Navy with forty pounds per ton of strong cordages.[270] The major task of hemp fiber cultivation was, however, taken by the Agriculture and Horticulture Society.[271] By the year 1831, UK was provided with an import of fibers which amounted to 9,472 tons, in 1847 it hiked up to 185,788 tons and by 1851, its import further increased to 59,0923tons from the East Indies and an increased supply of fibers was received from India.[272] There were exports of about 92 maunds of hemp fibers from Assam in 1895-96[273] and import of 70 maunds from Bengal to Assam in 1897.[274] Hemp imports to UK from British India in 1850 amounted to 14% of the total imports.[275]

However, it is important to note that a series of other widely different fibers were also often called hemp such as manilla hemp (*musa textilis*),[276] sisal

[270] Nick Mattingly, *Natural knowledge and Sea Power : the Cultivation of Hemp in the British Imperial World,2013.,* p.124.

[271] MacDonald Mackenzie, *Imperialism and the Natural World,* United Kingdom, Manchester University Press, 1990, p.54.

[272] J.Forbes Royle, *Cordage, Clothing and Paper with an Account of the Cultivation and Preparation of Flax, Hemp and their Substitutes,* London: J.E Adlard Bartholomew Close, 1855, p.7.

[273] *Report of the River Borne Trade of the Province of Assam 1895-96,* Shillong: Assam Secretariat Printing Office, 1896, p. 3.

[274]F.J. Monahan, *River Borne Trade of the Province of Assam for the year 1896-97,* Calcutta: Office of the Superintendent of Government Printing India, 1897, p.2.

[275] William Woodruff, *Impact of Western Man: A Study of Europe's Role in World Economy 1750-1960,* Newyork: ST Martin's Press, 1966, Table VII/1, Table VII/2.

[276] *Transactions of the Agriculture and Horticulture Society of India*, Vol I, Calcutta: Baptist Mission Press, 1838, p.51; *Memorandum by Surgeon General Balfour on the Cultivation of Manilla Hemp in India,* Financial Department, Proceedings:3-4, File No.2 of May 1881, pp. 13-14, (SAWB).

hemp,[277] reah hemp, sunn hemp (*crotalaria juncea*) etc. As the specific name of true hemp (*cannabis sativa*) was not provided in the statistics of imports and exports, it is highly doubtful whether the exported fibers were of *cannabis sativa*. At the same time, along with cannabis, experiments were also conducted on various other fiber yielding substitutes like flax (*linum usitalissimum*),[278] white jute (*corchorus), fascicularis, trilocularis, acutangulus, olitorius, capsularis*, pineapple, coconut, *hibiscus cannabinus* and sunn hemp.[279]

The fiber of *crotalaria juncea* or sunn hemp is the earliest used hemp fibers in India. As described in the text of Manu the sacrificial thread of the Rajputs or the Kshatriyas was to be prepared of '*sana*'. It was also used in medieval Assam by the Ahoms for the construction of '*moidams' (tumuli of the royalty of Ahom king in Sibsagar, Assam)* like *Rajmao Moidam* and *Moidam* of *Swargadeo* Siva Singha.[280] In the year 1903, the East India Company grew its interest towards sunn hemp. As such William Roxburgh (*the Superintendent of the Calcutta Botanic Garden (1793-1813),* conducted several experiments on the strength and durability of its fibers which was proved to be of excellent quality.[281] Its fibers as compared with *hibiscus cannabinus* and jute yielded a higher market value. It was grown before rice as a second crop in the same year for fibers which were mainly attained through various methods in different districts of colonial India. In the year 1909, the total estimated area under sunn hemp cultivation in Eastern Bengal and Assam was about 42,000 acres and the

[277] *Resumption of Special Grant held by CM Maddle for the Issue of Hemp Cultivation*, Board of Revenue Eastern Bengal and Assam, Revenue Department, Excise Branch, File No.65 of 1910, (SAWB).

[278] *Fibers for Paper Manufacture*, Government of Bengal, Revenue Department, Agricultural Branch, File No.1-129 of 26th June 1873, (ASA).

[279] *Report on the Experimental Cultivation of Different Kinds of Jute, Hibiscus and Leguminous Plants Growing in Botanical Gardens*, Government of Bengal, File No. 7 of 26th July 1873, p.55, (ASA).

[280] Bhuban Chandra Handique, *Changrung Phokanar Buranji*, Second Edition, Assam: Sibsagar Printworks, 1960, pp.15 ; Chow Lao Tze, *Architecture of the Tai Ahom Period*, Nagaon, Assam: Ajanta Press, 1999, p.134.

[281] T.S Sabnis, *Report of the Hemp Marketing in India*, Calcutta: Government of India Publication Branch, 1931, p.1.

estimated export of the fiber was 30,000 maunds.[282] In the year 1916, hemp exports to England were further increased to a total of 5000 tons.[283]

Another important fiber produced in Assam was *reah* hemp. Captain Jenkins (Agent to the Governor- General) while conducting a survey of Assam and Cachar in 1832 found the fishermen of Cachar making their nets out of twine, resembling the common English twine which he regarded to be a species of *urtica*. Jenkins reported that the hemp plant at the region was called *'reah'* and apart from this the common sunn hemp, the '*pat'* hemp (hibiscus) were also grown in the province of Assam for its fibers.[284] Moreover, on the 28th of July 1836, Jenkins sent samples of two sorts of vegetable fibers to Dr. Wallich. There were altogether four bundles, where three bundles were made out of pineapple from the Khassiah Hills and one made of caloe or rhea hemp from *urtica nivea* grown in his garden. Both the species of hemp were found to be extremely interesting and the strength of the fibers was entirely unequaled.[285] Moreover, the *Garos* of Assam were found to be using fishing lines and fishing nets made from the fibers of *'kilka tree',*[286] also the *Angami Nagas* as described by Mr. E.Grange, made their cloth from the pith of a nettle, which made fine fibered hemp.[287]

Jute (*Corchorus Capsularis*) is also known as 'golden fiber' because of its market value and international demands. In Assam, it was cultivated in

[282] *Note on the Extension of Cultivation of Fibre Plants in India* , Agricultural Research Institute Pusa, Calcutta, Superintendent of Government Printing India, 1909, p.5, (ASA).

[283]'A List of Economic Plants Native or Suitable for Cultivation in the British Empire', *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew),* Vol. 1917, No.7/8 (1917), p. 283.

[284] *Transactions of the Agriculture and Horticulture Society of India,* Vol II, Calcutta: Hurkaru Press Hare Street and Partly at the Serampore Press, 1836, pp.171-172.

[285] *Transactions of the Agriculture and Horticulture Society of India,* Vol III, Calcutta: Baptist Mission Press, 1839, p.137.

[286] P. Bahadur, *Caste, Tribes & Culture of India, Assam,* Delhi: Ess Ess Publications, 1977, pp.32.

[287] H.F. Samman, *Monograph on The Cotton Fabrics Of Assam,* Calcutta: Office of the Superintendent Printing, 1897, p.164.

Nowgong, Kamrup, Goalpara, and Darrang.[288] In both Bengal and Assam, jute formed an important cash crop which covered an area extending from Goalpara, Assam to the Northern and Eastern most limits then extending to West about 20 miles North of Kishhengunje, Purneah on the river Mahanadi. The export of raw jute from India to England in the year of 1872 was 20 lakhs or 80,00000 maunds.[289] In the Deccan and Bengal, garments were made out of flax fibers.[290]

As concerned with the true hemp, the Board of Trade in December 1800, asked William Roxburgh to guide Indian cultivators to cultivate ganja in the European method to yield fiber. One of them even promised to supply 17 tons of raw materials for about £35 per ton, which however never succeeded.[291] Dr. Watt in his report on cannabis sativa stated that '*this fiber has never been successfully produced in India*.'[292] A Similar report was submitted by Dr. Forbes Watson a Scottish physician, who after an extensive survey on the experiments, cultivation, and manufacture of hemp in India found that the true hemp was not cultivated for its fibers but for the resinous secretion of its leaves.[293] Another British servant, Robert Wisset (Clerk to the Committee of Warehouses) stated that

[288] D.B Sharma, *Changing the Cultural Mosaic of a Village in Assam,* Calcutta: Punthi Pustak, 1995, p.206; *Note on the Extension of Cultivation of Fibre Plants in India*, Agricultural Research Institute Pusa, Calcutta: Superintendent of Government Printing India, 1909, p.2.

[289] *Memorandum on the Subject of Jute for the Perusal of His Honour the Lieutenant Governor of Bengal,* Calcutta, Revenue Department, Agriculture Branch, Proceeding:7, File No: 39-40 of July 1873, (SAWB).

[290] 'A Commentary on the Colloquies of Garcia de Orta, on the Simples, Drugs, and Medicinal Substances of India' Part I, *Proceedings of the Royal Irish Academy (1889-1901),* Vol 1, (1889 – 1891), Royal Irish Academy, p.394.

[291] Nick Mattingly, *Natural knowledge and Sea Power: the cultivation of hemp in the British imperial world,* 2013, pp.122-123.

[292] *Note on the Extension of Cultivation of Fibre Plants in India,* Agricultural Research Institute Pusa, Calcutta: Superintendent of Government Printing India, 1909, p.27, (ASA).

[293] *Fibers for Paper Manufacture,* Government of Bengal, Revenue Department, Agricultural Branch, File No.1-129 of 26th June 1873, Calcutta, p.1, (ASA).

"the mode of cultivation practiced by the natives differs materially from the requisite of raising hemp. They are notoriously wedded to their own customs and habits and averse to the innovation of any kind."[294]

Another extract from the *Transactions of Agriculture and Horticulture Society* expressed grief over the fact that although hemp was widely available and commonly cultivated in India as *cannabis sativa* or 'true hemp,' having no differences from the European plant, the natives cultivate it mainly for its resinous substances instead of yielding fiber. This hemp grown in the Indian method was useless for the navy which was sown thin, placing them at a distance of 9-10 feet from each other.[295]

However, such a refusal of the European hemp cultivation by the Indian peasants lies in the fact that the natives viewed it as a sudden rift in their traditional method of cannabis production, which would altogether lead to a halt to the various indigenous usages of the drug. In order to prevent such a colonial policy, they demonstrated subtle forms of self-resistances. It was a part of their manifold strategies to insinuate their struggle in the form of 'denial in disguise' which would mean not abiding by any colonial laws as imposed on the drug.[296] This was a constant form of a struggle between the cultivators and the direct oppressors who desired to extract forced labor, taxation, and interests from them. The natives apart from their refusal of the European hemp cultivation, in many cases of ganja possession, also took the garb of cattle diseases to escape from the situation as possession of medicinal cannabis for cattle diseases was made legal in 1882.[297] Turning to its fiber production, the main form of

[294] Robert Wisset, *A Treatise on Hemp, Including a Comprehensive account of the Best Modes of Cultivation and Preparation as Practiced in Europe, Asia and America; With Observations on the Sunn Plant of India*, London: Printed for J. Harding, No.36, St. James Street, 1808, p.54.

[295] *Transactions of the Agriculture and Horticulture Society of India,* Vol III, Calcutta: Baptist Mission Press, 1839, pp.199-200 ; James H. Mills, Cannabis Britannica-Empire, Trade and Prohibition 1800-1928, 2003.,p.19.

[296] James C.Scott, *Domination and Arts of Resistance: Hidden Transcripts ,* New Haven, London: Yale University Press, 1990, p.136.

[297] *Use of Ganja and Bhang in Indigenous System of Medicines,* Medical Department, File No:9-7/57-D of 5th August 1957, New Delhi, (ASA); *Report of the Indian Hemp Drug Commission,*

disguised resistance of the cultivators was their feigned ignorance towards its cultivation and thereby, not adopting the European method of fiber production. [298] Although, they adopted subtlety while dealing with the colonizers, however, could not be regarded as powerless as they displayed sharp resistance against the oppressors as early as 1861 in the Phulaguri Uprising in Assam *(peasant uprising)* affected by the ban of local cultivation of poppy in the same year.[299]

Simultaneously, with the fiber production, the cultivation of hemp drugs also received a considerable boost by 1870. According to Dr. Prain *(British Curator of Herbarium, Royal Botanic Garden, Sibpur, 1887)* in his report in June 1893, there were three types of hemp narcotics namely '*bhang, ganja and charas'*, which was produced at 'Sholapur, Ahmednugger, Khandeish, Vizagaptam, Tanjore, Arcot, Coimbatore etc.' In Bengal, it was grown in 'Ganja Mahal' connected with the districts of 'Bogra, Dinajpore and Rajshahi' which is now across West Bengal, Bangladesh and Assam with its headquarters at Nowgong.[300] The Crop was rotated at least twice a year between November and January with other crops raised in between the intervals like that of potato, turmeric, tobacco, ginger, etc. [301] Hemp cultivation involved intensive labor inputs as well as land management, also calling for skilled persons like that of 'ganja doctors' who distinguishes the male plant which mainly produces fibers whereas female plant contains the narcotic resins and orders the destruction of the former.[302] The plantation agriculture and the role of poor peasants driven

---

Appendices, Miscellaneous, Vol III, Simla, Printed at Government Central Printing Office,1894, p.18.

[298] James C.Scott, *Weapons of the Weak: Everyday Forms of Peasant Resistance,* Yale University Press, New Haven & London, 1985, p.29.

[299] *Ryots Movement in Assam*, P.H.A Department, File No. 36 of 1836, p.3, (ASA).

[300] James H.Mills, 'Cannabis in Colonial India, Production, State Intervention and Resistance in the Late Nineteenth Century Bengali Resistance', Michael K.Steinberg (ed.) *Dangerous Harvest Drug Plants and the Transformation of Indigenous Landscapes,* Newyork: Oxford University Press, 2004, p.224.

[301] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928,* USA: Oxford University Press, 2003, p.52.

[302] Ibid., p.54

under colonial paradigm for securing their subsistence took up the production of cash crops.[303] However, in case of cannabis cultivation, the only reason the cultivators were drived to take up such a grinding task was because it was an important source of cash for the payment of land rent as well as source of funds for the purposes of festivals and weddings, while other crops acted as a subsistence income for the farmers.[304] It was purchased by the wholesaler who was then taxed for his holdings which afterward was sold to retailers and dealers that supplied it to Pakistan, Trinidad, London, and other countries.[305]

Moreover, by Act II of 1876, the peasants had to obtain a license for cultivating the crop which was a form of governmental scrutiny on the amount of hemp cultivation in their respective provinces.[306] After 1874, when Assam was separated from Bengal the duty of ganja exported from Rajshahye to Assam had to be paid in Rajshahye itself, however, previously under clause 39, section XVII, chapter XV, p.356, Vol-I, of the Board Rules duty on ganja was paid in Assam. Moreover, any contemplated change in the duties of excise articles in Bengal was informed by the Lieutenant Governor of Bengal to the Chief Commissioner of Assam. [307] Since the year 1905, duty on ganja was paid at a

[303] Sugata Bose, "Peasant Labour and Colonial Capital: Rural Bengal Since 1770",United Kingdom: Cambridge University Press, 1993 pp.41-42.

[304] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, 2003., p.56

[305] Ibid., p.58.

[306] James H.Mills, 'Cannabis in Colonial India, Production, State Intervention and Resistance in the Late Nineteenth Century Bengali Resistance', *Dangerous Harvest Drug Plants and the Transformation of Indigenous Landscapes*, ed. Michael K.Steinberg, Newyork: Oxford University Press, 2004, p.225.

[307] *Exported from Rajshahye to Assam-Orders on the Subject of Collection and Adjustment of duty,* Finance Department, Excise Branch, Proceeding:2, File No:89-97 of March 1887, Calcutta, (SAWB); *Duty on Ganja Exported from Rajshahye Levied After Separation of Assam and Bengal,* State Archives of West Bengal, Finance Department, Excise Branch, Proceeding:B.43, File No:1-92 of 12th January 1887, Calcutta (SAWB); *The Duty Levied in Rajshahye on Ganja Exported to Assam,* Finance Department, Excise Branch, Proceeding:277, File No:1-97 of 21st January 1887, Calcutta, (SAWB); *Contemplated Change in the- and other Excisable Articles to be Communicated to the Chief Commissioner of Assam,* Finance Department, Excise Branch, Proceeding:B.80-81, file No: 18 of April 1882,(SAWB).

uniform rate of Rs 11 per seer[308] which increased to Rs 20 per seer for the year 1923-24 and 1924-25. The revenue derieved from hemp drugs were successively high as for instance for the year 1904-05 the revenue was Rs3584000 in Bengal and in Assam it amounted to Rs 439000,[309] for the year 1912-13, it amounted to Rs 6.8 lakhs, between 1923-24 the revenue was 7.42 lakhs and for the year 1924-25 the revenue got hiked up to Rs 789,000.[310]

The constant governmental interventions and imposition of taxation exasperated the native peasants and they did not give accurate information of hemp cultivation to the Revenue Officers by showing an excuse of fire being the cause of damage of the crops, which provided a boost to its 'illicit trade'.[311] Baboo Hem Chunder Kerr, the Deputy Magistrate of Bengal, in his report in 1876, revealed the presence of Ganja smuggling in Rajshahi.[312] It was assumed that the smugglers belonged to the lower castes of the society and had built confederates of helpers and underlings around them.[313] Kerr reported that the unavailability of proper checks on the ganja fields and without proper scrutinization it was highly doubtful whether the areas suggested by the cultivators were genuinely under cultivation. This was evident from the disparity in the measurement of land in the year of 1875 which revealed the reported area

[308] *Uniform Rate of Duty in Assam(Rupees 11 per seer),* Finance Department, Miscellaneous Revenue Branch, Proceeding: B.109-11, File No: E 1G/1 of July 1905, Calcutta, (SAWB)

[309] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs,* Third Edition, Simla: Government Central Printing Office, p.4.

[310] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs, ,* Ninth Edition, Simla: Government of India Press, p.27.

[311] James H.Mills, 'Cannabis in Colonial India, Production, State Intervention and Resistance in the Late Nineteenth Century Bengali Resistance', *Dangerous Harvest Drug Plants and the Transformation of Indigenous Landscapes,* (ed.) Michael K.Steinberg, Newyork: Oxford University Press, 2004, pp.226-229.

[312] *Enquiry of Ganja ordered by the Government Resolution-to Baboo Hem Chunder Kerr-may be commenced as soon as possible,* Finance Department, Excise Branch, Proceeding: 2106, File No:1-59 of 16th August 1876, Calcutta, (SAWB).

[313] *Smugglers, Making of More Stringent Penal Measures to Deal with-On the Lines Laid Down in the Criminal Procedure Code for Dealing with Habitual Offenders*, Proceedings of the Government of Bengal, Agriculture and Industries Department, Excise Branch, March 1932, Calcutta, p.3, (SAWB).

under cultivation as 2,113 bighas and 2 cottahs whereas the actual measurement of the area was 3,111 bighas and 9 cottahs, showing a difference of about 998 bighas and 7 cottahs.[314] As the probabilities of smuggling were so great Kerr suggested the Board of Revenue towards the establishment of '*ganja golas'* for the storage of ganja.[315] Similarly, in the year 1976, F.R Cockerell (the Commissioner of Rajshahye and Coch Behar Division) reported that the drug passed from the cultivators into the possession of the license dealers without any check which made it labyrinth to estimate the exact amount sold by the cultivators. This in a way caused large proportions of ganja to escape the payment of excise duty altogether.[316] Moreover, the annual report of the Commissioner of Rajshahi Division on Ganja cultivation for the year 1881-1882, stated the extensive smuggling of the drug and its illicit sale by vendors under cover of their licenses.[317]

In general, the excise surveillance in case of ganja was lenient until 1853.[318] However, these reports led the Board of Revenue to execute some inquiries relating to the smuggling of the drug considering the following: Firstly, 'that the inspections of the growing plants should be made not before their reaping, the more useful and trustworthy will take the notes of the crops at the

[314] *Enquiry into the Cultivation, Storage and Sale of Ganja by Deputy Magistrate and Deputy Collector Baboo Hem Chunder Kerr*, Finance Department, Miscellaneous Revenue Branch,Proceeding:B.127-28, File.No:1 of December 1876, (SAWB); *Instructions Issued to Babu Hem Chandra Kerr to Submit his Report*, State Archives of West Bengal, Finance Department, Excise Branch, proceeding:110-11, File no: E 1G/6 of November 1876, (SAWB); *The Prevalence of Smuggling in Connection with the Cultivation of Gunjah*, Revenue Department, Excise Branch, File No 87B, Proceedings:1-231/32 of 1st February 1886, p.8, (SAWB).

[315] *The Board made Enquiries as to Checks on Ganja Smuggling*, Revenue Department, Excise Branch, File No: 108 of 5th May 1885, Darjeeling, (SAWB).

[316] *Memorandum of Cockerell, Hon'ble F.R, and His Honour's Resolution on the Cultivation, Storage and Sale of Ganja,* Revenue Department, Excise Branch, Proceeding: 53-65, File No: E 1G/6 of August 1876, (SAWB) .

[317] *The Prevalence of Smuggling in Connection with the Cultivation of Gunjah*, Excise Branch, File No 87B, Proceedings:1-231/32 of 1st February 1886, p.7, (SAWB)

[318] *Excise Surveillance on Ganja,* Revenue Department, Excise Branch, Proceeding:46, File No: 89 of 5th February 1861, (SAWB).

time of inspection' and Secondly, 'the inspection established will consist of only two officers or Assistant Supervisors and the Supervisor devoting a third of the month to it.' The Ganja tract was divided into three circles, the smallest one was in charge of the Supervisor and the other two in charge of the two Assistants. Before the harvest begins the Supervisor and his two Assistants visited their respective circles and made a rough general estimate of the crop. As the manufacture goes on for a long time the Supervisor and the Assistants visited the fields once more for the purpose. This inspection took a general idea of what sort of ganja was harvested for the year. Finally, the Assistants entered in the last two columns of the cultivation, licensed the number of bundles and the weight estimated as just described by the cultivator and took that license to the Supervisor's office and presented it. The Supervisor on reading the entries had the storage license prepared and registered in his office.[319] As the lands under ganja cultivation were not measured by the officers they usually made rough estimates of the crop and relied heavily on the 'inaccurate' statements of the cultivators,[320] who provided a further boost to the smuggling of the drug. In order to prevent this, Mr. Rainy in his report described the three stages where opportunities of smuggling were at its peak i.e. '*when the crop is on the field, when it is in course of manufacture and when it is under storage pending issue.'* According to him, the probability of malpractices at the last stage is small than compared to the first one. Ganja in its unmanufactured state is bulky and impossible to carry, so the cases of malpractices in the fields were rare as argued by Mr. Rainy. As preventive arrangements, the Government arrived at the provision of public storage or ganja golas and private warehouses for the accommodation of the drug after it left the chattar. Further improvements were made through curtailing the period during which the ganja remains on the chattars, also reduced and centralized their numbers for effective supervision. Moreover, on 23rd March 1887, the Sub Divisional Officer of Naugaon, (assisted by a Sub-Deputy Collector) was given the charge of Superintendence over the manufacture of Ganja in addition to his duties of treasury and criminal

[319] *The Board made Enquiries as to Checks on Ganja Smuggling*, 5th May 1885., pp.2-4.

[320] Ibid., p.3.

jurisdiction.[321] In the year 1909, funds of Rs.2700 were also granted for the purchase of suitable land for the construction of a ganja gola, spirit bonded warehouse and quarters of the Supervisors and peons at the district of Dibrugarh, Assam for effective supervision.[322]

The governmental interventions were criticised greatly by some British Officers like Ulick Browne who opined that the establishment of these *'ganja golas'* would further pressurize the cultivators. To prevent the drug from various pests and rats it was necessary to check the produce 'every third day which was efficiently done by the cultivators fearing any loss.'[323] Such strict governmental intervention was also cautioned by A.Money (a Member of the Board of Revenue), who argued that the dealers purchased the ganja, brought it to their respective district and stored it in a building under double locks of which he kept one key and the excise daroga kept the other. The duty was then paid by the retail shopkeeper to their joint custody. Money proposed to abolish this strict system and install a normal and genuine system which was commonly applicable in commerce for paying the duty when the produce has been removed.[324]

However, the fear of illicit smuggling of ganja led the British Government to appoint a mohurir in the year of October 1871, under the

[321] MG Rainy, *Report on the Cultivation, Manufacture and Storage of Ganja in Rajshahi*, Revenue Department, Excise Branch, Proceeding: 25-26, File. No: E I-R/9 of 23rd July 1904, p.3, (SAWB).

[322] *Construction of Spirit Bonded Warehouse, Ganja Gola and Quarters for Supervisors and Peons Attached to the Bonded Warehouse*, Revenue Department, Excise Branch, File No. 108 of 1909, Dibrugarh, (ASA).

[323] *The Board made Enquiries as to Checks on Ganja Smuggling*, 5th May 1885.

[324] *Minute Recorded by Mr A.Money on the Levy of Duty on Ganja*, Revenue Department, Excise Branch, Proceedings: 423B, File No: 1-55 of 7th June, 1876, (SAWB) .

Supervisor of ganja cultivation in Rajshahye, to assist the latter in his duties of inspection. Two additional mohurirs and two assistant supervisors were also appointed in the year of 1887, to scrutinize the crop in each village. The Ganja Cultivators' Cooperative Society supplied spraying machines and vermisapon against red spiders, insects and pests which damaged the crops. The area affected was then treated with pesticides. The Society also supplied kerosene gas lamps to the chatars (manufacturing yards) for proper lighting which would prevent smuggling. In addition to this, 21 Sub-Inspectors, 37 petty officers and 134 peons were also appointed for the inspection of ganja cultivation. Although the number of smuggling cases decreased, there was also a considerable decline in consumption and cultivation of the drug. Such a decline was ascribed to the increased prices of the drug, damages done by the insects, pests, hail, drought, and exhaustion of the soil as a result of ganja cultivation due to which ganja had to be grown once in three years on the same land.[325] Moreover, in the year 1888, ganja exports declined as the cultivators were refusing to cultivate the drug owing to the oppressions of the Government Officers upon the zamindars and the peasantry. In this context, Mr. Buckland (a Member of the Board of Revenue) suggested considering a caution and leniency in applying such checks

[325] *Prevalence of Smuggling in Connection to the Cultivation of Ganja in Bengal*, 1st February, 1886; *Ganja Export to Foreign Territories*, Proceedings of the Government of Bengal, Finance Department, Excise Branch, Section-IV: Hemp Drugs, December 1920, pp.16-17, (SAWB); *George Watt's Pamphlet on Hemp or Ganja*, Financial Department, Excise Branch, Proceeding:B.1-4, File No: E G/1 of July 1888, (SAWB); *Sanction Accorded to the Entertainment of an Additional Mohurir on Rs.20 a Month under the Supervisor in Rajshahye*, Revenue Department, Miscellaneous Revenue Branch, Proceeding: A.69 of October 1871, Fort William, (SAWB) .

as it might cost immensely to the British Indian revenues.[326] Such a considerable decline in the consumption of ganja from the year 1888 to 1902 compelled the Government of India to fix the area under ganja cultivation at 900 acres.[327]

Despite these Governmental measures, instances of dogged resistances became eminent in the colonial North-Eastern Frontier. In the year 1881, an issue arose in connection with a case in Assam, in which a person was found in possession of a small quantity of untaxed wild ganja [328] leading to the amendment of the Bengal Excise Act VII of 1878 by Act IV of 1881, imposing strict laws on the drug.[329] In Assam, the maximum possession of bhang got limited to ¼ seer per individual, exceeding which required special licenses procured from Rajshahi Bengal, in such a case many retained their habit of wild hemp consumption in various districts of the province.[330] In the Khasi Hills there was a continuous decrease of excise ganja due to the availability of wild hemp as well as the great facilities for its use.[331] Witness No. 140 a shopkeeper in Darrang district stated that "all the people smoke wild bhang and occasionally they buy excise ganja. The ganja smokers are not poor as wild bhang cost them nothing." Witness no.248, a Gaonbura, of Lakhimpur stated that "if people don't

[326] *George Watt's Pamphlet on Hemp or Ganja*, July 1888; *The Prevalence of Smuggling in Connection with the Cultivation of Gunjah*, 1st February, 1886.

[327] *Extension of the Area under Ganja Cultivation*, State Archives of West Bengal, Finance Department, Separate Revenue Branch, Proceeding:29-31, File No: E 1.G/1 of December 1902, (SAWB).

[328] *A Proposal for the Amendment of Bengal Excise Act 1878*, Financial Department, Excise Branch, File No. 7-8 of 3rd January 1881, (SAWB) .

[329] *Report of the Indian Hemp Drug Commission*, Appendices, Miscellaneous, Vol III, Printed at Simla: Government Central Printing Office,1894, p.18, (ASA).

[330] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Third Edition, Simla: Government Central Printing Office, p.6.

[331] *Report of the Indian Hemp Drug Commission*, Vol-III, 1894.,p.18.

get excise ganja, they smoke wild bhang. I had smoked wild bhang when I had no money."[332] Witness no.1 Excise Sub-Inspector in Kamrup on 6th January 1913 stated that "the leaves of bhang are occasionally taken in the form of ghota and also as mild intoxicant."[333] Witness no. 201 Jahaz Ram Das, a shopkeeper owning a ganja gola at Dibrugarh described that "Hill ganja is brought down by the Miris and its consumption is increasing amongst the Assamese population as compared to ten years ago."[334] Witness no. 140, a shopkeeper in Darrang district stated that "wild ganja is smoked more than excise ganja in my village as well as in other villages. All castes of Hindus, including kalitas, Brahmins and others smoke wild ganja."[335] Witness no.21 Sukna Ram Das a ganja salesman in Fansi Bazar of Kamrup district stated that "the quantity of ganja from our shop has not increased since the last ten years and the consumers are mostly foreigners and only a few Assamese."[336] From the above sources, it is clear that most of the native population of Assam was resorting to wild bhang instead of excise ganja. Moreover, despite the ban in 1894,[337] there were several other cases of illicit production and trade of hemp drugs which was carried on by the hill tribes like the Nagas of the Sibsagar district, the Miris of Lakhimpur and Darrang, Bhutias[338] of Bhutan and also in the Khasi, Naga, North Cachar Hills and Hill Tippera, from where it was later smuggled into the plains and to the

[332] *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, Excise/ Opium , 1913, p.10, (ASA)

[333] Ibid.,p.2

[334] Ibid., p.87

[335] *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, 1913., p.10.

[336] Ibid., p.15.

[337] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Vol-I, 3rd (ed.),1906.,p.4.

[338] *Report of the India Hemp Drug Commission*, 1894.,p.19.

borderlands.[339] Moreover, in the year 1912, there were a total of 52 cases of offenses related to the smuggling of hemp drugs in the province of Assam.[340] A similar case of smuggling was detected on 12th February 1909, by Babu Hem Chandra Bose, Excise Sub-Inspector, who arrested a Bhutia at Odalguri fair in the act of selling ganja weighing 3 seers 6 chataks to one of his peons in disguise and under the recommendation of the Board of Revenue, destroyed the captured ganja.[341] Another case of allegation arose in the year 1831, against Darjee Bhutia and Battoo Bhutia of having found 10 ½ seer of Bhutia ganja. The case was tried by Srijut R.Sharma Magistrate, who sentenced the accused to pay a fine of Rs.50 each. As they could not pay the amount they were sent to jail on 11.03.31 to suffer imprisonment.[342]

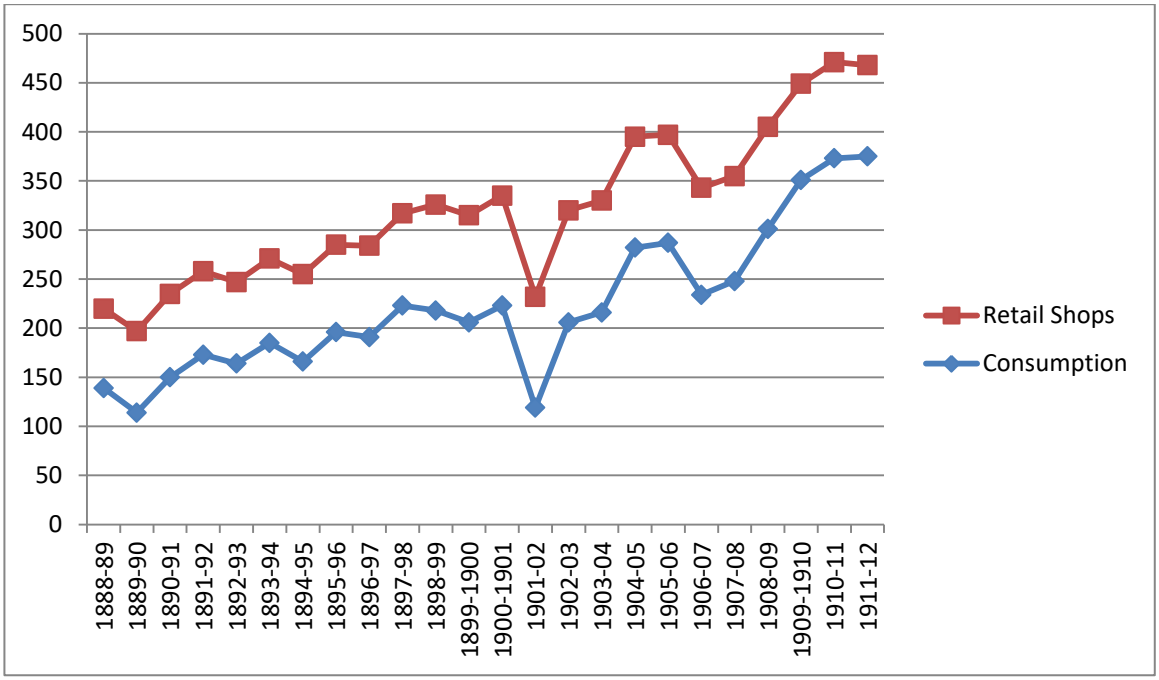
[339] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*, Calcutta: Office of the Superintendent of Government Printing Press, 1894, pp.530,531,535, (ASA); *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, 9th (ed.), 1926.,p.28.

[340] *Memorandum on Excise (Hemp Drugs) Administration in India for 1934-35*, Nineteenth Edition, Finance Department (Central Revenues), Manager of India Press, New Delhi, 1937, p. 48, (ASA).

[341] *Special Reward for the Detection of Illegal Sale of Bhutiya Ganja in Darrang*, Revenue Department, Excise Branch, File No. 88 of 1909,E.B & Assam, (ASA)

[342] *Smuggling of Ganja (Mangaldai)*, Revenue Department, Excise Branch, File No. XIX-8 of 1931, (ASA).

Fig 4.8: Total Number of Retail Shops and Consumption (in maunds) of Ganja in the Districts of Kamrup, Darrang, Nowgong Sibsagar, Lakhimpur, Assam (1878-1912)



Source: *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption 1878-1879*, Excise/ Opium, 1913, pp.18-20, (ASA)

Figure 4.8 shows the consumption of ganja as well as its retail shops in Assam which were low between the years 1888-1899.This, however, considerably deflated between 1900-1902 which was mainly due to the oppression of the zamindars and peasantry by the Government Officers causing the cultivators to give up the cultivation of the drug.[343] Moreover, the increased prices of the drug, damages done by the insects, pests, hail, drought, and exhaustion of the soil as a result of ganja cultivation also resulted in the decline of ganja output as well as its consumption.[344] Such a considerable decline in the consumption of ganja from the

[343] *George Watt's Pamphlet on Hemp or Ganja*, Financial Department, Excise Branch, Proceeding:B.1-4, File No: E G/1 of July 1888, (SAWB).

[344] *Prevalence of Smuggling in Connection to the Cultivation of Ganja in Bengal*, 1st February, 1886.,; *Ganja Export to Foreign Territories*, Proceedings of the Government of Bengal, Finance Department, Excise Branch, Section-IV: Hemp Drugs, December 1920, pp.16-17, (SAWB);

year 1888 to 1902 compelled the Government of India to fix the area under ganja cultivation at 900 acres. However, after 1903 till 1912, the statistics showed a considerable increase in the consumption of ganja and its retail shops by 88% which was due to the influx of foreign population. This was further boosted by the construction of railways which showed an increase by 355.4% between 1903 and 1911. [345] In Assam, foreign immigrants mainly consumed ganja more than opium.[346] Moreover, the establishment of hemp presses and ginning factories also called for the employment of a large number of immigrants.[347]The habit was also common amongst the laborers,[348] boatmen, and traders, who, however, smoked bhang to bare fatigue and exposure. Such an increase in excise ganja was mainly caused due to its cheapness and easy availability. Moreover, cannabis smoking was less looked down upon partly due to its religious association and partly because it was less injurious as compared to opium.[349] In Assam, there were up to 500 tea gardens averaging about 400 acres each which in 1901 were employing 2,98,382 adult laborers and 2,46,376 working children in addition to occasional

---

George Watt's Pamphlet on Hemp or Ganja, Financial Department, Excise Branch, Proceeding:B.1-4, File No: E G/1 of July 1888, (SAWB).

[345] *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, 1913.,pp.8-9; *Report on the Administration of the Excise Department in The Assam Valley Division For The Year 1924-25*, Department of Revenue, Excise Branch, File No. 589E, Guwahati, p.5, (ASA).

[346] J. Buckingham, *Liquor Shops and the Excise Administration in Assam*, Medical, Reports and Correspondence Showing abuses of present Outstill System, 1902, p.16 retrieved from https://dspace.gipe.ac.in/xmlui/handle/10973/22772 on 20-12-2018, 22:09.

[347] *Proceedings of the Assam Labour Enquiry Committee in the Recruiting and Labour Districts*, Calcutta: Office of the Superintendent of Government Printing, India, 1906, p.61.

[348] *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, 1913.,p.1-2.

[349] Ibid., p.9.

laborers at certain times of the year.[350] Amongst them a total of, 83 managers of the tea gardens of Assam reported that the consumption of ganja was more as compared to opium owing to the 'higher earnings and prosperous times.'[351] There is an old Assamese adage as stated by Witness No. 23 that *"Siddhi Khale Buddhi Bahe, Ganja Khale Loikho Sesh"* meaning if a man drinks bhang or siddhi he becomes more intelligent but if he smokes ganja his good luck abandons him.[352] This rings true as have been researched by a British Pharmacologist named Walter Ernest Dixon who described the nervous effects of hemp drugs where the primary stage is that of stimulation and excitement and with sufficient quantity of intoxication anesthesia and paralysis could be procured. He further explained that excessive smoking of this intoxicating drug also resulted in short term memory, sedation, cognitive dysfunction, and poor executive function.[353]

During 1891-1901, there were 350 admissions in the Tezpur Lunatic Asylum, Assam, where in 232 cases the cause of insanity was unknown, in 45 cases the cause was listed as the ganja, 16 epilepsy, 12 fever, 10 spirit-drinking, 2 hereditary and 4 opium.[354]In 1881-1890, Asylums in Lower Bengal witnessed

[350] *Assam Congress Opium Enquiry Report*, Jorhat, Assam, Calcutta: R.K Hatibarua, at Art Press, September, 1925, p.1.

[351] Rajani Kanta Das, *Plantation Labour in India*, Calcutta: Prabasi Press, 1931; *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, 1913.,pp.11.

[352] *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, 1913.,p.16.

[353] Walter Ernest Dixon, 'The Pharmacology Of Cannabis Indica', *The British Medical Journal*, Vol. 2, No. 2028, November, 1899, p.1355.

[354] B.C Allen, et al., *Gazetteer of Bengal and N.E India*, New Delhi: Kishan and Mittal Publications, 2012, p.121.

a total of 641 cases of insanity caused by ganja.[355]Dr. Prain, pointed out the Records of Bengal, where 30% of the patients were ganja users. However, the criminal statistics of the cases and their real character were unknown.[356] In the year 1912, statistics on ganja consumption and insanity in Eastern Bengal and Assam revealed 2 recoveries, 1 improved, admission of 14 criminals and 12 non-criminals and a total number of patients treated to be 89.[357] Moreover, the manager of Phukanbari, Lakhimpur described that "a quarter of his force was injured by the excise drug." The managers of Nudua in the same district reported that 75% of the consumers suffered from lung diseases and insanity.[358]This harmful practice of smoking ganja had also become a trend amongst children and teenagers, owing to the abstinence of proper age restrictions. According to witness no. 25, a retired Tahsildar at Batahjila Mauja, "the consumption of ganja has been increasing since twenty to thirty years as it has been easily procurable. This has gone to such an extent that boys of the tender age of 5-6 years old have taken to ganja smoking".[359] Similar statements had been made by witness no. 11 stating that "even boys of the tender age of 10 years old smoke ganja."[360] Witness no. 39 stated that "ganja consumption is increasing amongst the village

[355] *Final Report of the Royal Commission on Opium*: *Part- II*, Royal Commission on Opium, VOL. VII., Historical Appendices Together with an Index of Witnesses and Subjects, and a Glossary of Indian Terms Used in the Evidence and Appendices, London: Eyre and Spottiswoode Printers, 1895, p.76.

[356] *Report of the Cultivation and use of Ganja*, Calcutta: Bengal Secretariat Press, 1893, p.77

[357] R. Neil Campbell, *Statistical Returns of the Lunatic Asylums in Eastern Bengal and Assam for the Year 1909*, Eastern Bengal and Assam Secretariat Printing Office, 1910, pp. x-xi.

[358] *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, 1913., p.12.

[359] Ibid., pp.17-18.

[360] Ibid., pp.9-10.

boys of 13-14 years. This is like a fashion amongst them".[361] Children from the onset of adolescence influenced by the sociological portrayal of the 'foreign sections' taking the excise drug, they too imitated the same. Excise ganja was, however, not taken by the natives of plain or hill tribes like Meitheis, Miris, Kacharis, Garos, Lalungs, etc. who mainly resorted to wild bhang abandoning the excise ganja.[362] Moreover, there was less number of ganja shops in Nowgong, Lakhimpur and the Garo Hills due to its less consumption in the region.[363]

The number and sites of retail shops were fixed by the Commissioner of Excise in consultation with the district authorities. The shops were usually located in the bazaars and other centers of trade and the vendors deal with other commodities such as spices. In the hill districts and Assam proper, the shops were few and placed far away. The number of shops had been reduced to prevent the undue smuggling of the drug.[364]

[361] Ibid p.25.

[362] Ibid., pp.1-2,9; P. Bahadur, *Caste, Tribes & Culture of India , Assam*, Delhi: Ess Ess Publications, 1977, pp.14,44.

[363] *Report on the Administration of the Excise Department in The Assam Valley Division For The Year 1924-25*, Department of Revenue, Excise Branch, File No. 589E, Guwahati, p.2,(ASA).

[364] *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, 1913., p.19.

Figure 4.9: Ganja Cultivation in Naugaon, Rajshahi, Bengal, 1894

GATHERING THE GANJA CROP, NAOGAON.
16TH FEBRUARY 1894.

Source: *Report of the Indian Hemp Drugs Commission1894-95*, Volume I, National Library of Scotland, p.85, retrieved from http://digital.nls.uk/74464868 on: 16-03-2018, 08:39

The sale of the hemp drugs required special licenses in Assam which were issued by the Naugaon Ganja Cultivators Cooperative Society Limited in Rajshahi which could be obtained by auction for a period of one year.[365] By the year 1912-13, there were 47 wholesale and 245 retail licenses which further decreased to 36 wholesale and 233 retail licenses by the year 1923-24. These came down to 233 retail and 33 wholesale licenses by the year 1924-25. This was mainly done with the objective of wiping off the prior sections from the market and by creating native dependence on the few British dominated retail and wholesale shops which in turn would maintain their obeisance to the colonizers with the introduction of Permanent Settlement in Bengal in 1793.[366] Apart from these retail and wholesale licenses, there were three druggist permits

[365] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Ninth Edition, 1926.,Simla: Government of India Press, p.27, (ASA).

[366] C.A Bayly, *Indian Society and the Making of the British Empire*, Newyork: Cambridge University Press, 1988, p.65-66.

which were issued between 1912-13 in Sylhet, Kamrup and Sibsagar for medical preparations which exceeded in the subsequent years, 1923-24 and 1924-25 from nine to seventeen.[367] However, prior to British control, medicinal cannabis were either locally grown and easily accessible in the daily and periodic *'hats'*(markets) in Assam, like in the bazaars of Tharia, Jayantiapur, Bholaganj[368] and even in the yearly fairs, like *'Jonbeel Mela*' dealing with the trade of hill grown cannabis.

4.4 Connection of Cannabis with Insanity and Crime

In 1891 there aroused a hitched issue relating to the connection of the consumption of cannabis with insanity and crime. As the lunatic asylums were filled up by all ganja smokers, it compelled the Government to establish the Indian Hemp Drug Commission (*hereby IHDC*) to investigate the issue.[369] This was also coupled with the works of the missionaries and temperance campaigners who acted incessantly towards the ban of the drug.[370] The relation of cannabis consumption with crime was viewed to be caused by the loss of control under intoxication leading to unlawful acts and lack of moral discipline.[371] J.C Penny (M.D Civil Surgeon, Delhi) described the intoxicants of

[367] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, 1926., p.28.

[368] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*, 1894.,p.536.

[369] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, 2003., p.4

[370] James H. Mills, 'Colonialism, Cannabis and the Christians: Mission Medical Knowledge and the Indian Hemp Drugs Commission of 1893–4', David Hardiman, (ed.) *Healing Bodies and Saving Souls: Medical Missions in Asia and Africa*, New York: Editions Rudopi B.V, 2006, p.169.

[371] *Marijuana and Health*, a Report to the Congress from the Secretary, Department of Health, Education and Welfare, Sub Committee on Alcoholism and Narcotics of the Committee on

cannabis as nerve stimulants which arrest the secretion of the salivary glands. Its initial effects were that of stimulant, exalting and the tendency of laughter. However, its extreme and prolonged intoxication might produce disorder of mental faculties.[372] Dr. Beatson, Civil Surgeon, Nagpur also reported that excess ganja smoking produced insanity.[373] This is also evident from Srijut Hari Prasad Das, Sub-Deputy Collector of Barpeta, Assam, stating that "Uma Charan Das, a relative of Parsuram Mahajan of Barpeta district became mad for 3-4 days from drinking ghota. He was treated by Sita Nath Babu, the Sub-Assistant Surgeon at Barpeta."[374] However, in this connection, a proper insight into the chemical constituents of the drug is of dire necessity. The plant of cannabis has a complex chemical structure, where the main psychoactive constituent is Δ^9-Tetrahydrocannabinol (THC) and its antipsychotic constituent is Cannabidiol (CBD) which constitutes almost 40% of cannabis extracts. Therefore, the mental health implication may vary depending on the THC and CBD content of the drug.[375] According to a number of researches on THC and CBD effects on humans, they revealed that the former increased the psychotic symptoms while

---

Labor and Public Welfare United States Senate, Washington: US Government Printing Office, , 1971, p.91.

[372] *Each of all the Forms of Indian Hemp Act on Nervous System*, Proceedings of the Government of Bengal, Section-IV: Hemp Drugs, Revenue Department, Excise Branch, 10th February,1972, (SAWB).

[373] *Abuse of Ganja Produces Insanity and Other Dangerous Effects*, Proceedings of the Government of Bengal, Section-IV: Hemp Drugs, Revenue Department, Excise Branch, February, 1893, (SAWB).

[374]*Evidence Given Before the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, Excise, Opium,1913, Witness no.24, p.17.

[375] Stephen Pudney, Jérôme Adda and Jan Boone, 'Drugs Policy: What Should We Do About Cannabis?*', Economic Policy, Vol. 25, No. 61,* January 2010, p.168.

the latter had no physiological effects.[376] The first psychiatric research on cannabis was done by French Psychiatrist Jacques Joseph Moreau de Tour, who proposed the plant as an experimental psychotomimetic drug.[377] In the later years, several other laboratorial researches on CBD mainly showed its usage to improve psychotic conditions in doses that do not impair motor function.[378] Initially, it was mainly used to prevent psychotic symptoms produced by excessive intake of Δ^9-THC.[379] However, later, it led to an influx of researches and trials on the anti-psychotic properties of CBD, also treating various other mental conditions. As in the case of a 19-year-old black woman suffering from chronic aggressiveness, self-injury, coherent thoughts and hallucinations admitted to Clinical Hospital of Riberão Preto, was treated with cannabidiol intakes, causing a significant improvement in her psychotic symptoms.[380] Other clinical trials proved CBD to be most advanced in the treatment of epilepsy.[381] Out of 8 patients with uncontrolled secondary generalized epilepsy, CBD was

[376] 'Cannabidiol (CBD), Pre-Review Report', Agenda Item 5.2, *Expert Committee on Drug Dependence*, Thirty-ninth Meeting, Geneva, 6-10 November 2017, World Health Organization, p.15.

[377] A.W. Zuardi, J.A.S Krippa, J.E.C Hallak, 'Cannabidiol: A Cannabis Sativa Constituent, as an Antipsychotic Drug', *Brazilian Journal of Medical and Psychological Research* , 2006, p.425.

[378] Antonio Waldo Zuardi, José Alexandre S. Crippa, Jaime E.C. Hallak, 'A Critical Review of the Antipsychotic Effects of Cannabidiol: 30 Years of a Translational Investigation', *Current Pharmaceutical Design*, 2012, p.5138, retrieved from reprints@benthamscience.org on:09-11-2018, 07:04.

[379] Antonio Waldo Zuardi, José Alexandre S. Crippa, Jaime E.C. Hallak, 'A Critical Review of the Antipsychotic Effects of Cannabidiol: 30 Years of a Translational Investigation', *Current Pharmaceutical Design*, 2012, p.5131,retrieved from reprints@benthamscience.org on:09-11-2018, 07:04.

[380] Antonio Zuardi, Raphael Mechloulam and Fransisco Guimarães, 'Antipsychotic Effect of Cannabidiol', *Journal of Clinical Psychiatry*, November, 1995, retrieved from https://www.researchgate.net/publication/15640496 on 16-03-2018, 09:30.

[381] 'Cannabidiol (CBD), Pre-Review Report', November 2017 .,pp.15-19.

provided for duration of four months, where four remained seizure free and the other four showed improvements in their condition.[382] CBD was also experimented on Schizophrenic patients showing a significant reduction in their psychotic symptoms.[383] Apart from these, CBD is also useful for treating other medical conditions like antiepileptic, anti-inflammatory, anti-asthmatic, anti-tumor properties, anxiolytic, analgesic, neuroprotective, anxiety, intoxication liability and antipsychotic.[384] However, CBD was introduced late in the year of 1940s by Dr. Roger Adams and his colleagues at the University of Illinois which brought in line that the potentiality of CBD was unknown back in the 19th Century and eventually the British scientists emphasized more on THC which is the main psychoactive component of the drug.[385]

Although the connection of insanity and excessive intoxication of cannabis was valid, however, there were also several other cases of civilians who tried to defy British laws in the form of refusal of payment of taxes or so called illicit local smuggling or use of the drug even as a medicine or any form of government resistances, being directly sent to the British asylums without any

[382] C. H. Ashton, P. B. Moore, P. Gallagher and A. H. Young, 'Cannabinoids in bipolar affective disorder: a review and discussion of their therapeutic potential', London, Thousand Oaks, CA, *Journal of Psychopharmacology*, New Delhi: SAGE Publication, 2005, p.297.

[383] Antonio Waldo Zuardi, José Alexandre S. Crippa, Jaime E.C. Hallak, 'A Critical Review of the Antipsychotic Effects of Cannabidiol: 30 Years of a Translational Investigation', *Current Pharmaceutical Design*, 2012, p.5136, retrieved from reprints@benthamscience.org on:09-11-2018, 07:04.

[384] 'Cannabidiol (CBD), Pre-Review Report', Agenda Item 5.2, *Expert Committee on Drug Dependence*, Thirty-ninth Meeting, Geneva, 6-10 November 2017, World Health Organization, p.17.

[385] Aaron Cadena, 'The History of CBD: A Brief Overview', *CBD+origin*, 8th March, 2012, retrieved from https//:medium.com/cbd-origin/the-history-of-cbd-a-brief-overview-68545c05ccc9 on 27-04-2019, 19:50.

proper assessments based not on medical report but on police charges.[386] This was evident at the Tezpur Lunatic Asylum, Assam, as per the *Indian Hemp Drug Commission: Enquiry as to the Connection Between Hemp Drugs and Insanity*, there were cases of beggars like Purulia which was seen in the colonial period as non-normative.[387]In another case of a priest named Jagodhar Brahman, who was claimed to go insane because of reading ancient religious scriptures and consumption of bhang and being a follower of a viewed 'foreign culture', tea cooly like Murrani [388] who were subjected to extreme tortures and exploitation in the tea gardens turning them insane[389] and many others revealing clear arbitrations, policy of reformation and control under the colonial rule .This was done through severe tortures like blistering and mutilations of private organs which was recorded in the case of 'Purulia', owing to the patient's constant masturbation which was mainly viewed as the 'weapons of the weak.'[390] The causes behind such excruciations were then linked up with the

[386] James H. Mills, *Madness, Cannabis and Colonialism: The Native Only Asylums of British India1857-1900,* London: Palgrave Macmillan Publication, 2000, p.13.

[387] Rainbow Paul, *The Foucault Reader*, New York: Pantheon Books, 1984, pp. 124-139

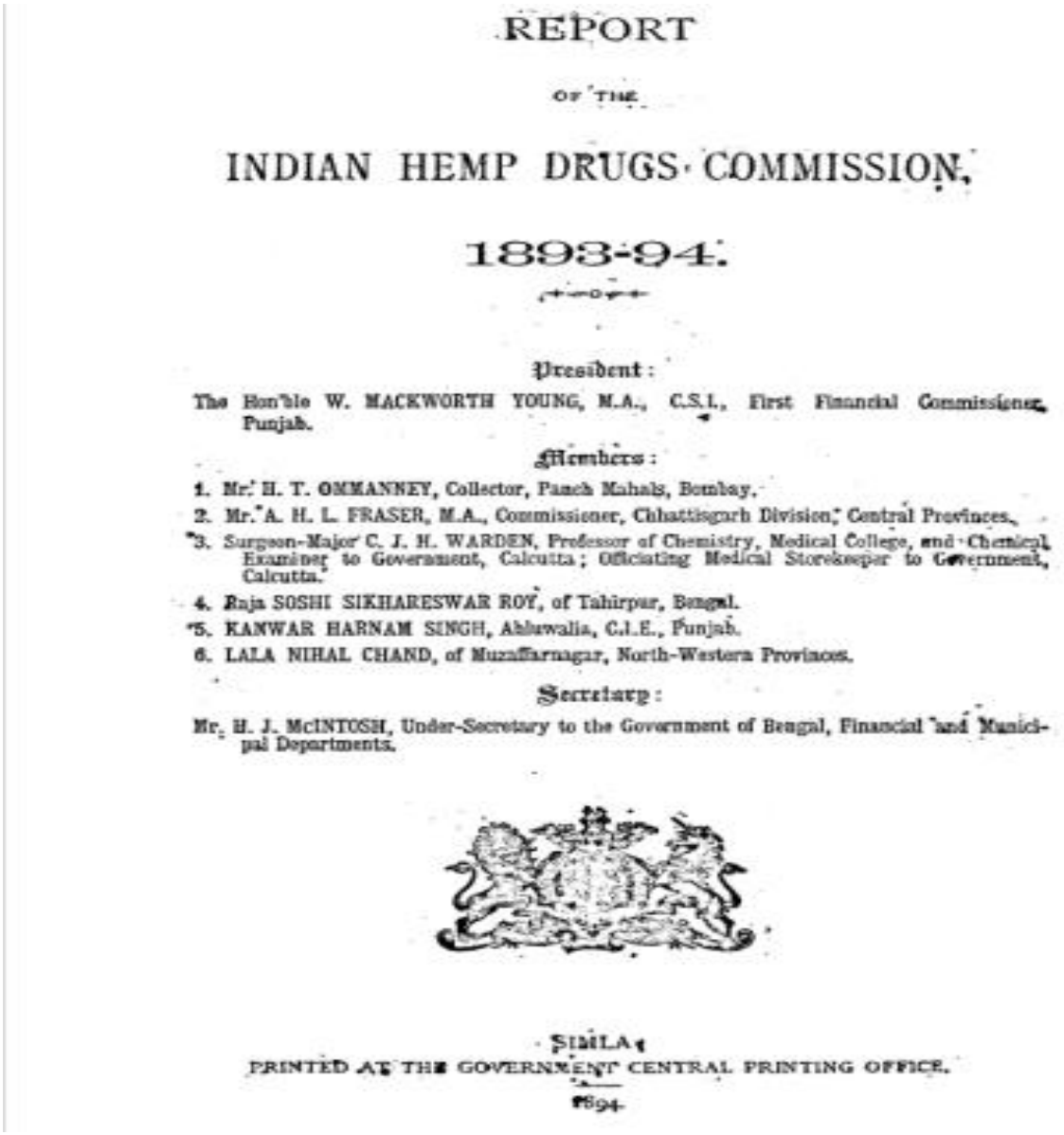
[388] *Indian Hemp Drug Commission: Enquiry as to the Connection Between Hemp Drugs and Insanity*, Vol.II, Simla: Government Central Printing Office, 1894, pp.63,65,66.

[389] Anjan Baruah, *Bishwa Bondit Chah Xilpo*, Jorhat, Publication Jorhat Bidya Bhawan, 2014, p.305.

[390] James C. Scott, *Weapons of the Weak*, US: Yale University Press,September,1987; *Indian Hemp Drug Commission: Enquiry as to the Connection Between Hemp Drugs and Insanity*, Vol.II, Simla: Government Central Printing Office, 1894, p.63; James H. Mills, *Madness, Cannabis and Colonialism: The Native Only Asylums of British India1857-1900*, London: Palgrave Macmillan Publication, 2000, pp.1-3.

consumption of cannabis not by the doctors but by the local zamadars to avoid further inquiry.[391]

Figure 5: Front Page of the Report of the Indian Hemp Drugs Commission



REPORT

OF THE

INDIAN HEMP DRUGS COMMISSION,

1893-94.

President:

The Hon'ble W. MACKWORTH YOUNG, M.A., C.S.I., First Financial Commissioner, Punjab.

Members:

1. Mr. H. T. OMMANNEY, Collector, Panch Mahals, Bombay.
2. Mr. A. H. L. FRASER, M.A., Commissioner, Chhattisgarh Division, Central Provinces.
3. Surgeon-Major C. J. H. WARDEN, Professor of Chemistry, Medical College, and Chemical Examiner to Government, Calcutta; Officiating Medical Storekeeper to Government, Calcutta.
4. Raja SOSHI SIKHARESWAR ROY, of Tahirpur, Bengal.
5. KANWAR HARNAM SINGH, Ahluwalia, C.I.E., Punjab.
6. LALA NIHAL CHAND, of Muzaffarnagar, North-Western Provinces.

Secretary:

Mr. H. J. McINTOSH, Under-Secretary to the Government of Bengal, Financial and Municipal Departments.

SIMLA:
PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.
1894.

Source: ***Report of the Indian Hemp Drug Commission 1893-94*****, Simla: Government Central Printing Office, 1894**

[391] *Indian Hemp Drug Commission: Enquiry as to the Connection Between Hemp Drugs and Insanity*, Vol.II, Simla: Government Central Printing Office, 1894, pp.63,65,66;*Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*, Calcutta: Office of the Superintendent of Government Printing Press, 1894, p.531.

The Indian Hemp Drug Commission however, denied any link with the social problems and cannabis use and indeed claimed that 'moderate' and 'habitual' use of cannabis had no health implications and that only extensive use was to be avoided.[392] The IHDC thereby mainly recommended a policy of 'control and restriction', rather than an overall ban on the drug.[393] In this connection, the Government of India, however, passed laws towards the total prohibition of the native cultivation, sale and use of the hemp drugs except under licenses, coupled with adequate taxations by allowing limited number of retail and wholesale shops while imposing the absolute prohibition of hemp drugs in Assam and Burma and some minor provinces of Baluchistan, Coorg, Ajmer-Merwara and Berar.[394] The plea put forward behind such a prohibition was that it would mainly prevent illegal manufacture, sale, and consumption of the drug.[395] This was the inception of British control over the hemp drugs driven by their natural desire of maximum appropriation for attaining the monopoly over the supply of hemp to the international markets. However, in the survey undertaken by the IHDC, out of 57 medical practitioners, only 6 were Ayurvedic specialists which limited its exact data source. This survey in a way truly fulfilled the colonizer's dual motive of domination of both the trade of cannabis and the body of its users. The Commission also did not stress on any of the

[392] *Report of the Indian Hemp Drug Commission 1893-94*, Vol-I, Simla: Government Central Printing Office 1894, p.419, (ASA).

[393] Ronen Shamir and Daphna Hacker, 'Colonialism's Civilizing Mission: The Case of the Indian Hemp Drug Commission', *Law & Social Enquiry*, Vol. 26, No. 2, 2001, p.438.

[394] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, 1906,p.3, (ASA).

[395] Robert Pringle, 'Indian hemp (ganja) from a public health point of view: a paper to be read before the East India Association', *LSE Selected Pamphlets*, 1893, p.2.

cultural basis of the drug and instead focused mainly on its cultivation, use and consumption and its interrelation with insanity and crime.[396]

4.5 The League of Nations and the Inclusion of Cannabis in the Second Opium Conference

The desired opportunity of having a flourished trade with China was extended after the 1911 Revolution in China, which banned the consumption of opium, resulting in a great fillip to hemp drugs consumption mainly imported from British India. The flourishing British trade of exporting hemp drugs to China, Tibet, Burma, Egypt, US, and South African countries became a matter of great concern which resulted in its inclusion in the International Opium Convention in Geneva, 1925.[397] The British companies were the chief suppliers of the drug to China which became issues of great condemnation in both domestic and international circles which finally resulted in the League of Nation's Advisory Council on Opium. The 'League of Nations' was followed by two opium conferences of 1924-1925, although the main focus was on opium, cannabis exploded into the agenda in the Second Opium Conference under Egyptian pressure as foisted by EL Guindy (Egyptian delegate), backed by US and China who desired the trade of opium and hemp drugs to be completely outlawed.

[396] Amit Ranjan Basu, 'Cannabis and Madness: Evidence from the Indian Hemp Drugs Commission, Bengal 1894', *Studies in History*, 2000, pp.137-138, retrieved from http://www.sagepublications.com on 10-07-2018, 19:48.

[397] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, 2003.,pp.152-187.

Figure 5.1: Second Opium Conference Geneva, 1924-25

Source: Dave Bewley et.al, 'The Rise and Decline of Cannabis Prohibition: The history of Cannabis in the Un Drug Control System and Options for Reform', *Transnational Institute, Global Drug Policy Observatory*, March 2014, p.11

Interestingly, although Egypt on their part had a history of cannabis consumption as medicine and intoxicant, however, stood against it partly because as James H.Mills has aptly put it, "*as the Egyptian Government emerged from the British colonial rule, it was eager to be seen, reformist*".[398] In this connection, the contracting parties undertook the following provisions-

i)To ban the export of Indian hemp and its intoxicants to the countries which had prohibited its use and special certificates stating the specific purposes of its use, to be presented in case of permitted exports issued by the importing country.

ii) Special import certificate must be issued by the Government of the importing country stating the required imports on medical or scientific ground.

[398] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928.*, p.6; Robert Kendell, 'Cannabis Condemned: The Proscription of Indian Hemp' ,Vol.98, *Addiction*, UK: Blackwell Publishing, 2003, retrieved from https://onlinelibrary.wiley.com/doi/full/10.1046/j.1360-0443.2003.00273.x on 14-10-2018, 09:08.

iii) The contracting parties would also exercise a strict check upon any illicit smuggling of the drug particularly its resins.[399]

To this, Britain ended up putting harsher regulations on cannabis agreeing the halt of hemp drugs to the dissented nations unless on their provision of a required certificate for medicinal and industrial usage. However, Britain on their part did not prohibit the drug completely but made it a complete governmental possession coupled with charges of criminality linked with its private cultivation or trade.[400] This was mainly attained due to the threat of direct intervention of US, China and Egypt to the scene which would prove detrimental to British rule in India. However, it became a catalyst of providing Britain with their required agenda of engulfing the entire share to themselves by turning the table to serve their interest- proving a fatal blow to the indigenous usage of the drug including its importance in the traditional therapeutics which itself was getting succumb under the modern medical system and significantly compelling the native's reliance on the 'Raj.'

[399] 'International Convention Relating to Dangerous Drugs', *The American Journal of International Law*, Vol. 23, No. 3,U.S: Cambridge University Press, July, 1929, p.142.

[400] 'The Cannabis Problem: A note on the problem and the history of international action', *UNODC-Bulletin on Narcotics*-1962, Issue 4-004, 1962, retrieved from http://web.archive .org/web/20050526043451/http://www.unodc.org/unodc/en/bulletin/bulletin_1962-01-01_4_page005.html on 20-10-2018, 22:03.

Chapter 5: Shifts in the Therapeutic Practices and the Decline of Indigenous Medicinal Cannabis

5.1 Cannabis, British Pharmacopeia and Decline of Traditional Therapeutics

The colonial rule witnessed an established control and authority over its subjects boosted by the colonial medicine whose history throws light on its evolution through amassed knowledge on the various disciplines of sciences, human geography, and indigenous therapeutics.[401] The immense importance of herbal plants including medicinal cannabis in the traditional therapeutics created hindrances after the spread of colonial medicine in the region. This was sought to be curbed through the Act of 1894,[402] Poisons Act of 1904 and 1919[403] which made the drug a governmental possession and issued special licenses towards its cultivation and trade with adequate taxations. The discovery of the active ingredients of cannabis contributed to the cause of British Pharmacopeia and by the late 18th and early 19th Century, cannabis was included in Piso's Cure Pharmaceuticals, One Day Cough Cure Pharmaceuticals, Sears Roebuck Catalogues and so on. With India as the supplier of raw materials, Britain was able to supply cannabis medications across the globe. Sajous's Analytic Cyclopedia of Practical Medicine (1924) summarized its therapeutic uses in

[401] David Arnold, *Colonizing the Body- State, Medicine and Epidemic Disease in the Nineteenth Century India*, Berkeley, Los Angeles: University of California Press, 1993, pp. 7,8.

[402] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs,* Assam State Archives, Third Edition, Simla: Government Central Printing Office, p.4.

[403]Rabindra Nath Karmakar, *Forensic Medicine and Toxicology*, Kolkata: Academic Publishers, 2007 pp.58,59; *The Poisons Act, 1919-Indian Kanoon*, Central Government Act, retrieved from https://indiankanoon.org/doc/1399304 on: 20/05/2018, 22:05.

colonial medicine for the treatment of migraines, gonorrhea, inflammation, tetanus, rheumatism and many more ailments.[404] Colonial policies towards the drug was partly targeted against the traditional therapeutics in the frontier which was to be cleared out for setting up of a colonial pattern of subsequent control which in turn served Britain with the required raw materials for the production of medications from its extracts as well as the huge profits associated with its commercial trade as an intoxication and medicine across the globe coupled with the appropriation of surplus revenues. However, this pushed back its usage in the indigenous therapeutics which itself showed signs of decay in contact with the emerging colonial medicine under the colonial regime.

5.2 Emergence of Colonial medicine in India

The emergence of colonial medicine in India was mainly through a process of successive developments. The first boost to colonial medicine was provided with the triumph of Anglicists over Orientalists which bought a rift between western and indigenous medicine by shifting the former to a superior position and ending the colonial patronage to the latter. The next break was the coming of a widespread and common form of medicine with the report of the Royal Commission on the Sanitary State of the Army and the appointment of provincial sanitary commissioners in the 1860s. And finally, a significant transition occurred in the 1890s with the establishment of 'tropical medicine'

[404] Andrew Hand, et al., *History of Medicinal Cannabis*, Ontario, Canada: Nova Science Publishers, Inc., 2016, p.389.

coupled with its role in controlling the 'Indian plague epidemics' of 1890s and 1900s.[405]

This was only possible through the inconsistent development in the field of western medical science with the amassed indigenous medical knowledge coupled with their own nosologies [406] which further upgraded with the discoveries of anatomy, chemotherapy, blood transfusion theory, blood circulation theory, germ theory, vaccination and so on. Moreover, the discovery of malignant microbes causing diseases like that of "*vibro cholera* for cholera, *leishmania donovani* for kala-azar, *variola virus* for smallpox, *falciparum* for malaria" contributed immensely towards the development of tropical medicine.[407] In addition to this, the professionalism of doctors who gained various outposts under the colonial empire trained in London and Liverpool schools of tropical medicine (*established in 1899*) and courses taught at Edinburgh, Durham, Aberdeen Universities, [408] finally upgraded tropical medicine which was used as a colonial 'weapon' for bringing the masses under their subsequent control.

Although India already had a history of epidemic diseases, it was further aggravated under the colonial rule of exploitation.[409] At the initial stages of their

[405] David Arnold, *Colonizing the Body- State, Medicine and Epidemic Disease in the Nineteenth Century India,* 1993.,p.13.

[406] Chris Philo, *The Birth of the Clinic: an unknown work of medical geography*, Glasgow: The Institute of British Geographers, 1999, p.13.

[407] Subrata Pahari, 'Travails of Traditional Medicine', Chittabrata Palit (ed.) *History of Medicine in India: The Medical Encounter,* Noida: Printed at Salasar Imaging System, 2005, p.226,

[408] David Arnold, *Imperial Medicine and Indigenous Society*, Delhi: Oxford University Press, 1989, p.12.

[409] Ibid., pp.3-6.

rule, diseases were connected to climate, heat, and humidity of the difficult tropical terrain with the colonial perception of 'miasma' until the 19th century.[410] This period witnessed the various medical discoveries particularly in bacteriology and parasitology contributing towards the development of tropical medicine. With these developments the British viewed themselves as superior and sanitized, bringing racial discrimination to the scene by viewing the natives as diseased and backward classes. Even cholera was connected to the Hindu religious practices and flourishing at sites of the pilgrimage in a way, assaulted Hinduism itself.[411] Tropical medicine thereby attempted to secure the health of the soldiers and indigenous laborers which was the major concern for the colonial government as they were seen as objects of security and development.[412] Later medicine became a part of the imperial ideology as it held its sway to bring the natives under its fold.

Ironically, the potential side of the medical researchers was for the State's understanding of the knowledge systems and controlling its subjects, leading towards the establishment of the so-called 'cure-centers' isolating diseases.[413] In India, the medical system arose out of the military requirement as is evident with the establishment of 'The Bengal Medical Service which was established in 1763, six years after the battle of Plassey. Medical services on similar lines followed soon after in Madras and Bombay in 1785' and finally with the 'maturing of the Indian Medical Service (hereafter IMS) confined to military

[410] Deepak Kumar, 'Colony' under a Microscope: The Medical Works of W.M.Haffkine'; Chittabrata Palit (ed.), *History of Medicine in India: The Medical Encounter*, Noida: Printed at Salasar Imaging System,2005, p.179.

[411] David Arnold, *Imperial Medicine and Indigenous Society*, 1989., pp.7,8.

[412] Ibid., pp.14,15.

[413] Chris Philo, *The Birth of the Clinic: an unknown work of medical geography*,1999.,p.15.

medical service of British India into an archetypal colonial service by the 1860s.'[414] It is worth mentioning that before the Europeans used the local physicians and also encouraged the military to use the local medicines which was much cheaper than those of the imported ones.[415] However, in the long-run, with the motive of breaking the native dependence and gaining a monopoly over medicine the British executed several operations for the accumulation of the required knowledge about the diseases of the colony and their cure which led to the various researches done on the subject along with the establishment of Native Medical Institution (hereby NMI) in 1823 where both western, as well as indigenous medical science, were taught side by side and after qualifying the students were to serve the army of civil departments *(being placed as third class servants*) for 15 years.[416]

However, in January 1835, Bentinck abolished the NMI and the books and all the equipments were shifted to the newly established 'Calcutta Medical College' in February 1835 which primarily focused on the practices and development of colonial medicine with the native graduates required to serve as sub-assistant surgeons or as medical attendants in dispensaries viewing the clear racial discrimination. By the mid-19th century, different kinds of hospitals came into existence like military hospitals, hospitals for the European civilians, general hospitals for all, lunatic asylums, lock hospitals, TB sanctorium, and

[414] David Arnold, *The Cambridge History of India- Science, Technology and Medicine in Colonial India,* UK: Cambridge University Press, 2000, p.63.

[415] David Arnold, *Imperial Medicine and Indigenous Society*, 1989., p.11.

[416] Deepak Kumar, 'Colony' under a Microscope: The Medical Works of W.M.Haffkine'; Chittabrata Palit (ed.), *History of Medicine in India: The Medical Encounter,* Noida: Printed at Salasar Imaging System, 2005, p.pp.161, 162.

fever hospitals.[417] This emergence of colonial medicine with its established health centers has been aptly remarked by David Arnold as

"*a clear demonstration of benevolent intention, balancing the coercive features of colonial rule and establishment of a wider imperial hegemony that could not be derived from conquests alone."* [418]

5.3Colonial medicine-Colonial Cultural Conquest in the Frontier

Since the British pre-occupation of the North-Eastern Frontier was as late as the early half of the 19th Century, the colonial influence of colonial medicine was thereby felt much later as compared to other parts of India. The difficult terrain and tropical climate of the province infused the native soil rich with malignant microbes causing epidemics[419] which were further aggravated with the advent of the colonial rule of exploitation. Various accounts like that of *Fathiya-i-ibriah* of Shihabuddin Talish, later account of Pembertson the Commissioner of Manipur along with Captain Welsh's visit to Guwahati in 1793 during the time of cholera epidemic viewed a picture of the frontier as a diseased-zone and more efforts to be taken to secure the health of its military and European civilians.[420] The initial colonial policy of therapeutic interventions and control in the region sprouted during the 19th century when smallpox in an epidemic form occurred in the Naugaon district in 1832. Epidemic form of smallpox became more frequent in every district of the frontier with the

[417] Ibid., pp.166,167.

[418] David Arnold, *Imperial Medicine and Indigenous Society*, 1989., p.16.

[419] J.D. Baveja, *New Horizons of North-East*, Guwahati: Western Book Depot, 1982, p.145.

[420] Kishor Goswami, 'Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact', *Proceedings of the Indian History Congress*, Vol.II, Part-I, 2011, pp.978, 979.

mortality rate being very high. Smallpox was mainly identified with the goddess *'Sitala',* the goddess of epidemic disease causing fever and eruptions. It was mainly sought to be cured through 'songs, prayers, devotional offerings, cooling potions and the other method involving variolation by the *Tikadars*.' However, this indigenous method of variolation got curbed under the Variolation Act of the 1870s and 1880s making vaccinations compulsory. Vaccination, on the other hand, was mainly seen by the natives as an assault to the caste system and acts against their religion defiling them through the transmission of body fluids from one individual to another.[421] This formed an important site of cultural resistance to colonial medical intervention as was evident in the work of John M Cosh, *Topography of Assam*, stating vaccination being strongly opposed by the natives of the plains whereas the inhabitants of the hilly terrain readily accepted such a change.[422] However, the inconsistent efforts of the colonizers bore fruit towards the early part of the 20th Century when vaccination was made compulsory in the towns of Golaghat, Sibsagar, Lakhimpur, Jorhat, Naugaon and so on, making clear cultural interventions.[423]

Diseases among the Europeans and the natives of the frontier were malarious fevers, irritability of stomach, diarrhea, dysentery, leprosy, dropsy, ulcer, cholera, small-pox and kala-azar. Cattle diseases of fatal kind were also common in the region.[424] In the 19th Century, both malaria and kala-azar were placed by the colonial government under the same category, it was only in the

[421] Dhrubananda Das, Khasi *and Jaintia Medicine,* Guwahati: Drupad Publishers, 1994, p.3.

[422] Kishor Goswami, *Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact*, 2011.,pp.980,981.

[423] B.C Allen, et al., *Gazetteer of Bengal and N.E India, New* Delhi: Kishan and Mittal Publications, 2012, p.582.

[424] W.W Hunter, *A Statistical Account of Assam*, London: Vol-I, Trübner & Co., 1879, p.95.

year 1898 that kala-azar was distinguished from malarial fever. From 1881 to 1901, there was a steady decrease in the Assamese population chiefly due to kala-azar, cholera, malaria, and smallpox.[425] The former first hit the region in the Garo Hills in 1869[426] and since its etiology was unknown till 1903, colonial medicine was unable to curb it,[427] whereas the natives claimed its cure through the general consumption of *'kani'* or opium.[428] It is assumed that the Mughal kings during the latter part of the 17th Century, sent opium as a present to the Ahom Royal Court and since then its consumption has been adopted by the indigenous population.[429] Moreover, till the 19th Century the answer to the cure of malarial fever in colonial medicine laid in quinine which were sold in the post offices, however this method also proved to be inadequate to restrain its menace[430] and having little impact upon the indigenous people who depended largely on medicinal cannabis[431] and the native practitioners particularly the

[425] *Assam Congress Opium Enquiry Report,* Jorhat, Assam: Art Press, Calcutta, September, 1925, p.14.

[426] Tahir Hussain Ansari, 'Disease and Medicine in Colonial Assam during the 19th Century', *Journal of Business Management and Social Sciences Research (JBM&SSR*), Vol 2, No.1, January 2013, www.borjournals.com on: 02-03-2018, 10:30.

[427] Kishor Goswami, *Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact,* 2011.,p.982.

[428] Binoy Kr. Nath, 'Opium in Assam: Introduction and its Prevention During the Colonial Period', *Knowledge Scholar – An International Peer Reviewed E-Journal of Multidisciplinary Research an Online Journal,* 2016, p.1, retrieved from http://www.knowledgepublishinghouse.com on: 09-08-2017, 15:20.

[429] *Assam Congress Opium Enquiry Report* ,1925,.,p.17.

[430] Kishor Goswami, *Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact,* 2011,p.982.

[431] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission*, Calcutta: Office of the Superintendent of Government Printing Press, 1894, p.556

'bez' who claimed to cure these fevers successfully.[432] These determinants caused immense hindrances to the colonizers in achieving their desired strategy of controlling bodies in the presence of the flourishing traditional therapeutics in the region shunned by its various medicinal drugs. Finally, in order to deal with the situation the British came up with the Poisons Act of 1904 and 1919[433] placing these drugs under strict Governmental control.

Towards the latter half of the 19th Century, the colonial medical intervention finally took its pace in the region with the establishment of the 'Tezpur Lunatic Asylum, John Berry White Medical School, Chatribari Hospital'. By the year 1904, there were almost 3 hospitals and 11 dispensaries in Goalpara district. In Sibsagar district, hospitals and dispensaries were comparatively high which was mainly opened with the objective of checking the epidemic progress in Nowgong. Lakhimpur possessed 2 hospitals and 6 dispensaries and Nowgong possessing a total of 3 hospitals and 4 dispensaries by the end of the year, 1904.[434] The first dispensary was opened at Nowgong town in 1863. In 1889, the Government issued directions for the provision of drinking water and construction of a proper drainage system. Likewise, Municipal Boards were also given grants for sanitation, water supply, and public health. The Civil Surgeon of Nowgong was in charge of the medical department and vaccination department. Moreover, scholarships were also provided for the admission of two indigenous medical practitioners, one from kaviraj and the

[432] Kishor Goswami, 'Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact',2011 .,p.982.

[433] Rabindra Nath Karmakar, *Forensic Medicine and Toxicology*, Kolkata: Academic Publishers,2007, p.58,59; *The Poisons Act, 1919- Indian Kanoon*, Central Government Act, retrieved from https://indiankanoon.org/doc/1399304 on: 20/05/2018, 22:05.

[434] B.C Allen, et al., *Gazetteer of Bengal and N.E India*, 2012.,pp.522,570,599,625,582.

other from Unani hakeem family to the John Berry White School, not to encourage indigenous medical practices rather accumulate their medicinal knowledge.[435] By the year 1912, there were 204 hospitals, with the opening of 5 new dispensaries. During 1911-1913, 38 new hospitals and dispensaries were opened and 12 were closed. Of the latter 4 were in the district of Sylhet, 1 in Goalpara, 2 in the Lushai Hills, 1 in the Naga Hills, 1 in Darrang and 1 in the North-Eastern Frontier. The number of state dispensaries increased from 25 to 36. In the year 1912, the largest numbers of indoor patients were admitted for malaria and admissions and deaths from cholera were higher with 114 admissions and 71 deaths. 1053 patients were treated at the Mokokchand dispensary in Naga Hills for all infective diseases.[436] The League of Nations in July 1912 accepted the invitation of the Government of India to send their Malaria Commission to the country. The Commission on 22nd November 1929 visited the Kala-azar Commissioner and with the aid of the Commissioner saw Assam village conditions, tea garden laborers and the anti-malarial work at Lumding. The Assistant Surgeon on kala-azar in Assam was trained at the Calcutta School of Tropical Medicine.[437] The Assistant Director was also the Sanitary Officer. He was required to inspect various works on vaccinations and kala-azar in all the districts of the province. He was also assigned to visit schools and educate the people about personal and communal hygiene and the evil effects of opium, ganja, alcohol, tobacco etc. and to acquaint them with

[435] Priyam Goswami, *The History of Assam-From Yandaboo to Partition(1826-1947),* New Delhi: Orient Black Swan 2012, p.202.

[436] Colonel R.Neil Campbell, *Dispensary Returns of the Province of Assam,* Guwahati: Assam Secretariat Printing Office, 1913, 1-3.

[437] *Proposed Visit of the Malaria Commission of the League of Nations to India,* Medical Department, Public Health Branch, File No: XXXIX/54/1929 of 18th July 1929, (ASA) .

knowledge of the spread of the epidemic and endemic diseases.[438] However, this colonial state's 'hegemonic aspiration' at its initial stage was unable to gain the consent of the native population of the valley which was still mainly confined to the cities, due to the dominance of indigenous therapeutics.[439] This, to a certain extent was overcome by the Poisons Act of 1904 and 1919, which introduced the sale of certain drugs like that of *cannabis, opium, datura, nux vomica* and so on to be conducted under special licenses reaping adequate revenues and at the same time, forming a constant governmental check on the drugs providing a blow to its usage in the indigenous therapeutics.[440] This was coupled with the 'Missionary involvement in the medical field *(which began soon after the lifting of the Company's ban on Christian missionaries in 1813)*, using native women nurses and doctors as a more effective agency to reach their husbands and sons.'[441] Similarly, with the efforts of the American Baptist Missionary, a women's hospital known as 'Chatribari Hospital' was opened in Guwahati in 1920, with the motive of reaching out to the masses.[442] This 'modern form of scientific medicine felt increasingly secure in its superior knowledge, convinced that most that could usefully be gleaned from indigenous texts and informants

[438] *Training of District Health Officers,* Medical Department, Public Health Branch, File No:121-125/29 of 24th November 1929; File No: 25-26/29 of 1929, ASA.

[439] David Arnold, *The Cambridge History of India- Science, Technology and Medicine in Colonial India*, UK : Cambridge University Press, 2000.p.65.

[440] Rabindra Nath Karmakar, *Forensic Medicine and Toxicology,2011* , pp.58,59; *The Poisons Act, 1919- Indian Kanoon* .

[441] David Arnold, *The Cambridge History of India- Science, Technology and Medicine in Colonial India*,2000.,p.87.

[442] *The Effect of Christian Proselytization and Philanthropic Activities on the Contemporary Socio-Cultural Milieu of Assam,* Shodganga, p.58, retrieved from shodhganga.inflibnet.ac.in>bitstream on 17-08-2017, 07:30.

had already been harvested,'[443] provided a shift away from the indigenous form of medical practices to a position of a more dominant power - a clear form of cultural conquest and a means of controlling the 'colonized body.'

5.4 Contradicted Responses towards Cannabis

This dominance of colonial medicine was, however, despised by the indigenous practitioners who sought to provide subtle resistances to such colonial medical intervention by laying consequent efforts to revive their profession. In this connection, several vernacular works on medicine were published in the region namely '*Prasuti'* by Kukha Kanta Borkakoty, the first Assamese book on medicine published in 1898; '*Sastha Bidhi'* herbal book on medicine published by the end of 19th century; '*Vaidya Amar'* handbook on indigenous medicine published in two volumes were clear examples of it.[444] This cause of reviving indigenous medicine came to the cognizance of the elites of the frontier who viewed the traditional therapeutics linked with the 'cultures of the past'.[445] This cause was eventually taken up by nationalists like Hem Chandra Barua, Anandaram Dhekial Phukan, Nabin Chandra Bordoloi, Chandranath Sharma, Tarunram Phukan, Kuladhar Chaliha, Gunabhiram Barua, Radhanath Changkakati and others as a part of their nationalist agenda.[446] Moreover, during the Swadeshi Movement 1905, the message of using 'country's own goods' and boycotting foreign products took its shape in the

[443] David Arnold, *The Cambridge History of India- Science, Technology and Medicine in Colonial India*, 2000., p.69.

[444] Kishor Goswami, *Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact*, 2011., p.982, 983.

[445] Poonam Bala, *Imperialism and Medicine in Bengal-A Socio-Historical Perspective*, California, Sage Publication, 1991, p.17.

[446] V.R Trivedi, *Documents on Assam*, New Delhi: Omsons Publication, 1995, p.xi.

frontier. In the year of November 1920, the first message of Non-Cooperation was delivered by Nabin Chandra Bordoloi at a place known as Belsor, Nalbari, Assam. Here, he clearly demonstrated the prohibition of all intoxicants (like ganja, opium or alcohol) which contributed towards the governmental revenues.[447] As a result of this, the consumption of ganja reduced to 0.26 tolas in the Brahmaputra Valley in 1905-1906 and during the Non-Cooperation Movement, it further dropped down from 632 maunds 29 seers in 1920 to 452 maunds 18 seers in 1921-22 and in 1923-24, the consumption further decreased to 344 maunds which were 45.7% less than in 1920-21.[448] However, later the nationalists of the frontier also raised a roar towards the overall ban of cannabis both the excise and wild hemp[449] only viewing its intoxicant properties and completely ignoring its extensive usages in all the traditional medical practices across the frontier. This was evidently because of their inclination towards westernization which infused them with the negative veil of the drug which, however, acquired an important place in Ayurveda, Unani and folk medicinal practices.[450] It is important to note that these nationalists were mainly imbibed with 'a nationalism, which even as it challenged the colonial claim to political domination also accepted the intellectual premises of modernity upon which it

[447] *Assam Congress Opium Enquiry Enquiry Committee*, Assam: Art Press, Calcutta, September 1925, p.55.

[448] *Report of the Indian Excise Committee (1905-06)*, Madras: Superintendent, Govt. Press, 1907, p. 27; Anirudh Deshpande, 'An Historical Overview of Opium Cultivation and Changing State Attitudes towards the Crop in India, 1878 -2000 A.D', *Studies in History*, 2009 , p. 123, retrieved from http://www.sih.sagepub.com/content/25/1/109 on: 13-12-2018, 11:00.

[449] Arun C. Bhuyan, *Political History of Assam*, Vol-ii, Assam: Publication Board Assam, 2008, p.36.

[450] *Report of the Cultivation and use of Ganja*, Calcutta: Bengal Secretariat Press, 1893, pp.41-66.

was based.'[451] They formed 'their own brand of Indian modernity' through the selective incorporation of indigenous knowledge and traditions.[452] Their prime objective regarding the native medical practices was to provide for a more scientific base making it detached from the dominance of religion and superstitions. However, denouncing the drug by them, demonstrated a 'selective appropriation' in the indigenous medical systems which led towards the consolidation of the colonial hegemony itself, making it a modernity not reflecting the general interests but that of sectional ones. This evidently, ignored the interests and inconsistent struggles of the indigenous inhabitants under the exploitative order who tried to retain their traditional adherence. Such degeneration of medicinal cannabis was mainly due to the declining therapeutic practices which were primarily due to the lack of initiatives undertaken by the British Government towards the traditional medicinal practices. Although both the indigenous as well as the modern therapeutics were patronized differently, the British preferred the development of colonial medicine, providing a fatal blow to the indigenous. Moreover, at the initial stage, the British followed a policy of recruiting both Indian and European scholars to amass the indigenous medicinal knowledge which later contributed to the cause of British Pharmacopeia. They also did not provide any registration or recommendation to any indigenous medical practices. These policies of intervention mainly resulted in the establishment of colonial monopoly over Indian drugs and trade.[453] Secondly, the important factors towards the decline of traditional therapeutics

[451] David Arnold, *The Cambridge History of India- Science, Technology and Medicine in Colonial India*, 2000.,p.17.

[452] Ibid.,p.17.

[453] Subrata Pahari, 'Travails of Traditional Medicine',2005 .,pp.225; Rabindra Nath Karmakar, *Forensic Medicine and Toxicology*, 2007.,pp.58,59; *The Poisons Act, 1919- Indian Kanoon*.

could not be articulated in terms of the colonial period alone, there were certain other impediments which were significantly provided prior to the advent of the 'Raj'. This could be traced back to the ancient period *(where medicine was claimed to be mainly practiced by the lower caste of the society)* where the Brahmanas assumed the so viewed monopolized position of knowledge appropriation and with their grip over the therapeutic practices, allowed no relevant inquiry or systematic development in the field, as was reflected in their codification of Ayurveda revealing the dominance of religion.[454] Thirdly, the non-prevalence of a uniform medical system, owing to various foreign interventions which in the medieval period, India came to be dominated by the Unani system of medicine *(whence it was in the process, of acquiring professionalism as was evident from the centers of medical education seen during the period of Firoz Tughlaq)*. During this period the Muslim royalty only recognized hakeems brought from Persia, viewing the conservative nature of ancient medicine, which however a change was provided only in the later years, particularly during the reign of Akbar, where both the medical forms received a greater fillip.[455] As in the Brahmaputra Valley, the Ahom royalty's trust for the Muslim healers and Ayurvedic vaidyas was predominantly less giving more importance to folk-medicine.[456] Thus, these changes, interventions as well as the dominance of external factors over the traditional therapeutics, ultimately led to the over-powering of the pre-modern by the modern medical practices under the colonial period.

[454] Poonam Bala, *Imperialism and Medicine in Bengal-A Socio-Historical Perspective,* California: Sage Publication 1991, p.19.

[455] Ibid., pp.34,35.

[456] Ratan Kumar Katoki, *Ahom Rajatat Chikitsha Sewa (Pratham Buranji),* Guwahati: M.S Chandrakanta Press, 2009, pp.110-140.

Chapter 6: Conclusion

Cannabis assumed a great significance in the socio-economic, cultural and religious spheres in India. It was immensely used as a medicinal and recreational drug in the tropical countries of Asia but it was a fiber crop in the temperate regions of the West.[457] However, the advent of the British colonization in India led to several shifts in the perception of the production process and uses of cannabis from a medical and recreational drug to that of an industrial and commercial commodity. This move initiated a commercial boom through the British apparent domination of the drug. Moreover, as cannabis was extensively used throughout Asia, the British annexation of the North-Eastern Frontier served them with the potential gateway to commercial extensions with its neighboring territories.[458] The significance of cannabis being so magnificent in the traditional therapeutics, as an industrial raw material, as a pharmaceutical drug, and as a commercial commodity that it calls for an imperative question relating to the trajectories involved behind the unsettling metaphor of viewing cannabis as an 'evil-drug' in recent times. The entire transformation takes place in five phases of substantial shifts which contributed towards the culmination of

[457] Ernest Small, *Cannabis A Complete Guide*, Canada: CRC Press,2017, p.94 ; M.C Cooke, *The Seven Sisters of Sleep: Popular History of the Seven Prevailing Narcotics of the World,* London: James Blackwood, Paternoster Row, 1860, p.216.

[458] I. A. Ross, *Medicinal Plants of the World: Chemical Constituents, Traditional and Modern Medicinal Uses,* Vol. 3, Totowa, NJ, ©Humana Press Inc., p. 30; Hui-Lin Li, 'An Archaeological and Historical Account of Cannabis in China', *Economic Botany*, Vol. 28, No. 4 (Oct. - Dec., 1974), Springer on behalf of New York Botanical Garden Press, p.443; Ernest Small, *Cannabis A Complete Guide*, 2017., p.139; Priyam Goswami, *Assam in the Nineteenth Century- Industrialization and Colonial Penetration,* Panbazar, Guwahati: United Publishers, 1999, pp.6-7; S.K Bhuyan, *Tunghungia Buranji- A History of Assam (1681-1826 A.D.),* Delhi: Goyal Offset Printers, 1933, pp.212-213.

the colonial policy of control, restriction, usage and partial portrayal of cannabis emphasizing only its intoxicant aspect and in this manner making it a complete governmental possession by the year of Second Opium Conference of 1925. This study primarily discusses such colonial interference and restrictions on usage of cannabis which sprouted various manifold struggles among the indigenous gentry obstructing strategies meted towards their age-old usage of the drug which, however, was put to a backlog by the sectional elites of the frontier, when they raised a roar towards the overall ban of cannabis.

The first phase of this shift was Britain's initial search for hemp and its alternatives in its Indian colony, pressed hard under the Russian Blockade as Russia was bonded by the Treaty of Tilsit, putting a ban to all Anglo-Russian trade, coupled with Napoleonic Continental System.[459] This led to the influx of surveyors, researchers, scientists, and botanists to Indian colony in search of cannabis. Their explorations emphasized Indian cannabis as the fiber producing European hemp, which they termed as 'true hemp'.[460] The three categories of researches conducted were viz. on medicinal research, fiber production and the preservation and elevation of cannabis intoxicants. The examples of these works were Robert Hooke, Ainslie, W.B O' Shaughnessy, W.Ley, R. Rowan Lees, Jacques Joseph Moreau, etc. The findings of active ingredients of cannabis by British Scientists, Wood Spivey, and Easterfield later led to the influx of

[459] James Davey, *The Transformation of British Naval Strategy: Seapower and Supply in Northern Europe 1808-1812,* The Boydell Press , 2012, UK, pp.13-31.

[460] *Transactions of the Agriculture and Horticulture Society of India,* Vol III, Calcutta: Baptist Mission Press, 1839, pp.199-200 ; James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, 2003, p.19.

researches towards the isolation of the various cannabis constituents.[461] Their contributions finally included cannabis in the British Pharmaceutical Codex in the year 1934 [462] and in the year 1850 it also got enlisted in the US Pharmaceutical Codex.[463] Secondly, the research on cannabis fiber production was undertaken by British botanists and agronomists like Joseph Banks, George Sinclair, William Roxburgh, Nikolai Ivanovich Vavilov and many more, proving Indian cannabis as the European hemp cultivated in a different pattern for obtaining resins.[464] However, their efforts of 'true hemp' cultivation never came to a successful end owing to the various resistances put forth by the Indian cultivators who viewed that the foreign method of cultivating the crop would mean an end to the traditional usage of the drug.[465] Thirdly, the research on the preservation and elevation of hemp intoxicants were carried on by Dr. Prain (Curator of Herbarium in the Royal Botanical garden, Sibpur) and Mr. Jenks (Chemical Examiner for Customs and Excise) where the former recommended the preservation of cannabis flower-tops in the form of homogenous cakes[466]

[461] Allan Chapman*, England's Leonardo: Robert Hooke and the Seventeenth Century Scientific Revolution,* London: IOP Publishing Ltd, 2005, p.116; James H. Mills, Cannabis Britannica-Empire, Trade and Prohibition 1800-1928, 2003.,pp.34-35; W.B O' Shaughnessy, 'On the Preparations of Indian Hemp or Gunjah', Provincial Medical Journal and Retrospect of the Medical Sciences, Vol. 5, No. 122, 1843, pp. 343-347; W. Ley, Observations on the Cannabis Indica, or Indian Hemp, Provincial Medical Journal and Retrospect of the Medical Sciences, Vol. 5, No. 129, March 18, 1843, p.487.

[462] *British Pharmaceutical Codex 1934*, Schaffer Library of Drug Policy, retrieved from http://www.druglibrary.org/schaffer/hemp/medical/brit34.html on: 20-05-2018, 14:28

[463] Ernest Small, *Cannabis: A Complete Guide, 2017*.,p.279.

[464] Ibid., p.428.

[465] *Report of the Cultivation and Use of Ganja,* Calcutta: Bengal Secretariat Press, 1893, p.36.

[466] Ibid., p.36 .

and the latter suggested its preservation in air-tight godowns.[467] Although such researches gave a fillip to the British Pharmaceutical Industries and flourishing hemp drugs exports however, it pushed back the usages of cannabis in the traditional therapeutics of the frontier by placing the drug under the strict governmental gaze. This was coupled with various taxations, the introduction of licenses and druggists permits while obtaining the drug. Moreover, India also served as a supplier of raw materials exporting cannabis to various British and US Pharmaceutical Industries like Piso's Cure Pharmaceuticals, Sears Roebuck Catalogues, Cough Cure Pharmaceutical, Messrs. Squire & Sons, Messrs. Burroughs & Wellcome Manufacturing Druggists, William Ransom & Sons Ltd., Parke Davis & Co., etc.[468]

The Second Phase was characterized by the hitched issue forced at the political circles by the missionaries and temperance campaigners viewing cannabis consumption causing insanity and crime followed by the survey of the Indian Hemp Drug Commission (1893-94).[469] The IHDC emphasized on the excessive intoxication of cannabis with insanity however, in criminal cases

[467] *Procedures Regarding Preservation of Ganja,* Proceedings of the Government of Bengal, Finance Department, Excise Branch, December, 1920, p.18-19, (State Archive of West Bengal, henceforth SAWB).

[468] Andrew Hand, et al., *History of Medicinal Cannabis,* Ontario, Canada: Nova Science Publishers, Inc., 2016, p.389; *Messrs. Squire & Sons, London for Medical and Experimental Purposes*, Finance Department, Separate Revenue, Proceeding: B.139-40, File No: E 1G/2 of May 1902, SAWB; *Remission of-which it was intended to forward to Messrs. Burroughs & Wellcome Manufacturing Druggists,* London for Manufacturing and experimenting Purposes, Finance Department, Separate Revenue, Proceeding:B.14-15, File No: E 1G/8 of June 1897, (SAWB).

[469] James H. Mills, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928*, 2003.,p.4; James H. Mills, 'Colonialism, Cannabis and the Christians: Mission Medical Knowledge and the Indian Hemp Drugs Commission of 1893–4', David Hardiman, (ed.) *Healing Bodies and Saving Souls: Medical Missions in Asia and Africa*, New York: Editions Rudopi B.V, 2006, p.169.

stated that the real causes were unknown.[470] Although the excessive intoxication of cannabis indeed caused adverse health hazards (*as also has been established by various researches*)[471], it is important to note that, there were also several other cases of civilians who tried to defy the British laws as a form of resistance against the restrictions imposed on the drug, were also sent directly to the British Asylums not on medical reports but on police charges.[472] However, IHDC itself had its own limitations as out of 57 medical practitioners only 6 were Ayurvedic specialist. IHDC also ignored the socio-cultural and religious significance of the drug throughout India and instead it mainly focused on the cannabis intoxication and insanity along with its cultivation, use, and consumption, providing insights to only one side of the story.[473] Such a portrayal of the survey thereby fulfilled the colonizers dual motive of domination of both the trade of cannabis and the body of its users.

The Third Phase was characterized by the enactment of various Acts and introduction of several licenses and permits providing a constant governmental check on the drug. The indigenous gentry who depended upon the native physicians for curing ailments caused immense hindrances to the colonizers in achieving their motive of controlling bodies. The presence of the flourishing

[470] *Report of the Indian Hemp Drug Commission 1893-94*, Vol-I, Simla: Government Central Printing Office 1894, pp.174-182.

[471] Ernest Small, *Cannabis: A Complete Guide*….pp.236-239; *Report of the Cultivation and Use of Ganja*, Calcutta: Printed at the Bengal Secretariat Press, 1893, p.74.

[472] *Indian Hemp Drug Commission: Enquiry as to the Connection Between Hemp Drugs and Insanity*, Vol.II, Simla: Government Central Printing Office, 1894, pp.63,65,66,(ASA) ;James H. Mills, Madness, *Cannabis and Colonialism: The Native Only Asylums of British India1857-1900*, London: Palgrave Macmillan Publication, 2000, p.13.

[473] Amit Ranjan Basu, 'Cannabis and Madness: Evidence from the Indian Hemp Drugs Commission, Bengal 1894', *Studies in History*, 2000, pp.137-138, retrieved from http://www.sagepublications.com on 10-07-2018, 19:48.

traditional therapeutics shunned by its various medicinal drugs was thereby sought to be curbed through the Poisons Act of 1904 and 1919.[474] These Acts also enlisted cannabis placing the drug under strict governmental control. The successful portrayal of IHDC connecting cannabis with insanity finally led to the Act of 1894 preventing the private cultivation, trade, and use of the drug.[475] Moreover, by Act II of 1876, the peasants had to obtain a license for cultivating the hemp drugs which was a form of governmental check on the amount of hemp cultivated in their respective areas. After the separation of Assam from Bengal in 1874, duty on exported ganja from Bengal had to be paid in Bengal itself. Prior to this, under Clause 39, Section-XVII, Chapter-XV, p.356, Vol-I of the Board rules, the duty of ganja was paid in Assam itself.[476] Moreover, in 1881, a person was in possession of a portion of untaxed ganja which led to the amendment of the Bengal Excise Act VII of 1878 by the Act IV of 1881, imposing strict laws on the drug and limiting the possession of cannabis to ¼ seer per individual.[477] Licenses were also issued to the vendors, cultivators,

---

[474] Rabindra Nath Karmakar, *Forensic Medicine and Toxicology*, Kolkata: Academic Publishers, 2007, pp.58,59; *The Poisons Act, 1919- Indian Kanoon*, Central Government Act, retrieved from https://indiankanoon.org/doc/1399304 on: 20/05/2018, 12:03.

[475] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Assam State Archives, 3rd ed., 1906, Simla: Government Central Printing Office, pp.4.

[476] *Exported from Rajshahye to Assam-Orders on the Subject of Collection and Adjustment of duty*, Finance Department, Excise Branch, Proceeding:2, File No:89-97 of March 1887, Calcutta, (SAWB); *Duty on Ganja Exported from Rajshahye Levied After Separation of Assam and Bengal*, Finance Department, Excise Branch, Proceeding:B.43, File No:1-92 of 12th January 1887, Calcutta (SAWB); *The Duty Levied in Rajshahye on Ganja Exported to Assam*, Finance Department, Excise Branch, Proceeding:277, File No:1-97 of 21st January 1887, Calcutta, (SAWB); *Contemplated Change in the- and other Excisable Articles to be Communicated to the Chief Commissioner of Assam*, Finance Department, Excise Branch, Proceeding:B.80-81, file No: 18 of April 1882,(SAWB).

[477] *Report of the Indian Hemp Drug Commission*, Appendices, Miscellaneous, Vol III, Printed at Simla: Government Central Printing Office,1894, p.18, (ASA); *Memorandum on Excise*

dealers, for storage and even for sale of hemp drugs. Both retail and wholesale licenses were issued by the British government which by the year 1912-13, a total of 245 retail licenses and 47 wholesale licenses were issued.[478] Even the Act of 1894 totally prohibited any private cultivation, use or sale of cannabis except under licenses.[479] Both the Acts of 1904 and 1919 also passed laws for possessing special licenses for the sale of cannabis.[480] The licensing of druggists were also introduced towards the sale of medicinal cannabis. In the year 1912-13, three druggists permits were issued which rose to nine in 1923-24 and the next year it increased to seventeen permits.[481] Prior to British control, medicinal cannabis was, however, either locally grown or easily procured in the daily or periodic '*hats'* (markets) in Assam and even in the yearly fairs which dealt with the trade of hill grown cannabis.[482] Such strict governmental interventions and imposition of higher taxations on the drug irritated the natives who resorted to subtle forms of resistances.

The Fourth Phase was characterized by such resistances, which went simultaneously in several insinuated patterns. Firstly, the overall denial of hemp fiber cultivation by the Indian cultivators who viewed the cultivation of the crop in the European method would mean a halt to their traditional usage of the drug. The main form of disguised resistance adopted by the cultivators was their

---

Administration in India so far as it is concerned with Hemp Drugs, Third Edition, Simla: Government Central Printing Office, p.6, (ASA).

[478] *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Ninth Edition, Simla: Government of India Press, p.27, (ASA).

[479] Ibid.,p.3.

[480] Ibid., p.28.

[481] Ibid., p.3.

[482] *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission,* Calcutta: Office of the Superintendent of Government Printing Press, 1894, p.536

feigned ignorance towards hemp cultivation and thereby not adopting the European method of fiber production. Due to their efforts, hemp fibers were never been produced in India. Secondly, the natives of the North-Eastern Frontier used wild bhang instead of the excise ganja. Thirdly, the overall denial of the governmental restrictions on the drug through continued use, sale and trade of wild cannabis amongst the hill tribes of the frontier. The significant outcome of such oppositions was strictly sought to be reformed by the colonizers in the Asylums of the region, which became arenas of inconsistent struggles, inflicting the defilers with severe tortures and in most cases dragging them to death. Fourthly, the strict legislation attached to hemp drugs irritated the cultivators and zamindars who were incessantly oppressed by the Government Officers which led to a considerable decline of hemp cultivation by the cultivators.[483] Lastly, the native physicians of the frontier through their various medicinal works described the potentialities of cannabis in the traditional therapeutics which was extensively used in healing various ailments. Medicinal works like '*Prasuti', 'Sastha Bidhi', 'Vaidya Amar'* were clear examples of their efforts in reviving indigenous therapeutics and the declining drugs of the period.[484]

The Fifth Phase was characterized by the clubbing of cannabis in the Second Opium Conference, 1925 and its consequent impact upon the native gentry of the North-Eastern Frontier. The British towards the end of the 19th

[483] George Watt's Pamphlet on Hemp or Ganja, Financial Department, Excise Branch, Proceeding:B.1-4, File No: E G/1 of July 1888, (SAWB)..

[484] Kishor Goswami, *Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact*, Proceedings of the Indian History Congress, Vol.II, Part-I, 2011, p.982, 983; Poonam Bala, *Imperialism and Medicine in Bengal-A Socio-Historical Perspective*, California: Sage Publication 1991, p.17.

Century successfully carried on a flourishing trade of exporting hemp drugs to China, Tibet, Burma, Egypt, US, and South African countries. This became a matter of great condemnation in the International circles as a result of which cannabis exploded into the agenda of the Second Opium Conference in 1925.[485] Egypt, backed by US and China demanded the trade of opium and hemp drugs to be completely outlawed. On this, Britain agreed to halt hemp drugs to the dissented nations unless on the provision of a required certificate for medicinal and industrial usage of cannabis. However, Britain on their part did not prohibit hemp drugs but rather made it a complete governmental possession coupled with charges of criminality associated with its private cultivation, use or trade.[486] This thereby provided Britain with the required agenda of engulfing the entire share to themselves and consequently providing a fatal blow to the indigenous usage of the drug in the traditional therapeutics and compelling the native's reliance on the 'Raj'.

The efforts of the indigenous medicinal practitioners in reviving traditional therapeutics came to the cognizance of the elites of the frontier who took up the cause as a part of their nationalist agenda in reviving the cultures of the past.[487] However, later the same nationalists also raised a roar towards the overall ban of cannabis both excise, (*as a part of Swadeshi and Non-*

[485] James H. Mills, *Cannabis Britannica-Empire*.,pp.6-7.

[486] 'The Cannabis Problem: A note on the problem and the history of international action', *UNODC-Bulletin on Narcotics-1962*, Issue 4-004, 1962, retrieved from http://web.archive.org/web/20050526043451/http://www.unodc.org/unodc/en/bulletin/bulletin_1962-01-01_4_page005.html on 20-10-2018, 22:03.

[487] Poonam Bala, *Imperialism and Medicine in Bengal-A Socio-Historical Perspective*, 1991.,p.17.

Cooperation Movement in boycotting foreign goods) and wild bhang[488] only viewing its intoxicant properties and completely ignoring its medicinal potentialities used extensively in the traditional therapeutics across the frontier. This denouncing the drug by the nationalists -'this selective appropriation' in the indigenous medical systems by them led towards an evident consolidation of the colonial hegemony itself, making it a modernity not reflecting the 'general interests' but that of 'sectional ones'.

This study concludes that the viewed embodiment of dangerous drug as attained by cannabis took its roots under the colonial period, taking its initial shape towards the 19th and early 20th Century, as impelled by the allied British policies, driven by their endeavor of maximum appropriation. This was further consolidated by the elites neglecting interests of the general population, which led to the evident decline of cannabis in the traditional therapeutics and rather its fillip in the British Pharmaceutical Industries, coupled with the additional hike of the hemp drug production serving international markets resulting in the coherent accumulation of the lion's share.

[488] Arun C. Bhuyan, *Political History of Assam,* Vol-ii, Assam: Publication Board Assam, 2008, p.36; V.R Trivedi, Documents on Assam, New Delhi: Omsons Publication, 1995, p.xi; *Assam Congress Opium Enquiry Committee,* Assam: Art Press, Calcutta, September 1925, p.55.

BIBLIOGRAPHY

STATE ARCHIVES OF WEST BENGAL:

1. Finance Department. Separate Revenue. Proceeding:. B. 139-40, File No: E1G/2. *Messrs. Squire& Sons, London for Medical and Experimental Purposes,* May 1902.
2. Finance Department. Separate Revenue. Proceeding: B.14-15, File No: E 1G/8. *Remission of-which it was intended to forward to Messrs. Burroughs & Wellcome Manufacturing Druggists, London for Manufacturing and experimenting Purposes*, June 1897.
3. Finance Department. Proceedings: 3-4. File No.2. *Memorandum by Surgeon General Balfour on the Cultivation of Manilla Hemp in India*, May 1881.
4. Finance Department, Excise Branch, Procedures Regarding Preservation of Ganja, December, 1920.
5. Finance Department. Excise Branch. Proceeding: 2. File No:89-97. Exported from Rajshahye to Assam-Orders on the Subject of Collection and Adjustment of duty, March 1887.
6. Finance Department. Excise Branch. Proceeding: B.43, File No:1-92. Duty on Ganja Exported from Rajshahye Levied After Separation of Assam and Bengal, January 1887.
7. Finance Department. Excise Branch, Proceeding: 277, File No:1-97. The Duty Levied in Rajshahye on Ganja Exported to Assam, January 1887.
8. Finance Department. Excise Branch. Proceeding: B.80-81, file No: 18. Contemplated Change in the- and other Excisable Articles to be Communicated to the Chief Commissioner of Assam, April 1882.
9. Finance Department. Miscellaneous Revenue Branch. Proceeding: B.109-11, File No: E1G/1. Uniform Rate of Duty in Assam (Rupees 11 per seer), July 1905.
10. Finance Department. Excise Branch. Proceeding: 2106, File No:1-59. Inquiry of Ganja ordered by the Government Resolution-to Baboo Hem Chunder Kerr-may be commenced as soon as possible, August 1876.

11. Finance Department. Excise Branch, proceeding: 110-11. File no: E 1G/6. Instructions Issued to Babu Hem Chandra Kerr to Submit his Report, November 1876.
12. Finance Department, Excise Branch, Ganja Export to Foreign Territories, Proceedings of the Government of Bengal, Section-IV: Hemp Drugs, December 1920.
13. Financial Department, Excise Branch, Proceeding: B.1-4, File No: E G/1. George Watt's Pamphlet on Hemp or Ganja, July 1888.
14. Revenue Department. Excise Branch. File No 87B. Proceedings: 1-231/32. The Prevalence of Smuggling in Connection with the Cultivation of Gunjah, February 1886.
15. Revenue Department. Excise Branch. File No: 108. The Board made Enquiries as to Checks on Ganja Smuggling, May 1885.
16. Revenue Department. Excise Branch. .*Medicinal Effects of Ganja or Bhang,* Section-IV: Hemp Drugs, November, 1871.
17. Revenue Department. Excise Branch. Proceeding: 67A. *Medicinal Properties of Ganja,* Section-IV: Hemp Drugs.
18. Revenue Department. Excise Branch. *Medicinal Properties of Ganja and Other Hemp Drugs,* Section-IV: Hemp Drugs, 30th November, 1872.
19. Revenue Department. Agriculture Branch. Proceeding:7. File No: 39-40. *Memorandum on the Subject of Jute for the Perusal of His Honour the Lieutenant Governor of Bengal, Calcutta,* of July 1873.
20. Revenue Department. Excise Branch. Proceeding: 53-65. File No: E 1G/6. *Memorandum of Cockerell, Hon'ble F.R, and His Honour's Resolution on the Cultivation, Storage and Sale of Ganja,* August 1876.
21. Revenue Department. Excise Branch. Proceeding: 46. File No: 89. *Excise Surveillance on Ganja,* February 1861.
22. Revenue Department, Excise Branch, Proceedings: 423B, File No: 1-55. *Minute Recorded by Mr A.Money on the Levy of Duty on Ganja,* June, 1876.
23. Revenue Department, Miscellaneous Revenue Branch, Proceeding: A.69. *Sanction Accorded to the Entertainment of an Additional Mohurir on Rs.20 a Month under the Supervisor in Rajshahye,* October 1871.
24. Finance Department, Separate Revenue Branch, Proceeding:29-31, File No: E 1.G/1. *Extension of the Area under Ganja Cultivation,* December 1902.

25. Financial Department, Excise Branch, File No. 7-8. A Proposal for the Amendment of Bengal Excise Act 1878, January 1881.
26. Financial Department, Excise Branch, File No. 7-8. A Proposal for the Amendment of Bengal Excise Act 1878, January 1881.
27. Finance Department. Miscellaneous Revenue Branch. Proceeding: B.127-28. File.No:1. Inquiry into the Cultivation, Storage and Sale of Ganja by Deputy Magistrate and Deputy Collector Baboo Hem Chunder Kerr, December 1876.
28. Revenue Department. Excise Branch. *Each of all the Forms of Indian Hemp Act on Nervous System.* Section-IV: Hemp *Drugs*, February, 1972.
29. Revenue Department. Excise Branch. *Abuse of Ganja Produces Insanity and Other Dangerous Effects*, Section-IV: Hemp Drugs, *February, 1893.*
30. Revenue Department, Excise Branch, File No 87B, Proceedings:1-231/32. *The Prevalence of Smuggling in Connection with the Cultivation of Gunjah,* February 1886.
31. Revenue Department, Excise Branch, File No: 108. *The Board made Enquiries as to Checks on Ganja Smuggling*, May 1885.
32. Revenue Department. Excise Branch. Proceedings: 25-26, File. No: E I-R/9. Report on the Cultivation, Manufacture and Storage of Ganja in Rajshahi by MG Rainy, 23rd July 1904.
33. Revenue Department. Excise Branch. File No 87B, Proceedings: 1-231/32. The Prevalence of Smuggling in Connection with the Cultivation of Gunjah, 1st February 1886.
34. Revenue Department, Excise Branch, File No.65. *Resumption of Special Grant held by CM Maddle for the Issue of Hemp Cultivation, Board of Revenue Eastern Bengal and Assam,* 1910.
35. Revenue Department, Agricultural Branch, File No.1-129. *Fibers for Paper Manufacture, Government of Bengal,* June 1873
36. Agriculture and Industries Department. Excise Branch. *Smugglers, Making of More Stringent Penal Measures to Deal with-On the Lines Laid Down in the Criminal Procedure Code for Dealing with Habitual Offenders*, March 1932.

ASSAM STATE ARCHIVES:

1. *Evidences Before the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, Revenue Department, Excise Department/ Opium, 1913, Medical Department. File No:9-7/57-D
2. *Use of Ganja and Bhang in Indigenous System of Medicines*, Government of India, Ministry of Health, New Delhi, 5th August 1957
3. Medical Department, Public Health Branch, File No: 121-125/29 of 24th November 1929; File No: 25-26/29. *Training of District Health Officers*, 1929.
4. Medical Department. Public Health Branch. File No: XXXIX/54/1929. *Proposed Visit of the Malaria Commission of the League of Nations to India*, 1929.
5. P.H.A Department. File No. 36. *Ryots Movement in Assam*, 1836.
6. P.H.A, File No:14. *Extract Taken from Treatise of Yandaboo and Other Sanads between East India Company and Raja Ram Singh of Jynteah*, 1826.
7. P.H.A. File No: Nil. *The New Regime: Chapter One*, of 1826-1947, P.H.A . File No: XLIII . *Treaty with Raja Ram Singh of Jynteah*, 1824.
8. P.H.A. File No: XL. *Treaty Concluded Between David Scott Esq. Agent to the Governor-General on the part of the Honorable East India Company and Rajah Govinda Chunder Naryn of Cachar or Hemrumba* , 1824.
9. P.H.A. File No: 147. *Regarding British Dealings with Rajah Purandar Singha and His Heirs*, 1830.
10. Revenue Department. Excise. File No. 88. *Special Reward for the Detection of Illegal Sale of Bhutiya Ganja in Darrang*, E.B & Assam, 1909.
11. Revenue Department. File No. XIX-8. *Smuggling of Ganja (Mangaldai)*, 1931.
12. Revenue Department. Excise Branch. File No. 589E., *Report on the Administration of the Excise Department in The Assam Valley Division for the Year 1924-25*, *Proceedings of the Assam Labour Inquiry Committee in the Recruiting and Labour Districts*, Calcutta: Office of the Superintendent of Government Printing, India, 1906.
13. Revenue Department. Agricultural Branch, File No.1-129. *Fibers for Paper Manufacture, Government of Bengal*, June 1873.

14. Revenue Department. Excise Branch. File No. 108. *Construction of Spirit Bonded Warehouse, Ganja Gola and Quarters for Supervisors and Peons Attached to the Bonded Warehouse, Dibrugarh*, 1909.
15. *Report of the Committee Appointed to Enquire into Certain Aspects of Opium and Ganja Consumption*, Revenue Department, Excise Branch / Opium, 1913
16. *Report on the Experimental Cultivation of Different Kinds of Jute, Hibiscus and Leguminous Plants Growing in Botanical Gardens*, Government of Bengal, File No. 7, July 1873.
17. Buckingham, J., *Liquor Shops and the Excise Administration in Assam*, Medical, Reports and Correspondence, Showing abuses of present Outstill System, Medical Department

PUBLISHED REPORTS OF COLONIAL PERIOD

1. *Assam Congress Opium Inquiry Report, Jorhat, Assam*. Calcutta: R.K Hatibarua, at Art Press, 1925.
2. Boyce, S.S. *Hemp Cannabis Sativa: A Practical Treatise on the Culture of Hemp for Seed and Fiber with a Sketch of the History and Nature of Hemp Plant.* New York: Mount Pleasant Printery, 1900.
3. Campbell, Neil R. *Dispensary Returns of the Province of Assam*. Printed at Assam Secretariat Printing Office, 1913.
4. Campbell, Neil R. *Statistical Returns of the Lunatic Asylums in Eastern Bengal and Assam for the Year 1909*. Eastern Bengal and Assam Secretariat Printing Office, 1910.
5. Das, Kanta Rajani. *Plantation Labour in India*. Calcutta: Prabasi Press, 1931.
6. Dickson, H. James, *The Fibre Plants of India, Africa and our Colonies*, London: Printed by Wilkes & Thornborough, 1864.
7. *Evidence of Witnesses from Bengal and Assam taken before the Indian Hemp Drug Commission.* Calcutta: Office of the Superintendent of Government Printing Press, 1894.
8. Forbes, J. *Cordage, Clothing and Paper with an Account of the Cultivation and Preparation of Flax, Hemp and their Substitutes,* London, Printed by J.E Adlard, Bartholemew Close, 1855.

9. *Final Report of the Royal Commission on Opium: Part- II, Royal Commission on Opium,* VOL. VII., Historical Appendices Together with an Index of Witnesses and Subjects, and a Glossary of Indian Terms Used in the Evidence and Appendices. London: Eyre and Spottiswoode Printers, 1895.
10. Hodson, C. T, *The Naga Tribes of Manipur*, London: Macmillan & CO., Limited, 1911.
11. Hunter, W.W. *A Statistical Account of Assam*, Vol-I. London: Trübner& Co., 1879.
12. *Indian Hemp Drug Commission: Inquiry as to the Connection Between Hemp Drugs and Insanity, Vol.II.* Simla: Government Central Printing Office, 1894.
13. *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, Vol-I, (3rd Ed.) Simla: Government Central Printing Office, 1906.
14. *Memorandum on Excise Administration in India so far as it is concerned with Hemp Drugs*, 9th ed. Simla: Government Of India Press, 1926.
15. *Memorandum on Excise (Hemp Drugs) Administration in India for 1934-35*, (19th Ed.). New Delhi: Manager of India Press, 1937.
16. Monahan, F.J. *River Borne Trade of the Province of Assam for the year 1896-97.*Calcutta: Office of the Superintendent of Government Printing India, 1897.
17. *Note on the Extension of Cultivation of Fibre Plants in India*. Agricultural Research Institute Pusa. Calcutta: Superintendent of Government Printing India, 1909.
18. *Notes on some Industries of Assam From 1884 to 1895.* Shillong: Printed at the Assam Secretariat Printing Office, 1896.
19. Prain, .D, *On the Morphology, Teratology and Diclinism of the Flowers of Cannabis,* Scientific Memoirs by the Officers of the Medical and Sanitary Department of the Government of India. Calcutta: Office of the Superintendent of the Government Printing, 1904.
20. *Proceedings of the Assam Labour Inquiry Committee in the Recruiting and Labour District.* Calcutta: Office of the Superintendent of Government Printing, India, 1906.
21. Pringle, Robert. *Indian hemp (ganja) from a public health point of view: a paper to be read before the East India Association.* LSE Selected Pamphlets, 1893.
22. *Report of the Indian Excise Committee (1905-06).* Madras: Superintendent, Govt. Press, 1907.

23. *Report on the Experimental Cultivation of Different Kinds of Jute, Hibiscus and Leguminous Plants Growing in Botanical Gardens.* Government of Bengal, File No. 7 of 26th July 1873
24. *Report of the Cultivation and Use of Ganja.* Calcutta: Bengal Secretariat Press, 1893.
25. *Report of the Indian Hemp Drug Commission 1893-94*, Vol-I. Simla: Government Central Printing Office, 1894.
26. *Report of the Indian Hemp Drug Commission, Appendices, Miscellaneous,* Vol III. Simla, Government Central Printing Office, 1894.
27. Sabnis, S. T. *Report of the Hemp Marketing in India.* Calcutta: Government of India Publication Branch, 1931.
28. Samman, F. H.. *Monograph on The Cotton Fabrics Of Assam.* Calcutta: Office of the Superintendent Printing, 1897.
29. *Transactions of the Agriculture and Horticulture Society of India, Vol III.* Calcutta: Baptist Mission Press, 1839.
30. Wade, Peter John. *Account of Assam,* Calcutta: The Kuntaline Press, 1800.
31. Wisset, Robert. *A Treatise on Hemp, Including a Comprehensive account of the Best Modes of Cultivation and Preparation as Practiced in Europe, Asia and America: With Observations on the Sunn Plant of India.* London: J. Harding, No.36, St. James Street, 1808.
32. *Indian Hemp Drug Commission: Inquiry as to the Connection Between Hemp Drugs and Insanity,* Vol.II, Simla: Government Central Printing Office, 1894

NATIONAL LIBRARY OF INDIA:

William Roxburgh, 'On the Culture and Comparative Strength of Hemp and other Vegetable Fibers', Thomas Gill (ed.), *Technical Repository containing Practical Information on Subjects Connected with Discoveries and Improvements in the Useful Arts*, Vol- VI, London: T.Cadell Strand, 1824

GUWAHATI DISTRICT LIBRARY:

Allen, C.B., et.al. *Gazetteer of Bengal and N.E India.* New Delhi: Kishan and Mittal Publications, 1979, reprinted 2012.

Allen, C. B. et.al. *Gazetteer of Naga Hills and Manipur,* New Delhi: Mittal Publications, 1905

Allen, C.B. et.al. *Gazetteer of the Khasi and Jaintia Hills, Garo Hills, Lushai Hills*, Delhi: Gian Publications, 1980

FBI Register of British Manufacturers 1952-53, Federation of British Industries, 25th Edition, Great Britain: The Chapel River Press, 1952

SECONDARY SOURCES: ENGLISH

1. Arnold, David. *The Cambridge History of India- Science, Technology and Medicine in Colonial India.* UK : Cambridge University Press, 2000.
2. Arnold, David. *Colonizing the Body- State Medicine and epidemic Disease in the Nineteenth Century*. India, Berkeley, Los Angeles: University of California Press, 1993.
3. Arnold, David (ed). *Imperial Medicine and Indigenous Society*. Delhi: Oxford University Press, 1989.
4. Bala, Poonam. *Imperialism and Medicine in Bengal-A Socio-Historical Perspective.* California: Sage Publication, 1991.
5. Bala, Poonam, *Contesting Colonial Authority-Medicine and Indigenous Responses in the Nineteenth and Twentieth Century*, USA: Lexington Books, 2012.
6. Barooah, P.D. *Assam District Gazetteer: Nowgong District*. Guwahati: Government of Assam, 1978.
7. Bhuyan, C. Arun. *Political History of Assam*. Vol-II, Assam: Publication Board of Assam, 2008.
8. Bhuyan, Kumar, Surya. *Studies in the History of Assam*, Second Edition, New Delhi: Omsons Publications, 1985.
9. Bose, Sugata. *Peasant Labour and Colonial Capital: Rural Bengal Since 1770, United Kingdom,* Cambridge University Press, 2003
10. Bayly, .A.C. *Indian Society and the Making of the British Empire*, Sixth Edition, Newyork: Cambridge University Press, 1988.
11. Barpujari, K. H. *An Account of Assam and Her Administration (1603-1822A.D),* Panbazar. Guwahati: Spectrum Publications, 1988.
12. Bose, L. M. *Social History of Assam*. New Delhi: Ashok Kumar Mittal, 1989.

13. Boyce, S.S, *Hemp Cannabis Sativa: A Practical Treatise on the Culture of Hemp for Seed and Fiber with a Sketch of the History and Nature of Hemp Plant*, New York: Mount Pleasant Printery, 1900.
14. Bezbaruah, Ranja. *The Pursuit of Colonial Interests in India's North-East*. Panbazar: EBH Publishers, 2010
15. Baveja D. J. *New Horizons of North-East*, Guwahati: Western Book Depot, 1982.
16. Bose, Manilal, *British Policy in the North-Eastern Frontier Agency*, New Delhi: Concept Publishing Company, 1979
17. Bhuyan, K. S. *Tunghungia Buranji- A History of Assam (1681-1826 A.D),* Delhi: Goyal Offset Printers, 1933.
18. Baruah, L S, *A Comprehensive History of Assam*, New Delhi: Munishiram Manoharlal Publishers Pvt. Ltd., 2013.
19. Chopra, R.N, Chopra, I.C, *Glossary of Indian Medicinal Plants,* New Delhi: NISCAIR, Press, 2009.
20. Chakrabarti, Pratik, *Medicine and Empiret 1600-1960*, China, Palgrave Macmillan, 2014
21. Chapman, Allan, *England's Leonardo: Robert Hooke and the Seventeenth Century Scientific Revolution*, London: IOP Publishing Ltd, 2005.
22. Cooke M,.C, *The Seven Sisters of Sleep: Popular History of the Seven Prevailing Narcotics of the World*, London: James Blackwood, Paternoster Row, 1860.
23. Crosby, W. Alfred, America, Russia, Hemp and Napoleon (ed). *American Trade with Russia and the Baltic 1783-1812.* US: Ohio State University Press, 1965.
24. Chittabrata Palit, *History of Medicine in India: The Medical Encounter,* Noida: Printed at Salasar Imaging System, 2005.
25. Dun,W.E, *Discovery of North-East India,* Vol-VI, Manipur: Mittal Publications, 2005.
26. Davey, James, *The Transformation of British Naval Strategy: Seapower and Supply in Northern Europe 1808-1812*, UK: The Boydell Press, 2012.
27. Das, Dhrubananda. *Khasi and Jaintia Medicine.* Guwahati: Drupad Publishers, 1994.
28. Evangelista, Nola. *Tokin' Women a 4,000 –Year Herstory,* Berkeley, CA: Evangelista Sista Press, 2015

29. Foucault, Michael. *Madness and Civilization: A History of Insanity in the Age of Reason,* USA: Vintage Book Edition, 1965.
30. Goswami, Chandana. *Nationalism in Assam*. New Delhi: Mittal Publications, 2008.
31. Gascoigne, John. *Science in the Service of the Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution*. Australia: Cambridge University Press, 1998.
32. Griffith, T.H Ralph. *Hymns of the Atharvaveda,* Delhi: Munishiram Manohar Publishers, 1985.
33. Goswami, Priyam. *The History of Assam-From Yandaboo to Partition (1826-1947),* New Delhi: Orient Black Swan, 2012.
34. Gait, Edward, *A History of Assam*, Delhi: Surjeet Publication, 2010.
35. Gabriel G. Nahas. *Marihuana-Deceptive Weed.* Newyork: Raven Press Publishers, 1973.
36. Garza, De La, Andrew, *Mughals at War: Babur, Akbar and the Indian Military Revolution, (1500-1605),* Ohio State University, 2010
37. Guha, Amlendu. *Medieval and Early Colonial Assam Society, Polity and Economy,* Calcutta: K P Bagchi & Company, 1991.
38. Guha, Amlendu. *Planter Raj to Swaraj, Freedom Struggle and Electoral Politics in Assam 1826-1947* , New Delhi: Indian Council of Historical Research, 1977.
39. Goswami, Priyam. *Assam in the Nineteenth Century- Industrialization and Colonial Penetration,* Panbazar, Guwahati: United Publishers, 1999.
40. Hand, Andrew, *History of Medicinal Cannabis*, Canada, Nova Science Publishers, Inc., 2016
41. Hodson, C. T, *The Naga Tribes of Manipur*, London: Macmillan & CO., Limited, 1911
42. Hardiman, David, *Healing Bodies and Saving Souls: Medical Missions in Asia and Africa,* New York: Editions Rudopi B.V, 2006
43. Herer, Jack, *The Emperor Wears No Clothes*, USA: AhHa Publication, 2006.
44. Hymavathi, Polavarapu, *History of Ayurveda*, Warrangal: Bhargava Publishers, 1993.
45. Johnstone, James, *Manipur and the Naga Hills*, Central Publishing House, Delhi, 1983

46. Kalita, Chandra, Ramesh, *Assam in the Eighteenth Century*, New Delhi: Omsons Publications, 1992
47. Karmakar, Nath, Rabindra, *Forensic Medicine and Toxicology*, Kolkata, Academic Publishers, 2007
48. Lucas, Shanthkumar, *Nighantus of Āyurveda,* New Delhi: Chaukhamba Publications, 2006
49. Logan, Frederick John, *The Age of Intoxication*, Yale French Studies, Intoxication and Literature, Published by: Yale University Press, 1974
50. Mackenzie, MacDonald, *Imperialism and the Natural World,* United Kingdom, Manchester University Press, 1990
51. Mills, H.James, *Control and Consumption in Britain, 1928-2008,* UK, Oxford University Press, 2013
52. Michael K.Steinberg, *Dangerous Harvest Drug Plants and the Transformation of Indigenous Landscapes*, Newyork: Oxford University Press, 2004
53. M.Z Abdin and Y.P Abrol, *Traditional System of Medicine*, New Delhi: Narosa Publishing House Pvt. Ltd., 2006
54. Mills, Moffatt, A.J, *Report on the Province of Assam,* Second Edition, Gauhati: Publication Board of Assam, 1984.
55. Mills, H. James, *Cannabis Britannica-Empire, Trade and Prohibition 1800-1928,* USA: Oxford University Press, 2003
56. Mills, H. James, *Madness, Cannabis and Colonialism: The Native Only Asylums of British India1857-1900*, London: Palgrave Macmillan Publication, 2000.
57. Mann, Michael, *Sources of Social Power Vol-I- A History of Power from the Beginning to A.D 1760.* USA: Cambridge University Press (1986),2005.
58. *Marijuana and Health, a Report to the Congress from the Secretary, Department of Health, Education and Welfare, Sub Committee on Alcoholism and Narcotics of the Committee on Labor and Public Welfare United States Senate, Washington*. US: Government Printing Office, 1971.
59. Nola, Evangelista, *Tokin' Women A 4000-Year Herstory*, Evangelista Sista Press, 2015.
60. Panchani, Seikher, Chander, *Manipur: Religion, Culture and Society*, New Delhi: Konark Publishers Pvt Ltd, 1987.
61. P. Bahadur, *Caste, Tribes & Culture of India*, Assam, Delhi: Ess Ess Publications, 1977.

62. Philo, Chris,*The Birth of the Clinic: an unknown work of medical geography*, Glasgow: The Institute of British Geographers, 1999.
63. Paul, Rainbow, *The Foucault Reader*, New York: Pantheon Books, 1984.
64. Pal, D.C., *Tribal Medicine*, Calcutta: Naya Prokash, 1998.
65. Pahari, Subrata, 'Travails of Traditional Medicine', Chittabrata Palit (ed.) *History of Medicine in India: The Medical Encounter*, Noida: Printed at Salasar Imaging System, 2005.
66. Rubin, Vera and Comitas, Lambros, *Ganja in Jamaica: A Medical Anthropological Study of Chronic Marijuana Use*, The Hague, Paris: Mouton &Co., Publishers, 1975
67. Ross, A., *Medicinal Plants of the World, Vol. -III: Chemical Constituents, Traditional and Modern Medicinal Uses*, Totowa, NJ, ©Humana Press Inc., 2013
68. Sharma, B. D, *Changing the Cultural Mosaic of a Village in Assam*, Calcutta: Punthi Pustak, 1995.
69. *Selected Essays on Tribes and Castes of Assam*, Guwahati, First Edition, Published by Directorate of Assam Institute of Research for Tribals and Scheduled Castes, 2007.
70. Scott, C. James, *Domination and Arts of Resistance: Hidden Transcripts*, New Haven, London: Yale University Press, 1990.
71. Sanyu Visier, *A History of Nagas and Nagaland: Dynamics of Oral Tradition in Village Formation*, New Delhi: Commonwealth Publishers, 1996.
72. Sarma, Nath, Hirendra, *Traditional Medicines of Arunachal and Assam, Practise and Prospect*, Guwahati: *P*erfect Imagers, November, 2011.
73. Small, Ernest, *Cannabis A Complete Guide*, Canada: CRC Press, 2017.
74. Scott, C. James, *Weapons of the Weak: Everyday Forms of Peasant Resistance*, New Haven & London: Yale University Press, 1985.
75. Tod H. Mikuriya, *Excerpts from the Indian Hemp Commission Report*, San Fransisco: Published by Last Gasp of San Francisco, November 1994.
76. Trivedi, R. V, *Documents on Assam*, New Delhi: Omsons Publications, 1995.
77. Tze, Lao Chow, *Architecture of the Tai Ahom Period*, Assam: Ajanta Press Nagaon, 1999.
78. Lewis, H. Walter, and Elvis, F. P, Memory, *Medical Botany: Plants Affecting Human Health*, Second Edition, New Jersey, Canada: John Wiley& Sons, Inc., 2003.

79. William, Woodruff, *Impact of Western Man: A Study of Europe's Role in World Economy 1750-1960*, Newyork: ST Martin's Press, 1966.

VERNACULAR SOURCES: (ASSAMESE)

1. Baruah, Anjan, *Bishwa Bondit Chah Xilpo*, Jorhat: Publication Jorhat Bidya Bhawan, 2014.
2. Baruah, Chandra, Dhiren, *Bhagawat Tattwa*, Sibsagar: Srimanta Sankar Sangha, January 2019.
3. Handique, Ch, Bhuban, *Changrung Phokanar Buranji*, 2nd ed., Sibsagar: Printworks, 1960.
4. Khanikar, Gunaram, *Book on Traditional Herbal Medicine for Various Disease*, Guwahati: National Tekan Printers, 2011.
5. Katoki, Kumar, Ratan, *Ahom Rajatat Chikitsha Sewa (Pratham Buranji)*, Guwahati: M.S Chandrakanta Press, 2009.
6. Sonovāl, Tulasi, *Asamar Paramparāgata Loka-Cikitsā: Ek Ksetrabhittik Namunā Sangrah*, Second (ed.), Dibrugarh: Government of Assam, March, 2013.

JOURNALS:

1. Ansari, Husain, Tahir, 'Diseases and Medicine in the Colonial Assam during 19th Century', *Journal of Business Management & Social-Science*, Vol- II, January 2013
2. Ashton, H.C., et al., 'Cannabinoids in Bipolar Affective Disorder: A Review and Discussion of their Therapeutic Potential', London, *Journal of Psychopharmacology*, 2005.
3. Barney, Warf, 'An Historical Geography of Cannabis', *American Geographical Society of Newyork*, October 2014.
4. Basu, Ranjan Amit, 'Cannabis and Madness: Evidence from the Indian Hemp Drugs Commission, Bengal 1894', *Studies in History*, 1894
5. Crawfurd. J, 'On the History and Migration of Cultivated Narcotic Plants in Reference to Ethnology', *Transactions of the Ethnological Society of London, Vol-VII*, 1869.
6. Changkija, Sapu, Folk Medicinal Plants of the Nagas in India, *Asian Folklore Studies*, Vol-58, 1999, Deshpande, Anirudh, 'A Historical Overview of Opium Cultivation and Changing State Attitudes towards the Crop in India, 1878 -2000 A.D', *Studies in History*, 2009.
7. Dutta, Jayashree, Kalita M.C, 'Ethno Anti-Diabetic Plants used by a Few Tribes of Rural and Kamrup District, Assam', *International Journal of Pharmaceutical Sciences and Research*, 2015.
8. Dave Bewley et.al, 'The Rise and Decline of Cannabis Prohibition: The history of Cannabis in the Un Drug Control System and Options for Reform', *Transnational Institute, Global Drug Policy Observatory*, March 2014.

9. Frost, Alan, 'The Global Reach of the Empire: Britain's Maritime Expansion in the Indian and Pacific Oceans 1764-1815', Reviewed by H.V. Bowen, *The International History Review,* Vol- 26, No 4, December 2004.
10. Goswami, Kishor, 'Disease and Medicine in Colonial Assam: British Health Policies, Objectives and Social Impact', *Proceedings of the Indian History Congress,* Vol.II, Part-I, 2011.
11. Hacker, Daphna, 'Law & Social Inquiry', *Wiley Vol. 26, No. 2,* 2001.
12. Jacobs, Jack,'The Story of Hemp in Virginia is an Old One', *The Virginia Gazette*, http://wwwvagazette.com/opinion/va-vg-edit-letters-maner-1209-story.html on: 30-04-2018, 22:03
13. Karpakal, Sindhu, 'Cannabis-One of the Sacred Plant in Atharva Veda', *LinkedIn,* July13, 2017, retrieved from https://www.linkedin.com/pulse-one-sacred-plant-atharva-veda-sindhu-karpal on 13-04-2019, 19:30.
14. Kendell Robert, 'Cannabis Condemned: The Proscription of Indian Hemp', Vol-98, *Addiction,* 2003, retrieved from https://onlinelibrary.wiley.com/doi/full/10.1046/j.1360-0443.2003.00273.x on 14-10-2018, 09:08
15. Li, Lin-Hui, An Archaeological and Historical Account of Cannabis in China, *Economic Botany, Vol. 28, No. 4,* Oct. - Dec., 1974.
16. Lees, Cowan R., 'Cannabis Sativa Seu Indica: Indian Hemp', *The British Medical Journal*, Vol-I, No. 1780, Feb. 9, 1895.
17. Ley, .W, 'Observations on the Cannabis Indica, or Indian Hemp', *Provincial Medical Journal and Retrospect of the Medical Sciences*, Vol-V, No. 129, March 18, 1843.
18. Mishra L.N, Balkrishna A., 'Ayurvedic Plants in Brain Disorders: The Herbal Hope', *Journal of Traditional Medicine and Clinical Naturopathy*, May 17, 2017 retrieved from http://www.omicsonline.org/open-access/ayurvedic-plants-in-brain-disorders-the-herbal-hope.php?aid=89160 on: 27-12-2018, 08:19
19. Marzo, Di Vincenzo, A Brief History of Cannabinoid and Endocannabinoid Pharmacology as Inspired by the Work of British Scientists, Trends in Pharmacological Sciences Vol.xx No.xx Monthxxxx, Italy, http://www.sciencedirect.com on: 20-05-2018, 13:19
20. 'Medicinal Plants of Assam', *State Biodiversity Strategy and Action,* Assam, 2002, retrieved from https://www.aidcltd.com>pdf>Medicinal -Plants-of-Assam.com on 29-08-2017, 12:05
21. Nath, Kr. Binoy, 'Opium in Assam: Introduction and its Prevention During the Colonial Period', *Knowledge Scholar – An International Peer Reviewed E-Journal of Multidisciplinary Research an Online Journal*, 2016, retrieved from http://www.knowledgepublishinghouse.com on: 09-08-2017, 15:20
22. Reed, C. Alfred, 'Medical Sketches in the Orient',*The Scientific Monthly*, Vol. 31, No. 3, September, 1930.
23. Rao, R.R, 'Ethnobotany of Meghalaya: Medicinal Plants Used by Khasi and Garo Tribes', *Economic Botany, Vol. XXXV, No. 1,* Jan. - Mar., 1981.

24. Shamir, Ronen, 'Colonialism's Civilizing Mission: The Case of the Indian Hemp Drug Commission', *JSTOR*, Vol- 26, No.2, 2001.
25. Singh, S. K, People of India-Meghalaya, Vol-XXXII, Calcutta: *Anthropological Survey of India*, 1994.
26. Sharma. K. G, 'Cannabis Folklore In The Himalayas', *Botanical Museum Leaflets*, Harvard University, Vol. 25, No. 7, October 30, 1977.
27. Shankar Rama, and Lavekar, G.S, 'Traditional Healing Practice and Folk Medicines used by Mishing Community of N-E India', Vol-III, *Journal of Ayurveda and Integrated Medicine*, 2012, retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC34872377 on: 12-10-2017, 10:30
28. Shah, C.N., and Joshi, C.M., 'An Ethnobotanical Study of the Kumaon Region of India', *Economic Botany*, Vol-XXV, No. 4, December, 1971.
29. Sharma, Kr Hemanta, 'Traditional Medicinal Plants in Mizoram', India, *Fitoterapia*, 2001, retrieved from http://www.elsevier.com/locatte/fitote on 12-10-2017, 15:09
30. Shaughnessy, O' W.B, 'On the Preparations of Indian Hemp or Gunjah', *Provincial Medical Journal and Retrospect of the Medical Sciences*, Vol-V, No. 122, 1843, retrieved from http://www.jstor.org/stable/25491786, on: 20-08-2017, 13
31. Small, Ernest, et al., 'A Numerical Taxonomic Analysis of Cannabis with Special Reference to Species Delimitation', *Systematic Botany*, Vol. 1, No. 1, 1976.
32. Shivaharidas, 'Vedic Use of Cannabis', *Scribd*, 11 November, 2012, retrieved from https://www.scribd.com/doc/112883222/Vedic-Use-of -Cannabis on: 12-04-2019, 18:45
33. Stephen, Pudney, et al., 'Drugs Policy: What Should We Do About Cannabis?', *Economic Policy, Vol. 25, No. 61,* January 2010.
34. Touw, Mia, 'The Religious and Medicinal Uses of Cannabis in China, India and Tibet', *Journal of Psychoactive Drugs* Vol- 13, January-March, 1981, retrieved from http:www.cnsproductions.com> on:
35. Walter, Ernest Dixon, 'The Pharmacology of Cannabis Indica', *The British Medical Journal*, Vol. 2, No. 2028, November, 1899.
36. Waring, J. Edward, 'Remarks On A Few Articles of the Indian Materia Medical', *The British Medical Journal*, Vol-I, No. 1275, Jun. 6, 1885.
37. 'A Commentary on the Colloquies of Garcia de Orta, on the Simples, Drugs, and Medicinal Substances of India', Part I, *Proceedings of the Royal Irish Academy (1889-1901),* Vol-I, 1889 – 1891 'A List of Economic Plants Native or Suitable for Cultivation in the British Empire', *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew),* Vol. 1917, No.7/8, 1917.
38. 'International Convention Relating to Dangerous Drugs Source', *The American Journal of International Law*, Vol- 23, No. 3, July, 1929.
39. Zuardi, W. A., et al., 'Cannabidiol: A Cannabis Sativa Constituent, as an Antipsychotic Drug', *Brazilian Journal of Medical and Psychological Research*, 2006.

40. Zuardi, W. A., et al., 'A Critical Review of the Antipsychotic Effects of Cannabidiol: 30 Years of a Translational Investigation', Current Pharmaceutical Design, 2012, retrieved from reprints@benthamscience.org on:09-11-2018, 07:04
41. Zuardi,W.A., et al., 'Antipsychotic Effect of Cannabidiol', Journal of Clinical Psychiatry, November, 1995, retrieved from http:// www.researchgate.net/publication/15640496, on: 16-03-2018, 09:30
42. 'The Cannabis Problem: A note on the problem and the history of international action', *UNODC-Bulletin on Narcotics-1962*, Issue 4-004, 1962, retrieved from
43. http://web.archive.org/web/20050526043451/http://www.unodc.org/unodc/en/bulletin/bulletin_1962-01-01_4_page005.html on 20-10-2018, 22:03

INTERNET SOURCES

1. *Yearbook of U.S Dept. of Agriculture 1901*, retrieved from http;//www.pinterest.com>pin on: 21-07-2018, 15:02
2. *Russian Hemp Growers, 11 November, 2011*, retrieved from http://englishrussia.com/2011/11/11/russian-hemp-growers/ on 20-10-2017,16:45.
3. *La Roche Jagu Chanvre 1.JPG-Wikimedia Commons*, retrieved from https://commons.m.wikimedia.org/wiki/file:La_Roche_Jagu_chanvre_1.JGP#mw-jump-to-license on 10-11-2018, 09:08
4. *Parvati Offers Bhang to Shiva, Exotic India*, retrieved from http://www.exoticindianart.com/m/product/paintings/parvati/parvati-offers-bhang-to-shiva-HB53 on 14-12-2018, 09:00.
5. *Her Holiness Princess Magu Goddess of Cannabis*, retrieved from http://www.wayofinfiniteharmony.org/wp-content/uploads/2009/12/Her-Holiness-Princess-Magu-Goddess-of-Cannabis.jpg on 14-12-2018, 13:01.
6. *The Hemp Chronicle*, retrieved from https://thehempchronicle.com/topic/seshat-goddess-cannabis on14-12-2018, 12:08
7. *The Goddess Hera in Greek Mythology*, retrieved from http://owlcation.com/humanities/The-Goddess-Hera-in-Greek-Mythology on 14-12-2018, 13:39.
8. Dobhal, Vinay, *Bhang ki Chutni*, ed. Rashmi Binjola, June 30, 2009, http://www.aboututtrakhand.com/Know-About-Dishes/Pahari-Dish-Bhang-Ki-Chutney.html on:15-12-2018,10:00
9. *BhangGujiya*, retrieved from https://pin.it/lpekvfpm4qxs5l on:15-12-2018,13:01
10. Archana Doshi, *Thandai Recipe-Spiced Festival Drink with Saffron and Dry Fruits*, retrieved from https://pin.it/gjfw6q4e5gpq55 on 15-12-2018, 17:08
11. Acharya, Rabinarayan, *Vijaya (Cannabis Sativa Linn.) And its Therapeutic Importance in Ayurveda: A Review*, September, 2015, retrieved from http://www.researchgate.net>publication 13-12-2017, 09:00

12. Amrisha Sharma, *Bhang Peda: Holi Sweet Recipe*, retrieved from https://pin.it/dlgotnobdvnbka on 15-12-2018, 13:30
13. *CBDBhangGoli*, retrieved from http://jubaledibles.com/productcbd-bhang-goli-1-ball on: 15-12-2018,13:05
14. 'Cannabis and Cannabinoids (PDQ) Health Professional Version', *National Cancer Institute,* USA, retrieved from *http:www.cancer.gov/about-cancer/treatment/cam/hp/cannabis/pdq* on:20-10-2017, 22:37
15. 'Cannabidiol (CBD), Pre-Review Report', Agenda Item 5.2, *Expert Committee on Drug Dependence, Thirty-ninth Meeting, Geneva*, 6-10 November 2017, World Health Organization
16. Kogan, and M. Natalya, Cannabinoids in health and disease, Hebrew University of Jerusalem, Israel, 2007, retrieved from www.dialogues-cns.org on: 19-05-2018, 13:05
17. Hugieia, Kai Eirene, 'Asterion: The God of Cannabis', *The Cave of Oracle,* retrieved from http://caveoforacle.wordpress.com/2014/02/11/asterion-the-god-of- cannabis/ on 14- 12-2018, 10:17
18. *The Effect of Christian Proselytization and Philanthropic Activities on the Contemporary Socio-Cultural Milieu of Assam*, Shodganga, shodhganga.inflibnet.ac.in>bitstream on: 17-08-2017, 07:30
19. *Festivals of the Tiwas*, Shodganga, retrieved from shodganga.inflibnet.ac.in>bitstream on 15-11-2017, 10:20

DISSERTATION:

1. Mattingly, Nick, *Natural Knowledge and Sea Power: The Cultivation of Hemp in the British Imperial World*, PhD thesis, Southern Cross University, 2013, retrieved from http://epubs.scu.edu.au>theses on: 03-2018, 22:06