

Perceptual Shift Ambigrams using Devanagari and Latin

Introduction:

It is through sensory experiences that we interact with and interpret things in our world. Recognizing and interpreting sensory information is a cognitive function that constitutes the perception of the observer. When the mind maps a particular sensory input to more than one entity from memory, it is said to be a perceptual shift. Such perceptual-shift phenomena are shaped by learning, memory, expectation and attention. Perceptual shifts, when extended to the graphical representation of a language can be used to create **perceptual-shift ambigrams**. Ambigrams can be designed such that they are perceptible in two different writing scripts (e.g. Devanagari and Latin). A perceptual-shift ambigram can be designed in the form of graphical elements that may be perceived by the observer in the two different scripts, to which the observer is predisposed. Such an ambigram will utilize the bilingual disposition of the observer (if any).

Bilingual ambigrams will fail to produce a perceptual shift if the observer has only been exposed to a language expressed in only one of the scripts.

The core content of this paper is bi-scriptural, bi-lingual perceptual shift ambigrams in Devanagari and Latin scripts. It is important to note that, an ambigram which is bilingual need not be bi-scriptural, however bi-scriptural ambigrams are necessarily bilingual in nature. While being fascinating cognitive phenomena as well as intriguing graphical specimens, bilingual ambigrams can also provide an interesting and perhaps novel interaction with the bilingual observer and the two languages in question. The phenomenon of bilingual proficiency as observed in India has not been previously explored through the graphical medium of ambigrams. Through these ambigram artworks and the detailed demonstration of their creation process, the paper intends to establish perceptual-shift typography in the bilingual context and thereby create overall awareness about this form of art.

This paper explores the area of bi-scriptural perception shift ambigrams using Devanagari and Latin. In these bi-scriptural ambigrams, the typographic unit is designed to spell out word/s in both Devanagari and Latin, with the perceptual shift constituting the oscillation between the two forms.

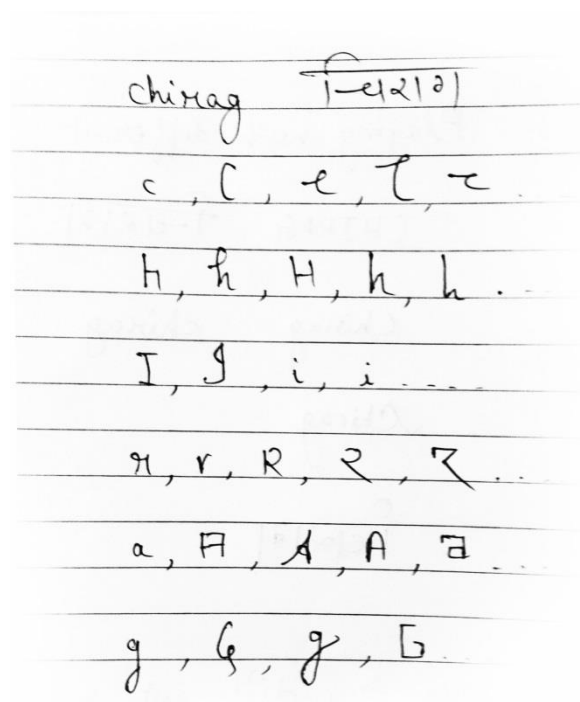
Perceptual-shift ambigrams are relatively unexplored in terms of formal study as compared to other graphical elements. Here, we also propose a novel classification system dedicated to perceptual-shift ambigrams in order to systematize their study. The classification system is broadly based on the synthesis of various theories such as the Gestalt Theory of Visual Perception, Gibson's Theory of Direct Perception and Optic Flow and the Gregory - Direct Perception hypothesis. The actual process of creation of the graphical elements also contributes to the classification scheme.

Creation process:

The paper intends to establish the broad guideline for designing a perceptual shift ambigram. The techniques and typographical aspects of ambigram creation suggested here are generic and therefore each of them may not necessarily be applicable in their exact form for creating all ambigrams.

The procedure can broadly be classified into the following steps:

- Experimentation with basic letterforms
- Developing the skeleton
- One to one mapping
- Arrangement of adjacent letters and modifications
- Styling and stroke possibilities



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Different ways of adding flesh to the skeleton

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Trying different color shades to make the
scripts more discrete

Applications:

Ambigrams cater to the innate tendency of expressing elegance through minimalism. If used innovatively, they may serve to express relevant information in an unobtrusive and observer-

specific format as demonstrated by the perceptual shift. Industries that build on artistic expressions such as visual media (advertising, tattooing, etc.) may also find a formal study of this element beneficial. Other applications of perceptual-shift ambigrams may be in cryptography, psychology and semiotics. Hence a systematic creation process for the same will be very useful to anyone who may wish to explore the different possibilities with this art-form in diverse fields of application.

Additionally, the results of such a study could be used to build an online generator for oscillation ambigrams, that works with different sets of combination and artificial intelligence.