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Cultural and economic geography of Ajmer state, India, with an estimate of future potentialities.

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CULTURAL AND ECONOMIC GEOGRAPHY OF AJMER STATE, INDIA
WITH AN ESTIMATE OF FUTURE POTENTIALITIES

by

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CHAPTER I
INTRODUCTION

The state of Ajmer, situated on the eastern edge of the Thar Desert, is one of the smallest political entities of the Indian Union (Figure 1). The axes of the state are 92 miles and 84 miles with a total area of only 2,417 square miles. After the independence of India in 1947, the newly-drawn Indian constitution provided Ajmer with a Legislative Assembly and a Council of Ministers by the authority of the Part "C" State Act of 1951. Thus Ajmer has maintained its political identity traceable to early British occupation of the territory in 1818. The British were quick to recognize the area's strategic location as a focus of routes and very early established administrative government in the locality. Long before Ajmer State achieved political recognition, however, the city of Ajmer held a prominent position economically and historically with respect to the surrounding hinterland. Ajmer participated and contributed to at least three famous periods of Indian development. The city was established about 145 A.D. and guarded a major north-south passway through a series of low mountains (Figure 2). Many invading peoples utilizing this route have left an indelible cultural stamp on the city and its hinterland. Today these diverse cultural and

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1 The 23 states of the Indian Union have been classified according to methods of administration into Parts "A, B and C." A Part "C" state is governed by a Chief Commissioner and his Advisory Council.
INDIA
SHOWING
LOCATION OF
AJMER STATE
(WITHIN RAJASTHAN UNION)

Figure 1
ethnic patterns form a fascinating panorama that here as elsewhere in
the Union is peculiarly Indian.

From the early period when Ajmer began to assume the function
as a fortified town and religious center, it has evolved into a metropoli-
tan center of considerable industrial importance. The city's tributary
area, once the scene of many battles, now is cultivated in a myriad
variety of irrigated crops, some of which are of commercial importance
beyond the borders of the state. Although both the city and at a later
date the state have much history that is local only, the evolution of this
little-known area to its present position of regional significance typifies
to a large degree similar changes occurring elsewhere in India. In order
to more clearly understand and evaluate the character and problems of
these regional centers, basic research on the historical rise, regional
economy and social characteristics of the diverse peoples of these centers
is of paramount importance. India must first understand the basic structure
of her many small regional centers before an intelligent program which
would meet in part the complex problems of her teeming millions can be
initiated with some assurance of success. Ajmer is such a center. No
detailed treatment of its geography is available at this time. It is hoped,
therefore, that a detailed treatment of this center may bring to light
principles applicable to other centers of similar structure in India,
and which will contribute to a better understanding of problems facing
India as she energetically plans for improvement of Indian way of life.
CHAPTER II

AJMER: THE LAND AND ITS CULTURAL BACKGROUND

Although a separate political entity, Ajmer is both culturally and physiographically a part of the Rajasthan Union which comprises an easily defined physiographic region of India. ¹ The Vindhya Mountains of Rajasthan continue into Ajmer and are known as the Aravalli Range. The surface configuration of the Aravalli Range may more aptly be classified as rugged hill lands at elevations ranging from 1,000 to 3,000 feet. Deeply incised by a dendritic stream pattern in which many of the tributaries have intermittent flow, these hill lands are oriented northeast-southwest along the western border of Ajmer. Lower outlying hills of this range surround the city of Ajmer and afford partial protection for the inhabitants from the wind storms and dessicating summer breezes that move eastward out of the Thar Desert. In marked contrast to the rugged nature of the land in western Ajmer, the eastern portion of the state is gently undulating to almost flat. On alluvial soils of larger streams, intensive cultivation is possible by means of irrigation dependent primarily on wells. Owing to meager annual rainfall throughout the state, the hills to the west are almost barren and only along stream courses do stunted growth of deciduous trees make their appearance.

¹ After Indian Independence all the native princely states were amalgamated and Unions were formed for the convenience of administration. The various princely states of the Province of Rajputana thus were joined to form the Rajasthan Union.
During the rainy season which is from June to September, the land is clothed in green consisting of short grasses, a few flowering plants and thorn brush upon which graze herds of sheep and goats. The valleys, however, support better grasses as a second story beneath the trees.

Scattered small hills occur widely in the state. In the narrow ravines between these hills are large tanks, wherever construction is possible, to capture run-off during the rainy season for irrigation and domestic use in early fall. The western hill lands of Ajmer are very stony and steep so that rain water flows down quickly to small narrow tributary valleys which also have been dammed to collect water for irrigation of the cultivated lands below. Even after stored water is used, the water table in the area remains high for a longer period. This source of water is tapped by wells.

The state's eastern plain extends about 60 miles from the city of Ajmer. More fertile than other areas of the state, this plain receives water from the three small rivers, Dai, Khari and Banas. The Dai and Khari flow only during the rainy season, which lasts from late June to September. Both these rivers are tributary to the Banas, which, although possessing permanent flow, is characterized by very low volume during fall and winter. If seasonal rains are below normal for two or three successive years, it also dries up. These rivers do supply silt and alluvium to the plain, but the mineral content of much of the rock underlying Ajmer does not breakdown into very fertile soils. Owing to
the intensive nature of cultivation, it is essential for farmers to fertilize heavily for adequate yields. Fertilization is dependent upon cattle manure, bones and night soil.

Along the northwestern flank of the Aravalli Range, a very narrow plain grades imperceptibly into the great Indian desert. It is a sandy plain suffering from diminishing rainfall as one proceeds west. Two tributaries, the rivers Saraswati and Saganati flow windingly through this section. These are also intermittent rivers, having flow for about two to three months only. The beds of these rivers form major cultivatable areas and mostly minor food crops and vegetables are grown.

Owing to the latitude and interior position of Ajmer, the climate is characterized by tropical to subtropical temperatures, marginal rainfall and a continental regime. Ajmer is situated on the semi-arid transition belt peripheral to the Thar Desert. Except for occasional winter temperatures as low as 40°F which are associated with weak cyclonic activity, the area experiences a tropical continental temperature regime. Clear skies and dry tropical air masses prevail over the area much of the year. Marked seasonal temperatures and therefore large annual ranges are characteristic with diurnal ranges as great as 48°F. Owing to low relative humidity, the land and air heats rapidly during the day, and except during the rainy season, heat loss is equally rapid at night.

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1 According to Koeppen's classification, Ajmer would be classed as BSkwa. The suffix "k" is used in spite of the latitude because of low winter temperatures. Trewarth's modification of the Koeppen system more correctly classifies the area as BShwa, or Low Latitude Steppe winter dry with pronounced warm high sun period.
Average annual rainfall for the entire state is about 21 inches. Considering that potential evaporation is at least four times this amount, cultivation is impossible without at least seasonal irrigation. Not only is rainfall low in amount, but it is highly variable and undependable. These two characteristics, meagerness and unreliability of rainfall are of utmost significance in evaluating the future agricultural potential of Ajmer. For all of India, the monsoon is unreliable to varying degrees, but for Ajmer which does not lie in the direct path of the rain-bearing winds, the percentage variation in seasonal rainfall is well over 100 per cent. Ajmer receives air masses during the monsoon which have traversed much of India before their arrival. As a result it is not uncommon that during the so-called, "rainy season" periods of clear skies and no rain occur that may last for almost a week.

The climate of Ajmer, like that of much of India contains three definite seasons: 1) the pronounced period of heat, clear skies and little rain prior to the rainy season, 2) the rainy season with its heavy showers, cloudy skies and less insolation resulting in a reduction of temperature although the increase in humidity makes this period more enervating, and 3) the cooler period of few rains (winter season) having occasional cyclonic disturbances which may bring cloudy skies and light rains for a few days interrupting the general condition of clear weather.

Although the climate of Ajmer is warm early in the calender year, temperatures climb rapidly during the months of April, May and June.
Owing to the leeward location of this area with respect to monsoonal air flow from the southwest, Ajmer receives its rains somewhat later than much of peninsular India. During this period, temperatures commonly are $90^\circ$ to $100^\circ$ daily. Insolation is so intense that high temperatures prevail well into the night making it most uncomfortable for the inhabitants. To alleviate nighttime heat, the people often sprinkle water on the ground and sleep outside in addition to the use of fans both electric and hand operated. Especially during the months of May and June is the heat intensified by the relatively strong flow of desert air out of the Thar. Although velocity of these winds is reduced materially by the hilly nature of Western Ajmer, they often are filled with dust to great elevations. The people suffer greatly during periods in which these winds reach appreciable velocities, and have named this phenomena "Loo." Dust-laden winds contribute much to eye, nose and throat trouble among the populace. Attesting to the vast quantities of dust and fine material coming out of the Thar through the ages are the deposits of loess which lightly mantle much of Ajmer. The period of hot, dry weather continues through the end of June.

The rainy season generally is ushered in during the first week of July by sporadic showers, considerable cloud cover and an occasional violent thunderstorm. As rains become increasingly frequent and sky cover extensive, temperatures drop to $70^\circ F$ in the uplands and to about $80^\circ F$ in the lowlands. However, relative humidity climbs from about
40 per cent to remain between 70 and 90 per cent for the next two months. Thus, the weather becomes not only damp, but also oppressive. As mentioned before, the arrival of the monsoon is not very predictable. Normally July and August are the wettest months with a gradual tapering-off in rainfall during September. It is not uncommon, however, to have the rain-bearing winds delayed to well into July so that the period of heavy precipitation is shifted to August and the first weeks of September. Often a late monsoon also means less than normal rainfall with much of the populace facing critical food problems.

During November, December and January, temperatures remain between 40° and 50°F. Cool cyclonic rains in this period have caused temperatures to drop below 40°, but no record of freezing temperature exists. Weak storms possessing ill-defined fronts pass through Ajmer from the Persian Gulf. Rainfall comes in the form of heavy showers of short duration and which contribute materially to the water reserve in reservoirs and tanks. Prevailing cool northwest winds descend out of Pakistan and flow down the small valleys of Ajmer making December and January the coolest months although there is bright sunlight. Except for the few days of showers, this winter period enables farmers to work in the fields which are planted to wheat, barley, sugar cane, cotton and market vegetables, all successful crops under irrigation. The adaptability of the semi-arid climate of Ajmer to irrigation agriculture is not only dependent on the few rivers possessing considerable flow, but also to the infrequent rains
that occur during the period of less evaporation in the winter time.

Trewartha expresses this significant aspect of Low Latitude Steppe climates that are situated poleward of desert regions as follows: ¹

"Because BS is less at heart and more on the margins of dry settling tropical air masses associated with the subtropical high pressure cells, and is therefore one step closer to the humid climates than are the deserts, the steppe lands are encroached upon for a short period of the year by rain-bearing winds and their associated storms. It is this brief period of seasonal rains which causes them, although still having a dry climate, to be semi-arid rather than arid."

In response to the climate, vegetation is xerophytic and very sparse. Existing deciduous forests are open with a grass understory and considerable brush. The Neem tree abounds but is of little economic use, being valuable only as a shelter from the hot sun. Its leaves, bark and wood are very bitter in taste, and camels and goats are the only animals that eat the leaves. Other trees are the Banyan, Peepal and Babool. Banyan and Peepal trees are considered sacred by the Hindus and are not cut for any purpose. The Babool is thorny and constitutes the major domestic fuel supply. Both its leaves and its fruit provide good food for sheep and goats. Since all of these trees are deciduous, they lose their leaves during the fall and remain bare during the winter. Hill lands are clothed in a scrub forest comprised of many species of thorny, leafless bushes found scattered here and there. In some of the lower areas the date palm occurs. This palm is resistant to drought and has a deep root system. The tree is of great economic value as it not only provides

food, but also its leaves are used in many ways by the peasants. These fronds are used for making mats, hand fans and toys for children. Roots are used to make polo balls. During the recent war, people started using its fruit stone as a substitute for beetle nut, which was a curtailed import during this emergency.

Short grasses with shallow roots also are a typical vegetation cover of the hill lands. During the extreme hot season, grasses quickly become parched. In some localities where the water table remains near the surface for a longer period of time, grass cover is continuous and has considerable grazing capacity. This type of vegetation occurs on the valley bottoms and at the base of hills.

Among various developmental plans in the country designed to increase potential value of natural resources, conservation by central and state governments is receiving priority. In 1950, the Government of India formed the Central Board of Forestry the functions of which are to coordinate and integrate the forest policy of the different states of India, to adopt measures of conservation affecting forest resources and soil, the maintenance of adequate standards for training officers, and coordination of forest research carried on in Central and State institutes.¹

In 1950, "Vana Mahotsava"² (Afforestation) was originated in order to

¹ See Hindustan Year Book 1955, p. 204.
² Vana - forest; Mahotsava - a big gathering. People gather everywhere in a joint effort to plant as many trees as possible. (At least one per person).
create love for trees among the masses. Every year a day is observed for planting trees throughout the nation.

A national forest policy of India was enunciated in 1952. Remaining forests, according to that policy, are to be carefully conserved as a permanent segment of land use. Naturally, annual rainfall in Ajmer state limits the percentage of land under permanent forest. Approximately 25 per cent, or 593 square miles of the state is classed as forest. Reforestation of the rugged hill lands and badly eroded terrain is an important part of the entire program. It is hoped that protection of watershed vegetation, both forest and grass, will contribute to a marked reduction in rates of precipitation run-off, which will help reduce seasonal variation in river volumes and also promote a more continuous vegetative cover. Proposed river valley projects and new irrigation methods also recognize the need for conserving vegetation, not only because of silting problems but also to allow better utilization and storage of Ajmer's marginal rainfall.

Early settlement of the land

Ajmer State traces its identity back to the period of British Occupation in 1818. Prior to this date, the land contained within present political boundaries was occupied by descendents of early invading peoples. From its earliest beginning as a fortified village, Ajmer city was a focal point of routes allowing access through the
hill lands of the Aravalli Range (Figure 3). Primarily from the north and west, conquering peoples remained in the area after each period of invasion to settle on the fertile alluvial lands near sites well-watered. Early agriculture was very rudimentary. Not only were recently settled peoples semi-nomadic and therefore had limited knowledge of agriculture, but also the semi-arid climate of Ajmer restricted greatly lands suitable to cultivation. The rugged topography of much of Ajmer tended to promote isolation among early settlements which during early centuries developed a high degree of provincialism. The radial stream pattern descending the slopes of the Aravalli Range was highly influential in developing an early period feudal-warlord society because agricultural lands were separated from others by rugged interstream areas. General low yields of early forms of agriculture left little surplus of great economic value. Much of the early history of the area therefore was characterized by almost continuous warfare where no doubt the spoils of war were highly important in the existing provincial economy.

Thus, from earliest recorded times, the pattern of settlement in Ajmer is characterized by the gradual rise and final dominance of the city of Ajmer, whereas at the same time, the city's importance as a religious and economic center gradually was extended into the hinterland. It might be said that Ajmer State had
North-West Passway

Figure 3
its beginning as the logical conclusion of the slow process of territorial accretion to the influence of the city by the same name. Consequently, much of the history of land occupancy of Ajmer, also is the history of the city as it has gradually emerged in its present form.

The fortified village of Ajmer was founded in 145 A.D., but did not get its present name until 1108 A.D. when Ajay Deo conquered portions of Rajputana. Although the first Mohammedan invasion was made by King Mohammed Ghazni in the 11th century, Ajmer city did not come under direct Mohammedan rule until 1195 A.D. It remained under Mohammedan rule until 1818 when the British took over the administration of this area. The history of Ajmer, therefore, can be easily divided into three periods: 1) the Hindu Period from 145 to 1200 A.D.; 2) the Mohammedan Period from 1200 to 1800 A.D.; and 3) the British Period from 1818 to 1947 when India attained independence. Current rule since Indian independence is contemporary with very little information recorded and accessible.

The early Hindu period was dominated by independent chiefs who engaged frequently in local wars among themselves for spoils. Owing to an almost war-dependent economy among these early nobles, they led a somewhat migratory life which did little to foster permanent settlement and erection of large fortifications. Ajmer therefore was only developing as a strong fortress in this period. Existing ruins of
the old city fort indicate the semi-nomadic life of the Rajputs and the Marhatta Chiefs. Because Ajmer occupied a position on the main passway from the northwest, the city never expanded beyond the limits of the fort for fear of invasions (see Figure 3, p. 15). Numerous invasions in the past greatly hindered the development of agriculture and cottage industries. Vighra Raj, one of the Hindu rulers in 1157 A.D., built the Hall of Two and a Half Days and Lake Bichla, which are still in existence. The hall received its name because of the practice by hermits to utilize the structure for festivals for two and half days each year. During this period Ajmer also became a Hindu pilgrimage. In Pushkar, located about seven miles west of Ajmer city, according to legend one of the Hindu deities established her abode on the banks of a lake. Large temples were built along the shores of this lake, and today this locality has become one of the largest Hindu pilgrimages in India. Becoming thus an important religious center, Ajmer's population increased steadily and many arts and crafts developed owing to the tremendous market for religious articles.

With the arrival of the Muslims, Ajmer became the cultural center of two racial groups, the Hindus and the Muslims. During the Muslim reign there was an extensive intermixture of the two religious groups. The example was set by Akbar himself, who married a Rajput princess

1 These were the two different communal groups ruling over most of northwestern India before the Mohammedans came to the country.
Figure 4. One of the four gates of the city.

Figure 5. Baradari at Anasagar Lake built by Shah Jehan.
and thus helped to bring the two groups closer together. When Moham-
med Ghori, one of the Muslim raiders, occupied Ajmer about 1230 A.D.,
a Muslim sage by the name of Khwaja Moinuddin Chisti came with his
army. Chisti lived in Ajmer for about 45 years and died at the age of
97. His tomb is considered very sacred by the Muslims, and it is made
of pure silver which is cared for by his followers.

The great Moghul King Akbar visited Ajmer in 1570 A.D. where
he built a mosque. Ajmer, therefore, became a Muslim as well as a
Hindu pilgrimage, and every year hundreds of pilgrims from all over
India and other Muslim countries come to Ajmer to pay homage to that
saint. Akbar also built the four walls of the city with four gates to the
north, south, east and west (Figure 4). These gates served as guard
posts for the city for a number of years. Akbar was very interested
in Ajmer City and always tried to protect it from invasions by surround-
ing Hindu states. Shah Jehan, the famous "Moghul Builder" who was
Akbar's grandson, built a big marble embankment at Anasagar, the
big lake of Ajmer (Figure 5). It was here that Sir Thomas Roe came
to visit Emperor Shah Jehan in December, 1615 to ask his consent to
trade with India.

The British took the city in 1818 after years of fighting. The
small area to the west of Ajmer known as Merwara was amalgamated
with Ajmer in 1842 and an English Chief Commissioner was appointed
for the whole area, which was called Ajmer-Merwara. In 1871 this
area came under the administration of the Central Government. The British recognized the strategic position of Ajmer and so General Ochterloni, their Commander, established a military station at Nasirabad, situated about 14 miles from Ajmer city, on July 28, 1818. This cantonment is still there and caters to the needs of Ajmer and its surrounding areas. Since Ajmer city does not have an airport, Nasirabad Cantonment also serves as an airport. In 1875, during the viceroyalty of Lord Mayo, the British Government founded a large college for the princes of Rajputana States and the elite of the city. Mayo College occupies one of the most beautiful buildings in Ajmer and is a prominent educational center (Figure 6). In the industrial field the British Period marked the establishment of two locomotive, carriage and wagon workshops of the Western Railway, one of the principal rail lines of western India. After the independence of India in 1947, the Home Minister, Sardar Patel, started working toward the unification of all the princely states in India. This work was completed in 1950 and Ajmer became a state. Ajmer state was provided with a thirty-member Legislative Assembly and a Chief Commissioner who directs the administration of the state with the assistance of a Council of Ministers.
Figure 6. Mayo College
CHAPTER III

THE PEOPLES OF AJMER STATE

According to Dr. B.S. Guha's 1 classification of races in India, the non-Muslim people of Ajmer state appear to belong to the Nordic group. 2 Inasmuch as Ajmer state was a part of Rajputana, an area dominated by princely states, the people were and still are dominantly Rajputs. 3 With the influx of Muslims in the 12th century, not only two different groups but the intermixture of both formed a large part of the populace. The rugged topography of Ajmer state lent itself well to fortification during the early periods of turbulence. The Rajputs built many strong fortresses, some of which developed into small cities. The city of Ajmer is the largest urban agglomeration in the state, around which small towns and cities occupying old fortress sites cluster in widening circles from the center. Successful Muslim invasions made the city of Ajmer dominantly Muslim in character although the Muslim population has never exceeded the Hindus numerically. After the partition of India

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1 Dr. B.S. Guha is Director of Anthropology and has made the most recent authoritative classification of peoples of India.

2 Descendents of the Nordic group are the Aryan-speaking peoples of India. The Nordic group in India developed what has come to be considered India's Hindu civilization. These peoples are thought to have come to India from the Eurasian steppes during the second millennium B.C.

3 Rajputs were the ruling class at the time of the Mohammedan invasion of this area.
in 1947 when the transfer of population was effected between Pakistan and the Indian Union, two major communal groups, the Sikhs and the Sindhis, migrated into Ajmer. The addition of these peoples has materially reduced the role of Muslims in the percentage composition of Ajmer's peoples. According to the census of 1951, the total population of Ajmer state is 693,372, which is distributed over an area of 2,417 square miles so that the average density per square mile is 287 people. Of the total population, 360,236 are male persons while 333,136 are females; a ratio of 1000 males for every 925 females. In recent years the country has shown a significant trend toward urbanization and Ajmer is one of the leading states in this regard. As compared to the country's urban population which has gone up from 13 per cent to 17 per cent, the present urban population of Ajmer is 30 per cent of its total populace.

Religious rites and practices are an integral part of Indian life. Ajmer reflects a diversity of religious affiliations owing to its checkered history. Within the state there is represented most of the religious groups of India.

The distribution of these religious communities within the total population is indicated in the following table.

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\(^1\) Sindhis are all Hindus; because they came from the province of Sind they are known as Sindhis.
Religious Affiliation of the Population of Ajmer

<table>
<thead>
<tr>
<th>Religious Group</th>
<th>Population</th>
</tr>
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<tbody>
<tr>
<td>Hindus</td>
<td>599,524</td>
</tr>
<tr>
<td>Muslims</td>
<td>48,486</td>
</tr>
<tr>
<td>Jains</td>
<td>32,004</td>
</tr>
<tr>
<td>Buddhists</td>
<td>4,319</td>
</tr>
<tr>
<td>Christians</td>
<td>4,313</td>
</tr>
<tr>
<td>Sikhs</td>
<td>3,964</td>
</tr>
<tr>
<td>Zoroastrians</td>
<td>262</td>
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1 Indian Census 1951

In addition to a large Muslim minority traceable to early historical settlement, Jains comprise a large group. This is an outcome of the larger Hindu group and like Buddhism which grew under Lord Buddha, Jainism grew under Mahavir. Except for certain very orthodox customs it is not very different from the Hindu religion. Zoroastrians are those people who came to India from Persia in the early seventh century. They settled in Western India and later migrated toward the Gangetic plain. On the whole they are the smallest religious group in the country.

The semi-arid climate of Ajmer greatly affects the people's physical development, their capacity to work and their mode of living and other factors. Because of high summer temperatures, often exceeding 100°F, it is very difficult for the people to work during midday. Fortunately, high temperatures are less severe than in other portions of India because relative humidity in the summer season is only about 20 to 25 per cent. Hot winds and blowing sand are also a great hindrance to the people's initiative and productivity.

In an effort to reduce the effects of heat, the people make tatties or screens from harsh grasses which abound in the scrubland. These

1 Indian Census 1951.
tatties are used to shield doors and windows of their homes, and are sprinkled with water when hot winds blow during the day. At night, if it is too uncomfortable, people often soak the ground with water where they sleep in an effort to cool the atmosphere round about the house.

Rural peasants numbering approximately 346,686 form the poorest class and reside in very humble dwellings. Commonly they live in houses constructed of mud and straw mixed with cowdung. Personal clothing is at a minimum; agricultural workers commonly labor all day in a single loin cloth. As a result, body complexion is darker than that of people of cooler areas in India. Family diet is largely dependent on coarse grains which are widely grown owing to their drought-resistant characteristics. This basic foodstuff is supplemented with vegetables grown in small plots near homes. Nearly 90 per cent of the populace are vegetarians, for it is against most Hindu religious beliefs to eat meat. Although people use milk and milk products, its handling is not very hygienic. Cattle are owned mostly by village people, but milk is mostly consumed in urban areas. Villagers are forced to sell the milk to the city to get the better price which eventually helps in the upkeep of the cattle. In the rural areas, there is practically no consideration of balanced foods for the body. This unfortunate situation exists because these people are for the most part illiterate, and greatly beset by poverty.

Although the dryness and heat of the climate greatly hinders human endeavor and crop production, there are other factors detrimental to
health of the people. The short rainy season often causes floods which inundate the low lands. These flooded lands become a breeding ground for malarial mosquitoes. Owing to low physical resistance to disease among the populace, malaria is easily contracted and a large number of deaths each year, particularly among infants is traceable to this disease. Malaria also debilitates the rest of the population. Insipite of increasing effectiveness of medical care, in recent years many children reach adulthood weak and underdeveloped. In India it has been estimated that 100 million persons suffer from malaria annually and approximately 1 to 1.5 million die of this disease. Each year tubercular cases approach 2.5 million with 500,000 deaths. Other prevalent diseases are Cholera, Small Pox and Typhoid, which cause a very high rate of disability. In part, the prevalence and seriousness of these diseases is related to malnutrition because of the near-starvation diet of most peasants. Food is not only insufficient but also the diet is ill-balanced being heavy in starch and lacking in proteins and other elements vital to good bone structure and body tissue. In addition to the food problems of supply and nutritive value, the widespread practice of very limited use of water for cleaning garments, disposal of waste and for drinking presents a most difficult situation to control. In 1946, the Health Survey and Development Committee of the Government of India found that only 6 per cent of the towns had protected water supplies and that existing facilities served only 6.2

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1 Figures from Hindustan Year Book 1954, p. 386
per cent of the total population. ¹ Thus among the many problems being attacked by the Indian Government in their efforts to better conditions for the masses, the desperate need for better health and sanitation in cities and villages is of paramount importance.

Insurmountable as the problems of disease and lack of sanitation in vast areas of India may seem, the Government has embarked on an encompassing program. The newly organized Ministry of Health is directly responsible to the centrally administered areas or the Part 'C' states. Ajmer State, therefore, is advised directly by the Ministry with regard to measures to be adopted in tackling this problem. The state Treasury of Ajmer meets the financial obligations with regard to medical relief and public health. Foreign Christian missions from Europe and America have been rendering valuable help in this field. These missions came to Ajmer State in the latter part of the 19th century and started their work in the field of education and public health. They were first to serve the village people by establishing small dispensaries and primary schools. Ajmer State is particularly indebted to the American Methodist Mission for the Madav Tuberculosis Sanatorium (Figure 7). This sanatorium is situated about three miles from the city of Ajmer, and has been a pioneer in the fight against tuberculosis in the state. It is not limited, however, to the people of Ajmer State, but also extends its facilities to peoples from other areas as well.

¹ Hindustan Year Book 1954, p. 387.
Figure 7. Madar Sanatorium with Madar Hill in the background.
As a member of the World Health Organization, India has been receiving much assistance from the above organization and also from the United Nations International Children's Emergency Fund. Currently this aid has been in the form of expert technical advice by persons from abroad to improve the available services, medical literature, fellowships to promising students, medical equipment and clinics. Emphasis has been placed upon the control and cure of tuberculosis, venereal diseases, malaria, and improvement of child health.

There is a great dearth of doctors and nurses throughout India and Ajmer State proves no exception from this situation. Persons in training in institutions in India are pitifully few compared to the demand and need, even for rudimentary service to many areas. For example, Ajmer State does not have a single medical college. Efforts directed toward establishing medical colleges and training centers and also increasing facilities for more students in the already existing institutions, are just getting started. The total number of doctors in India is about 50,000, or a ratio of one doctor to 8,400 people. In the United States the ratio is one doctor to 800 people. There are approximately 7,000 trained nurses in India, or one nurse for 56,000 people, whereas the ratio in the United Kingdom is one to 300. Even in the case of midwives, the ratio is 1 to 80,000 persons. Although a comparison between India and western countries has little real meaning owing to the tremendous differences in development between India and the United States or the United Kingdom,
nevertheless such comparisons indicate the magnitude of the problem and the need for qualified help to administer the various new governmental health programs.

As discouraging as present statistics indicate, the first Five Year Plan is nearing completion in 1956. The second Five Year Plan outlined for the economic development of the country continues to emphasizes a basic attack on the tremendous problem of the economic condition of the masses, their health, sanitation and education. The first Five Year Plan was drawn in 1951 by the Planning Commission of the Government of India to improve conditions by coordinated efforts of the governmental agencies and the general public. The main provisions of the Program for Health and Sanitation were these:

(1) Provision for water supply and sanitation.
(2) Control of Malaria.
(3) Preventive Health care of the rural population through health units and mobile units.
(4) Health education and training.
(5) Health services for mothers and children.
(6) Self sufficiency in drug and equipment.
(7) Family planning and population control.

Of the total amount of money Rs. 17,93,00,000,000\(^1\) allotted for the entire country over this plan, Ajmer state received Rs. 1,61,19,000 from which Rs. 37,79,000 are to be spent on health and sanitation, the above seven receiving equal attention.\(^2\)

\(^1\) Under current rates of exchange an Indian rupee is equivalent to $0.22 in United States currency at current rates of exchange.

\(^2\) A. C. Jain, J. C. Ojha, Administration of Ajmer State, p. 33.
The Anti-Malaria Campaign by the Anti-Malaria Institute of the Government of India is doing a great deal to control and eradicate this disease as well as to educate the people in personal hygiene. Education in personal hygiene has materially reduced the tragic rate of infant mortality in many areas, and it is hoped that with more facilities available, in the future the rate will decline more rapidly. The following table illustrates in part the effectiveness of these measures.

<table>
<thead>
<tr>
<th>Births (Total in $000s$)</th>
<th>Birth Rate per 1000 Population</th>
<th>Total Deaths (in $000s$)</th>
<th>Death Rate per 1000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1938</td>
<td>9,398</td>
<td>6,685</td>
<td>23.7</td>
</tr>
<tr>
<td>1950</td>
<td>6,728</td>
<td>4,333</td>
<td>16.0</td>
</tr>
</tbody>
</table>

Infant Deaths (per 1000 live births)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1938</td>
<td>167</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>127</td>
<td></td>
</tr>
</tbody>
</table>

There has also been an improvement in life expectancy, which has increased noticeably during the last two decades.

Life Expectancy at Birth

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1921 - 1930</td>
<td>26 years, 11 months</td>
<td></td>
</tr>
<tr>
<td>1941 - 1950</td>
<td>39 years</td>
<td></td>
</tr>
</tbody>
</table>

Statistics indicate that improvement has begun in the overall picture of the condition in India. Needless to say, the rate of improvement in health and sanitation reflected in these statistics varies widely among
the various regions of India. Ajmer may be classified in the median group relatively. In Ajmer State, the municipalities in cities and District Boards in rural areas have special sanitary inspecting staffs which work in cooperation with the government and private hospitals in matters related to problems of health, and sanitation in the state. Mobile dispensaries, fully equipped, make special effort to reach rural areas and remote places to provide medical help and health education.

Education

One of the basic problems deterring rapid improvement in health, disease control, poverty and a general low standard of living, is illiteracy. Approximately 70 per cent of the population engaged in agricultural pursuits in India have no formal education. In urban areas, 50 per cent of the remaining population do not know how to read or write. This leaves only 15 to 16 per cent of India's people who have had some formal education. Ajmer State has a slightly higher percentage of literacy than the country; 20 per cent of its people are literate. The percentage of literate males is 29, and that of the females is 10.3, which is comparatively much higher than many other states of the Union.

Early enterprises in the field of education in India was started both by missionaries and the East India Company during British occupation. These enterprises were restricted to the two states of Madras and Bengal. The earliest recorded date available is 1677 when Ralph Ord, a schoolmaster, came to India. He was a Protestant and taught religion and elements of English in Madras. In Rajputant (now

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1 This was the British company which first started trade with India and later became the ruler.
Rajasthani) education was begun in 1800 by Dr. Carey, a Baptist missionary. Being a missionary, he also included religion in his curriculum, but his effectiveness as a teacher was hampered by the British government as their policy was not to propagate Christian religious beliefs to the Indians. Records also affirm that in 1822 Sir Ochterloni an army General stationed in Ajmer, received a letter from the then Governor General in Council about Dr. Carey's work in which his methods and materials taught the Indians were severely criticized. The British government assumed a position favoring Oriental studies, and in enunciating this policy opened district schools where village teachers were engaged to impart Oriental education. By the end of the 17th century the British position in India was so strong that the government did not feel the need to intervene in the missionary program. It was during this period that several missionary schools were started in Ajmer State. The Scottish Presbyterian Mission started three boys schools: a high school in Ajmer City, a high school in Nasiribad and a normal school in Beawar (Figure 8). All three remain boy's schools. The Methodist Mission started a boys hostel and a girl's middle school in Ajmer City. Formerly only the more wealthy people sent their children to these schools, but later on when it was possible to reduce tuition fees, the children from families of middle income groups also were admitted to these schools.

Owing to traditional attitudes concerning the desirability of formal education during the early and middle 17th century, Government effort
Ajmer Sub-Division

Figure 8
was directed toward establishing such schools as would meet the needs of the wealthy. In Ajmer city a large college for the princes of the native states was established in 1875. This institution was named Mayo College after Lord Mayo who was then the Governor General of India see (Figure 6). It was not until 1900 that the government altered its earlier policy and supported public education by providing high schools in towns and cities, and secondary and primary schools for semi-urban and rural areas. Ajmer City was provided with one Government High School whereas smaller towns and villages in the state were served by District Boards and Municipal Committees who were entrusted with the responsibility of establishing and administering secondary and primary schools. At this time Christian Missions energetically expanded their work in rural areas of Ajmer State. Actually, mission-sponsored schools were more effective in providing education both in cities and in villages because of missionary zeal and the greater availability of mission funds. Schools in Ajmer State, whether Governmental or Missionary, were run on an Anglo-Vernacular scheme, that is, both English and Vernacular were taught.

In 1944, the Central Board of Education of the Government of India drew up a national scheme for expanding education known as the 'Sargent Scheme.' It dealt with the establishment of elementary and high schools covering a six year course for children from 11 to 17 years old. Under provisions of this scheme, two categories of high schools were to be
established; technical high schools, and academic schools. This ambitious program envisaged an educational reconstruction plan for the entire country which was to be completed in 40 years. The Government accepted the plan but the 40 year period was subsequently reduced to 16 years by special committee. This program founded a number of high schools in the provinces, and in addition, schools financed by private enterprise and subsidized by the government were also erected. A technical school also was established in the city of Ajmer from which many graduates were subsequently employed as apprentices in the railway workshops in Ajmer and factories in other states.

Since 1950 the Government of India has been subsidizing all schools in every state, most of which are privately administered. The Department of Education finances 90 per cent of the total expenditure of each school and exerts considerable control in the supervision and general standard of the schools. Past effectiveness of this department in Ajmer has fostered a relatively rapid expansion of schools and has consequently brought about a material rise in the literacy figures of the state. The number of primary and secondary schools within the state as based on 1947-1947 figures are as follows:

1. Primary Schools - 350 Number of children attending; 25,000.
2. Secondary Schools - 75 Number of children attending; 15,000.

There are approximately 25 high schools and six colleges in the state.
Five colleges are located in the city of Ajmer, and the other is in Beawar. Both rural and urban students are admitted to these institutions. For students coming from rural areas, these colleges provide accommodations which include boarding facilities at minimum cost. Owing to the rapid expansion of educational facilities in recent years, there has been a marked increase in the percentage of literacy. Prior to World War II, only 13 per cent of the people were educated, but today this figure has risen to 20 per cent.

In addition to the above mentioned educational facilities, the state has also expanded its services for adult education, and education for the handicapped. The Adult Education Program is administered by the School Department and the Social Service Organization, which is composed of various civic groups. Evening classes are conducted by the educational institutions and service clubs. Schools for handicapped persons may be grouped into two broad classes, depending on the nature of the disability:

Schools for the physically handicapped, and Schools for mentally retarded persons.

All these schools are under private management.

Provisions contained in the first Five Year Plan focussed attention on the educational need in India and provided measures for increased financial assistance within states. Of the Rs. 1,61,19,000 designated by the Government for the varied provisions of the plan for Ajmer,
Rs. 20,17,000 was earmarked for education. Current emphasis on strengthening basic education facilities is interpreted as learning by doing. Handicrafts and art are stressed in school curricula. Such emphasis is expected to prepare the coming generation through the acquisition of basic skills to avoid unemployment as well as to make them increasingly self sufficient once students have completed their training. The philosophy supporting current educational policies in the state is to remove illiteracy as rapidly as possible, at least to enable everyone to read and write. Many of the pressing problems besetting India are deeply imbedded in tradition, conservatism and unreasoning superstition. It is recognized that many of the objectives of government planning designed to better the conditions of the people are hampered greatly by the inability of the populace to communicate by written word. The dissemination of literature to the public by government agencies containing information on means by which individuals may improve their way of life, is a procedure that can not be used widely prior to lowering materially the rate of illiteracy in the country. Thus basic education comprises a primary step toward realization of government goals stipulated in recent Five Year Plans. Progress to date in primary education already has fostered a more enlightened attitude toward problems associated with religious differences, the caste system and sectarianism in society. Resistance by the populace toward government sponsored campaigns for bettering rural life particularly, has lessened considerably as basic education
has enabled them to recognize the spirit behind what had previously been termed government proselyting and interference in private affairs. 1 Although the people of Ajmer state have kept their identity and traditions, they are rapidly accepting new concepts requiring change, which in turn, encourages a broader personal perspective. Evidences of this change in attitude is becoming increasingly apparent in each new generation.

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1 A. C. Jain and J. C. Oha, Administration of Ajmer State, p. 33.
CHAPTER IV

RURAL OCCUPATIONS OF THE PEOPLE

Cultivation of the land

India is heavily dependent on agriculture where nearly three quarters of her teeming millions till the soils. The relief of Ajmer state is not well suited to agriculture, but nevertheless, 55 per cent of her people are engaged in agricultural pursuits. Cultivation is especially carried on in the low-lying valleys and in the silt-laden beds of water tanks when they are dry after the summer heat. Major crops are wheat, barley, maize, millets, (jowar and bajra), cotton, and till, known in western countries as sesamum. The following table indicates the area of land under each crop and the total production for 1949-50.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Area in Acres</th>
<th>Yield in Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wheat</td>
<td>29,000</td>
<td>9,000</td>
</tr>
<tr>
<td>2. Maize</td>
<td>77,000</td>
<td>8,000</td>
</tr>
<tr>
<td>3. Millets</td>
<td>132,000</td>
<td>3,000</td>
</tr>
<tr>
<td>4. Gram</td>
<td>15,000</td>
<td>2,000</td>
</tr>
<tr>
<td>5. Cotton</td>
<td>13,000</td>
<td>500</td>
</tr>
<tr>
<td>6. Sesamum</td>
<td>13,000</td>
<td>475</td>
</tr>
</tbody>
</table>

The low yield is evident from the table and is due largely to primitive cultivation methods, complex systems of property ownership and excessive subdivision of land holdings, lack of extensive areas suitable to cultivation and rainfall variability and paucity.

Cultivation methods are ancient and primitive. Commonly a pair
of oxen and a wooden plow constitute the sole prized possession of the farmer. Progress toward improving cropping techniques and in increasing the number and variety of farm implements to the farmer has been slow. This problem is directly related to existing conditions of land tenure, fragmentation of holdings and very low per capita income among farmers. Tenancy is widespread throughout India and Ajmer is no exception. There is little incentive among tenants to purchase equipment even if their income permitted such expenditures. General lack of security among tenants who have little voice in matters related to expiration of leases does little to foster a long-term attitude toward agricultural production.

Most holdings in Ajmer are less than five acres. In many instances an individual farmer may cultivate a number of scattered small parcels of land. Excessive fragmentation greatly hinders improvement of crop production by use of farm tools inasmuch as many cannot be used on existing sizes of holdings. The vicious circle becomes complete owing to the lack of income among peasants for even barest necessities. Not only are farmers unable to purchase implements, but also lack of income greatly hinders recent governmental programs encouraging cooperatives in rural areas. The inability of many to obtain credit forces peasants to depend upon sources such as landlords, traders and money lenders. In many cases, rates of interest charged the peasants constitute flagrant usury which keep victims in constant debt. Conservatism
and old age methods of tilling the soil are characteristics difficult to change. Although both state and national governments have inaugurated legislation to correct many of the evils associated with problems of credit, land tenure and low yield, progress will continue to be on an "evolutionary" plane.

Ajmer State made no concerted effort toward improvement of crop yield prior to 1943. Before that year, a "Grow More Food Campaign" resting primarily on popular appeal constituted the first efforts of the state. Today, Ajmer State is enthusiastically implementing the general policies and objectives promulgated by the national government and which are set forth under various program titles. An Integrated Production Plan, various agricultural research plans, and extensive national legislation attacking evils within present systems of land tenure are some measures now initiated by the national government.

The "Integrated Production Plan," the extension of research and introduction of land reforms were all directed toward improving agriculture. The central government now gives assistance for different specific programs like work schemes and supply schemes. Work schemes include construction and repair of wells, tanks, small dams, channels, tube wells and installation of water lifting appliances and pumps. Supply schemes cover distribution of fertilizers, manures and improved seeds. In 1947 the country took a bold step in founding the General Tractor Organization. The 200 tractors which had been left by the U.S. Army became
the basis for the foundation of this organization. In 1951, the national
government obtained a loan from the International Bank of Reconstruction
and Development which was used to purchase 240 tractors for the organi-
zation. These tractors were distributed to different states for recla-
mation work. Their use was made available to farmers to bring about
improvement both in the method and amount of agricultural production.
Since the farmers could not afford to buy tractors, they were used on
a time-limit rental basis. Ajmer state received a few of these tractors
and demonstration work was begun on model farms. Three model farms
were established in the state in order to show practical examples of modern
cultivation techniques to farmers who had been conservative in adopting
recommended methods of cultivation. Demonstrations are held from
time to time and schools are provided for the farmers' children.

Agricultural Cooperative Societies have grown in number in Ajmer
in recent years, and have been rendering many types of assistance toward
improvement of agriculture and the farmer's economic position. Among
the services made available by cooperatives are financial assistance to
a limited degree, better seeds, storage and marketing facilities for
produce and various types of machinery such as tractors, threshers,
and trucks which can be rented at minimum rates. The national govern-
ment is pledged to assist states by taccavi loans in time of flood and
drought. These measures, only in their infancy, have been instrumental
in improving farmer security, resulting in expanded agricultural production.
One of the most severe obstacles to better agricultural production is size of the average land holding, and tenure laws and customs binding those who till the soil. In India the problem of uneconomic holdings assumes vast proportions. Even in Ajmer, where a rural grazing economy is dominant, population pressure on cultivable land, irrigated and non-irrigated, is intense. Existing laws of inheritance aggravate this pressure because they encourage sub-division of holdings. Not only must land be divided equally among surviving sons, but also division of holdings must recognize the factor of inherent fertility of the various plots of land. Whether the land is irrigated or non-irrigated is also considered in Ajmer inasmuch as most non-irrigated land is suitable only for grazing. As a result of centuries of land division, under provisions which are common to all laws in the state dealing with inheritance of property, fragmentation in certain areas has assumed a grimly pathetic extreme, particularly in the valleys. Holdings have become so small and widely scattered that collectively these tiny parcels allow the farmer only 2.5 - 5.0 acres, which is the size indicated by the census as the mean category. To combat this tendency toward smaller and smaller holdings, Ajmer has incorporated special provisions in the Tenancy Acts by which limits have been placed on minimum size below which the land cannot be subdivided or transferred.

An attack on landlordism also has been enunciated by the Indian Government. The general reform policy of the country abolishes zamindari and similar forms of tenure and places this measure at highest priority.
Before recent reforms, zamindari was one of the three main forms of land ownership in India. Its characteristic feature was the vesting of proprietary rights in tax collectors, the Zamindari, to whom in the late eighteenth and the nineteenth centuries, the British administration farmed out the collection of revenue from the peasants who were cultivating the land. Also, the system of permanent proprietary rights established by the British about 1640 under which land revenue was fixed also has been terminated. It is apparent that these systems of fluctuating and fixed revenues collectable from peasant tenants had basic weaknesses that all too often encouraged unscrupulous practices which hindered progress in agricultural production. The abolition of zamindari, therefore, means the abolition of all intermediary rights between the State and the cultivator. As provided by national decree, the state is fostering the ryotwari tenure system in which the cultivator pays directly to the State and enjoys proprietary tenure. In addition to these basic forms of tenure, the mahalwari system most closely resembles communal tenure where a family may jointly own an estate, or as commonly is the case, village communities co-share in owning property. In either case, the members are jointly as well as severally liable to pay the land revenue. The mahalwari system as applied to village communities has


2 Ibid. The abolition of this type of landlordism does not involve any change in the scale of farm operation or in methods of cultivation, but is limited to a transfer of ownership. Unlike the use of the term "landlordism" in Europe or Latin America, the reform laws do not imply the breaking up of large estates with invested capital in large economic units as units of this type are the exception rather than the rule in India.
been the most easily adaptable form to governmental encouragement of cooperatives and united effort in production.

Although many recent national laws have encouraged various schemes for reclamation of unusable land and voluntary gifts of land for redistribution to the land less, the climate and terrain of Ajmer severely limits these avenues of endeavor in the state. Early in the history of settlement in the area, land that could easily be brought into cultivation was placed under the plow. Today there remains few areas where expansion of land in crops can take place. Perhaps a more fruitful avenue of approach toward greater agricultural production lies in expansion and modernization of existing facilities for storing water and large government-financed schemes (Figure 9). As previously mentioned, rainfall in the state is highly undependable. Often monsoons fail completely whereas at other times they wreak havoc because of floods due to excessive precipitation. For example, Ajmer received 9 inches of rain above normal in August 1955. Because of this factor of rainfall variability with respect to time of occurrence and amount, 83,000 acres of a total 279,000 under cultivation are under permanent irrigation. Thus the state is dependent for food-stuff from its agricultural area, one third of which must be irrigated. Obviously, problems of adequate storage facilities and maintaining reservoir capacity equal with water need are highly significant. Irrigation is almost entirely dependent upon wells and small catchment tanks. One tank per village to supplying domestic needs is common and nearly
Dr Rajendra Prasad laying the foundation-stone of the Gandhi Sarovar Dam near Jalia, 47 miles from Ajmer, on Monday.

Gandhi Sarovar Dam To Irrigate 8,000 Acres

FOUNDATION-STONE LAID BY PRESIDENT

[FROM OUR CORRESPONDENT]

AJMER, Nov. 1.

THE President, Dr Rajendra Prasad, yesterday laid the foundation-stone of the Gandhi Sarovar Dam near Jalia, 47 miles from here.

The dam, which is the biggest irrigation scheme for Ajmer State is expected to be completed by the end of 1958. It will irrigate about 8,000 acres.

Replying to a civic address presented by the Bijnagar Municipality, the President said search for underground water should continue unabated in States where there were no big rivers. He said scarcity conditions in one part of the country were bound to lower the general level of prosperity in other parts.

Dr Prasad appealed to the villagers not to depend on imported goods so far as possible but to meet their requirements from products made in the village itself.

Addressing a meeting here yesterday the President called upon the people to extend their fullest support to the Government which was devoting all its energies to improve the living conditions of the people. Dr Prasad reminded his audience that the Government had already successfully solved the food problem and boldly tackled...
every farmer has a well or two in his fields. Smaller hills and vallies possess suitable sites for tanks. Generally, a small embankment is constructed at a low level adjoining two small hills and rain water is collected so as to provide irrigation.

As mentioned previously, the national government gives financial assistance to specific programs, which include repairs of wells, tanks, small dams and channels. Also, the rugged terrain along the border of Ajmer and Rajasthan is under study for the creation of a vegetation belt. The implications of this program are far-reaching and will materially reduce rates of water run-off in that part of the state. The Chambal River Project, nearing completion, is limited in scope and size, but will provide much needed irrigation water to its fertile valley. The limit of these and similar type measures is nearly reached in Ajmer. Although much can be accomplished toward improving water supply from tanks, wells and small catchment basins, nevertheless climatic characteristics of the area impose severe limitations. Reduction of rural population pressure can be achieved best by increasing industrial activity in the major cities, where demand for workers can be met by surplus peoples from the hinterland.

**Livestock and grazing economy.**

Livestock is the mainstay of the rural population of Ajmer state. According to the 1950 census, the following table indicates numbers of various animals in the state.
<table>
<thead>
<tr>
<th>Livestock Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle (cows, oxen and buffalo)</td>
<td>3,46,000</td>
</tr>
<tr>
<td>Sheep and goats</td>
<td>6,04,000</td>
</tr>
<tr>
<td>Horses</td>
<td>2,000</td>
</tr>
<tr>
<td>Camels</td>
<td>2,000</td>
</tr>
<tr>
<td>Poultry</td>
<td>16,000</td>
</tr>
</tbody>
</table>

There is of course no doubt that these animals are poor in quality although not necessarily of poor breed. Because of insufficient rain and a chronic shortage of hay and fodder, animals are weak and half starved. As a result, milk production is low and fluctuates widely during the year. Each year thousands of these animals are driven to central India, whereupon many die en route and many others are sold by the farmers at sacrifice prices. However, no farmer can do without these animals no matter how much he might have to spend for their upkeep. Cows and buffalo are the chief milk giving animals, oxen, horses and camels the chief transport animals and sheep and goats the chief meat and skin animals. The value of hides, hoofs, horns, bones and hair is of considerable economic importance. Although efforts have been made in the past and are being made at the present to improve herds and breeds, little progress can be reported because of: (1) refusal of orthodox Hindus to destroy old and diseased cows on religious grounds, (2) lack of food, (3) promiscuous breeding, (4) want of grazing lands, (5) unscientific methods of rearing animals and, (6) want of cross breeding.

The Key Village Project under the Five Year Plan is an initial step toward improvement of the deplorable condition of a significant segment
of Ajmer's rural economy. Its aim is to establish a number of centers in the state. These centers will consist of three or four villages where breeding will be confined to a few superior bulls of known pedigree and all other bulls will be either removed or castrated. Prophylactic steps will be taken to prevent fatal epidemics among cattle. Still in the formative stages, it is hoped that the objectives of this phase of the plan will receive adequate acceptance among the populace.

**Non-farm rural occupations**

A small percentage of the rural population is engaged in handicraft and small business. These include artisans, carpenters, leather workers, blacksmiths, and gold-and-silver-smiths. Approximately 10 per cent of the village population are employed in these tasks. Each village, therefore, is quite self-sufficient with respect to manufactured articles needed by the village population. Conventional demands and social customs followed by people in villages provide much of the work performed by the artisans. The dowry system and traditional use of jewelry provides a ready market for goods made of gold and silver. Perhaps more important is the relative position of the blacksmith in a community. He not only provides the all important plow, but also mends, repairs and manufactures articles for daily use, such as the bullock cart, household utensils, small tools and other implements used by the farmer. The village carpenter is as important as the blacksmith and inasmuch as both these craftsmen do work that is interdependent,
nearly every village has men of these skills. Leather workers in rural areas are semi-skilled and work mostly with sheep and goat skins. Commonly they confine their work to semi-tanning supplying material to urban areas for final processing and manufacturing machine made goods. Most of these village artisans are at a low social status in the village, but the village community cannot do without them.
CHAPTER V

URBAN OCCUPATIONS AND THE INDUSTRIAL RISE OF AJMER

At the turn of the century, British interest in the need for improvement of communications and transportation grew rapidly. Military concepts had changed with regard to troop movements and the Administration supported a policy of closer governmental integration among the diverse regions of the country. The central position of Ajmer State among the various states of Rajasthan led to the early establishment of Ajmer city as a focus of rail lines radiating to the north and south. The erection of railway repair shops and foundries in the city constituted one of the first industrial enterprises employing labor on a relatively modern basis. Traditional textile mills were administered in a manner peculiarly Indian and skills required of laborers were not as great as those in the shops. The new demand for labor was met by the migration of peasants from nearby communities and villages. As the number of urban peoples grew, a slow initial expansion resulted in secondary and tertiary industries and occupations to meet the increased market. Not only did the urban market for textilee, foodstuffs and personal articles grow rapidly, but also the hinterland trade areas of Ajmer was extended greatly by rail lines to Madras, Calcutta and Bombay, traditional transhipment centers, during the 19th century. Today the city of Ajmer is an industrialized urban center supporting an urban population of nearly 110,000.
Ajmer and surrounding small urban agglomerations have attained a favorable degree of industrialization compared to other centers of similar size in India, inspite of many handicaps in their natural resource base. Other than mica and feldspar, the state possesses no appreciable mineral resources. The power picture is also disturbing. Because of the character of the climate, development of appreciable hydroelectricity is impractical and steam generated power must depend entirely upon imports of coal from neighboring areas. Actually the industrial base of the area is related directly to focus of communications and transport facilities in Ajmer and industries based on processing agricultural products such as sugar cane, and cotton, and animal products such as wool, hides and skins.

Within Ajmer State four large cotton mills employ nearly 15,000 workers. Three mills are located in Beawar which is approximately forty miles southwest of Ajmer. This center is situated near the fertile Khari River valley, much of which is devoted to cotton production. The other mill is at Bijainagar, 25 miles southeast of Ajmer and employs 3,000 laborers. Supporting the textile industry, about 13,000 acres are devoted to cotton, which yields about 4,000 bales annually. Currently production of cotton fabric is 22.4 million yards. The following table

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1 A bale is composed of 392 pounds of cotton.
indicates production capacity of the cotton textile industry in the state. 1

COTTON PRODUCTION CAPACITY IN AJMER

<table>
<thead>
<tr>
<th>Name</th>
<th>Year Established</th>
<th>Production Spindles</th>
<th>Capacity Loom</th>
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</thead>
<tbody>
<tr>
<td>1. The Krishna Mills Ltd., Beawar</td>
<td>1889</td>
<td>18,268</td>
<td>636</td>
</tr>
<tr>
<td>2. Edward Mills Ltd., Beawar</td>
<td>1906</td>
<td>19,564</td>
<td>376</td>
</tr>
<tr>
<td>3. The Mahalaxmi Mills Ltd., Beawar</td>
<td>1923</td>
<td>13,240</td>
<td>416</td>
</tr>
<tr>
<td>4. Shri Vijai Cotton Mills Ltd., Bijainagar</td>
<td>1941</td>
<td>12,240</td>
<td>335</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63,492</td>
<td>1,763</td>
</tr>
</tbody>
</table>

Owing to semi-arid climatic conditions, cotton is irrigated. Disease control is easier to maintain even though acreage that can be irrigated is limited. As a result, Ajmer is noted for its quality cotton. The first mill was established at Beawar in 1889 by a group of wealthy Indians. The selection of Beawar was based primarily upon its nearness to cotton production and the city's protected site resulting in higher atmospheric humidity, a factor of vital importance. The early success of the first mill led to the construction of two more.

All mills within the state produce both coarse and fine cloth. Whereas fine cotton fabrics are purchased chiefly by upper middle classes in Ajmer and neighboring states, coarse cloth is marketed primarily

1 A.C. Jain and J.C. Ojha, Administration of Ajmer State, p. 29.
among the domestic rural population.

In addition to cotton textiles, Beawar is noted for its processing of wool, which is cleaned and pressed prior to being sent abroad for manufacturing. Smaller cleaning and pressing plants are found in other urban centers within the state. Every year, nearly 12,653,100 pounds of wool is collected and baled in six presses. The chief wool market is Liverpool, England.

The textile industry of the state cannot be expressed solely in terms of modern plant production. Traditionally, textiles have been the foundation of cottage industries throughout the state. These small family enterprises, situated in both rural and urban areas, produce annually a large amount (impossible to determine) of fabric for local needs. Spinning and weaving of coarse cloth is widespread and most of the village people use homespun cloth made on the hand loom.

Refining of sugar in Ajmer is a relatively new industry currently employing approximately 2,000 workers. Irrigated cane is processed in Bijainagar. Climate severely limits the acreage devoted to this crop and since the cultivation of cane requires more water than the cultivation of cotton, it is doubtful that this industry will expand greatly. Existing markets for processed sugar can lie principally within cities, so demand is relatively small inspite of the large population of the state.

A kaleidoscopic variety of smaller industries are found in most urban centers. Some of these activities are traditionally cottage industries
often established within easy access to urban markets, whereas others are distinctly urban or rural. Among these miscellaneous activities which rarely employ persons outside of the family or village circle, are the skilled artisans working in brass, gold and silver, tanning of hides and skins, tobacco processing chiefly into snuff, products woven from fronds of the date palm tree and manufacture of buttons and furniture. Owing to the economic and socialological significance of some of these occupations, a few will be discussed briefly.

Nearly every village and urban center has skilled craftsmen working in metals. One of the largest sources of revenue is derived from gold and silver threadwork. Very fine handwork is employed in cloth used for festive dresses and ornaments. Whereas threadwork is concentrated in urban areas, craftsmen working in metals, chiefly brass and copper, are widespread. The fine quality of the work of these individuals has established markets beyond state borders. Inspite of the necessity of importing all metals, labor is cheap and production is not based upon a time-cost factor.

The manufacture of buttons from horn and clay has evolved from the traditional concept of cottage industry to establishments employing a varying number of persons. Beawar's industry is an excellent example. The predominantly rural grazing based primarily upon sheep and goats provided a virtually inexhaustable supply of horn and bone. Heretofore, tanning of hides and skins, a village activity, was the only means by which many
grazers could market a product for much needed income. Although the button industry is small, it nevertheless provides a highly significant secondary source of income to rural peasants as demands for horn increase even though the total economic importance of the industry is small.

After partition of India and Pakistan in 1947, refugees settled within the state, many of whom were skilled craftsmen. The Sindhs from West Pakistan have quickly established relatively new industries in Ajmer, such as silk weaving and the manufacture of fountain pen inks. Most of these industries are in the cities of Ajmer and Beawar.

Mention should also be made of an expanding furniture industry using material derived from a widely grown xerophytic bush. Articles such as casual chairs, couches and chicks are made from this light, cheap and durable wood. Initially, the lower middle classes in cities constituted the principal market for inexpensive furniture. However, the market has expanded to tap neighboring states, and fully half, of current production passes beyond the borders of the state.

Owing to socio-economic problems attendant with mass migrations of rural peoples to modern industrial cities, the national government is emphasizing the need for expansion of cottage industry. Its chief objectives are to provide needed income during slack periods in harvesting crops and to gradually increase economic intercourse between urban areas.

1 Chicks are a type of curtain hanging placed at doors and windows.
and rural communities through marketing of rural manufactured articles. Such action, it is believed, would stabilize the village community and minimize the tremendous adjustment problems that face the newly arrived peasant as he seeks employment in the urban centers. Special subsidies and training centers have been established in rural areas. Many persons unable to cope with the more complex living conditions in cities are returning to villages only to find that their position in the community has been filled. The main policy of the state is to develop agriculture and industry without the progress of one becoming a deterrent to the development of the other. As difficult as a "middle course" may seem, there is little doubt that rural education and training, and the expansion of cottage industries protected by governmental legislation, is minimizing the glaring differences in economic opportunity between rural and urban areas.

Ajmer's mining and quarrying industry is founded on exploitation of non-metallic minerals, marble and other types of building stone. Among the various minerals mined, mica and feldspar are most important. Ajmer is the second largest producer of mica in East India. Nearly 150 handling plants are located in the cities of Ajmer and Beawar. The entire production is shipped by rail to West Bengal, where needs of the Tata Iron and Steel Works in Jamshedpur are first met and the surplus is exported. Annually 6215 cwts. valued at Rs. 8,38,495 or approximately $176,084 is mined. Owing to India's expanding steel industry, the increasing demand for mica is reflected in expansion of mining within the state.
The mining of feldspar from which the principal derivative product is allumina, is also expanding. Considerable research is being conducted in analysis of this mineral toward increasing its potential use. Currently, about 393 tons valued at Rs. 3,743 or $790 is extracted annually.

Owing to an almost total lack of wood for construction purposes, Ajmer State as traditionally built in stone. The crystalline hill lands within the state long have provided marble and ocher stone. Marble of superior quality is quarried in Western Ajmer near the small town of Makrera. Since marble is commonly used in constructing religious edifices in India, inspite of its cost, marble is exported widely throughout the country. The rapid expansion of urban centers and increased demand for marble used to face business houses and department stores has resulted in a rapidly expanding activity. In addition to marble, other types of stone are quarried and some are crushed for mortar.

The current dominance of the city of Ajmer both in terms of population and industrial significance is related directly to its central position in the rail network of the state which forms a highly important transhipment point for all neighboring states. As mentioned previously, Ajmer forms the link in trunk lines connecting Madras, Calcutta and Bombay. Two large railway workshops dominate the city's industrial landscape and employ nearly 12,000 laborers. Two electric power plants, a hosiery factory and a number of establishments including printing houses and various processing
industries form the core of Ajmer's industrial facilities.

The establishment of the rail center in the city was initiated under British Administration primarily concerned with needed expanded facilities for troop mobility. Ajmer became the headquarters of the Bombay Baroda and Central India Railway on the metre gauge system. Two big workshops were built in the heart of Ajmer city, one to build locomotives and the other to manufacture carriages and wagons. In the beginning practically all the raw material was imported from England, but later as other industries developed in the country, imports were reduced. Today only minor quantities of materials are imported from England. With the development of a network of railroads over the whole of the country, these workshops have developed tremendously and the whole city of Ajmer and its economy is centered around them.

These two shops not only cater to the B.B. & C.I. Railway or what is now known as the Western Railway, but are the suppliers to all the different railways of the country which operate on the metre gauge system. They have their branches spread all over the western part of the country covered by this system. The two have absorbed approximately 20 per cent of Ajmer's city population. Because of the population growth, demand for better transportation continues to increase and so both of these shops have continuously grown, so much so that another survey has recently been

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1 India has three gauges of railways. A broad gauge rail line is 5 1/2 feet wide, metre gauge is 3 feet 3 3/8 inches wide and the narrow gauge is both 2 feet 6 inches and 2 feet wide.
completed to make Ajmer a Broad Gauge junction. With the increased demand placed upon these workshops, more and more people have been drawn into this industry. These two workshops also train technicians and engineers who not only are employed by the plants, but also go to work in other industrial concerns upon graduation. High school graduates are always anxious to apply for apprenticeship training, but due to keen competition, only very competent pupils are admitted. ¹

As there was no developed power available at the time the railway plants were constructed, two power plants were also completed. One is owned by the Western Railway whereas the other is a private concern. The rail-owned plant employs approximately 4,000 people. In the early 1900's, this plant also supplied power to the city. Only in 1938 was the second private plant completed and took charge of the city's needs.

It is important to note that Ajmer has many industries and establishments which are related to the city's position as governmental center of the state. Nevertheless, its position as a rail center of regional importance forms the basis of its industrial activity. By contrast, Beawar more nearly reflects the economic life of the state inasmuch as its industries are directly dependent on processing the principal exportable commodities of the area. Although a much smaller urban complex, Beawar is the second economic center of the state.

¹. For a period of five years, the writer was employed in these workshops. Personal observation verifies marked growth of this industry, modernization of manufacturing techniques and improved working conditions particularly since World War II. Since the war, production has doubled and worker-management relationships have improved.
In spite of rapid industrial expansion within the state, the avenues of development are surprisingly limited. Perhaps the greatest economic opportunity lies in increased transport facilities which would tie Ajmer more closely to adjacent areas. There is little doubt that Ajmer's hinterland is insufficient to meet current economic needs. Climatic limitations greatly hinder development of the area's agricultural base. Lack of variety in mineral resources greatly restricts smaller types of industry owing to the necessity of importing materials. A highly restricted power potential poses a difficult problem even at the present time and may severely limit future expansion. Currently, unemployment is a chronic problem. Labor supply due to natural population increases and the influx of refugees from West Pakistan greatly exceeds demand. Solutions to these various problems will be slow in development. Nevertheless, Ajmer has initiated many measures at the state level which are needed to effect equal economic opportunity for the people and which have the support of the Indian Government.
Ajmer's geographical position seems to have been the greatest single factor for the character of growth it has made through the years. Availability of labor, unskilled or semi-skilled, within the state has been another factor contributing to this growth. Change has not been sudden but has been attained gradually. Although Indians have been noted for their conservatism and self-centeredness, Ajmer provides an example where people have altered this trait and generally have accepted change in the hope of bettering their economic and social status. Approximately 20 to 30 per cent of the labor strength in various industries originally migrated from agriculture to manufacturing. These people form the nucleus around which a successful attach on conservatism has been made. Private enterprise of some of the rich people, especially with regard to establishing factories such as cotton mills, wollen mills and power houses has been still another factor for the growing industrialization and people's interest in working as factory laborers. Another factor worth mentioning is that the state, being a pilgrimage for both the major communities (Hindu and Muslim), has attracted peoples of both faiths by meeting their religious needs and providing a good cause for migration to this area. Indians, whether Hindu or Muslim, are very religious people. Religion is an integral part of their lives. The Durgah for the Muslims and Pushkar Lake for
Hindus have been important factors for the concentration of population in and around the city of Ajmer.

Since its inception as a separate entity, Ajmer has always been under the supervision of the Central Government, and so has been continuously receiving governmental attention with regard to its various economic and political needs and an integrated development. After Indian Independence, major governmental emphasis has been placed upon industrialization. Various projects and schemes are being worked out for providing improvement of economic and social conditions. Under the First Five Year Plan an extensive program for the development of village industries prepared primarily with the object of increasing rural employment has been drawn. This program covers the following industries: Khadi (hand spun cloth), coir, village oil, matches, leather, handmade paper, can jaggery, palm jaggery, woolen blankets and bee keeping. It has been recommended that the central government establish a Khadi and Village Industries Development Board which should have large executive functions. The Board will be responsible for initiating village industrial programs in cooperation with state governments and other organizations seeking to improve village industries. As part of the program for the textile industry, the output of the handloom industry is expected to be doubled.

The Cooperative societies which are primarily agricultural have also taken a step forward in the field of industry, commerce and transport.
Industrial cooperatives, however, are still in their infancy. Their function is centered around village artisans who find it difficult to maintain their traditional employment under the pressure of competition from organized industry. Furthermore, the Five Year Plan also envisages community development and rural extension programs. Community projects cover agriculture, communications, education, health, commerce, supplementary employment, housing, training and social welfare. In carrying out this program there will be one agricultural extension worker for every five villages. There are about 55 such projects working all over the country. Each project comprises nearly 300 villages with a total area of about 450 to 500 square miles. A Project Area is divided into three Development Blocks, each consisting of about 100 villages and population of 60,000 to 70,000. The Development Block is also sub-divided into groups of five villages, each under the control of a village level worker. The city of Ajmer has one Development Block at present where trained personnel are helping the peasants.

With regard to conditions in desert and semi-desert areas, the Planning Commission of the Government of India appointed a Committee which recommended a five mile wide vegetation belt along the western border of Rajasthan. A Desert Research Station at Jodhpur, Rajasthan, has been set up to conduct research in soils, land use and silviculture. A pilot scheme for the creation of the vegetation belt will also be undertaken. Ajmer state is going to be affected by this program and a final
program of action will be worked out by the state.

Because of the power shortage, the development of more industries in this area is hampered. They are, however, two projects, viz. The Bakhra Nangal Hydroelectric Project and the Chambal River Project nearing completion, which are expected to alleviate the great need for industrial energy. The former project will bring power to industry and the other, which is limited in size, will provide additional water.

Expenditures provided under the First Five Year Plan for Ajmer State is as follows:

<table>
<thead>
<tr>
<th></th>
<th>(in 00,000 Rupees)</th>
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<tbody>
<tr>
<td>1. Agriculture &amp; Rural Development</td>
<td>77.0</td>
</tr>
<tr>
<td>2. Major Irrigation &amp; Power Projects</td>
<td>11.3</td>
</tr>
<tr>
<td>3. Transport</td>
<td>15.9</td>
</tr>
<tr>
<td>4. Social Services</td>
<td>53.0</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Education, Medicine, Public Health, Housing, Labor, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>157.2</strong></td>
</tr>
</tbody>
</table>

These plans and concentrated efforts of state government and people alike insure that the future of Ajmer State is promising, and it is the author's hope that the people of Ajmer will realize a significant rise in their standard of living.

**Avenues for further study**

The States Reorganization Commission set up by the government a few years ago has recently issued its report suggesting amalgamation of Ajmer State with the broader physiographic region of Rajhastan. It is not yet known whether their recommendations will be accepted, but in
they are, then Ajmer would become a part of Rajhastan and the developments and changes within this area would have to be restudied with respect to a much larger area. Ajmer city as such will hardly lose the importance that it has achieved and it will be of great interest to observe what changes will eventually be agreed upon by the various governments involved.
BIBLIOGRAPHY


