

देवनागरी

मुद्राक्षर

आभिकल्प

अक्षर

*means imperishable, that which
cannot be destroyed or eroded.*

प्रॉजेक्ट २

देवनागरी मुद्राक्षर अभिकल्प.

गाईड

प्रॉ. किर्ती त्रिवेदी

किमया गांधी

आय. डी. सी. आय. आय. टी. मुंबई

Project 2

Design of a multi-purpose Devanagari typeface

Guide

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Approval sheet

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Preface

The increasing advent of globalization and technological advancements are taken to tell that we are living in an age of increasing sameness. The cultural diversity, once rich and abundant is being replaced by a global culture. This has had an effect on the visual culture of India. Regional dialects, languages and scripts have not escaped the consequences of 'modernization'. The well painted billboards and shop signs have been replaced by massive in your face advertisements. The streets are full of panwalas and departmental stores wear the same huge red beverage advertisements on their heads.

The devanagari script saw its peak in the times of letterpress, when elegant complex letterforms were cast and used widely in print and publication. The nature of Indian scripts being different than Roman or Latin, their digitization initially proved to be a tedious task that did not deliver the script in its totality. Recent developments in type digitization however have reached a stage where the script can be produced in its original richness of form and elements. There has been increasing demand for the digitization of Indian scripts to reach larger number of audiences via several media. In the print media, newspapers in Hindi boast

more circulation than their english counterparts, proving that there is certainly demand. The digitization of Indian scripts however have brought in their wake alteration in form to suit the requirements of the technology available. Though reach of the scripts has widened, they propagated the spread of a deteriorated form.

This forms the inspiration for undertaking the task to analyze the current type design scenario & thereafter design a new approach to designing typefaces to propagate the richness of a correct and complete script.

Acknowledgements

A heartfelt note of gratitude towards all those who have, in some way or the other contributed to this project and above all made this process a remarkable learning experience.

The institute, for providing a platform for this project and its resources.

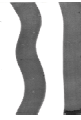
Prof. Kirti Trivedi,
for being an inspiration, encouragement
and a phenomenal guide.

Mr. Sarang Kulkarni,
for his valuable inputs and assistance.

My parents,
Shaival,
for being the pillars
of strength and support, always...

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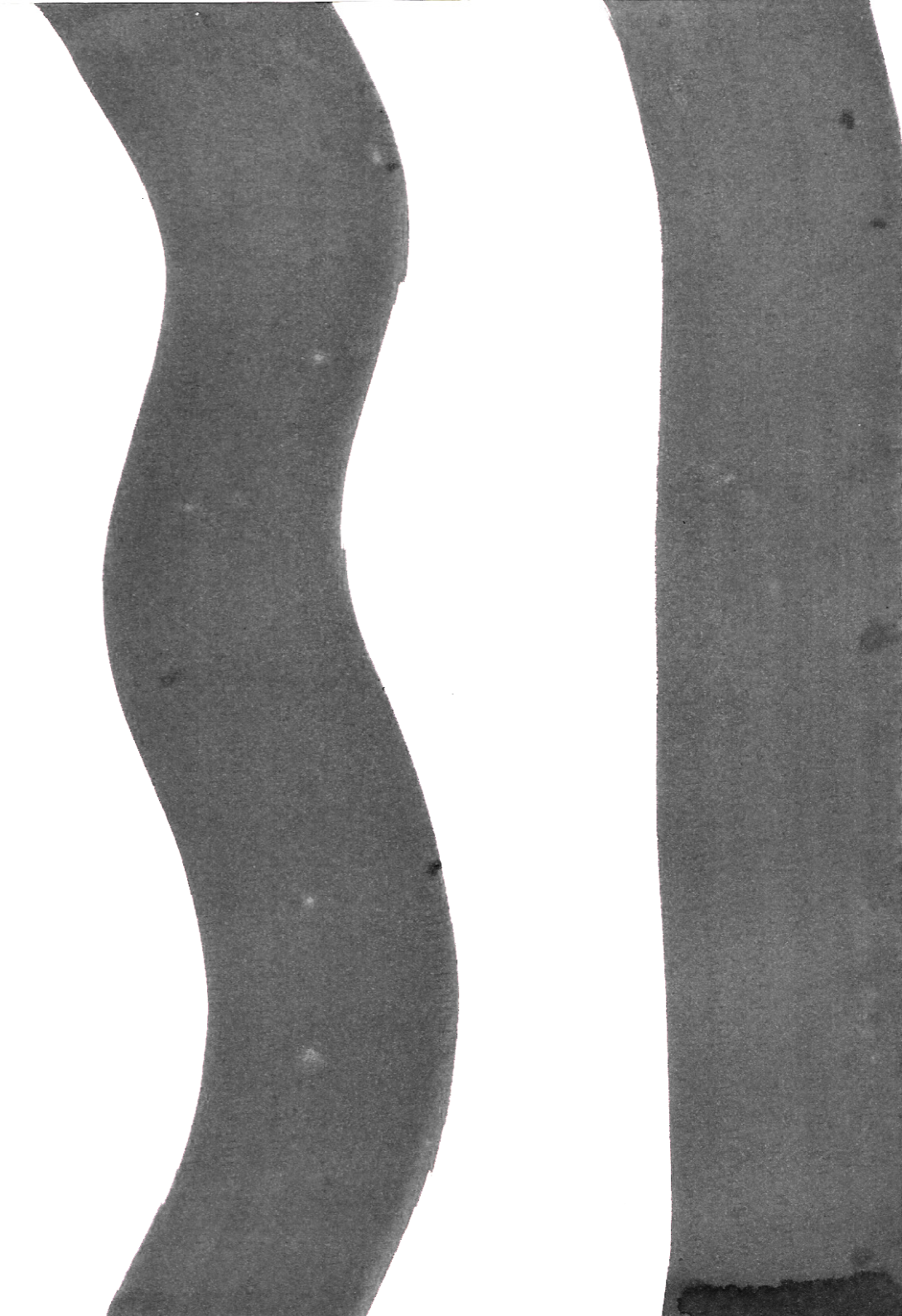


Typeface design २२
 A new approach
 Visual form and framework

Prologue

This project is my attempt at making a contribution to the field of devanagari typography. The project is my first type design project in devanagari script, hence process has been equally important to the final outcome. The emphasis of the project is on its process and a new approach to type design. The project aims at tapping the growing needs of the market and try open newer possibilities to enhance type design as it is done today. The project involves understanding the need and creating correct character forms that form a pre requisite to the font design process that follows. The aim is to not just generate a font, but also understand emerging possibilities in font design today.

The report progresses with chapters explaining the process in brief and the approach that has been the most important learning of the project. The report is thus a description of the need, perspective and value of this project undertaken.

The image features two dark, wavy vertical bands on a white background. The band on the left is wider and has a more pronounced, undulating shape. The band on the right is narrower and more straight, though it still has a slight wavy texture. Both bands appear to be made of a dark, possibly textured material like paper or fabric.

The need for new devanagri
faces cannot be overemphasized.
There are new needs, new
messages to be conveyed.
The new technological
developments in typesetting
have finally removed all
constraints which inhibited the
development of Devanagari script.
It is time for a new generation
of Devanagari letter icons to
emerge, and to be perfected.

- *Iconography of Letterforms, Kirti Trivedi*

आवश्यकता

'Alphabet epitomizes culture'

Need

The letterform which was supposed to be 'Akshara'- beyond erosion - has undergone much erosion and mutilation in the process of submitting to the demands of technology.¹

The project finds its inspiration in the deep interests in scripts of India and the area of font design.

The process of the project is directly reflected in the need. The font design process is more of a problem solving process than a purely aesthetic one.

Communication and digitization

The font design scenario in India has been flourishing since the development in digitization and different organizations (foundries) have made fonts in Indian scripts available. Various font design organizations making Indian script fonts are CDAC, ShreeLipi etc have made fonts in a various Indian scripts available. Formally speaking our cup may look like its full, but if one analyzes them under the yardstick of quality and usability, only a handful would make the grade. Over the period, from the times of letterpress, the quality and standards in typefaces seem to have suffered.

Though there has been an ever increasing need, the demands have not been fulfilled with quality. The hindi newspaper boasts the highest circulation in the print industry. Websites, blogs and other media demand Indian scripts and their vivid usage. The typefaces from available today lack a voice.

They largely demonstrate various limitations, in terms of both character form as well as usability. Though the attempt for digitizing scripts has been magnanimous one observes a sense of incompleteness in the fonts available today. The first part of the project deals with exactly this aspect of articulating this incompleteness in the font design of today.

Indian script requirements.

Indian scripts are highly evolved scripts, which have been seen as 'complex' scripts by the font design digitization today. There have been attempts to simplify this complexity, when originally what one has done is compromised form and aesthetics at the cost of limited tools. However, the complexity if viewed as requirements of the script can result in a different approach to Indian typeface design.

The project attempts at understanding these requirements and try doing justice to the richness of devanagari and lay foundations for better type design perspective. Not taking into consideration these requirements of scripts in their stride has led to development of incomplete and at times inappropriate typefaces which get propagated continuing the spread and replication of these typefaces.



Above and left, are pictures of forced devanagari signages on store facades. The forcefulness mars the visual image of the store and the brand.

Visual culture

The visual culture of a place is determined by the visuals a place offers on display. One has seen the visual culture of metro cities been taken over by a global culture. The signboards are no longer hand painted, the shop facades look similar, colours change but styles remain same. They reflect what we are slowly losing. Indian scripts have vanished from the visual culture of certain places at an alarming rate. This triggers one of the underlying concerns that form a need for this project.

The above mentioned reasons of incomplete typefaces also comes to play here, as these incomplete typefaces get splashed over newspapers and some forcefully changed signboards, making the situation even more appalling.

As a girl living in Mumbai, who has witnessed this change from painted letterings to neon signs, the deterioration in form has been more than evident. The digitization of typefaces is a welcome change and the opportunities it opens up today are immense, they just need to be acted upon. This is basically my act.

विचार प्रवाह

A typeface for today

Approach and perspective

The answer to this question lies in two phases: realizing the need for a typeface and articulating the need in terms of form and voice.

Thus the project progresses in the same direction. Having the first phase already explained in the previous chapter, the further course defines the ways in which this gets articulated. The aim is not just make statements, but to clearly and technically portray their existence.

The approach to the project is that of a learner; to learn from seeing and learn by doing. The construction of the letterforms is not on the basis of making them aesthetically pleasing. The aesthetics of the letterforms arise out of a problem solving mechanism. The idea is to minimize the flaws in existing typefaces and generate an output that if not better, be as good as the best available today.

Importance of character form

Technologies keep developing, tools keep changing, what remains constant is the form of the letters. So the approach is to define a correctness of the character form that may or may not depend on existing software limitations. It is a process of way finding.

Font design possibilities

As mentioned earlier the project output, along

with generating typeface is to understand the process by which one arrives at decisions in a process. To allow oneself to make mistakes and to learn from them, to open up to newer avenues of font design and explore newer possibilities has been the key learning of this project.

Value of a designer

In this age of complex digitization of typefaces, the role of a computer program has highly attained great stature. Various programs allow the generation and blending of fonts without actual human design interference. It seems like gone are the days when type designers did meticulous manual calculations and hand drew each fount to attain great levels of accuracy and completeness. But the value of a human hand cannot be challenged. The observations and thoughts of the designer are the basis of the thin line of quality. Hence, the project helps also realize the potential of a designer and coherent software support to produce better results.



The shape of a letterform is
a surface manifestation of
deep mental abstraction.

- Otl Aicher

A written line of Devanagari
is rich in texture where the
horizontals and verticals are
emphasised in subtle variations.

- K. C. Aryan

The soul in the body is the very
self of the letters and of sound.

- Tantra Shastra

पूर्वगत मुद्राक्षर

Notes in awe of the masters

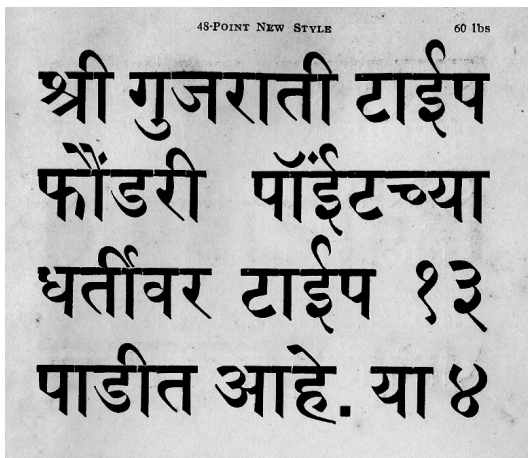
Precedents, a brief study

Letterpress and phototypesetting have been the precedents to digital typefaces that are available today. This chapter is a visual journey into those pages of time where one perhaps witnessed the last complete, beautiful specimens of very a rich script. The study of these founts also led to an understanding of the composition and anatomy of the script.

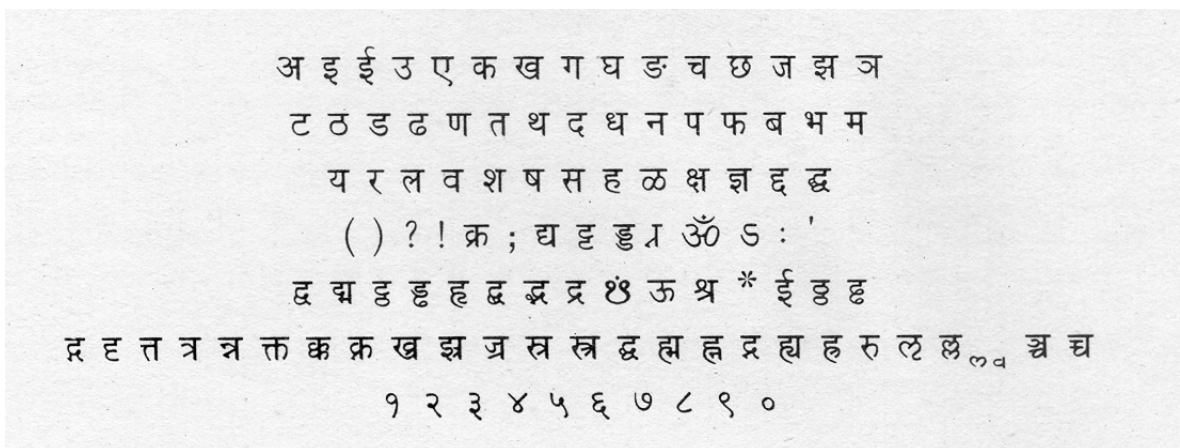
It is enthralling to see a 6-point devanagari type neatly set in the letterpress times. The uniformity of character, the optical arrangement of space are the learning lessons from the masters.

References from

Gujrati type foundary manual
Mauj publication manual
Nirnaysagar fount
Typography of devanagari, Bapurao Naik
My grandfather's collection of booksw



Above, scan displaying a fount from Gujrati Type foundry



Above, glyph set for Devanagari Bold fount by Mauj Publications

20 मराठी मुद्रणाचे कलात्मक मूल्य वाढविण्याच्या प्रयत्नांत मुद्रकाला जी मोठी अडचण येते ती टाइपांच्या विविधतेच्या अभावाची. देवनागरी टाइपांच्या जाती व आकार इतके थोडे आहेत की, त्यामध्ये मजकुराची जुळणी व मांडणी कितीही वेगवेगळी करण्याचा प्रयत्न केला तरी त्यातला तोचतोपणा डोळ्यांत भरतोच. याउलट इंग्रजी-कडे पाहिले की डोळे दिपून जातात. त्यामध्ये टाइपाच्या वळणाची व आकारांची

24 मराठी मुद्रणाचे कलात्मक मूल्य वाढविण्याच्या प्रयत्नांत मुद्रकाला जी मोठी अडचण येते ती टाइपांच्या विविधतेच्या अभावाची. देवनागरी टाइपांच्या जाती व आकार इतके थोडे आहेत की, त्यामध्ये मजकुराची जुळणी व मांडणी कितीही वेगवेगळी करण्याचा प्रयत्न केला तरी त्यातला तोचतोपणा डोळ्यांत भरतोच. याउलट इंग्रजीकडे पाहिले की

36 मराठी मुद्रणाचे कलात्मक मूल्य वाढविण्याच्या प्रयत्नांत मुद्रकाला जी मोठी अडचण येते ती टाइपांच्या विविधतेच्या अभावाची. देवनागरी टाइपांच्या जाती व आकार इतके थोडे आहेत

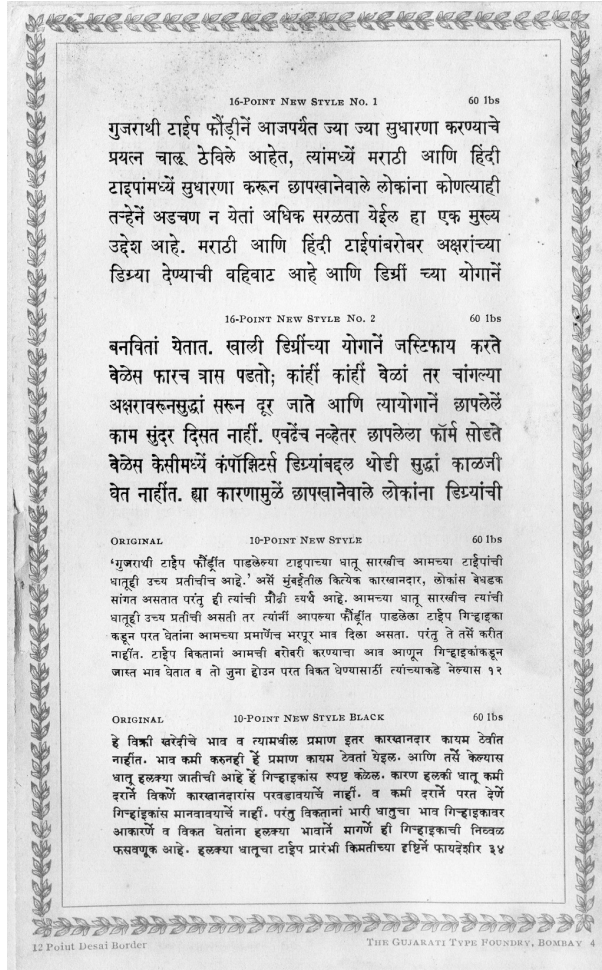
अ ई उ ए क ख ग घ ङ च छ ज झ ञ
ट ठ ड ढ ण त थ द ध न प फ ब भ म
यर ल व श ष स ह ळ क्ष ज्ञ द्व द्भ
() ? ! क्र ; घ ङ्ह ञ् ञं ङः '
द्व बा ड ढ्ह द्व द्भ द्र छ ऊ श्र * ई ङ्ह
द द त त्र त्त क क ख ख़ ख़ ख़ ह ह द्र ह रु ल ल्ल० च घ

१ २ ३ ४ ५ ६ ७ ८ ९ ०

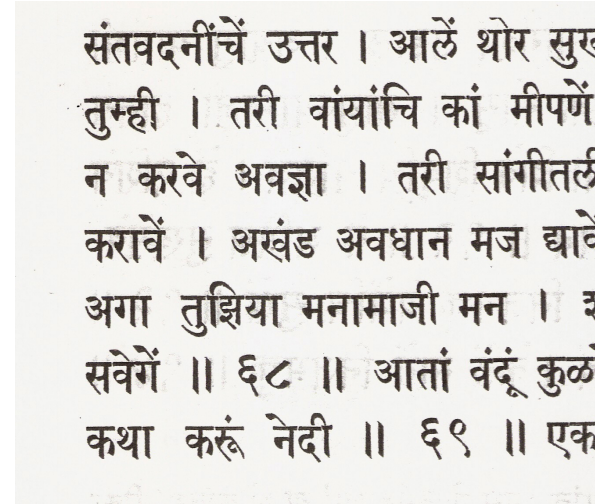
हे विक्री खरेदीचे भाव व त्यामधील प्रमाण इतर कारखानदार कायम ठेवत नाहीत. भाव कमी करूनही हे प्रमाण कायम ठेवता येईल. आणि तसे केल्यास धातू इलक्या जातीची आहे हे गिन्हाइकांस स्पष्ट केले. कारण इलकी धातू कमी दराने विकणे कारखानदारांस परवडायलाच नाही. व कमी दराने परत देणे गिन्हाइकांस मानवावयाचे नाही. परंतु विकताना भारी धातुचा भाव गिन्हाइकावर आकारणे व इलक बेताना इलक्या भावाने मागणे ही गिन्हाइकांची निव्वळ फसवणूक आहे. दलक्या धातुचा टाईप प्रारंभी किमतीच्या इष्टिने फायदेशीर ३४

*Above and left, scans from Gujrati type foundry
Devanagari letterpress type specimen andMauj
publications, Devanagari Sadha letterpress specimen.*

Devanagari founts from various foundries



Above, small point size type specimens from Gujarati type foundry.



Above, enlargement of a page from the Dnyaneshwari.
The matra placement and anuswar are worth taking note of.

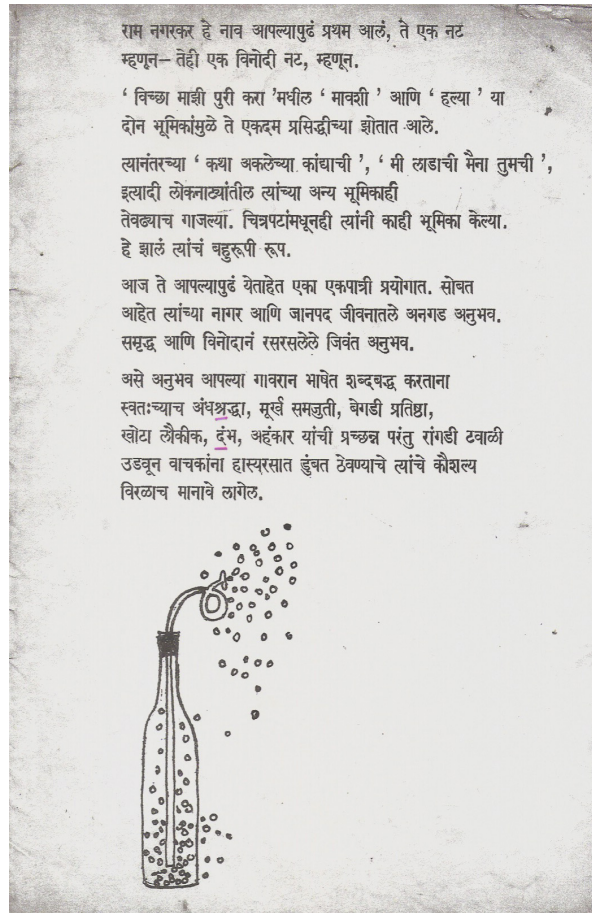


The heading of Marathi newspaper Lokashakti.
Extra Bold letterpress type specimen.

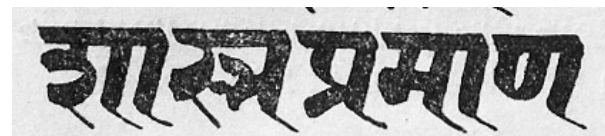
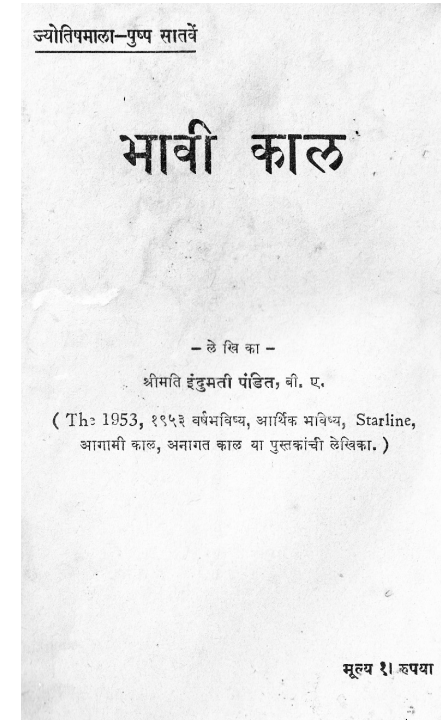
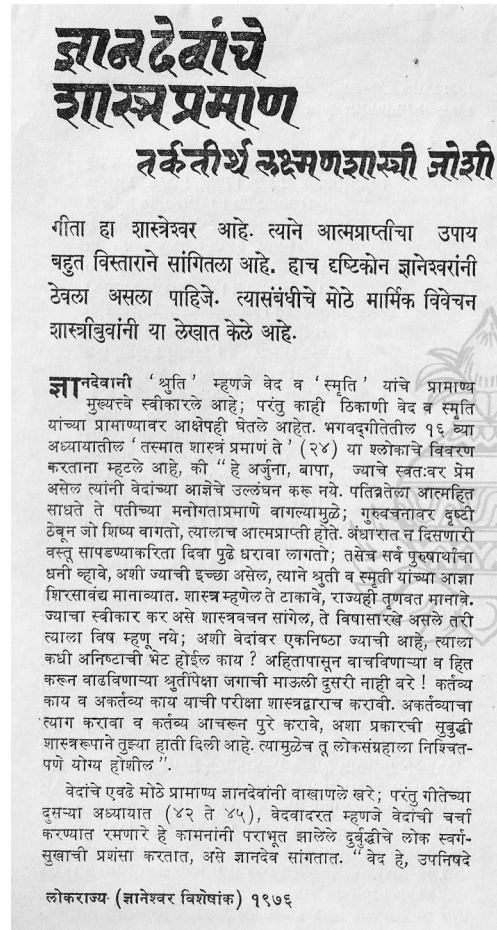


Above, an advertisement in a magazine.
Bold devanagari letterpress specimen.

Devanagari type setting, letterpress



Above and alongside are specimens of typesetting work in the letterpress times. The second sample shows a blend of various styles in setting of one article. Left, enlarged lettering style showing conjuncts in bold variety.

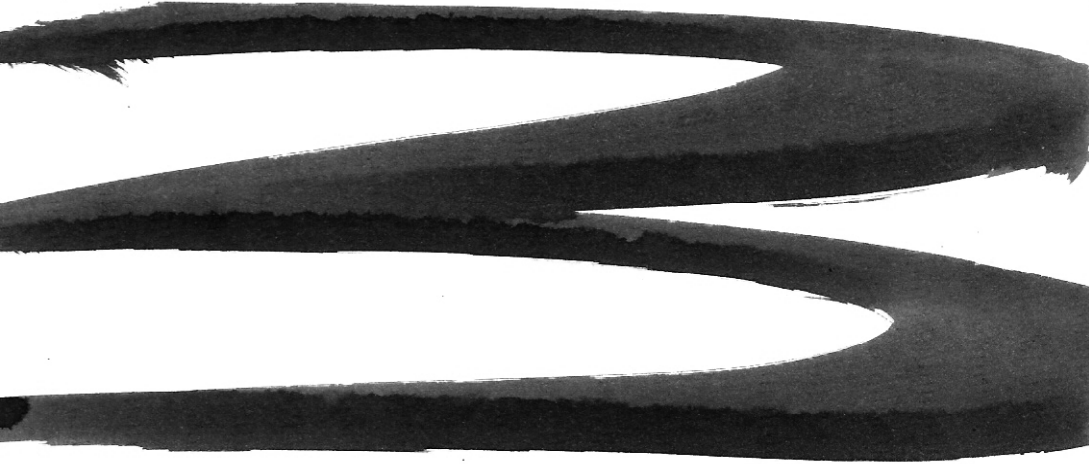


A Fount of Nirnaya Sagar Devanagari type

Type specimen table showing entire character set

1	Vowels on full body.	अ इ उ ऊ ऋ ॠ ए ॡ ॢ	11
2	Consonants on full body.	क ख ग घ ङ च छ ज झ ञ ट ठ ड ढ ण त थ द ध न प फ ब भ म य र ल व श ष स ह ळ क्ष ज्ञ	36
3	Short <i>i</i> Combinations.	कि गि नि जि टि डि नि ति थि दि धि नि पि बि मि नि यि रि लि वि शि षि सि हि क्षि	25
4	Long <i>i</i> (ī) Combinations.	की खी गी ची जी शी टी ठी बी णी ती थी दी धी नी पी फी बी मी यी री ली वी शी सी ही श्री	28
5	Long & short <i>i</i> Combinations with anuswar.	किं हिं कीं णीं तीं नीं यीं लीं हीं	9
6	Short <i>u</i> Combinations.	कु खु गु घु ङु चु छु ज्ञु ञु टु ठु डु ढु णु तु थु दधु नु पु फु बु भु मयु रलु वु शु षु सु ह ळु क्षु ज्ञु	36
7	Long <i>u</i> (ū) Combinations.	कू खू गू चू जी शू टू ठू बी णू तू थू दू धू नू पू फू बू भू मू यू रू लू वू शू षू सू हू ळू क्षू ज्ञू	36
8	Mātrā Combinations.	के खे गे घे ङे चे छे जे ज्ञे टे ठे डे ढे णे ते थे दे धे ने पे फे बे भे मे ये रे ले वे शे षे से हे ळे क्षे ज्ञे औ और	37
9	Mātrā-anuswār & double-Matras.	कैं खैं गैं चैं जीं शैं टीं ठैं बीं णैं तैं थैं दैं धैं नैं पूं फैं बैं भैं मैं यैं रैं लैं वैं शैं षैं सूं हैं ळैं क्षैं ज्ञैं	22
10	Spl. letters with anuswār & Raḥār.	अं रं सं ईं णं तं थं मं वं षं णं	12
11	Nuktā letters.	अ क ख ग ज ङ ढ फ	8
12	Characters for Mātrā and Ukār Combinations (1/2 body).	अ क ख ग घ च छ ज झ ट ठ ड ढ ण त थ द ध न प फ ब भ म य र ल व श ष स ह ळ क्ष ज्ञ	35

13	Characters for Mātrā Combinations (3/4 body).	क ख ग घ च छ ज झ ट ठ ड ढ ण त थ द ध न प फ ब भ म य र ल व श ष स ह ळ क्ष ज्ञ	34
14	Half letters (a) Consonants.	क ख ग घ च छ ज झ ट ठ ड ढ ण त थ द ध न प फ ब भ म य र ल व श ष स ह ळ क्ष ज्ञ	49
15	Vowel Symbols full body.	। ि ि ि ि ि ि ि ि	11
16	Vowel Symbols (a) Mātrā Degree.	ॠ ॡ ॢ ॣ । ॥ ० १ २ ३ ४ ५ ६ ७ ८ ९ ०	22
17	Vowel Symbols (b) Ukār Degree.	ॠ ॡ ॢ ॣ । ॥ ० १ २ ३ ४ ५ ६ ७ ८ ९ ०	6
18	Letters *for conjuncts on Ukār degree.	क ख ग घ च छ ज झ ट ठ ड ढ ण त थ द ध न प फ ब भ म य र ल व श ष स ह ळ क्ष ज्ञ	16
19	Conjunct letters Full body.	कू खू गू चू जी शू टू ठू बी णू तू थू दू धू नू पू फू बू भू मू यू रू लू वू शू षू सू हू ळू क्षू ज्ञू	115
20	Figures.	१ २ ३ ४ ५ ६ ७ ८ ९ ०	10
21	Punctuation marks & signs.	. , - ' : ; ! ([/ ... / = > + x = ÷ s * † ‡ § ¶ √ - —	33



The current day letterform has undergone much erosion and mutilation in the process of submitting to the demands and constraints of technology so as to lose a great deal of vigour and meaning

- *Iconography of letterforms, Kirti Trivedi*

प्रचलित मुद्राक्षर रूप

An overview

Current scenario

This chapter details the need of the project in a sense. The current scenario of font design in devanagari involves a study of the current best, most popularly used fonts from various type foundaries. It involves a comprehensive analysis of the same. Study of fonts available and popularly used DV Yogesh
DV Surekh
Kruti Dev 010
Shree Dev- 0708
Jana Sanskrit

Range

Along with the standardization, one observes that devanagari typefaces provide limited range. There are very few extrabold display faces or typefaces that can be efficiently used over a range of applications. This limits the user to explore different dimensions of devanagari typography. The spine manifests the essence of a character. If one observes closely, the fonts available today show very little, in some cases no variation in spine resulting in a mass of similar looking typefaces.

Akshar Unicode

नमस्ते राज। मैं प्रकाश हूँ।

CDAC-GISTSurekh Normal

नमस्ते राज। मैं प्रकाश हूँ।

CDAC-GISTYogesh Normal

नमस्ते राज। मैं प्रकाश हूँ।

Devanagari MT

नमस्ते राज। मैं प्रकाश हूँ।

JanaHindi

नमस्ते राज। मैं प्रकाश हूँ।

Comparison of devanagari fonts available .

The above sentences show conjuncts not functioning which may be because of the non compliance of open type fonts on certain softwares. Below is a sample text in DV Yogesh where the conjuncts do appear.

यह सीडॅक की योगेश मुद्रलिपि है
निम्नलिखित
बीजाङ्कुरित
कॉङ्करर
काकचेष्टा बकोध्यानम्
ष्ठर्योः |

Observations and inferences: Standardization

Various type foundaries across the country generate fonts, which are made available to the users. Different foundaries use different coding systems making it difficult to use a variety of fonts with ease. There are no fixed standards except the ISCII developed by the font generation cell of CDAC. Issues of coding as well as standardization of the size (x height) have made the use of devanagari fonts cumbersome. Additional typing aids have been emerging solutions to this problem.

Comparison of fonts

CDAC-GISTYogesh

अ सभी मनुष्यों को गौरव और अधिकारों के मामले में जन्मजात स्वतन्त्रता और समानता प्राप्त है ।
उन्हें बुद्धि और अन्तरात्मा की देन प्राप्त है और परस्पर उन्हें भाईचारे के भाव से बर्ताव करना चाहिए ।

Gargi

अ सभी मनुष्यों को गौरव और अधिकारों के मामले में जन्मजात स्वतन्त्रता और समानता प्राप्त है। उन्हें बुद्धि और अन्तरात्मा की देन प्राप्त है और परस्पर उन्हें भाईचारे के भाव से बर्ताव करना चाहिए ।

JanaHindi

अ सभी मनुष्यों को गौरव और अधिकारों के मामले में जन्मजात स्वतन्त्रता और समानता प्राप्त है।
उन्हें बद्धि और अन्तरात्मा की देन प्राप्त है और परस्पर उन्हें भाईचारे के भाव से बर्ताव करना चाहिए।

Kalimati

अ सभी मनुष्यों को गौरव और अधिकारों के मामले में जन्मजात स्वतन्त्रता और समानता प्राप्त है ।
 उन्हें बद्धि और अन्तरात्मा की देन प्राप्त है और परस्पर उन्हें भाईचारे के भाव से बर्ताव करना चाहिए ।

Above, comparison of devanagari fonts.

Lack of standardized coding

उपलब्ध फॉन्ट में पाई गई कमियाँ:

साधारणीकरण का अभाव

विशेषता कि कमी

विविधता का अभाव

बाह्य आलंकृत

સમાન અક્ષર રુપ રીઢ

□□□□□□ □□□□□□ □□□ □□□ □□ □□□□□□.

साधारणीकरण का अभा

विशेषता कि कमी

अक्षम विविधता

बा॥ आलं० क०

समान और प रीड

Text typed in DVOTYogesh at 14 pt. And below is the same text with heading changed to DV Natraj and body text changed to Gargi. Due to differential coding, text is not readable as the glyph placement differs. Each font has its own separate coding which makes typesetting in devanagari cumbersome.

Comparison of same character in different fonts, at same point size

ख ख ख ख ख ख

DV- Yogesh
72 pt

DV- Surekh
72 pt

Mangal
72 pt

JanaSanskrit
72 point

Jana Hindi
72 pt

Mahendra Normal
72 pt

Comparison of the character a in different fonts

Traditional based fonts. (they follow the 45 degree angle)

अ

DV- Yogesh

अ

DV- Surekh

अ

JanaSanskrit

अ

Kruti Dev 010

अ

Shree Dev 078

अ

DV Natraj

Geometric construction, monothick strokes

अ

Mangal

अ

Kruti Dev 041

*The spines are almost similar, especially in the case of
DV Yogesh and Kruti Dev 010.*

Deteriorating character form

The main essence of a script is in the nuances of the letterforms, joineries and its composition. The characters start to look alien if the 'devanagari-ness' in them is lost.

The commonly observed issues in character forms in the fonts available are summarized as follows:

Less variation in spine, more in the skin:

as discussed above there is very less variation in the different fonts and hence they look similar with only variations with the way strokes end or their surface treatment.

Space consumption: owing to differential glyph heights at a same point size, consumption of space and variety in type setting is not achieved.

Matra placement: the way the short and long vowel signs (matras) are placed with consonants is inappropriate in most of the fonts available today in India. Lesser width groups are created as a solution to fit the matras onto all consonants which in the process causes a compromise in the character anatomy.

Inter character spacing: not only the letters determine the impact of the typeface but also the spacing in between. The nature of spacing has considerable impact on how the typeface

looks as well as the readability. The spacing becomes even more important with devanagari script because it carries a lot many variables

Examples of incorrect matra placement

किल्फी DV Yogesh
योगेश

किल्फी DV Surekh
सुरेख

किल्फी Kruti Dev
कृती देव

किल्फी Shree Dev
श्री देव

Above, illustrated are insufficient matras for jodaksharas and also greater width consonants.

Ill spaced matra combinations

नूपुर

The above text shows the matra clashing due to insufficient spacing or construction of the vowel signs.

and combinations of these variables. The inter character spacing as well as interline spacing is also an observed issue in the fonts available.

Conjuncts and ligatures: the richest characters of the devanagari scripts are the highly evolved conjuncts. These conjuncts form a very important part of the devanagari character set and are mostly ignored by the fonts available. There are very few fonts that provide a complete and correct conjunct set. The joineries in the jodaksharas are hence appear forced and abrupt.

'The conjuncts were gradually eliminated in the name of script reforms, because there was no room on the keyboards of the machines designed to set Roman type to accomodate all the conjuncts which existed in the devanagari script. From 115 conjuncts in the full type fount for Devanagari the number was reduced to 34, then 23 and now less than dozen in successive so called 'reforms' of the script. the substitution of linear conjuncts has led to a distortion in pronunciation. Along with this, there has been a loss of semantic, physical and phonetic integrity which a complex, single conjunct presented'.
- Prof. Kirti Trivedi, Iconography of Letterforms.

Examples of incorrect conjuncts

खिझन्य DV Yogesh योगेश

खिझर्य DV Surekh सुरेख

खिस्त्रझ Kruti Dev कृती देव

खिझन्य Shree Dev श्री देव

The sample text above show the conjuncts and the convenient form decisions taken to ust fit. The joineries are abrupt, overlapping and below text shows they are unreadable at smaller point sizes.(10 pt)

खिस्त्रझ
खिझर्य

Unique character: There is very less variety as such in the voice of the fonts. They seem to speak in a very similar tone, with only few variants, which however fail on the basic character stage.

What fonts lack today? A voice, an identity...

To conclude this chapter, by using the inferences of analyzing existing fonts, it can be said that what current fonts lack is a voice, newness, in character as well as approach. A contemporary, correct, complete typeface that does devanagari script justice is the identified need for the day. This forms the basis of defining design brief of the project.



Form arises from the formless
- *Vastusutra Upanishad*

No letter should take itself seriously,
none embellish or adorn itself.
- *Otl Aicher.*

The demands of the visual
presentation are, so as to speak,
already embodied in the context.
- *Helmut Schmid*

मुद्राक्षर अभिकल्प

The main learning of the project, the process

Typeface design

The amalgamated study of the devanagari script in its best times and current times leads to defining the project problem statement and hence attempt to solve it. This is where the entire project gets visualized and the process gets decided.

The shape of a letterform is a surface. A word is a deep manifestation of deep mental abstraction.

Letters mutually define each other's existence.

Type design is not only to design the characters but also the spaces within them

Type that reflects its roots in writing will tend to incorporate transitional and approximate forms.

Type has to be designed to reflect fluency in both writing and reading.

Letters are not self-referential wholes, but rather acquire their identity by fusing their identity with other letters to form wordscapes.

Form is the external expression of inner content. -Wassily Kandinsky

A new approach:

This chapter defines the new approach to font design. This is the actual stage where the process of designing a typeface begins. The process begins from a thought that will become the backbone of the designed set of characters. This thought, rather collective pool of thoughts will define the voice of the typeface and will give direct visual clues for design. It is based on the thought, "form arises out of the formless"- (pratitatpratika). The idea is to define a set of attributes/ adjectives that will facilitate the process of formal type design process.

An idea/ collective attributes

Based on the observations of the current status of fonts and what they lack, in the previous chapters, a list of attributes helps define the visual form the type to be designed.

These form the backbone of the design, describe the essence of the typeface to be designed. The next step explains how these attributes manifest themselves through the letterforms.

Young

Contemporary

Mature

Expressive

Bright

Not decorative

Expressive

Evolved

Multipurpose

Digital

॥ अरुपाद् रूपः ॥

"Form arises out of the formless"

Visual form and framework

Young: Young is lean, young is enthusiastic and fluid. This gives rise to lean characters, with a lesser height to weight ratio. The reading process is horizontal, vertical strokes perpendicular to the textual flow shapes the reading rhythm, making the type easier to digest. Leaner type can help enhance legibility.

Contemporary: Contemporary is belonging to this time. This results in a typeface that does not follow the traditional calligraphic spine as it is. It attempts at delivering newness.

Mature: Mature is well thought, not frivolous. This results in a character that is young, yet mature. That results in the forms having a reason to be the way they are, a thought behind form decisions.

Not decorative: It is to mean no additional ornamentation or ostentations.

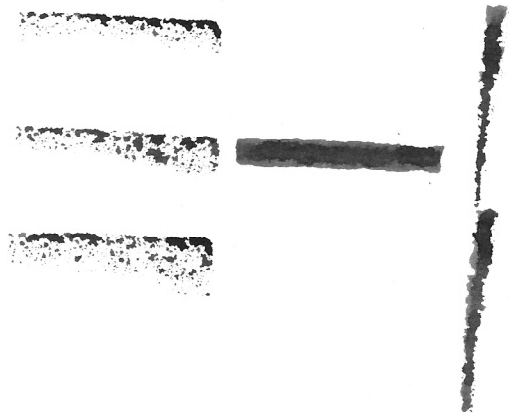
Expressive: Expressive is communicative and active. This results in an open typeface, with more open counters. It also manifests itself by being humanist and a form that is not constructed. The typeface is written and as

written typefaces have more in common with the reading process again facilitating the process.

Evolved: Evolved is developed. The typeface will look evolved after going through meticulous observations and fine changes. This attribute defines the process of work more than the visual of the typeface.

Multipurpose: This defines the usage of the typeface. It means to say that the typeface is devoid of any labels of it being a text, display or a screen font. It has to be designed with a vision of it being able to be reproduced for all possible media with equal efficiency.

Digital: Lastly, the typeface is digital, and it can be reproduced on via various digital media.



*A tool dictates the 'shape' of a
letterform. Its spirit and essences come
from the spine of the character..*

*-Hofstadter's comments on Donald Knuth's
article "The Concept of Metafont"*

प्रक्रिया एवं रीति

Generating Kimya Normal

Process and methodology

अ क ख ग घ ङ
च छ ज झ ञ
ट ठ ड ढ ण
त थ द ध न
प फ ब भ म
य र स ल श
ष ह ळ क्ष त्र ऋ

Right, illustrated hand drawn letterforms
for generating the spine

The overall process has been triggered by the thought 'do and see'. With the basic framework in place, the next stages involve the implementation and actualizing of the prerequisite thought. The methodology involves self-reflection, to see and react to the visual. The formal stages involved are visually discussed as follows

First sketches

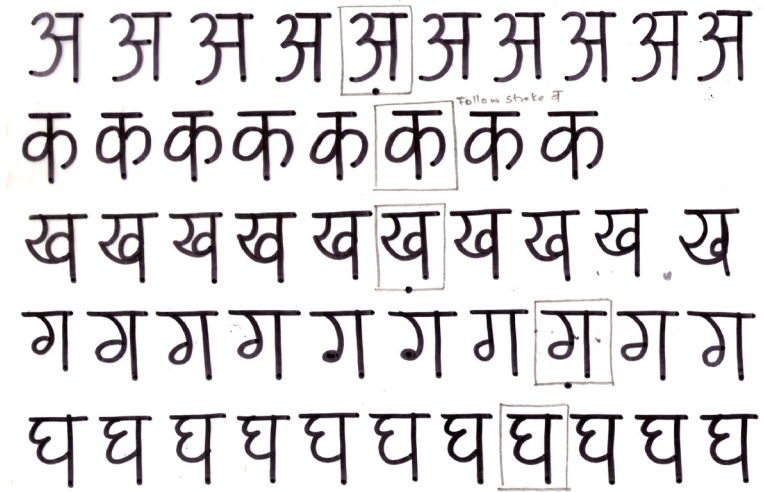
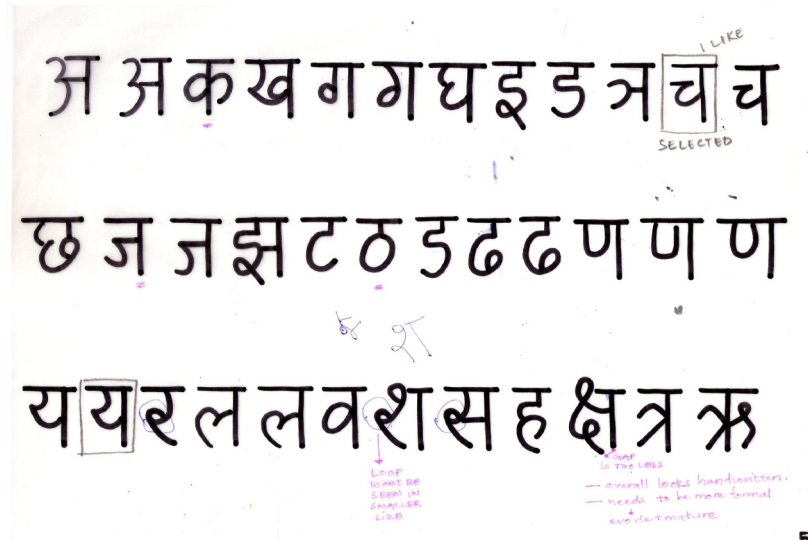
This involved the hand renderings of a letterforms based on the decided attributes. These sketches helped understand the construction of the letterform and form decision were taken in accordance of the framework and also to solve problems existing in current font. The first attempt is to make the spine for the basic consonant and vowel set for the typeface. This is followed by the design of an exhaustive character set which includes implicit and explicit consonants, vowel signs like matras, rafars and thier respectives combinations as well as a set of conjuncts. But before approaching the design of this set, the grid needs to be in place.

The grid

After numerous hand sketches, a grid of sorts was formulated for the design of the entire character set. Anatomy nomenclature based on the system by M W Gokhale.

The formulation of the grid then led to the actual generation of the typeface on digital medium. These characters have been generated using software Fontographer and FontlabStudio 5.

Explorations: creating the spine



The hand done explorations for the spine enable to visualize the form based on the attributes and help strengthen grid decisions.

The visual characters that have been applied here are:

Lean characters

Open counters

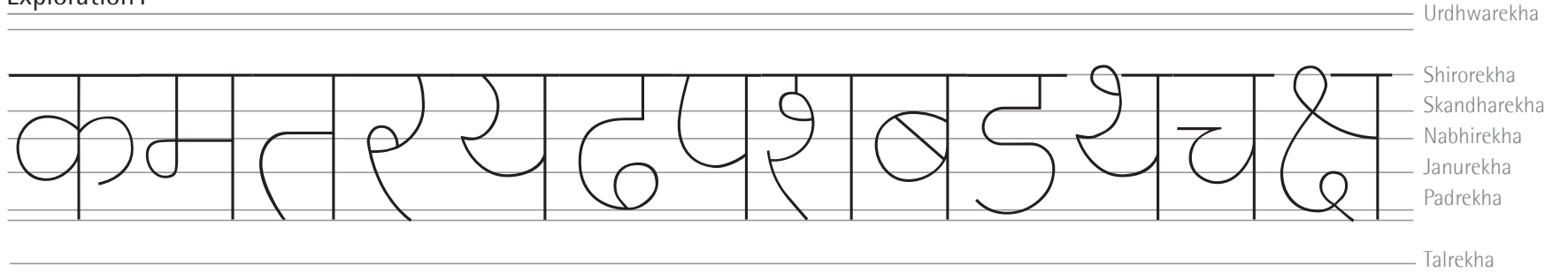
Humanist

Grid explorations

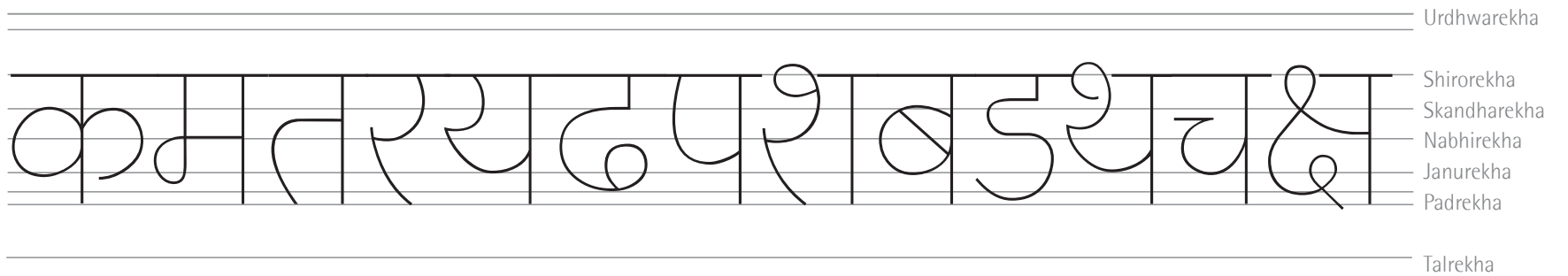
*The grid for one of the first version spines
created on Fontographer.*

*This has been subject to further change. Optical corrections
and form corrections have been made in the spine below.*

Exploration1



Exploration3



Font generation

Software used for initial test typeface:

Fontographer and later versions of the typeface have been generated on Fontlab Studio 5.

The font follows the grid as illustrated earlier.

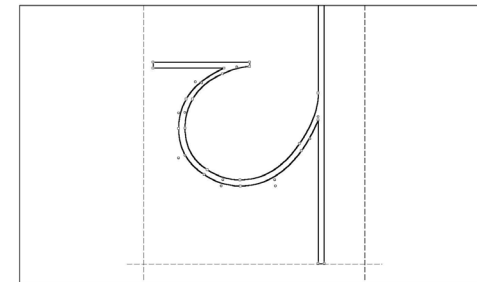
Every time a font is generated, character tests are done in various sizes to check for faults and corrections and this process would continue till the desired output quality is achieved with respect to the form as well as spacing. Detailed font sheets have been attached further to illustrate the development in font generation.

Glyph tests

FONTLAB FONT REPORT	
Font: KimyaNormal	
9/9/2009 3:2	
Page 1/1	
Index 16, Unicode 0005 Unicode 05, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 17, Unicode 0004 Unicode 04, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 18, Unicode 0006 Unicode 06, Contours: 2 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 19, Unicode 0007 Unicode 07, Contours: 2 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 20, Unicode 0008 Unicode 08, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 21, Unicode 0009 Unicode 09, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 22, Unicode 000A Unicode 0A, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 23, Unicode 000B Unicode 0B, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 24, Unicode 000C Unicode 0C, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 25, Unicode 000D Unicode 0D, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 26, Unicode 000E Unicode 0E, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 27, Unicode 000F Unicode 0F, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 28, Unicode 0010 Unicode 10, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 29, Unicode 0011 Unicode 11, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 30, Unicode 0012 Unicode 12, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 31, Unicode 0013 Unicode 13, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 32, Unicode 0014 Unicode 14, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 33, Unicode 0015 Unicode 15, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)

The following are test sheets generated by FontLab Studio 5. The farthestmost image shows the letter च being constructed.

FONTLAB GLYPH SAMPLE	
Font: KimyaNormal	
9/9/2009 3:2	
Page 1/1	
Glyph: c	



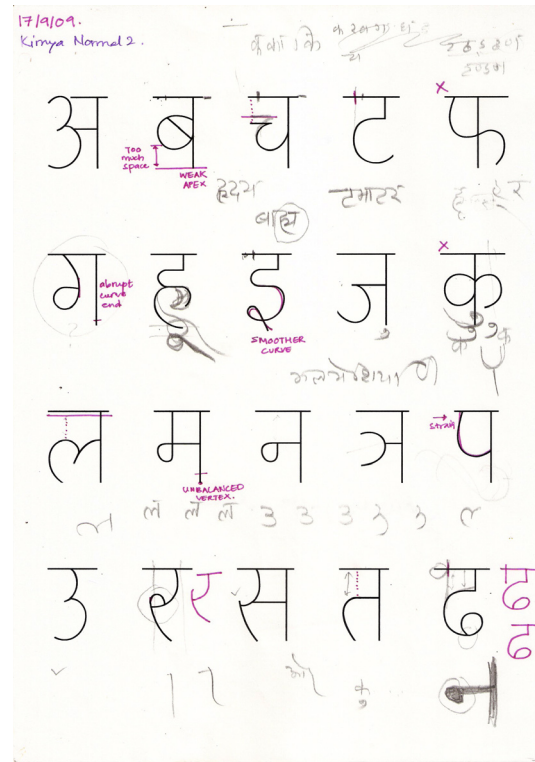
Enlarged character च in a Fontlab Studio window.

Index 4, Unicode 0042 Unicode 42, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 5, Unicode 0044 Unicode 44, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 6, Unicode 0047 Unicode 47, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 7, Unicode 004B Unicode 4B, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 8, Unicode 004E Unicode 4E, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 9, Unicode 0050 Unicode 50, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 10, Unicode 0054 Unicode 54, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 11, Unicode 0058 Unicode 58, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 12, Unicode 005E Unicode 5E, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 13, Unicode 005F Unicode 5F, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)
Index 14, Unicode 0061 Unicode 61, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)	Index 15, Unicode 0062 Unicode 62, Contours: 1 BBow (1, 1), (250, 800) LBow (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800) LSD (1, 1), (250, 800)

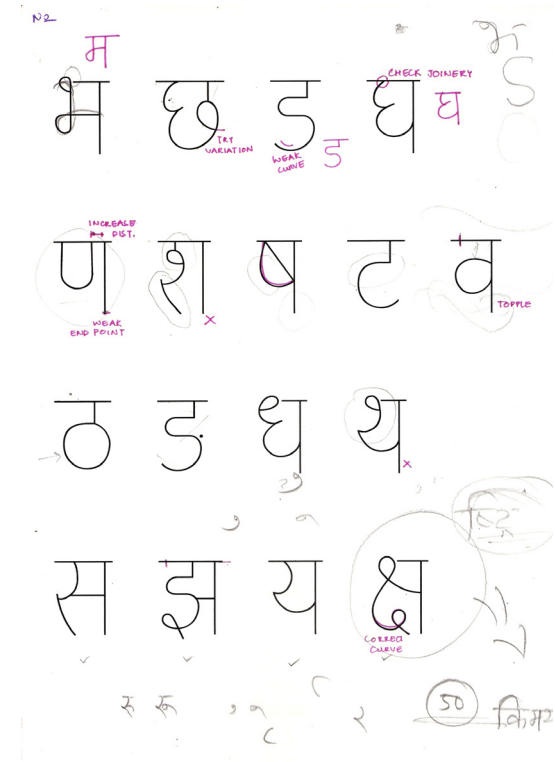
Glyph tests



Version 1



Version 2



Version 2

Comparison of characters

अ क म ज र य ढ श ड थ च क्ष
अ क म ज र य ढ श ड थ च क्ष

KimyaNormal Spine

The basic consonants and vowels, vowel signs were generated. These were subject to constant evaluation and changes have been made according to corresponding observations.

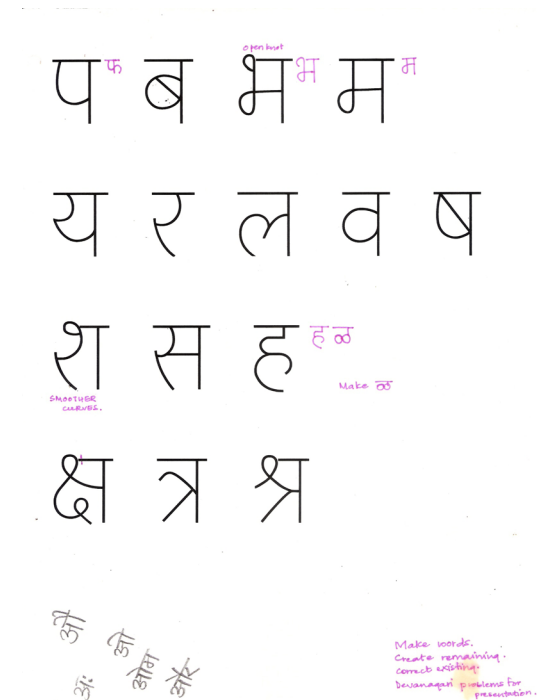
Form references have been the letterpress examples of founts. Individual letterforms were generated first and then they were evaluated in groups to form words, lines and paragraphs. The characters individually might look aesthetic but the real test of the correctness of a typeface is when the characters appear as wordscapes.

The effort is to not allow the individual letters look monumental when appearing in a sentence, but contribute to the completion of its function. The function of communicating meaning when grouped with other characters has to achieve for a typeface to have good legibility. Optical corrections are corrections that computer does not make on its own. These have been carefully made towards making the image of the typeface similar to its individual elements.

Character tests and corrections

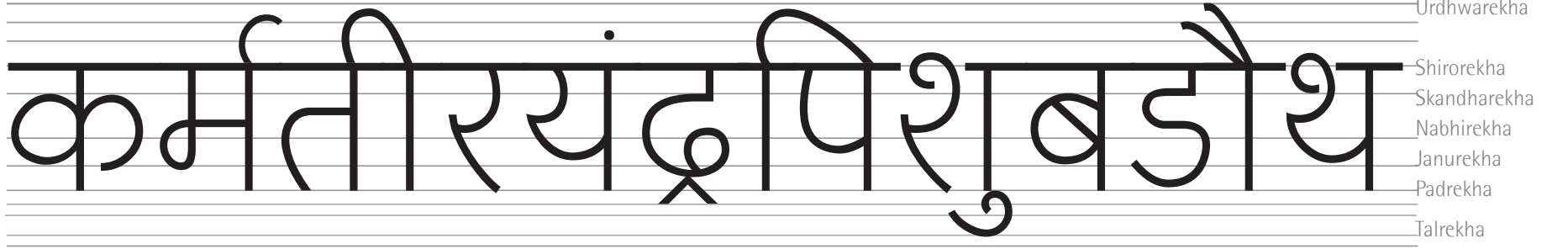


Version 3



Version 3

Kimya Normal Grid



Above illustrated, the grid for version 15 with the matra (ascender and descender grid).

Kimya Normal characters

कखगघञचछजझडत

थदधनटठडढणपफब

भमयरलवशषसहळक्षज्ञ

Illustrated, left are the fleshed out basic consonants of the same version.

Kimya Normal point size tests

6 स्युर्पिहौबूँनुक्षेमीगुंढें

10 स्युर्पिहौबूँनुक्षेमीगुंढें

18 स्युर्पिहौबूँनुक्षेमीगुंढें

30 स्युर्पिहौबूँनुक्षेमीगुंढें

48 स्युर्पिहौबूँनुक्षेमीगुंढें

60 स्युर्पिहौबूँनुक्षेमीगुंढें

100 स्युर्पिहौबूँनुक्षेमीगुंढें

Kimya Normal point size tests

6 स्यपिकीबीविक्षिमीं

10 स्यपिकीबीविक्षिमीं

18 स्यपिकीबीविक्षिमीं

30 स्यपिकीबीविक्षिमीं

48 स्यपिकीबीविक्षिमीं

60 स्यपिकीबीविक्षिमीं

100 स्यपिकीबीविक्षिमीं

Kimya Normal character set

Vowels (स्वर)

अ आ इ ई उ ऊ ए ऐ ओ औ अं अः ऋ

१३

Consonants (व्यंजन)

क ख ग घ ङ च छ ज झ ञ
ट ठ ड ढ ण त थ द ध न
प फ ब भ म य र ल व श
ष स ह ळ क्ष ज्ञ

३६

Short 'i' (इ) combinations

कि खि गि घि नि चि छि जि झि डि
ति थि दि धि नि टि ठि डि ढि णि
पि फि बि भि मि यि रि लि वि शि
षि सि हि ळि क्षि ज्ञि

३६

Long 'i' (ई) combinations

की खी गी घी जी ची छी जी झी डी
ती थी दी धी नी टी ठी डी ढी णी

३६

पी फी बी भी मी यी री ली वी शी
षी सी ही ळी क्षी झी

Short 'u' (उ) combinations

कु खु गु घु नु चु छ जु झु डु
तु थु दु धु नु ट ठ डु ढु णु
पु फु बु भु मु यु रु लु वु शु
षु सु ह ळ क्षु झु

३६

Long 'u' (ऊ) combinations

कू खू गू घू नू चू छू जू झू डू
तू थू दू धू नू टू ठू डू ढू णू
पू फू बू भू मू यू रू लू वू शू
षू सू हू ळू क्षू झू

३६

Matra (ए) combinations

के खे गे घे जे चे छे जे झे डे
ते थे दे धे ने टे ठे डे ढे णे
पे फे बे भे मे ये रे ले वे शे
षे से हे ळे क्षे ज्ञे

३६

Matra (ऐ) combinations

कै खै गै घै जै चै छै जै झै डै
तै थै दै धै नै टै ठै डै ढै णै
पै फै बै भै मै यै रै लै वै शै
षै सै है ळै क्षै ज्ञै

३६

Matra (औ) combinations

को खो गो घो जो चो छो जो झो डो
तो थो दो धो नो टो ठो डो ढो णो
पो फो बो भो मो यो रो लो वो शो
षो सो हो ळो क्षो ज्ञो

३६

Conjuncts

क ख ग ब च छ ज झ

त थ द ध न ट ठ ढ

प ब भ म व स त्र श

क ग घ ङ ज

श ढ ध व प्र फ ब भ म स श स्ल

क घ गृ तृ धृ पृ बृ मृ वृ शृ

त क ऋ त्य त्य

स्व स्य स्थ स्म स्व

ज घ ष ष

Spacing

As mentioned earlier spacing is one of the most important tools in giving voice to the typeface. The typeface is not tightly spaced. The spacing for individual letters should not make individual characters stranded at the same time, hence appropriate the type is appropriately spaced, which completes the image of the typeface.

Intercharacter spacing

Word and line spacing

ऋतू हिरवा बरवा सुंदर अक्षर लेन करा युवती
मना दारण अन् रचिर हा छंद जीवाला मा
लवून टाक दी प चेतवून अंग अंग राजसा
किती दिसात लाभला निवांत संग मामा
काका दादा ऋतू हिरवा बरवा सुंदर अक्षर ले
खन करा युवती मना दारण अन् रचिर हा छंद
जीवाला युवती मना दारण

KimyaNormal6

*Tight intercharacter spacing, loose word spacing make
the words appear separate and not as sentences*

ऋतू हिरवा बरवा सुंदर अक्षर ले न करा युवती
मना दारण अन् रचिर हा छंद जीवाला मा
लवून टाक दी प चेतवून अंग अंग राजसा किती
दिसात लाभला निवांत संग मामा लेखन करा
युवती मना दारण काका दादा ऋतू हिरवा
बरवा सुंदर अक्षर लेखन करा युवती मना दारण

KimyaNormal9

*The words are beginning to appear but sentence forma-
tion is weak because of loose spacing.*

ऋतू हिरवा बरवा सुंदर अक्षर ले न करा युवती
मना दारण अन् रचिर हा छंद जवाला मालवून
टाक दी प चेतवून अंग अंग राजसा किती
दिसात लाभला निवांत संग मामा काका दादा
ऋतू हिरवा बरवा सुंदर अक्षर लेखन करा युवती
मना दारण अन् रचिर हा छंद जीवाला मालवून
टाक दीप अंग अंग राजसा किती दिसात ला
भला निवांत संग मामा काका दादा ऋतू हिरवा
बरवा सुंदर अक्षर लेखन करा युवती मना दारण

KimyaNormal13

*Both word and character spacing changed, sentences
start appearing with minor matra spacing problems.*

Kimya Normal characteristics

Matras that fit onto all basic consonants, jodaksharas (combination of two) and conjuncts

कि फी म्लि म्लिर् णीं हौं

The ukars do not hang abruptly but are placed onto each consonant

टु रु डु फु कू ट्रु

The typeset includes conjuncts rather than having linear conjuncts

क्व ज्ञ क्र भ्र स्थ ख्र ष

Text type set in Kimya Normal

नसतेस घरी तू जेव्हा

नसतेस घरी तू जेव्हा
जीव तुटका तुटका होतो
जगण्याचे विरती धागे
संसार फाटका होतो ॥

नभ फाटून वीज पडावी
कल्लोळ तसा ओढवतो ।
ही धरा दिशाहीन होते
अन् चंद्र पोरका होतो ॥

येतात उन्हे दाराशी
हिरमुसून जाती मागे ।
खिडकीशी थबकून वारा
तव गंधा वाचून जातो ॥

तव मिठीत विरघळणाऱ्या
मज स्मरती लाघव वेळा ।
श्वासावीन हृदय अडावे
मी असाच अगतिक होतो ॥

तू सांग सखे मज काय
मी सांगू ह्या घरदारा ।
समईचा जीव उदास
माझासह मिणमिण मिटतो ॥

ना अजून झालो मोठा
ना स्वतंत्र अजुनि झालो ।
तूज वाचून उमगत जाते
तूज वाचून जन्मच अडतो ॥

...
संदीप खरे

*"Modern machinery should
be employed to make letters
whose virtue is compatible
with their mechanical
manufacture, rather than
exact scholarly resurrection".*

- Eric Gill, An essay on typography.



अवलोकन एवं मूल्यांकन

Taking a step further

Vision and value

The value of this project has been the learning involved in the process. It lies in the newness of approach and the possibilities that this approach opens up to.

The aim of the project lies in recognizing the value of type designers in the process of digital font generation. This chapter explains the emerging possibilities in font design today.

Emerging possibilities

The design of a typeface based on the spine, opens many emerging possibilities to take type design onto a level further. This part of the project ends in the discussion of many such possibilities. The reason why the typeface is called multi-purpose is because it is devoid of any one particular label. The form is designed so as to assume multiple characters as per applications.

One has known type families to be based on visual parameters of weight, width or angle of inclination. The design of a spine triggers the options for design of type to represent a feeling, emotion or any verbal description. Thus this results in infinite such permutations

and combinations of visual and thought parameters to result into a many a different typefaces to suit ones needs and applications.

Multi- purpose

The typeface designed has been called multi purpose owing to this aspect. The type designed by understanding correct form and based on the spine could assume any form and hence could be used as text, display or any other medium required. The typeface family is hence open to whatever form the spine has to take. Each character the spine assumes however needs to be seperately worked on and certain other processes may have to be carried out to render the type useful for its respective application.

Figure 3. Donald Knuth's virtuoso Metafont rendition of Psalm 23, in which the font for each character is determined by the settings of 28 knobs, all of which change slowly but steadily as the psalm progresses.

The LORD is my shepherd;
I shall not want.
He maketh me to lie down
in green pastures:
he leadeth me
beside the still waters.
He restoreth my soul:
he leadeth me
in the paths of righteousness
for his name's sake.
Yea, though I walk through the valley
of the shadow of death,
I will fear no evil:
for thou art with me;
thy rod and thy staff
they comfort me.
Thou preparest a table before me
in the presence of mine enemies:
thou anointest my head with oil,
my cup runneth over.
Surely goodness and mercy
shall follow me
all the days of my life:
and I will dwell
in the house of the LORD
for ever.

The figure above shows Donald Knuth's virtuoso Metafont rendition of Psalm 23, in which the font for each character is determined by the settings of 28 knobs, all of which change slowly but steadily as the psalm progresses.

'Metafont, Metamathematics, and Metaphysics'- Comments on Donald Knuth's article, "The Concept of a Metafont" by Hofstadter ¹

Donald Knuth holds out in his article a philosophically tantalizing prospect, that can be broken down into two ideas-
underneath all "A" there is just one grand, ultimate abstraction that can be captured in a finitely parametrizable computational structure- a "software machine" with finite number of "turnable knobs" or "parameters".
every conceivable particular "A" is just a product of this machine with its knobs set at specific value..

This view of Knuth is rightly commented upon by D. Hofstadter.

"A" Spirit

The shape of a letterform is the surface manifestation of a deep mental abstraction. It is determined by conceptual considerations and balances that no finite set of merely geometric knobs could capture. Underneath or behind each instance of "A" there lurks a concept, a Platonic entity, a spirit. No matter how many new knobs, or even new families of knobs, you add to your. machine, you will have left out some possibilities. People will forever be

able to invent novel variations that haven't been foreseen by a finite parametrization

Hybrid digital typefaces

- by Margo Johnson ²

Hybrid digital typefaces is an experiment in generating fonts by process of set programs. Results of the study focus on experiments that are primarily concerned with generating pure form over functionality or legibility. Though the experiment does not have any direct relevance to my study, the process of mutation and the transformation matrix is an interesting study.

The thoughts of the spine of the type assuming various characters can be described by this experiment in creating multiple type possibilities . The process takes its inspiration from hybrid digital typefaces, merely to illustrate the many possibilities. The following experiment is not based on generating pure forms. It is an attempt to create typefaces that are all usable as type, that are completely legible, meaningful and could satisfy a given application.

The spine can assume different visual characters or even characters based on a thought or feeling. Some of these characters could be,

Visual characters

Thin
Bold
Extra bold
Oblique
Outline
Condensed
Serif
Extended
Calligraphic
Handwritten
Dotted
Rounded ends
Shadow
3D
Brushwork
etc.

Emotional characters

Soft
Rough
Angry
Decorative
Funny
Serious
Scary
Friendly

Sharp
Tragic
Historic
Flamboyant
Fashionable
Very ornate
etc.

Typefaces could be based and generated according to the feeling or emotion they are used to convey an intended message. Typefaces can be generated by a eclectic mix of both visual as well as thought characters to arrive at interesting results.

The following matrix elaborates the same thought by combinations within each category and also with seperate categories. The matrix is an experiment to analyze how the spine assumes various roles and character. The results of which are presently crude and jand done, but more possibilities are open for exploration.



Categories of A, from Visible Language XVI/4 1982

Matrix for creating possibilities of typefaces from the same spine

Original font	A Normal	B Bold	C Oblique	D Rounded	E Decorative	F Scary
A Normal	A+A	A+B	A+C	A+D	A+E	A+F
B Bold	B+A	B+B	B+C	B+D	B+E	B+F
C Oblique	C+A	C+B	C+C	C+D	C+E	C+F
D Rounded	D+A	D+B	D+C	D+D	D+E	D+F
E Decorative	E+A	E+B	E+C	E+D	E+E	E+F
F Scary	F+A	F+B	F+C	F+D	F+E	F+F

In the above figure, the variables A, B, C, assume visual characters like weight and angle while D, E, F are thought driven abstract variables. The permutations of which can lead to 36 new typeface possibilities derived from the same spine of Kimya Normal.

The spine forms the framework, it carries the thought behind the design of that type. The flesh or weight added completes/ enhances the visual of the type. The matrix alongside illustrates how the spine of a typeface opens out various type possibilities.

These numerous possibilities can find their own applications. If one were to think, the typeface thus designed could assume any role as per the content that it needs to be used for. Thus type could be rightly used to effectively convey content and communicate better, thus pushing the limits of type design as we see today by offering a blend of the designer and digitization.

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Matrix illustrating possibilities of variations from the same spine

	Normal (N)	Bold (B)	Oblique (O)	Rounded (R)	Decorative (D)	Scary (S)
Normal	अ N.N	क N.B	ख N.O	ग N.R	घ N.D	ञ N.S
Bold	च B.N	छ B.B	ज B.O	झ B.R	ड B.D	ढ B.S
Oblique	थ O.N	द O.B	ध O.O	न O.R	ट O.D	ठ O.S
Rounded	ड R.N	ढ R.B	ण R.O	प R.R	फ R.D	ब R.S
Scary	भा S.N	मा S.B	या S.O	रा S.R	ला S.D	वा S.S
Decorative	श D.N	ष D.B	स D.O	ह D.R	ळ D.D	क्ष D.S

More possibilities



The figure above illustrates the various possibilities of type variations that can arise from the spine of Kimya Normal.

Epilogue

The project has brought in its wake many a learning. The process of the project has been enthralling, challenging and above all satisfying. The learning has been solely in its process. The reasons lie in the visual, and the visual lies in the thought. So I have learnt to find my reasons, learn from my mistakes. To learn by doing and the new approach and vision while undertaking a project is my biggest learning.

My personal quest for learning is the driving force of any of my projects. The phenomenal guidance I received during the course of the project has been instrumental in shaping not only this project but also a perspective to taking on any design challenge in future. This has been a sincere attempt to contribute to devanagari typography, my first project in devanagari typeface design, this marks a beginning...

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