

# A COMPARATIVE STUDY OF MEETEI MAYEK

[ FROM THE INSCRIBED LETTERFORM TO THE DIGITAL TYPEFACE ]

#### **INSCRIBED LETTERFORMS**

3458年から、1910年の239年11日日日 いようない。1910年の1239年11日日日の し、886の日本の日からの日からの日本のは、1910年12日

#### **MANUSCRIPT LETTERFORMS**

#### **SIGN-PAINTING LETTERFORMS**

# THE HEARING TO STIELL

#### **LETTERPRESS LETTERFORMS**

ा व्यव्याशिषा उवर्त स्वाधिशिष्ट प्राचित्र मार्चित्र स्वाधिशिष्ट विष्ट्र मार्चित्र मार्चित्र मार्चित्र मार्चित्र मार्चित्र स्वाधित्र मार्चित्र स्वाधित्र मार्चित्र स्वाधित्र मार्चित्र स्वाधित स्वाधित्र मार्चित्र स्वाधित स्व

#### **DIGITAL LETTERFORMS**

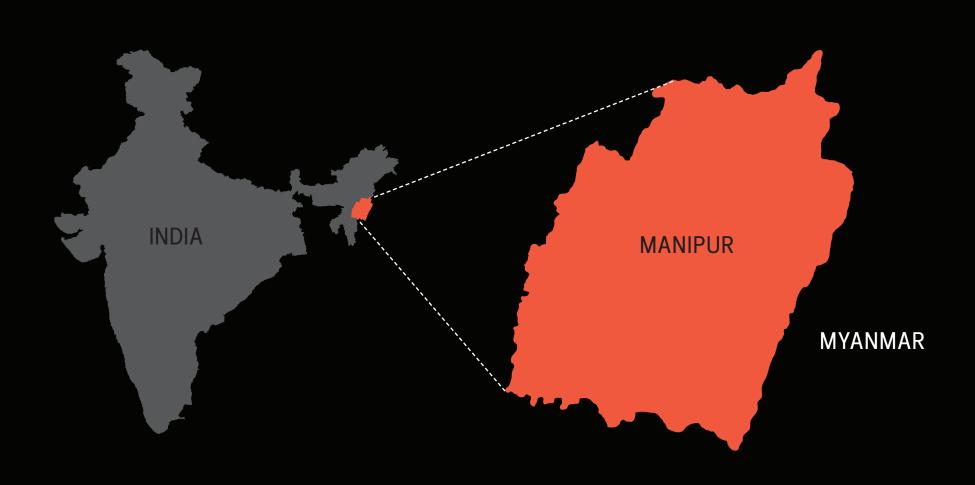
टेंड्यूमलीय, जूबम ऊराध्याणीय, प्रजूम इस्ट्रिय प्रताय कराध्याणीय केया क्रिस्ट्रिय प्रताय इस्ट्रिय प्रसार्थिय ब्रह्म अश्वर १९२१ : २२ ४२मध

## MEETEI / MEITEI / MEITHEI / MANIPURI SCRIPT

The indigenous script of Manipur to write Meeteilon or Manipuri language

# MEETEI / MEITEI / MEITHEI / MANIPURI SCRIPT

The indigenous script of Manipur to write Meeteilon or Manipuri language

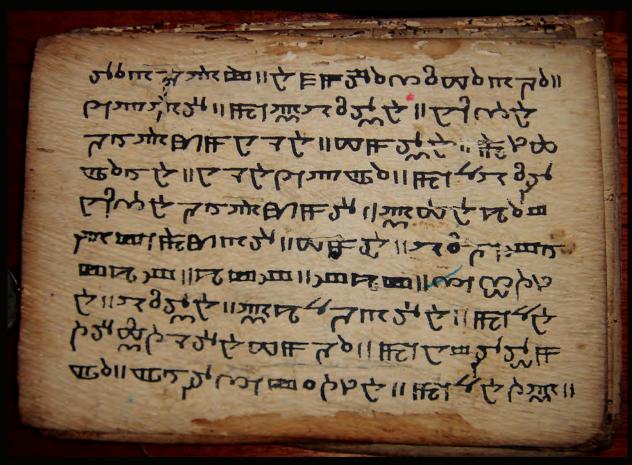


# **ADVENT OF MISSIONARIES IN 18TH CENTURY**

King Pamheiba adopted the religion Vaishnavism

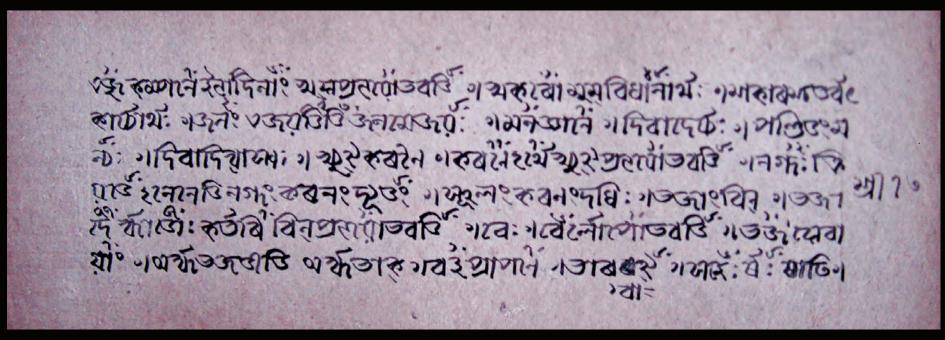


# BURNING OF PUYA (Ancient book of knowledge)



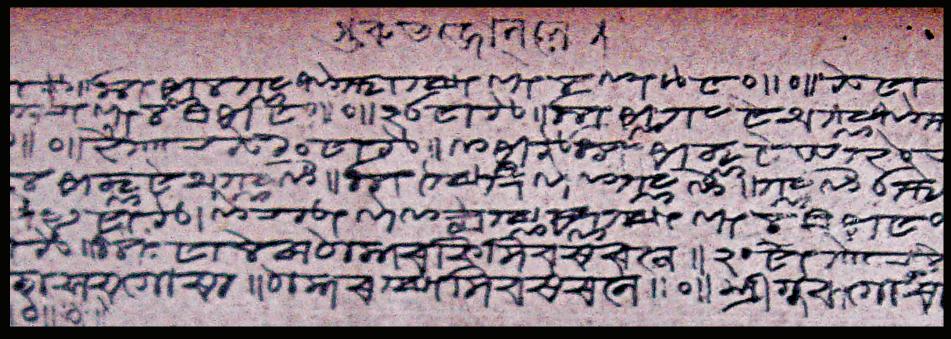
A sample of *Laining Lambi* manuscript written on the *agarbak*, 18th century (*Manipur State Archive*, Manipur)

# INTRODUCTION OF BENGALI SCRIPT



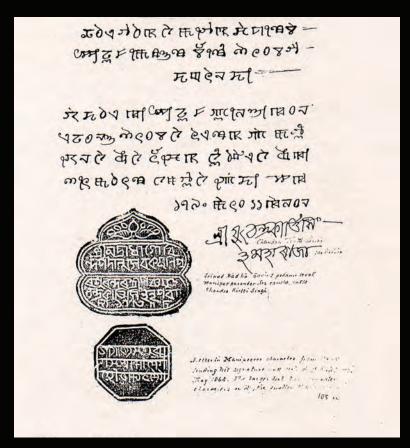
A specimen of Manuscript (Sanskrit) written in Bengali script in 18th-19th century. (*Manipur State Archives*)

# MIXING OF BENGALI LETTERFORMS

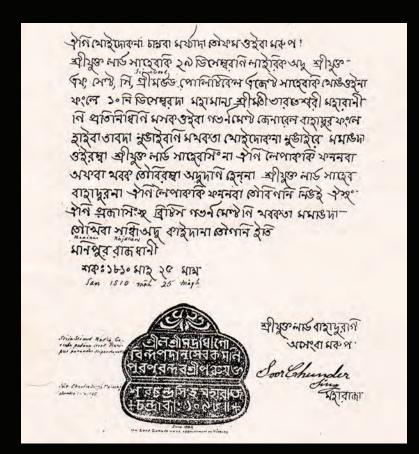


A specimen of Manuscript that shows the inclusion of Bengali script in Meetei Mayek. (*Manipur State Archives*)

# **MEETEI MAYEK TO BENGALI SCRIPT**



A sample of a letter in Manipuri script sent to Viceroy of India by Maharaj Chandrakirti in 1868. (The Lost Kingdom: Royal Chronicle of Manipur)



A sample of a letter in Bengali script sent to the Viceroy and Governor General of India by Maharaj Soorchandra in June, 1889. (*The Lost Kingdom: Royal Chronicle of Manipur*)

# ATTEMPTS TO REVIVE THE SCRIPT (1930-1980)

There were debates on the number of letterforms, especially '36' and '27'





A sample of Meetei Mayek 36 letterforms (*Linguistic Survey of India*)

A sample of Meetei Mayek 27 (18+9) letterforms (Manipur Gazette No. 33, Secretariat, Department of Education, 1980. Contributed by Khumancha M)

# **APPROVAL OF 27 LETTERFORMS IN 1980**

In 1980, the government of Manipur approved Meetei Mayek with the 27 letterforms and its supplements.



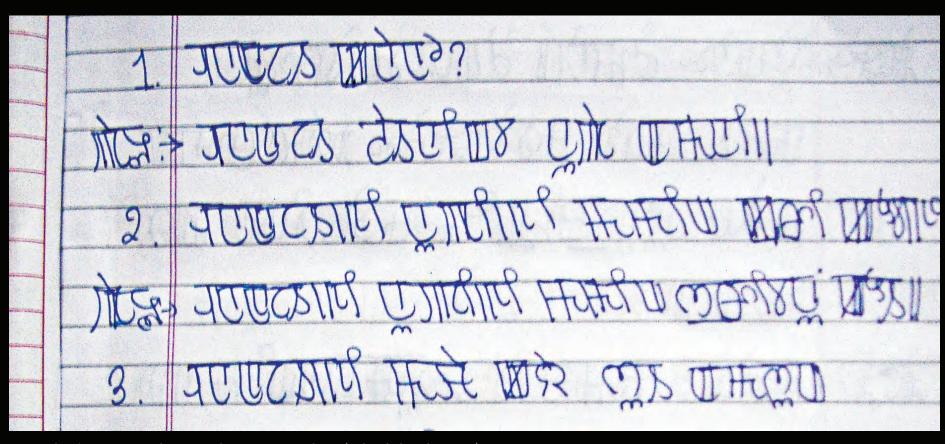
A sample of Meetei Mayek 27 (18+9) letterforms (Manipur Gazette No. 33, Secretariat, Department of Education, 1980. Contributed by Khumancha M)



A sample of Meetei Mayek supplements (Manipur Gazette No. 33, Secretariat, Department of Education, 1980. Contributed by Khumancha M)

# **INCLUSION OF MEETEI MAYEK IN 2005-06**

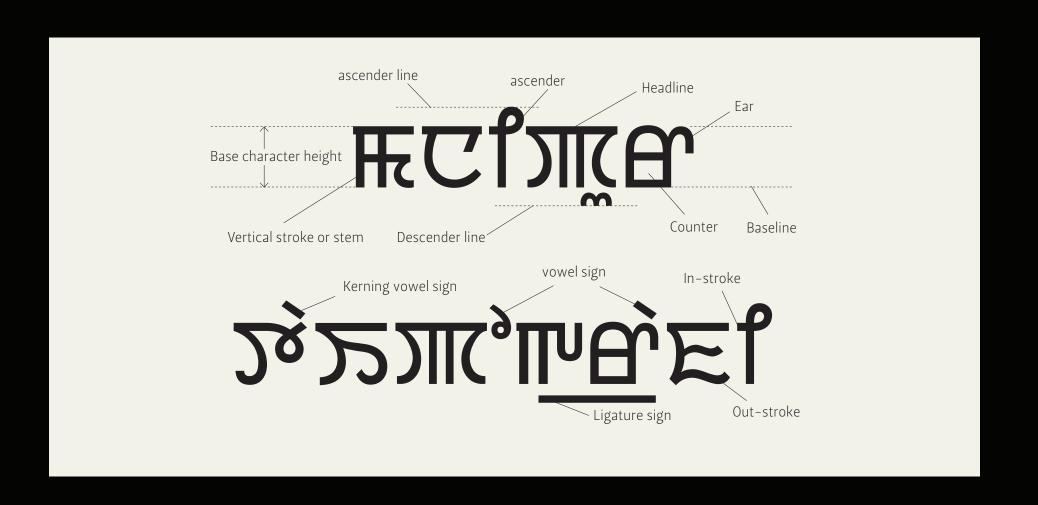
After almost 25 years since approval of the script, the government of Manipur included Meetei Mayek as a part of academic curriculum.



A sample of Meetei Mayek written by a young student. (Nikita's handwriting)

# **NOMENCLATURE**

Name of the structure parts of Meetei Mayek letterforms



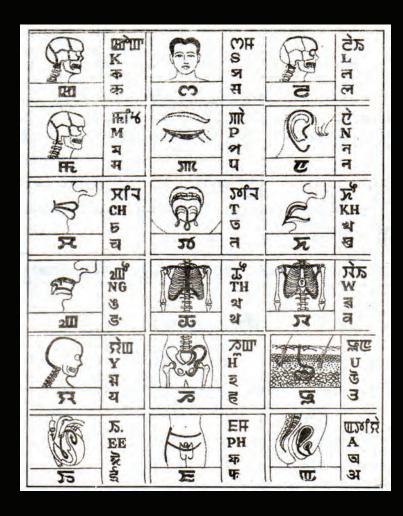
# **EEYEK EEPEE**

The original 18 letterforms

W	(Y)	C
Æ	SIIC	C
天	<b>2</b> g	77
<b>Ш</b>	$\mathfrak{T}$	<b>5</b> 7
र	F	S S
$\Sigma$	E	W

# **EEYEK EEPEE**

The original 18 letterforms



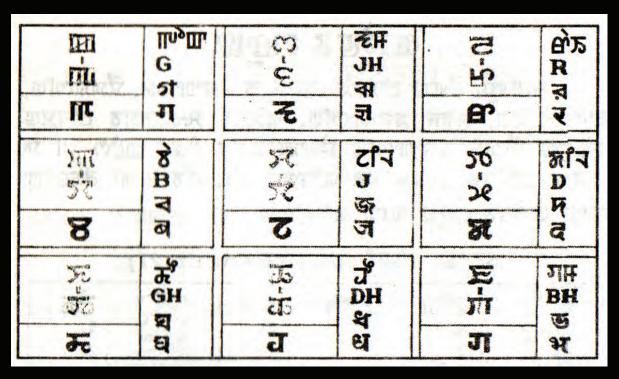
A sample of 18 letterforms of Eeyek Ipee illustrating its derivation of the names and the structures from the human anatomy.
(Meetei Mayek Tamnaba Mapee Lairik)

# **LOM EEYEK**

9 letterforms which were added later

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9 letterforms which were added later



A sample showing the derivation of Lom Eeyek from its corresponding Eeyek Eepee sounds (Meetei Mayek Tamnaba Mapee Lairik)

# **LONSUM EEYEK**

Semi consonant or half sound



$$\underline{\mathsf{C}} \to \mathsf{Z}$$

$$\mathbb{H} \to \mathbb{H}$$

$$\longrightarrow \square$$

$$M \rightarrow M$$

$$2 \rightarrow 2$$

# **CHEITAP EEYEK**

Vowel signs (Forms word shape)





# **KHUDAM EEYEK**

**Punctuation marks** 

# **CHEISING EEYEK**

**Numerals** 



# **CHEISING EEYEK**

Numerals



An illustrated diagram showing the derivation of Meetei Mayek numerals from the embryonic development of a human foetus.
(Meetei Mayek Tamnaba Mapee Lairik)

# **HEADLINE AND BASELINE**

Consists of both headline as well as baseline



Gurmukhi script (Typeface: Gurmukhi MT)



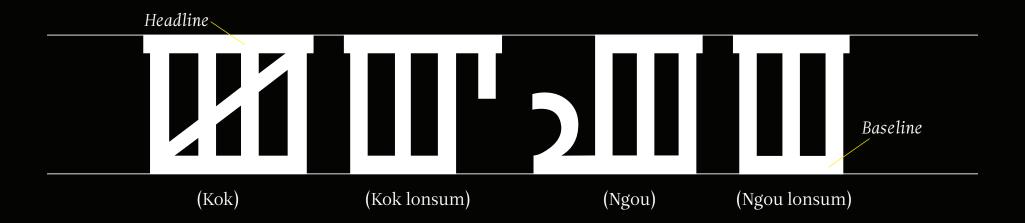
Devanagari script (Typeface: Devanagari MT)



Bengali script (Typeface: Frijky Bengali)



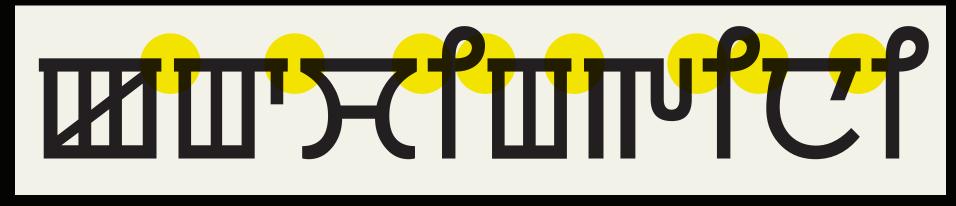
Meetei Mayek script (Typeface: Sanamahi)



Examples of Meetei Mayek letterforms that have with both headline and the baseline

# **GAP BETWEEN LETTERS**

The Meetei Mayek letters do not connect with each other when written



Example of a Meetei Mayek word showing the gap between the consecutive letterforms.

# PRESENCE OF MULTIPLE VERTICAL STROKES

The presence of multiple vertical strokes and their repeated appearance in text-setting form a unique texture and colour.

# 四四四四元四五四四四四

Пह्यामा अध्या कर स्था कर स्थ

# **ABSENCE OF CONJUNCT LETTERFORMS**

Though conjunct letterforms existed in 18th–19th manuscript, the modern Meetei Mayek does not have conjuct letterforms.





















# SOME CHANGES IN TYPOGRAPHIC EXPRESSIONS

# STRUCTURE AND PROPORTION

Until the point that Meetei Mayek was written by hand (in inscriptions and manuscripts), its letterforms underwent a lot of change structurally, because different writers constructed the letterforms in different proportions.













# STRUCTURE AND PROPORTION

Until the point that Meetei Mayek was written by hand (in inscriptions and manuscripts), its letterforms underwent a lot of change structurally, because different writers constructed the letterforms in different proportions.

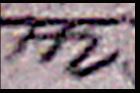














HC (MIT)

# STRUCTURE AND PROPORTION

Until the point that Meetei Mayek was written by hand (in inscriptions and manuscripts), its letterforms underwent a lot of change structurally, because different writers constructed the letterforms in different proportions.















(NA LONSUM)

# STRUCTURE AND PROPORTION

Meetei Mayek letterforms engraved on wood can be considered the first attempt at creating a typeface. This marks the transition between handwritten and printed type.







**MANUSCRIPT** 

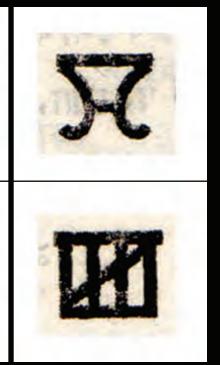
**WOODEN TYPE** 

# STRUCTURE AND PROPORTION

The letterforms were then translated to metal-type retaining close proportion to the wooden type. Similarly, the letterforms of metal-type are translated to the digital typeface.







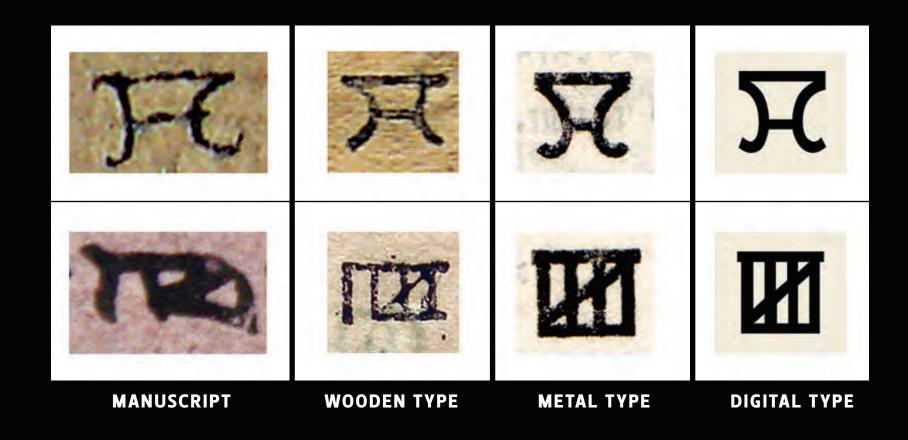
**METAL TYPE** 

**WOODEN TYPE** 

**METAL TYPE** 

# STRUCTURE AND PROPORTION

Once it reached the stage of printed letterforms (in letterpress and digital typeface), these structural changes came to an end, thus resulting in the basic structures that exist today.



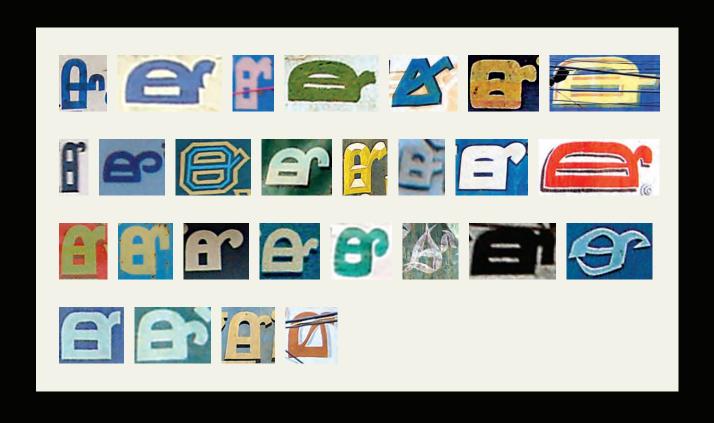
## STRUCTURE AND PROPORTION

In sign-painting, one finds a variety of letter proportions of Meetei Mayek—condensed, compressed and expanded.



## STRUCTURE AND PROPORTION

Sign-painting explores various structures and proportions, yet maintaining a consistent feature that groups letterforms as a family.







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## **NATURE OF STROKE**

The nature of the stroke refers to the shape of the stroke of the letterform. It can broadly be divided into two—mono-linear (equal thickness) and modulated strokes (difference in thickness)



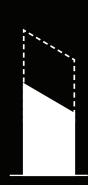


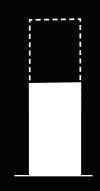












## **NATURE OF STROKE**

Historically, the letterforms have an inescapable association with tools and materials used for writing. Depending on the tool and technique used, one can determine the nature of the stroke in the letterforms.

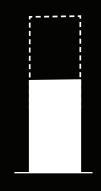






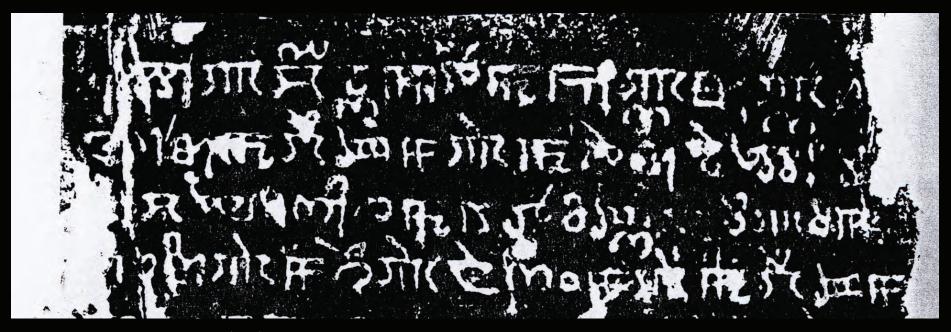






## NATURE OF STROKE

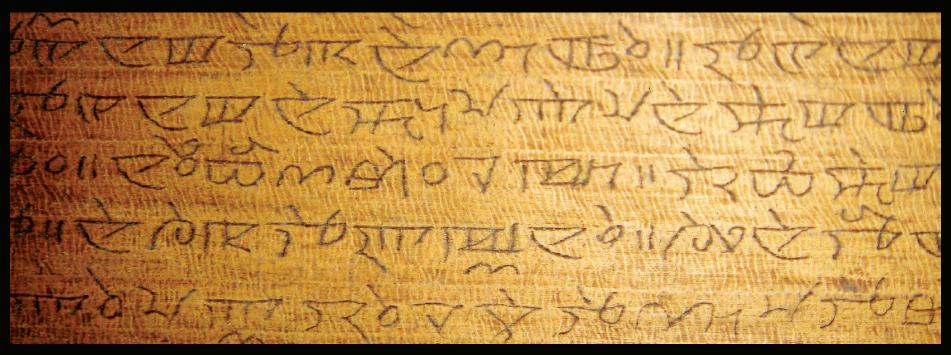
Letterforms in Meetei Mayek inscriptions were traced (chiseled) from draft letterforms written with a sharp nib on sandstone.



Sample of Leishankhong Inscriptions (1819). (Epigraphical Records of Manipur)

## **NATURE OF STROKE**

Early manuscripts (16th and 17th) of Meetei Mayek were written with bamboo, reed, and quill feathers sharpened to a fine tip.



Specimen of a manuscript written on palm leaf. The writer etched the letterforms with sharp or pointed nib. (People's Museum Kakching)

## **NATURE OF STROKE**

As a result these letterforms possessed mono-linear strokes.



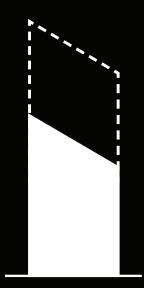


## **NATURE OF STROKE**

The Bengali script introduced a new tool—the broad nib pen. This influenced the letterforms of Meetei Mayek and modulated strokes came into existence.





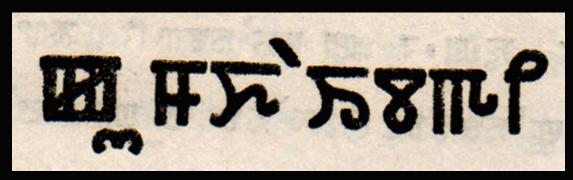


## NATURE OF STROKE (LETTERPRESS)

Only Mono-linear stroke existed in the domain of letterpress (wooden and metal type).



Printed Wooden type (Mono-linear)



Printed Metal type (Mono-linear)

# NATURE OF STROKE (DIGITAL)

The modern Meetei Mayek letterforms (digital typefaces) have both mono-linear and modulated strokes.

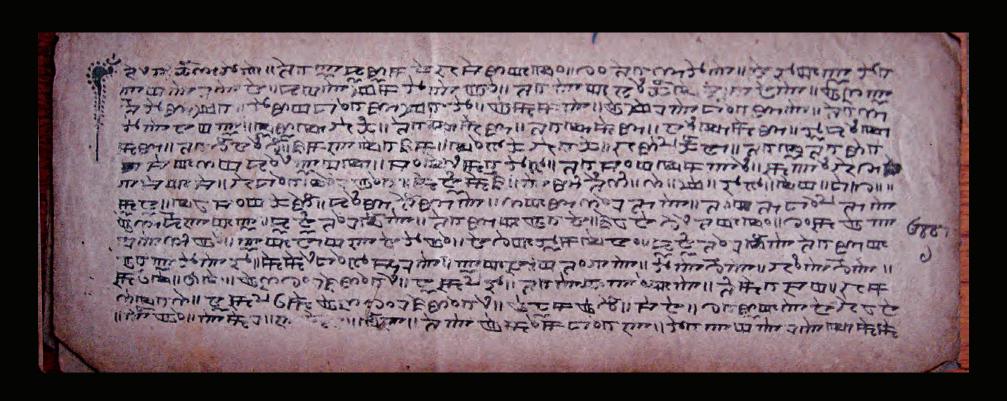




Kanglei Phajaba, 2004 (Modulated stroke)

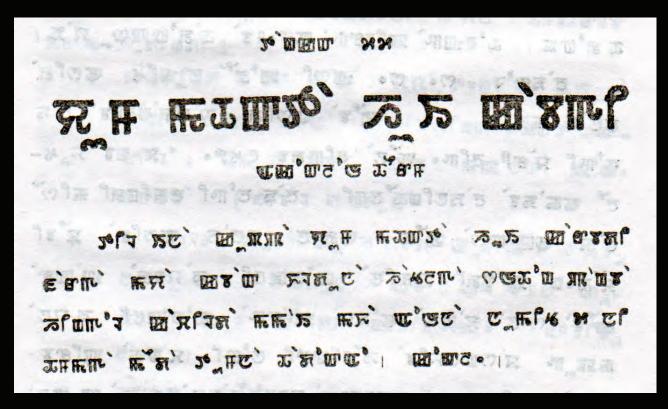
## HIERARCHY

In Meetei Mayek typography, hierarchy is created through size, weight and style. Early inscriptions and manuscripts of Meetei Mayek had a few examples of the use of size and weight to create hierarchy.



## HIERARCHY (SIZE)

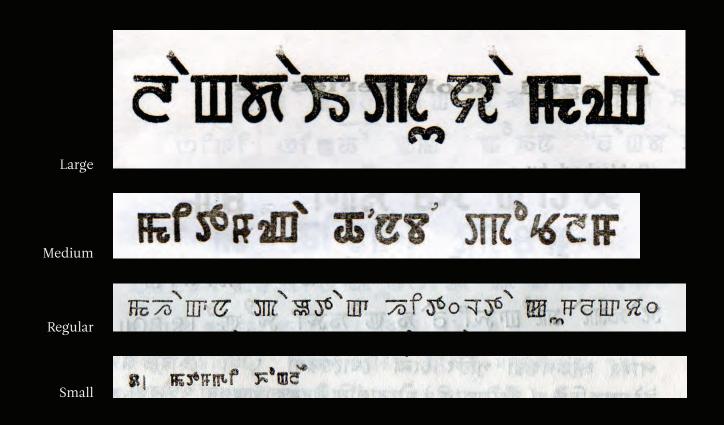
The prominent usage of size and weight began only with the arrival of letterpress (metal type) and digital type.



Sample of letterforms printed with hot metal, creating heirarchy of text using the difference in size of letterforms (Eikhoigi Thouramlon)

## HIERARCHY (SIZE)

Metal type had only 4 different sizes of the same style (mono-linear): small, regular, medium and large. The difference in weight didn't exist in Metal type.



HIERARCHY (WEIGHT)
The usage of different weights to create hierarchy began with digital typefaces (an influence from foreign scripts like Latin, Bengali etc.)





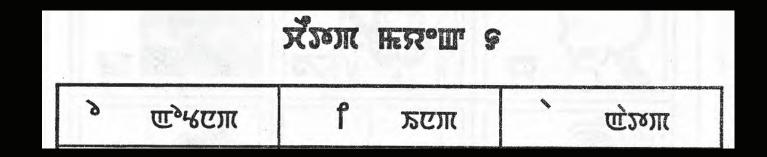
Kanglei Eeyek (Regular), 2003



Kanglei Athaba (Bold), 2003

## HIERARCHY (WEIGHT)

The usage of different weights to create hierarchy began with digital typefaces (an influence from foreign scripts like Latin, Bengali etc.)



Text sample of using bold and regular to differentiate the hierarchy of text. (Meetei Mayeki Araiba Mapi Lairik 2005)



Bold (Fake)



Regular

HIERARCHY (STYLE)
The sign-painting domain explores various means in creating hierarchy—the technique of shadows, highlights, outlines, slanted etc.





## **HIERARCHY** (STYLE)

Sign-painting letterforms generally serve for display typefaces—to catch or attract the attention of the viewer. This led to the formation of letterforms that are highly decorative and expressive in nature.





## **TEXTURE & COLOUR**

Meetei Mayek has a unique texture due to its structure and formation of text.

पार्व छात्रं हित्रं विश्व विषय प्राप्त प्राप्त प्राप्त प्राप्त प्राप्त प्राप्त प्राप्त हित्रं हित्र

## **TEXTURE & COLOUR (MULTISCRIPT)**

Due to the presence of multiple scripts, Meetei Mayek texture has evolved.

யரித் கம்யரிளிக Panganba Press en Proprietor ஐ யூக்கிளிக் கில் கலையன் Activist, கையகர் 1991 மி கலையன் கண் Jail கற देशின் சுமை Organisation கல்ய Senior Instructor மூக்கற் देशிளிக் முக்கி! கியியர் கல்ய கியியர் மூக்கிய மூக

## **TEXTURE & COLOUR (MULTISCRIPT)**

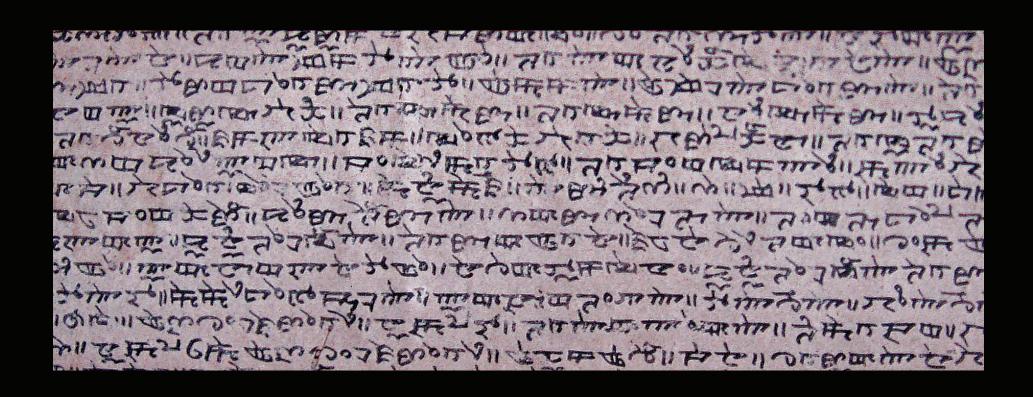
In the 1980s with the introduction of metal-type, the presence of Meetei Mayek increased. Since then, Meetei Mayek has prominently existed along with Latin, Bengali and occasionally Devanagari.





## **TEXTURE & COLOUR (WORD SPACE)**

Introduction of word and paragraph space. Early writings of the manuscript did not have word and paragraph space.



# **TEXTURE & COLOUR (WORD SPACE)**With the arrival of other scripts in the 18th–19th century, word and paragraph

space slowly came into existence in Meetei Mayek.

西海河市	त्रम् म	ं हेना	क भ	芒 亚	らいないま	हे छ	かの中
Mi Man	a-ma-gi one-of	ma-cl	hā ild	ni-pā male	a-ni	i lai	-rammi. were.
Ma-bungā-ni-	gi ma-rak-tā midst-in		ma-não		a-tom-bā		a-du-nā
ma-pā-dā	hāi, 'I said, 'I	Pā-bā,	ai-nā	phang-g	ga-da-bā	lan	saruk
a-du	ai-ngon-dā me-to	pi-l	oi-yu.'	A-	du-dā	ma	-pā-nā

# **TEXTURE & COLOUR (WORD SPACE)**Though there is no definite reason behind this introduction, word spaces

appear in the samples of transliteration of language.

医医肾 內口 多色地 田台 是自 医果然是 医医生 医鼠虫 医医鼠虫 医医鼠虫 医医鼠虫 医鼠虫 医鼠虫虫 医鼠虫虫虫虫虫虫虫虫虫										
THE TE	रम हेन हैं	गार	कि ग्र	Χ, Τ	my	机力	गदे			
Mi Man	a-ma-gi one-of	ma-c	hā aild	ni-pā male	a-ni	i la	i-rammi. <i>were</i> .			
Ma-bungā-ni-	gi ma-rak-tā midst-in		ma-não		a-tom-bā		a-du-nā			
ma-pā-dā		Pā-bā,	ai-nā	phang-g	ga-da-bā	lan	saruk			
a-du	ai-ngon-dā pi- me-to give		bi-yu.' ·pleasc.' I		du-dā	ma-pā-nā hi <b>s</b> -fathe <b>r-</b> by				

## **TEXTURE & COLOUR (PUNCTUATION MARKS)**

Addition of punctuatiion marks like coma, colon, bracket etc., from the Latin script.

```
। वंस्कील पा॰स्कील उर्वं "वंषा ल" आत्मा॰ तर वाल प्र
क्रमा ( त म ) पा करा र मार्ग प्राप्त क कार्य ( स के हा )
।। वेषा भार पा किरते भे हीलक के जार मा
                   क्षित्र के हम्म अभ्यापित भ्रमण्ड -: - व ज्यान
- सम सा चा मार्ग वितरं स का रामां म हा लच का नाम है
ಕ್ರಾರ•, ಸ್ವಾಪ್ ಕ್ರಾಪ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಾಪ್ ಕ್ರವ್ ಕ್ರಾಪ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ಟ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್ ಕ್ರವ್ಟ್ ಕ್ರಿಸ್ ಕ್ರಿಸ್
उदं र ''आ सा सा सा ' आत्या गिरुप भारतं र जिंद
 लियं पा लियं है।। ट॰ण पिंधट टें अमेर प्रस् हें में
 ंक्र निष्ठतं के कर्ज कर्ज कर्ज क्रार के कर्ण कर्
```

## **TEXTURE & COLOUR (LIMITATIONS)**

Due to the technical limitations for production, the texture of the printed text with letterpress (metal type) stood out.







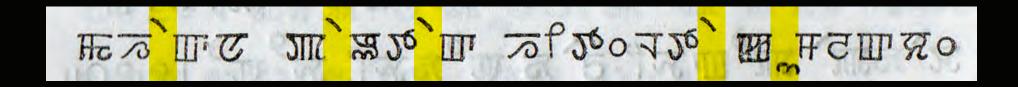






## **TEXTURE & COLOUR (LIMITATIONS)**

Therefore, there is an apparent gap in the text-setting, disrupting the cohesive nature of word formation, which in turn affects the texture and colour.



## **TEXTURE & COLOUR**

Interestingly, digital typefaces are influenced by the letterpress text composition. Vowel signs are now intentionally positioned on the top-right or bottom right of the letterforms, although technology allows them to be positioned like they were in early inscriptions and manuscripts.





## **TEXTURE & COLOUR**

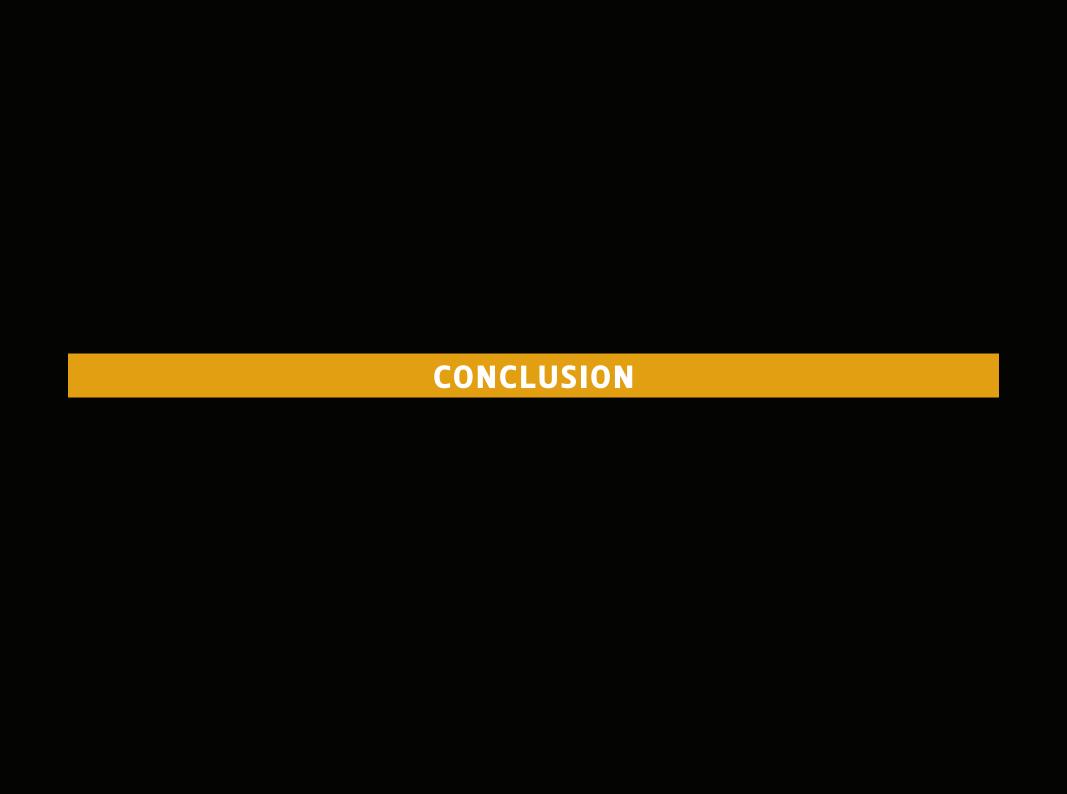
Due to technical advancement, digital typefaces have solved most problems—limitations on size, weight, style, vowel sign positioning etc.

 खेणरेंगरेणखा स्तर॰ण खेणरेंगरेणखा स्तर॰ण खेणरेंगरेणखा स्तर॰ण

## **TEXTURE & COLOUR**

It allows an easier way for complex type-setting—the combination of text and image, multilingual typesetting with different scripts etc.





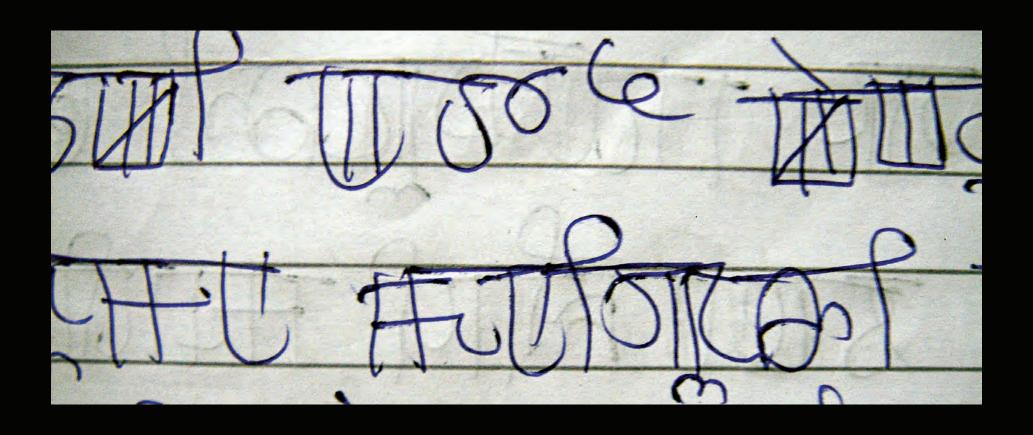
## **CO-EXISTENCE**

At present, Meetei Mayek co-exists with Bengali script.



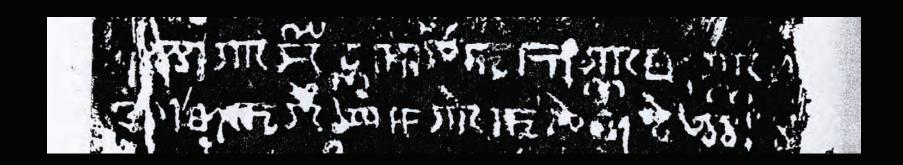
## **MEETEI MAYEK REPLACING BENGALI SCRIPT**

Students are now learning only Meetei Mayek script and Bengali script is no more a part of childrens' educational curriculum.



## **INSPIRATION**

The letterforms found in inscriptions and manuscripts show an immediate influence of handwriting. They show spontaneity and have a natural flow of the stroke. They could be a good inspiration for developing text typefaces.





## **INSPIRATION**

Sign-painting letterforms are more constructed and geometric rather than possessing a natural stroke movement. This can serve as a useful source of inspiration for developing display typefaces.







## INSPIRATION

It is equally important to examine printed letterforms, as the technical restrictions and advantages in producing them influence the design of a typeface.

## करणार्व यत्तातिक सामान्य मान्य प्रताप प्रता

## ऊम्म<sup>°</sup>ए°माीण <u>ठट</u>°म्म॰म मट्ट्रणम <u>उन्</u>यण में देठम प्रण्डएठ आदुर्टा९७८ हेर्राठ माण्डिक फर्टा देम॰ण<u>ऋ</u>

क्रमहेन. E°8वामेवा ९६: ए॰लए॰न 0°ए आए ज् ।। दिश्ले विर्पत त्रमञ्ज् निषद मित्र विष्ण प्रतिस्म रिका रिक्र संभित्रम पारामक संभित्रह る。田が田。川

॥ दिल्ला गाज्यका कार्यक्षित अन्यत्य अन्यत्य प्रकार्य प्रमान्य प्रमान्य प्रमान्य प्रमान्य प्रमान्य प्रमान्य प्रमान्य भ्या का का का से स्वास्त्र में के स्वास्त्र के किया के स्वास्त्र के स् मह्याधिक सार्थ कार्य के सार्थ के सार्य के सार्थ के सार्थ के सार्थ के सार्थ के सार्थ के सार्थ के सार्य के सार्थ के सार्य ുറ്റു പ്രൂപ്പുള്ള വുടുന്നു വു चारीयण मध्य सक्ष्य हर वण हर्दरम ॥ दिश चाचल घन इस्त्रिम क्षियाची हर हा हर वण हर वण कि लच्च के लच्च के मध्य प्रभाव स्थाय स्याय स्थाय स्याय स्थाय स्याय स्थाय रिप्रार्त्य गाहस्त्री गा ३२ ° एतर्द्र वि गार , अर्द्ध १० विषयार १५ अ ९ अ ९ अ १ जो व द्रिप्रे व जो अ<sup>6</sup> प्रतिस् माह माहित हें सा हित है से सा हित है से सा है है से सा है सा है से सा है स उने पारास हा के प्राप्त समाराम भारत लग्ज हुए स्थान के प्राप्त कर है जिल्ला हुए से प्राप्त सहस्र समाराम हुए प्राप्त स्थान हुए स्थान स्थान हुए स्थान सहस्र समाराम समारा हेत्रीया प्रथम प् ए हे साथ के साथ है होता है होता है होता है है से पार्थ के साथ के साथ है होता है है से साथ के साथ है है से साथ क

उत्तर मंं इ हे पाता देवन प्रमार ह र र्सिट रिस.. हे चित्रहें प्राण्या प्रश्य प्राण्या किया है अप किया है कि स्वाण्य किया है कि स्वाण कि स्वाण कि स्वाण किया है कि स्वाण किया है कि स्वाण किया है कि स्वाण किया है कि स्वाण कि स्वाण

# WITH THESE SOURCES OF INSPIRATION, ONE WILL UNDERSTAND THE LIMITATIONS AND POSSIBILITIES WHILE DESIGNING A TYPEFACE.

Thank you