# THE ANATOMY AND HISTORICAL DEVELOPMENT OF SINHALA TYPEFACES

## S. S. M. R. Samarawickrama

(118044K)

Degree of Doctor of Philosophy

Department of Architecture

University of Moratuwa Sri Lanka

October 2016

Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible

- Francis of Assisi

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### DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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Date

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The above candidate has carried out research for the PhD thesis under our Supervision.

#### ABSTRACT

*Keywords:* Type Anatomy, Typeface, Sinhala Typography, Letterform and Sinhala letter

This thesis is an epistemological study, which presents various knowledge-building activities for Sinhala typography. Initially, it presents a historical analysis on Sinhala typefaces and the morphological characteristics of letters. These characteristics articulate the anatomy of Sinhala.

The historical outline on the Sinhala letters and typefaces are discussed in relation to the introduction of the printing press and various technological developments. Using this a chronological timeline of Sinhala typefaces was developed. Followed by gaps in the current typographic knowledge, and its limitations are analyzed and discussed. The core contribution of this thesis is a comprehensive study on the anatomy of Sinhala based on distinct visual properties of each letter. We report how these visual properties are manifested in typefaces from 1737 CE to 2013 CE. These visual properties are also compared with existing typographic knowledge systems from scripts around the world.

We suggests 59 (sub categorized into 19) visual properties distinct to the Sinhala letter. We believe that our research on the morphological characteristics (visual properties, referencing lines, grid and vocabulary) that defines the anatomy of Sinhala fill up the existing knowledge gap in Sinhala Typography.

The thesis reveals that the existing typefaces were developed intuitively by designers or copied, adapted to overcome technological changes. It also speaks of an absence of formal knowledge on Sinhala typography, more specific to typefaces design. As a result, the number of typefaces designed today (considered as original typeface designs) is lesser than of what was found prior to the introduction of digital (Sinhala) typefaces used as body text.

The thesis primarily contributes knowledge towards building a theoretical framework for Sinhala anatomy, it also contributes knowledge to type design process, typographic pedagogy, typographic history, and methodology that can be adopted by other scripts to define the anatomy and to analyze typefaces. Dedication to my husband, my inspiration, to Mikhail and Raphail

#### ACKNOWLEDGEMENT

I would sincerely like to thank my supervisors, Prof. M. S. Manawadu, Department of Architecture, University of Moratuwa, Prof. R. Arangala, Department of Sinhala and Mass Communication, University of Sri Jayawardanapura and Prof. G. Dalvi, Industrial Design Centre, Indian Institute of Technology – Bombay, for always encouraging me and directing me to thrive for excellence. Their challenging questions helped me to grow in both theoretical and practical knowledge. Their words of advice and mostly their guidance throughout the research led me to complete this research, with an immense amount of knowledge on the subject area and I am ever grateful.

I thank Dr. Gamaini Weerasginhe the Head of the Department of Architecture, Faculty of Architecture, for many thoughtful discussions and advice rendered in completing the research.

I am obligated to my internal examiner Prof. Gihan Dias, for his keen interest and guidance that helped me to complete this research. It was his helpful critiques that lead me to study the subject area in detail.

I am grateful to the previous Directors of the Post Graduate Studies Division, Faculty of Architecture: Dr. Sepani Senaratne, Dr. Y. S. Sandanayake and the current director, Dr. Thanuja Ramachandra.

I appreciate the support and motivation render by my research Coordinator Dr. Shalini Cooray, for being a friend, conducting my progress reviews and the transfer examination. To Prof. J. Uyangoda, Prof. R.M.W. Rajapaksa for their presence, comments and suggestions for improvement.

A figure who was guiding me throughout my journey was Prof. Nimal de Silva, I thank you for being that continuous motivation in my life.

A special thank you to the expert interview panel: Prof. Wimal G. Balagalle, Prof. J. B. Dissanayake, Prof. K.N.O Dharmadasa and the non-expert interview panel, I am grateful for their time and advice.

I also express my gratitude to Dr. Hema Goonathilake who had been helping me with the initial editing of the chapters, who never hesitated to correct and advised on research writing methods. Also would like to thank Mr. Lucian Rajakarunanayake, for the final editing of this thesis.

Among these helpful people, I like to thank the Director, the staff of the Research room of the Department of the National Archieves, Colombo, Mr. Gorden De Silva from the Sri Lanka Rupavahini cooperation, Ms. Chintha from the Chithra type Foundry, Mr. Pushpananda Ekanayake From Font Master Pvt Ltd., for their time and generous insight on the subject.

I express my gratitude to Mr. Rafael Saraiva, Pathum Egodawatta, Post Graduates from the Department of Typography and Graphic Communication, University of Reading for their insight on Sinhala typography.

I am grateful to Ms. Nimashi Rajapaksha, and Ms. Sulakshana Mendis for helping me in compiling certain diagrams and to Ms. Kaveesha Koralege and Ms. Kalhari Senavratne who willingly assisted me to validate my findings.

I reserve my special thanks to the Mr. Ruwan Attanayake and Mr. R.A.J. Kithsiri for all the technical help and for their generous assistance.

I would like to say thank you to my parents specially my father who had been nudging me to complete this research, my mother and to my sisters for their support and for ever following up on the progress, which lead me to concluding the research and I finally want to say a big thank to Rohan for being the silent motivation and to my two sons who sacrificed their time with me.

#### LIST OF RESEARCH PUBLICATIONS

Samarawickrama S., (2012) "Distinguished Characteristics of the First Printed Sinhala letters" FARU International Research Symposium, p. 15, 24<sup>th</sup>-25<sup>th</sup> February, Galle, Sri Lanka

Samarawickrama S. (2014), "Development of a typeface from the handwritten Sinhala plakkatens of Sri Lank"a, Typography day 2014, p.34-35, 1<sup>st</sup>- 3<sup>rd</sup> March, Sybiosis Institute of Design, Pune, India.

Samarawickrama S. (2014), "*A Study on the First Sinhala Printed Letter*, 7th Annual Research Conference on the Humanities and Social Sciences at the Royal Asiatic Society of Sri Lanka", p. 69, 27<sup>th</sup>-29<sup>th</sup> March, Colombo, Sri Lanka.

Samarawickrama S., (2015), *"Anatomy of the Sinhala letter"*, Typoraphy day 2015, p. 3, 3<sup>rd</sup>-9<sup>th</sup> March, Industrial Design Centre, Indian Institute of Technology, Bombay.

Samarawickrama S., Saraiva R., (2015), *"Historic Overview; Meta-data of Metal Typefaces"*, Typography 6<sup>th</sup> meeting, 6.<sup>*o*</sup> Encontro de Tipografia: Livro de Resumos. Aveiro: University of Aveior. p.22, 4<sup>th</sup>-5<sup>th</sup> December, Portugal.

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Samarawickrama S., (2015), Root letters for Sinhala, *Sri Lanka Design Journal, Academy of Design, Colombo* 

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#### LIST OF ABBREVIATIONS

AS	- Ascending stroke
BS	- Base Stroke
CABS	- Colombo Auxiliary Bible Society
СС	- Combined or Conjunct Consonants
СТТА	- Kotte
DF	- Distinct feature
DNA	- Department of National Archives
DS	-Descending stroke
DVP	- Distinct visual Properties
GP	- Government Press
MNLSI	- Ministry of National Languages and Social Integration
NAS	- Non-alphabetical signs
NEC	- National Education Commission
OSS	- Other special signs
RL	- Root letter
VP	- Visual Properties
VS	- Vowel signs
WMP	- Wesleyan Mission Press