Title: Issues with Devanagari Display Type

Author: Sarang Kulkarni, WhiteCrow Designs. sarang@whitecrow.in

Abstract: This paper aims to overview existing display typefaces in Devanagari script, highlight their inadequacies and suggest probable solutions. Here display type refers to typefaces designed to be used at large point sizes, preferably for small amount of text and which are expressive, convey a distinctive feeling or look, or have a distinct feature associated with it.

While one gets to see variety of traditional, local styles, variations and letterforms with good visual quality in calligraphy, hand-painted / hand-drawn lettering, book covers and logotypes, the same may not be true in case of digital typefaces. One realizes that most of the existing digital display typefaces in Devanagari are inconsistent. They have imbalanced letter structures, limited/ inadequate matras and ill-designed conjuncts. They also seem outdated and are overused. Many of them copy features and styles from existing Latin typefaces.

The following questions arise in ones mind-

1. When a script has a rich history of calligraphy and lettering, why is it not reflected in the typefaces?
2. Why are new original typefaces based on the structural explorations of the Devanagari script rarely available?

Developing new, contemporary typefaces can fill this lacuna in the field of Devanagari display typography. We suggest calligraphy and exploring the structure of the letterforms as a possible solution to come up with new typefaces.

Introduction: The Devanagari script is a widely used script in India. In order to understand the various dimensions of the Devanagari script explored so far, we surveyed existing Devanagari letterforms as found across various media like identity designs, branding collaterals, books, magazines, newspapers, television, hoardings, shop signage, movie posters etc. We studied works of calligraphers, lettering artists and designers, as also typefaces from letterpress printing and existing display typefaces.

The available material can be divided into the following categories-

- Calligraphy (Traditional & Contemporary)
- Lettering (hand painted & digital)
- Typefaces (Existing typefaces or modifications of existing typefaces)

We noticed that-

1. As compared to digital typefaces, more variety in designs, reflection of traditional and local styles were found in calligraphy & lettering.

2. The quality of calligraphic & lettering based work is also better in terms of consistency in form, shape, proportion, spacing and matra placement.
3. One gets to see new variations in digital lettering in the form of of advertising taglines, logotypes etc. But the same is not true in case of type design.
4. There are many calligraphic/lettering styles, which have the potential of getting converted into display typefaces. But these possibilities have not being explored.

There is clearly a gap, which needs attention. The lack of available technology, lack of standardization or inadequate implementation of standardization have been long standing problems in the field of Indian type design. Even though standardization is still an issue, technology is progressing. Even so, technical and functional problems cannot be reason for visually in incorrect or aesthetically bad typefaces. This situation needs to improve.

Aim and Objectives:

Through this paper we aim to highlight the shortcomings of existing display typefaces, point out commonly found errors and inconsistencies so that they are taken into consideration while designing new upcoming typefaces. We would also like to suggest a calligraphic approach that can be used for creating new typefaces in Devanagari script.

Issues:

We surveyed fonts supplied by- Modular Infotech (Shreelipi), Summit Infotech (Indica), Cdac, Akruti, Indian type foundry, Typotheque and Linotype.

The following issues were identified-

1. **Fonts are Software dependant**
   - Most of the available typefaces are software dependant i.e. they need an additional software to be installed without which they do not function. This software-based approach was devised to bridge the gap created by lack of available technology. But it hampers the implementation of standardization.
   - This also limits the user of particular software from using fonts from other software providers.

2. **Lack of overall consistency in letterform construction**
   a) Many of the typefaces are poorly designed. Basic quality of letterform construction/ curves is poor.
   Examples:

इ श्र य श्र शा ढ ह

Image 1

b) Typefaces lack overall form and stroke consistency

Example: In these 2 samples the stroke width of द is thinner than rest of the letters. ह is smaller in shape as well as strike thicknes as compared to other letters

विदेशों को महत्वपूर्ण

Image 2

c) Individual letterforms are imbalanced
d) There is no shape consistency between similar looking letterforms

Example: Similar characters like य and थ, 2 *chandra bindus*, झ and इ are inconsistant within the same typeface.

थय थय जाँ ꣽ झइ

Image 3

e) Conjuncts are disproportionate and out of family. Basic vowel-consonants may be well designed but the same does not reflect in the design of the conjuncts.

प्रह्लाद द्वार प्राप्ती बाङ्गला

Image 4

3. **Incorrect letterform construction**
   a) Few characters are wrongly designed.

Example: the ळ छ appear incomplete. The next 2 letterforms (supposed to be ऋ) are simply incorrect.

ळ छ झर ऋह

Image 5

   b) There is ambiguity in letter shapes

Example: One can get easily confused between रवा and खा, श्र and श्न. Similarly it is difficult to identify the न, it can also be read as म.

खारवा श्रश्र ञ

Image 6

4. **Matra (Vowel Sign) Issues**
   a) Improper and misaligned matras.
   Example:

   चित्ता ञि लिपि की

   Image 7

   b) Overlapping/ clashing *matras*
   Example: As seen below the *matras* overlap on each other or with the character itself.

   आर्मीकिे नूपुर हू

   Image 8

   c) Disproportionate *matras*
   Example: As compared to the letterforms the matras are sometimes too big or too small

   रू सौं ै सौं और सै

   Image 9

5. **Based on Latin typefaces**
   Designs of many of the available display typefaces are based on the Latin typefaces of the 90's. It appears that these typefaces were designed only with the intention of matching the look and feel of the Latin fonts.
   Examples:

Image 10

a) It appears that some of the Devanagari fonts have been constructed out of parts of existing Latin letterforms

Example: ड is made out of 'S'

Image 11

b) Latin features like 'serifs' or calligraphic styles are randomly adapted for Devanagari letterforms. Example:

Image 12

c) Devanagari is a complex script as compared to Latin. Many a times distinct features of Devanagari are omitted in order to simplify it to match Latin. This creates readability issues. Example: If the knot of न is removed. It is difficlut to idenify the न conjuncts.

Image 13

d) Several typefaces are based on the same internal structure or skeleton. Only the outer flesh is changed to create new designs.

6. **Outdated and Over Used**

a) Most of the available designs are outdated. Only a handful of typefaces have been recently designed.
b) Many foundries provide designs which are based on letterpress or Latin typefaces.
c) There are hardly more than 2-3 weights of a typeface available.
d) The same, few good typefaces are used everywhere. The same typefaces cannot be used from outdoor communication to wedding cards.

The software based approach and poorly designed letterforms makes one wonder if the typefaces were actually designed by type-designers.

Today we have technology but we are lacking good type designers. The number of type designers is less, Compared to our population, number of scripts and demands.

Fonts are raw material for designers/ DTP operators/ laymen to use in their designs, documents etc. If the typefaces are poor in the first place, poor output will be produced. Hence it is important for a font to be correct in all aspects for someone else to be able to use it correctly.

Mistakes also happen as a result of designer's/DTP operator's ignorance or lack of basic typographic understanding.

Indic type design is an upcoming filed, new designers are developing typefaces, without clearly understanding the basic structure of the Devanagari script or are unaware about the actual use of the script. Fonts designed by such designers add to the list of poor typefaces that are designed.

The existing incorrect fonts available today are causing confusion about correct letter structure.

It is not incorrect to design typefaces that match/or are based on Latin typefaces[1]. But the authenticity of individual scripts needs to be maintained. It is important to adapt the essence of the typeface from one script to the other rather than just the outer appearance.

From type foundries to software companies to independent type designers, all are facing the same problem that is standardization. This issue cannot be solved individually. We need scholars to come together and take unanimous decisions in developing Indian type standards.

Technology should be molded as per the requirement of the script & not vice versa.

The following questions arise in one's mind-

1. Is there any Indian authority to take decision on the quality of fonts available in the market?
2. Why this negligence and where is the root of this horrible situation?
3. Why are we using these deprived versions of Indian scripts?
4. Are we unable to exploit the digital technology to the advantage of our script?
3. Do we lack in Type design education?
4. When a script has a history of calligraphy and lettering, why is it not reflected in the typefaces?
5. If these typefaces are out dated, then where are new typefaces?

---

[1]This is legal, only if it is done in collaboration with the Latin designer or with prior permission of that designer.

6. Why are contemporary Devanagari display typefaces rarely designed?
7. Why are original Typefaces based on the structural modifications of the Devanagari script rarely available?
8. Is this the situation is of all Indian scripts?

Only developing new, contemporary, original typefaces, can fill this lacuna in the field of Devanagari display typography. Instead of just creating fonts, which are visually influenced from typefaces in other scripts, original designs based on/coming from/inspired from features of the Devanagari script itself should be designed. This will add a much-required, new, fresh touch to Devanagari display typography.

Exploring Letterforms through calligraphy and structural modification

Devanagari script has a tradition of calligraphy. It is written using a right canted reed pen (as opposed to the left canted pen used for writing Latin.) Practicing formal Devanagari calligraphy helps one to understand the basic structure of letterforms, components, proportions, guidelines, joineries, script texture and colour. It is very important to understand the structure of a letterform before modifying it.

Through structural modifications to the skeleton- separating the components, simplifying, stylizing, decorating, enhancing specific features – a variety of letterforms can be created. These letterforms can further be explored with the use of different tools, surfaces and techniques. (Method for exploration of letterforms was taught by Prof. Santosh Kshirsagar.)
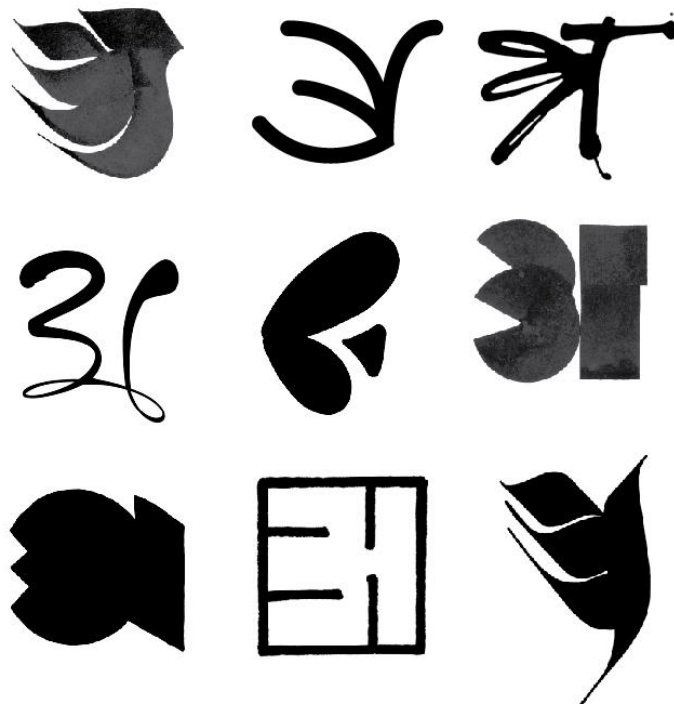
Sample explorations:

Image 14

Shortlisted variations can be continued across different letterforms. The understanding of basic formal calligraphy helps in extending the features to other letters.

One needs to understand that-

1. There are certain characteristic features of every letterform; the letterform will be illegible if these features are deleted. Constantly exploring the boundaries of a letterform helps one understand the characteristics of that letterform better.

2. Every script has its own peculiar features and characteristics. It is important to retain the Devanagari-ness of Devanagari while designing.

3. It is not necessary and/or possible for every such variation to be developed into a typeface. It is up to the individual designer to decide, which designs he or she wishes to/ is able to take forward.

Sample typefaces, which are in the process of development, as a result of this exercise- (add example?)

The possibilities arising out of this exercise are many and can further be used for identity designs, drop letters, titles, lettering as well as type design. Since this exercise is not script specific, similar explorations can be carried out in other Indian languages as well.

Conclusion:

Looking at the existing situation in the field of type design in India, one realizes that the Devanagari script needs new exploration and fresh ideas. One needs to look at Devanagari typedesign independently and not as secondary to Latin type design.

We need to develop educational/ reference material for people to develop fonts. A standardized approach needs to be developed rather than giving temporary solutions.

References

Typography of Devanagari (1965) by Bapurao Naik

Conceptual model for Devanagari Typefaces (2010) by Dr. Girish Dalvi

Varna (1996) by Santosh Kshirsagar

Urjakshare (2009) by Achyut Palav

Kamalakshara (1995, 2009) by Kamal Shedge

Letraset

www.linotype.com

www.typotheque.nl

www.indiantypefoundry.com

www.cdac.in

www. modular-infotech. com

www. summitindia. com

www. akruti. com