Chapter VII
From Manuscripts to Printed Books: Introduction of New Book Production Techniques and Formats

Prior to the arrival of the American Baptist Missionaries in Assam, most writings were made in the form of manuscripts, prepared from the bark of trees or pressed cotton (Sachipat and Tulapat). The use of paper was unknown until the modern era of Assamese literature. The history of Assamese manuscripts is glorious and it gives us both literary and past artistic information. The introduction of printing technology and production of books were a great gift from the American Baptist Missionaries to Assamese literature.

The tradition of writing manuscripts on Sachipat in Assam was prevalent perhaps from the sixth or seventh century. Edward Gait states in his A History of Assam that king Bhaskara Varman of Assam sent some valuable gifts to king Harsha Vardhana (606 - 648 A.D) who ruled the whole of the Ganges valley. Among other gifts, one gift item was ‘finely-written books with leaves of bark’ (Gait 1992: 26).

Colourful pictures were added to some of the manuscripts in Assam in the period between the later part of seventeenth century to the nineteenth century (Kalita 1996: 8). The manuscripts were written on folios made of the bark of Sachi or Agar tree (Aquilaria Agallocha Roxb) which were prepared with a laborious process. Ink or writing was also prepared from the indigenous materials. The writing pen was made
from stem of fern or plume of the *Bhimraj* (Racket-tailed Drongo) bird.

In the past, the process required to make *Sachipat, Tulapat* and ink were time consuming and laborious, which are described below.

**Process for making of Sachipat**: Sachipat was made from the bark of a tree commonly known in Assam as *Sachi* or *Agar* tree. The botanical name of this tree is *Aquilaria Agallocha Roxb* and the class is *Thy-meliaceae*. In English the tree is called *Aloe wood* and *Eagle wood*. It is an evergreen type of plant. Sir Edward Gait in his *A History of Assam* describes the process of preparation of *Sachipat* as follows:

A tree is selected of about 15 or 16 years’ growth and 30 to 35 inches in girth, measured about 4 feet from the ground. From this the bark is removed in strips, from 6 to 18 feet long, and from 3 to 27 inches in breath. These strips are rolled up separately with the inner or green part inside, and are dried in the sun for several days. They are then rubbed by hand on a board, or some other hard substance, so as to facilitate the removal of the outer or scaly portion of the bark. After this, they are exposed to the dew for one night. Next morning the outer layer of the bark (*nikari*) is carefully removed, and the bark proper is cut into pieces of a convenient size, 9 to 27 inches long, and 3 to 18 inches broad. These are put into cold water for about an hour, and the alkali is extracted, after which the surface is scraped smooth with a knife. They are then dried in the sun for half an hour and when, perfectly dry, are rubbed with a piece of burnt brick. A paste prepared from *matimah* (*Phascolus radiants*) is next rubbed in the bark is dyed yellow by means of yellow arsenic. This is followed again by sun-drying, after which the strips are rubbed as smooth as marble. The process is now complete, and the strips are ready for use (Gait 1992: 357).

**Process for making of Tulapat**: To make *Tulapat*, cow-dung and cotton or old pieces of cloths are decomposed to pulp. A glue, extracted from *Bar Gach* is added to the pulp and mixed for fine consistency. The fine pulp is then spread thinly on a smooth wooden plate. Another smooth wooden plate is placed on the top of the pulp with a
moderate hand pressure. *Tulapat* takes its form under natural drying. When *Tulapat* is dried completely it is ready for writing (Kalita 1996: 9).

**Process for making ink:** The following materials were used for making ink: the shells of *Amlaki* and *Jamu*, *Keheraj*, *Silikha* (*Terminalia Citina*) bull's urine, earthworm or *Kusia* and rusted iron pieces. The utensils are - an earthen bowl (container), a tub of bronze, an earthen pot, a stand and a hollow bamboo pole with two nodes at both ends. The shells of *Amlaki* and *Jamu* are to be ground and kept in an earthen bowl to soak in water for a week. The *keheraj* are to be blended and the bull urine to be collected in the bronze tub. The *Silikhas* are to be shredded and to be soaked in water at least for a week. Then all the materials to be kept exposed under dew for one night. The stand to be made in such a way that the upper earthen container can rest at a higher level and the bronze tub to be kept directly underneath. All the paste materials to be kept in the top earthen container and a few pieces of rusted iron are added. A little blood from earthworm or *Kusia* are added for better reflection of the writing in night time. The stand with all the materials described above, is kept in a moderately cold place and the bull’s urine is be poured in the upper earthen container. Due to condensation, small droplets will accumulate in the bronze tub below. This liquid was used as ink which are called in local terms *Kali* or *Mohi*. The inks were kept in bamboo poles as mentioned above with tight plug for future use. The stem of a fern is cut into a hand made pen for writing using this ink. Often, the plume of *Bhimraj* bird was also used as a pen for writing on *Sachipat* or *Tulapat* (Bora 1994: 24).
From the traditional to the modern type of book:

By the time the Baptist Missionaries first arrived at Sadiya, in March 1836, printing technology in the west was in an advanced stage. Printing technology progressed to a sophisticated level through gradual modifications.

The invention of printing in China was an invaluable gift to the world. Block printing was invented in 8th century. Later in 11th century, movable type was introduced. In 868 A.D., the first book printed in China by using blocks was *The Diamond Sutra*, a Chinese translation of a Buddhist religious book.

The production of paper was known to Chinese from early days. Paper was invented in China by Ts’ai Lun as early as 105 A.D. (Mazinder: 1998). In ancient times, the Chinese marketed paper to the Arab world. In 751 the Arabs got the secret of paper making from the Chinese. Paper mills proliferated from the end of 8th century to the 13th century in the Arab world, and later to Spain, which was then under Arab domination. In the 12th century, paper first penetrated Europe through the Italian ports and by an overland route from Spain to France. The papermaking techniques were rediscovered by the Europeans by examining the imported paper. Papermaking industries grew in Italy after 1275 and in France and Germany by the 14th century.

Printing was traditionally defined as a technique for applying under pressure a certain quality of colouring agent onto a specified surface to form a body of text or an illustration. Printing technology is changing with modernization. Printing is no longer limited to merely books and newspapers but is also used for textiles, plates, wall
papers, packaging, billboards, etc. So in the present world, the definition of printing will probably be any of several techniques for reproducing texts and illustrations, in black and in colour, with durable type faces and in a desired number of identical copies.

The invention of durable type faces in large numbers and with each letter strictly identical as well as the concept of printing press itself were independent of Chinese discovery. Johannes Gutenberg of Mainz, Germany is generally credited for the discovery in 1450 though there is some uncertainty about it (Encyclopædia Britannica 1974 : 1053).

Mechanical printing was introduced in India during the middle of the sixteenth century. The very first printing press was set up by Portuguese Jesuits at Goa in 1556. In 1557, the Portuguese printed a book in the Roman alphabet from Goa which was the first published printed book in India (Neog 1983 : 0.72). Kalidasa’s The Season (Ritusamhara) was the first book printed in Sanskrit in 1792 (The British Library 1979). Dr. William Carey published the New Testament (Dharma Pustak Antabhag) in Assamese from Serampore Mission Press in 1813. This was the first printed Assamese book (Neog 1983 : 0.72).

By the end of the eighteenth century, Mr. Halhed wrote a book, A Grammar of the Bengal Language, to explain the grammar of Bengali language for the British people in India. To cite examples he used Bengali text in the book. In order to print the Bengali text, the creation and use of the Bengali font became unavoidable. William
Bolts tried to make Bengali fonts in England, but he was unsuccessful. Later, Mr. Charles Wilkins, who was a civilian officer in India and who had acquired the talent of making Bengali fonts, made the fonts used in printing the book with the help of a gem engraver, Joseph Shepherd and a Bengali blacksmith, Pancanan Karmakar (The British Library, 1979). Definitely the fonts took on a modified form of the original Bengali letters. In later years, under the direction of Dr. William Carey, Pancanan created modified Bengali fonts which were smaller in size and more attractive. While publishing the Assamese New Testament, Dr. William Carey probably felt the necessity of having some fonts for Assamese combined letters. We may assume that Atmaram Sarma from Nagaon, who was at Serampore, probably helped in this matter. In most cases the Bengali fonts were used in printing of Assamese texts (Neog 1983: 0.74-0.75).

The writing of manuscripts in Assamese itself was an art. Dr. S. N. Sarma expresses his opinion that the first form of characters written in Assamese manuscripts bear a close resemblance to the characters of stone inscriptions of Kanai Barasi Bowa of the thirteenth century. The old Kamrupi script gradually changed to a modified Assamese script. The old Assamese script is also divided into three groups - Garganya, Bamunia and Kaitheli or Lahkari. There were no distinct characteristics to differentiate the scripts excepting some change in configuration of the letters in terms of bend and shape (Sarma 1981: 15).
The art of writing - which more or less approached calligraphy - was of a distinct style. As the mechanical printing developed, this art disappeared and the letter fonts took a new shape.

Dr. Nathan Brown arrived Sadiya with Mr. O. T. Cutter who was a printer. They brought a printing machine with them. They brought Bengali and English fonts with them from Calcutta. When the Baptist Missionaries moved from Sadiya to Jaipur, the printing machine was also moved to Jaipur. Finally the printing machine was brought to Sibsagar where Dr. Brown and Mr. Cutter installed the press under the name 'Sibsagor Baptist Mission Press'. This was the first printing press in the history of Assam.

Mr. Jenkins, the Commissioner of Assam, donated a Bengali font in the beginning to Dr. Brown and Mr. Cutter. Later, the fonts were brought from Calcutta to Sibsagar as needed. Several Assamese alphabets which were not available in Bengali, were prepared locally at the Sibsagor Baptist Mission Press. From the 'Description of the Printing Office' by Dayaram Chetia in the Orunodoi we get information on making Assamese fonts locally (Neog 1983 : 902). From the inception of the printing press at Sibsagar, the Baptist Missionaries published a significant number of books, both secular and non secular, in Assamese and in English. The publication of the Assamese monthly magazine the Orunodoi by the Baptist Mission Press was the most important contribution of the Missionaries and ushered the Assamese language towards a modern style of writing.
Modern Writing Formats:

In old Assamese literature, the format of manuscripts was of rectangular in shape from the horizontal to the vertical and the writings were extended horizontally. The folios were not bound together on the sides but a bunch of threads were maintained at the center of the folios.

The new technology of mechanical printing brought to Assam by the Baptist Missionaries changed the look of book format. Instead of the old horizontal format, printed books became vertical. Calligraphic letters were modified to standard fonts for printing.

A new system of punctuation was also introduced by the American Baptist Missionaries in Assamese writing. In old writings also a system of punctuation was followed. But the number of punctuation marks was limited. In the verse form - in which the bulk of the old books were written - only two marks were used - the single period (.) and the double period (..). In prose writing, over and above the periods the colon-like mark was very frequently used to indicate pauses.

We have incorporated in the illustration section, a few specimens of old Assamese writing printed in the modern Assamese script to illustrate the system of punctuation followed in them.

Old Assamese books, which were written on Sachipat or Tulapat, did not normally have any clear labeling of contents or indexing. But in many cases they used "markers" to indicate subject-matter, chapter-heading, canto (skandha, adhyay,
parba) and metre (chabi, pad, dulari). The Missionaries started a new style of Assamese writing introducing the labeling of contents. This was definitely an influence of modern Western manner of writing current in the West.

One of the earliest and best known Assamese literary persons in the modern era was Anandaram Dhekial Phukan. His most valuable discourse on Assamese literature - A Few Remarks on the Assamese Language and on Vernacular Education in Assam, was published by the American Baptist Mission Press, Sibsagor, in 1855. We observe in this book that 'contents' has been specifically reported with definite page numbers. Though the writer's discourse was in English, he has given many examples in Assamese, Bengali and Hindi to explain his view points.

The punctuation used in the Orunodoi clearly shows the use of the following marks : , (comma); ; (semi-colon); I (period, dari); : (colon); - (dash); ? (note of interrogation); ! (note of exclamation); " (quote) and " (unquote). Naturally, long sentences called for the use of a greater number of quotation marks than short ones. Anandaram followed this method of punctuation in his Assamese writing, which changed the style of writing of Assamese prose.

In the illustration section of this chapter a few specimen of old Assamese writings with punctuations to illustrate the system of punctuation followed in them are incorporated. Also added a few specimen of writings from the Orunodoi to illustrate the punctuations followed by the American Baptist Missionaries.
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Notes & References

1. An Assamese manuscript was found in 1995, in the attic of a building undergoing renovation work by Mr. and Mrs. Reichler of Connecticut, USA. Mrs. Reichler contacted me to know the language of the old manuscript. On my request Mrs. Reichler displayed the manuscript at the annual meeting of the Assam Sahitya Sabha, North America Branch on July 2, 1995 in Boston, Massachusetts. The manuscript is clearly an Assamese{}\textit{pathi}. This photograph reflects a middle page with cover page. The name of the manuscript could not be ascertained. Contents of this page describes lord Krishna's early life. The manuscript is in very good condition and was copied by Ciring Phukan.

I tried to have a second look on the manuscript. Since Mr. and Mrs. Reichler left America for Italy on military assignment I could not get a chance to go through the manuscript. Perhaps this Assamese manuscript was brought to America by some early American Baptist Missionaries.
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Illustration Section

(a) An old Assamese Manuscript, found at Connecticut, USA.
(b) A specimen from the Nama Ghosa.
(c) A specimen from the Guru-Charita-Katha.
(d) A few passages from the Orunodoi.
(e) A specimen from the A Few Remarks on The Assamese Language, And on Vernacular Education in Assam.
(f) A few specimen from the Charup Asrai (1840) and the Summary of the Faith and Practice of the Baptist Church of Christ in Assam (1845).
Chapter VII
Illustration-(a)

An old Assamese Manuscript, found at Connecticut, USA in 1995
Chapter VII
Illustration-(c)

অক-চিন্ত-কথা

[আক এদিন ছওজনা ওক নোঞ্জে গতি করিয়ে: মাথারো-ঘাটে কপাল একমাত্র খিচিয়ে: ওক বালে বড়গোলে ই কি: বলেন বাপ কপাল বেঁধ। কবিয়ে: বেঁধে আমারে। নবতম নোঞ্জে মন বুঝি কটালিতে পথমাষ্ট সদায়চরণত বেলা কর। তেহে গুঞ্জকে চোট আত্মা গীত কবিয়ে ভাটাণ্ডি। বেঁধে কবিয়ে। আলে মনাই হরিব। চনেল নাথ সাহ।]

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আক এদিন৷ কাঁক্ষি৷ সুনি সবে গলঃ চোট আতাও গলঃ ওজন উড়া নাই: বেঁধে রুঁটি আনিলে বেঁধে দেবে। শ্রীবাস জেষ্ট নাই: বলে বাপ আপনি উড়া নাই দেখিয়ে বৈচ্ছি কর্তব্য৷ তুলিয়ে: বলে আলোচনা কুমিল্লা তেলায়ে বরে হই বাপঃ বেলে চর মেয়ে: বর্ণলো গলঃ গুঞ্জলা বেলাঃ আবাই নানাগে অতে দাখা। তেহে ভেজনকে ওজনকে কাঠে কাথে সাহে৷ পাঁচ মহাপুকুর ওক চিন্তা অতারক মাতিচ অথবা পরল: কোমল বলে বাপঃ আকো কই পত্র বেলে শ্রীবাসঃ বলে বাপঃ বলে মন নামে নালে৷ পাঁচে তিনি পত্র মাতি ওকনালো বলে শ্রীবাসঃ আতা বেলে মহাপুকুরঃ বলে চিন্তা মই নামে নালে৷ বলে বাপ আমিউ অনুভবে করিয়ে৷ তেহে ষেয় পত্র মাতিচ: বলে বাপঃ পাঁচে ওজনে খেলিয়ে স্ববিচ: বলে শ্রীবাস দেহো মই চাকো পত্র মাতিচে মাতা:: নিজাতো নাইনে তোমাঃ এ বলে বাপ পুরুষে সিদ্ধিচতা কর হায়ুক্তে ময়া গলঃ পুঞ্জ ভেড়ি সোমাল। আপনাব' নিজ দেখিয়ে বাড়ীকো ইতার অষ্টতি মায়ার হাতকে দিয়া গলঃ আক সত্য যুগে৷ অগ্নিকর কাঠে৷ [হেভেতাো ময়া দান তুষ্ক কিনো মহঃ] সাপ্তন্তে শ্রীবাস আদি আনো অভিজ হইঃ জঙ্গ হোম পুঞ্জ। আপনিকে কবি ধ্বস্তা: এতিয়া হইতে [কলহুঁতাম মেন্ত চাইলে প্রকাশতে চাইহতে অপুর্বীতা ওড়াতা সিদ্ধির প্রকৃতি মায়া। মৃদু পাইঃ নোজলাই নথে নবে: চুথ [থর নিমো অয়াজাট] দেখি নিজা নাইনে বাপো তেহে মহাপুকুর ওক চিন্তা অতার শেখ ভেলো দেয়: বেলো হরিব হবি প্রহারদেউ পাত্রী হুমক তাহাহে দেখিয়ে সংসারে হাৰ্দকু। মৃদুসংহত আগত বেলেঃ কথা কপ দেখিয়া। তোমার প্রচু যেমন ননী নাই৷ 'সাঙ্গাতচারী দিনের হুনেতে সদাঁ
A few passages are reproduced below from *Orunodoi* and from the early Assamese printed books published by American Baptist Missionary Press to illustrate the modern use of punctuation.

From *Orunodoi*, Vol. I, No. 1, January 1886:

![Image](image)

From *Orunodoi*, Vol. I, No. 6, June 1846:

![Image](image)
From Orunodoi Vol. I, No. 6, June 1846:

... Ahominsri Charnilal, a native of Assam, reported in a letter to the editor that in his childhood, when he was about 7 years old, his mother used to teach him the Assamese language. He said that his mother would say, "I am to teach you the Assamese language.

(From Orunodoi Vol. I, No. 6, June 1846)

From A Few Remarks On The Assamese Language, And On Vernacular Education In Assam By a Native, published from American Baptist Missionary Press in 1855:

পদার্থ বিদ্যা নাইবা পারিবার চাই উনিউরা।
জানব কথা।

পদার্থ বিদ্যায় মাহমুদ অধ্যায়ে রুজিলে মুইবিলাকার কেনে- কুরক নীতি অর্থাৎ তাঁর গুণ কি, আক কেনেকে লাভ লাভ করে, তাকে বিচার করাই তাঁর বান। নেই বিদ্যায় কো মহানকে ভাগ করি পাঁচি, খালি আক আতি লাগিনং লাভ মুইবিলাকার বিদ্যায়ের দেখার গতি আতে, তাকে বিচার করে; এতে একে একে তাঁকে কোনায়া ২ রেলের কথা পদার্থ বিদ্যা। বলে। কিন্তু চক্রতাক তাঁকে মুইবিলাকার গতি বিশ্বাসিত বিদ্যায় মুইবিলাকার পারি। মুইবিলাকার বলে অন্তর্ভুক্ত বিদ্যায় তাঁকে আর কে ও, তাকে বিচার করে; আক কি বিচার কেনে বিচার করে, তাকে বিচার কি রেল ২ বিদ্যায়। বলেন দেখ তাঁকে কোনায়া।

(Native 1855: 34)
From *Carup Asrai* (The True Refuge in Assamese), published by American Baptist Mission Press, Jaipur 1840:

•• তেকাই। বাক আত্তা, এই বেলি এটা কথা বোলো, ইহার সিদ্ধাংশ নিয়া সুনী। আম নম্বর অর্থাদ গোল, অর্থাদ মস্তিৱ্যটাবে আত্ম বহি জি ন বেলি অর্থাদ হরিং চিন, তোঙ্গে চিত্তু নিশ্চিতীম।

•• বুলাই। তাই বুলাই, হিন্দু মায়ুঞ্জ এই কথা কই, কিন্তু তোমাত এটা কথা সুমাৰেচন, এই কথা নিষ্ঠুর ডিয়া। সুনী, এই আটটা অর্থাদ সহ জি কথম কঠিলে তাহ মার্জন পাপ পায়। তাই হই, এম বিসেন করম কি কি কঠিলে? এম কেনে করম কথা নহই, কষ্ট্য তাব পাম।

তেকাই। আত্তা, কি তাব পাবান ন হল, তেহে কেনো দেবানক ভক্তীলে ভরি নে পাব নে?

•• বুলাই। দেও, নিও অকল রূপ রুম জানিয়। পুনরুম করা কনাই আপুনি ঐকেচে,

(From *Summary of the Faith and Practice of the Baptist Church of Christ in Assam* and printed at the American Baptist Mission Press, Sibsagor, 1845:

•• ৯। নিলা কলে আচরিবর নিমিতে আবাস প্রকৃত বৃত্তে দুই বিধি বিকলন করিলে। প্রথম বিধি বূহ দিওয়া; তাতে কি মায়ুঞ্জ বিয়াস কবে, সি পাপ সমস্ত সি মন্ত বৈদর্শ বিয়াস আচরণ করে যাক পেন নিয়ে মহি সাহাব পায়। উচ্চ তাব করোটা। প্রসু তাব নিয়ান্ত দেখাব নিমিতেও, সেই মায়ুঞ্জ প্রকৃত মনব কুলোকে প্রায় সুকুমারী রূপ দিয়া হইয়। দুইটি বিধি প্রকৃত রূম আজ্ঞ বিবাহ করে রূপ পায়া। গভির লোকে সেই কেভাে কবে পেরেছিনীর ভাবে হোয়া। বৃত্তে কি গধি সবচেয়ে উপমায়ে পিতা। কাক কেওন কেষ উপমায়ে নাথ পরিবারের নম্ব রাই, তেও আহিবর নিমিতে কেষ নম্ব প্রকৃত কবে।

(American Baptist Mission Press 1840: 5)

(American Baptist Mission Press 1845: 12)