A Metamorphosis of Bãrs: Critical Role of Canal Colonies in Transforming Punjab's Agricultural Landscape

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The Punjab, predominantly known as a region of alluvial plains, presented a significantly different landscape in pre-colonial times. Characterized by sparse populations and minimal agricultural activities, the Bãrs of Western Punjab, beyond the river Ravi formed a distinct part of Punjab's geography. With the advent of British colonial rule, a transformative period ensued, marked by the establishment of Canal Colonies in these regions. This massive irrigation initiative dramatically altered the landscape and demographics of the Bãr areas, leading to permanent changes. By examining the historical context of Bãrs and the development of colonial irrigation projects, this is an attempt to provide an understanding of the transformation of Punjab's landscape and demographic patterns during the colonial era. Additionally, the paper seeks to understand the motivations and objectives behind these massive projects and the social engineering initiatives in the Punjab following its annexation in 1849.

I: The Bãrs of Punjab

> *Heer jaye ke aakhdi babulave, tere nayo ton ghol ghumayian main*
> *Jis apne raj de hukam andar, wich Sandal-Baar khidayian main"*[1]
> ('Says Heer "My father, may my life be sacrificed to you, under the shadow of whose protection my youth has passed happily in the Sandal-Bãr).[2]

With a view to understand the pre-colonial landscape of Punjab, particularly of the Bãrs, we can refer to the acclaimed Punjabi poet Waris Shah. Contrary to the popular notion, the Punjab has not historically been exclusively associated with agriculture. Waris Shah, the renowned poet of Punjab, completed his famous *Qissa* of Heer-Ranjha in 1766 while residing in a place called Malika Hans, located in the Ganji Bãr. The poet hailed from Jandiala Sher Khan, in the region of Sandal Bãr. These were two of the most prominent Bãrs among various Bãrs of the Punjab. While reading *Heer-Waris*, we can observe that in this *Qissa* which serves as a rich archive of the region's cultural anthropology, there is scant mention of agriculture. Instead, the historical narrative places greater emphasis on pastoralism and livestock breeding.[3] Buffaloes are central to this timeless tale. These buffaloes not only occupy a pivotal place in this evergreen story but also form the cornerstone of the entire livelihood in the regions known as the Bãrs.

Those were the Bãrs of Punjab, where once thrived one of the oldest civilizations that ever existed on the Earth.[4] While establishing the Canal Colonies in Punjab, the British officers continued to speculate about the *Thehs* (Mounds) of Bãrs and they wondered about their connection to the ancient history,[5] as Harappan civilization was not yet discovered. The historical significance of this region was brought to light when, in the late 19th century, British archaeologist Alexander Cunningham, during his "Tours in the Punjab-1878-79", discovered ancient *stupas* and temples associated with Buddhism and early Hinduism.[6] Therefore, the material culture and historical context of this region date back a millennium. This history, spanning thousands of years, is divided into several stages. One notable stage is when the region started being referred to as the Bãrs. The exact source and time period are unknown, but it was around the medieval times when this area came to be known as Bãrs. Generally, the vernacular word Bãr is translated literally to mean an uninhabited forest area where a variety of wild grasses and shrubs are found.[7] Some scholars also interpret Bãrs as a threshold or "outer space; an area distant from human settlement and serving as a barrier between populated areas and wild forests".[8] Oral sources suggest that the word Bãr originated from two opposite Persian words: *Bar*, meaning dryness, and *Behar*, which meant water. Some interpretations suggest that the term Bãr refers to deposits left behind by flooded rivers. When a river repeatedly deposits sediment in the same location over a long period, the layers of these fertile loams are called Bãr.[9]

But in reality, the term Bãr extends beyond its literal meanings and cannot be fully understood in those terms alone. The Punjab, the land of five rivers, possesses a sacred geography, with the rivers Sutlej, Beas, Ravi, Chenab, and Jhelum flowing from the upper Himalayas. The land between the interfluves of these five rivers is called a Doab, and each Doab has its unique geography. In the Doabs beyond the Ravi, a specific type of area is referred to as Bãrs. These areas are far from the riverine tracts known as *Hithar* in the vernacular and are situated at a slightly higher elevation than the areas adjacent to the river. There was very little agriculture in these areas, which was mostly confined to the riverine tracts.[10] Pastoralism was prevalent in these Bãrs. In this context, the term 'pastoral highlands'.[11] somewhat describes these areas, but it fails to fully encapsulate the essence of Bãrs. Given the various definitions of the term Bãr, it might seem that these areas were devoid of population, history, and culture. However, contrary to this notion, these areas were indeed rich in these aspects. In fact, no single meaning can fully define Bãr, each Bãr had its own unique nature, both geographically and culturally. Nevertheless, some common trends can be observed across all these Bãrs. The British officers who wrote about the region predominantly conveyed negative, albeit diverse, perspectives. One officer, while acknowledging the unique beauty and vastness of the region, also lamented the loss experienced by its former inhabitants:

> "The Bãr has often been spoken of as a country of extreme desolation, and though this description may be justified by the almost entire absence of crops which could only be grown in the

> most favoured localities and favoured years, yet the landscape though monotonous was far from unpleasing, and after a fall of rain might almost be called beautiful. It certainly possessed a peculiar fascination of its own, to which the wilderness and vastness of the scene doubtless contributed. Few of those who knew it in the past and felt its freedom will regard its disappearance without a sense of genuine regret, despite the enormous benefits which have accompanied the change".[12]

M. L. Darling, while describing the region of Bãrs as the "ugliest and dreariest country in the world", refers to the Deputy Commissioner of Jhang to illustrate its old form before colonisation where he describes it as "unrivalled in the world for its combination of the most disagreeable features a landscape is capable of affording".[13] However, considering the significance of the Bãrs in Punjab's folklore and heritage, these accounts appear insufficient in capturing their true essence. Four well-known Bãrs in the Punjab were namely the Sandal Bãr, the Kirrana Bãr, the Ganji Bãr and the Neeli Bãr.

Referring to the people of Bãr as *Jangalis* - forest dwellers or wild - is entirely inappropriate. The inhabitants of Bãr had a well-defined and complex social fabric of their own. The Bãrs of Punjab were home to various types of people. The people of Bãrs mostly belonged to different tribes and clans. As mentioned earlier, the trend of agriculture was only in the *Hithar* or lowland areas which were near the river. On these uplands, people were involved in pastoralist activities. There were very few permanent villages in Bãr, and nomads used to wander from one place to another.[14] These tribes and clans of Bãrs had their own customs and tribal laws.[15] These people also had their own songs which are called *Dhola*.[15] It is largely true that the people of the Bãrs exhibited a strong tendency toward raiding and committing robberies.[16] Blood feuds were the major characteristic of Bãrs and were considered honourable.[17] Oral traditions also show that, among many tribes, the turban ceremony for a son was performed after the accomplishment of his first robbery or a feud. In these Bãrs, not only did the indigenous nomads of Punjab practice pastoralism, but large numbers of migrants from the Afghan border also arrive used to during the winter season. These pastoralists gathered in the area of *Derajat* and then travelled to various Bãrs of Punjab to find fodder for their animals and engage in trade. After traversing these Bãr regions, some of them went to other parts of North India in search of trade and work.[18]

A. The Sandal Bãr

The Sandal Bãr, located between the Ravi and Chenab rivers in the Rachna Doab, is the most important Bãr in Punjab, both historically and culturally. Sandal Bãr was the region where the ancient city of Sangla was situated towards its northern end.[18] The ancient city of Sangla was known for Alexander's invasion in 326 BC.[19] This city was developed by the Indo-Greek king Mahendra in the 2nd century AD. Sangla finds mention in Greek and Buddhist

texts.[20] The region of Sandal Bãr was important in medieval times due to its proximity to Lahore and was known for long political contestation between different war-like tribal groups inhabiting it.[21]

The Sandal Bãr boasts of a rich cultural heritage, as it is deeply linked with two of Punjab's most famous love legends, Heer-Ranjha and Mirza-Sahiba. Heer and Sahiba hailed from the *Siyal* clan, the dominant clan of Sandal Bãr, while Mirza belonged to the *Kharral* clan. In pre-colonial times, the principal trees of Sandal Bãr - *Jand (prosopisspicigeria), Van (Salvadora oleoides), Kareer (Capparis aphylla), Ber (Zizyphus jujuba), Mallah (Zizyphusnumularia),* and *Kikkar (Acacia arabica)* could all survive extreme droughts, as the rainfall in this region is less than five centimetres a year.[22] These trees hold significant importance in the folk history of Punjab. A popular folk song featuring these trees, particularly the tale of Mirza-Sahiba, vividly describes the landscape of Sandal Bãr:

> Says Mirza-*"Ni Tun Vekh Jandola Baar Da Ehdi Kaisi Chha Bani, Ehdiyan Poran Naal Jamin De Ethe Paindi Nhi Kani"*
> Sahiba replied- *"Tittar Bolan Baar De Te Van Ch Uddan Mor, Tenu Kithon Ayyiyan Nindran Te Menu Khatrre Hor"*[23]
> Says Mirza: "Look at the canopy of *Jand* (*prosopisspicigera*) on the land of the Bãr, how magnificent it appears. Its lush greenery barely allows a single drop of rain to touch the land seen.
> Sahiba replied: "Partridges of the bar chirp in the wilderness, and peacocks rise in the *Van (Salvadora oleoides)*. How can you find sleep when I am surrounded by dangers untold?"

Dullah Bhatti, a famous rebel of medieval Punjab who fought against the Mughal Emperor Akbar, was a heroic figure of Sandal Bãr.[24] In colonial times, the war-like tribe of Kharrals gave a tough fight to colonial masters under the efficient leadership of Rai Ahmad Khan Kharral around Gogera, beyond the River Ravi near the area of Ganji Bãr.[25] There are some contrary views on its nomenclature of Sandal Bãr, some scholars believe its name was derived from a bandit called *Sandhar.* Others believe that the name was derived from the name of an ancient rishi called *Shaandley* who once resided in this region.[26]

B. The Kirrana Bãr

Kirrana Bãr is the last Bãr of Punjab in the north-western part. It got its name from the hill named "Kirrana" located in the middle of it.[27] This area consists of a small range of dry hills. Beyond this Bãr, the salt range is situated, and towards the Indus River, the geography of Punjab changes.[28] From this Bãr, on the Jhelum side, Shahpur was initially the district headquarters, and later, Sargodha was designated as the district headquarters.[29] This Bãr extends from the eastern part of Chaj Doab towards Sargodha in the south. The northern part of Chaj Doab near Mandi Bahauddin and Gujrat is also described as a distinct Gondal Bãr.

C. The Ganji Bar

The Ganji Bãr is located in the western part of the districts of Montgomery and Multan. This Bãr, a vast prairie, derives its name from the vernacular word *Ganj*, which means baldness, because its landscape resembles a bald head, with sparse trees on its surface, and the whole area is a long barren tract.[30] Neighbouring the Cholistan desert, M.L. Darling describes it as a country of "rolling sand dunes patched with grass and hard, unfruitful plains glistening with salt."[31] Dusty winds were a major characteristic of this area and the region was more arid and hotter than the other northern Bãrs of Punjab.[32] This barren tract was also called *Kappar* by locals, starting from a place called Okara and extending southwest towards Multan. The width of this *Kappar* (Bãr) was an average of eight miles, and its length was approximately 125 miles.[33] Like other Bãrs of Punjab, *Jand,Van, Kareer, Farvah,* and Fog were the major trees and plants of Ganji Bãr. *Bhakhra* (*Tribulus terrestris*) and *Tunma* (colocynth) were found throughout the Bãr and were also used for medicinal purposes.[34] Baba Farid-ud-Din Ganj-Shakar, widely regarded as the first poet of Punjabi, composed his verses in the language of Ganji Bãr. This language, known as Multani or Saraiki, is intrinsic to the region. Baba Farid is closely associated with Pakpattan. Ganji Bãr was situated between two significant historical and cultural centres of Punjab, Gogera and Pakpattan. It is interesting to note that the village of Harappa, from which the entire ancient Indus Valley Civilization derives its name, is also situated in the region of Ganji Bãr.

D. The Neeli Bãr

The Neeli Bãr, like Ganji Bãr, was located in the Bari Doab. The old course of the Beas River ran through the middle of Bãri Doab. Ganji Bãr was situated on the northern side of this old riverbed, while Neeli Bãr was located to its south. The area was named Neeli Bãr because the blue sky was visible through the waters of the Sutlej River, giving the water a blue appearance.[35] Buffaloes were regarded as the most valuable assets of the Bãrs, with the Neeli Ravi breed from Neeli Bãr being particularly renowned as the finest and most prestigious. These buffaloes were often referred to as the "black gold" of Punjab.[36]

II: The Annexation of Punjab (1849)

The annexation of Punjab was a complex process influenced by geopolitical strategies, internal dynamics, and the role of key personalities. The British aimed to secure their interests by maintaining Punjab as a buffer region while also capitalizing on its economic potential.[37] The wars and subsequent annexation highlight the interplay between military might and diplomatic manoeuvring, ultimately reshaping the region's history and its role within the British Empire. To fully grasp the intricacies of this conquest, it is essential to delve into the personalities and geopolitical strategies that influenced British policies.

Notably, the differences between Sir Henry Lawrence and his brother John Lawrence,[38] as well as the broader economic and strategic interests of the British, played pivotal roles in shaping the fate of Punjab. The decision to annex Punjab was driven by British geopolitical and economic needs. Punjab served as a crucial buffer region between the East India Company and the volatile regions inhabited by the Afghans and other emerging Western powers. The Treaty of Lahore, signed in 1809 between C.T. Metcalfe and Maharaja Ranjit Singh, established friendly relations between the British and Punjab, reinforcing its role as a buffer. However, the stability of this buffer began to waver following the death of Maharaja Ranjit Singh in 1839, leading to internal strife and weakened leadership.[39]

Sir Henry Lawrence, a prominent British resident at the Lahore Durbar, was a key figure in shaping British policy towards Punjab. Unlike his brother John, Henry Lawrence opposed the idea of immediate annexation. He believed in reconstructing the Durbar by either coaxing or coercing the squabbling chiefs, reflecting his empathetic yet pragmatic approach.[40] However, the British were always aligned with the broader objective of securing British interests rather than genuinely considering the independence and autonomy of the Sikh State. Any plan that did not guarantee their safety was not deemed worthy of consideration. The British also saw themselves as the ultimate authority in the region, responsible for fulfilling certain obligations, including maintaining control and stability.[41]

The First Anglo-Sikh War (1845-46) was marked by fierce battles between the Sikh forces and the British army. Despite the valiant resistance, the Sikhs faced defeats in key battles such as Ferozeshah and Sabraon. Lord Gough, the British commander-in-chief, narrowly avoided defeat and described the Battle of Sabraon as the 'Waterloo of India'.[42] The subsequent Treaty of Lahore compelled the Lahore Durbar to cede the fertile and prosperous Bist Jalandhar Doab region to the British.[43]

In his renowned 'Jangnama',[44] Shah Muhammad depicts the transformative events within the Lahore court and the advent of British rule in the Punjab after this war:

> "Rhenda Mulk Firangi De Peya Pete,
> Kita Hukam Jo Goreyan Sareyan Ne.
> Mayi Fauj Nun Chaye Ke Jawaab Ditta,
> Ditti Naukri Shad Vichaareyan Ne.
> Pishon Saanbh Leya Mulak Kaardaran,
> Bakhtaavaran Nek Sitaareyan Ne.
> Shah Mohammanda Lok Viraan Hoye,
> Tod Sutteya Mulak Ujaardeyan Ne".[45]

(The remaining country too fell into the lap of the Feringhee. (British)For, such were the orders they now promulgated. The Mai sacked the Punjab army. The ranks were demobbed as a consequence. The country now passed into the hands of Company functionaries. As well as of the sons of men of

> means. O Shah Mohammed! People were devastated, country was broken and destroyed in wholesale).[46]

The Second Anglo- Sikh War (1848-49) further solidified British control over the Punjab. The decisive Battles of Chillianwala and Gujrat saw the defeat of the Sikh militia, leading to the complete annexation of the Sikh Empire.[47] This annexation was pivotal for the British Empire, as it not only expanded their territorial control but also secured a strategically important region.

III: Encounters and Aspirations

Before discussing the 'metamorphosis of the Bãrs' or the transformation brought about by the canal colonies in Punjab's agricultural landscape, it is worth examining some early trends of the British encounters in Punjab and their aspirations for the region. The western and eastern parts of Punjab exhibit different agricultural trends. The land between the rivers Sutlej and Beas is known as Bist Jalandhar Doab. During the Sikh period, this Doab was referred to as "the garden of Punjab" due to its abundant natural water and numerous wells, which facilitated flourishing agriculture.[48] The submontane areas of Punjab, including Ambala, Hoshiarpur, Gurdaspur, Sialkot, and Gujarat, received the most rainfall, benefiting agriculture in these regions.[49] The Majha region, particularly around Lahore and Amritsar, also had good water resources, supporting successful agricultural practices. The southeastern part of Punjab, encompassing parts of Malwa and modern-day Haryana, had a sparse population and tended towards dry cultivation mixed with some pastoral farming.[50]

The Punjab can be considered the most promising region - a land full of potential and capabilities for British exploitative endeavours. Specifically, the regions of Bãrs in western Punjab possessed great capabilities for canal irrigation.[51] Long before the annexation of Punjab, the British were keenly interested in exploring these possibilities. We get a glimpse of this policy and intention from the letters of Sir Henry Lawrence, who was the Resident at the Lahore Court. In 1841, he wrote about his journey from Ferozepur to Peshawar, noting that the region beyond the Ravi lay uninhabited. He expressed his surprise that there were only wild grasses in this area and that the settlements or inhabitants were sparse or non-existent over wide stretches.[52] It was bewildering to the British imagination to see such a vast and rich alluvial land lying virgin and desolate. It was a throbbing scene in their eyes, and they fantasized about filling this vacuum of their imagination by "irrigating, populating, regulating, and reordering this desolate and deserted wasteland."[53]

It may be necessary to limit our discussion to the canal colonies and agriculture. However, it wouldn't be inappropriate to mention that the changes brought about by the British were not confined to material aspects alone. Colonialism had a profound impact on the livelihoods, and collective consciousness of the Indian people. This was partly due to the extensive social and anthropological studies conducted by the British on the society and people of India. This also applies to the colonial rule in Punjab.

In this context, administrator scholars such as Richard C. Temple and Denzil Ibbeston[54] hold significant importance. However, it is also worth mentioning some individuals who were active before the British annexation of Punjab. One notable figure is William Carey, who is considered the father of Indian Missions. In 1812, the missionary William Carey, who lived in Srirampur, Bengal, wrote the first grammar of the Punjabi language.[55] Continuing this legacy, the Ludhiana Presbyterian Press was established in 1935, with L. Janvier and J. Newton playing crucial roles in understanding the Punjabi language and evangelistic work.[56] However, they characterize Punjabi as the language of the Sikhs and do not recognize it as the state language, fearing a renewed political claim by the Sikhs on Punjab.[57] When we consider this phenomenon in conjunction with Henry Lawrence's remarks, we can gain insight into the British's long-term strategies and aspirations for Punjab.

The irrigation policy of the British in India categorised canals into two categories, productive canals and protective canals. Tirthankar Roy argues that the "distinction between those works built for purely administrative or famine relief purposes (later named 'protective' works) and those built to increase agricultural production (later called 'productive' works). The former class need not yield an income, though they might save the government money that would have to be spent on famine relief if a famine occurred. The latter class could be commercially profitable for the government. That irrigation works could be remunerative in both these senses, as money saved and money made, had already been demonstrated by several major works."[58]

As is easily understood from this, profit was the primary priority of the British. To fulfil this aspiration, along with the construction of canals, the commercialization of agriculture was also crucial. Additionally, the development of transportation and communication infrastructure was necessary. Punjab was the ideal destination for the realization of these aspirations and was set to become a part of the world market as never before. A significant canal project prior to the British advent in Punjab was the Yamuna Canal, constructed in the thirteenth century by Feroze Shah Tughlaq, which irrigated areas up to his lodge in Hisar. The Huslee Canal, excavated during the reign of Mughal Emperor Shah Jahan, supplied water to Lahore. This canal underwent renovation during the Sikh period and was extended up to Amritsar.[59] The Khanwah Canal was situated in the middle portion of Bãri Doab.[60] Besides these major canals, people would divert the supplies of natural drains or '*nullahs*' for irrigation.[61] After the arrival of the British in Punjab in 1849, the work of renewing and repairing the existing irrigation facilities began.[62] Numerous proposals for large and extensive projects were envisioned, discussed, and exchanged between the administrative offices of the state and the imperial government.[63]

IV: Pioneering Projects before the Canal Colonies

Even after the British victory in the Anglo-Sikh wars, they continued to face the threat of resurgence by Sikh forces. In a report of November 1849, Charles

Napier expressed doubts, stating that they had merely occupied Punjab militarily and had not yet fully conquered it.[64] The Majha region had historically been the centre of political and religious activities in Punjab. This context provides insight into why the British constructed the first canal in Punjab, known as the Bari Doab Canal, in 1850.[65] The canal was drawn from the Ravi River. One of the reasons given by the government for this project was to employ disbanded Sikh forces. Another reason was to protect the Majha area from seasonal fluctuations. The people of this region were described as the 'flowers of the nation'.[66] The British aimed to restore vitality and fertility to a region. They believed that it was once inhabited by people and served as a hub of commerce and agriculture. Over the centuries, however, this area had transformed into a refuge for wild animals, a wilderness of forests and underbrush. This desolation was further accentuated by the presence of ruins and relics, which stood as poignant reminders of a lost era of prosperity.[67] The Bari Doab Canal began its irrigation operations in 1859. In its inaugural year, the canal successfully irrigated 50,505 acres of land between the river Beas and Ravi.[68]

It is worth noting that, during the initial years of British rule, many native states began to show a keen interest in irrigation projects. In addition to one chief from the frontier district, several landed proprietors demonstrated a strong desire to irrigate their native areas. To achieve this, they approached the British authorities to form joint ventures.[69] As a result of these initiatives, the next major canal system was launched under the auspices of the princely state of Patiala. As a result, the second major canalization project in Punjab was initiated under the name of the Sirhind Canal. Besides Ludhiana and Ferozepur upstream from the Sutlej River, water was transported to the states of Patiala, Jind, and Nabha through this canal.[70] Although the surveying work for this canal began in 1836, it was not completed until 1887.[71] By 1901, 961,000 acres of land were irrigated by this canal.[72] In addition to the Patiala State, which benefited from this system by supplying irrigation to 35 per cent of the total area to be irrigated by the entire Sirhind Canal project, the Native States of Nabha, Jind, Faridkot, Malerkotla, and Kalsia benefited to the extent of 18 per cent of the total area commanded by the project. The remaining 47% of the area was commanded lay in British territory.[73]

The implementation of these two canal systems significantly altered the cultivation practices in the Majha and Malwa regions, which are culturally significant areas of eastern Punjab. It is important to note that these canal projects were constructed in central Punjab, which was already densely populated and extensively cultivated. While Malwa was not as densely populated as Majha, it still had established villages.[74] This was merely the beginning. In the decades that followed, the British were set to unveil a project far grander than the initial two canal systems. The land of the five rivers and its people likely sensed the impending transformation. This new endeavour was poised to radically reshape the Bãrs of western Punjab, irrevocably altering the region's destiny.

V: Transforming Bãrs: Development of Nine Canal Colonies

What inspired the British authorities to undertake such a large canalisation project in Punjab? Despite some disagreements on the specific reasons, there is broad consensus on several major causes for this extensive and strategic initiative. In the words of Eric Stoke, "British policies moved within the orbit of ideas primarily determined in Europe", and in doing so, he cites Utilitarian ideas as one of the reasons behind the English policy.[75] On the other hand, Neeladri Bhattacharya further talks about the adaptation of the agricultural policy to local conditions according to political needs as being behind the British policy. He elaborates on how experiences from the British Empire in India influenced the formation of agricultural policies. The importance of the legitimacy and stability of the empire was also considered in policymaking.[76] We can see the combination of both these notions in the agricultural policy of Punjab during British rule. While the first conception can be seen to have a major impact on the creation of canal colonies itself, the second concept played an important role during the land allotment in these colonies. The government presented two key reasons for creating new canal colonies in wasteland areas:

> "To relieve the pressure of population upon the land in scheme those districts of the province where the agricultural population has already reached or is fast approaching the limit which the land available for agriculture can support." [77]
> "To colonize the area in question with well-to-do yeomen of the best class of agriculturists, who will cultivate their own holdings with the aid of their families and of the usual menials, but as much as possible without the aid of tenants, and will constitute healthy agricultural communities of the best Punjab type."[78]

In considering the first reason presented by the government for colonization, it is essential to understand how the British portrayed themselves as paternalistic and benevolent rulers to the Punjabis. As they took over the kingdom, they particularly sought to embrace the Sikh population. It is important to note that the central districts from which they sought to relieve population pressure were Sikh-majority areas of the region.

In the quest to identify the "best class of agriculturists", the allocation of land in the canal colonies represented an intriguing phenomenon. Imran Ali argues that the ownership of land was transferred according to the State's discretion. This arbitrary distribution of land by the British was intrinsically tied to their political and economic motives. The British preferred to grant land to existing proprietary classes and the landed gentry to secure loyalty and ensure the stability of the Empire in the province.[79] Furthermore, he analyses the increasing authority of the State over indigenous society, as the British now controlled the means of production, specifically water and land.[80] It was only natural that economic gain was the primary motivation behind this grand scheme devised by

the British. The potential return on investment was carefully evaluated before committing to these extensive projects. However, due to the entrepreneurial spirit of the Punjabi people and the region's ideal geographical conditions, the British reaped far greater benefits from these canals than they had initially anticipated.[81]

The British canalization and investment in the Punjab were not limited to the economy and its profits, as we have discussed above, it was used for the stability of the state. In this context, the phenomenon of using canal settlements directly for military needs comes to the fore. However, it is important to note that three major infrastructural initiatives, namely in roads, railways and telegraphs of early British rule in Punjab, are directly associated with the smooth movement of the military, its operations and communication purposes, which are seen as crucial and strategically important for the frontier province. But these three initiatives helped agricultural growth in the province in return too.[82] In the canal colonies of Punjab, lands were directly given to the soldiers working for the state. "War veterans" also got lands. Apart from these "military grants", "pensioners" were also given lands from "civilian grants". Generally, military men and soldiers were given direct preference during allocation. It is also noteworthy that the "agricultural castes," to whom land grants were allocated, were often connected to many of the British military personnel. As a result, the benefits of these land grants extended to a significant segment of Punjabi society, fostering loyalty and friendship between the local population and the British rule.[83] In addition, we will further consider the "horse breeding grants" in the Jhelum colony portion which were directly linked to the military needs of the State. It should be noted that the entire area covered by these canal colonies and newly constructed canals was not originally part of the Bãr regions. However, a significant portion of the total area commanded, particularly under the projects of the Lower Chenab Canal, Lower Jhelum Canal, Lower Bari Doab Canal, and Neeli Bãr Colony, was previously part of various Bãr regions.

The Sandal Bãr was the most important region in the Punjab in terms of heritage and history. This pastoral highland situated between the rivers Ravi and Chenab, belonged to the indigenous tribes and clans, most of them were nomadic pastoralist. Settled agriculture and private ownership existed only in the *hithar*,[84] which refers to the low-lying land adjacent to a river. As the river eroded one side, the high land on the opposite side was called *Dhaya.* These pastoral tribes and clans were the *de facto* rulers of the Bãr. Pre-colonial states never interfered with or penetrated the livelihood or local practices of these people. However, colonial authorities did not entertain the claims of these nomadic people and the land was designated as wasteland, now belonging to the government only.[85]This vast tract assumed as waste land was full of possibilities for colonization and commercial agriculture. That is why the largest canal colony of Punjab was built in the area of Sandal Bãr.

The Sandal Bãr was now officially renamed as the Chenab Colony, in which water was arranged through the Lower Chenab Canal. The weir was built at Khaki in Gujranwala district, from where the main canal with bed width of 250 feet and 9.6 feet depth of water was discharged.[86] At 28 miles, from a place

called Sagar, the largest branch of the canal, Gogera, carries about half of the water. The Gogera branch irrigates the south-eastern part of the Bãr. The other significant branch, Jhang, irrigated the western part of the Bãr. A secondary branch from Jhang, called Bhowana, reached the end of the Bãr, extending to the villages of *Hithar*. Both the Rakh and Mianwali branches irrigate the central parts".[87] Additionally, a comprehensive network of smaller canals branched out from these major waterways, extending throughout the Bãr. By the end of 1902-03, the main branches and their distributaries spanned a total length of 2,254 miles.[88] These canals, much like blood vessels, had spread throughout the entire expanse of the Sandal Bãr. Overlooking the indigenous people of the Bãr, the British government, in search of the "best agriculturists", initiated large-scale migration, from the central districts of Punjab. The Government of Punjab explains the rationale behind this immigration as an effort to preserve the tradition of Punjab as a region of peasant farmers. They aimed to attract sturdy, well-to-do, and enterprising farmers to these new colony lands.[89] The British authorities also disrupted the traditional land ownership patterns of Punjab by allocating land in the Sandal Bãr. While the pastoral rights of nomads were ignored, this shift marked a transition from the collective ownership rights of village communities to the individualisation of property.[90]

In addition to some miscellaneous grants to the elite section of society, the colonization scheme divided land grants into three categories: Peasant, Yeoman, and Capitalist, which were allotted approximately 78 per cent, 8 per cent, and 7 per cent of the total grants, respectively.[91] Certain castes were preferred over others. Most of the land grants were given to the agriculturist castes of Punjab, such as the Jatts, Kambojs, and Arains. Specifically, 36 per cent of the land grants in the Chenab Colony were allocated to the Jatts.[92] A notable feature of this social engineering was that the landless poor remained landless in these new canal colonies, as the British did not want to alter or disrupt the social setup of traditional society. Consequently, their roles as labourers and subtenants remained unchanged, which raises questions about the idea of social change propagated by the British.[93]

Immigrants in these colonies and particularly to the Chenab Colony primarily came from the central districts of Amritsar, Hoshiarpur, Gurdaspur, Jalandhar, and Ferozepur, as well as from other districts of eastern Punjab in smaller numbers. The arrival of these immigrants led to a significant increase in the population of the "Bãr" region. Comparing the figures from 1892 and 1921, the population density per square mile in Jhang increased from 113 to 165, and in Sheikhupura, it increased from 136 to 247.[94] The first planned city of Punjab was established in the heart of Sandal Bãr, called Lyallpur, named after Sir James Lyall, then Lieutenant-Governor of Punjab. The population figures for this newly formed district are particularly notable. In 1892, the population of the district was approximately 60,000, which increased to 1,160,000 by 1911.[95]

The government did not anticipate significant opposition from the nomads. However, the nomads attacked the new colonists and farmers, creating numerous problems for the administration.[96] This grand scheme, devised by the British government and primarily benefiting the English, resulted in

considerable hardships for both the nomads and the new immigrants. The nomads' rebellion is understandable, as they were the original inhabitants of the Bãr, and this substantial change was being imposed on their land without any trust being placed in them. The British government adopted various repressive measures to control these nomads. Ultimately, through persistent efforts by the administration and seeing no other option, the British gradually succeeded in transforming the nomads from pastoralists to settled agriculturalists.[97] This transformation represented a triumph of British social engineering.

Next to the Sandal Bãr, towards its northwest, beyond the river Jhelum, there was the area of Kirrana Bãr. This Bãr was transformed by the Lower Jhelum Canal, with work commencing in 1902. In the northern part of the Chaj Doab, the headworks and weir of this canal were built at a place called Rasool. This canal, 140 feet wide, was divided into two branches, northern and southern, after approximately 40 miles.[98] By 1921, this canal was irrigating 439,000 acres of crown wasteland, a large portion of which was in the Kirrana Bãr. Along its course, a network of canals, over 200 miles long, was established in the Kirrana Bãr and the Chaj Doab.[99] However, in this canal colony, land grants were allocated differently compared to other colonies. The military needs of the imperial government were prioritized here. On the recommendation of the Horse Breeding Commission, a significant number of 'horse breeding grants' were issued in the Jhelum Colony. By 1922, out of the total 440,000 acres, 240,000 acres were allocated for 'Horse breeding grants'.[100] While common peasants were given one to two squares (approximately 27 acres) of land to raise a mare, yeomen and elite landlords were allotted larger tracts of land to raise more mares.[101] To ensure smooth administration, efforts were continually made to transition the *Jangalis* from a nomadic-pastoralist lifestyle to settled agriculture. Approximately 60,000 acres of land, constituting 14 per cent of the total grants, were allocated to the nomads, in this new colony. However, this land, which was of very poor quality, was allotted to the indigenous inhabitants of the Kirrana Bãr.[102]

The British undertook a challenging project to colonize the next Bãr of Punjab known as Ganji Bãr. Situated in the southern part of Bãri Doab, including the areas of District Montgomery and Multan, Okara, Mian Channu, and Khanewal were other significant towns. There was insufficient water in the Ravi River to irrigate Ganji Bãr. Consequently, water from the Jhelum and Chenab rivers was diverted into the Ravi River as supply for the Lower Bari Doab Canal.[103] This initiative is referred to as the Triple Canal Project. The first canal, called the Upper Jhelum Canal, was sourced from Mangla Headworks and supplied water to the Chenab River. The second canal, called the Upper Chenab Canal, was sourced from Marala Headworks and its water was diverted into the Ravi River. Finally, the Lower Bar Doab Canal was sourced from a location called Balloki, approximately 40 miles south of Lahore.[104] A famous Persian couplet describes the region of Multan as follows:

> "Chaar Cheez Ast Tohfa-e-Multan, Gard, Garma-o-Gada-o-Goristan."[105]

> "With four special gifts, Multan abounds: Heat, Beggars, Dust, and Burial Grounds."

However, this region had now received a new gift in the form of the Lower Bari Doab Canal, which may challenge the accuracy of this verse. Like Kirrana Bār, horse breeding grants were also encouraged in Ganji Bār. However, unlike in Kirrana Bār, these grants were not compulsory. Instead, peasant grantees were enticed with the promise of additional land for horse breeding to foster competition among them and fulfil the imperial government's need for horses.[106] Additionally, other military needs were prioritized in Ganji Bār. Approximately one lakh acres were allocated for military grants, and during World War I, an additional 75,000 acres were added.[107] This constituted approximately 20 percent of the total colony. The largest state farm in India, comprising 20,000 acres, was also allocated to the military in Ganji Bār. This farm provided fodder for army horses and other financial benefits for the army.[108] Seventy thousand acres were also allocated to members of the 'landed gentry' who were considered loyalists to the British government and provided assistance to the state during significant political crises.[109]

For the first time, special grants were allocated to two communities from the opposite strata of society. Sixty thousand acres were allocated to the landed gentry, and 20,000 acres were allocated to the depressed classes and criminal tribes.[110] However, the political needs of the British government were prioritized here over the welfare of any marginalised community, because the issue of indigenous nomadic tribes was a persistent problem for the administration. It is also worth noting that the population of 'depressed classes', whom the government claimed they wanted to ameliorate, was two million.[111]

Although the nomads of the Bār initially opposed the newly arrived immigrant farmers in many places, the situation was not uniform everywhere. Relations between the two communities were not always harmonious; however, instances of camaraderie and solidarity are documented in a memoir of an immigrant farmer of Ganji Bār. The *Jangalis* learned agricultural methods and techniques from the newly arrived farmers.[112]

Neeli Bār was the last colony to be settled in Punjab. Canal colony also got its name from Neeli Bār. Till now the British government had tried every kind of experiment with Punjab and land grants, whatever could give them profit. But for the first time, 45 per cent of the area under perennial irrigation in Neeli Bār was reserved for auction. This was culmination of the remunerative efforts of the British government.[113] To colonize the Neeli Bār a project was initiated to divert multiple canals from the Sutlej River. This project, named the Sutlej Valley Project, began in 1922 and continued into the 1940s. It is noteworthy that this project arranged to provide water not only to Punjab but also to Bahawalpur State and Bikaner State.[114] Two important headworks were constructed at Suleimanke and Ferozepur, which facilitated the supply of water to Dipalpur, Pakpattan, and other areas of Nili Bār.[115] The history of the Sutlej Valley Project provides insight into the aspirations of the British Raj regarding the Punjab. Although the work on the Sutlej Valley Project commenced in 1922, British

officials had been proposing canalization in this region adjacent to the Sutlej River since 1854 when a proposal was made to build a weir and bridge at Ferozepur. Then, in 1866, a proposal was put forth to dig a canal from Harike.[116] Such proposals continued to be submitted to the government throughout the late nineteenth and early twentieth centuries. However, these plans were repeatedly postponed due to high costs, disagreements with the Bahawalpur state, and other reasons.[117] In this discussion, we have primarily focused on the canal colonies constructed in the Bãr areas. These four canal colonies were the largest irrigation projects in Punjab in terms of acreage. Additionally, other smaller projects were also established in Punjab. Among them were the Sohan-Para and Sidhnai Colony projects in the Bari Doab during 1886-88. Two smaller colonies were established in the areas above the Lower Chenab Colony and Lower Jhelum Colony, which were irrigated by the Upper Chenab and Upper Jhelum Canals. Moreover, the Chunian Colony in the lower part of Lahore district was also a significant project. Collectively, these irrigation projects increased the canal-irrigated area in Punjab from approximately 3,000,000 acres in 1885 to 14,000,000 acres by 1947.[118]

The trends in crop cultivation within the canal colonies demonstrate that wheat was the most cultivated crop during this period, particularly in the canal colonies and in Punjab in general. Cotton was the second most cultivated crop. In the areas of Jalandhar, Gurdaspur, Hoshiarpur, Ludhiana, and Sialkot in Punjab, favourable rainfall, suitable soil, and weather conditions led to the extensive cultivation of sugarcane too.[119] Due to the commercialization of agriculture, so-called inferior crops were replaced by superior crops. In the districts of central Punjab and the canal colonies, wheat substituted traditional crops such as *Jowar, Bajra, China, and Kangi*.[120]

With the settlement of the Neeli Bãr, the transformation of the Punjab Bãrs by the British had reached its peak. These Bãrs were no longer as they once were. The vast open tracts of all these Bãrs were divided into small ‘squares’ and ‘rectangles’. Many branches of canals emerged from each main canal, and numerous field channels or outlets branched from these, through which the ‘rectangles’ and ‘squares’ received water. One unit of these ‘Squares and Rectangles’ was called a ‘Chak’.[121] The number of Chaks determined was based on the number of water outlets adjacent to the canal. To provide these statistics with a human and poetic form, and to imbue them with cultural meaning, people added the names of their old villages, elders, or other traditional-cultural names to these numbers. Even today, the names of most villages in western Punjab exist in this way. Days were divided into eight *pehars* (three-hour periods), with one or two *pehars* allotted accordingly into ‘turns.’ Each farmer was assigned a specific time or turn to water their crops, known as *waribandi*.[122] This substantial shift in the Bars landscape is evident from the data presented in the table below.

Canals in Operation in Bãrs area	Mileage	Year of Completion	Area Irrigated ('000 acres)
Lower Chenab Canal	2,904	1899-00	2,921
Lower Jhelum Canal	1,193	1917	1,005
Lower Bari-Doab Canal	1,499	1917	1,540
Sutlej Valley Project	3,526	1933	2,235

Source: Statement II C in *Administration Report of the Punjab Public Works Department (Irrigation Branch),* 1945-1946. [123]

Although these *Chaks* were not solely formed through the construction of canals, the British government had already begun dividing the Bãrs into Chaks even before the establishment of the canal colonies. To control the pastoralists who roamed freely in the Bãrs and to end the local traditions and nomadic politics of the Bãrs, the government implemented several symbolic measures.[124] One such measure was the imposition of the '*tirni*' tax. Although this tax existed prior to British rule, it was now levied based on small administrative units in Sandal Bãr, referred to as Chaks. Nomadic pastoralists could no longer graze their cattle from one Chak to another.[125] Like the trees and bushes growing in these areas, the people of the Bãr were deprived of their freedom to roam freely. Many other such laws were enacted, resulting in the Bãrs being taken away from the original inhabitants.

The newly arrived immigrant farmers also faced considerable hardships. These farmers and their descendants spent their entire lives and the coming generations to "irrigate, populate, regulate, and reorder" these Bãrs. The Bãrs no longer appeared as eyesores to the British; the perceived "evil" was removed from the land, making it no longer ugly or dreary. The British had fulfilled their dream. For this fulfilment, Punjab had to change itself forever in many ways, and the Bãrs had to sacrifice themselves for it. The Bãrs were no longer resembling their former self, both in terms of demography and landscape. The traditional trees - *Jand, Kareer, and Van* - that once characterized the Bãr had largely disappeared from the newly developed colonies.[126] The melodious calls of *Tittars*, or partridges, were replaced by the bustling sounds of crop trading. The once frequent crowing of peacocks had given way to the sirens of railway engines. This was no longer the Bãrs of Heer-Ranjha or Dulla Bhatti, where Ranjha's flute once filled the air and echoed with the fierce challenges of Dulla Bhatti. Instead, it transformed into the largest commercial agricultural market in South Asia.

Conclusion

Historically, numerous kingdoms and empires have left their mark on the land of Punjab over the centuries. However, colonial policies of the British Empire

uniquely transformed Punjab's landscape and demographics in unprecedented ways. It is crucial to understand how colonialism, primarily driven by political and economic motives, exploited both the indigenous population and the land in South Asia. The imposition of colonial laws and knowledge had a profound impact on the lifestyle and mindset of the people. The integration of Punjab's agriculture into the global market triggered far-reaching changes, particularly in the Bãrs region. These irrigation projects, started under British rule, significantly altered the centuries-old heritage, folk culture, and history of Punjab, leading to the disappearance of the traditional landscape of the Bãrs. Existing studies examine the economic and social conditions of the Punjabi peasantry, exploring whether these conditions improved and how the peasantry became ensnared in debt. This raises questions about British claims about their paternalistic and civilizing mission. Additionally, a tragic consequence of these large-scale irrigation projects and colonial social engineering was that thousands of farmers settled in the canal colonies had to be displaced once more during the partition of 1947, leading to a tragic massacre.

Notes

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3 Manzur Ejaz, *Waris Shah: The Ideologue* (Virginia: Sulaikh/ Wichaar, 2019), p. 56.

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5 *Gazetteer of the Chenab Colony, 1904*. (Lahore: Civil and Military Gazette Press, 1905), pp. 3-4.

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7 Harkirat Singh, *Yaddan Ganji Baar Diyan*, p. 5.

8 Mushtaq Soofi, "Punjab Notes: Bar: Forgotten Glory of Punjab", *Dawn*, June 13, 2014. (https://www.dawn.com/news/1112454) 10/12/2024.

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10 Imran Ali, *The Punjab Under Imperialism 1885-1947*. (Princeton: Princeton University Press, 1988), p. 18.

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12 *Gazetteer of the Chenab Colony*, p. 6.

13 M. L. Darling, *The Punjab Peasant in Prosperity and Debt* (London, Oxford University Press, 1925), p. 9.

14 Neeladri Bhattacharya, *The Great Agrarian Conquest*, pp. 348-50.
15 For more details, see Sher Singh Sher, *Baar De Dhole*, In Punjabi, (Amritsar, Hind Publication, 1954).
16 Neeladri Bhattacharya, *The Great Agrarian Conquest*, pp. 345-46. For more details, see Richard C. Temple, *The Legends of Punjab Vol. I.*
17 Neeladri Bhattacharya, *The Great Agrarian Conquest*, pp. 345-46.
18 Neeladri Bhattacharya, "Pastoralists in Colonial World", *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*, (edited by David Arnold and Ramachandra Guha), (Delhi: Oxford University Press, 1995), pp. 49-51.
19 *Gazetteer of the Chenab Colony*, pp. 11-12.
20 *Ibid*, pp. 11-12.
21 Neeladri Bhattacharya, *The Great Agrarian Conquest*, p. 342.
22 *Gazettteer of the Chenab Colony*, pp. 7-9.
23 This is a famous Punjabi folk song about Mirza and Sahiba, sung by Alam Lohar and many other singers. In it the trees of the Bãr regions are specifically mentioned.
24 Shafqat Tanveer Mirza, *Resistance themes in Punjabi literature* (Lahore: Sang-e-Meel Publications, 1992), pp. 100-105.
25 *Ibid*, pp. 100-105.
26 Harkirat Singh, *Yaddan Ganji Baar Diya*, p. 6.
27 Ibid, 7; Nain Sukh, *Dharti Panj Dariyayi*, p. 134.
28 *Punjab District Gazetteer of Shahpur District, vol xxx A, 1917.* (Lahore, The Superintendent Government Printing, Punjab, 1918), pp. 10-11.
29 *Ibid*, p. 47.
30 Harkirat Singh, *Yaddan Ganji Baar Diyan*, pp. 10-12.
31 M. L. Darling, *The Punjab Peasant in Prosperity and Debt*, p. 129.
32 Harkirat Singh, *Yaddan Ganji Baar Diyan*, pp. 30-32.
33 *Ibid*, pp. 10-11.
34 *Ibid*, pp. 13-14.
35 *Ibid*, pp.7-8.
36 Nain Sukh, *Dharti Panj Dariyayi*, p. 135.
37 Surjit Singh Bal, *British Policy Towards Punjab, 1844-49*, (PhD Thesis, University of London, 1962), p. 6.
38 Rajmohan Gandhi, *Punjab: A History from Aurangzeb to Mountbatten* (New Delhi: Aleph Book Company, 2015), pp. 187-194.
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41 Lt. Col Sir C. M. Wade, C.B., "Notes on the state of our relations with the Punjab and the best mode of their settlement", *How to Rule India: Papers related to British Policies towards Punjab*, (edited by Ahmed Saleem), (Lahore: Punjab Adbi Markaz, 1978), p. 31.
42 Khushwant Singh, *A History of The Sikhs Vol II 1849-2004* (New Delhi, Oxford University Press, 1999; 2004), pp. 50-52.
43 *Ibid*, p. 55.

[44] Shah Muhmmad,. Jangnama *Singha Te Firangian Da,* (Edited by, Piara Singh Padam), (Amritsar: Singh Brothers, 1973), pp. 9-10. "Initially, Muslim poets wrote about the battles of Hazrat Muhammad Sahib or the martyrdom of his two grandsons, Hasan and Hussain. There appears to have been a similar tradition in Persian literature, which influenced Muslim poets to compose such stories in Punjabi, labeling them as "Jangnama." The term "*jang*" means war or battle, while "*nama*" refers to a composition or writing, signifying a work that depicts a state of war. Muslim poets rarely employed verse; instead, they predominantly wrote war stories in forms such as *Dwaya*, *Dohra*, and *Baint*. In some instances, they also adopted the style of Persian *Masnavis*. Punjabi literature has its own tradition of writing epics, with Muslim poets being the pioneers of this genre. Subsequently, non-Muslim poets also embraced this poetic form. Initially, narratives written about Islamic wars were known as war chronicles. Later, the intense conflicts between the British and the Sikhs provided poets with a new context. Consequently, many of the religious *wars* of Guru Gobind Singh and the stories of the four *Sahibzades* were also adapted as war chronicles, greatly enriching this poetic form. The "Jangnama" mentioned above was written by Shah Muhammad in 1846, following the First Anglo-Sikh War.

[45] *Ibid*, p. 86.

[46] *The First Punjab War; Shah Mohammed's Jangnama*, (Translated by P.K Nijhawan), (Maharaja Duleep Singh Foundation, 2000), pp. 98-99.

[47] Khushwant Singh, *A History of The Sikhs Vol II 1849-2004*, pp. 80-81.

[48] Indu Banga, *The Agrarian System of the Sikhs: Late eighteenth and early twentieth Century*, (New Delhi, Manohar, 1978), pp. 4-6.

[49] *Ibid*, pp. 4-6.

[50] Neeladri Bhattacharya, *The Great Agrarian Conquest*, p. 67.

[51] Paul W. Paustian, *Canal Irrigation in Punjab: An Economic Inquiry Relating to Certain Aspects of the Development of Canal Irrigation by the British in the Punjab*, (New York: AMS Press, 1968), p. 21.

[52] Neeladri Bhattacharya, *The Great Agrarian Conquest*, pp. 385-86.

[53] *Ibid*, pp. 385-86.

[54] Sir Richard Carnac Temple (1850-1931) was an Indian-born British administrator and anthropological writer, renowned for his extensive work "The Legends of Punjab" published in three volumes; Sir Denzil Charles Jelf Ibbetson (1847-1908), the Lieutenant-Governor of Punjab in 1907, is well-known for his role in the 1881 Census operation in the Punjab.

[55] Farina Mir, *The Social Space of Language: Vernacular Culture in British Colonial Punjab*, (London: University of California Press, 2010), pp. 49-50.

[56] For more details, see Gurcharan Singh Arshi, *Isaee Missionary, Punjabi Bhasha te Sahit, In Punjabi* (New Delhi: Arsee Publication, 2021).

[57] Farina Mir, *The Social Space of Language*, pp. 49-50.

[58] Tirthankara Roy *The Economic History of India 1857-2010* (New Delhi: Oxford University Press, 2000; 2020), pp. 216-217.
[59] Paul W. Paustian, *Canal Irrigation in Punjab*, p. 22.
[60] Indu Banga, *The Agrarian System of the Sikhs*, p. 6.
[61] *Ibid*, p. 6.
[62] Himadri Banerjee *The Agrarian Society of Punjab 1849-1900* (New Delhi: Manohar, 1982), pp. 19, 34.
[63] For more details, see Paul W. Paustian, *Canal Irrigation in Punjab.*
[64] Charles Napier, "Report by Lt-Gen Sir Charles Napier," 27 November 1849, OIOC, BL, MS EUR/C123" Quoted in Farina Mir, *The Social Space of Language*, p. 50.
[65] Paul W. Paustian, *Canal Irrigation in Punjab*, pp. 33-36.
[66] Himadri Banerjee *The Agrarian Society of Punjab*, pp. 20-21.
[67] Paul W. Paustian, *Canal Irrigation in Punjab*, p. 32.
[68] *Ibid*, p. 36.
[69] *Ibid*, pp. 39-40.
[70] Himadri Banerjee *The Agrarian Society of Punjab*, p. 21.
[71] *Ibid*, p. 21.
[72] *Ibid*, p. 21.
[73] Paul W. Paustian, *Canal Irrigation in Punjab*, p. 45.
[74] Neeladri Bhattacharya, *The Great Agrarian Conquest*, p. 67.
[75] For more details, see Eric Stoke, *The English Utilitarians and India* (London: Oxford University Press, 1959).
[76] For more details, see Neeladri Bhattacharya, "Colonial State and Agrarian society" Burton Stein *Making of Agrarian Policy in British India 1770-1900* (London: Oxford University Press, 1992).
[77] *Gazetteer of the Chenab Colony*, p. 29.
[78] *Ibid*, p. 29.
[79] For more details, see Imran Ali, *The Punjab Under Imperialism 1885-1947*. (Princeton: Princeton University Press, 1988).
[80] *Ibid*, p. 10.
[81] Paul W. Paustian, *Canal Irrigation in Punjab*, p. 57.
[82] Ranjit Majumder, "Military Imperatives and the Expansion of Agriculture in Colonial Punjab", *International Journal of Punjab Studies*, Vol. 8, 2001, pp. 161-63.
[83] *Ibid*, p. 174.
[84] Imran Ali, *The Punjab Under Imperialism*, p. 18.
[85] *Gazetteer of the Chenab Colony*, p. 26.
[86] *Ibid*, p. 27.
[87] *Ibid*, p. 27.
[88] Paul W. Paustian, *Canal Irrigation in Punjab*, p. 168.
[89] *Gazetteer of the Chenab Colony*, p. 29.
[90] Imran Ali, *The Punjab Under Imperialism*, p. 4.
[91] *Ibid*, p. 21.
[92] *Ibid*, p. 51.
[93] *Ibid*, p. 23.

94 Paul W. Paustian, *Canal Irrigation in Punjab,* p. 82.
95 Neeladri Bhattacharya, *The Great Agrarian Conquest,* p. 403.
96 *Gazetteer of the Chenab Colony,* p.30.
97 *Ibid*, p. 30.
98 Paul W. Paustian, *Canal Irrigation in Punjab,* p. 60.
99 *Ibid*, p. 60.
100 Imran Ali, *The Punjab Under Imperialism*, p. 28.
101 *Ibid*, p. 27.
102 *Ibid*, p. 29.
103 Paul W. Paustian, *Canal Irrigation in Punjab,* pp. 60-62.
104 *Ibid*, pp. 60-62.
105 *Yaddan Ganji Baar Diyan,* p. 30.
106 Imran Ali, *The Punjab Under Imperialism*, pp. 30-32.
107 *Ibid*, pp. 30-32.
108 *Ibid*, p. 34.
109 Paul W. Paustian, *Canal Irrigation in Punjab,* p. 63.
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111 Paul W. Paustian, *Canal Irrigation in Punjab,* p. 63.
112 *Yaddan Ganji Baar Diyan,* pp. 118-121.
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114 Gazetteer of Montgomery district 1933 Wace, F.B., and F.C. Bourne, *Punjab District Gazetteer: Volume XVIII A, Montgomery district*, (Lahore: Superintendent of Government Printing, Punjab, 1935), pp. 54-58.
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120 *Ibid,* p. 68.
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122 *Ibid*, pp. 34-35.
123 *Ibid*, p. 26.
124 Neeladri Bhattacharya, *The Great Agrarian Conquest,* pp. 348-50.
125 *Ibid*, pp. 348-50.
126 *Gazetteer of the Chenab Colony,* pp. 7-8.