

Faculty of Arts University of Peradeniya



**Development, Diversity and Harmony
through Knowledge and Innovation**

**International Conference on the Humanities
and the Social Sciences
ICHSS – 2018**

PROCEEDINGS

22nd and 23rd November 2018

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Sri Lanka**

Proceedings of the
INTERNATIONAL CONFERENCE ON THE HUMANITIES AND THE
SOCIAL SCIENCES (ICHSS) – 2018

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MESSAGE FROM THE VICE-CHANCELLOR

UNIVERSITY OF PERADENIYA

It is with great pleasure that I issue this congratulatory message for the International Conference on the Humanities and the Social Sciences (ICHSS) 2018, organized by the Faculty of Arts of the University of Peradeniya. The University of Peradeniya is the recipient of the oldest University tradition in Sri Lanka being the legacy of the University of Ceylon, the first ever institution of its kind set up in the Island in 1942.

Much of the success of any University Academic atmosphere will depend on the extent of its vibrant research culture. The maintenance of such a culture involves generating ample opportunities for the academics to carry out research. This will create a platform for all participants to share the outcomes of their findings and exchange ideas with the academia. It is my wish that ICHSS - 2018 would prove to be a productive forum that will facilitate exchange of new ideas and thoughts toward the betterment of our country.

I wish ICHSS - 2018 all the very best.

Professor Upul B. Dissanayake
Vice Chancellor
University of Peradeniya

MESSAGE FROM THE DEAN

FACULTY OF ARTS

UNIVERSITY OF PERADENIYA

It gives me great pleasure and honour to convey this very sincere and fond message of congratulations and appreciation of the ICHSS-2018 which is held at the Faculty of Arts in the University of Peradeniya. The ICHSS is an important annual event of the Faculty that has provided a vital forum for national and international scholars to share their research findings and discuss matters relevant to the progress of humanity.

In my capacity as the Dean, I assure the fullest cooperation and facilitation to make the conference a success. I would like to emphasize that nothing is more important in the present world than striving for the common good which finds expression in the honest and ethical efforts and academic cooperation among intellectuals and policy makers. This is especially demanding in the current social context as individuals are increasingly becoming extremely selfish and their selfish efforts and agendas have created a huge threat to common good. The world today is experiencing the trends of the “tragedy of commons”. However, our world today hovers perilously close to many catastrophes and derailments: catastrophes looming in geopolitics, global economies, environmental ruination, governance, unethical conduct, non-principled behavior, and in a host of religious, ethnic and political hostilities and conflicts. As members of academia, it is our firm responsibility to help the society resolve its problems by creating a conducive environment and conditions for peaceful, prosperous and sustainable existence of the humanity through our intellectual efforts. I hope this conference will provide a platform for scholars in humanities and social sciences to deal with complex and in depth issues and challenges.

I wish to express my heartfelt gratitude and appreciation to the organizing committee of the ICHSS-2018 for doing everything possible to make this event a success.

Wishing you all a very fruitful and rewarding conference.

Professor O.G. Dayaratna-Banda

Dean

Faculty of Arts

University of Peradeniya

MESSAGE FROM THE CO-CHAIRPERSONS

ORGANIZING COMMITTEE

The international conference on the humanities and social sciences (ICHSS) 2018 with a theme more open than usual, ‘Development, Diversity and Harmony through Knowledge and Innovation’ aids on diverse areas of research to develop and enhance the knowledge by creating innovative objectives for a harmonized society. Hence the ICHSS 2018 paves the way to the researchers within the country and around the world to share the findings with the pioneers in the research field through the rich academic culture prevailed in the University of Peradeniya for many eras.

Promoting research and innovations are one of the key expectations of a university as one of the predominant methods of enhancing the academic arena. Hence University of Peradeniya takes pride in organizing ICHSS 2018 through which the rich and diverse academic heritage of it will be further enriched with constructive contributions made to the research and innovation via this platform. We expect to enhance the academic space of the Social Sciences and Humanities stream through including multitude of research papers under a wide variety of themes ranging from Languages and Literary Studies, philosophy to Economic Research and etc. This year’s conference will be covering sixteen sessions led by paramount experts who have contributed to the humanities and social sciences in numerous prestigious universities in Sri Lanka. ICHSS 2018 received a large number of contributions via the Easy chair conference management system. These were subjected to double – blind peer reviewing by scholars in the respective disciplines and sixty-five abstracts have been selected for oral presentations by the ICHSS 2018.

Our foremost objective in organizing ICHSS 2018 is to create a vivid platform for research and discussion to flourish with highly innovative research ideas contributed by multi-talented academics representing the discipline of Social Science and Humanities.

As the co- chairs of ICHSS 2018, we take this as the apt moment to confess our gratitude to the presenters and also we would like to note that the ICHSS 2018 would not have become a reality without unstinted dedication and immeasurable support given by the organizing committee by creating an arena for innovative researchers. The energetic great force behind the success of ICHSS 2018 who navigated this process towards the harbor of victory; the Dean Faculty of Arts deserves our thanks and least but not last the support rendered by the staff is much appreciated.

Dr. C. Herath and Dr. S. Premasiri
Co-Chairpersons
ICHSS – 2018

ABSTRACT

KEYNOTE SPEECH

Sri Lanka's Universities in Transition: Neo-Liberalization and Its Discontents

At present Sri Lanka's universities are being subjected to a major structural change. Its context is the emergence of 'neo-liberal universities' in the global North as well as the global South. Directly inspired and promoted by international capital as well as global financial institutions, the neo-liberal model of universities embodies an ideology and vision that has re-defined the goals of education in terms of changing dynamics of the capitalist market and the global capital in world and national contexts. Current reforms in Sri Lanka also mark the end of social welfare model of universities that was inaugurated in the early 1940s with the establishment of University of Ceylon.

There is very little critical thought among Sri Lanka's university communities about the nature and consequences of this transformation of Sri Lanka's higher education. This talk highlights the crucial importance of generating a critical reflection on the process of neo-liberalization of education in general and in universities in particular, and seeks to urge the academic community to build a discourse of resistance as well as alternative visions for reform.

Professor Jayadeva Uyangoda
Professor Emeritus
University of Colombo

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PROGRAMME

INAUGURAL SESSION

Time: 2.00 – 4.30 p.m.

Venue: Senate Room, University of Peradeniya

22nd November, 2018

2.00 p.m.	Registration
2.30 p.m.	Arrival of Guests
2.35 p.m.	Lighting of the Oil Lamp
2.45 p.m.	Welcome Address by the Co - Chairperson of the Conference Dr. Charitha Herath
2.55 p.m.	Address by the Dean, Faculty of Arts Professor O.G. Dayaratna-Banda
3.05 p.m.	Address by the Vice Chancellor University of Peradeniya Professor Upul B. Dissanayake
3.20 p.m.	Keynote Address Professor Jayadeva Uyangoda
3.50 p.m.	Vote of Thanks Co - Chairperson of the Conference Dr. Sunanda Premasiri
4.00 p.m.	Refreshments
4.30 p.m.	Session I

DAY ONE – THURSDAY, 22 ND NOVEMBER 2018		
1.00 p.m. – 2.00 p.m.	REGISTRATION	SENATE ROOM UNIVERSITY OF PERADENIYA
2.00 p.m. – 4.00 p.m.	INAUGURATION SESSION	
Refreshments – Senate Building Pillar Area		
4.30 p.m. – 5.10 p.m.	SESSION I Language and Literary Studies	SEMINAR ROOM, FACULTY OF ARTS
4.30 p.m. – 6.30 p.m.	SESSION II Tamilology	ROOM 33 MAIN ARTS BUILDING, FACULTY OF ARTS
7.00 p.m. – 10.00 p.m.	CONFERENCE DINNER OAK RAY REGENCY, KANDY	

DAY TWO – FRIDAY, 23RD NOVEMBER 2018			
8.30 a.m. – 9.00 a.m.	Refreshments – Arts Faculty Pillar Area		
TIME	TECHNICAL SESSION	Pal. no.	PANELS
9.00 a.m. – 11.00 a.m.	I (6 Parallel Panels)	III	Education and Pedagogy
		IV	Pali and Buddhist Studies I
		V	Psychology and Counselling Philosophy: East and West
		VI	Sociology and Social Anthropology
		VII	Geography and Environmental Studies
		VIII	Art, Theater and Media I
10.30 a.m. – 12.30 p.m.	II (2 Parallel Panels)	IX	Economic Research I
		X	Law
12.00 p.m. – 1.00 p.m.	Lunch – Arts Faculty Pillar Area		
1.00 p.m. – 3.00 p.m.	III (2 Parallel Panels)	XI	History and Heritage Studies Library and Information

			Studies
		XIII	Pali and Buddhist Studies II
		XI V	Economic Research II
		XV	Archeology and Heritage Studies
		XV I	Art, Theater and Media II
3.00 p.m. – 4.00 p.m.	Refreshments		
CLOSING OF THE CONFERENCE			

SESSION THEMES

- Session 1:** Languages and Literary Studies
- Session 2:** Tamilology
- Session 3:** Education and Pedagogy
- Session 4:** Pali and Buddhist Studies I
- Session 5:** Psychology and Counselling, Philosophy: East and West
- Session 6:** Sociology and Social Anthropology
- Session 7:** Geography and Environmental Studies
- Session 8:** Art, Theatre and Media I
- Session 9:** Economic Research I
- Session 10:** Law
- Session 11:** History and Heritage Studies
- Session 12:** Library and Information Studies
- Session 13:** Pali and Buddhist Studies II
- Session 14:** Economic Research II
- Session 15:** Archeology and Heritage Studies
- Session 16:** Art, Theater and Media II

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4.30 – 5.10 P.M.

SESSION I

Languages and Literary Studies

VENUE: SEMINAR ROOM

Main Arts Building, Faculty of Arts

Chairperson : Prof. P.B. Meegaskumbura

Discussant : Dr. Rohana Seneviratne

Allocated Time	Abstract No	Presentations and Presenters
4.30 – 4.50	EA 33	Poetics and Writing Skills: A Critical Study of Literary Theories in Bhāmaha's <i>Kāvyālaṅkāra</i> <i>Ven. A. Upananda</i>
4.50 – 5.10	EA 34	Betty Heimann (1888-1961), The Founding Professor of Sanskrit and Indian Philosophy at the University of Ceylon: A Critical Survey of Her Biography and Career in Germany <i>M. Lechler</i>

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4.30 – 6.30 P.M.

SESSION II

Tamilology

VENUE: ROOM 33A

Main Arts Building, Faculty of Arts

Chairperson: Prof. M.A. Nuhman

Discussant : Prof. T. Manoharan

Allocated Time	Abstract No	Presentations and Presenters
4.30 – 4.50	EAD 116	<i>Vijayanagara Nayakkar</i> Period's Devotional Literature: A Subaltern View <i>J. Harosana</i>
4.50 – 5.10	EAD 115	Female Experience and Language in Tamil Devotional Literature: with Special Reference to <i>Āndāl's</i> Poems <i>T. Vijitha</i>
5.10 – 5.30	EAD 117	<i>Thirumandiram</i> a Topical View <i>S. R. Devakumari</i>
5.30 – 5.50	EAD 113	Myth and History of <i>Vathanamaar</i> Ritual songs <i>S. Santhirasegaram</i>
5.50 – 6.10	EAD 114	A Study of Christian Devotional Literature with Special Reference to <i>Thiruchelvar</i> Epic <i>R.V. Francis</i>
6.10 – 6.30	EAD 112	Role of Divine Literature in the Rituals of Eastern Sri Lanka: A Study on <i>Mahamari Devi Divya</i> <i>Karani</i> <i>V. Inpamohan</i>

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9.00 – 9.40 A.M.

SESSION III
Education and Pedagogy

VENUE: ROOM 85
New Arts Building, Faculty of Arts

Chairperson: Prof. Prasad Sethunga

Discussant : Dr. Pushpa Vitharana

Allocated Time	Abstract No	Presentations and Presenters
9.00 – 9.20	EA 08	Demographic Factors Affecting Students' Choice of Advanced Level Supplementary (private) Tuition Classes: Evidence from Galle district <i>G.P.S. Nalaka</i>
9.20 – 9.40	EA 22	Learning to Live Together: The Importance of Introducing Comparative Religion to Sri Lankan School Curriculum <i>Ven. Moragaswewe Vijitha</i> <i>Samantha Ilangakoon</i>

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9.00 – 11.00 A.M.

SESSION IV
Pali and Buddhist Studies I

VENUE: ROOM 33A
Main Arts Building, Faculty of Arts

Chairperson : Prof. P.D. Premasiri

Discussant : Dr. H.M.M. Herath

Allocated Time	Abstract No	Presentations and Presenters
9.00 – 9.20	EA 09	Using Color ‘ <i>Kasiṇa</i> ’ for Anger Management: A Study of the Method in the <i>Visuddhimagga</i> <i>Ven. Y.B.M. Thakuri</i>
9.20 – 9.40	EA 23	Evolutionary Sense of the Term ‘ <i>Tīkā</i> ’: An Inquiry on Silent Readings in Pāli Exegeses <i>Ven. Candavara</i>
9.40 – 10.00	EA 37	The Fuenction of Ignorance (<i>Avijjā</i>) as a Fetter (<i>saṃyojana</i>) and an Underlying Tendency (<i>Anusaya</i>): A Critical Study <i>Dipen Barua</i>
10.00 – 10.20	EA 55	Understanding <i>Majjha</i> (<i>Middle</i>) in the <i>Majjhe</i> - Sutta of the <i>Aṅguttara Nikāya</i> to Avoid the Extremes <i>Ven. T. Kusalagnana</i>
10.20 – 10.40	EA 17	An Analytical Interpretation of Craving for Non-existence (<i>Vibhava-Taṇhā</i>) <i>Ven. Priyo Ranajan Tongchangya</i>
10.40 – 11.00	EA 66	Four Sublime States; Basic Principles of Effective Approaches to Conflict Resolution in an Intercultural Society <i>Ven. Delgoda Nandasara</i>

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9.00 – 11.00 A.M.

SESSION V

Psychology and Counselling, Philosophy: East and West

VENUE: AUDIO VISUAL ROOM

Main Arts Building, Faculty of Arts

Chairperson: Prof. R.D. Gunaratne

Discussant : Dr. Danesh Karunanayake

Allocated Time	Abstract No	Presentations and Presenters
9.00 – 9.20	EA 10	The Impact of Parental Emotion Regulation and Quality of Parent-child Attachment on the Ability of Sri Lankan Adolescents to Regulate Their Emotions <i>T.J. Gunawardena, N. Schuck</i>
9.20 – 9.40	EA 46	Victimization Factors of Female Juvenile Delinquents in Sri Lanka with Special Reference to a Certified School in Rathmalana <i>K.G.N.U. Ranaweera</i>
9.40 – 10.00	EA 52	A Description of Current Trends and Profiles of Drug Users in Sri Lanka <i>B. Senanayake, A.T. Darshana D.G.P.M. Perera</i>
10.00 – 10.20	EA 90	A Road Least Travelled: A Four Quadrant Model to Prevent and Minimize Ragging in the Faculty of Arts, University of Peradeniya <i>Buddhiprabha Pathirana</i>
10.20 – 10.40	EAM 68	An Inquiry into Selflessness in Sartrean Existentialism and Buddhist Teachings <i>Vev: Kadawalawewe Kalyana</i>

10.40 – 11.00	EAM 85	The Role of Methodology in the Construction of Scientific Knowledge: A Comparative Study of Karl Popper and Thomas Kuhn's Approaches <i>T. Thileepan</i>
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9.00 – 11.00 A.M.

SESSION VI
Sociology and Social Anthropology

VENUE: SEMINAR ROOM, DEPARTMENT OF SOCIOLOGY
New Arts Building, Faculty of Arts

Chairperson : Prof. Tudor Silva

Discussant : Dr. Vijitha Nanayakkara
Dr. Sarathchandra Gamlath

Allocated Time	Abstract No	Presentations and Presenters
9.00 – 9.20	EA 40	A Study of Women's Political Participation in China from 1949 to the Present <i>A.M.M. Chandrika</i>
9.20 – 9.40	EA 41	Impact of the Caste System on Traditional Drum Players: A Case Study Based on Anuradhapura Region <i>J.C.R. Kumara</i>
9.40 – 10.00	EA 31	Fertility Transition and Ethnic Fertility Differentials: A case Study in Kandy Urban Area <i>P.P. Masakorala</i>
10.00 – 10.20	EA 30	Myths Making or Breaking: Religion and Suspicion Among a University Community <i>Dhammika Herath</i>

10.20 – 10.40	EA 63	A Sociocultural Study on the Chronic Kidney Disease of uncertain aetiology in Anuradhapura district (with Special Reference to Kabithigollawa Divisional Secretariat) <i>C.B.M.P.D Weerasekara</i>
10.40 – 11.00	EAM 73	Social Issues Faced by Children due to the Migration of their Mothers on Foreign Employment <i>D.M.D.A. Rathnayaka</i> <i>K.A.S.M. Kulathunga</i> <i>T.H.A.P. Keerthirathna</i>

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9.00 – 11.20 A.M.

SESSION VII
Geography and Environmental Studies

VENUE: SEMINAR ROOM
Main Arts Building, Faculty of Arts

Chairperson: Prof. C.M. Maddumabandara
Discussant : Dr. Tilak Bandara

Allocated Time	Abstract No	Presentations and Presenters
9.00 – 9.20	EA 04	Mapping Flash Flood Potential Using GIS in the Turtle River and Forest River Watersheds in North Dakota, United States of America <i>R.A.D. J. Perera</i> <i>G.S. Vandenberg</i>
9.20 – 9.40	EA 12	Relationship Between Elevation and Human Heat Stress (HHI) in Sri Lanka <i>N.W. Srimalee Nanayakkara</i> <i>K.W.G. Rekha Nianthi</i>
9.40 – 10.00	EA 20	Transformation of Rubber Cultivation to Tea Plantation: A Case Study Based on Bulathsinhala Divisional Secretariat Division <i>W.D.K. Madushanka</i> <i>S.M.A.T de S. Nandaseela</i>
10.00 – 10.20	EA 25	Intentions for deforestation of Wilpattu Forest Complex <i>L.K.D.C.H. Nimalasiri</i> <i>W.M.P.W. Wickramasinghe</i>

10.20 – 10.40	EA 42	<p>Perception of Mangrove Ecosystem Degradation in tropical Regions: A Case Study of Chillaw Lagoon in Sri Lanka</p> <p><i>M.S.B. Jayasundara</i> <i>N.G.C.L. Gunawardhana</i> <i>J.A.S.N. Senevirathne</i></p>
10.40 – 11.00	EAM 45	<p>Changes of Ecosystem Service Value in Response to Land Use/Cover Change: A Case Study in Hanthana Area, University of Peradeniya, Sri Lanka</p> <p><i>K.W.D.N. Darmasena</i> <i>C.S. Hettiarachchi</i> <i>S. Subasinghe</i></p>
11.00 – 11.20	EA 58	<p>The Influence of Rainfall on Paddy Production: A Case Study in Mahaweli “H” zone</p> <p><i>U.S. Meegahakotuwa</i> <i>K.W.G. Rekha Nianthi</i></p>

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9.00 – 10.00 A.M.

SESSION VIII
Art, Theater and Media I

VENUE: SEMINAR ROOM, DEPARTMENT OF ECONOMICS
& STATISTICS

New Arts Building, Faculty of Arts

Chairperson: Prof. Liyanage Amarakeerthi

Discussant : Dr. Sudesh Mantillake

Allocated Time	Abstract No	Presentations and Presenters
9.00 – 9.20	EA 65	The Impact of Sri Lankan Folk Music on Sri Lankan Music Compositions Known as Opera <i>B.H. Bulathsinhala</i>
9.20 – 9.40	EAD 93	Skeletons in the Closet: Post-conflict Language Policy Planning in Sri Lanka (from 2009-present) <i>Achinthya Bandara</i>
9.40 – 10.00	EAD 96	<i>Silent Return to Peninsula:</i> Representation of Tamil Silence of War and Post-war Cinematic Dialogue <i>S.L.P. Fonseka</i>

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10.30 A.M. – 12.10 P.M.

SESSION IX
Economic Research I

VENUE: SEMINAR ROOM, DEPARTMENT OF
ECONOMICS & STATISTICS
New Arts Building, Faculty of Arts

Chairperson: Prof. Ananda Jayawickrama

Discussant : Prof. Wasantha Athukorala

Allocated Time	Abstract No	Presentations and Presenters
10.30 – 10.50	EA 05	Economic Effectiveness of Coal Power Plants in Sri Lanka: Evidence from Lakvijaya Coal Power Plant <i>H.R.A.C. Thilanka</i>
10.50 – 11.10	EA 15	Leadership Styles and Organizational Culture: A Comparison Between Private and Public Banks in the Kandy District <i>M. Gunasekera</i> <i>G.D.U.P.K. Gamage</i>
11.10 – 11.30	EA 35	The Relationship Between Exchange Rate and Inflation of Sri Lanka <i>A. Pusparasa</i>
11.30 – 11.50	EA 43	Causality Between Savings and Growth in Sri Lanka After Economic Liberalization <i>W.E. Piumini Perera</i>
11.50 – 12.10	EA 47	Role of Gender in Community Based Mangrove Management in Puttalam Lagoon in Sri Lanka <i>M.D.K.L. Gunathilaka</i>

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11.30 A.M.– 12.30 P.M.

SESSION X

Law

VENUE: AUDIO VISUAL ROOM

Main Arts Building, Faculty of Arts

Chairperson: Prof. Jayadeva Uyangoda

Discussant: Dr. Kalana Senaratne

Ms. Shyamali Ranaraja

Allocated Time	Abstract No	Presentations and Presenters
11.30 – 11.50	EAD 108	The Right to Information vs. the Right to Privacy and Confidentiality under Commercial Arbitration in Sri Lanka <i>K.M.C.R. Karunatilaka</i>
11.50 – 12.10	EAD 111	Foundational Failures in Jurisprudential Legitimizations of Capital Punishment: A critical analogy of the Utilitarian and Retributivist theories and their usage in the Sri Lankan debate <i>J.M.P.D. Jayasundara</i>
12.10 – 12.30	Guest Presentation by Professor Jayadeva Uyangoda	

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1.00 – 2.40 P.M.

SESSION XI
History and Heritage Studies

VENUE: SEMINAR ROOM
Main Arts Building, Faculty of Arts

Chairperson: Prof. P.V.J. Jayasekara
Discussant : Prof. T.P. Mettananda

Allocated Time	Abstract No	Presentations and Presenters
1.00 – 1.20	EAD 102	The Role of Cinkaiyaryan I in Establishing the Jaffna Kingdom – A Historical Perspective <i>G. Jeyatheeswaran</i>
1.20 – 1.40	EAD 105	The Fort of Jaffna: A historical Perspective <i>V. Kapilan</i>
1.40 – 2.00	EAD 110	Missionary Impact and Social Mobility Among Indian Diaspora in British Colonial Sri Lanka <i>Ramani Hettiarachchi</i>
2.00 – 2.20	EAD 106	Muslim Women and Social-Educational Changes in Bangladesh: A Study in the Second Half of the Twentieth Century <i>Md Abdullah Al-Masum</i>
2.20 -2.40	EAM 89	A Historical Study of Crime and Punishment in Pre-colonial Sri Lanka with Special to the <i>Vēvālkāṭiya</i> Slab Inscription of King Mahinda IV (956-972 A. D.) <i>N. A. Wimalasena</i>

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1.00 – 1.40 P.M.

SESSION XII

Library and Information Studies

VENUE: ROOM 85

Main Arts Building, Faculty of Arts

Chairperson: Mr. V. Maheswaran

Discussant : Dr. Menaka Hidagolla

Allocated Time	Abstract No	Presentations and Presenters
1.00 – 1.20	EA 01	ICT Self-efficacy and the Use of Electronic Information Resources Based on Four Sources of Self-Efficacy Theory <i>C.N.K. Alahakoon</i> <i>S. Somaratne</i>
1.20 – 1.40	EA 19	The Effect of Digital Media on the Reading Habits of Children <i>A.G.N.D. Gunarathna</i> <i>W.M.K. Wijesundara</i>

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1.00 – 2.40 P.M.

SESSION XIII
Pali and Buddhist Studies II

VENUE: ROOM 33A
Main Arts Building, Faculty of Arts

Chairperson: Rev. Prof. Gnanananda
Discussant : Rev. Mawela Rathanapala

Allocated Time	Abstract No	Presentations and Presenters
1.00 – 1.20	EA 67	Is Excessive <i>Dāna</i> (generosity) driving Myanmar into a Poverty Trap? <i>Ven. Zanaka</i>
1.20 – 1.40	EAM 72	Buddhist Contribution to Gender Equity through the Promotion of <i>Bhikkunī</i> Leadership <i>Nun Kundasale Subhagya</i>
1.40 – 2.00	EAM 75	A Study on Self-defeating Behavior: The Buddhist Perspective <i>Ven. Kapugollawe Rathanwansa</i>
2.00 – 2.20	EAM 81	A Review on Geiger's Pali Language Classification <i>Ven. Saliya Ashokapura Nanda</i>
2.20 – 2.40	EAM 71	The Philosophical Study on Nature of Mind- body <i>K. A. D. Dilini Nishani Dilrukshi</i>

23RD NOVEMBER 2018

1.00 – 2.20 P.M.

SESSION XIV
Economic Research II

VENUE: SEMINAR ROOM, DEPARTMENT OF
ECONOMICS & STATISTICS
New Arts Building, Faculty of Arts

Chairperson: Prof. Anoma Abhayrathne

Discussant : Dr. Smanmala Dorabawila

Allocated Time	Abstract No	Presentations and Presenters
1.00 – 1.20	EA 56	The Causal Nexus Between the Economic Growth and Government Expenditure on Transportation and Communication: The Sri Lankan Case <i>G.A.K.N.J. Abeyrathne</i>
1.20 – 1.40	EA 49	Migration Towards Sustainable Development: National Labour Migration Policy in Sri Lanka AND Female Labour Migration <i>K.D.D.G. Silva</i> <i>K.A.S. Udayanga</i>
1.40 – 2.00	EA 03	Impact of Migration of Sri Lankan Professionals to Qatar on Skill Development and Brain Drain <i>E.M.A.P. Ekanayake</i> <i>K. Amirthalingam</i>
2.00 – 2.20	EA 38	Eliciting Customer-defined Attributes of Food Quality for Powdered Milk Products <i>M.R.F. Rizmina</i> <i>J.M.U.K. Jayasinghe</i>

23RD NOVEMBER 2018

1.00 – 2.40 P.M.

SESSION XV

Archeology and Heritage Studies

VENUE: AUDIO VISUAL ROOM

Main Arts Building, Faculty of Arts

Chairperson: Prof. R.M.M. Chandraratne

Discussant : Dr. Piyathissa Senanayake

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1.20 – 1.40	EA 91	An Ancient Clay Canoe Burial Tradition in Sri Lanka <i>D.K. Jayaratne</i> <i>J.D.K. Jayaratne</i>
1.40 – 2.00	EA 92	An Archaeological Study of Pre-Historic Paintings Found in Veherayaya <i>Ven. Gampola Viajaya</i>
2.00 – 2.20	EAD 103	Remote Sensing for Monitoring the Cultural Heritage: A Case Study of Sacred City of Kandy <i>S. Jeewan</i>
2.20 – 2.40	EAD 101	Revisiting of the Punch- marked Coin Finding Places in Sri Lanka <i>K.W.C. Tharangani</i>

23RD NOVEMBER 2018

1.00 – 2.00 P.M.

SESSION XVI
Art, Theater and Media II

VENUE: SEMINAR ROOM, DEPARTMENT OF SOCIOLOGY
New Arts Building, Faculty of Arts

Chairperson: Dr. Michael Fernando

Discussant : Prof. Liyanage Amarakeerthi

Allocated Time	Abstract No	Presentations and Presenters
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1.20 – 1.40	EAD 94	Representation of the War in Sri Lankan Performance Art <i>C.W.M.M. Chandrasekara</i>
1.40 – 2.00	EAD 95	Evident Spirit and Sacredness in Afro Sri Lankan Community: Rejuvenation of Afro Sri Lankan Cultural Practices <i>S.M.D.N.K. Senevirathne</i>

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POETICS AND WRITING SKILLS: A CRITICAL STUDY OF LITERARY THEORIES IN BHĀMAHA'S *KĀVYĀLAṆKĀRA*

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Bhāmaha, the first and foremost writer on the theories of Sanskrit poetics, lived before the 7th century AD in Kāśmīr, India.¹ His work on poetics is the *Kāvyālaṅkāra* (figures of poetry). The title of Bhāmaha's work by itself emphasizes what it contains, i.e. the figures of poetry. Some scholars primarily recognize the *Kāvyālaṅkāra* as a treatise of theories of poetics.² In contrast, it seems that some theories of poetics recommended by Bhāmaha are clear related to writing skills (in Sanskrit), which is a genre of learning in the modern time. It therefore appears that the work by Bhāmaha has a dual role; as a work on Sanskrit poetics and a manual of writing skills. This paper attempts to examine critically the theories of poetics in Bhāmaha's work to distinguish its approach to writing skills in Sanskrit.

Literary sources including the original text and commentaries of the *Kāvyālaṅkāra* and modern works on writing skills in English are the primary materials used for this study. The theories of Sanskrit poetics recommended by Bhāmaha's *Kāvyālaṅkāra* were critically explored in order to ascertain theories of writing skills in Sanskrit. Moreover, the theories of writing skills recognized in the *Kāvyālaṅkāra* were compared with selected modern theories of writing skills in English. Critical reading and understanding were largely employed in this study.

The content of the *Kāvyālaṅkāra* recommends various guidelines with regard to writing skills that are comparable with those in the context of modern

¹ Edwin Gerow, *Indian Poetics* (Wiesbaden: Otto Harrassowitz, 1977), 228.

² Gerow 1977, 226-227; S.K. De, *History of Sanskrit Poetics* (Calcutta: K.L. Mukhopadhyay Publishers, 1960), 47; P.V. Kane, *History of Sanskrit Poetics* (Delhi: Motilal Banarsidass, 1961, 3rd edition), 79.

academia. At the beginning of the *Kāvyaḷaṅkāra*, the author uses the term ‘sādhukāvyanibandhanam’³ (composition of good poetry) emphasizing the nature of overall outcome of any creative work. Along the theories of poetics are also taught the rules that can be recognized as those essential for maintaining good writing skills. For example, he says that “the desire to compose *Kāvya* should be entertained after learning Grammar and the meanings of words and after having served the masters therein and after having studied other works.”⁴ This quotation clarifies some fundamentals of writing skills in Sanskrit, such as collocations and contextual usage of words, which can be compared with frequently given guidelines on writing skills in English today.⁵ Moreover, Bhāmaha recommends; “never shall be spoken even a word which is faulty. By a work which is bad, one gets a bad name, as by a bad son.”⁶ This is another way of highlighting the accuracy of language usage, which is the basis of any formal writing process. What’s more, Bhāmaha stresses that the title *Mahākāvya* (epic or long poem) can be used only if it is devoid of vulgarity of expression and includes figures of speech and treats of the good.⁷ This underlines the formal usage of language in creative works like a *Mahākāvya*, which can be understood from the perspective of writing skill as well. Further, Bhāmaha demonstrates the *Kāvyaḷaṅkāra*⁸ (defects of poetry) such as *Apārtha*⁹ (devoid of collective

³ ‘dharmārthakāmamokṣeṣu vaicakṣanyaṃ kalāsuca
prītiṃ karoti kīrtiṃ ca sādhu-kāvyanibandhanam’ – ‘composition of good poetry produces ability in
(or makes one able, or capable in the pursuit of) Dharma, Artha, Kāma and Mokṣa; It also confers
pleasure and fame.’ *Kāvyaḷaṅkāra of Bhāmaha*, trans. P.V. Naganatha Sastri (Delhi: Motilal
Banarsidass, 1970), i.1.

* Henceforth, the abbreviation KB stands for the ‘Kāvyaḷaṅkāra of Bhāmaha’.

⁴ KB i.10.

⁵ See, David Shimkin and Allen H. Lanner, *Ways to Writing* (New York: Macmillan Publishing
Company, 1987), 306-309; John M. Lannon, *The Writing Process* (Glenview: Scott, Foresman and
Company, 1988), 135-136.

⁶ KB i.11.

⁷ KB i.16.

⁸ KB i.37, 38,40, 41,45,47.

⁹ KB iv.3.

meaning), *Apakrama*¹⁰ (out of order) and *Śabdahīna*¹¹ (ungrammatical) etc. It is evident that the explanation of the *Doṣa* (defects) in the *Kāvyaḷaṅkāra*

also sets clear guidelines with regard to the skills in writing because composing something accurately is also highly recommended by modern lessons on writing skill.¹² Bhāmaha says that ‘poets never employ a word with a hidden meaning’¹³, a rule which seems to concur with the concept of clarity in the context of English writing skills. From the qualities of poetry mentioned by Bhāmaha it is clear that he had serious concerns with the language of poetry in particular. The *Kāvyaḷaṅkāra* states ‘That (*kāvya*) is known as sweet which is agreeable to the ear and does not contain many compounds (or big compounds). That composition is clear whose meaning is apparent to all from the learned down to women and child.’¹⁴ The above quotation can better be understood in the light of the theories of coherence and clarity as explained in writing skill lessons with reference to the formal usage of contemporary English.

It is fair to say that Bhāmaha's analysis of the literary theories has a clear connection with how we interpret some theories of writing skills today. Even though the modern works on poetics and writing skills are separately conceived and presented, Bhāmaha's work attempts to cover both areas, i.e. poetics and writing skills. As the poetics and writing skills primarily depend on the usage of language, both areas can overlap in any work written on poetics. It is then reasonable to maintain that the theories of writing skills in the *Kāvyaḷaṅkāra* can clearly be distinguished and employed back in the context of modern academia as well. Depending on the theories of writing skills in the work by Bhāmaha, the relation between the *Kāvyaḷaṅkāra* and later Sanskrit works on poetics can also be comparatively examined.

To conclude, this study demonstrates that the work by Bhāmaha is not merely a work on poetics but also includes guidelines on writing skills. The

¹⁰ KB iv.20.

¹¹ KB iv.22.

¹² Lannon 1988, 135-136.

¹³ KB i.45.

¹⁴ KB ii.3.

earliest work on Sanskrit poetics therefore covers both areas: poetics and writing skills, within the context of poetics itself. Further, the guidelines on writing skills included in the *Kāvyaṭāṅkāra* can clearly be understood by comparing it with modern works on writing skills, particularly those written to teach contemporary formal English.

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**BETTY HEIMANN (1888-1961), THE FOUNDING PROFESSOR OF
SANSKRIT AND INDIAN PHILOSOPHY AT THE UNIVERSITY OF
CEYLON: A CRITICAL SURVEY OF HER BIOGRAPHY AND
CAREER IN GERMANY**

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Betty Heimann (1888 - 1961, see fig. 1), the founding professor of Sanskrit and Indian Philosophy at the University of Ceylon in the end of the 1940s, came from Germany. Even today she is well-known as the “funny smoking German lady”, according to the memory of Ms. Gauri Jayawardene, who is a daughter of Heimann's successor, Oliver Hector de Alwis Wijesekera (1909 - 1990). This paper examines the beginning of a brilliant scholar's academic career tainted by all the difficulties of being female and Jewish in the 1920s in Germany.



Fig. 1: Prof. Betty Heimann at the University of Ceylon
at the end of the 1940s.

The time period chosen for this research (1923 to 1933) starts with her professional breakthrough as a scholar in 1923 at the University of Halle (*Vereinigte Friedrichs-Universität Halle-Wittenberg*) in Halle, a city in

Eastern Germany. It is the university where her habilitation treatise was accepted. As neither any historical material nor a biography has been published on Heimann, I first searched for unknown historical documents about Heimann, especially about her career, in the archives of the University of Halle (UAH), which I then studied, analysed and systematised. As the second step, the insights derived from these documents were compared with the information from secondary literature about Heimann such as Stolze 1995 and Wolfradt 2003. Consequently, this research rediscovered her legacy and courage by first publishing the formerly unknown historical documents of the University archive in Halle.

The documents of the archive shed light on the progression of Heimann's career and her further activities. Altogether, 24 surveys and other administrative documents exist at the UAH (PA Nr. 7469, Rep. 21 III Nr. 153). These surveys represent the most extensive part of the historical documents in Halle. They include a review of Heimann's publications by well-known professors, for example, Eugen Hultzsich (1857-1927). All of these professors were men and professors of Indian philology. It is apparent that they were critics as well as supporters of Heimann. Her critics mentioned her religion and sex although what they were requested to do was to review her works. These critical reviews resulted in Heimann not becoming a professor in Germany.

Again and again Heimann applied for support for her academic activities, for instance, an expedition to India and Ceylon in 1931. With huge efforts she could finally travel to India. Before and after that expedition the number of students and listeners of Heimann's lectures increased tremendously, mostly because the pictures she showed of her expedition attracted their attention.

The surveys of the UAH additionally provide information about Heimann's method of teaching and research. The six monographs and 16 articles she published from 1922 to 1961 clearly evince that she introduced innovative ways to analyse Sanskrit. On one hand, she distinguished herself from other philologists by inventing the "anthropo-geographical method" to teach Sanskrit by including social and ethical aspects in her explanations (s. UAH PA Nr. 7469, part 1, A 23, S. 196). On the other hand, she compared Indian

and Western philosophies in her papers. Although she was a teacher of Sanskrit, her main attention was directed to Indian philosophy (see e.g. her monograph titled "Facets of Indian thoughts" in 1930). Looking into the society of India in this context was a totally new approach. Furthermore, several colleagues of her criticised her research career as they were only interested in linguistic questions. They also envied her for her experiences in India as a result of which she faced scepticism from other scholars.

Betty Heimann in Halle had to struggle for being admitted as a qualified teacher at a university. Compared to the careers of her male colleagues it took her much longer and she had to overcome more obstacles. Heimann reacted by defending her methods and showing activities against a lot of critics. From 1933, the political situation in Germany did not allow the Jews to work in the country anymore. Heimann thus had to emigrate to Great Britain and became a successful academic and later a famous scholar at the University of Ceylon.

The start of her academic career in Germany was far beyond an easy-going and pleasant one. The historical documents in Halle witness the barriers and daily experience of discrimination she encountered. The reasons for the discrimination lie in the challenging political situation, her religious denomination, gender, and innovative research method. From 1923 to 1933, Heimann was the first female academic at Halle. Therefore, Heimann's biography and career is an integral part of the history of women, especially considering her motivation and the difficulties she faced to become the first academic of her university, in spite of all the discrimination. She maintained an international network, an example for which is her participation in the conferences of the Royal Asiatic Society. It also led to the establishment of the Sanskrit Department of the University of Ceylon. Consequently, her international network can be seen as an essential building block in the history of Sanskrit studies beyond India.

Ultimately, because the circumstances around Heimann's career were so difficult, special tribute should be paid to her perseverance, innovative research method, expedition to India at the beginning of the 1930s and her

popular and famous classes. Thus she was a pioneer in the field of Sanskrit and Indian philosophy.

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Figure

figure 1: <http://www.pdn.ac.lk/arts/classical/history.htm> (download on 08/10/2015).

VIJAYANAGARA NAYAKKAR PERIOD'S DEVOTIONAL LITERATURE: A SUBALTERN VIEW

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The word '*Vilimpu*' is the Tamil word paralleled with the English word 'Subaltern', for it is used to refer to people who are outside the framework of political, economic, social and cultural power. This is a way of identifying social groups excluded from social hegemony and emphasizing their voices. Post modernism states that there exists an X center that is a contradictory position in the social system, where the center embodies the power structure, superiority, dominance and institution, in which the margin varies on the verge of being oppressed. Here the margin is not a study; nor does it have a single ideology. The margin is a comparative concept. The edge of a center makes it possible for a center of the edge to act over the margin. It is noteworthy that such a difference on the edge defines the general part of the edge on the grounds that it is resistant to the center, leaving behind the center. In the history of Tamil Literature, the *Vijaya Nayak Nayakar* period's literature is the first literary period that reflected the people on the edge. Many types of devotional literature appeared during this period, such as *pallu*, *kuravanji*, *thuthu*, *sathagam* and *kathal*, etc. They are the literary forms of the people who are far from the center. The main objective of this study is to examine how the *Vijaya nagara Nayakkar* period's devotional literature reflect the marginalized people and how they are the voice of the marginalized people.

The *Nayakkar's* period's devotional literature is the main source of evidence for this study. It has been analyzed through sociological and postmodern subaltern approaches and the descriptive methodology, along with secondary data analyzed through the content analysis method.

In the Indian and Tamil contexts, many marginalized people can be identified, such as *Dalits*, women, untouchable workers, prostitutes, beggars, mad men, thieves, hunters, tribes, abductors, and permanent patients. In the

history of Tamil Literature, the *Vijayanagara nayakka's* period's literature illustrates the quest of the common people, especially, in the many types of devotional literature. Devotion is the most important literary subject in Tamil literature that can be seen as a trend from the 3rd century A.D to the 18th century. Devotion reflects the relationship between God and the soul. However, this is also essentially marginal. Here god is the center while soul is marginalized on the edge. According to this study, the devotional literature of the *Vijayanagara nayakkar's* period reflects political, social, economic and cultural marginalization of the people such as *Dalits*, women, untouchable people, cooley workers, unorganized laborers, and prostitutes in their literary forms such as *satagam*, *pallu*, and *kathal*, which speak of the state of these people marginalized by social and economic elites. The '*Mukkūdal pallu*' indicates that the '*pallar*' has been the slave of the landlords. *Kuttarala kuravanchi* expresses aspects of the *kuravar* society. Scholars refer to the *vijaya nakara nakkar* period as one of stagnation and its literature as the expression of a stagnant society. The people who have not been reflected in this literature have been depicted in the periodic rhymes of the *Nayakkar* period. Which speaks about the cooley workers, farmers, cowherds, thieves, fishermen, cart-riders etc. The lives of the people, their living practices, multidimensional lifestyles, production methods and spoken languages are therefore recorded in this periodic poetry. However, these people are not the heroes of these writings. In the contrast between the center and the margin, these people are also marginalized in literature. Moreover, although *Nayakkar's* literature reflects the living elements of the marginalized people, they have been used for comic effect and laughter to make people escape boredom. In these types of literature the bond between landlords and slaves is justified, and their characters have not been given any priority or importance as respectable characters.

Key words: Subaltern, Margin, *Vijayanagara Nayakkar's* Devotional Literature

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**FEMALE EXPERIENCE AND LANGUAGE IN TAMIL
DEVOTIONAL LITERATURE:
WITH SPECIAL REFERENCE TO ĀNDĀL'S POEMS**

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Āndāl is one of the key female representatives of Indian Tamil literature in the period of Pallavar (7th Century A.D). She is one of the most uncommon women poets of this time as well as a brilliant modernist and feminist whose poetry is different from the mainstream in both subject and form. Āndāl is seen as a mystic due to her recognition of the existence of the soul and its relation to the divine soul. Āndāl is also a great mystic because through her sensuous poetic images she brings out the intimacy between Lord Krishna and he, the presiding deity of the Vaishnavite sect, Sri Rangam. She looks for the consummation of this relationship with him as his consort, longing to marry him. The main motivation of the religious mystic is achieving an intimate relationship with the God. It is essential to have knowledge of the fundamental principles of the mystic's philosophy and theology to understand the language of a mystic.

The primary objective of the paper is to explore the feminist features of Āndāl's poetry based on the feminist criticism. The sub objectives of the paper are to analyze the female subject and to pay attention to the female voices through the language and means expression in the religious content of Andal's poems. Though a feminine or masculine way of writing exists apart from the author's gender, Andal's poetry can be viewed especially in the voice of female language, an alternative to patriarchal discourse. Andal's poetry is emphasized as a concept and also demonstrated in the way of writing called *écriture féminine* (literally feminine writing) which is deeply related with the body and sexuality. Andal's sensuous poetry with its

semiotic elements present a fruitful field of research in the context of this idea.

With the general growth of feminist work in many academic fields, it is very important that the relationship between language and gender has attracted considerable attention in recent years. Some research has focused only about women's literature and its poetic richness and lyrical felicity. Other studies have sought to show the philosophical and religious content of the women's writing. Some more works have attempted to explore about the feminist theories and criticism. In Tamil Literature, most of the feminist researchers from Tamilnadu such as A. Mangai, Dr. R. Prema, Dr. V. Nirmala Rani, Aranga Mallika and Maharasan as well as Sitraleka Mounnguru and Selvi thiruchandran from Sri Lanka have researched this field. Some people have tried to study classical literature such as Sangam poetry and devotional literature based on the feminist viewpoint and theories. It is very important to find answers to questions on the relationship between Language and gender how it is depicted in literature, how men and women use language in their creative work and what the differences between male language and female language are. Some of the work of this type, emphasize features of the female language and its differences from the patriarchal language. This study focuses on how women's experiences and voices are expressed in devotional literature through the use of language based on social linguistics.

Research methods and approaches are tools used to investigate, examine and analyze the social world. Feminist literary theories and social linguistics approaches have been used in this research. These methods seek to understand literary work by investigating their social, cultural and intellectual contexts. Andal's poetry has been used as primary data and other relevant material and information from the printed and electronic devices have been used as secondary data in this regard.

This review shows that women writers focused on the image of the woman in mainstream devotional literature. Devotion is common to all and has no limits. It can be used to express their love for the divine in different ways. Their writing speak about the social conditions that prevailed at that time, and the position of woman at home and in society. They wrote poems with

both religious and secular sensibility. Through their poems they address the issue of personal freedom and turned every wound inflicted by life into a poem. There are some links between these poems and modern feminist theories as well as linguistics aspects. The female experience in this collection, as mentioned before, is individual. Andal's poetry dares to express her inner feelings - often physical and sensual. If she talks about romantic love, she is not an object there - she speaks from the position of being a subject in love.

Feminism is the result of the socio-economic revolution in the world. Though the term has many meanings, generally it is a set of ideas or a series of political movements. Its analysis is based on some adopted theories such as gender, place, power, sex, language and literature. Andal's works flourished in an entirely different context of ancient India in the period of Pallavar (7th Century A.D). Therefore, some of the modern feminist theories particularly Gyno criticism cannot be found in her works.

As a prominent woman poet in the Tamil literary world, she occupies a special place in the origin and development of modern Tamil feminist literature. Her vivid literature shows that Andal has powerful command over the language which enables her to compose poems in idiomatic Tamil in an indigenous form. She epitomizes the sweetness, elegance, and essence of the language when she expresses her profound feelings of devotion, love and Saranagathi (totally surrender) in her immortal and exemplary lyrics. She preaches to humanity that there is nothing equal to the route of chanting to train the mind to seek Divinity. Her theology motivates people to chant the name of the Lord Ranganathan, to develop a close rapport between him and his devotees. Therefore, the contribution of women writers in Tamil literature is visible in poetic language.

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THIRUMANDIRAM: A TOPICAL VIEW

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Religion has been created for the wellbeing of human beings. *Bhakthi* literature spreads religious thoughts among the people. Bhakthi literature in Shaivism is divided into three major categories called *Sasthirangal*, *Thothirangal* and *Kappiyangal*. The *Thothirangal* is a set of a spiritual songs, which are called as *Thirumuraigal*. *Thirumuraigal* means set of Spiritual songs, which organized in to twelve categories called *Thevaram*, *Thirivasagam*, *Thirukkovaiaar*, *Thruvisaippa*, *Thiruppallandu* and finish with *Tirumandiram*. *Tirumandiram* has been reckoned in the tenth of the twelve *Tirumarigal* of Shaivism. The *Tirumoolar* is the creator of the *Tirumandiram* and he is a mystic and yogi for a very long period, he was one of the eighteen *sidhars* of Tamilnadu and he is the first *Sidhar* of the eighteen *Sidhars*. Also he has been hailed as one of the sixty three *Nayanmargal*. The *Tirumandiram* consists of over three-thousand verses. It has been divided into nine sections called *Tantras*. *Tirumoolar*, the author of the text. Historically, the author belongs to the fifth century, but it is difficult to predict the exact time period of his living. When we sing the *Tirumandiram* songs, we get a feeling of meditation and through that, we can feel him, the spiritual yogi. So the *Tirumandiram* can be researched on various topics and it is no doubt that this will benefit the current and future generations as well. This research specially focused on related areas of science and yoga in *Thirumanthiram*. The objectives of this research are to study the writer *Tirumoolar*'s role in the development of religious literature in Saivism, *Tirumoolar*'s contributions in science and Yoga and *Thirumoolar*'s ways of practicing yoga as a curable medicine for many diseases.

The main sources for this research were *Tirumoolar*'s *Tirumandiram*. Further *Thothira* text books (*Noolgal*), the research papers of the *Tirumandiram*, Videos, and Essays related to the *Tirumandiram* were used as further material.

Historical (history of Tirumoolar and Tirumandiram) and Literacy approach descriptive approach study, comparative (Tirumoolar's Tirumandiram and current development of science) study and aesthetic method have been used in this study.

It is very rare to observe the texts, that are popular still and benefits all ages of human beings even after many decades. Tirumandiram is one of very important texts that is very useful to the current human being as well as next generation. The England born chemistry scientist John Dalton is the first person, who invented the atomic theory in 18th century (1766-1844). But Tirumoolar has described about the atom before the invention of the atomic theory many hundred years ago in his Tirumandiram songs.

The present scientific and information world invents lot of new things every day in the world in various fields that benefit people. At the same time people are suffering from new diseases and dying tens of thousands around the world every day and Doctors and Scientist are contributing to overcome through those diseases. But most of the recent research revealed that the diseases can be curable through "Yoga". So teaching yoga became very important to human life in the current context. To recognize that, the United nation declared the June 21st as a "Yoga day" The first "Yoga day" was celebrated on 21st of June 2015 and celebrate every year. Further educationists are thinking of introducing yoga in the education system to the children. But Tirumoolar have described deeply about yoga before the many decades in his Tirumandiram and described the way of curing the diseases and the medicines in his songs. Further he has proved doing "Attanga Yogam" By doing this yoga anything can be achieved and he proved practically by doing good things for the people. Those have been proved by many scholars throughout the time.

It is identified by the contemporary medical researcher Indian born Dr. Sundara Vadivel, who is working in South Carolina hospital USA in cancer unit, says many diseases like Alcumer and drug addict can be curable through meditation. He researched and found Tirumandiram breathings yoga method and it was accepted by the London Cambridge University and it will be published in the university journal in August 2018. Further Tirumoolar in

his 2nd Thanthiram in Tirumandiram describing about the accurate process of the creation of the child from its egg stage to end stage in 41 songs under the topic “*Karu utpaththi*” (Child creation). So the Tirumandiram describes many invented things, which are not invented by the science, therefore in the present, many researchers from various field specialists like Scientist, doctors, scholars and linguists are trying to do the research on Tirumandiram. The 2nd of June 2018 “Healthy in Tirumandiram (Arokiyathil Tirumandiram) book authored by K. Vaitheesvaran was published at Colombo Tamil Sangam. This is one of the examples to show the above.

The main objective of this paper is to explore the value based useful thoughts that could cater the wellbeing of the common mass. However, this paper has taken into account only some relevant poems for this research on Tirumandiram. The Tirumandiram not only benefits to the present human life but also for the future generation too. This will be very useful for the students who are doing study on Tirumuraigal to find the further knowledge on Tirumandiram as well as good for the researchers who will do research on Tirumandiram. It could be used as a source for future researchers, which could improve wellbeing of the people.

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MYTH AND HISTORY OF VATHANAMAR RITUAL SONGS

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‘*Vathanamaar*’ worship is one of the traditional and ritual worships in Batticaloa. The God *Vathanamaar* is worshiped for Cattle’s fertility. In this worship system several songs are sung such as songs ‘வதனமார் ஊர்கற்று காவியம்’, ‘வானமார் குழுமாடு கட்டு காவியம்’, ‘வதனமார் குழுமாடு கட்டு அகவல்’, ‘வதனமார் யானை கட்டு அகவல்’, ‘வதனமார் தேன்வெட்டு காவியம்’. These songs were written on Palm leaf. This research seeks to show about the origin of ‘*Vathanamaar*’ and their arrival to Eastern part of the Sri Lanka ‘*Vathanamaar*’ racial group immigrated towards to Eastern part from South India and lived at the place of Naathanai. During this period, they did their traditional occupation to establish their life style permanently. Then they have occurred premature death and become as a religious and respectable group.

The objective of this research is to describe about the immigration of the ancient group towards Batticaloa who lived in south India and to explore how did the ancient group became as the worship group.

These *Vathanamaar* ritual songs seek to show the historical stories by the myth. Therefore, other objective of the paper is to identify the relationship between myth and history and explore the historical background established by the myth. In this way, this research examines about how did *vathanamaar* group immigrate towards Eastern part of Sri Lanka, what are the socio – Politics reasons for living there? And also how did they establish and popularized as the religious group in the society.

In this type of view, this research is approached and initiated to find out some research conclusions. Historical and social approaches are used as the methodology in this research.

The *Vathanamaar* ritual Songs describe the *Vathanamaar* group involved and showed their braveness in their traditional work such as collecting honey and catching cattle and finally they became god *Vathanamaar*.

Ancient Batticaloa people who got involved in traditional work believed that *Vathanamaar* group had divinity. The people may have respected *Vathanamaar* highly after the death. These songs were written to establish the worship system in the society. These songs expressed that the *Vathanamaar* group who came from south India lived as a wandering race and then they lived at *Naathanai* permanently. At the same time, they have become a respectable group with religious rites.

This research tries to find whether immigration of ancient groups from south India to Batticaloa existed. Many myths were created in these songs to make god the group of *Vathanamaar*.

1. *Vathanamaar* and *Manglanaar* who were leaders of the group were born blessed by God: A lady who was in a Brahmin caste prayed to god *Thirumaal* to give her a child and the God *Thirumaal* gave her a lotus flower to her. Due to that she got a baby *Mangalanaar* and then 160 *Vathanamaar* were born from the lotus (*'Vathanamaar theen veddu Kaviyam'*)
2. *Vathanamaar* is the super Hero: They have bravery to fight with the cattle and Elephants and control them. The *Vathanamaar* Songs say that *Kaakka Vathanan* can fly in the sky.
3. Finally, made as a god by *Swathi Amman*: *Vathanamaar* was killed by an Ox (*kdah*) and *Swathi Amman* gave an opportunity to re-live and prosper cattle in the world.

Therefore, these mythical stories, *Vathanamaar* were made the guardian deities in folk worship probably coming from ancestor cults.

Vathanamaar is a guardian deity in folk worship and *Vathanamaar* folk Songs are sung in religious ceremonies. The ideology of Brahmin society is dominated in these songs. There is a myth that *Vathanamaar* were born from Brahmin caste and that they grew up with the Brahmin norms, values and culture. Therefore, as the ideology of Brahmin was dominated in Batticaloa,

Vathanamaar were made as the guardian deities. Also, we can identify about the batticaloa society from this myth.

These songs say that the group of *Vathanamaar* immigrated to Sri Lanka (Eastern Part of the Island) from city of Ayothi in India. The group of *Vathanamaar* lived as a wandering race and they live at *Nathanai* (Vellavelly) at last. Now, the folk worship of *Vathanamaar* is conducted in ‘*Naachiyaar Kallady*’.

‘இன்புற்று ராமே சுரந்தனில் வந்து
செந்தமிழ் சிறந்து வளர் கந்தமா பருவதந்
திருகோண மலை தன்னில் வந்தவதரித்தார்...’

According to the above mentioned Song (*Vathanamaar ur suttu kaaviyam*), they have come to Trincomalee harbor from Rameswaram India. During the Chola era in India, there were most popular harbor in the Eastern Part of the Sri Lanka such as Trincomalee and Kandapaanadura (Kandiah, V.C., 1964:398).

Therefore, their immigration might have tooked place either during the Chola era or after the Chola era. The names of the Villages such as *Naathanai*, *Thirukkivil*, *Maddukkaluppu* and *Thaanthoonrum Appar Nagar* on these Songs help to evaluate the period of *Vathanamaar*. It can be considered that *Vathanamaar* immigrated to Batticaloa where people lived a sustainable life.

Therefore, it can be considered that in the Agricultural Society, people who live in the Eastern part of the Island, praised their guardian deities and composed these ritual Songs to establish this folk worship.

Keywords: *Vathanamaar*, ritual, wandering race, Brahmin norms and guardian deity

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A STUDY OF CHRISTIAN DEVOTIONAL LITERATURE WITH SPECIAL REFERENCE TO *THIRUCHELVAR* EPIC

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Generally, literature has contributed to all religions to spread and extend their religious principles and ideologies into the societies. When Christianity was introduced by the missionaries among the Tamil societies, Christians made concrete contribution to Tamil language and Tamil literature. According to this tradition, Christians who had been born in Europe have adopted to Tamil culture and made major contributions to the development of Tamil literature. Tamil Christians Literature was mainly developed by Christian missionaries who composed several literary works on Christianity such as epics, small prabandas (Sitrilakkiyangal), Purana, Keerththanai etc... several form of poems and other literary works based on ethics, customs and principles of Christian religion. One of the most important Christian epics is the Thiruchelvar epic that was composed by Poolohasingha Mudaliyaar who lived at Tellipalai – Jaffna in the early period of Nineteenth century. He is named Arulappa Naavalr and has composed more literature in Small prabandas such as the Thempaavani Keerththani and Thiruchelvar ammaanai. This Christian devotional epic was adopted in Tamil and the biography of Thiruchelvaraayan states that he was the son of king Abiner in Sindu Naadu in the eighteen century.

This epic is divided into 24 sections called padalam in Tamil. These 24 sections contain approximately 1947 verses of the epic called viruththngal in Tamil. The major objective of this research paper is to examine and evaluate the contribution of the Thiruchelvar epic to the development of Tamil Christian devotional Literature. And also to explore other contributions of this poet is another objective of the paper. Tamil epics such as Periyapuraanam and Kambaraamayanam have been influenced this epic as well as some ideas of Thirukkural too. Many issues and problems in the day to day lives of people have been expressed in this epic and the end of the epic has been composed as a comedy. The poet has contributed in spreading

principles of Christian religion simply through the stories based on Christian culture.

In this paper, historical criticism and approach has been used as the methodology. This approach seeks to understand a literary work by investigating social, cultural and intellectual contexts. The Thiruchelvar epic is used as the primary data and other relevant material and information from printed and electronic devices related to the epic have been used as secondary data.

The key finding shows that the Author mixes several literary devices successfully influenced by classical literature such as Kamparaamaayanam and periyapuraanam. This is particularly evident in his description of some ideology of Tamil literature. Christians adopted Tamil culture and made major contributions to the development of Tamil language and literature. The other finding shows that the history of God Buddha may have been composed as a story of Thiruchelvar in another literature form.

This research focuses on the contribution of Christians scholars in Sri Lankan Tamil literature. These scholars played a crucial role in not only popularizing Tamil literature all over the world but also in opening up new avenues in the literary style. The glory of Tamil language reached greater heights through their efforts in the European era of Tamil literature. In addition, this research expresses that the plot of the western literature was created as the Tamil epic by the author. His work 'Thiruchelvar epic' was a treasure to Tamil literature. The contribution of this author was crucial in bringing about a new style of creativeness in Tamil literature.

I believe that the Author occupies a special place in the development of the Sri Lankan Tamil Literature in the Eighteenth century and he is one of the prominent authors in the Tamil literary world. He has explained the religious principles and ideas of the Christianity through the stories based on the Bible verses in this Epic.

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ROLE OF DIVINE LITERATURE IN THE RITUALS OF EASTERN SRI LANKA: A STUDY ON *MAHAMARI DEVI DIVYA KARANI*

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Eastern Sri Lanka has a unique identity in many spheres of the people and in their life style viz; Performing arts, food habits, language, religious life and the like. Among these religious life is an important aspect as it is followed by all the people in the region. Five decades before, most of the religious (except few) practices based on non-agamic tradition and the priests used to chant psalms (ritual songs). But most of the songs were not in written format and spread orally generation by generation. These songs were about the gods like Shiva, Vishnu, Murugan, Iyanâr, Vairavar, Veerapathirar, Vathanamaar, Nâhathambiran, Kâthavarâyan, and goddesses like Kanngiamman, Mâriyamman, Pechiyamman, Kâli and Draupathuyamman. Even people realized the importance of printing these songs for conservation and preservation but it was not done till 1970's. First and foremost, this effort was carried out by late Mr. S. Kanapthipillai from Addapallam in 1971. He compiled most of these songs and published them.

This study attempts to analyze the status of the songs in relation with current practices. The objective of the study was to focus and interpret the importance of the songs in the Mahamari Devi Divyakarani. In order to achieve the aim of the study, the differences in the psalms of the book and other psalms which are sung in rituals were compared to study the possible psychological implications while chanting the songs and the study also attempts to predict the future of these songs in religious rituals.

As this study focuses on a folk religious texts of Batticaloa and their practices in *non-Agamic* temples, a qualitative research design was employed. Primary data were collected from observation of rituals and in-depth interviews from selected key informants. Also, *Mahamari Devi Divya Karani* was studied as a secondary resource of the study. Few peripheral

readings were also used as secondary data, which were collected and analyzed qualitatively and interpreted.

In the Batticaloa district the goddess temple rituals begin in the month of May and continue until September. There are numerous goddesses worshiped in it viz; Kannaki, Mariyamman, Kaliyamma, Draupathiyamman, Kaderiyamman and the like. Annually, these rituals start with the goddess Kannagi Amman sadanku and ends with goddess Droubathiyamman Sadanku. Each and every ritual differs according to the cultures of each community that lives in Batticaloa. During these ritual periods the psalms are sung for each deity based on their beliefs. Such as Ammanai, kaviyam, Ahaval, Kummi, Thaalaatu and so on. Customs, lifestyles, habits of the people are also the themes of the songs.

In the early period those songs were orally transferred from generation to generation. Sons-in-law of the priests became the future priests as Batticaloa has a matriarchal society. Then, these were written in talipots (*Edu*) as the early period people were not literate like those in the contemporary period. Although they were written in talipot, practically they were sung orally without learning from the *Edu*. This tradition continued until the contemporary period. When research was carried out on these it was revealed that they were practiced and were chanted orally since they did not have literary knowledge. Therefore, it is an appreciable contribution of C. Kanpathypillai who wrote down these psalms. Otherwise they would have vanished and as a consequence we would not be able to study and practice these songs. It was identified that after the publication of this book, most of the rituals are done based on this particular book. The young generation follows the book for chanting these Amman songs.

The people who follow the gods may express their feelings through the psalms on the experience of their day to day life. For example,

“Fried egg for Palliya Pechi
Drumstick curry for Palliya Pechi”

(முட்டைப் பொரியலம்மா பள்ளயப் பேச்சி
முருங்கைக்காய்த் தீயலம்மா பள்ளயப் பேச்சி)

“Palliya Pechi consumes liquor
Gobble white arrack Palliya Pechi”
(குடிப்பாளாம் சாராயம் பள்ளயப் பேச்சி
கொப்பளிப்பாள் வெள்ளரக்கு பள்ளயப் பேச்சி)

The above psalms express the feeling of the people who follow this god. This kind of psalms are the rituals songs which are sung by priests and devotees of Batticaloa in their rituals.

These songs are specially sung during the period of rituals carried out in their special events. People engage in rituals in order solve their critical problems that cannot be found any solutions. Therefore, they engage in rituals.

By listening and singing these psalms they get rid of their mental agony and feel relaxed. Therefore, these psalms bring them a little satisfaction and that is a kind of psychological healing for the suffering people.

But on the other hand modern lifestyle does not allow us to follow all traditional cultural customs. The mentality is that the non-Agamic tradition is irrational and Agamic is the real way of worship. As a result, traditional ritual temples become Agamic worship places. And therefore we could not find ritual tradition in these temples. Even though there have been changes through the ages, folk rituals still remain as the psalms are in written format.

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**DEMOGRAPHIC FACTORS AFFECTING STUDENTS' CHOICE OF
ADVANCED LEVEL SUPPLEMENTARY (PRIVATE) TUITION
CLASSES: EVIDENCE FROM GALLE DISTRICT**

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The quality of education is a factor that has a strong impact on the country's future. Education is a long-term process of socialization of both children and adults. Therefore, not only the world's most developed countries, but also developing countries take special interest in the education sector. In the formal education sector in Sri Lanka, Advanced Level (AL) is the highest General Certificate of Education (GCE) qualification offered by the Department of Examination under the Ministry of Education. Although there is a free education policy in Sri Lanka, the education-related expenditure per household as a percentage of the monthly income of that household is increasing. According to the Household Income and Expenditure Survey Reports, the percentages of expenditure on education were 4.3% in 1995/96, 4.3% in 2002, 4.1% in 2005, 4.4% in 2006/07, 5.6% in 2009/10, and 5.6% in 2012/13. And, a huge portion of this expenditure on education is utilized to cover the students' tuition fees, and many parents tend to target private supplementary tuition classes, which are costly.

The private supplementary tuition classes, which is an unofficial field of education, is called shadow education. However, it is an integral part of the modern education field, and it is also widespread across the world. According to Silva (1991), in Sri Lanka, the proportions receiving tutoring in Years 6 and 11 were 80% and 75% respectively; in Year 13 it was 62% for arts students, 67% for commerce students, and 92% for science students. Empirical evidence points to certain demographic factors that influence consumer behavior. Since students can be recognized as the consumers in the tuition industry, their choice of tuition classes may be influenced by demographic factors. Therefore, this study focused on the influence of

demographic factors on students' choice of AL supplementary (private) tuition classes.

This study was performed with a quantitative approach. A sample survey was conducted to gather primary data. Students who were receiving private tutoring for the AL examination in the streams of Science, Commerce, Arts, and Technology in the Galle district were considered as the target population. A sample of size of 250 was selected using stratified random sampling in proportion to the number of students for each stream. A structured questionnaire was used to collect primary data. The level of the students' choice of AL supplementary (private) tuition classes was measured as a multidimensional variable through five dimensions—interest, pleasure, sign value, risk importance, and risk probability—using Likert scale statements.

Gender, the AL stream, Ordinary Level results, settlement, family income, parents' education level and their occupation, type of school were considered as the demographic factors. Descriptive statistical measures and appropriate data presenting tools were used to describe and present the data. Cronbach alpha, *KMO*, and Bartlett's tests were used to test the reliability and validity of the data. In order to identify the influence of the demographic factors on students' choice of AL private tuition classes, two Independent sample *t*-tests and Analysis of Variance (ANOVA) were used.

Among the surveyed students, 42% were from the Commerce stream, 29% from the Science stream, 19% from the Arts stream, and 10% from the Technology stream. The gender composition consisted of 57% female and 43% male. 41% of the students were from urban areas, 33% from semi-urban areas, and 26% from rural areas. The family income of most of the students was Rs. 30 000 - 40 000. In the case of a majority of the students, their fathers had O/L and their mothers had A/L as their highest educational qualifications. The occupations of the parents were in the areas of self-employment, the government sector, and the private sector. The Cronbach's alpha value (0.929), *KMO* (0.843), and the significance of Bartlett's test satisfied the reliability and validity.

Table 1: T test and ANOVA Results

Demographic Factor	Test Statistic Value	P-Value
Gender	3.519	.001
AL Stream	23.073	.000
OL Results	51.717	.000
Settlement (Location)	4.885	.008
Family Income Level	29.941	.000
Fathers' Education Level	1.187	.315
Mothers' Education Level	6.071	.001
Fathers' Occupation	6.900	.000
Mothers' Occupation	25.175	.000
Type of School	12.840	.000

According to the results of the *t*-test and ANOVA, the influence of demographic factors can be identified. There is a difference between males and females with respect to average students' choice of tuition classes. The A/L stream has an association with the students' choice. At the same time, the students' choice of tuition classes is associated with their OL results. Therefore, it could be concluded that the performance of the students has a direct influence on the choice of tuition classes. The area that the students live in also has an impact on their choice of tuition classes. As far as the parents' education level is concerned, there is no significant impact of the fathers' education level on the students' choice, while the mothers' education level has an impact on the students' choice of tuition classes. Also, with respect to the occupation categories, there is a significant difference between the average of students' choice. The family income level influences the choice of students as well as most of the previous scholars had found. Significantly, the type of school has an impact on the students' choice.

Finally, it can be concluded that Gender, AL Stream, OL Results, Settlement, Income Level, Mother's Education Level, Father's Occupation, Mother's Occupation and Type of School are significantly affect the students. However, the least portion of the AL students in Technology stream might be limited the generalization of findings with them. Education policy makers have to consider the demographic characteristics of the

students since their choice of AL supplementary (private) tuition classes is influenced by demographic factors.

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LEARNING TO LIVE TOGETHER: THE IMPORTANCE OF INTRODUCING COMPARATIVE RELIGION TO SRI LANKAN SCHOOL CURRICULUM

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This paper attempts to address the importance of introducing comparative religion (hereafter CR) to Sri Lankan schools because we are living in the post-war period where we experience the explosive regional tensions of ethnic and religious character in Sri Lanka. All Sri Lankans must remember how the war-caused hardships and devastated the entire country during the last three decades. Therefore, it is high time that the country moved towards reconciliation, which can be considered one of the most difficult challenges that Sri Lanka has ever met. In such a context, it is a timely need to introduce Comparative Religion to Sri Lankan schools as a specific subject. At a time of increasing challenges and threats, such as violence, inequality and division dominated by local tensions, the concept of 'Learning to Live Together' (hereafter LLT) can be practised to seek better answers for them. When individuals become inter-faith and inter-cultural experts at school level, they begin to appreciate diversity in accordance with the values of pluralism and mutual trust as they grow up and become adolescents.

The importance of introducing CR to the Sri Lankan school curriculum is a need indeed in the post-war period. The knowledge of one's own religion alone does not allow one to be open-minded. Therefore, allowing the younger generation to learn the different religions is better than teaching them one religion in school in order to prevent the explosive regional tensions of ethnic and religious character in Sri Lanka, and that can lead towards a peaceful country in the future. At the same time, how to strengthen the concept of LLT? Does traditional Sri Lankan schooling meet the current

goals in education? The research problem of this study is centered around why CR should be introduced to Sri Lankan schools in such a context.

The research methodology utilized in this paper was exploring the teachings relating to the subject area. The study also engaged with other selected secondary texts, monographs and articles with a view to generating pragmatic results while providing greater insights into certain historical aspects of the Sri Lankan education system. Accordingly, the methodology of this study comes under archival research.

Schools should be respected and protected as sanctuaries and zones of peace. Education programmes should be designed to promote the full development of the human personality and strengthen respect for human rights and fundamental freedoms as proclaimed in the Universal Declaration of Human Rights (Article 26). Such programmes should promote understanding, tolerance and friendship among all nations and all ethnic and religious groups; and they should be sensitive to cultural and linguistic identities, be respectful of diversity and reinforce a culture of peace. Education should promote not only skills, such as the prevention and peaceful resolution of conflict, but also social and ethical values.

CR yields a deeper understanding of the fundamental teachings of every religion. But Sri Lankan schools are quite different because many of them have been established based on the ideas of religion and nationality—Sinhala-Buddhist, Hindu-Tamil, Muslim, Christian and so on. These schools have been giving priority to their own religions, and less attention is given to other religions and cultures. This segregation has created many problems. It has been accepted that mixed-gender schools are more productive than uni-gender schools. In the same way, there are also mixed-schools where students belonging to Buddhism, Hinduism, Islam and Christianity coexist. Citizens passed out from such schools show personality qualities that lead to reconciliation. The number of such schools should be increased to reduce ethnic and religious tension. However, now the time has come for us to change this system in which we not only teach one's own religion but also introduce the students to other religions. Though this takes a long time to work, it will give us a number of good results, as it leads to peace and mutual

understanding. As a result, for example, a student who studies in Jaffna or the Eastern part of the country will learn about Buddhism, whereas others will study Hinduism, Christianity and Islam. Therefore, school premises should be open to studying CR. If there is no opportunity for them to study other religions, they would never understand the value of those religions, as a result of which they might not respect those religions. If anybody wants to teach their own religion they can do that in the Sunday school. This can be quite useful to inculcate one's own religious values and values of other religions in the minds of the people. Under the UNESCO theme "education for all" (Jacques Delor's Commission) in 1996, the concept of LLT is one of the four fundamental pillars, which should be upheld in order to nurture ethical values and spirituality in children, teachers and youth leaders. This move is expected to strengthen their identity and critical thinking, ability to make well-grounded decisions, and respect and work with people of other cultures and religions with collective consciousness. Accordingly, the study of CR can be used in order to prevent inequality in the Sri Lankan society and develop mutual respect among members of society who belong to different religions and ethnic groups. Schools are ideal spaces where they can understand each other and care for themselves as one community without subscribing to race- and religion-based concepts. Hence, it is time to include this subject in the school curriculum for the purpose of achieving a better understanding of each other in the near future in Sri Lanka. The emerging global orientation of the study of CR in education will provide a setting for the development of the country where inter-religious and inter-cultural understanding can be fostered in a future Sri Lanka. We believe that education can channel one's temper towards more productive and peaceful goals where everyone lives peacefully without any conflicts.

The introduction of CR can be helpful to reduce tensions caused by ethnic or other divisions, which have contributed to the instability seen in the Sri Lankan society today. Sri Lankan education system has not yet taken an effective step in this regard. The serious divisions within the national population could pose serious threats to peace and social cohesion. The expected goal of such an introduction is to promote school children's ability to form peaceful relationships with peers and community members. This can

also be used to promote mutual respect, tolerance, positive attitudes to diversity in society, gender sensitivity and mutual trust. However, this is a big challenge particularly given the unavailability of resources and well-trained teachers in post-war situations like ours.

Keywords: CRs, Education, LLT, Schools, Sri Lanka

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USING COLOR ‘KASIṆA’ FOR ANGER MANAGEMENT: A STUDY OF THE METHOD IN THE *VISUDDHIMAGGA*

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Kasiṇa is one of the meditation subjects discussed in length in the *Visuddhimagga* under the section of concentration. Among the ten types of *kasiṇa* mentioned in it, four are color *kasiṇa*, namely blue (*nīla*), yellow (*pīṭa*), red (*lohita*), and white (*odāta*).¹⁶⁴ The enumeration is slightly different in the *Suttanta* and *Abhidhamma* texts.¹⁶⁵ Nevertheless, there is no discrepancy regarding these four types of color *kasiṇa*. An interesting point which is often overlooked regarding this is that the author, Venerable Buddhaghosa, said that they are suitable for those who have angry temperament (*cariyā*). This might have important practical value in management of anger.

In the *Visuddhimagga*, meditators are classified into six broad categories based upon six types of temperament for the purpose of assigning suitable meditation subjects.¹⁶⁶ There are altogether eight specific meditation subjects for angry temperament, namely four divine abodes (*brahmavihāra*) and four types of color *kasiṇa*.¹⁶⁷ The purpose of this paper is to highlight the correlation between color *kasiṇa* and anger and also to explain some salient points related to the practice. Venerable Buddhaghosa pointed out that angry temperament develops due to painful experiences and excessive enmity in the past.¹⁶⁸ Although, he means “from the past lives,” there can be no objection in extending it to “the incidents in this life” which can mediate angry temperament.

¹⁶⁴ Ācariya Buddhaghosa, *Visuddhimagga* 1:106. These four colors are incorporated also in the Buddhist flag.

¹⁶⁵ Paravahera Vajirañña Mahāthera, *Buddhist Meditation: In Theory and Practice*, Second (Malaysia: Buddhist Missionary Society, 1975), 109.

¹⁶⁶ Buddhaghosa, *Visuddhimagga* 1:97. For a concise explanation see Bhikkhu Bodhi, ed., *A Comprehensive Manual of Abhidhamma*, Fourth (Kandy: Buddhist Publication Society, 2016), chap. IX:3.

¹⁶⁷ Buddhaghosa, *Visuddhimagga*, 1:110.

¹⁶⁸ Buddhaghosa, 1:99.

As the color *kasina* is not widely practiced nowadays, there is very little literature on this subject. The information is very meagre even in the Pāli literature. The primary source for this research is the *Visuddhimagga* of Venerable Buddhaghosa. The secondary sources used in this research are: *Ten Kasinas* by Pa-auk Sayadaw,¹⁶⁹ *Colour-Kasina Meditation* by Thitapuñño Bhikkhu, and *Buddhist Meditation in Theory and Practice* by Paravahera Vajirañāṇa Mahāthera. The first two works provide information regarding practical aspects. The third is a scholarly work which also consists of comparative study with other schools of Buddhism. However, the correlation between anger and color *kasina* has not been properly studied in these works.

This paper uses mainly the textual method. When deemed necessary, practical and explanatory methods are used. Suitable generalization has also been applied based on the discussion provided in the section of earth (*pathavī*) *kasina* in the *Visuddhimagga*.

The word *kasina* is usually translated as “disc.” Strictly speaking, this is not a suitable translation. Hence, it is left untranslated here. One important reason is that it is not essential for the *kasina* to have a round shape. It may also be square or triangle.¹⁷⁰ Besides, in order to prepare a color *kasina*, natural objects such as flower, cloth, and color-element can be used. For example, blue lotuses can be used to prepare a blue *kasina*. Literally, *kasina* means “entirety” or “whole”, which can be used in a general sense of “all”.¹⁷¹ In the context of meditation, it means the meditation object which should be observed as a whole. For this purpose, it is important that colors should not be mixed while preparing a color *kasina*, and the surface should be made even and smooth.

Furthermore, in the *Visuddhimagga* two types of sign (*nimitta*) in *kasina* meditation are mentioned, namely formed and unformed. What this means is that some meditators have to prepare a *kasina* systematically. But others may obtain the sign by just looking at a flower bush or flowers in a shrine. For

¹⁶⁹ Sayadaw is a Burmese equivalent for ‘honorable teacher’.

¹⁷⁰ Bhikkhu Thitapuñño, “Color Kasina Meditation,” accessed January 20, 2018, <http://www.elixa.com/wp-content/uploads/2016/02/Color-Kasina-Meditation-By-Thitapuñño-Bhikkhu.pdf>.

¹⁷¹ Brahmanimantanika Sutta, *Majjhimanikāya* I, 403. Buddhaghosa, *Visuddhimagga*, 1:145.

example, one may obtain the sign of blue *kasiṇa* by observing blue lotuses. But this can happen in people who have practiced it previously.¹⁷²

As further evidence of unformed sign, Pa-auk Sayadaw says that the color *kasiṇa* can be practiced by using several parts of our own body. For example, the color of blood can be used for red *kasiṇa*.¹⁷³ This method finds support in the *Visuddhimagga*.¹⁷⁴ However, according to Pa-auk Sayadaw, this method can be used only by those who have already attained absorption (*jhāna*).

Having said this, in the case of formed sign, the size of *kasiṇa* appears to be an important factor. In the *Comprehensive Manual of Abhidhamma*, the size of *kasiṇa* is mentioned as thirty centimeters in diameter.¹⁷⁵ Thitipaño, however, recommends nine inch.¹⁷⁶ In any case, this does not seem to imply that the size of the *kasiṇa* has to be delimited. It is said in the *Visuddhimagga* that comparatively smaller *kasiṇa* is suitable for those who have discursive temperament (*vitakka cariyā*).¹⁷⁷ Thus, the size may be adjusted depending upon one's temperament.

Visuddhimagga gives very elaborate guideline on the procedure of practice. Followings are some noteworthy ones. The meditator (*yogi*) should observe the *kasiṇa* with moderately opened eyes and repeat the name of the color in the mind. The *yogi* is supposed to be seated on a chair, which should be one span and four fingers high. The distance from the seat to the *kasiṇa* should be about two and a half hand-span.¹⁷⁸ Most importantly, the *yogi* should not pay attention to the characteristics of color. This is because paying attention to characteristics belongs to insight meditation.¹⁷⁹

Three kinds of “sign” arise in *kasiṇa* meditation, namely preliminary sign (*parikamma nimitta*), learning sign (*uggaha nimitta*), and counterpart sign (*paṭibhāga nimitta*). The first refers to the meditation object that is seen by

¹⁷² Buddhaghosa, *Visuddhimagga*, 1:167.

¹⁷³ Sayadaw Pa-auk, “The Ten Kasinas,” accessed January 20, 2018, <http://www.visuddha-mc.com/vmc%20sg/books%20doc/Pa%20Auk%20Sayadaw%20Books/Ten%20kasinas%20&%20othe rs.pdf>.

¹⁷⁴ Buddhaghosa, *Visuddhimagga*, 1:186.

¹⁷⁵ Bodhi, *A Comprehensive Manual of Abhidhamma*, 332.

¹⁷⁶ Thitipaño, “Color Kasina Meditation.”

¹⁷⁷ Buddhaghosa, *Visuddhimagga*, 1:110.

¹⁷⁸ Buddhaghosa, 1:121.

¹⁷⁹ *Majjhima Nikāya*, 1:222.

the eyes. After some practice, the *yogi* is able to see the exact replica of the *kasiṇa* even with the closed eyes. This is called learning sign, which is a conceptual object born of perception. Its appearance is different for different individuals. After more practice, the sign starts to become pure and translucent. This is called counterpart sign.¹⁸⁰ At this stage, hindrance are suppressed due to the power of concentration.¹⁸¹ One of the hindrances is anger. To be specific, it is the ‘joy’ (*pīti*) which is born of concentration that suppresses anger.¹⁸² Thus, the primary factors that dispel anger are concentration and joy

In conclusion, the practice of color *kasiṇa* meditation can be helpful in anger management. But the exact mechanism through which the colors themselves may help to dispel anger is not clear. The answer can be probably found by doing a systematic study based upon the methods of psychology. One possible reason can be that the agreeable quality of color objects helps in sustaining attention, which is crucial in developing concentration. Another interesting question is; why color such as green is not used? As concentration and joy can be obtained through other meditation subjects also, what does it make the color objects suitable for angry temperament? Discussion into the issue of a particular *kasiṇa* being relevant to anger management and critical observation from psychological point of view is wanted in future research related to this topic.

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¹⁸⁰ Bodhi, *A Comprehensive Manual of Abhidhamma*, 340–41.

¹⁸¹ Buddhaghosa, *Visuddhimagga*, 1:121.

¹⁸² Buddhaghosa, 1:137.

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(Note: References to canonical Pāli texts are from CSCD Chaṭṭhasaṅgāyana edition, Myanmar page, published by Vipassanā Research Institute)

EVOLUTIONARY SENSE OF THE TERM ‘*ṭĪKĀ*’: AN INQUIRY ON SILENT READINGS IN PĀLI EXEGESES

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The term ‘*tīka*’, used to entitle exegetical work of Pali literature, will be discussed in this paper. Literally, the term *ṭīkā*¹⁸³ is defined ‘by means of which the meaning of commentaries is known’. As a light dispels darkness, it can also eliminate all confusions in the field of Pali literature.¹⁸⁴ With the help of the *ṭīkā*, the doctrinal meanings of previous commentaries, which make readers confuse can be perceived properly. However, no definition on the term occurred until the 12th century C.E. Even senior Pali grammarians, Kaccāyana and Moggallāna, did not point out the root $\sqrt{\text{ṭīk}}$ and its derivative forms from the etymological perspective. It was in the early 13th century C.E. the definition of the term *ṭīkā* was given by Pali scholars. But modern study on the term is scant. This paper aims at investigating the detailed elucidation of the term with reference to sub-commentaries and modern scholastic interpretations.

The term *ṭīkā* was introduced by Ācariya Dhammapāla who composed several commentaries and sub-commentaries approximately about the 8th century C.E. Its derivative forms found in the *Udāna-aṭṭhakathā*, the *Anuṭṭikā*, the *Dīghanikāyaṭṭikā* are of ‘*ṭīkāya*’ or ‘*ṭīkāyaṃ*’¹⁸⁵ ‘*ṭīkākārehi*’¹⁸⁶ and ‘*ṭīkākārena*’.¹⁸⁷ In fact, these cross references occurred as the first time throughout the history of the *Pāli* literature. However, Ācariya Dhammapāla was not a pioneer who coined the term *ṭīka*. Actually, the term derived from Sanskrit literature. During the Anuradhapura period, eminent Pali scholars like Ācariya Dhammapāla, adopted and started to use the term *ṭīkā*, due to the influence of Sanskrit literature.

¹⁸³ *Ṭīkāti tikiyati jāṇiyati saṃvaṇṇanāya attho etāyā ti ṭīkā*. (Smith 1928, 326)

¹⁸⁴. (Ariyavaṃsa 1905, 437)

¹⁸⁵ (Woodward 1977, p. 94) (*Dīghanikāyaṭṭikā*, vol-I, p.28)

¹⁸⁶ (*Anuṭṭikā* I, p.185)

¹⁸⁷(*Anuṭṭikā* III. p.43)

During the reign of king Parakkamahāhu I (1153-1186) in Sri Lanka, a number of sub-commentaries (*atthavaṇṇanā* or *ṭīkā*) on commentaries were compiled and re-written by *Kassapamahāthera* and his disciples. They are reported as *ṭīkā*-s in the *Saddhammasaṅgaha*.¹⁸⁸ Most of the works, written in medieval period used the term *ṭīkā* in order to invoke their relevant former sub-commentaries.¹⁸⁹

The *Sanskrit-English Dictionary* etymologically defines the root $\sqrt{\text{ṭīk}}$ of *ṭīkā* as ‘to move’, ‘to trip, jump’ and also ‘to explain, make clear’.¹⁹⁰ The word *ṭīkā* is of feminine gender and a sense of commentary. Other Sanskrit dictionaries elaborate the meaning of *ṭīkā* as a commentary and gloss (Apte); commentary which explains only difficult passages (Macdonell); a commentary, explanation and notes (Vedabase).¹⁹¹ Unlike the Sanskrit dictionary definition, A Dictionary of Pali by Margaret Cone concisely gives the meaning of *ṭīkā* as a sub-commentary (a commentary to a commentary).¹⁹²

Two modern scholars i.e. Lily De Silva, and Somapala Jayawadana, only and solely, defined the root $\sqrt{\text{ṭīk}}$ of *ṭīkā* as ‘to go’ and ‘to explain, make clear’ respectively. Without any expression to the meaning of *ṭīkā*, they have discussed the context of *ṭīkā*s.

After 12th century C.E, the *Saddanīti-dhātumālā*, the *Maṇisāramañjūsā*, the *Dhammapada-mahāṭīkā*, the *Dhātvattha-saṅgaha* and the *Dhātupaccayadīpanī* were prominent books, which gave the distinctive definitions on the term *ṭīkā*. In early 13th century C.E,¹⁹³ the *Saddanītidhātumālā* of Aggavaṃsa rendered the root $\sqrt{\text{ṭīk}}$ as ‘to know’ (*gatyatthā*) as follows: Giving the sense of, “the meaning of the commentary ought to be known by this, so, it is called as *ṭīkā*.”¹⁹⁴ In 1442,¹⁹⁵ the *Maṇisāramañjūsā* by

¹⁸⁸ (B.C. Law, 1999: pp.83-94)

¹⁸⁹ (*Saratthadīpanīṭīkā* I, p. 367)

¹⁹⁰ (Monier-williams 1899-1986, pp.429-430)

¹⁹¹ <http://www.sanskritdictionary.com> accessed on 20 of April .2017.

¹⁹² (Cone 2010, 256)

¹⁹³ (Sīlānandābhivamsa 1977, 21)

¹⁹⁴ *ṭīkāti ṭīkiyati jāniyati saṃvaṇṇanāya attho etāyā ti ṭīkā*. (Smith 1928, 326)

¹⁹⁵ (Mahasirijeya-su 2012, 69)

Ariyavaṃsa extended the analysis of the root of $\sqrt{t}ik$ as follows: ‘the sense is of two definitions that “the meaning of the commentary ought to be known by this, in other words, it, as light destroys darkness, that of confusion, it thus is called $tikā$.”’¹⁹⁶

In 1866, the *Dhammapada-mahāṭikā* by Varasambodhi Mahāthera extensively analyzed the term based on etymology. (1) $\sqrt{t}ika$ ‘to know, to do and to be’ (2) dental $\sqrt{t}ikā$ ‘to cut’ (3) $\sqrt{d}ā$ ‘to give’ (4) $\sqrt{d}hā$ ‘to bring’ (5) $\sqrt{d}hu$ ‘to cut’ and (6) $tikā$ which derives from *tiṇṇa+pūraṇa*.¹⁹⁷ Although he shows six ways of $tikā$ in earnest, only the first etymology corresponds with the previous interpretations of Aggavamsa and Ariyavamsa. In 1889, Visuddhacāra Mahārājaguru presented the roots $\sqrt{t}ik$ and \sqrt{tek} for $tikā$ interpreting as ‘to go’ and giving a verse, “ tik and \sqrt{tek} are ‘to go’¹⁹⁸ and added an extra verse, saying that ‘the meaning of commentary is to be known by this, so it is called $tikā$ ’.¹⁹⁹ As the last reference, the *Dhātupaccaya Dīpanī* by Varasambodhi in 1936 merely maintained the meaning of $\sqrt{t}ik$ as ‘to know’.²⁰⁰

As reflected in the direct readings above, later Pali works have employed the definition of $\sqrt{t}ik$ ‘to know’ showing synonyms of $tikāyati$ such as $jāniyati$, $ñāyati$, $gamayati$, $bujjhiyati$ and $ñāyatīti$. It seems to be based on expression of $ñānagamanaṭṭha$, ‘meaning of going with wisdom’²⁰¹ found in the *Dīghanikāyatthakathāṭikā* by Acariya Dhammapāla. For instance, the word *Tathāgata* can be divided into two parts, *tathā* and *gata*. Acariya Dhammapāla defined suffix *gata* to be the sense of going by wisdom. Accordingly, the compound *tathāgata* contains the meaning of awakening to the real and the most fundamental fact²⁰² as the root ‘ \sqrt{gam} ’ “go” has the meaning of understanding.²⁰³

¹⁹⁶ (Ariyavamsa 1905, 437)

¹⁹⁷ (*Dhammapada-mahāṭikā*, 2010, p. 3)

¹⁹⁸ (*Dhātuvatthasaṅgaha*, 2000, p.13)

¹⁹⁹ (*Dhātuvatthasaṅgaha*, 2000, p.122)

²⁰⁰ (Varasambodhi 1935, 124)

²⁰¹ (Silva 1970, 133) 00.

²⁰² Ibid, 48

²⁰³ Ibid, 326

Pali scholars had demonstrated defining ‘to know’ of the root $\sqrt{t}ik$ as substitution of ‘to go’. Thus, the evolutionary sense of $tikā$ comes a as ‘the sub-commentary by which the meaning of the commentary can be known’. Finally, the $tikā$ in Pali literature is an exegetical work that shows the hidden meanings and dispels confusion on commentary in terms of its sense.

THE FUENCTION OF IGNORANCE (*AVIJJĀ*) AS A FETTER (*SAMYOJANA*) AND AS AN UNDERLYING TENDENCY (*ANUSAYA*): A CRITICAL STUDY

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In the Theravada tradition, the four stages, stream entry, once returning, non-returning, and Arahantship have been described as successively higher stages of purity should attain through the eradication of certain specific fetters at each stage out of the total number of ten fetters. But it has been observed that, two lists of ten fetters are presented somewhat differently in the *Sutta* and *Abhidhamma Piṭaka*-s. The standard list found in the *Sutta*-s, is: personality-belief (*sakkāya-diṭṭhi*), doubt (*vicikicchā*), clinging to rules and vows (*sīlabbata-parāmāsa*), sensual desire (*kāma-chanda*), ill-will (*vyāpāda*), desire of form (*rūpa-rāga*), desire of formlessness (*arūpa-rāga*), conceit (*māna*), restlessness (*uddhacca*) and ignorance (*avijjā*).²⁰⁴ In the *Samyojana Sutta* of AN, these ten fetters are divided into two kinds: the five lower fetters (*pañcorambhāgiyāni saṃyojanāni*), and the five higher fetters (*pañcuddhambhāgiyāni saṃyojanāni*).²⁰⁵

Pali Scholar Maurice Walshe in summarizing the Theravada tradition says that one becomes a stream-enterer by abandoning the first three of the five lower fetters, a once-returner by greatly weakening the fourth and fifth lower fetters, a non-returner by completely destroying the fourth and fifth lower fetters, and an Arahant by destroying the five higher fetters.²⁰⁶

In the *Abhidhamma*, e.g., the *Dhammasaṅgaṇi*, another list of ten fetters is recorded, as: sensual desire (*kāma-rāga*), hatred (*paṭigha*), conceit (*māna*), view (*diṭṭhi*), doubt (*vicikicchā*), clinging to rules and vows (*sīlabbata-*

²⁰⁴ AN V 17.

²⁰⁵ *ibid.*

²⁰⁶ Maurice Walshe, "Introduction," in *The Long Discourses of the Buddha: A Translation of the Dīgha Nikāya*, (Boston: Wisdom Publications, 1995), 26-27.

parāmāsa), desire for becoming (*bhava-rāga*), envy (*issā*), selfishness (*macchariya*), and ignorance (*avijjā*).²⁰⁷

In both accounts of ten fetters mentioned above, the fundamental item *avijjā* is placed last. If we look closely at the ten fetters in both accounts, we can say that *avijjā* is eradicated only by an Arahant. But a common-place in the Buddha's teachings is that the root cause of all craving and consequent suffering is ignorance: "Whatever unwholesome things are there, they are all due to ignorance" (*ye keci akusala dhammā sabbe te avijjāmūlakā*).²⁰⁸ In the *Vibhaṅga Sutta*, *avijjā* is defined as not knowing the Four Noble Truths.²⁰⁹ The same is also applicable to not knowing the five aggregates in the *Avijjā Sutta*.²¹⁰

In this paper, I will attempt to show that although *avijjā* is placed last of both lists of ten fetters, one has to eradicate *avijjā* while passing through the stages of stream entry, once returning and non-returning. In this context, *avijjā* should be more appropriately understood as an underlying tendency (*anusaya*) than as a fetter (*saṃyojana*). This reference could be substantiated with the *Purisagati Sutta* of AN. In this *Sutta*, the Buddha is said to have described a "non-returner" as one who has not yet realized the highest stage of arahantship due to not having cut off three underlying tendencies: becoming (*bhava*), conceit (*māna*) and ignorance (*avijjā*).²¹¹ But the Theravāda tradition says, a non-returner has not yet attained arahantship due to not having cut off five higher fetters: *rūpa-rāga*, *arūpa-rāga*, *māna*, *uddhacca* and *avijjā*.

Clarifying the aforementioned doctrinal setting, I will review the formation of both lists of ten fetters. They could be conceived as subsequently developed in the Pāli Canon. This conclusion could be derived from the observation that in the *Sutta*-s no reference can be found to the effect that the four stages of enlightenment are described entirely in terms of the cutting off of the ten fetters. It was only found in the *Abhidhamma*. In light of this, I

²⁰⁷ The *Dhammasaṅgaṇi*, 197.

²⁰⁸ SN II 263.

²⁰⁹ SN II 4: *yaṃ kho bhikkhave dukkhe aññāṇaṃ, dukkhasamudaye aññāṇaṃ, dukkhanirodhe aññāṇaṃ, dukkhanirodhagāminiyā paṭipadāya aññāṇaṃ, ayaṃ vuccati bhikkhave, avijjā.*

²¹⁰ SN III 162-63.

²¹¹ AN IV 70-71.

will also show the significant differences between the functions of *saṃyojana* and *anusaya* as presented in the *Mahāmālunkya Sutta* of MN.²¹² This study is based on the *Sutta* and *Abhidhamma Piṭaka*-s and their Commentaries.

Abbreviations:

MN *Majjhima Nikāya*
SN *Saṃyutta Nikāya*
AN *Aṅguttara Nikāya*
PTS Pali Text Society

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²¹² MN I 432-37.

UNDERSTANDING MAJJHA (MIDDLE) IN THE MAJJHE - SUTTA OF THE AṄGUTTARA NIKĀYA TO AVOID THE EXTREMES

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Buddhism discusses the concept of ‘Middle’ in two ways as the philosophical theory and its practice leading to *nibbāna*. The *Sutta*-s in the *Nidānavagga* of the *Samyuttanikāya* provide sufficient proof in relation to the first aspect i.e. the doctrine of causality that is the central tenet in Buddhism. The *Dhammacakkappavattanasutta* expounds the Noble eightfold path that leads to *nibbāna* as the “Middle” or Middle way. That is practical aspect of the teaching. However, the *Majjhesisutta* of *Aṅguttaranikāya* explains another very important aspect of the concept of ‘Middle’. According to the *sutta*, mindfulness of ‘Middle’ is vital to realizing the ‘Ends’ that ordinary individuals grasp. Six notable aspects are seen in it for one to cultivate mindfulness.

In considering other contributions to this field by scholars, we come across different books and articles on this topic. Ven. Ñānananda, K.(2009) discusses this *sutta*, in his book series “*Nibbana-The Mind Stilled, and The Law of Dependent Arising*”. In these two series, he elaborates this *sutta* in explaining how craving causes samsaric extension. Ven. Nanda, Akiriyagala. (2010) discusses this *sutta* in his Sinhala article ‘*MulBudusamaye dekvena madyama pratipadave vividhatā*.’ In these studies, they elaborate the factors in the *sutta* highlighting its relevance for understanding of extremes to realize the ‘Middle’.

This study discusses how to understand mindfully the “Middle” which leads to perceive the true nature of phenomena by distinguishing and abandoning the ‘Ends’.

The study uses qualitative data analysis and both deductive and inductive reasoning. This is primarily a textual study. The *Suttapiṭaka*, commentaries and sub commentaries are used as primary sources. Besides, relevant secondary literature also is used.

The *Majjhесutta* of the *Anguttaranikāya* points out how one should cultivate the mindfulness accurately. Ordinary beings do not have the capability of living in the present moment mindfully. They often associate both Ends either the past or the future. Hence, they cannot understand the real nature of sensory experiences. The *Majjhесutta* mentions six kinds of ‘Ends’, mundane dwelling on and their ‘Middles’ which are unable to perceive. According to *Majjhесutta*, two kinds of ‘End’ and the ‘Middle’ can be pointed out thus;

End	Middle	End
Contact (<i>phasso</i>)	Cessation of contact (<i>phassanirōdha</i>)	Arising of contact (<i>phassasamudaya</i>)
Past (<i>atītaṃ</i>)	Present (<i>paccuppannaṃ</i>)	Future (<i>anāgataṃ</i>)
Pleasant feeling (<i>sukhāvedanā</i>)	neither-painful-nor-pleasant feeling (<i>adukkhamasukhavedanā</i>)	Painful feeling (<i>dukkhāvedanā</i>)
Name (<i>nāma</i>)	consciousness (<i>viññāṇaṃ</i>)	Form (<i>rūpa</i>)
The six internal bases (<i>chaajjhattikaāyatana</i>)	Consciousness (<i>viññāṇaṃ</i>)	the six external bases (<i>bāhirāniāyatanāni</i>)
Personal existence (<i>sakkāya</i>)	the cessation of personal existence (<i>sakkāyanirodha</i>)	the origin of personal existence (<i>sakkāyasamudaya</i>) ²¹³

²¹³*Majjhесutta*, NDB: The Numerical Discourses of the Buddha. 2012. pp.950-952

(1 & 2) According to the *Salāyatanavibhaṅgasutta*, there are six kinds of contact. The sensory process propels towards conceptual proliferation with arising of contacts. One who penetrates the cessation of contact mindfully knows the causal genesis of the sensory process. Therefore, he does not abide in contact and its arising. Thereby, he does not become the victim of his sensory process. This fact is easily understandable with the second point i.e. the past, the present and the future. One who lives with the penetrative understanding about the present moment does not conjoin the past and the future with craving. The fact is explained in the *Bhaddekarattasutta*.²¹⁴

(3) One who lives with neither-painful-nor-pleasant feeling does not grasp pleasant feeling and unpleasant feeling tightly. In this context, neither-painful-nor-pleasant means equanimity based on renunciation. This equanimity arises by knowing impermanence, change, fading away, and cessation of sense bases. Hence, this equanimity transcends the sense bases (*Salāyatanavibhaṅga-sutta*, MLDB. 1995. p.1070). Thus, he does not abide in pleasant feeling and unpleasant feeling. This fact is explained clearly in the *Chaphassāyatanasutta*.²¹⁵

(4) Name and form manifest with the help of consciousness. One who has penetrative knowledge in regard to causal nature on psycho-physical (*nāmarūpa*) existence and consciousness, does not grasp name (*nāma*) and form (*rūpa*) as isolated elements. The *Sabhiyasutta* of the *Suttanipāṭa* emphasizes the necessity of understanding the nature of 'name and form' or psycho-physical (*nāmarūpa*) existence.²¹⁶

(5) In order to manifest what is called contact, the sense base, sense objects and corresponding consciousness should work together. One who does not have penetrative knowledge and wisdom with regard to the function of consciousness which exists in the 'Middle' in this process grasps internal sense bases or external sense objects or both internal sense bases and external sense objects with craving and attach to it. This fact is explained in the *Abhinandanasutta*²¹⁷ and *Dutiyaabhinandanasutta*.²¹⁸

²¹⁴BhaddekarattaSutta, MLDB: Middle Length Discourses of the Buddha. 1995. p.1039

²¹⁵CDB: The Connected Discourses of the Buddha. 2000. p.1174

²¹⁶Sabhiya Sutta, Sutta Nipāṭa translated by Jayawicrama N. A. 2001. p. 206

²¹⁷CDB. 2000. p.1139

(6) Finally, one who contemplates the cessation of personal existence sees the true reality of personal existence; five grasping groups (*pañcupādanakkhanda*) and its origin (*Cullavedalla-sutta*, MA, I, BJTS. p.702). Therefore, he does not associate both Ends.

Thus, when these factors are considered, we can understand that this *sutta* very clearly highlights the “Middle”. One who cultivates the penetrative knowledge and wisdom through the development of mindfulness can perceive the “Middle” while avoiding the ‘Ends’ to which leads to the realization of real nature of existence and cessation of all defilements and attainment of full bliss of *Nibbāna* in this very life.

Key words: Middle, Mindfulness, Contact

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²¹⁸*Dutiya Abhinandana Sutta*, S, IV, BJTS. 2005. p. 26

AN ANALYTICAL INTERPRETATION OF CRAVING FOR NON-EXISTENCE (*VIBHAVA-TAṆHĀ*)

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Despite the inclusive understanding of craving for non-existence (*vibhava-taṇhā*) as the desire for complete annihilation at death (*uccheda-vāda*), it is plausible to interpret it in practical dimension: a drive to eradicate unpleasant situations etc. Craving for non-existence is a kind of cravings (*taṇhā*) which causes suffering. The threefold craving (*taṇhā*) is: craving for sensual pleasure (*kāma-taṇhā*), craving for existence (*bhava-taṇhā*) and craving for non-existence (*vibhava-taṇhā*) (S V, 426). *Vibhava* is derived from the Pali prefix ‘vi’ which indicates negation and the root ‘bhū,’ which means existence. Most of writings on craving for non-existence are interpreted as craving for annihilation at death. Therefore, it seems to call for an analytical investigation of craving for non-existence.

The objectives of this paper is to show how could be comprehensively understood the concept of *vibhava-taṇhā* from not only doctrinal understanding but also practical dimension. Moreover, the causes and eradication of *vibhava-taṇhā* will be analysed. In order to achieve these aims, I shall analyse the problem using sources from the *Suttapiṭaka* and its relevant sources from commentaries.

Vibhava-taṇhā is the third categorization of craving which occurs with the association of craving for annihilationism (*uccheda-vāda*), is a kind of wrong-view (*diṭṭhi*) as stated in the *Brahmājāla Sutta*. *Vibhava* has the contextual meanings of unfortunate (*vipatti*), failure (*hāni*), annihilation (*ucchedo*), evil (*pāpa*), non-existence (*abhavo*), and cessation (*nirodha*) Sn-a, I, 19).

The Commentary to the *Saṅgīti Sutta* has defined that, attachment and passionate *citta* accompanied by the notion of annihilationism is called *vibhava-taṇhā* (D-a III, 988). Moreover, according to the commentary of *Sammādiṭṭhi Sutta*, when it occurs by finding gratification in visible form,

thinking "form is annihilated, destroyed, and does not exist after death," through its nature as lust accompanied by the annihilationist view, then it is craving for non-being (M-a I, 219). Similarly, craving for non-existence arises on the grounds of remaining four aggregates as well.

However, when other heretics have accused to the Buddha with the abovementioned terms, the Buddha interpreted annihilationism (*ucchedavādo*) and the notion of non-action (*akiriyavādo*) from completely different perspectives in accordance with his teaching: The annihilationism and the notion of non-action are not committing any unwholesome bodily conduct, verbal conduct and mental conduct (A IV, 175).

Craving associated with annihilation view is related with the notion of nihilistic view (*natthikadiṭṭhi*) which rejects both *kamma* and its result (M-a IV, 122). However, annihilation-view (*uccheda-diṭṭhi*) is the belief in existence of an ego-entity as being more or less identical with those physical and mental processes, and which therefore, at the dissolution at death, will come to be annihilated. (Nyanatiloka, 2011, 61). It is a result of *vibhava-taṇhā*.

Craving for non-existence arises due to having the notion of self and self-related aggregates are identical. Consequently, they conclude 'This self is going to end after death.' The *Alagaddūpama Sutta* states the grounds of arising wrong-view: One who is not well-versed in Dhamma — assumes about form, feeling, perception, volitional formation and consciousness: 'This is me, this is my self, this is what I am' (M I, 135-136). Hence, due to improper attention (*ayonisomanasikaro*), arising of *vibhava-taṇhā* happens.

From the etymological perspective of *vibhava*, wishing to change an undesirable pain with a desirable one is also regarded as craving for non-existence. Thus, Harvey interprets *vibhava-taṇhā* as the drive to eradicate unpleasant situations, things and people. In a strong form, it may lead to the impulse for suicide, in the hope of annihilation (Harvey 2013, 63). However, from Buddhist doctrinal explanation, if one craves for non-existence then he will happily commit evil without any consideration of *kamma* and its result.

Avoiding these two extremes of existence and non-existence, the *Tathāgata* teaches the *Dhamma* through the middle way (S II, 18). Dependent arising is also regarded as Middle Path that every phenomenon occurs due to necessary conditions. As the abridged popular quotation on dependent arising runs as 'due to this that arises, due to the arising of this, that arises' (M I, 263).

To eradicate the craving for non-existence, voices of others (*parato ca ghosa*) and proper attention (*yoniso ca manasikaro*) are essential to gain right understanding on the nature of mind and body. Then, one has to practise the bare attention (*sati*) for the complete eradication of *vibhava-taṇhā* gradually.

Only when craving for non-existence is eradicated will it be possible to attain the stream entry (*sotāpanna*) since craving for non-existence is a kind of wrong-view (*diṭṭhi*). The *Cūḷagopālaka Sutta* states stream entry (*sotāpanna*) abandoned three fetters (M I, 226), namely personality-view (*sakkāyadiṭṭhi*), doubt (*vicikicchā*), and rites and rituals (*sīlabbataparamāso*). A noble disciple through disenchanted with form, feeling, perception, volitional formation and consciousness he becomes dispassionate. Through dispassion, he is fully released. With full release, there is the knowledge, 'fully released.' He discerns that 'Birth is ended, the holy life fulfilled, the task done. There is nothing further for this world (M I, 39).

Having understood the concept, practical understanding and the eradication of *vibhava-taṇhā*, one will be able to understand through middle path as they occur according to causes and conditions.

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FOUR SUBLIME STATES; BASIC PRINCIPLES OF EFFECTIVE APPROACHES TO CONFLICT RESOLUTION IN AN INTERCULTURAL SOCIETY

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Social conflicts among communities do lead to social frustration and disharmony resulting in social degeneration. The people who are socialized in deferent cultures adhere to various types of ideologies, customs, norms, traditions and beliefs leading to asymmetrical behaviors within the social context. The emergence of conflicts in such societies is not surprising. The concept of intercultural society is rather beneficial than any other for promoting the interactive communication and resolving the social conflicts in considering the mindsets and perspectives of people. The approaches on conflict resolution in intercultural society are the most important facts, which draw little attention most of the time due to individualistic and collectivistic perspectives. As results of poor approaches of solving conflicts among the communities, although well recommended methodologies are used in the process, the increase of frustration, disharmony and disagreements with undesirable consequences can be recognized in modern societies. The teaching of the Buddha can be considered to play a significant role in resolving social conflicts and several concepts in the teaching can appropriately be applied in conflict resolutions. As an approach of resolving social conflict, the Buddhist concept of four sublime states can effectively be used as effective means for conflict resolution in intercultural society.

The data for the study is collected based on qualitative methodology and hypothesis on the experience of social conflicts in the country. Primary and secondary sources on Buddhist teachings relevant to the four sublime states and other monographs in both religious and non-religious fields relevant to the discussion are used in this investigation. The concept of four sublime states the principle approach to be used in conflict resolution is examined here with reference to the teaching of the Buddha.

The foundation which affects the entire success or failure of resolving conflicts would be the behavior, actions and attitudes that proceed from the thoughts and insight intentions of individuals. The practicability of modern theories of conflict resolution such as Modern Need Theory, Principled Negotiation Theory, Community Relation Theory, Identity Theory, Communication Theory, Conflict Transformation Theory etc. will be examined in relation to Buddhist teaching.

The concept of four sublime states (*Mettā, Karunā, Muditā Upekkhā*) concerns the development of personal attitudes and behaviors of a benevolent nature towards others. The benevolent nature which developed through four sublime states can productively be applied to resolve conflicts in intercultural societies.

Loving-kindness (*Mettā*) is defined in Visuddhimagga as “loving-kindness is characterized here as promoting the welfare of others. Its function is to promote welfare. It is manifested as the removal of annoyance. Its proximate cause is seeing loveableness in beings. It succeeds when it makes ill will subside, and it fails when it produces (selfish) affection.”²¹⁹ The definition given in the teaching explains clearly how individual purpose or intention should be focused in dealing with the public communication. The *Mettasutta* says “Let no one work another one's undoing or even slight him at all anywhere: And never let them wish each other ill through provocation or resentful thought”²²⁰ The Loving-kindness helps to develop a wholesome personal attitude towards others without exposing limitations and discriminations. The Buddha preached “When anger spreads, when a man becomes angry, he has no shame, no fear of evil, is not respectful in speech”²²¹. *Cūḷagosiṅgasutta* says that wholesome attitudes should be developed in private and public manner “I maintain bodily acts, verbal acts and mental acts of loving-kindness towards those both openly and

²¹⁹ Visuddhimagga, p.311

²²⁰ KN Snp, MettaSutta - “*na paro paraṃ nikubbetha, nātimaññetha katthaci na kañci; byārosanā patighasañña, nāññamaññassa duk-kha-miccheyya.*”

²²¹ AN 7, Kodhanasutta - “*Nāssa hirī na ottappaṃ, na vāco hoti gāravo; Kodhena abhibhūtaṃ, na dīpaṃ hoti kiñcanaṃ.*”

privately”²²². The attitudes that developed through loving-kindness in both ways; inner development and social benevolence are absolutely supportive to obtain effective resolution of conflicts in intercultural context.

The second aspect of Four Sublime States is compassion (*Karunā*). In *Visuddhimagga*, it is defined as “Compassion is characterized as promoting the aspect of allaying suffering. Its function resides in not bearing others’ suffering. It is manifested as no cruelty. Its proximate cause is to see helplessness in those overwhelmed by suffering. It succeeds when it makes cruelty subside and it fails when it produces sorrow”²²³. It involves an attitude of helping others and being sensitive to difficulties that other are experiencing and saving them from all. In conflict resolution in intercultural society, the compassion can be considered as an approach to solve conflicts in comparing with modern theory of situational approach which accomplishes incompatible goals of different communities. The *Vibhanga* explains “Everywhere, identifying himself with all, the world of all (beings)”²²⁴. The proper understanding of situations of conflict without being partial and focusing on bringing benefit to all is necessary to deal with conflicts with compassion. The supportive intention and practical involvement helping each to resolve the matters in own and opposite parties without discrimination can be considered as a wholesome mentality. *Nissāraṇīyasutta* explains, “When compassion has been developed, pursued, handed the reins and taken as a basis, given grounding, steadied, consolidated, and well-undertaken as awareness, release, viciousness would still keep overpowering the mind. That possibility doesn’t exist, for this is the escape from viciousness: compassion as an awareness-release”²²⁵. The quality of compassion (*Karunā*) is such mental ability which needs to be developed in dealing with conflicts in various social situations.

²²² MN 31 – “imesu āyasmantesu mettaṃ kāyakammaṃ paccupaṭṭhitaṃ āvi ceva raho ca; mettaṃ vacīkammaṃ paccupaṭṭhitaṃ āvi ceva raho ca; mettaṃ manokammaṃ paccupaṭṭhitaṃ āvi ceva raho ca.”

²²³ Visuddhimagga, p.312

²²⁴ Vb - “Sabbadhi sabbattatāya sabbāvantam lokan” ti sabbena sabbam sabbathā sabbam asesam nissesam. - “Pariyā-dāya-vacana-metam— “sabbadhi sabbattatāya sabbāvantam lokan” ti.

²²⁵ AN 6 - Aṭṭhānametaṃ, āvuso, anavakāso yaṃ karuṇāya cetovimuttiyā bhāvitāya bahulikatāya yānikatāya vatthukatāya anuṭṭhitāya paricitāya susamāradhāya; atha ca panassa vihesā cittaṃ pariyādāya ṭhassati, netam ṭhānam vijjati. -Nissa-ra-ṇaṇ-hetaṃ, āvuso, vihesāya yadidaṃ karuṇā-ceto-vimutti’ti.”

The *Visuddhimagga* has defined *Muditā* as follows “Gladness is characterized as produced by others’ success. Its function resides in being un-envious. It is manifested as the elimination of aversion (boredom). Its proximate cause is seeing beings, success. It succeeds when it makes aversion (boredom) subside, and it fails when it produces merriment”²²⁶. The appropriateness of self-interest “*Muditā*” in conflict resolution in intercultural society is to tolerate and appreciate the others’ advantages and development. The quality of pure joy (*Muditā*) as basic principle in resolving conflicts is effectively supportive to be satisfied with social and cultural differentiations in all communities. The approach based on *Muditā* is a kind of a way to make all individuals to be satisfied and to gain the development that each achieves do not cause frustration in others.

The fourth quality of four sublime states is equanimity (*Upekkhā*) which means according to *Vibhanga* “That which in beings is equanimity, act of equanimity, state of equanimity, equanimity that is mental freedom (from distraction). This is called equanimity.”²²⁷ It intends to establish perfect, unshakable balance of mind looking at our own heart and the world. It is a capacity of mind to accommodate everything without being frustrated and unsatisfied. The quality of equanimity is significant as a principle of approach for conflict resolution in intercultural society. The approach that pertains the mental freedom from frustration provides balanced conclusion in conflictive situations and resolution of conflicts in intercultural society. For the purpose of reconciliation, each ones need to sacrifice part of one’s values, the idea of supremacy and social norms for the benefits of others. The approach based on the quality of *Upekkhā* sets the mind for endurance of others norms for the avoidance of conflicts.

Four sublime states to conflict resolution are useful in intercultural society and in present situations of courtiers with intercultural conflicts. The approaches which are used for conflict resolution in modern society may become causes for social frustration and disharmony. The Buddhist concept of four sublime states include cardinal qualities and approaches to eliminate

²²⁶ Visuddhimagga, p 312

²²⁷ Vib – “*Yā sattesu upekkhā upekkhāyanā upek-khā-yi-tat-taṃ upekkhā-ceto-vimutti—ayaṃ vuccati “upekkhā”*”

social frustration. The approaches and solutions based on four sublime states are more effective to control frustration and conflictive situations. The concept of sublime states helps to develop the qualities of respecting others, helping others boundlessly, social appreciation and mental and physical. Therefore, four sublime states can doubtlessly be considered as a basic principle of conflict resolution in intercultural societies.

Key words: Intercultural Society, Conflict Resolution, Four Sublime States, Buddhist Teaching

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THE IMPACT OF PARENTAL EMOTION REGULATION AND QUALITY OF PARENT-CHILD ATTACHMENT ON THE ABILITY OF SRI LANKAN ADOLESCENTS TO REGULATE THEIR EMOTIONS

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Emotion regulation (ER) is defined as the internal and external processes involved in initiating, maintaining and modulating the occurrence, intensity and expression of emotions (Thompson 1994, 27). Difficulties in ER has been identified as a common symptom of different psychopathologies, low academic performance, deviant behavior and low self-esteem (Petrides, Frederickson and Furham 2004, 275). In Sri Lanka, previous research has found both a low level of ER skills (Jayasekara et al 2014, 16), a high frequency of self-reported emotional problems among university students (Kathrarachhi 2001, 198) as well as a high prevalence rate of reported emotional abuse during late adolescence: 31.3% male 25.4% female adolescents (Perera, Ostbye, Ariyananda & Lelwala 2009, 13). Lack of maternal attachment has been seen to be a risk factor for emotional abuse among the youth in Sri Lanka (Fernandopulle 2000,).

Parental ER ability has been found to play a major role in the ER ability of the child. One manner in which a child's ER can be enhanced is found to be through the enhancement of a parent's ability to self-regulate (Sanders, 2008; Sanders and Mazzucchelli, 2013). Parent child attachment is another mechanism that aids in overriding developmental psychopathology even with children who have a difficult temperament (Barros, Goes & Pereira 2015, 299).

The type of culture a person belongs to i.e. whether it is independent or interdependent also influences the motivation to regulate emotions. The need for ER is given more emphasis in interdependent cultures like Sri Lanka as

opposed to independent cultures such as Europe. Despite this emphasis, there is also a high prevalence rate of poor life skills such as low self-awareness, an inability to cope with emotions and stress, and a lack of empathy among Sri Lankan youth (UNICEF 2004, 2).

For the Sri Lankan school-going adolescent, the family is a major factor in promoting psychosocial wellbeing. Sixty percent of the adolescents consider their family to be close to them and fifty percent consider their family to be a refuge for their problems (UNICEF 2004, 4). Therefore, family based interventions are more likely to be effective in terms of promoting psychosocial wellbeing of adolescents.

Most previous research conducted related to emotional dimensions in Sri Lanka have largely focused on the topic of emotional abuse (Perera, 2009; Fernandopulle, 2000). Research has also emphasized the need to implement strategies directed at parents to prevent emotional abuse (Fernandopulle 2000). Moreover, most research investigating familial influence on ER has focused on childhood (Morris 2007, 385). Furthermore, the influence of paternal ER has not been explored extensively (Morris 2007, 386). Therefore, this research focused on both parents' influence on the ER of an adolescent sample.

The main objective of the study was to explore the relationship between parental ER, parent-adolescent attachment and an adolescent's ER.

A sample of 233 (Male=144, Female=89) school going adolescents between the age group of 12-14 (Grades 7, 8 & 9) and their parents (Male=136, Female=213) participated in this study. The sample was selected through convenience sampling. The adolescents were accessed from type AB, type C and type 2²²⁸ schools in the Colombo Educational Division. Each adolescent had at least one parent responding to the parental ER questionnaire. The parents were accessed during the parent-teacher meetings. Parental consent

²²⁸ Type AB-Science A/L only with non-Science A/L, Type C-Non-Science A/L only, Type 2-Year 1-11 classes only

was gained and the parents were also asked to fill in the questionnaire measuring their ER abilities. After the parents returned their questionnaires to the class teacher, the students were accessed on a separate day to fill out their set of questionnaires. The parent-child pair was identified and matched through the use of a coding system to ensure anonymity.

The Difficulties in Emotion Regulation Scale (DERS) (Gratz, 2004) and the *Inventory of Parent and Peer Attachment-Revised-Parent Subscale* (IPPA-R) (Gullone, 2005) were used for the study. The content and consensual validity of both scales to the Sri Lankan context were ensured prior to administration. Correlational and regression analysis were the main analysis techniques.

The first hypothesis of this study was found to be true as there was a positive relationship between parental ER and adolescent ER (Mother: *pearson r* (208) =.305, Father: *pearson r* (122) =.377). This finding was concordant with previous research findings (Eisenberg&Morris, 2002). However, contrary to previous research that found mothers' ER ability to have a higher impact on adolescents' ER ability, the present study finds that fathers' ER abilities had a greater impact on the adolescents' ER abilities (Father: $\beta=0.32$, $p<0.01$, Mother: $\beta=0.823$, $p=.526$). This finding was similar to the findings of Zeman and Garber (1996, 960).

The patriarchal nature of the Sri Lankan family could be one reason as to why the father's ER ability had such a significant impact on adolescent ER ability. Moreover, in the present sample, mothers were seen to exhibit significantly higher ER difficulties than fathers ($M=89.19$, $SD=18.08$, r (329) =2.755, $p<0.01$). This could partly be due to the fact that emotional displays are more accepted in a female than a male. Males are expected to suppress their emotions. Hence, potentially, the father playing a larger role as an emotion socialization agent might serve as a protective element promoting ER ability in Sri Lankan adolescents. This has been seen in previous research where if the father has a more stable attachment relationship with offspring, they are in turn more likely to transmit similar attachment patterns (Cowan and Cowan 2005, 282) towards their fathers. This also emphasizes the need to incorporate paternal ER training when implementing therapeutic interventions for adolescents with ER difficulties. In the current context, it is

the mother who most often brings a child to mental health services. The need to incorporate the father into this process is highlighted through this research.

Adolescents of middle and lower socio-economic status (*SES*) were seen to have more ER difficulties (Middle *SES*: $M=93.12$ $SD=18.12$; Lower *SES*: $M=103$ $SD=10.34$) than adolescents from higher *SES* ($M=86.93$ $SD=19.48$). This emphasizes the need to initiate parent and adolescent based ER interventions in type C and type 2 schools where there is a higher concentration of adolescents of middle and lower *SES*.

Findings from the current study indicated that there was a negative relationship between the quality of parent child attachment and ER difficulties (Mother: *spearman r* (225) = -.220, Father: *spearman r* (219) = -.233). When considering one's attachment to mother and father separately, father's attachment ($\beta=-.277$, $p<0.01$) was seen to be more important in predicting the ER ability in the adolescents than attachment towards mother ($\beta=.059$, $p=.629$). This was in contrast to previous research findings. Therefore, interventions focusing on parent-adolescent attachment enhancement will benefit adolescents at risk of ER difficulties.

In conclusion, external familial factors such as parental ER and the quality of parent child attachment were found to be important influencing factors in the development of adolescent ER. These findings support the need to implement programs that target the enhancement of parental ER and the quality of parent-child attachment with a special focus on fathers as a method of improving adolescents' ER ability.

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**VICTIMIZATION FACTORS OF FEMALE JUVENILE
DELINQUENTS IN SRI LANKA WITH SPECIAL REFERENCE TO
A CERTIFIED SCHOOL IN RATHMALANA**

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The most controversial types of crime related to children are “Child Abuse” and “Juvenile Delinquency”. “Abuse” is a crime against children, whereas “Delinquency” is a crime committed by children. A juvenile is anyone under the age of 18 who has committed a crime.

Statistics issued by the United Nations (UNO, 2013) indicate that in virtually all parts of the world, with the exception of the United States, rates of juvenile delinquency rose in the 1990s. In Western Europe, one of the few regions for which data are available, arrests of juvenile delinquents and under-age offenders increased by an average of around 50 per cent between the mid-1980s and the late 1990s. In the Sri Lankan context, juvenile delinquency has been recognized as a serious social problem, although the reporting rates were low. Increased rate of juvenile delinquency has become a national concern, and juvenile arrests are on the rise. Attempts to ascertain the status of female delinquency and present a literature review that focuses on definition, etiology, and treatment is difficult. During the 1950s, most of the attention on juvenile delinquency focused on males. Female delinquency was much less common during this era and it primarily involved sexual misconduct (Calhoun, Jurgens, & Chen, 1993).

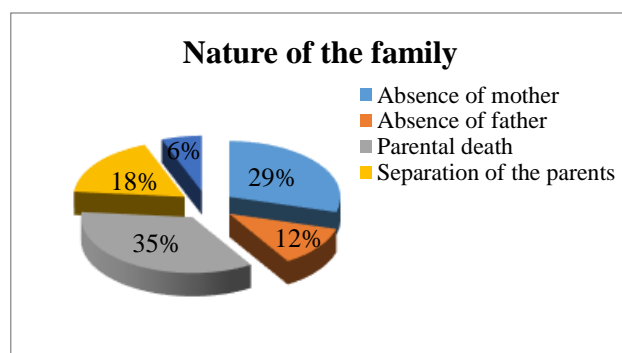
Through the decades there have been many trends in rehabilitation programmes for juvenile delinquents the world over and there continue to be many more new and innovative ways to help halt or reverse the growing problems through juvenile justice systems. Juvenile justice system is a comprehensive term for dealing with children who come into conflict with the law (Griffin, 2010). In Sri Lanka, the rehabilitation of juvenile delinquents on probation or in custodial care is administered by the Department of Probation and Child Care. Juvenile delinquents are being

rehabilitated in four certified schools which are state-run institutions and in an approved school which is a registered voluntary institution run by the Catholic Church with state assistance. Before admission to these schools, delinquent children are placed in remand homes (www.unicef-irc.org/portfolios/documents/440_sri-lanka.htm). They are not detained along with adult offenders. While in care they are enrolled for vocational programmes in the certified schools. The objective of the present study was to explore the victimization factors experienced by juvenile delinquents in certified homes in Sri Lanka and make recommendations for prevention and intervention.

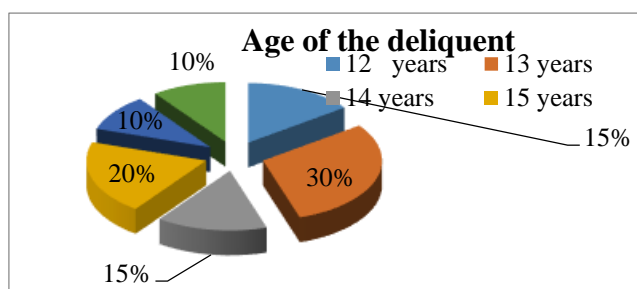
Among certified schools established for the wellbeing of juvenile delinquents, Ranmuthugala Certified School is reserved for girls. There are 8 girls who need guardians and protection; 16 who have experienced abuse and 17 girl delinquents. As the study focused on juvenile delinquency, the participants considered juvenile delinquents (n=17) were interviewed in-depth. The data obtained was tabulated using MS Excel.

The family plays a very important role in developing deviant behavior in children. Primary socialization is mainly influenced by the immediate family. All families have different patterns of interaction between its members. The personality of children is gradually created according to these patterns. 16 delinquents were from broken or disorganized families.

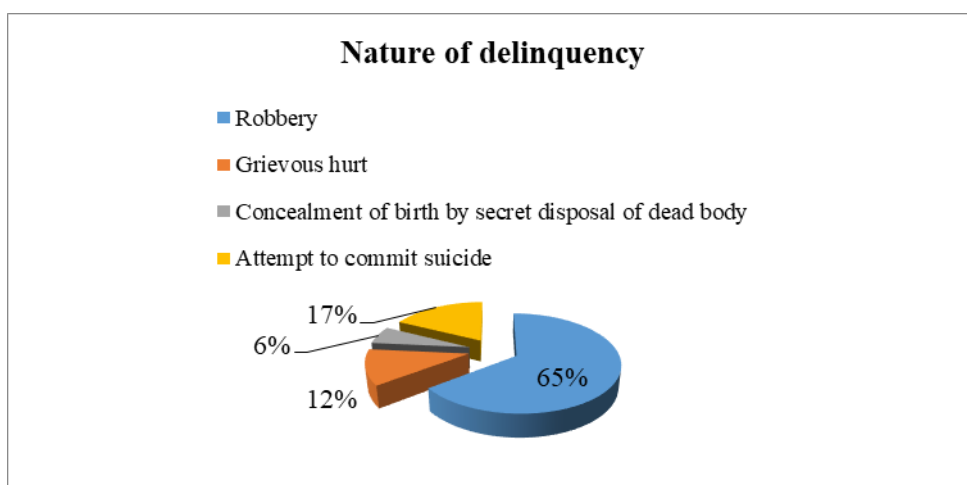
Figure 01



Majority of girl delinquents are 13 years old. As they are released after 3 years and they are not allowed to enter their families after the age of 18. The participants were between the age group of 12 to 17 years.



Theft was the most frequent offence for which girl delinquents were admitted to the certified home. It represents 65% of all offences. Seventeen percent of delinquents were accused of attempting to commit suicide while 12% have gone through grievous hurt. There were two girls who had been convicted for the concealment of birth by secretly disposing the bodies of the babies.



The aim of the present study was to explore the victimization factors of female juvenile delinquency in Sri Lanka. According to the available

literature, there is confusion in Sri Lankan law as to the definition of a child because different laws define the term child differently. This leads to an incompatibility with UN treaties such as the Convention on Child Rights and International Non Treaty Guidelines and Principles. This could be identified as the main problem which affects the entire juvenile justice process in Sri Lanka.

Disorganization of the family is a major factor for juvenile delinquency. Absence of one or both parents and domestic violence could be recognized as the motives. At the same time, the deterioration of primary socialization processes creates delinquents without a sense of norms and values.

“Unawareness” could be recognized as a major victimization factor in the case of many juvenile delinquents. Lack of sexual education is a part of this unawareness. Moreover, lack of social knowledge, which should be acquired through the family, has widely influenced the creation of a delinquent.

Children’s interactions with the community create social norms, values and structural conditions that they utilize for their growth. Delinquent behaviors, like most social behaviors, are learned in the process of social interaction. All robberies done by girls were directly affected by the learning process of peer groups.

Economy plays a vital role as a victimization factor of delinquency. Young girls who are not able to feel satisfied with the facilities provided by their families tend to engage in delinquent activities such as robbery. Furthermore, short term hedonism creates economic imbalances in the family, acting as a push factor for juvenile delinquency. Juvenile delinquency is not inherited. If it is inherited, capital punishment must be the solution. As this issue could be addressed by offering delinquents a learning process, there is no single best recommendation for the control and prevention of juvenile delinquency. The counseling approach could be recognized as a preventive method. It will encourage them to learn correct behaviors by helping them get rid of inappropriate behavioral patterns. Medication, psychotherapy, play therapy and task based approaches can be used effectively.

As the family has a special place in one's life increasing friendly interactions between parents and children is essential for the prevention of juvenile delinquency. While the rehabilitation process takes place in the certified schools, it is better to encourage both the child and the family to maintain good interactions. After the return of the child to the family, it is better to have a post-inquiry process as a controlling technique.

Facilitating vocational training is an appropriate remedy to minimize juvenile delinquency. Delinquents with economic problems will be able to get rid of criminal behavior. Apart from these, awareness programmes could be recognized as a preventive method of juvenile delinquency. Making children of vulnerable age groups aware that juvenile delinquency is a crime and that it is considered inappropriate by society would be one of the most effective approaches to preventing this social problem.

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A DESCRIPTION OF CURRENT TRENDS AND PROFILES OF DRUG USERS IN SRI LANKA

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Drug abuse has become a major problem in Sri Lanka. It leads to many social, health and financial problems in society. Heroin usage became popular in the country in the late 80s and its use was initially confined to Colombo city and few provincial towns. But it was always feared that the consumption of this drug would quickly reach to remote towns and rural areas. According to the world drug report (2017), around 5 percent of the global adult population used drugs at least once in 2015

The Handbook of drug abuse information in Sri Lanka 2017 reported 79,378 drug related arrests in 2016 and the prevalence of drug related arrests was 390 per 100,000 populations. Therefore, it is very important to identify the nature of and the current trends in the profiles of drug users. The changes that have taken place in social, economic and political background of the country directly or indirectly affects the nature of the profile of drug users. There is sufficient literature on the abuse of dangerous drugs in Sri Lanka. However, there have not been enough research articles on the misuse of pharmaceutical drugs and alternative drugs in Sri Lanka. In light of this situation, the main objective of this research was to identify the current trends in the profiles of drug users in Sri Lanka. For policy making and prevention activities in Sri Lanka, it is important to pay attention towards the multiple drug use patterns, drug initiation age and influencing factors drug initiation.

A survey method was used during this study. In addition, structured questionnaires and faced-to-face interviews were used to collect data. Some of the major questions raised from the sample included alternative drugs used by drug users and influencing factors the period of initiation.

The snowballing technique was used to select 1079 drug users from 28 police divisions. The above selection was based on the prevalence of drug related arrests and the percentages of annual treatment received from each police division. Ethical clearance and the approval for the research were obtained by the National Dangerous Drugs Control Board.

Majority of the drug users in Sri Lanka were male. Of the total sample of 1079, 99% of them were males, 40% of the drug users were in the age range of 26-35 and 32% were between 36 and 50 years old. The educational status of the sample showed that 39% (417) had studied up to grade 10, 26% (284) and 10% (101) got through the Ordinary level examination and Advanced Level examinations respectively. However, a person with degree-level or higher educational qualifications and 6 diploma-holders were also identified. The data further highlights that 42% of heroin users and 39% of the cannabis users only have received secondary (up to grade 10) education. 487 (45%) persons of the sample were unmarried and 29 (13%) were divorced. The financial status of the sample indicates that majority, 61% (540) of them, were having a monthly income of Rs. 20,001 -50,000/-.

When considering the factors that caused drug addiction, the respondents chose their answers from the following options: the majority, 55 %, were influenced by peer pressure, 50, % for pleasure, 39% for curiosity, 11% had consumed drugs to overcome troublesome situations and 3% used it for other reasons.

Most of the drug users (61%) initiated drug use when they were between the ages of 12 to 24 years old and 128 (13%) of them started when they were 14 years old or below. Of the sample of 455, (42%) used heroin and out of them 38% were administered heroin by the Chinese method (Chasing the dragon) The data further indicate that of those who were administered heroin under the Chinese method, 377 (95%) used heroin daily and 118 (31%) consumed it three times per day.

711 (60%) used cannabis and 409 of them were daily users, whereas 193 used it weekly and 54 of them used it randomly. Of the daily cannabis users, 120 (29%) persons used it once a day, 95 (23%) twice a day and 55 (13%) three times per day. Most of the cannabis and heroin users have used

cigarettes and arracks or legal alcohol initially before consuming illegal drugs.

Of the total heroin users, 6% followed the injection method to administrate the drug in addition to the Chinese method. Morphine sulfate was also injected when drug availability was less. Other than cannabis and heroin, as an alternative to illicit drugs, 7% (72) of the drug addicts misused medically prescribed tablets and majority of them used one or more tablets and 16 of them used these tablets daily. The tablets used are shown in Table 1 which shows that pseudophedrine (50), tramadol (39), morphine (36) and diazepam (31) were the mostly misused tablets.

Table 1. Types of Tablets Used

Name of the tablet	No of persons used	%
Pseudoephedrine	50	4.6
Tramadol	39	3.6
Morphine	36	3.3
Diazepam	31	2.9
Rexulti	11	1.0
Rohypnol	5	0.5
Pregabalin	3	0.3
Artane	2	0.2

Majority of the illicit drug addicts had a lower educational background. There is a lower probability of illicit drug addiction among those with a higher educational background. Cannabis can be named as the most prevalent illegal drug in the country. Further, it can be concluded that majority of the drug users were multiple drug users and that teenagers are the drug victims of the country. Drug injection increases the possibility of contracting diseases like HIV, Hepatitis C and B among the drug users as well as non drug users especially when injectors share their injecting equipment. As a significant number of legal tablet users are present in the

country, laws and regulations governing the distribution of pharmaceutical drugs should be strengthened and society, as a whole, should take responsibility for the consumption of drugs by some of its members. Campaigns about the harmfulness and side effects of drugs and drug administrative methods and rehabilitation programmes for those who are addicted to drugs should be conducted.

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A ROAD LEAST TRAVELLED: A FOUR QUADRENT MODEL TO PREVENT AND MINIMIZE RAGGING IN THE FACULTY OF ARTS, UNIVERSITY OF PERADENIYA

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Ragging in Sri Lankan universities can be described as a set of organized acts of violence which may include forms of physical, sexual and psychological abuse deeply embedded in their sub-culture (Gamage, 2017). This may create several negative repercussions affecting physical and mental health of its victims.

Even though the University Grants Commission and administrative bodies of the Sri Lankan universities have taken varied measures to prevent/ minimize ragging, no tangible solutions have emerged to eradicate ragging from Sri Lankan universities.

The present study was exploratory in nature and was based on meetings and dialogues held with varied stakeholders pertaining to ragging over several years. The recommendations are also based on the author's experience in working with students who have been affected by ragging as well as her experience in working as a Senior/ Volunteer Student Counsellor.

Tool - The present study outlines an expanded conceptual framework using a four quadrant model in which 16 recommendations are presented in two continuums (1. Long Term Vs Short Term; 2. Soft measures Vs. Hard measures). The model utilizes broad parameters, allowing the author to accommodate and incorporate a wide range of variables.

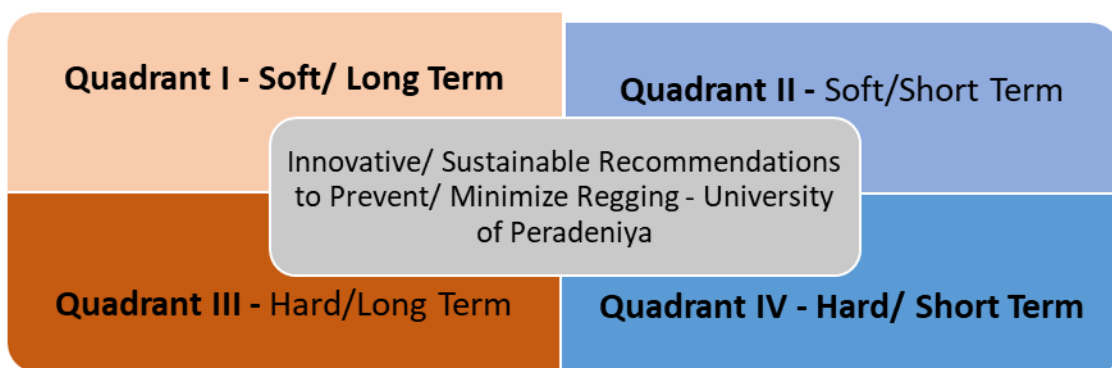


Figure 01: Four –Quadrant Model of Recommendations

Quadrant I – Long term/ software

R-1: Recruit trained student counsellors (SCs) to man the university counselling center when first year students enrol for the Faculty of Arts, with a counsellor student ratio being 1:150 for the first year students (n = 5/6).

R-2: Instate a 24-hour hotline for the students to convey the issues, initially during the orientation period and then to be considered for continuation. It is envisaged that the freshmen may experience myriad of issues including daily hassles and major stressors.

R-3: Develop resources in paper/digital formats (e.g. e-posters, e flyers, booklets, posters) to students/staff and ensure their availability as measures to prevent/ minimize ragging.

R-4: Provide training in basic listening skills (6 hrs) and Mental Health First Aid (6 hrs) for all staff (Academic/Administrative).

R-5: Develop and ensure the implementation of a uniform rag intervention protocol (e.g. where to report, what to do...) if ragging is observed by the staff and the administration. It is argued that, staff members, especially temporary and probationary staff members may not be aware of adhering measures when confronted with incidents of ragging.

Quadrant II – Short term interventions/ software

R-06: Develop and conduct a training program on Violence Prevention for all students prioritizing second years; and explore the possibility of offering it as a certificate/credited (n = 1C)/non-credit, free of charge program. Recommended topics to be included: basic listening skills, conflict resolution, assertiveness, and NVQ

R-07: Increase student involvement to prevent ragging by introducing buddy programs with third/ fourth years acting buddies for the freshers; as second years are considered to be actively involved in ragging and are usually restricted to enter the university during the orientation period. The study also recommends that their services to be recognized by provision of a certificate upon its successful completion.

R-08: Ensure 100% first/second year student engagement during the first semester with back to back classes, filling the emergency staff absence/late comings with alternative programs. Strict adherence to assignment completion deadlines as well as industry based training offered to second years during the first semester is also suggested.

R-09: Develop awareness programs for ‘semios’ (students who have been ragged in their first year but opt not to rag the first years) and non –raggers (students who have never been ragged and want to take proactive action against ragging) to initiate assertive initiatives against violence.

Quadrant III – Long Term Interventions/ Hardware

R-10: Canteens to be built with glass walls, middle/side walk pathways to promote visibility/vigilance with staff eating spaces to be located in the center; separated by glass walls from students’.

R-11: Build more canteens near places like the KB, Dept. of Education, New Arts to increase the visibility/spontaneous policing.

R-12: Student counselling center eventually to be built next to the Health Centre to prevent stigmatization/confrontations, with individual/group-counselling rooms, and a waiting/ rest rooms.

Quadrant IV – Short Term Interventions/ Hardware

R-13: Replace long wooden benches with small cement/ wooden single seater benches and create outside students eating spaces (especially on near the KB where most of the Social Science lectures take place) for visibility/vigilance.

Ragging takes place in student canteens during lunch hours/ after lectures. At present, the student canteens have long wooden tables and benches for seating, cluttered together due to space constraints. During the orientation period, the first years are ordered to sit in the middle of these benches while

the ragger seniors seat themselves on either side of the benches, at times dressed as freshers. Thus, when SSC's come for policing it is impossible for them to walk between the benches and spot the incident of ragging.

R-14: Place staff tables within the student eating spaces. At present the eating space reserved for academic staff members are separated by walls from the students' in both Gemba and WUS canteens. This prevents academic staff from spontaneous spotting of rag incidents; limiting the rag monitoring to deliberate policing by the SCs during lunch hours and after lectures. However, the sophisticated interventions used by the raggers (e.g. informing the arrival of the staff via sms, placing seniors on either side of the bench) decreases the effectiveness of such interventions.

R-15: Offer better incentives at the canteen to the academic staff, especially during the student orientation (e.g. quality food, free food/beverage items, no queue policy) to promote inadvertent and spontaneous policing. The study recommends against the present practice of deliberate policing of SCs due to the strain it creates on students.

R-16: Relocate the student counselling center in the health center with immediate effect as the present location limits its access to first years and anti-raggers due to its proximity to the locations (i.e. WUS canteen/ union room) where ragging frequently takes place.

This study provides a conceptual framework using a four quadrant model recommendations to prevent/ minimize ragging in the University of Peradeniya, which have not been considered by the policy makers so far.

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AN INQUIRY INTO SELFLESSNESS IN SARTREAN EXISTENTIALISM AND BUDDHIST TEACHINGS

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“Existentialism is a doctrine that does render human life possible, a doctrine, also which affirms that every truth and every action imply both an environment and a human subjectivity” (Sartre, 1996). According to this definition definition, existentialism places emphasis on human subjectivity. Buddhism is, of course, much more than this theory. It reveals the reality of the phenomenal world. But we can examine the relationship between Sartre's phenomenological description of the "self" as expressed in his “Being and Nothingness” and elements to be found in some approaches to Buddhism. Sartre's method for explaining his position on the "self" is a phenomenological one. Phenomenology is a descriptive analysis of subjective processes. Sartre asserts that existence precedes essence and that there are two basic categories of being, "being-in-itself" (*être en-soi*) and "being-for-itself" (*être pour-soi*). Inanimate objects exist in the world as "being-in-itself" which is complete and unchanging.

"Being-for-itself" is very the essence of consciousness. It is the characteristic of humanity that is basic to individual freedom. This freedom is not absolute, but complete and allows people to make choices. Additionally, the “for-itself” is the origin of nothingness or negation. Human consciousness is a form of non-being that is derived from the negation of the self. Humanity is free because "Being-for-itself" is freedom. Man is free because as soon as the individual becomes conscious of himself, he becomes responsible for all of his actions. The discovery of consciousness as nothingness takes place as a result of processes of interrogation and negative judgement. It is this point that brings Sartre close to the teaching of Buddhism.

For Buddhism, life is an ever repeating cycle which is best characterized by impermanence, suffering, and non-self. These are called "the three marks" and they are essential to the Buddhist's view of the world. In Pali, the word

anatta refers to non-self, non-ego and non-substantiality. In the Upanishads the word "*atman*" means the self in a broad sense. "Atman is what remains when everything that is not the self is eliminated. The self, therefore, is a residue which is left after all physical and mental constituents of a man's personality are analyzed".

Data was collected from libraries and E- libraries. The data from the primary and secondary sources related to the field were collected through the libraries and discussed with scholars in the field. The data analysis method of the research is descriptive method. In this research I wanted to point out some similarities and differences between Sartrean existentialism and early Buddhist reflections on selflessness using a comparative method.

We can conclude that Sartre's philosophy and Buddhism have in common that consciousness is emptied of the permanent self and that *freedom of consciousness* is the highest goal in life. I conclude by restating my contention that various similarities exist in the content of Sartre's phenomenological selflessness and early Buddhism, with the major difference between the two lying in the materialistic, this-worldly orientation of the former as opposed to the transcendent, other-worldly orientation of the latter.

Keywords: Existentialism, Selflessness, being-in-itself, being-for-itself, consciousness

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THE ROLE OF METHODOLOGY IN THE CONSTRUCTION OF SCIENTIFIC KNOWLEDGE: A COMPARATIVE STUDY OF KARL POPPER AND THOMAS KUHN'S APPROACHES

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Methodology plays an important role in the construction of knowledge about the growth of science. The methods of constructing knowledge, however, is challenging. There are different methodologies presented throughout the eras of the history of the growth of science. In the history of the Greek, the deductive method of Aristotle also contributed to the formation of knowledge. The deductive method is a suitable method to explain natural events; it helps one find new knowledge.

In the history of the West, the Middle Ages is considered a period dominated by religious authority. During that period faith and reasoning were barriers to the development of new knowledge. But there were some important developments in fields such as Astronomy, Medicine, Mathematics and Translation. During this period, a methodology devised by Roger Bacon influenced the growth of science. In his research of lights, he used the method of observation, experiment and comparison.

Revolutionaries' thoughts and new methodologies contributed to the construction of scientific knowledge during the Age of the Renaissance. In the development of scientific methodology, the inductive method of Francis Bacon and the method of skepticism of Descartes were a turning point. It is noteworthy that, following them, many discoveries in various fields and many methodologies appeared in the 18th and 19th centuries.

The step-by-step developments in the scientific field were raised to another level during the 20th Century. Of the many thinkers of this period, Karl Popper and Thomas Kuhn are noteworthy. The contribution to methodology

of these two thinkers brought about revolutionary changes in the construction of scientific knowledge.

Methodology is a systematic, theoretical analysis of the methods applied to a field of study. Therefore, methodology, criterion and principles are indispensable for scientific research. It is natural for them to appear and then disappear. As such, not only did the methodologies introduced by Popper and Kuhn push scientific studies to another level, but their contribution is widely spoken about even today.

. This study attempts to fill this gap? and focuses on the impact of their methodology to the construction of scientific knowledge.

Objectives

This study has several objectives such as;

- The contribution and the impact of Popper and Kuhn's methodology to the development of scientific knowledge
- It examines the nature of their methodologies and the similarities and differences between them.
- The value of their methodology to future developments in the field of methodology and the construction of knowledge.

Since this research focuses on two individuals, a comparative approach, historical approach and analytical approach will be used. That brings out all the information pertaining to the role of methodology to the constructing of scientific knowledge. To that purposes, we adapt secondary sources of information which are collected from books, articles, magazine and etc.

Throughout the paper, the analysis of the issues involved in the Kuhn and Popper methodology, how impact of scientific development. In scientific history, many methodologists have been used in scientific research, Karl Popper's Theory of Falsification and Thomas Kuhn's Theory of Paradigm Shift have taken the scientific study to another realm.

Further, this study is to bring out the beneficial of the methods applied to a field of social sciences and follow is my attempt to highlight both similarities and differences in these theories and then to investigate possible problem with each.

To summarize, Popper believes all knowledge of all types' growths through a process of having, conjecturing solution to those problems, and then refuting those conjectures based on the discovery of new problems. But Kuhn argues that the goal of science is not to refute the theories of science and they disagreed on whether or not scientific progress brings scientists closer to the truth and both insist on the revolutionary aspect by which an older theory or paradigm is rejected and replaced a better one. Eventually, Popper and Kuhn regarded science as a deeply dynamic process.

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A STUDY OF WOMEN'S POLITICAL PARTICIPATION IN CHINA FROM 1949 TO THE PRESENT

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China is maintaining a remarkable economic growth in the world and Chinese women have been playing an important role in many aspects of socio-economic sphere. However, in recent decades, overall women's political participation in China has not significantly been improved. Hence, lack of women's representation in power structures would not support for steady improvement in women's political participation in China. There has been a lot of discussion about defining women's political participation in China, which shows that they have aspiration and capacity to take positions in government. Further, they are keen to take leadership and make decisions, participate in mass organizations and involve with a wide range of issues including raising their concerns and contributions with regard to women's political participation and representation. Although some scholars express the above view, the practice is not so - women have insufficient representation in national politics. Hence, the major objective of this study is to examine the challenges faced by women in participating in politics in China. This paper also explores why women's political participation has not improved when compared to their socio-economic development.

Mixed method research approach was used in this study. This method was used to analysis the information and documents after the beginning of new China, and current achievements of women in political institutions. Thus, qualitative method was used to gain an in-depth understanding on women's situation in society, and the underlying causes for women's political inequalities under the patriarchal social context. In addition, secondary data were gathered from institutional reports and women's organizations. Quantitative date was used to find out the degree of women's participation in politics.

When we consider modern Chinese history, after the Communist party (CPC) came to power in 1949, women's socio-economic status had improved in many aspects under the Mao regime. However, women's position in political participation had not increased when compared with the social development in society. Nevertheless, since the Chinese Communist Party (CPC) came to power in 1949 and with the formation of the National People's congress of China (NPCC) in 1954, Chinese women have been taking part in politics as representatives. Under the Constitution of the People's Republic of China, Chinese women and men enjoyed same rights in every sense and had equal personal dignity. Chinese women highly appreciate the 1954 Constitution followed by that of 1982 which gives men and women equal rights: "Women have the same rights as men in all spheres of political, economic, cultural, and social life, including family life". In practice, women have still not received equal status in political participation.

Table 1: Women's Political Participation in China

The Party Congress (Years)	Numbers	Percentage of male and female	
		Women	Men
8 th Party Congress(1956)	170	4.7	95.3
9 th Party Congress(1959)	279	8.2	91.8
10 th Party Congress(1973)	319	12.9	87.1
11 th Party Congress(1977)	333	11.4	88.6
12 th Party Congress(1982)	338	4.1	95.9
13 th Party Congress(1987)	285	7.7	92.3
14 th Party Congress(1992)	319	7.5	92.5
15 th Party Congress(1997)	349	7.3	92.7
16 th Party Congress(2002)	356	7.6	92.4
17 th Party Congress(2007)	371	10.03	89.97

Source: Department of Population, Society, Science and Technology of the State Statistical Bureau of China, ed., **Women and Men in China**, China Statistical Publishing House, 2004, p.83. For 2007 <https://news.xinhuanet.com/ziliao/2007>.

This table provides clear evidence regarding the gap between men and women in Chinese political participation.

Table 2: Share of Women in National Parliament from 2007 to 2017

Year	Share of Women in Chinese National Parliaments
2007	20.6%
2008	21.3%
2009	21.3%
2010	21.3%
2011	21.3%
2012	21.3%
2013	23.4%
2014	23.4%
2015	23.6%
2016	23.6%
2017	24.2%

Source: Share of Women in National Parliament in China,
<https://www.statista.com/statistics/> Share of Women in National Parliament in China.

The table 2 presents statistical data on share of women in national parliament from 2007 to 2017. Most scholars have argued that, to increase political leadership of women in China, it is important to pay more attention to a range of issues, such as customs and trade regulation, narrowing the gender gap in political empowerment, public spending on education, the economic validity of the country etc. Of them, the gender gap in political empowerment and the collectivism, cultural variable is very crucial. The study finds that there is an increased political awareness among women, but their participation in the political process is restricted. Women face enormous challenges in terms of political participation in the largely male-dominated society of China. The following factors influence for the above pattern, namely, a handful women who have interest to take part in politics, patriarchal culture (traditionally women were excluded from high positions), lack of experienced women (most women have been forced to have “feminine” occupations and it is hard to enter into politics through such occupations) and woman’s family responsibility (it is often hard to juggle time and energy between family and politics). Family responsibilities and domestic duties are thought to be critical factors that affect women’s lower

political participation in China. Recent national surveys indicate that one of the barriers to women's participation in the mainstream politics, socio-cultural and economic life is closely linked with their family burden, but not their participation capacity; majority of people are of the opinion that 'women's capabilities are no worse than men's and 'men should consciously shoulder some of the household responsibilities'. In addition to this, there are some policy challenges too -government policies are focused on achieving planned targets such as economic growth and material prosperity; thus, the goals of gender equity would be subordinated and become poorly implemented.

When we look at some aspects of women's participation like economic development, Chinese women seem to be leading the way towards "gender equity" in the world. In the case of political participation, Chinese women remain far behind than that of many other countries. Chinese Central Government has been trying to increase the number of women taking position and leadership roles at different levels. As a result, since 1949 to date, women's political participation has improved to some extent, especially in middle levels (e.g. municipal and county level). Yet, there has been no substantial improvement at either the local level or the top level. Due to this pattern, high profile women politicians in China should contribute to gender equity. Nevertheless, the wider participation of women in politics at grassroots levels is more important and fundamental to the society at large.

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IMPACT OF THE CASTE SYSTEM ON TRADITIONAL DRUM PLAYERS: A CASE STUDY BASED ON ANURADHAPURA REGION

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The Present study focuses on identifying and analyzing the socio-cultural impact faced by the traditional drummers in the region of Anuradhapura, Sri Lanka. It is apparent that the drummers (tom-tom beaters) played a vital role in Buddhist religious ceremonies and rituals in the central administrative region of Anuradhapura throughout the history. However, the society classifies them as people of 'low caste'; namely the '*Berava kula*'. Due to the distinctive identification and social categorization, the younger generation of these drummers' families hesitates to continue their hereditary art. The factual basis for their abandonment is the caste system that has made an impact on the regular life style. Thus, the present study aims to analyze the social stratification of traditional caste system that has influenced the traditional drummers in Anuradhapura region.

Robert Knox (1681) in his book "An Historical Relation of Ceylon" has discussed the village life in *Nuwara Kalawiya* (Anuradhapura). In his study, the castes of *Neketh*, *Berava* (tom-tom beaters) and Dancers were mentioned.²²⁹ The book titled 'An Account of the interior of Ceylon and of its Inhabitants' (1821) authored by Jhon Davy classifies Sri Lankan caste into *vaishya* (Merchant), *Kshudra* (untouchable caste) and outcaste. According to his classification the *berava* people are included in the *Kshudra* caste.²³⁰ Huge Neville (1886) mentions in his book '*Janawamsa*' that Sri Lankan *Berava* people originated from Indian drummers who came to Sri Lanka with the sacred Bodhi Tree. Henry Parker (1910) examines that the castes such as *Rajaka* (washer-men), *Kumbal* (potters), *Aachāri* (iron producers),

²²⁹ Knox, Robert. 1681. An Historical Relation of Ceylon.

²³⁰ Davy, John. 1821. An Account of the Interior of Ceylon and its Inhabitants. p.112.

Thovilkāra/Berava (Drummers and rituals) etc. were in the North Central provincial regions.²³¹

Senarath Paranavithana (1931) states that names of villages have often been influenced by the institution of caste in the history, resulting in the villages being named as *Govigama* (the village of farmers), *Beravagama* (the village of drummers) etc.²³² Ralph Pieris (1956) in his book 'Sinhalese Social Organization' defines the *Berava* caste as an untouchable caste based on the region of Kandy.²³³ Walpola Rahula (1962) elaborates the caste system in Anuradhapura period²³⁴, while M.U. De Silva (1998) discusses the duty of *Berava* people in his book.²³⁵ The book written by Susil Naidu titled 'Sri Lankan Society and Culture' (2002) contains the structural, historical perspective of caste system in the Hindu society and its influence on Sri Lankan caste system.

The present study attempts to address the research question how the caste-based social stratification has influenced the traditional drummers in Anuradhapura region.

The study was conducted through both literature and field surveys that include face-to-face discussions and communication with the community, carried out by the author. The literature survey included a library survey and scholarly studies.

1. Data Collection:

There had been 18 villages of people from *Berava* caste; namely “*berawagam daha ata* (eighteen villages of tom-tom beaters). Data for the present study were collected from the following fourteen villages of drum players within the Divisional Secretariat.

- | | |
|--------------------------------------|----------------|
| 1. Pahala Kolaniya (Berawa Kolaniya) | -Medawachchiya |
| 2. Ulpathgama | -Medawachchiya |
| 3. Mailagaswewa | -Medawachchiya |
| 4. Galenbindunuwewa | -Medawachchiya |
| 5. Aluthgama | -Medawachchiya |

²³¹ Parker, Henry. 1910. Ancient Ceylon. p.5.

²³² Paranavithana, S. 1931. Ceylon Literary Register, Vol.I. p.53.

²³³ Pieris, Ralph. 1956. Sinhalese Social Organization.

²³⁴ Rahula, Walpola. 1962. Lakdiwa Budusamaye Ithihasaya. p.247.

²³⁵ De Silva, M.U., 1998. Sri Lankawe Kula Wedawasam Kramaya. pp.4-6.

6. Puwarasankulama	-Nuwara gampalatha Central
7. Solama	-Thambuththegama
8. Galkandegama	-Rambewa
9. Welangahaulpatha	-Horowpotana
10. Nelugollewa	-Horowpotana
11. Hettikattiya	-Horowpotana
12. Ambagaswewa	-Kahatagasdigiliya
13. Sandamalgama (malabiriyagama)	-Rambewa
14. Messalewa	-Rambewa

There are two subdivisions within the caste:

<i>Badgama Berava</i> -	Temple drummers who occupied and cultivated rice.
<i>Gahala Berava</i> -	Drummers who performed at funerals (<i>malabera-players</i>) and rituals.

2. Significance of social stratification and impact on regular life style:

Marriages customs: Marital relations are prohibited between *Berava* people and *Goyigama* people according to their stratification system. *Berava* families are allowed to keep marital relationships within their own caste and lower caste.

Funeral customs: There are cemeteries reserved for *Berava* people in their villages. They are not allowed to use other cemeteries, especially those reserved for *Goyigama* people.

Religious activities: *Goyigama* people do not engage with *Berava* people for religious activities at the temple. When donors of the temple are from both castes the chief donor must be from the *Goyigama* caste. Further, the Siyam Nikaya is confined to the *Goyigama* caste. Monks-to-be from the *Karava*, *Salagama* and *Durava* castes obtain their ordination in the Amarapura Nikaya. The Ramannya Nikaya ignores caste.

Education: The free education introduced by C.W.W. Kannangara triggered several changes in the social class-based education. Due to the distinctive identification and social categorization, the young generation of these

drummer families still faces some discrimination at the schools nearby their villages.

Politics: The *Berava* people do not have any prominent political background historically, but if they are eligible for political leadership, the society discriminates them especially in the regional context. Further, *Berava* people joined the JVP youth revolt in large numbers in recent history.

The social stratification of traditional caste system has influenced the traditional drummers in Anuradhapura region. It has made an impact on their regular life style due to the distinctive identification and social categorization.

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FERTILITY TRANSITION AND ETHNIC FERTILITY DIFFERENTIALS: A CASE STUDY IN KANDY URBAN AREA

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Human fertility in Sri Lanka started to decline since 1950s and reached below replacement level during the period of 1995-2000. This achievement is remarkable for a multi-ethnic society like Sri Lanka because, according to the existing studies, there is a tendency to increase fertility among the minority groups of a multi-ethnic country (Van Heek 1956, Fagley 1967, Day 1968, Goldscheider and Uhlenberg 1969, Sly 1970, and Kennedy 1970, as cited by Dissanayake 1995: 162-163).

Studying fertility of the minority groups is timely important because there is a claim that fertility of the minority groups is rapidly increasing. Further it is also significant to know whether all the ethnic groups have reached the below replacement level and whether they would maintain it in the future.

Existing studies on fertility in Sri Lanka have repeatedly pointed out that the minority group of Moors and Indian Tamils have higher fertility rate than the Sri Lankan Tamils and Sinhalese (Puvanarajan and De Silva 2001; Fernando 2014). However, all these studies have assessed fertility for a short period of time whereas none of them has assessed the long-term fertility behavior in each ethnic group. Therefore, this study attempts to analyze the fertility transition in each ethnic group since 1950s.

One hundred and eighty participants from Kandy urban area were selected for this study by using the multi-stage stratified random sampling procedure and interviewed by using a survey questionnaire. The fertility data were gleaned from the participants of three generations belonging to all the four ethnic groups. The three generations, G1, G2 and G3, were selected to represent modern, transitional and traditional characteristics respectively. The participants of G3 were those born between 1932-1952, those of G2

between 1953-1973 and the participants of the younger generation (G1) between 1974-1994.

Fertility is defined as the number of children per family. As fertility varies with the marital status and the stage of child-bearing, three measures; (i) actual, (ii) expected and (iii) preferred number of children per family, were used instead of using a single measurement. Under each generation, the estimates of the three fertility measures of all the ethnic groups were given and the mean comparison tests (ANOVA) was done at $\alpha = .05$ to recognize whether there were any significant differences among the ethnic groups in each generation with respect to the variables of fertility.

Table 1 gives the summary statistics of the estimated actual number of children per family in each ethnic group by generation. In G3 and G2 the highest and second highest fertility were among the Moors and Indian Tamils. However, in the younger generation, the highest fertility rate was among the Sinhalese. The fertility rate of all the ethnic groups of the younger generation was below the replacement level.

Table 1: Summary statistics of actual number of children per family for those who have completed childbearing of all ethnic group by generation

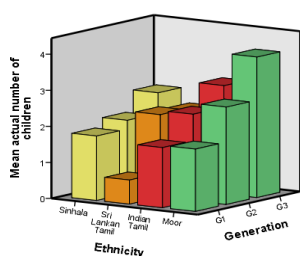
Generation	Ethnic Group	Mean	SD	SE	95% CI		Min.	Max.
					for Mean			
					LL	UL		
Generation 01	Sinhala	1.79	.59	.155	1.4	2.1	1	3
	Sri Lankan Tamil	0.67	1.15	.667	-2.2	3.5	0	2
	Indian Tamil	1.67	1.21	.494	.40	2.9	1	4
	Moors	1.73	1.19	.359	.93	2.5	0	4
Generation 02	Sinhala	1.97	.95	.161	1.6	2.3	0	4
	Sri Lanka Tamil	2.29	1.38	.522	1.7	3.5	0	4
	Indian Tamil	2.40	1.12	.289	1.7	3.0	0	4
	Moors	2.70	1.52	.341	1.9	3.4	0	6
Generation 03	Sinhala	2.60	1.26	.214	2.1	3.0	1	6
	Sri Lankan Tamil	2.20	.83	.374	1.1	3.2	1	3
	Indian Tamil	3.00	1.29	.488	1.8	4.1	1	5
	Moors	3.89	2.49	.572	2.6	5.1	1	10

Note: N = Sample Size, SD = Standard Deviation, SE = Standard Error, CI = Confidence Interval, LL = Lower level, UL = Upper Level, Min = Minimum, Max = Maximum

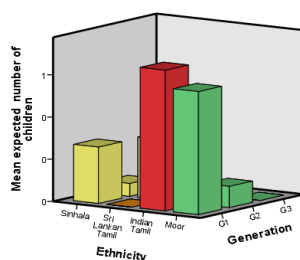
Source: Calculated from the sample data in this research

Fertility of all the ethnic groups was compared in each generation and there was a significant difference only among the ethnic groups of the G3 ($F=2.771$, $p = 0.049 < 0.05$) and Tukey's HSD test revealed that the Moors' fertility is significantly higher than the other ethnic groups' in the older generation (G3). However, when it comes to G2 it has diminished. One-way ANOVA revealed that there are no significant differences among the ethnic groups with respect to fertility in G1 ($F= 1.130$, $p = 0.353 > 0.05$) and G2 ($F= 1.065$, $p = 0.380 > 0.05$). This indicates that all the ethnic groups have the same level of fertility irrespective of their ethnicity. This may be due to the urban setting of the study area since all the ethnic groups live within a socially, culturally and economically close environment in an urban setting. Therefore, the fertility differences among the ethnic groups may be less. Further, another reason may be that the impact of modernization which highly influenced urban dwellings has treated each ethnic group equally since 1970s.

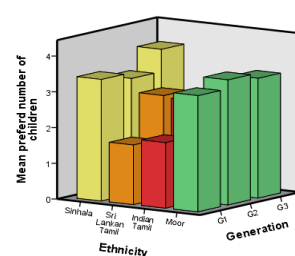
However, we cannot expect that all ethnic groups will continue to remain below replacement level because the expected and preferred numbers of children per family are high among both Sinhalese and Moors of the younger generation (see Graph 1.b and 1.b). If they achieve the expected number or preferred number of children, the average number of children per family will be three in the younger generation. De Silva (2010) also observed that there is an increasing trend of fertility after 2000.



a. The mean actual number of children per family for completed child bearing



b. The mean expected number of children per family for not completed child bearing



c. The mean preferred number of children for all

Graph 1: Fertility transition in each ethnic group by generation

However, this situation cannot be due to the reversing of modernization. According to the findings of this research there is evidence to claim that this situation arose due to the rise of nationalist ideas of Sinhalese people who wanted to increase the number of children of their families. The rationale was their thought that the Sinhala nation will disappear if they limit the number of children per family to one or two.

All the ethnic groups contribute to achieve below the replacement level of fertility irrespective of their ethnicity. This is due to sharing of equal socio-economic and cultural benefits by all ethnic groups within the urban setting. However, there is a possibility to increase fertility in the younger generation, which could be triggered by the thoughts of nationalist ideology.

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**MYTHS MAKING OR BREAKING:
RELIGION AND SUSPICION AMONG A UNIVERSITY
COMMUNITY**

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Buddhism has been a source of growth and moral uplift in Sri Lanka. Some see Buddhism as a religion of peace while others argue that it has led to conflicts (Deegalle 2014; Obeyesekere 1995; Tambiah 1992; Schonthal 2016). The last five years have seen a surge of conflicts and tension between the Buddhist majority and Muslim minority in certain parts of Sri Lanka but scholars have noted a longer history of the discourse of fear that underpinned these tensions and the episodes of violence (Bartholomeusz 1996; Gunawardana 1976; Tilakaratne 2003). First recorded conflicts between the Buddhists and Muslims can be traced back to early 1900s (Jayawardena 1970; Kannangara 1984; Roberts 1990). Recent studies highlight the role played by radical religious movements in building mistrust and encouraging conflicts (Schonthal 2016; Silva 2016). Developing suspicion towards the 'religious other', especially between Buddhists and Muslims, has been a key feature in recent conflicts between Buddhists and Muslims (Herath and Rambukwella 2012). The objective of this study is to contribute to the scholarship on conflicts between Buddhists and Muslims through a case study of a small university community, which is considered peripheral by mainstream universities. Another objective is to understand how the students and staff negotiate with suspicion and manage or mismanage the potential for conflicts.

This paper constitutes a micro component of a larger research project on religion and conflicts in Sri Lanka and Myanmar although the focus here would be on a particular case study conducted in Sri Lanka. I delve into how suspicion interferes with student-staff and student-villager interactions at the South Eastern University of Sri Lanka through a qualitative study, primarily using semi-structured interviews and focus group discussions. My interest in

studying this university community emerged due to a few minor conflicts between Sinhala Buddhist students and Muslim villagers that occurred outside the university premises. There are also accounts of tension between the students and the university administrators. This local university community can be treated as a microcosm of a much larger universe in the light of conflicts between Buddhists and Muslims in other parts of the country. I conducted the semi-structured interviews within the university premises and met people outside the university at their residences and workplaces. The interviews adopted an informal approach while two focus group discussions were also conducted. In presenting the findings I have used the grounded theory approach to undertake the data analysis.

The South Eastern University of Sri Lanka has never experienced open conflicts between Buddhists and Muslims but tension has been around for some time. The Buddhist students meet a different cultural environment when they first arrive at the University. They define its building architecture as 'Islamic' arguing that the university buildings look more like those of a mosque than those of a national university. Since the Buddhist students arrive at the university with some presupposed perceptions regarding the Muslim community, such perceptions color the way they look at the university including its administration. However, the Muslims students do not see the University as necessarily 'Islamic' while the administrators argue that students must learn to be tolerant and respect the regional culture. Further, the Muslim students and staff argue that Sinhala Buddhists students are motivated to be at loggerheads with Muslims by certain religions and political movements. They feel that Buddhist students try to assert Buddhist cultural authority in a Muslim-predominant environment.

The Buddhist students have a notion that a University must necessarily be a secular place, although contradictions to such an ideal are very common. The University of Peradeniya, for instance, has followed a conspicuously Buddhist style in its architecture. But when students are confronted with this reality, they tend to justify the 'odd' cases with specificities of geography and history. One can clearly observe lack of preparedness to accept a different cultural setup but the administration, which also operates with suspicion towards the Buddhist students, has failed to produce conditions,

which would have resulted in better mutual understanding. Moreover, there have been isolated attacks on the Buddhist students by certain local Muslims creating a perception among the Buddhist students that these attacks were orchestrated by the University administration.

On the positive side, the academic staff has been able to foster a level playing field by winning trust of both the Buddhist and Muslim students. Further, the Buddhist and Muslim students, although grieved by incidents of violence outside of the University and other parts of Sri Lanka, have maintained peaceful relationships and have never clashed along ethnic or religious lines. Within the broader academic environment, contacts between the students show significant promise in terms of strengthening social connectedness. There is also a trend of building social relationships outside the classroom helping to iron out some cultural stereotypes.

Acknowledgement

I am grateful to the Swedish Research Council for funding this research study.

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**A SOCIOCULTURAL STUDY ON THE CHRONIC KIDNEY
DISEASE OF UNCERTAIN AETIOLOGY IN ANURADHAPURA
DISTRICT WITH SPECIAL REFERENCE TO KABITHIGOLLA
DIVISIONAL SECRETARIAT**

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The prevalence of chronic kidney disease is rising globally and it has become a major health issue worldwide (National Kidney Foundation 2015). In Sri Lanka there was a rapid increase of CKDu in last decade. CKDu is mostly seen in the dry zone. Anuradhapura shows the highest population affected from CKDU in North Central province. According to the hypothesis of illeperuma et al that fluoride could be the causative factor for CKDu and aluminum playing an additive effect by enhancing the absorption of fluoride. This hypothesis was based on the observation that areas affected by CKDu are located in the fluoride belt of the country and people in these areas were using insufficient aluminum pots for cooking and storing water (Wanigasuriya, 2012). However, the causative factor of CKDu is still unknown in NCP even though researchers still attempt to find on the causative factor of CKDu. CKDu has a higher frequency in male farmers from the North Central Province in Sri Lanka, who are over the age of 40 years.

In addition World Health Organization mentioned that CKDu in North Central Province is an environmental exposure disease caused by several aspects such as chronic exposure to kidney damaging pesticides, arsenic, lead, cadmium, poor diet and genetic susceptibility to kidney failure (Westernhospital, 2015).

This research is narrowed to investigating about the Kabithigollawa divisional secretariat in Anuradhapura district, as it is the highly affected district in North Central Province. In Anuradhapura main economic sector is

agriculture. For the paddy production people in this area is using tank water and rain water.

The main objective of this research is to find out whether sociocultural factors as in educational level, occupation, attitude, social background and other sociocultural factors accurately affect to CKDu in Anuradhapura district. Sociocultural factors are important to study on human behavior and day to day activities. All the behaviours and habits of people interrelated with sociocultural factors. Therefore, it is important to understand about the sociocultural factors affecting to CKDu. Thus the research problem of current study is, "What are the sociocultural factors affecting to CKDu in Anuradhapura district?" Significances of the study are, this study will help to understand how sociocultural factors affect for the CKDu in Anuradhapura district.

The available literature indicates various factors of CKDu. Among such factors the researcher selected education, occupation, attitude social background as independent variables and the dependent variable is factors which affect CKDu in Anuradhapura. Since the population defines higher patients of this area researcher only selected 15% of the population. Therefore, the research sample consists of 100 including CKDu patients of Kabithigollawa MOH area from 398 populations. Simple random sampling method used to select the sample where each individual is chosen randomly. Therefore, this research has mix data analysis methods to collected data. This questionnaire was given to the patients who live in Aiyathigewewa, Gonahathdenawa, Wattewewa Grama Niladari divisions in Kabithigollewa.

- a. Questionnaire
- b. Key Informants Interview

There were 63% of males and 37% of the females participated as the sample. 22 patients from the sample have never attended to school and majority of patients which means 47 patients have only attended from grade 1 to 5 classes. According to the research data 32 patients in the sample are unemployed. Maximum family monthly income of the sample is 67000/= and the minimum family income is LKR 3000/=. These respondents have poor social background and their attitude also made according to particular

social background. There are 45 patients who use pipe born water pumping through shallow well for cooking and 20 patients use water through well near to their paddy fields. 6 people use pipe water which provided from the water board for cooking purposes. 30 patients use water from springs for cooking purposes. Moreover, it shows 65 patients still consume risky water which can affect from CKDu. Moreover, there were 77 patients unaware about the symptoms of CKDu. However, majority of 57 respondents believe and engage in white magic and Ayurveda medicine as a healing process for CKDu.

K. Wanigasuriya mentioned in his research on “Aetiological factors of CKD in the North Central province of Sri Lanka” most of the patients were farmers (Wanigasuriya, 2012). This research also found that majority of patients are farmers and 18 patients were not engaging in farming activities due to CKDu. Education level is very low among CKDu patients in Kabithigollawa as they have been engaged in farming activities from their young age. Majority of the people in this area are not interested in education due to the attitude of their society on education as a result of that they are not aware about diseases and prevention of diseases. This research is similar to Wasantha Subasinghe’s study as most of CKDu patients come from poor social background. There were 25 patients where all the members of the family are unemployed.

The current study strongly favors that CKDu is prevalent among farmers in dry zone and related with drinking water and the sociocultural factors which plays a main role of affecting from CKDu. Majority of patients who affected from CKDu drink pipe born water supply from national water supply and drainage board, they use other water sources for cooking. Most of the patients have poor socioeconomic status. Moreover, majority of people in this area have been considered on black and white magic.

There should be well-organized programs for national level preventing such as awareness programs on preventing and caring, national task force for better health services as majority of patients did not identify the symptoms and preventions of CKDu according to the study.

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SOCIAL ISSUES FACED BY CHILDREN DUE TO THE MIGRATION OF THEIR MOTHERS ON FOREIGN EMPLOYMENT

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Women's labour migration on foreign employment is one of the most growing issues in Sri Lanka in view of the fact that the women engaged in foreign employment encounter various social problems. Its impact on their children is a more serious issue. Many researches have been conducted on foreign employment of women and the issues faced by them during the period of their employment. This study rather focuses on the issues encountered by the children during the period of their mothers' foreign employment. After the introduction of open economy to Sri Lanka, foreign labour migration was promoted as a solution to the insufficiency of local employment opportunities. Then the percentage of women seeking foreign employment opportunities gradually increased while their children also started facing related problems. As a result of women's migration on employment a significant amount of foreign remittance reached Sri Lanka.

Ganewatte in Kurunegala district is an area where women went on foreign employment since 40 years ago. Before the introduction of the open economy there were no serious household issues but the children of many families of which mothers were away on foreign employment started encountering different types of issues. Child delinquency, child abuse, child marriage, drug addiction, and decline of child education are frequently reported issues. The objective of this research is to study the impact of women's labour migration on their children in Ganewatte Divisional Secretariat.

Kurunegala is the second largest district of Sri Lanka and Ganewatte is its second largest Divisional Secretariat where a sharp increase of women's

labour migration for foreign employment can be observed. Using simple random sampling technique, the study population was selected in which 51.18% of the total of 2532 women is employed in foreign countries. In addition, 100 families of this area were randomly selected out of those with migrated women. The study was carried out using primary and secondary data while the primary data were collected using questionnaires, interviews and observations. GIS was applied for identifying spatial variation and, for statistical analysis of data, MS Excel was used. Through this study it was found out that children in 60 out of the 100 households have faced different types of issues as a result of their mothers' foreign employment.

According to this study, children in 60 out of 100 households have faced issues directly. Among those issues 16 cases of sexual abuse could be recognized and 35 children have addicted to drugs. Heroin-addicted children could also be seen. Child delinquency could be seen as 8% while in 5 out of 100 households child marriage have happened. In 60% percent of households children's education has declined. In addition to them, some minor incidents were observed. As a whole 60.03% children of the sample of 100 households have faced issues.

Women's labour migration affects their children badly and consequently has become a growing issue in Sri Lanka. Majority of such children face many troubles due to this reason. There are a few solutions that are proposed. Development of Sri Lanka's local job market is a temporary solution for this issue. If the overall job market is considered, per capita income is very low and one person's salary is not enough for maintaining a household. Therefore, increasing of the salary is essential. Encouraging an export-based economy is also beneficial. Implementation of a strict legal framework for foreign labour migration and child marriages is another solution. Because of child marriages poverty and poor education prevail. Since the registration process is often skipped in child marriages, legal measures cannot be taken. Enhancement of the quality of child education and enforcement of punishments for the criminals of child abuse are other temporal solutions for this issue. However, there must be more standardized rules and regulations for women's labour migration. Then the issues encountered by children in

the families where mothers have sought foreign employment can be mitigated.

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MAPPING FLASH FLOOD POTENTIAL USING GIS IN THE TURTLE RIVER AND FOREST RIVER WATERSHEDS IN NORTH DAKOTA, UNITED STATES OF AMERICA

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Flash flooding is a rapid onset natural hazard and can cause extensive property and crop damages as well as deaths. The main purpose of this study is to identify the critical areas affected by flash floods within two selected watersheds in Eastern North Dakota, USA. The research method relies on the use of a Geographic Information System (GIS)-based model, the Flash Flood Potential Index (FFPI) that incorporates physiographic characteristics from the watershed.

Although many flash flood potential assessment models exist, some river basins may not respond to the intensive rainfall in a way that forecasters expect. Smith (2003) developed Flash Flood Potential Index and the goal of this FFPI was to quantitatively describe a given sub-basin's risk of flash flooding based on four physiographic parameters: slope, land use, vegetation cover, and soil type/texture.

The FFPI approach addresses physiographic properties that can make an area susceptible to flash flooding and whether the changes in these features or properties increase or decrease the area's susceptibility to flash flooding (flash flood early warning reference guide). This has been used for predictions at various geographic locations from Colorado to Iowa. According to our knowledge, the index has not been used, in a flat-lying region such as the Red River Valley of North Dakota and Minnesota.

An FFPI is developed using four physiographic characteristics (elevation, land use, soil and vegetation density data) and flow accumulation derived from Digital Elevation Models (DEMs). These are used as an additional parameter as the research paid more interest raster data. Then data were re-

sampled, re-classified, and combined using GIS tools. The main goal was to come up with an index value ranging from 1 to 10 where 10 being the most and 1 being the least favorable for flash flooding. Each of the elements was scaled to an overall index value. In this study, digital elevation models at 30 m and 3 m resolutions were used to evaluate the sensitivity of the index. In this study, three different scenarios of FFPI were used to modify the original FFPI equation. Scenario 1 used the original equation. For scenario 2, flow accumulation was added as an additional layer, and for scenario 3, different weights were assigned for each component datasets including flow accumulation (Fig. 1). The weights were determined using the Analytical Hierarchy Process (AHP), a multi-criteria decision making approach by Saaty (1977). It uses a pair-wise comparison of each criterion is used to determine the relative importance on each alternative in terms of each criterion over another by a decision matrix.

Scenario 01 – $FFPI = (M + L + S + V) / n$
Scenario 02 - $FFPI = (M + L + S + V + FA) / n$
Scenario 03 - $FFPI = \{(M * 1.38) + (L * 1.12) + (S * 1.14) + (V * 1.12) + (FA * 1.23)\} / n$
(M = slope in percent L = land use S = soil V = forest/vegetation cover
FA = low accumulation N = sum of weightings)

Fig. 1. Equations used in three scenarios.

The preliminary results include the maps showing areas susceptible for flash flooding in the watersheds. Notably, the highest values of the index for this study correspond to urbanized areas and impervious surfaces such as roads and built spaces, and high slopes reflecting an increased vulnerability to floods and inundation of the watersheds. The correlation between historical events and index results was also tested. The analysis, which used DEM's of 3 m resolution, was identified as more effective in identifying the flash flood potential sites than 30 m analysis that used DEM's of 30 m resolution. Comparing the scenarios used in the study, scenario 1 has accurately predicted the potential for flash flooding depending on the error analysis. It shows all the flash flood points above threshold.

High resolution (3 m) DEM's of the study areas were effective in identifying the most critical areas of flash flooding. In overall, the

model/index is found much sensitive to the slope and flow accumulation followed by land use characteristics. Specially, the study area being comparatively flat with the study areas of previous studies, the model is very sensitive to any change of the elevation, and thus the slope.

This study provides quantitative results of the high and low flash flood potential areas based on a determined threshold value. The threshold values are based on the previous flash flood events of the study areas. However, the index provides satisfactory results in mapping the flash flood potential in a portion of Red River Valley. Scenario 1 FFPI maps correlate well with the reference events and thus can be used as a flash flood risk map.

Although it reflects the reality of the field, this is not a completely error-free study. The historical flash flood events had an uncertainty of their actual location records. Due to the lack of specific location data, the actual inundations could not be mapped and the buffer analysis was performed instead.

The main study objectives (identifying critical areas of flash flooding in the study area, evaluating the sensitivity using DEM's of different resolutions and evaluating applicability comparing with historical events in the area) were achieved in a satisfactory level and the study shows FFPI is an accurate model in mapping the flash flood potential in flat low lying landscapes. However, some additional work on the index will give highly accurate and reliable results. Any future work if carried out could incorporate the soil moisture conditions, precipitation, and runoff amounts to make FFPI a more reliable tool in identifying critical areas for flash flooding.

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RELATIONSHIP BETWEEN ELEVATION AND HUMAN HEAT STRESS (HHS) IN SRI LANKA

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The Human Comfort Index (HCI) is known as the apparent temperature of the human body which is used to calculate Human Heat Stress (HHS). This is how the human body feels effects of the combination of Relative Humidity (RH) and Air Temperature (AT). This index is very important for human health, recreation activities, human productivity, tourism, urban planning and etc. The trend of annual, maximum and minimum temperature have been continuously increasing in Sri Lanka (Rekha, 2012) and it might impact to the spatial changes of THI in the country. There are some limited studies carried out related to thermal comfort with temperature-humidity in Sri Lanka. Thambyahpillay (1954) has introduced a Bio climatic classification in Sri Lanka, but only two out of four climatic classifications were recognized namely as, Hot and Very humid and Warm and Very humid. Emmanuel (2004) mainly focused Thermal Heat Index (THI) in Colombo city and he found, THI continuously increased in day time as well as in the night time. But attempts of measuring heat stress used by annual average temperature and annual average relative humidity are rare in Sri Lanka and it seems to be an immense limitation in Meteorological analysis. The main objective of this study was to analyse the monthly, seasonally and annually heat stress (with related to the elevation) through THI to identify the comfortable zones in Sri Lanka.

Human Heat Stress (HHS) was calculated by Temperature Humidity Index (THI) with reference to the elevation of the country. As Sri Lanka is a tropical country, this index is more suitable. Generally, with increases of heat index the working capacity of the people can decline (McGregor & Nieuwolt, 1998).

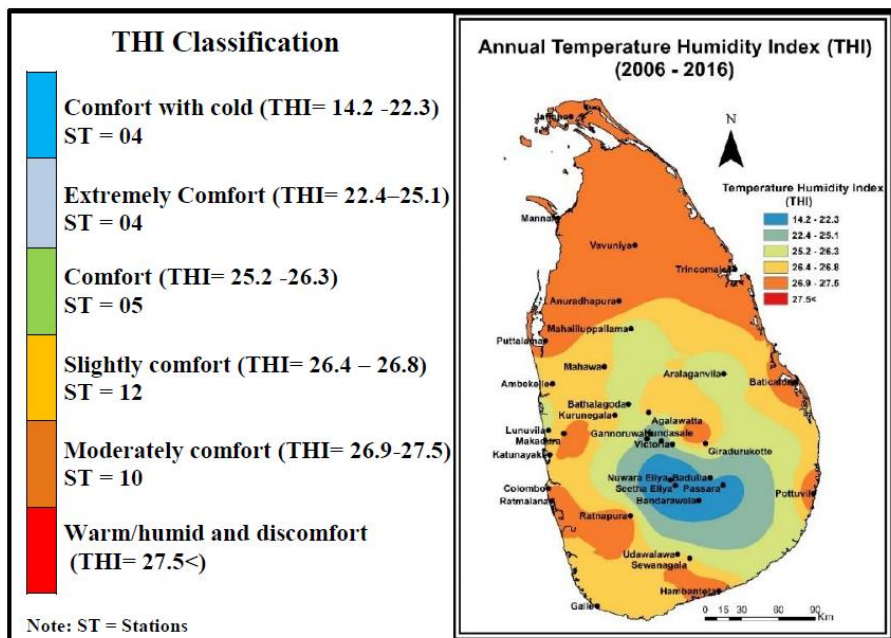
Temperature-Humidity Index (THI) is invented by Nieuwolt in 1975; $(THI=0.8T+(T \times RH)/500)$. THI values classify under three intervals;

- i. $21 \leq THI \leq 24 = 100\%$ of the subjects felt comfortable.
- ii. $24 \leq THI \leq 26 = 50\%$ of the subjects felt comfortable.
- iii. $THI > 26 = 100\%$ of the subjects felt un-comfortable and hot.

The research is based on the secondary data of RH and Temperature collected from the Meteorology Department in Colombo. HHS is calculated from 2006 to 2016 for 35 Meteorological and Agro-met stations for the entire country. Arc GIS 10.4: Interpolation analysis (Radial basis function and Universal Cringing Method) and Microsoft Excel have been engaged in data analysis.

Based on THI classification of Nieuwolt, this study has introduced new comfortable classification to Sri Lanka and a new Bio-climatic map for Sri Lank (Figure 1). The map and classification show the spatial variation of comfort zones and discomfort zones with respect to the elevation.

Figure 1: Classification of Temperature Humidity Index in Sri Lanka



Source: Author, 2017

The Comfort with Cold condition could be recognized in Central Highland (CH) i.e. Nuwara-Eliya, Seetha-Eliya, Bandarawela, and Passara with the elevation of greater than 1000 m. The Extremely Comfort level is gathered around CH i.e. Katugastota, Badulla, Kundasale, and Gannoruwa situated above 300 m elevation. Many of the stations are belong to the Slightly Comfort and Moderately Comfort level. Out of 35 stations, 22 stations belong to these two categories and situated in the Intermediate and Coastal zones in Sri Lanka. According to the annual THI values in Sri Lanka, the Warm/Humid and Discomfort range ($THI=27.5<$) has not been identified.

When considering the seasonal THI pattern, which shows the clear spatial variation with elevation of the country. Further, THI values are changing with the seasonal rainfall and wind pattern like *Kachchan* which occurs in the Eastern side of the CH. It is also found that the comfortable range has been changing along the slope of the CH. The reasons is that, in South western Monsoon (SWM) period western slope of the CH is more comfortable than Eastern slope, but in the North Eastern Monsoon (NEM) period both side of the CH are comfortable than the other seasons in the country.

Table 01: Seasonal variation of THI in Sri Lanka

Wet Zone						
Stations	Elevation (m)	Annual	NEM	FIM	SWM	SIM
Galle	4	26.5	25.9	27.2	26.7	26.3
Rathnapura	186	26.8	26.4	27.6	26.7	26.6
Kaugastota	752	24.2	23.2	25.3	24.4	24.1
Seetha-Eliya	1860	15.8	14.7	16.2	16.2	15.9
Nuwara-Eliya	1895	15.7	14.8	16.0	16.1	15.8
Dry Zone						
Jaffna	3	27.2	25.1	27.6	28.5	26.6
Trincomalee	12	27.5	25.6	27.6	28.8	26.8
Anuradhapu	84	27.3	25.5	28.0	28.1	26.9

ra						
Vavuniya	88	27.1	25.1	27.7	28.1	26.6
Kurunegala	116	26.4	25.1	27.2	26.8	26.1

Source: Author, 2017

The study revealed that when elevation increases the THI decreases in Sri Lanka. This theoretical relationship is clearly noticed between Jaffna and Nuwara-Eliya.

High THI values can generate the stressful and un-comfortable conditions i.e. costal and dry zones areas are noticed in this condition. The Extremely Comfortable environments are gathered around the Central Highlands. A comfortable environment is observed with increasing elevation. On the other hand, rapid decreases in THI values are also can create the Cold and Stressful environment. Monsoonal rainfall patterns are highly impact to the spatial variation of THI in the country. NEM period can be identified as a most comfortable season for every elevation levels. There is a strong relationship between elevation and Temperature Humidity Index in Sri Lank.

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**TRANSFORMATION OF RUBBER PLANTATION TO TEA
PLANTATION: CASE STUDY BASED ON BULATHSINHALA
DIVISIONAL SECRETARIATE DIVISION**

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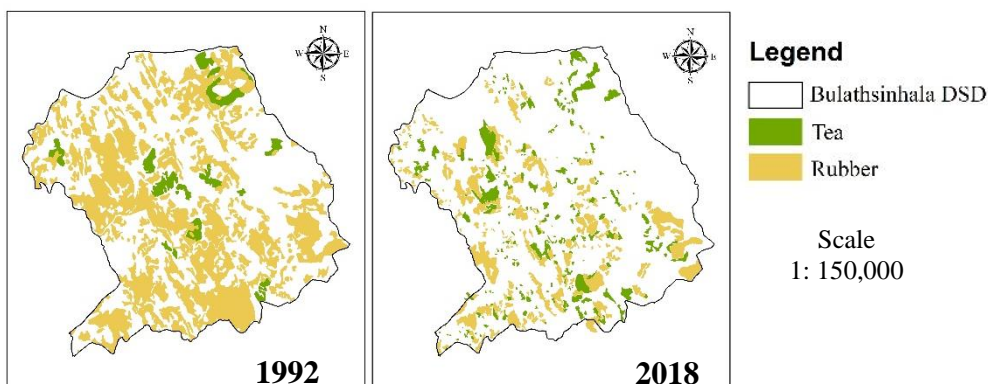
Sri Lanka being a tropical country, blessed with high rainfall and high temperature conditions where many plants can grow and many animals can make their habitation. The same environmental condition has become the main reason that Sri Lanka is still engaging in primary production activities, which is really good in a way of food security with in the country. Among many seasonal and perennial crops, rubber is one main exporting product that brings foreign income to the country. But synthetic rubber production has an impact on world natural rubber production. Latex or natural rubber industry along with rubber cultivating farmers have to take a risk when cultivating rubber in future. But comparing the quality of the products latex rubber remains the best. Even though it is the best synthetic rubber has made a huge impact on natural rubber industry of Sri Lanka.

Rubber plantation in Sri Lanka started in year 1876 and continues to be one of the main exporting product. Undulated terrain of the low lands along with good precipitation conditions and dry spells have supported the rubber cultivations to thrive for its peaks. With current economic trends and climate change effects, rubber industry of the country is becoming more unstable. People tend to move away from rubber converting to tea plantation. This can be seen in many parts of the country and this study therefore focused on identifying the trends of transformation form rubber cultivation to tea in Bulathsinhala Divisional Secretariat Division (DSD). There were around 3586 hectares of tea lands in 1982 in Kaluthara District which has increased up to 12,757 hectares in year 2013 as well as 47633 hectares of rubber lands have declined to 24,490 hectares in year 2013. (<http://www.statistics.gov.lk>, 2018)

Methodology of this study can be segmented in to three as in data collection, data analysis and data visualization. For data collection both primary and secondary data sources were used. One main focus was given identify the land use changes from 1972 to 2018 and different sources of data have been used for this. One-inch map of Panadura - Horana and metric map of Rathnapura were used to obtain secondary data for the land use patterns in years 1972 and 1992 respectively. Through the screen digitizing process, they were converted in to the digital format. Then the satellite images of Google earth applications were used to obtain the land use patterns of year 2018. Arc GIS 10.1 and Quantum GIS 2.8 were used as tool of digitizing. Secondary data from Rubber Development Department of Sri Lanka and Department of Census and Statistics were also used to support the argument. Questionnaire survey and the semi-structured interviews from the land owners (rubber and tea) were another main mode of data collection that have been used. Methods of *spatial analysis*, *overlaying* and *proximity calculations* were used as main data analysis tools in Arc GIS and measures of central tendency and dispersion were used as the other analytical techniques. Visualization of the results are mainly based on maps, graphs, charts and tables.

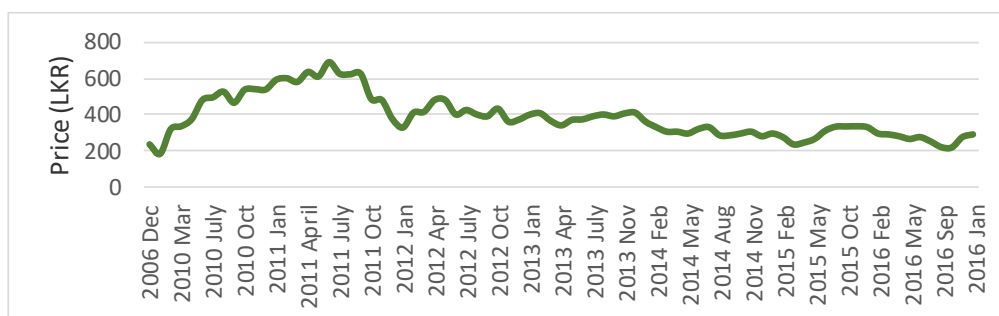
According to the figure 01 there were no tea cultivated areas in Kalutara District 1972. Main perennial crop dominant during this time was rubber along with paddy being the main seasonal crop. As given in the figure 01. In 1992 the emergence of tea can be visible in many parts of the DSD. In first, they were started as small scale tea and currently some of them have converted in to large scale tea plantation. There were around 839 hectares of tea land in year 1992, which has now extended up to 1194 hectares in 2018. There were about 8053 hectares of rubber cultivated lands in 1992 which were declined to 2421 hectares in 2018. There are two main reasons for the decline of rubber and one reason is the decline of rubber price in Sri Lanka. According to figure 02, the price was recorded as 689 rupees a Kg in the month of June 2011 and it has declined to 290 rupees in the month of January 2017.

Figure 01: Tea and Rubber plantation of Bulathsinhala in 1992 and 2018



Source: - Prepared by the author, 2018

Figure 02: Rubber prices of Sri Lanka from 2006 to 2017



Source: - Rubber Development Department of Sri Lanka, 2018

With this decline it is extremely hard to maintain rubber cultivation and earn profits from the rubber industry Sri Lanka. In contrast the growing tea industry has more stable and increasing price trend compared to tea in dusty. Cost of Production of rubber per kilogramme in 2002/03 is Rs-59.76 and it has increased up to Rs-266.41 in 2014/15. (<http://www.statistics.gov.lk>, 2018). Therefore, with the declining trend of selling price and the increasing trend of production cost, transform from rubber cultivation to tea cultivation in many parts of the wet zone. Prices of tea indicates an increasing trend but with fluctuations in some years. Land owners, revoked compared to rubber

tea cultivation is more profitable. Another reason to shift from the rubber cultivation is the changes of rainfall patterns in the wet zone. Community, clearly stated that the number of rainy days has increased from the past. According to the statistics, amount of rainfall did not indicate an increasing trend from the past. Anyhow, If the number of rainy days increase rubber harvesting an opiated. will not be possible. In addition to that to obtain good quality products from the rubber plant, day conditions are required. Polythene covers have been introduced as a solution for the wet conditions of rubber plantation, but stated with their experience that covering is not success solution for the wet condition of the plant. Since rubber plant absorb more water, the quality of the production declines. But analysis reveals that many of the rubber lands are converted to tea residence land to oil palm cultivation too.

Rubber being one of the main exporting primary production in the country indicates a declining trend from recent past. Main reasons for this declining trend are the decline of rubber prices and the changing climate. Even though the process of transformation incurs initial cost the conditions of living have become more sustain among the tea land owners. But many rubber lands have been transformed in to residential lands during past two decades owing to demand generated by of the area.

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INTENTIONS FOR DEFORESTATION OF WILPATTU FOREST COMPLEX

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Wilpattu Forest Complex (WFC) is the largest remaining forested land in Sri Lanka (Environmental Foundation Limited 2017). The WFC is comprised of a diverse range of ecosystems including dry deciduous forests, thorny scrub jungles and wetlands. This designated Ramsar site is made up of seven forest reserves, two sanctuaries and a national park namely: Wilpattu National Park, Wilpattu North Sanctuary, Marichchikaddi – Karadikkuli Reserved Forest, Thabbova Sanctuary, Veerakkulichol Sanctuary, Eluwankulam Proposed Forest Reserve, Veppal Forest Reserve, Mavillu Forest Reserve, Vilatthaikulam Forest Reserve. These protected areas, which fall under the mandate of the Forest Department and Department of Wildlife Conservation, form a contiguous flourishing ecosystem that sustains high levels of biodiversity, including species such as leopards, elephants and sloth bears (IUCN 2006). WFC bordering the northwestern coast of Sri Lanka, is an important ecological complex of global biodiversity. Wilpattu National Park (WNP) is the main constituent of WFC and it is only one part of the WFC. In effect, a number of peripheral forests and sanctuaries and WNP link up to create a large habitat that is more than the sum of its parts and these other lands include the Kallaru Forest, Wilpattu North Sanctuary, Thabbowa Sanctuary, Vilatthaikulam, Mavillu, and the Veerakkulicholai-Eluvankulama Proposed Reserve.

The overall aim of this study was to identify the major reasons for devastation of natural environment at WFC. Specific objectives were to find out the present situation, identify the existing management system and the affected reasons for the destruction of WFC after the post war periods.

In order to achieve the objectives of this study, the required data were collected both from primary and secondary sources. Primary data were

collected by field observations and key person's interviews. (Formal discussions were conducted with key persons who were in WFC). The other required secondary data collected using previous studies, related books, Internet, magazines and newspaper articles. One-inch maps (1:63000) published by the Survey Generals Department were used to locate the studied sites. Qualitative methods were used for data analysis and mainly descriptive analysis was used for that. The surface recognition study was carried out to record the archaeological sites and their present status.

The reality is shocking, giving a close-up view of the devastation and destruction of the oldest and the largest forest complex in Sri Lanka called Wilpattu. The devastation, tragically and unfortunately, has not been wrought by nature but by humans themselves, with cruel disregard for the immense repercussions. Identified illegal activities included logging, sand mining, the construction of houses and expanding the Pallekhandal church (Jayawardana 2015). Since 2011, deforestation has been taking place within the boundaries of the Maraichukkaddi-Karadikkuli, Vilaththikulam and Veppal forest reserves, with land being cleared for the alleged 'resettlement'. According to Google Earth images from 1984- 2015, 157 acres in Veppal, 700 acres in Vilaththikulam and 1351 acres in Maraichukkaddi-Karadikkuli forest reserves have been cleared and extensive forest clearing within demarcated boundaries of the reserves, along with the existence of completed and semi-completed housing schemes, makeshift roads and other infrastructure developments including electrical transmission lines stretching into the Vilaththikulam Forest Reserve. The threatened Northern habitat comprises ecosystems including wetlands, wet villu, mangrove, and freshwater ecosystems, containing 605 species of plants, 33 of which are endemic to Sri Lanka. The section provides habitat to 30 freshwater-fish species, 17 amphibian species, 57 reptile species, 149 bird species, 41 mammal species, and 86 species of butterflies (IUCN 2006). Human settlement of the WFC poses a direct threat to the conservation of all of these vital natural and other resources. 50 acres of resettlement area belong directly to Wilpattu North Sanctuary (Chamila Weerathunge 2017). Apart from the 50 acres of Wilpattu North Sanctuary, 2500 acres of deforested land is owned by the state, mainly by the Forest Department and partly by the Department of Wildlife Conservation. The initial stages of the settlement

projects led the Wildlife Department itself to initiate legal inquiry and the above-mentioned 2,500 acres of habitat land belonging to the state has been destroyed for human settlement in contravention of the Forest Conservation Ordinance. The study found that the Sponsored human settlement within the WFC began in 2010, following the 2009 construction of an illegal road on 300 acres of land, cutting through WNP and bridging the areas 'Eluvankulama' and 'Mollikulama'. This coastal road is also about 130 feet wide and has gone through archaeological sites such as Pomparippu (Change.org 2018). Another road runs through the forest from Eluwankulama to Pukulum cutting it in two. To build those roads hugging the coastline, bulldozers have destroyed sand dunes and coastal vegetation causing massive soil erosion. That second road is used with no regulations imposed on the activities inside the park. Vehicles travelling at unregulated speeds and killing wild animals, haphazard dumping of polythene and other forms of garbage. Human settlement commenced subsequent to the road's construction and has led to visible quickening of deforestation. The Pallekandalshrine itself predates the declaration of Wilpattu as a National Park in 1938. Today the vicinity of the church, which was surrounded by plants, and trees of the Wilpattu was now garbage. Empty plastic cans, polythene bags and wastage have destroyed the natural of the surroundings. Because of the feast was at church in 2016, more than 30,000 people attended and more space for the people to set up tents was given by cutting trees (Fonseka 2017). The footprints of elephants could be seen all over the place around the church. It proves that the elephants too roam in the church areas because it is their habitat.

From the results of this study, the researchers realized that without taking any legal actions to the destruction of natural environment at WFC would be a massive problem for both Sri Lankan forest reserves and natural resources. Illegal deforestation results in the destruction of habitat and the restriction to the movements of wildlife. Although the units remain empty at present, the housing project will result in an increase in the human population, which would in turn increase the stress to the surrounding resources. Clearing of the forest continues unabated with materials being brought in for the continuation of construction work and that damage the natural environment

indirectly. Under Section 20 of the Forest Conservation Ordinance, clearing of State forestlands as well as building roads, permanent or temporary settlements, growing crops and cutting down trees on such lands is illegal. Therefore, all the responsible parties should pay their attention directly for such destructions. Post-war, the internally displaced should be given housing regardless of their race, ethnicity or religion. First of all, the government should find out where they lived previously and relocate them to their original locations. At a time when green forests are being destroyed, allowing the WFC to be cleared to build houses is an environmental catastrophe. It is because there is no proper housing plan to accommodate, relocate and reinstate the internally displaced that a situation like this has arisen. Also the written permission must first be obtained after conducting a mandatory Environmental Impact Assessment (EIA) prior to clearing more than one hectare of forestland or prior to launching a project that seeks to settle more than 100 families on one occasion.

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PERCEPTION OF MANGROVE ECOSYSTEM DEGRADATION IN THE TROPICAL REGION: A CASE STUDY OF CHILLAW LAGOON IN SRI LANKA

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Mangroves are mostly distributed in lagoons, shores, bays and estuaries where land meets the sea. They receive salt water from regular tidal flushing and fresh water from streams and rivers and habituate between the mean sea level and the high-tide level on a substrate of mud and sand (Amarasinghe,1996). They are nursing grounds for much valued prawn (Pinto,1986). In addition, they serve as defense from the impacts of climate change, including sea-level rise and coastal erosion caused by surges and extreme weather events (Alongi,2001) and other biophysical hazards.

Recently, collapse of reproduction system of coastal fish and loss of their life-supporting resources are observed which are resulted by mangrove destruction. Therefore, mangroves are to be protected in order to maintain the balance of the coastal ecosystems in the tropics.

Objectives of this study were: to identify dominant flora and fauna species in mangrove eco-system; to explore the most threatened species; to assess the major causes for destruction of mangroves; its effects on the Chillaw lagoon and to propose measures to reduce destruction to mangroves in the area.

Chillaw lagoon, situated in Puttalam district in the North Western Province of Sri Lanka was selected as the case for this study. Data was collected for this study from both primary and secondary sources. The secondary data consisted of literature encompassing the theme. Primary data was collected through semi-structured interviews of 15 key informants and five local tourists selected at random in addition to extensive field observation conducted by the research team. Further 30 structured questionnaires were administered with five levels Lickert scale and analyzed using Excel application. Both primary and secondary data were analyzed through

thematic content analysis with text reading methodology (Thomas, & Harden, 2010).

Dominant true and associate species found by this study are: *Rhizophora mucronata*, *Bruguiera gymnorhiza*, *Bruguiera sexangula*, *Avicennia marina*, *Ceriops tagal*, *Xylocarpus granatum*, *Acrostichum aureum*, *Dolichandrone, pathaceae*, *Clerodendron inerme*, *Cervera odollum* and *Derris tritolitata*.

Aquatic fauna in the lagoon has also been degraded. Only nine out of 21 recorded species (Pinto,1986) found in the survey and two of them are threatened. Species found are: Kurutu Issa (*Penaeus semiculcatus*), Ilaththya (*Scatophagus argus*), Patha Madiya (*Plat fish*), Parava (*Caranx*), Mada Kakuluwa, (*Chiromamts sp*) and threatened species are: Kiri Issa (*Penaeus indicus*) and Kapu Handa (*Monodactylus argenteus*). Chillaw lagoon has been recorded as a place of migrant and native bird gathering place where 91 bird species are being recorded (Pinto,1986). However, in the field survey only three bird species have been recorded such as Punchi diyakawa (*Cittle cormornt*), Hadapalu diyakawa (*Indian cormornt*) and Ahikara (*Orientan darter*).

Field observation records that the most of the area of mangrove ecosystem in Chillaw lagoon has been degraded. According to key person interviews, all three locations are degraded heavily. It is highest in Velihena, less in Pambala and lowest in Ambakandawila. Four species of mangrove plants most distracted were analyzed. Accordingly, there is a variation in the level of destruction of species in various locations, for example, *Rhizophora mucronata* heavily destroyed in Pambala (60%) and Ambakandawila (50%), *Xylocarpus granatum* (50%) and *Lumnitzera racemes* (20%) heavily destroyed in Ambakandawila.

Courses for mangrove ecosystem destruction in Chillaw lagoon is three fold: shrimp farming, settlement establishment and timber mining. Accordingly, most effective cause is shrimp farming continued regularly from 1980s. Self-interest centered economic thinking and lack of environmental literacy are found to be the root causes of this ecosystem degradation.

Solution to the issue is found in environmental education, application of Polluter Pay Principle for regeneration of the ecosystem and rigid environmental monitoring by Central Environmental Authority. Participatory approach in this process of regeneration from planning to evaluation targeting at establishing sustainable production system is essential. The ecosystem needs to be managed with involvement of community organizations. Establishment of a buffer zone is an essential component of such plan.

Mangroves are valuable and sensitive ecosystems and in Chillaw, the same is highly vulnerable to degradation resulted by human activities centered in shrimp farming. Immediate attention is required to regenerate the ecosystem applying advanced environmental management principles with a participatory approach.

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CHANGES OF ECOSYSTEM SERVICE VALUE IN RESPONSE TO LAND USE/COVER CHANGE: A CASE STUDY IN HANTHANA AREA, UNIVERSITY OF PERADENIYA, SRI LANKA

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A dynamic complex of plant, animal, and microorganism communities and the non-living environment, interacting as a functional unit is defined as an ecosystem (MAE, 2005). The ecosystem consists of a community of organisms together with their physical environment. The people obtain many services from ecosystems to fulfill their needs. These include provisioning, cultural, regulating and supporting services (MEA, 2005). Quantifying and analyzing changes in ecosystem service values (ESVs) is an important tool to raise awareness, contribute to developing knowledge on management of natural capital (Costanza et al., 1997), improving decision making for allocation of scarce resources among competing demands, formulate policies (Kindu et al., 2016) and provide a stimulus to conserve the ecosystems that offer the most valuable services (Bateman et al., 2013).

Recently, several studies have employed remote sensing and Geographic Information System (GIS) based tools and techniques in ESVs calculation. Specifically, these studies have commonly used the Land Use/ Land Cover (LULC) maps, derived from the remotely sensed data. In such context, the present study calculates the ESVs and its changes (from 2003 to 2017) in a small part of Hanthana Mountain range, which is bordered by the University of Peradeniya, using Google Earth and GIS techniques. This study based on the find out the ESV changes in response to LULC in the area. Main objectives of this study are (1) map the land use, cover in Hanthana area, University of Peradeniya (2) calculate the ESVs and ESV changes (from 2003 to 2017).

The Hanthana Mountain Range lies in central province of Sri Lanka, south-west of the city of Kandy. The University of Peradeniya is located on the lower slopes of the Hanthana mountain range. The University covers about 700 hectares. The area where the main campus building is located, known as “University Park”. It covers about 150 hectares. The rest of the land remains forested, known as “Hanthana”. The study area covers more than 75% of the total landmass of the university area.

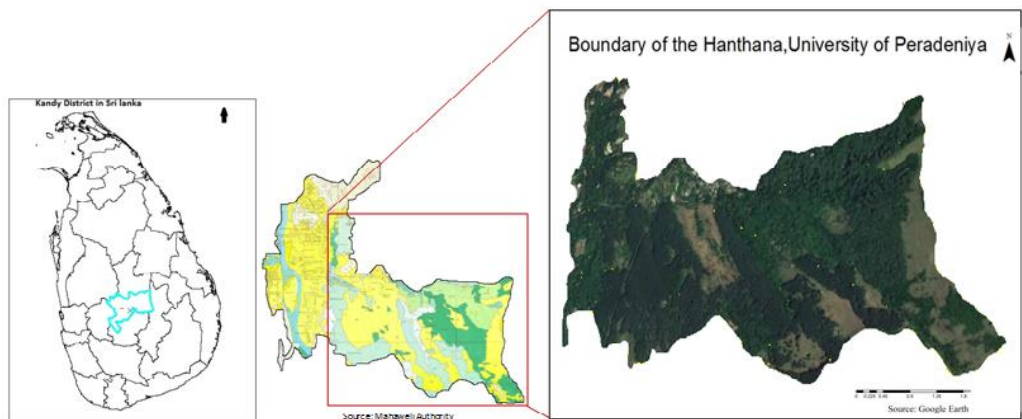


Fig. 1: Boundary of Hanthana Mountain range, University of Peradeniya, Sri Lanka.

In the study, secondary data were used in terms of structure of the study and limitations of the primary data. Land Use Data, Google Earth, GIS Data, an equivalent ESV coefficient and field data were used for the study. A 20m * 20m grid based land use map was obtained from the Google earth. Then, reclassified seven types of ecosystems based on the Land Use, Land Cover in the Hanthana area. The seven types ecosystems are, build area, water, secondary forest, pines, grasslands, cultivated area and bare land.

Costanza's Ecosystem Service Value Coefficients were used to identify and classify the Ecosystems in the study area (US\$/ha/year). The values for the

LULC types in each reference year were summed to estimate total ESV of the landscape of the reference year.

$$ESV = (\sum A_k * VC_k)$$

Where, ESV= total estimated ecosystem service value, A_k = the area (ha) and VC_k = the value coefficient ($\$ \text{ ha}^{-1} \text{ year}^{-1}$) for LULC type 'k'. The percentage ESV changes were calculated using following equation:

Percentage ESV changes

$$= \frac{(ESV \text{ final year} - ESV \text{ initial year})}{ESV \text{ initial year}} * 100\%$$

The land use, land cover data used in this study were extracted from Google earth and GIS images for the years 2003 and 2017. Prior to land use, land cover classification scheme that consisted of seven classes, namely build-up area, water, secondary forest, pines, bare land, cultivated areas and grassland was adopted.

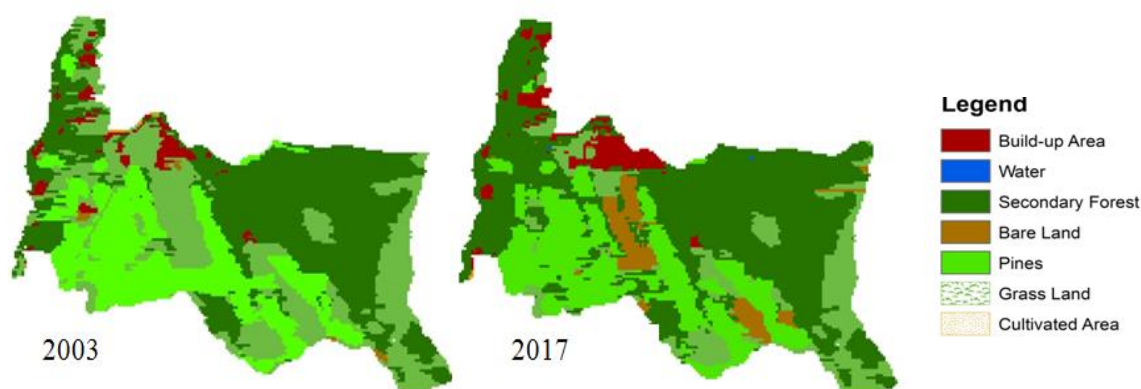


Fig 2: LULC change, Hanthana Mountain Range, UOP, Sri Lanka

LULC of secondary forest, bare land and build-up area have increased and grassland, pines, water and cultivated area have decreased from 2003 to 2017. Land classified as Build area increased by 49% during the period 2003-2017 in relation to the entire study area, this included a 56% increased as a result of the conversion of secondary forest to build area. The 117% area gained of bare lands, due to conversion of water into bare lands (7%) and 2% of secondary area has converted into bare lands from 2003 to 2017. Secondary Forest increased by 23% during the reference time period (from 215 ha. to 265 ha.), this included 47% increased as a result of the conversion of grassland to secondary forest, 26% of bare land to secondary forest and 30% of cultivated area converted as secondary forest. Secondary forest has extent 40% from the total study area and it has increased more when 2017 as 49% from the total landmass of the Hanthana. During the period of 2003-2017, grassland has decreased (from 156 ha. to 83 ha.) of the loss was owed to its conversion to 47% of secondary forest. 60% decreased because of cultivated area from 2003 to 2017 in the Hanthana study area; with 30% and 6% of decrease the result of the land has been converted to cultivated area and water, respectively. 130 ha. of pines area has decreased to 122 ha. within the reference time period.

According to the study, overall ESV of the seven types of the ecosystems has increased from 2003 to 2017 (from US\$730736 to US\$797329). During the time period, there was a increase in the ESV of the secondary forest brought about by a net gain in its area. It was US \$431399 in 2003 and US \$531156 in 2017. ESV of Cultivated area represented highest negative change. ESV of pines was US \$260237 in 2003 and it decreased into US \$245297 in 2017. ESV of grassland decreased by 47% during the reference time period, this included US \$38025 in 2003 to US \$20174 in 2017.

LULC of Secondary forest, bare land and build-up areas have increased and LULC of grassland, pines, water and cultivated areas have decreased from 2003 to 2017. The expansion of build-up area and bare land made the largest contribution to decrease in ESV, within 2003 to 2017 study period. It can be identified that the ESV changes has occurred in response to LULC in the Hanthana study area. The overall ESV of the seven types of the ecosystems has increased from US \$730736 in 2003 to US \$797329 in 2017.

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THE INFLUENCE OF RAINFALL ON PADDY PRODUCTION: A CASE STUDY IN MAHAWELI “H” ZONE

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Rice is the staple food and most essential cultivation crop for generating employment and income of the rural population in Sri Lanka. Rainfall variability is one of the most significant factors influencing year to year variation of paddy production, even in the high-yield and in high-technology agricultural areas. The main two cultivation seasons for paddy are practiced in Sri Lanka. From October to March is considered as *Maha* cultivation season and from April to September is considered as the *Yala* cultivation season (Domros, 1974). *Yala* gets its rainfall from the second half of the First Inter-Monsoon and from the South West Monsoon season, whereas *Maha* depends mainly on the rainfall from the Second Inter-Monsoon and North East Monsoon season. Yoshino and Suppiah (1984) have recognized four types of relationship between rainfall and paddy production of Sri Lanka, i.e. significant positive relationship, significant negative relationship, no significant relationship and significant positive relationship below certain critical values and no relationship above the values. Mahaweli H zone is situated in the Dry zone of the country and it has 51254 hectares in the land. Paddy cultivation is the key farming practice in Mahaweli H zone and the basic economy and food consumption are mainly depending on rice production. Seasonal variability of rainfall can change the seasonal and total amount of paddy production. It can decrease the income and the food security of the paddy farmers. The main objective of this study was to examine the relationship between rainfall and paddy production in Mahaweli H zone of Sri Lanka.

The study was based on monthly rainfall and paddy production data for the period from 1981 to 2014. The rainfall data were obtained from the Mahailuppallama Agro-Meteorological station which is situated in the Mahaweli H zone and paddy production data was obtained from the

Department of Census and Statistic. The correlation analysis was undertaken to find out the relationship between rainfall and paddy production. The linear regression analysis has been applied to observe the trends of rainfall and paddy production. MS Excel and Minitab software were used for data analysis.

The annual rainfall variation in the research area was displayed in figure 1. The highest annual total rainfall is recorded as 2143 mm in the year 1984 and lowest is recorded as 1001 mm in the year 1992 during 1981 to 2014. Even though no clear pattern was observed in the positive and negative rainfall anomalies but the rainfall variability seems to be rather higher in the study area. Annual rainfall has shown increasing trend during the study period.

The paddy production is higher in *Maha* season²³⁶ compare to *Yala* (figure 2). One of the main reasons for this increase is the considerable amount of rainfall has received in *Maha* season (average rainfall 958 mm). The paddy production of the *Maha* season was high in 2009-2010 and 2012 but 1981-1982 and 1989 it was less in Mahaweli H zone. In *Yala* cultivation season, less amount of production is recorded due to less rainfall (average rainfall 417 mm) in the *Yala* cultivation season. The *Maha* season average paddy production was 107600 mt (79%) and 28600 mt (21%) was in *Yala* season. The trends of *Maha* and *Yala* season paddy production have significantly increased in Mahaweli H zone during the period from 1981 to 2014 (figure 3).

²³⁶ Note: Maha season paddy production data is not available only in 2011

Figure 1: Variation of Annual Rainfall in Mahailuppallama

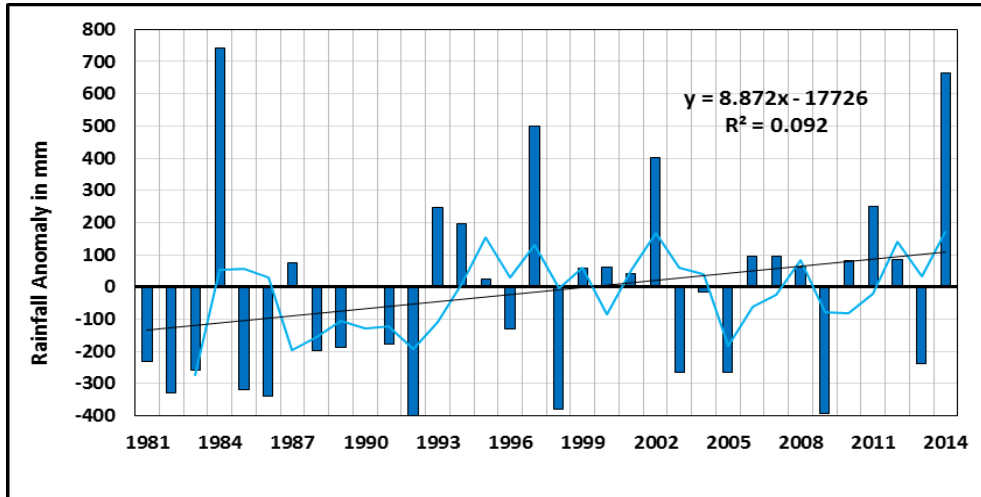


Figure 2: Paddy Production in Mahaweli H Zone

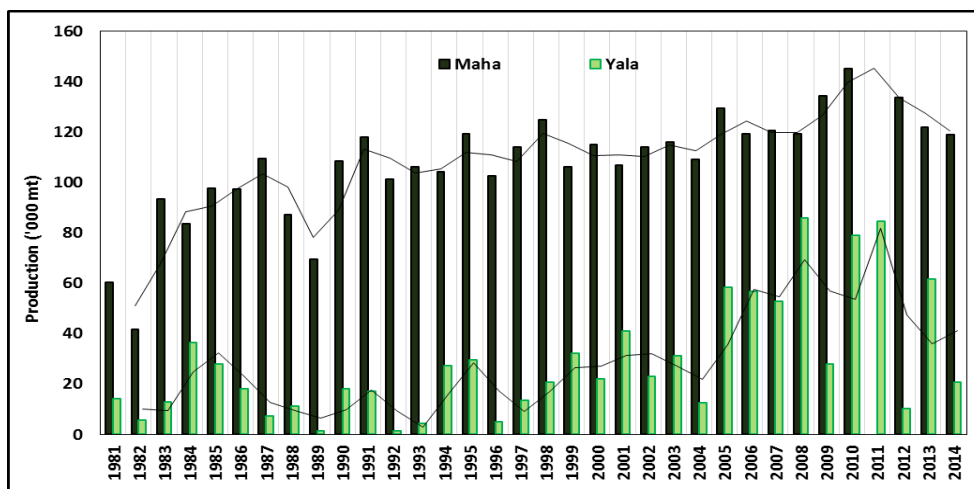
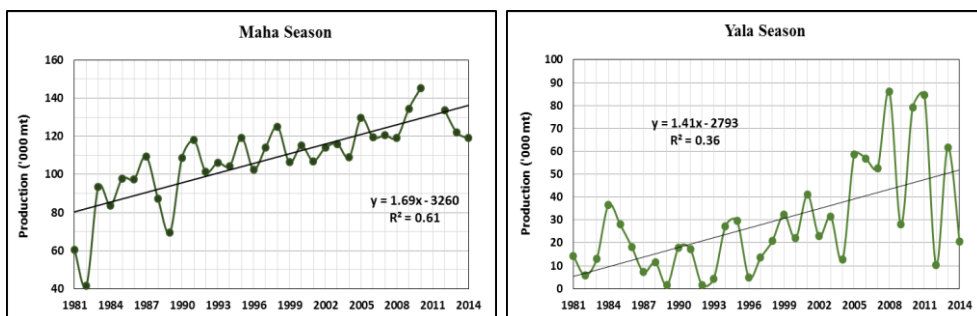
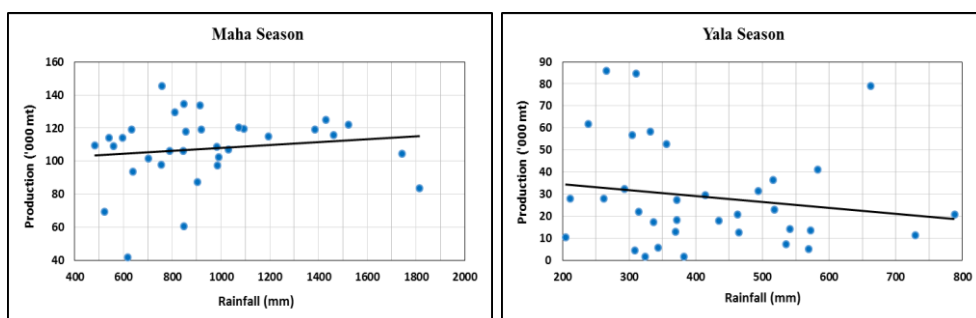


Figure 3: Trends of Paddy Production in Mahaweli H Zone



The relationship between rainfall and paddy production is shown in figure 4. There was a positive relationship between rainfall and *Maha* paddy production. The correlation value was 0.14 and which is not-significant ($P > 0.05$). The negative correlation identifies between rainfall and *Yala* season paddy production. The correlation value was -0.16 and which is also shown non-significant correlation.

Figure 4: Correlation between Rainfall and Paddy Production



Even though the variability of annual rainfall was high during the study period in Mahaweli H zone, the significant increasing trends were noticed in *Maha* and *Yala* paddy production. There was a positive relationship between rainfall and *Maha* cultivation season paddy production and negative relationship between rainfall and *Yala* cultivation season paddy production. There may not be a strong correlation between rainfall and paddy production in both cultivation seasons ($P > 0.05$). The contribution of proper irrigation (i.e. *Kala-wewa*, *Rajanganaya-tank*, *Yodha-ela* and etc.) water management system and fertilizer subsidies policy have also contributed to increase the paddy production in both cultivation seasons in the Mahaweli H zone.

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THE IMPACT OF SRI LANKAN FOLK MUSIC ON SRI LANKAN MUSIC COMPOSITIONS KNOWN AS OPERA

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The Sri Lankan version of western opera was introduced to the Sri Lankan audience in the mid-20th century by Maestro Kemadasa. With his productions *Manasa Wila*, *Dora Madala*, and *Agni*, Maestro Kemadasa established the tradition of making voices to international standards. Darshana Ruwan Dissanayake who is a prominent figure in field of Sri Lankan opera is continuing with the tradition introduced by Maestro Kemadasa. These two key individuals are known for the unique characteristics that they introduced to the field of opera. Those characteristics have their roots in folk music, folk songs and folk drum beats. While this kind of operatic music provided a new experience to the contemporary Sri Lankan society, it also paved a way for a new Sri Lankan music culture, which incorporated certain western musical elements associated with opera, to emerge. The western operatic aspects, such as Recitative, Aria, Ensemble, Chorus, Overture and libretto, can be seen in this Sinhala operatic compositions. The focus of the present study is therefore to identify the characteristics and aspects of Sri Lankan folk music that are embedded in the tradition of Sri Lankan opera. There is a dearth of literature on Sri Lankan opera and also on the influence of Sri Lankan folk music on that tradition. Lushan Bulathsinhala provides an account of Maestro Kemadasa's role in spreading opera to in Sri Lanka in his *Kemadasa Nyaya Bhavithaya saha Aragalaya* (2000). But he does not focus on Kemadasa's use of folk music in his Sinhala opera. In *Opera Vinisa*, Erick Illayaparachchi engages with the initial Sri Lankan compositions with a focus on the influence of the western operatic tradition, but he does not assess the influence of Sri Lankan folk music.

The present study adopted a qualitative approach. The literature survey included a survey of scholarly studies and secondary sources. Field studies were performed to identify and analyze the impact of folk music on Sinhala opera.

It is apparent that Maestro Kemadasa's *Manasa Wila* and *Dora Madala* was influenced by folk songs (*Sirasa Paada Kavi*, *Nelum Osaya*) and '*Pirith Huye Sannaya*'. The incorporation of original notations into Kemadasa's Opera can be described as follows.

Fig. 1. 'Hisa Muwa Thula' (Sirasa Paada Kavi) 6/8

G-G	GMP	M-G	GMP	M-G	GMP	M-M	PMG
GMP	MPG	G-G	GG-	S-G	-G G	G-G	MP-
---	---	---	MG-	GMP	MPG	G- -	G- -

<i>Hisa Muwa thula bella deura dethe dasengili</i>	<i>agine</i>
<i>Lamedu udara nabhi katiya deukula dekalawa</i>	<i>dedane</i>
<i>Kenda bolata depiti pathula dasengili dasaniya</i>	<i>agine</i>
<i>Suvisi munidu anuhasayen oba piripatha dura</i>	<i>harine</i>

The melody of this Sirasa Paada Kavi was the base for Maestro Kemadasa's composition '*Sakwalawa ira mudune thiyenne*' in *Manasa Wila*. The impact of this folk melody can be identified in the pattern of the notes in '*Sakwalawa ira mudune thiyenne*' composition, when compared with the original folk song.

Fig. 2. Patterns of notes in ‘Sakwalawa Ira Mudune Thiyenne’ composition by Maestro Kemadasa

G-G	G-G	G-G	GG-	G-G	MP-	-	-	-
R-R	R-R	R-R		M-G	GG-	MG-		
		GMP				---	---	

Sak walawa ira mudune thiyenne
Duk walawa sitha yata karakewenne
Yathuru lapuwehi dorawal erennei
Mithuru walahaka wessak wetennai

It is evident that Darshana Ruwan Dissanayake, Kemadasa’s successor, has also been inspired by Sri Lankan folk music. Darshana introduces his ‘Kadawara Yagaya’ to the Sri Lankan audience as “folk opera”. He has created the melody of ‘Mama Wem Mahath Thedethi’ of *Kadawara Yagaya* opera based on the melody of the *Thuranga Wannama*, a classical musical piece used in classical dance belonging to the Kandyan tradition.

Fig. 3. ‘Sath weth mahath adara’ (Thuranga Wannama) 5/8

S	—	P	—	P	—	P	<u>D</u>	P
M	—	P	—	M	G	—	R	<u>S</u>
S	—	R	—	G	M	—	<u>G</u>	R
<u>G</u>	R	S	—	—	—	—	—	—

Sath weth mahath adara — Lath yuth sidath kumaru
Gath sith thosath pevidi anga
Ana kaarana channayena — kanthakaya asu genena
Gena Edina asuge pita negga

The diagram below illustrates how he adapted the melody for ‘*Mama Wem Mahath Thedethi*’ of the *Kadawara Yagaya* opera.

Fig. 4. Pattern of notes in ‘*Mama Wem Mahath Thedethi*’ composition by Darshana Ruwan Dissanayake

S	—	P	—	P	M	—	G	R	G
M	—	G	R	G	S	—	R	S	N
S	—	R	—	G	M	—	G	R	R
G	R	S	—	—	—	—	—		—
								—	
								—	

There are more adducible illustrations, which portray the influence of folk music on Sinhala opera.

The above examples indicate that Maestro Kemadasa’s opera compositions have been influenced by folk and indigenous music patterns of Sri Lanka. It is clear that the different art traditions have evolved over the course of time, and the art form of opera has incorporated certain native concepts, styles and elements in the Sri Lankan context as part of that change. Although folk music has had a monumental impact on the form of Sinhala opera, it should be examined as to why that aspect has not been studied.

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SKELETONS IN THE CLOSET: POST-CONFLICT LANGUAGE POLICY PLANNING IN SRI LANKA FROM 2009 TO THE PRESENT

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The Language Policy Planning (henceforth, LPP) process in Sri Lanka is a key element in understanding micro-politics of creation, existence and transformation of 'nationalism' and 'ethnocentrism'; it has also been instrumental in altering the linguistic landscape of the country over time. Based on the contextual orientations and episodic relevancies, the process of LPP can be divided into three stages: Colonial LPP (1500s-1948); Post-Independent LPP (1948-2009); and Post-Conflict LPP (2009-present). It is evident that nationalism has been a key element in every stage of LPP. It has also created and shaped the contemporary debate of planning processes. The texture of pre-independent and post-independent LPP was largely influenced by linguistic nationalism,²³⁸ ethno-nationalism²³⁹ and ethnocentrism,^{240,241} and the policies were mainly designed for language status and corpus planning genres. Colonial language policy,^{242,243,244,245} in this context, was

²³⁸ DeVotta, Neil. *Blowback: Linguistic nationalism, institutional decay, and ethnic conflict in Sri Lanka*. (Stanford University Press, 2004).

²³⁹ DeVotta, Neil. "Sinhalese Buddhist nationalist ideology: Implications for politics and conflict resolution in Sri Lanka." *Policy Studies* 40 (2007)

²⁴⁰ See Dharmadasa, K. N. O. *"The people of the lion: ethnic identity, ideology and historical revisionism in contemporary Sri Lanka."* (Michigan University Press, 1989).

²⁴¹ Dharmadasa, K. N. O. "Nativism, diglossia and the Sinhalese identity in the language problem in Sri Lanka." *International Journal of the Sociology of Language* 1977, no. 13 (1977): 21-32.

²⁴² Coperahewa, Sandagomi. "The language planning situation in Sri Lanka." *Current Issues in Language Planning* 10, no. 1 (2009): 69-150.

²⁴³ Coperahewa, Sandagomi. "Language Contact and Linguistic Area: Sinhala—Tamil Contact Situation." *Journal of the Royal Asiatic Society of Sri Lanka* 53 (2007): 133-152.

²⁴⁴ Coperahewa, Sandagomi. "Purifying the Sinhala Language: The Hela Movement of Munidasa Cumaratunga (1930s–1940s)." *Modern Asian Studies* 46, no. 4 (2012): 857-891.

²⁴⁵ Coperahewa, Sandagomi. "The language planning situation in Sri Lanka." *Language planning in the Asia Pacific: Hong Kong, Timor-Leste and Sri Lanka* (2011): 160-241.

merely a policy aimed at creating a colonial bureaucracy to assist colonial administration. The end of the protracted civil war in 2009 emphasized the need for new LPP, as the context was more complex and unique unlike its historical antecedents. However, the role of nationalism remained unchanged, if not became more prominent, in the wake of the post-war glorifications and *neo-Sinhala ethnocentrism*²⁴⁶ that emerged as the ideological front of the moment. In this context, the demand for new language legislations was at the core of the reconciliation discourse, as it was envisaged that the government of Sri Lanka would provide a long-term strategic solution to the national issue.

The present study focused on the post-conflict LPP from three different standpoints: the state led legislative process;²⁴⁷ the contemporary political debate; and the socio-cultural discourse that supported and promoted both Tamil and Sinhala language planning demands. Thus, the study intended to answer the following research questions:

1. What was the progress of post-conflict language reforms implemented by the governments after 2009 to date?
2. How were the Sinhala and Tamil nationalist discourses instrumental in understanding post-conflict language planning in Sri Lanka?
3. What roles did the political and social movements play in enriching the LPP debate in the post-conflict LPP process in Sri Lanka?

Both qualitative and quantitative data collected via a document retrieval and validation process was used in understanding the number and types of language policies and circulars enacted by the Sri Lankan government and other external authorities. It was clear that there had been more than 30 public administration circulars issued under the subject of national language policy. Lessons Learnt and Reconciliation Commission (LLRC) in 2011 provided a series of recommendations to the government of Sri Lanka to implement certain language policies as part of a nationwide post-war reconciliation policy implementation process. A progress analysis of the

²⁴⁶ I use the term *Neo-Sinhala Ethnocentrism* as the elements of this phenomenon was significantly different from that of Bandaranaike or any other nationalist movements.

²⁴⁷ See Learnt, Lessons. "Reconciliation Commission (LLRC)" Report of the Commission of Inquiry on Lessons Learnt and Reconciliation", (November 2011)."

government strategic plan²⁴⁸ (Trilingual Sri Lanka) was initiated in 2012, but it has not shown a considerable development or an overall progress.²⁴⁹

Simultaneously, on the ground level of society, particularly in war torn areas, a neo-Sinhala ethnocentric situation emerged as a result of which existing political regimes and emerging extreme nationalistic movements became influential in changing the linguistic landscape of Sri Lanka and shaping language identities and social dynamics of non-dominant oppressed social groups. The post-war resettlement process initiated by the state created unrest between ethnic groups as it threatened the existing social and linguistic dynamics of individual communities and led to a loss of native linguistic habitats in the long run.

Testimonial evidence made before the LLRC Committee,²⁵⁰ public and parliamentary political debates on language reforms and media reports on language-based violence and evidence for hate-speech suggest the inadequacies of the post-war language policies, anomalies of advocacy-level implementations of such policies, and most importantly, growing ethnocentric extremisms and their effect on the peace building process in the Sri Lankan context. Based on the qualitative and quantitative research results, the analysis of the study is as follows.

First, this study examined the context and the composition of the post-conflict language planning process of Sri Lanka and how it was introduced and employed by the government. Second, the role of political and social movements in this debate, and the extent to which they actively contributed to the contemporary LPP debate is discussed. Third, the study investigated how Sinhala and Tamil political movements and nationalist groups shaped

²⁴⁸ See Rajapaksa Language Policy (RLP) in particular. Theoretically, RLP was focused on a trilingual policy, yet, had anomalies that showed inadequacies as it modeled after traditional language planning methods (Ferguson, 1962; Fishman, Ferguson & Das Gupta, 1968; Rubin & Jernudd, 1971) those argued widely by contemporary LPP theories, based on social justice, linguistic human rights and minorities (See Lidicott & Baldauf, 2008; Ricento 2000; Leibowitz, 2015).

²⁴⁹ See *LLRC Implementation Monitor Law & Governance Statistical and Analytical Review No. 3* of Verite Research

²⁵⁰ LLRC Archive, <http://www.llrcarchive.org/> last accessed; May 1, 2018, 03.07am

the discourse pertaining to post-conflict language policy reforms through agitation and how political and institutional authorities reacted to such demands.

Results of the study indicate that the Rajapaksa Language policy could not fully address the linguistic demands of the victimized communities in the long run. In addition to exploring the inter-relationship between nationalism and post-conflict language policy planning, this study also contextualized the epistemological and procedural use of nationalism in post-conflict language planning contexts in nations that were in the middle of post-conflict peace building processes.

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SILENT RETURN TO PENINSULA: REPRESENTATION OF TAMIL SILENCE OF WAR AND POST-WAR CINEMATIC DIALOGUE

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The thrust between Sinhala and Tamil communities in a par nationalistic mode has a history of more than five decades which sets it first step right after post-independence context. ‘Sinhala Only’ policy implemented in 1956 created a rupture between two communities creating a backdrop to a prolonged brutal civil war with mass destruction of both physical and ideological quarters of the contemporary Sri Lankan Society.

This social condition influenced in creating a new genre of literature, art, drama and cinema which theme and ideological representation was either war, or micro-politics of it. Cinema, for that matter, was a strong medium of interpretation of this situation as it was visually stronger to portray the landscape of the war. Year 2000, was a remarkable stage of contemporary Sri Lankan cinema, with the production of renown film ‘This is My Moon’ (*Me Mage Sandayi*) by Asoka Handagama which transformed the point of attention of war cinema from and iconic Sinhalese figure to a Tamil lead role. A character of an average Tamil lady with no name; refused to reveal her language, was is in a journey to south, plays a lead role of the film. The character being silent in most part of the film creates metaphors to the impact of cheering roars of war winning Sinhalese on her Tamilness. This character overlaps with similar characters found in ‘*Ini Avan*’ (2011) and ‘*Him, Her and the Other*’ (2018) later films by him²⁵¹ which discusses the reverse situation faced by a Tamil woman. However, all three films discuss how minorities and their voices decay with the presence of victory celebrations, cheering, and echoes of Sinhala Nationalistic war films.

²⁵¹ ‘Him, Her and the Other’ (2018) is a film directed by three directors, namely Asoka Handagama, Prasanna Vithanage and Vimukthi Jayasundara. It has three different narratives which dealing with the post-war situation of the country.

This study examines how ‘Active response-resistance silence’, which proposed by Priyantha Fonseka in his recent research on ‘Sri Lankan Cinema’ with some additions to Kennon Ferguson’s ‘Resistance Silence’, works in the context of post war cinema and how it reflects the Tamil representation in the North. Since, Tamil community share different cultural identities, this study also examines the discussion of Covarrubias and S. Windchief’s on silences. With those theoretical background, this paper compares three female characters portrayed in three aforesaid war-time and post-war films as symbols of Tamil nationalistic ideological representations. Ann Kaplan’s finding on voluntary mutism and Thomas Bruneau’s theoretical examination on socio-cultural silence re-examine in this study to apprehend the above characters within their socio-political territory.

This research based on two questions which arose after May, 2009, the brutal end of the three decade long civil war of the country.

1. How the notion of art (Cinema) identifies the representation of Tamilness and to which direction that perception inclined in a post-war context?
2. how the notion of Tamilness in cinema overlaps with the textual or socially attributed signifier of Tamilness in general?

To find out the theoretical answers for the above key questions this study basically reads the cinematic codes and connotations and the narrative line of the above three films as well as other key films which deal with the same disputes of the extent. This is an extension of the research on ‘Silence as a weapon’ and a mere attempt to identify how language is used or silenced in post-war cinema in contexts of pre-existing nationalistic hegemonic zones.

Despite parallels with other parts of the world in similar situations, the particular kind of silence is a unique manifestation in the Sri Lankan context, proliferating and reproducing over contemporary, recent and historic social, political and religious cultural spaces, forcing to cast stereotyped representation in cinema and other contemporary arts.

The Tamil girl’s character in ‘This is My Moon’ and ‘Tamil Woman’s character in ‘Him, Her and the Other’ confirmed the suggestion by

Covarrubias and S. Windchief in *Silences in Stewardship: Some American Indian College Students Examples* (2009), that silence is a method of preserving one's culture. Further, Thomas Bruneau's observation in *Communicative silences: Forms and functions* (1973) that silence is a tool in the hands of the powerful and unleashed towards the weak and the subordinates as a measure of control is unsettled in preference to argue the exact opposite of it: that silence is a shield of the marginalized and the vulnerable, behind which they feel safe, as also suggested by Cheryl Glen in *Unspoken* (2004) and Kennan Ferguson in *Silence: The Politics* (2011).

In parallel to Ferguson's argument from a feminist point of view that the weak is feminized by authority, both 'the Tamil girls' in 'This is My Moon' and 'Ini-Avan' and 'Old Tamil Woman' in 'Him, Her and the Other' are feminised as opposed not only to the 'masculine' authority of the 'other's' religion and state but also to the same authorities of their own territory. In terms of gender, religion, language and culture all the Tamil female characters occupy a liminal space. Ferguson's contribution towards 'resistant silence' is particularly useful in this context.

Anyhow, Silence did not limit itself to a protective shield. It also becomes a powerful weapon against the very perpetrators of their oppression. The female Tamil characters, therefore, are armoured with the shield of silence, which also is their weapon, which we saw them using in subtle and crafty strokes against the otherwise unassailable. As we note that silence is capable of being the weapon of a weak, we are prompted to believe that silence is no longer the cinematic expression of a particular individual, as Fonseca suggested.

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ECONOMIC EFFECTIVENESS OF COAL POWER PLANTS IN SRI LANKA: EVIDENCE FROM LAKVIJAYA COAL POWER PLANT

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Lakvijaya coal power station is the first coal fired power station in Sri Lanka. It consists of three units each having a 300 MW capacity. Unit 1 of Lakvijaya power station commissioned in 2010 under Puttalam Coal Power Project (PCPP) phase-I while the units 2 and 3 were commissioned in 2014 under Puttalam coal power project phase-II.

Existing literature supports to look into the economic viability and the effectiveness of having various kinds of energy generation ways including coal power plants. According to a study conducted by Ujam & Diyoke (2013) based on economic viability of coal based power generation of Nigeria mainly found that coal combustion technology is economically, less risk and technically viable option for power generation in Nigeria. Luschen & Madlener (2013) found that cost-effectiveness is strongly influenced by prices for biomass, coal and CO₂ permits. Synder & Kaiser (2008) based on ecological & economic cost-benefit analysis mainly found that economic and ecological costs of offshore wind power are site specific & these costs can be mitigated with current technology and detailed site selection. Hence, this study examines the economic effectiveness of Lakvijaya coal power plant in Sri Lanka.

There is a criticism on Lakvijaya power station due to frequent breakdowns stating that project is not successful and failed to gain the expected economical benefits to the country. Therefore, it is expected to check whether these two projects are economically effective.

This study uses a financial cost-benefit analysis and a cost-benefit analysis for non-valued and non-quantified effects to examine the economic effectiveness of the coal power plant. In financial cost-benefit analysis, the research compared the net benefit of the projects on expected power generation at the designed stage and actual power generation by the power station. Since the base year was taken as 2010, the expected and actual calculations were conducted from 2010. Energy generation data were collected for PCPP-I and PCPP-II from 2010 to 2017. The cost is compared where the cost of energy generation from diesel and the cost of energy generation from coal in order to find out the net benefit of coal power generation. Since the unit costs of these two categories have been calculated by Ceylon Electricity Board, those data were extracted for the calculations of this study. The net benefit of coal power generation can be calculated using following equation.

Net benefit of coal power generation = cost of energy generation from diesel power plants – cost of energy generation from coal power plant

Net Present Value (NPV) can be calculated using following equation.

$$NPV = \sum_{t=1}^T \frac{C_t}{(1+r)^t} - C_0 \longrightarrow (1)$$

Where, NPV is Net Present Value, C_t is net benefit gained from replacing diesel power generation with coal power during period t , C_0 is total initial investment cost, r is discount rate (r is taken as 8%), t is number of years.

cost-benefit analysis for non-valued and non-quantified effects was conducted by considering socio-environmental and economic aspects over diesel power plants.

Financial cost-benefit analysis:

Since diesel power plants have to generate the same amount of energy in the case of absence of coal power plants, (the electricity demand has to be supplied by diesel power plants if coal power plants are not constructed) the

cost of energy generation from diesel power plants is 21 Rs/kWh. Meanwhile unit generation cost of coal power is taken as 9 Rs/kWh according to CEB calculations²⁵². Hence, the calculations which are related to cost- benefit analysis can be shown as follows.

Net benefit of coal power generation = cost of energy generation from diesel power plants – cost of energy generation from coal power plant

$$\text{Net benefit of coal power generation (per unit)} = 21 \text{ Rs/kWh} - 9 \text{ Rs /kWh} \\ = 12 \text{ Rs/kWh}$$

Based on this net benefit, NPV can be calculated through main categories (Expected and Actual).

It was expected that the plant would generate 60% out of its total capacity per year. For example, per year PCPP-I will generate $300 * 1000 * 24 * 365 * 0.6 = 1.58$ billion kWh units. If the coal power plant had not been constructed all these units would have been generated from diesel power plants at a 21 Rs /kWh instead of 9 Rs /kWh. Therefore the net benefit for a year will be $12 * 1.58 = 18.92$ Rs. billion. Investment cost for PCPP-I was 59.2 Rs. billion in 2010. Therefore NPV for 2011 is calculated as $\{18.92 / (1+0.08)\} - 59.2 = -41.6$ Rs. billion. Likewise, NPV was calculated for each year from 2011 to 2019.

Table 1: Expected Results of Cost Benefit Analysis

	year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Energy Generation (billion kWh)	PCPP-I		1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58
	PCPP-II					0.86	3.15	3.15	3.15	3.15	3.15
NPV (Rs. billion)	PCPP-I		-41.6	-25.4	-10.4	3.52	16.4	28.3	39.4	49.6	59.1
	PCPP-II					-120	-87.2	-57.1	-29.3	-3.54	20.3

²⁵² Diesel and coal unit cost were taken as average cost for last 10 years according to CEB statistical digests 2010 to 2017. Therefore, these values are real values (not discounted values).

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Although it was expected a 60% out of the total capacity per year, it varied due to breakdowns and other reasons. In actual case analysis, the same calculation was conducted considering actual power generation data. For example, in 2011 although the expected power generation is 1.58 billion units but it had generated only 1.04 billion units. Same calculation was conducted for PCPP-II as well taking the investment cost as 129.19 billion Rs. in 2013.

Table 2: Actual Results of Cost Benefit Analysis

	year	2010	2011	2012	2013	2014	2015	2016	2017
Energy Generation (billion kWh)	PCPP-I		1.04	1.40	1.47	1.32	0.72	0.82	1.72
	PCPP-II					1.88	3.72	4.65	3.92
NPV (Rs billion)	PCPP-I		-47.6	-33.2	-19.2	-7.54	-1.66	4.53	1.66
	PCPP-II					-108	-70.0	-25.7	8.89

As per the results PCPP-I has paid back its investment cost in 2016 that is five years after the completion of the project. However, if the plant had generated the expected output (60%) it could have paid back the investment cost in 2014. Similarly, PCPP-II has paid back the investment cost in 2017 and it is 2 years earlier than the expected payback year. The mentioned payback years were taken as the years in which NPV > 0.

Cost-benefit analysis for non-valued and non-quantified effects (non-financial analysis):

Effect	Diesel Plant	Coal Plant
Environmental emission	- -	- - -
Noise Pollution	- - -	- -

Sea water pollution	0	--
By products	-	++
Energy source security	---	--
Reliability of power plant	+++	+
Stability of world market price	---	0
Operation Flexibility	+++	+
Resettlement	0	--

According to above analysis there is no much significant difference between net beneficial effect from diesel plant and coal plant.

According to financial cost-benefit analysis, these two projects can be identified as financially viable. If the power plant was not constructed, the expenditure on diesel power plants could have increased dramatically and then have an adverse effect. As the lifetime of a coal power plant is about 25 years, recovering its investment cost in less than five years have a positive impact on the economy. During the remaining 20 year period electricity can be provided at lower price which leads to have less production cost and then sustain industries. Along with these, the other positive impacts are decreasing the money incurred on oil importing, attracting the investment from overseas, and having favorable impact on the Balance of Payment (BoP). According to non-financial analysis there is no much significant difference between net beneficial effect from diesel plant and coal plant. Therefore, the coal power plant can be identified as economically effective considering both financial and non-financial impacts together. Hence, further development of coal power plants can be recommended to cater for the escalating electricity demand in the country.

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LEADERSHIP STYLES AND ORGANIZATIONAL CULTURE: A COMPARISON BETWEEN PRIVATE AND PUBLIC BANKS IN THE KANDY DISTRICT

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Organisational culture and leadership styles are integral components that lead an organisation to meet the organisational objectives. As Gardner (1993) defines “leadership is the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives held by the leader and his or her followers. He also identified three types of leadership styles as *Transformational Leadership*, *Transactional Leadership* and *Passive-Avoidant Leadership*. Shein (2004) interprets the *organisational culture* as “a pattern of shared basic assumptions that a group has learned as it solved its problems of external adaptation and internal integration that has worked well enough to be considered valid and therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems”. He shows four types of organisational cultures as *Clan Culture*, *Adhocracy Culture*, *Hierarchy Culture* and *Market Culture*.

In the literature, leaders have to behave according to the situation matching to the situation and subordinates with whom they are dealing. Leaders who precisely identify followers’ needs will be more effective than those who are able to distinguish one situation from another (Arnold, et al. 2010). Transformational leaders change their culture by first understanding it and then realigning the organisation’s culture with a new vision and a revision of its shared assumptions, values, and norms (Bass and Avolio 1993). It stresses that leadership style is prominent to the organisational success. Lunenburg and Fred (2011) identifies four distinctive culture types as family culture, machine culture, cabaret culture and “little shop of horrors” culture. He also describes the process of organisational socialization and the change cycle of the organisational culture and emphasises that culture is created by means of terminal and instrumental values, heroes, rites and rituals and

communication networks. Therefore, concerning the relationship between leadership styles and organisational cultures is very crucial.

The aforementioned three types of *leadership styles* were measured using the MLQ 5x (Multifactor Leadership Questionnaire) which consists of 45 items and was developed by Avolio (Bass and Avolio 1997) and Bass while the data for *organisational culture* was collected employing *Organisational Culture* Assessment Instrument (OCAI) that has 24 items and was developed by Cameron and Quinn (Cameron and Quinn 2006). A self-developed demographic questionnaire was employed to gather basic information of the participants. In the process of data collection, informed consent was respected. Data were collected from a sample of 100 participants as 40 managers/assistant managers and 60 subordinates using Convenience Sampling technique from 6 banks as 3 private banks and 3 government banks in Kandy district. Both questionnaires provided quantitative data and gathered data were analysed using SPSS.

The analysed data provided the following results. Table 1 indicates a significant correlation between the present *market culture* and transformational leadership ($r = .206$, $p = .039$)

Table 1

		Transformational Leadership
Average of Present Market culture	Pearson Correlation	.206*
	Sig. (2-tailed)	.039
	N	100

Note: * $p < .05$, ** $p < .01$

Further, Table 2 depicts two significant correlations between the *preferred clan culture* and *Passive-Avoidant leadership* ($r = .199$, $p = .047$) and between the *preferred clan culture* and *transformational leadership* ($r = .202$, $p = .044$).

Table 2

		Passive-Avoidant leadership	Transformational Leadership
Average of	Pearson Correlation	.199*	.202*
Preferred Clan Culture	Sig. (2-tailed)	.047	.044
	N	100	100

Note: *p < .05, **p < .01

The MLQ 5x also measures extra effort, effectiveness and satisfaction. The combination of extra effort, effectiveness and satisfaction is called outcomes. The results showed strong significant relationships between transformational leadership and outcomes ($r = .644$, $p = .000$), between transactional leadership and outcomes ($r = .582$, $p = .000$) and between *Passive-Avoidant leadership* and outcomes ($r = .202$, $p = .044$). Moreover, there was a significant relationship between *preferred clan culture* and outcomes ($r = .248$, $p = .013$).

The researcher also tried to check statistical differences of leadership styles and organisational culture; private banks versus public banks. Thereby, there was a significant difference of *Passive-Avoidant leadership* between private banks ($M = 2.05$, $SD = .78$, $t = 3.14$, $p = .002$) and public banks ($M = 2.48$, $SD = .55$, $t = 3.14$, $p = .002$). The results denoted that *Passive-Avoidant leadership* characteristics can mostly be seen in the public banks than the private banks.

In order to discuss the findings, the study supported the study of Tsai and Yofang. The organisational cultures were significantly (positively) correlated with leadership behaviour and job satisfaction, and leadership behaviour was significantly correlated with job satisfaction (Tsai and Yofang 2011). The study also showed a significant relationship between the transformational leadership and the present market culture. It advocated the findings of Schimmoeller and Bass and Avolio (Bass & Avolio 1993; Schimmoeller 2010). The study was also matched the findings of Mozaffari and Amin that there is relationship between *organisational culture* and *leadership styles*;

the congruence between organisational culture and leadership styles (Mozaffari and Amin 2008). It is evident that there is a positive correlation between *leadership styles* and organisational culture types. Moreover, leaders' behaviour influences on organisational culture. It leads to the success of a particular organisation.

The research interpreted that there was a significant correlation between *leadership styles* and *organisational culture*. Thus, the organisational leadership should develop transformational and transactional leadership traits for making a *clan*, an *adhocracy* or a *market culture* in the organisation. The study also figured out a difference of leadership styles and organisational culture; the private banks versus the public banks. Hence, the public organisations or the banks should make necessary changes to see a better productivity and a better efficiency in the organisation. Further, leaders should consider the other pertinent factors that would affect for the successful changes of the organisation. In concern the above factors, the present study is essential for the modern financial field.

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THE RELATIONSHIP BETWEEN EXCHANGE RATE AND INFLATION OF SRI LANKA

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The exchange rate is considered as an important instrument of macroeconomic policy in an economy whether it determined by policy or exogenous shocks. The relative value of currencies and their volatility often have significant effects on inflation, and overall economic performance. Concerning this, Sri Lanka engages in a continuous and extensive economic liberalization process since 1977. Exchange rate and inflation control have been integral components of macroeconomic policies since the liberalization. Even though, with fluctuation, Sri Lankan currencies depreciating over time since 1977, the inflation shows high fluctuation over the periods of this study.

The literatures on this issue have evolved in the last few decades provide with mixed results. While some studies found adverse relationship between exchange rate and inflation (e.g. Onyekachi and Onyebuchi, 2016) and some other studies report a positive relationship (e.g. Thaddeus and Nnneka, 2014). Moreover, some studies do not found any significant relationship between these two series (e.g. Abdurehman and Hacilar, 2016). This indicates that there is no consensus among the researchers regarding the relationship between exchange rate and inflation. The assessment of the relationship between ER and inflation is inadequate and limited in the context of Sri Lanka. Thus, this study attempts to fill this gap by investigating the ER and inflation nexus in the context of Sri Lanka.

This study adopts purchasing power parity theory to explain the relationship between ER and CPI in Sri Lanka. The major argument of the purchasing power parity model is that; ER determination depends on the levels of

relative prices. The implication is that in every change in price level, ER also changes. The theory attempts to explain the equilibrium value of the ER in terms of differences in inflation rate between two countries. In this regard, it assumed that ER of currencies of two countries move in a way that seek to offset the inflation differential between the two economies thereby maintaining real purchasing power of the two currencies.

Annual data of Sri Lanka over the period of 1977 to 2016 has been employed for this study. The data of exchange rate (ER), consumer price index (CPI) which is the proxy for inflation, money supply (MS), real gross domestic product (RGDP) were obtained from World Development Indicator (WDI) of the World Bank data base. All the variables are transformed in to natural logarithm. ADF and PP unit root test methods were adapted to test the order of integration. Akaike Information Criteria (AIC) is utilized to determine the optimum lag length of each series. The Johansen co-integration method requires that the all of variables should be integrated in same order to find out the long run relationship between the variables. However, our results shows that different variables have different order that contains $I(0)$ and $I(1)$, which suggests us to use alternative co-integration method. Thus, we employed Autoregressive distributed lag (ARDL) Bounds testing procedure to examine the existence of long run relationship between the variables.

The results of ADF and PP unit root test indicate that the variables are integrated in order zero (LER) and order one (LCPI, LGDP, LMS). AIC confirmed that to use ARDL (1, 1, 3, 3) model for this analysis. The Wald test result confirms that there is a long run relationship between ER and other variables under considered in this study due to the computed F-statistics (5.38) greater than the upper bound critical value (4.35) at 5% level of significance.

The long run relationship of the corresponding ARDL model is presented in Table 1 (in panel A). The estimated coefficient of the long run relationship shows that CPI has a positive and statistically significant (at 5% level) relationship with ER in the long run. An increase in inflation by 1% leads to 1.34% increases in exchange rate whiles all things being constant. However, the results of short run coefficients show that (in panel B), CPI and MS have

negative and significant impact on ER. An increase in inflation by 1% decreases the exchange rate by 1.44% in the short run. As well as, an increase in money supply by 1% tends to decreases exchange rate by 0.07% whiles all things being constant.

Table 1: The results of ARDL (1, 1, 3, 3) model

Panel A: The results of long run coefficients				
LCPI		LGDP	LMS	R ²
1.335* (0.027)		-0.422 (0.951)	-3.101 (0.152)	0.806
Panel B: The results of Short run coefficients				
Lag order	ΔLER	ΔLGDP	ΔLCPI	ΔLMS
0		0.004 (0.50)	0.034 (0.92)	0.008 (0.11)
1	0.237 (0.37)	0.003 (0.23)	0.510 (0.20)	-0.023 (0.46)
2			-1.437 (0.02)*	-0.07 (0.02)*
3			-0.116 (0.79)	0.001 (0.33)
Panel C: The results of diagnostics test				
Serial Correlation (LM Test $\chi^2_{(df)}$)				Prob. = 0.795
Normality Test (Jarque-Bera)				Prob. = 0.636
Heteroscedasticity (BPG Test)				Prob. = 0.754
Omitted variable (Ramsey's RESET)				Prob. = 0.124

Note: Probability values are given in the parenthesis *, ** represents the variables are statistically significant at 5% and 10% level of significance respectively.

Source: Authors' calculation

The Lagrange Multiplier test of autocorrelation advocates that the residuals are not serially correlated. According to the Jarque-Bera test, the null hypothesis of normally distributed residuals cannot be rejected. The Breusch-Pagan-Godfrey test of heteroscedasticity suggests that the disturbance term in the equation is homoscedastic. The result of Ramsey RESET test confirms

that there is no specification error in the estimated model (See Table 1, Panel C above). The CUSUM plots lie between the lower and upper critical bounds at the 5% level of significance, which indicates that the stability of the parameters.

This study concludes that the both co-integration approach to ARDL and error correction method of ARDL passed all the diagnostics and the stability test. The Wald test confirms that the variables are co-integrated. The CPI affects the ER positively and significantly in the long run and in the short run. Lagged value of MS negatively affects the ER in the short run. Therefore, Sri Lankan government and the central bank will have to pursue monetary and fiscal policies to be a panacea for a sustainable macroeconomic stability in Sri Lanka.

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CAUSALITY BETWEEN SAVINGS AND GROWTH IN SRI LANKA AFTER ECONOMIC LIBERALIZATION

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The importance of saving in economic analysis as well as in policy-making is widely accepted. Only Handful number of studies has been conducted regarding Savings and Economic growth. However, it can be observed that the importance of Savings has been emphasized in most of the studies and books related to economic development. Those works include “Development under stress” by Kelegama (2006) and “Dilemmas of Development” by Lakshman (1996) etc. Despite these descriptive studies, only few empirical studies have been found and in those also it was hard to find a study which attempted for an econometric analysis which tests the causality between savings and economic growth.

Comparing the Sri Lankan economy with other East Asian Countries, Ahmed and Ranjan (1995) pointed out that “Another major weakness in Sri Lanka has been the low domestic saving rate. The average saving rate of about 13% of GDP in Sri Lanka compares quite poorly with saving rates of over 30% in Malaysia, 25% in Korea, in Thailand and 25% in Indonesia.” A similar study has been conducted Hevia and Loayza (2013) from World Bank in order to find the relationship between savings and growth but it is limited to some trend analysis and simple regression analysis. Their main aim was to analysis the tendencies of growth and savings after the civil war and to find the reasons behind those fluctuations. They have not concerned the two-way relationship between Savings and Economic growth. Our study attempts to fill that gap through a comprehensive time series econometric analysis which takes in to account the period from 1977 to 2016.

This study focuses on the relationship between the rate of change of the Gross Domestic output and the rate of change in the savings. In both variables, monetary value will be taken. My research problem may thus be

summarized by two principal questions: (1) Can that relationship be interpreted as a causal linkage? (2) If so what is the direction, is it from savings to growth or from growth to savings? It should be emphasized that the main purpose of this study is not to find the determinant of the National output of the economy, but to solve the dilemma of whether savings causes economic growth or economic growth causes savings in the context of Sri Lanka.

Annual Data for 40 years' time span from 1977 to 2016 belongs to Sri Lanka has been occupied in the empirical analysis sourced from World bank data base of World Development Indicators. Since the most of the studies used Log of current values in US dollars of Gross Domestic Savings (LGS) and Gross Domestic Products (LGDP) as the proxies for economic growth and Savings, this study also utilized them in order to achieve its objective. And the following abbreviations are used to denote the terms when building up the model of Granger Causality Test and Co integration analysis.

In the initial step, stationarity of each time series data was tested using the Augmented Dickey Fuller (ADF) including a constant in to the model as each and every line graph of the series shows an intercept in it. To obtain more robust results, Phillips Perron (PP) Test and as well as Kwiatkowski–Phillips–Schmidt–Shin (KPSS) test have been conducted to find the stationarity of the time series LGDP and LGS. According to the results obtained ADF test statistic is higher than the critical values at 5% level of significance for both first differenced time series DLGS and DLGDP, and therefore we reject the null hypothesis that the time series has a unit root, which means that both time series are stationary at their first differenced and can be termed the variables LGDP, LGS as $I(1)$ s. The other tests conducted namely Phillips Perron (PP) test and as well as Kwiatkowski–Phillips–Schmidt–Shin (KPSS) test have given the same results. So in level form LGDP and LGS time series are not stationary, but in their first difference form they became a stationary.

Since both time series are integrated in same order, Johansen co-integration test is employed to test whether the series are co integrated or not. Before doing the cointegration test, optimum lag length is selected based on the

Akaike Information Criteria (AIC), which suggested to use one lag as optimum lag for this model. And other criteria also have given the same optimum lag length.

Johansen cointegration approach proposes two different likelihood ratio tests to investigate the cointegrating relationship between the variables under considered in this study which trace test and maximum Eigen value test. The results of both test depicts that there is one co integrating equation between the variables, which clearly says the existence of long run relationship between LGDS and LGDP. As we have used only one independent variable, Bivariate Granger causality can be applied to evaluate the Causality between LGDP and LGS. The results are given below:

Table 1: The Results of Pair wise/ Bivariate Granger Causality Test

Null Hypothesis	F statistic	Probability Value
DLGS does not Granger Cause DLGDP	3.19610**	0.0381
DLGDP does not Granger Cause DLGS	0.25919	0.8542

Note: ** indicates significance at 5 % level of significant

According to the above table, since the probability value (0.0381) is less than 5 percent level of significant, the null hypothesis of DLGS does not Granger Cause DLGDP can be rejected which implies that savings Granger causes GDP. Secondly, null hypothesis of DLGDP does not Granger causes DLGS cannot be rejected since probability value of 0.8542 is higher than 5 percent level of significance. This means that GDP does not Granger causes savings. Accordingly, it can be identified only unidirectional causality relationship between savings and economic growth. That is, savings causes economic growth but economic growth does not facilitate savings.

This study does not prove bidirectional causality between savings and economic growth. However, it has been found that there is an impact on

economic growth by savings. But economic growth does not influence savings. This relationship is positive but weak according to the results. What could be the reasons behind this weak positive relationship? One can argue that Keynesian “Paradox of Thrift” can be applicable for Sri Lanka. However, we have found out a positive relationship. In order for economy to grow, saving must be converted into investment. However, there is no ensured mechanisms through which savings transfers to productive investments which stimulate economic growth. As Bagawathi (1996) pointed out the savings can be mobilized for unproductive investments such as gold and land purchases. Further there could be inefficiencies in the financial systems which prevents channeling savings into investment. The rigidity of financial system may not allow the savings to flow into proper investment packages. Unfavorable macroeconomic conditions and especially civil war which was ended in 2009 may have discouraged savings which may have weakened the relationship between savings and economic growth.

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ROLE OF GENDER IN COMMUNITY BASED MANGROVE MANAGEMENT IN PUTTALAM LAGOON IN SRI LANKA

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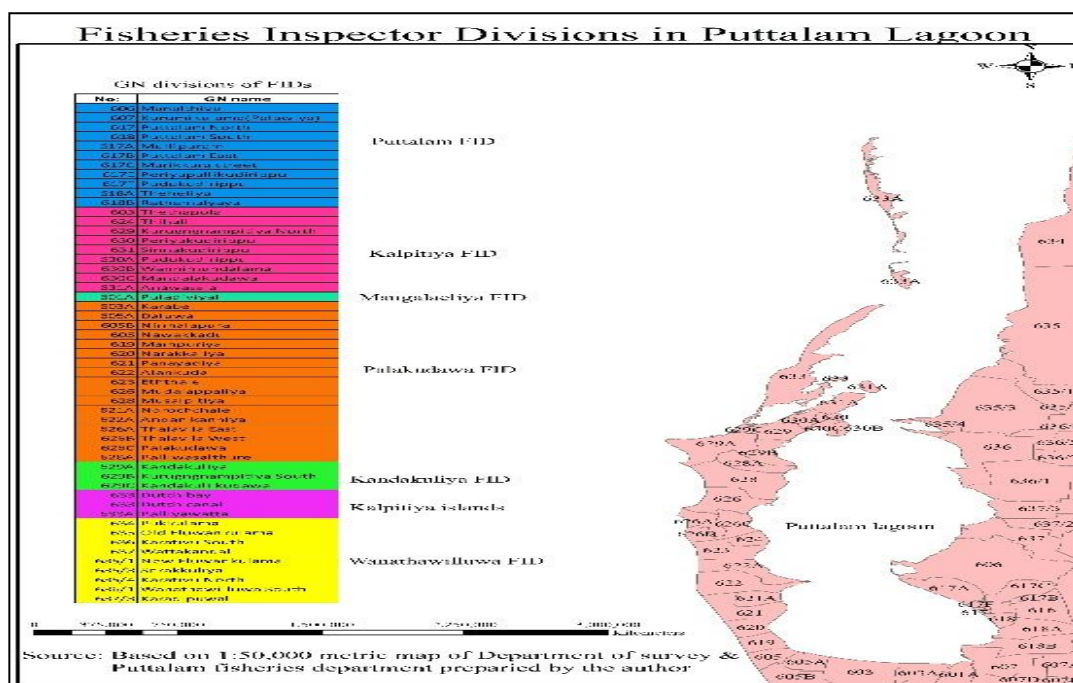
Environmental management is one of the most concerned topics that discusses thoroughly throughout the world. Due to the rapid increasing environmental problems along with the exponential growth of population, the goal of environmental management has become difficult to achieve. This is significant in most of developing countries including Sri Lanka. Mangrove management is one of the most stressed problems associated in tropical countries such as India, Philippine, Indonesia, Congo, Nigeria, Malaysia, Myanmar, Vietnam, Bangladesh and Sri Lanka. Therefore, most of the countries have applied Community Based Mangrove Management (CBMM) programs to re-green the coastal peripheries with mangroves due to their invaluable various ecosystem services (Spalding *et al*, 2010; Stone *et al*, 2008). In the process of CBMM, the role of gender is an important aspect that influences the success of the programme to vary. The way that men and women interact with the environment is different. Hatfield (2000) mentioned the environment, and development has particularly stressed that women's work is often linked to the environment. However, there is little information on gender in natural resource management or environment management (Bagsit and Jimenez, 2012). Agarwal's (2010) regular findings also showed the failure of men's group to become involved in environmental management.

Most of the studies have emphasized (Siar, 2003; Maliao and Polohan, 2008) the difference between men and women in mangrove resource utilization. In contrast, studies have shown little attention on the role of gender in the success of CBMM. The current study focused to 'the role of gender' in CBMM as a critical point in coastal environmental management. Specifically, the study aimed to determine the gender roles in the protection and management of mangroves and the success

of the goals of CBMM in Puttalam Lagoon where the most degraded and largest mangrove forests located in Sri Lanka.

The study was carried out in the Fisheries Inspector Divisions (FID) located around the Puttalam lagoon. Eastern periphery consists of Wanathavilluwa and Puttalama FID while Palakudawa, Kandakuliya, Kalpitiya and Kalpitiya islands are the FIDs in the Western periphery (Fig.1). A small area of Puluthivayal Grama Niladari Division, belonging to Mangalaeliya FID identified closely to Karabe. A pre-tested questionnaire survey was done for a sample of two hundred randomly selected individuals; 100 males and 100 females per se, live along the coastal periphery of each FID. CBMM was examined by having non-structured in-depth group discussions and interviews for randomly selected hundred individuals. Secondary data were acquired from past published literature where literature-based review also done. Data analysed via MS excel version and base map for the study area was created by applying GIS mapping techniques.

Fig1: FIDs in Puttalam lagoon



Socio-economic figures such as education, employment and residence and income levels reported in the questionnaire survey showed comparatively

significant differences among FIDs, which in turn important to CBMM. CBMM has been launched by the involvement of government and non-governmental organizations. Two main broader objectives of CBMM were (i) restoration of mangroves due to the importance of mangrove belts, (ii) increase household income; particularly targeted marginalized women. Those who actively participated in CBMM were received small-scale grants; Seacology delivered 2000 loans and repayment level was 96% (Discussion with Seacology, 2017). This could be identified as a 'win-win situation'. Throughout the programme, women were the most active as their primary purpose was to increase their livelihoods. Men and women benefited vary from CBMM programme. Men value finfish species, prawns and crabs living offshore while women tend to value mussels, clams and other invertebrates supported by mangroves in the intertidal zone (Siar, 2003).

A total of 178 respondents had participated in CBMM. Women's performance as 'green teams' to do CBMM duties was comparatively higher than men. During the plantation period, 92% of participants reported only from women. At the very first men and women, both participated for CBMM in Puttalam lagoon, gradually men lost their interest and reduced their participation from 48% to 22% as they have regular employment activities where Bagsit and Jimenez (2012) also identified the same situation in Philippine. In contrast, women participation has increased up to 78%. In-depth interviews revealed that men's inability to protect post plantations. This was significant in the western periphery of the lagoon as the majority of them were engaged in brackish water fishery. Respondents from Kalpitiya FID expressed these mangrove belts contracted the space necessary for their boat yards and ad hoc landings. Some men deliberately damaged mangrove plants for short-term benefits. Younger males were found not to be interested in mangrove management. A handful of women have participated under pressure. Lack of support from their household was an issue encountered during the in-depth interview was proved by literature too (Jimenez, 2004).

The study found and emphasized the dramatic role played by women in CBMM programme in Puttalam lagoon area where the role of men appeared as inactive. The goals of CBMM have achieved in some standard extent; the survival rate of

restored mangroves was ranged from 65% to 80%. Livelihood enhancement temporarily achieved and most of the women in the uppermost western periphery were identified as unemployed. The contribution of fisheries organizations and community involvement, particularly women's participation have greater potential to sustain a successful environmental development project in the area.

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THE RIGHT TO INFORMATION VS. THE RIGHT TO PRIVACY AND CONFIDENTIALITY UNDER COMMERCIAL ARBITRATION IN SRI LANKA

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Commercial arbitration refers to an alternative dispute resolution mechanism where parties consent to submit any conflict arising out of a contractual relationship to neutral arbitrators. This has become the most increasingly used dispute settlement machinery among the commercial community²⁵³. One of the most appealing features which makes arbitration more popular than litigation is the privacy and confidentiality of the hearings of arbitration proceedings.²⁵⁴ Under the notion of privacy, the parties are entitled to be heard in camera while confidentiality relates to an obligation to not to disclose any information without the consent of the relevant party. This concept was used for the elementary purpose of protecting unpublished commercially sensitive information and intellectual property rights. Though Sri Lanka was the first South Asian country to enact a law on arbitration, the privacy and confidentiality of the arbitration has not been given statutory protectionism through the Arbitration Act No.11 of 1995. This obligation is only recognized as an institutional rule in Sri Lanka²⁵⁵. Consequently, it had been recognized as one of the major drawbacks in the Sri Lankan Act.

The 19th Amendment to the Constitution of Sri Lanka happened to be a remarkable transformation in the legal history of the country. It introduced a new provision to the Constitution recognizing the Right to Information (RTI) as a fundamental right²⁵⁶. Moreover, the enactment of the Right to Information Act No. 12 of 2016 further strengthened the public RTI. The Act

²⁵³ International Arbitration Survey: Corporate Choices in International Arbitration- Industry Perspectives 2013

²⁵⁴ International Arbitration Survey: Corporate Choices in International Arbitration- Industry Perspectives 2013

²⁵⁵ ICLP, Article 16

²⁵⁶ Constitution of Sri Lanka, Article 14A

confers a wide authority for the public to seek information from a number of public authorities while the definition given to 'public authority' is also a broad one. This situation had led to the question whether the public RTI overrides a private party's right to privacy and confidentiality, especially where the State is a party to arbitration. Therefore, it is a timely requirement to study the impact of the new RTI law on privacy and confidentiality in arbitration.

Objectives

- Conducting an assessment of the current legal regulation and quantum of privacy and confidentiality provided for the parties to arbitration in Sri Lanka.
- Assessment of the scope and the nature of recently enacted RTI laws.
- Evaluating the impact of the RTI law on the right to privacy and confidentiality in arbitration
- In case if the RTI law overrides the privacy and confidentiality of arbitration, legal reforms are to be suggested to include the concept as a part of the arbitration process in order to balance the competing interests.
- Conducting a comparative analysis on how the other democratic jurisdictions effectively balance the RTI while protecting privacy and confidentiality of arbitration.

The study was conducted utilizing both library based and field based research techniques. Field research was conducted utilizing the qualitative data, where experts in arbitration, human rights, legal practitioners and policy makers were consulted in semi-structured interviews. Reference was made to a large collection of library sources with special reference to foreign jurisdictions in order to understand the significance of balancing public and private rights relating to arbitration. Primary sources such as legislation, case law and International Instruments as well as secondary sources such as books, journal articles and internet sources were used.

The foremost outcome of the research suggested that the public RTI would override a private party's rights in commercial arbitration in Sri Lanka. RTI has been given Constitutional and statutory recognition whereas the right to privacy and confidentiality is neither guaranteed by the Constitution nor the

arbitration law. The experts suggested that since there is no clear standing as to which right should get priority, constitutionally protected RTI would get priority. Further they suggested that privacy and confidentiality can claim priority if the arbitration is conducted between private parties. When it comes to an arbitration proceeding connecting the State, there shall be an obligation to disclose the information about the arbitration for the purpose of protecting constitutionally guaranteed RTI. In such situations, the confidential information provided during arbitral proceedings can now be attacked using RTI in Sri Lanka.

When it comes to the situation in Australia, originally commercial arbitration laws didn't provide protection of confidentiality. Attention must be drawn to **Esso Australia Resource Ltd vs. Honourable Sydney James Plowman**²⁵⁷, where the High Court of Australia held that the arbitration process is generally held in private but complete confidentiality is unachievable in arbitration and even if there is an express term for duty of confidentiality in the agreement, a common law or a statutory duty to declare and disclose such information to the public would prevail over the contractual term. In the case of **Commonwealth of Australia v. Cockatoo Dockyard Pty Ltd**²⁵⁸, it was held that if the government is a party to arbitration, the mere imposition of a duty of confidentiality would not undermine the government's duty to account to the public. Therefore, for the purpose of balancing the right to privacy and confidentiality of parties to arbitration, Australia made certain drastic alterations to their statutory law on commercial arbitration.

Comparatively, India also has a very strong legal regulation for freedom of information. However, in the case of **Rama Aggarwal vs. Delhi State Legal Services Authority**²⁵⁹, a landmark Order dated 08.08.2015 was made by the Chief Information Commissioner. It was held that even though the RTI Act of 2005 definitely overrides the provisions of the Arbitration and Conciliation Act of 1996 in India, the confidentiality attached to the conciliation process by Section 75 of the Arbitration and Conciliation Act

²⁵⁷ (1995) 183 CLR 10

²⁵⁸ (1995) 36 NSWLR 662

²⁵⁹ (2015) CIC/SA/A/2015/000305

should be protected and Public Information Officer was not bound to disclose the information related to a conciliation process. Though this Order is related to conciliation, it can be taken as a green signal that if a special statute provides provisions for privacy and confidentiality, such protection may prevail notwithstanding any contrary provision in RTI law.

Even though complete privacy and confidentiality is unachievable, it is evident that accepting this as an integral right in commercial arbitration has become significantly imperative. Recognition and proper codification of these concepts through statutory amendments would provide some sort of protection to the commercial community. Further, a regulatory body could be established with the objective of evaluating and balancing the public RTI and privacy and confidentiality where the State is a party to arbitration. Sri Lanka needs to pay serious attention to the above suggestions if it is to become a hub of commercial arbitration. If the private parties are deprived of their privacy and confidentiality, it would result in an utter failure of the commercial arbitration system as well as the promotion of Sri Lanka as a seat of arbitration.

Keywords: Commercial Arbitration, Right to Information, Right to Privacy and Confidentiality

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**FOUNDATIONAL FAILURES IN JURISPRUDENTIAL
LEGITIMIZATIONS OF CAPITAL PUNISHMENT:
A CRITICAL ANALOGY OF THE UTILITARIAN AND
RETRIBUTIVIST THEORIES AND THEIR USAGE IN THE SRI
LANKAN DEBATE**

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Capital punishment - the deliberate killing of a supposed or actual offender for an offense - is a habitually debated topic throughout history and across different societies in legal and political spheres. Execution of criminals and political opponents has historically been a part of the justice systems of many societies, and presently, state execution of persons who have committed the most heinous of crimes is recognized as a form of legal punishment in many countries. States have autonomy in determining their capital punishment laws despite numerous international standards and these laws do not exist in a vacuum. It is imposed for a wide array of crimes, such as murder, espionage, treason, sexual crimes, drug trafficking, human trafficking, serious cases of corruption, mutiny and insubordination, and the act of punishment itself varies and takes forms such as hanging, electrocution and lethal injection.²⁶⁰

The most prominent objectives of capital punishment are deterrence, retribution, and closure²⁶¹, and there are strong arguments to propose and oppose their feasibility. These discussions have received a great deal of attention in the jurisprudential literature, and many philosophers have responded in various ways to the questions that arise.

²⁶⁰ Geoffrey P. Goodwin¹, Dena M. Gromet. Punishment. <https://cpb-us-w2.wpmucdn.com/web.sas.upenn.edu/dist/c/183/files/2016/08/Goodwin-Gromet-2014-Punishment-WIREs-1pg0imh.pdf>

²⁶¹ Essays, UK. (November 2013). Determining The Morality Of Capital Punishment Philosophy Essay. <https://www.ukessays.com/essays/philosophy/determining-the-morality-of-capital-punishment-philosophy-essay.php?vref=1>

The jurisprudential concerns that are popularly invoked to justify the execution of certain types of criminals can be categorized into two broad theories: utilitarianism and retributivism. The consequentialist utilitarian conception justifies punishment in its repercussions and recognizes that punishment has consequences for both the offender and society²⁶² to hold that the total good produced by the punishment should exceed the total evil. Being the counterpart to the utilitarian theory of punishment, retributivism looks backward at the transgression as the basis for punishment²⁶³ and as a measure to protect the legitimate rights of both society and the offender, and offenders are punished contingent to what they offender deserve.

The paper firstly aims to discuss the features of both utilitarian and retributivist theories of punishment, secondly to analyze their justifications of death penalty and how they have been utilized to justify the enforcement of death penalty in Sri Lanka, and finally to identify the foundational failures of those justifications and claims.

Objectives:

- Assessing the theories of punishment and their objectives in utilitarianism and retributivism.
- Evaluating the particular validations of capital punishment in utilitarianism and retributivism, and how those justifications have been used in the current debate on capital punishment in Sri Lanka.
- Identifying the common and specific formational flaws in those validations.
- Critically analyzing how such fundamental defects in justifications to capital punishment invalidate its objectives.

A library research was employed for the collection of primary data which expedited a broad, qualitative appreciation of the research topic. An in-depth analysis was conducted through reference of secondary sources including journal articles, commentaries of contemporary jurists and study reports on

²⁶² Anders Breivik. Theories of Punishment. <https://bengarrido.com/2015/11/04/theories-of-punishment/>

²⁶³ Robert A. Pugsley. Retributivism: A Just Basis for Criminal Sentences. <https://scholarlycommons.law.hofstra.edu>

the implementation of capital punishment and the ongoing debate on its resumption in Sri Lanka.

The discussion is firstly focused on the utilitarian and retributivist theories of punishment and their significant features, the objectives of punishment and the differences between the two theories. Secondly, it aims to emphasize the particular justifications of capital punishment in the two aforementioned theories and the employment of those justifications in the contemporary debate on the enforcement of capital punishment in Sri Lanka. Some general and specific formational defects of those validations of death penalty are identified and analyzed towards the end of the discussion along with the pragmatic considerations with particular emphasis on the Sri Lankan context.

The dominant defenses of capital punishment provided by the utilitarian and retributivist theories are riddled with several formational imperfections for being based on presumptions which indicate logical, functional and realistic defects. The validations of capital punishment as assimilated by this duo of theories; deterrence, denunciation, vengeance, rehabilitation, closure and vindication, are not idealistically and realistically attainable if and when such presumptions are proven to be substandard. Hence, this conceptual vagueness demands a broad interpretation by cautious legislative agencies on the preconditions of state execution as a form of legal punishment, considering its irrevocability. Death penalty has been adopted, abolished and reintroduced in Sri Lanka for several times and it has been decades since a Sri Lankan prisoner has been put to death. However, the contemporary debate in Sri Lanka on the enforcement of capital punishment reflects both utilitarian and retributivist justifications for its retention and resumption and is therefore flawed due to the conceptual imperfections inherent in those theories.

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THE ROLE OF CINKAIYARYAN I IN ESTABLISHING THE JAFFNA KINGDOM – A HISTORICAL PERSPECTIVE

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Jaffna kingdom is stated as a kingdom which was established by the Aryacakkaravarties having Nallur as its capital in the 13th century A.D. It covered the Jaffna peninsula and its surrounding islands, some parts of Vanni, Mannar and Trincomale. This kingdom reached its highest development in the 14th and the 15th centuries and fell down at the beginning of the 17th century. The literary sources (e.g., Yalpana Vaipavamalai, Kailaya Malai) indicated that the 1stCinkaiyaryan who came from the decedent of Aryacakkaravarties' were the founders of the Jaffna kingdom and worked for its development. This reveals that, the king 1stCinkaiyarian is as a crucial ruler and the king in the development of Jaffna kingdom.

Although a lot of literatures explain about the Jaffna kingdom, we used some of those very important literary sources. These literatures can be categorized in to three manner based on the methodology. The first types of the authors (e.g., Samuel John, 1879 (History of Jaffna); Mathakal Maylvaakanapulavar (Yalpaana Vaipavamalai); Sathasivampillai (re-edition of Yalpaanavaipavamalai) and Muthuthambipillai (History of Jaffna)), who do not have historical experience, have written books using myths. The second types of researchers (e.g., Muthaliyar Rasanayakam, 1926 (Ancient Jaffna); Swami Ganapirakasar (Critical analysis of Jaffna) used archaeological evidences and they had somewhat experienced about the Jaffna kingdom. These books are more ensured than the 1st types of books since these books are supported by the Archaeological evidences. Last types of authors (e.g., Indrapala, 1972 (The Origin of the Jaffna kingdom); Pathmanathan, 1974 (Jaffna kingdom) and 2011 (A concise history of the Jaffna kingdom); Sitrampalam, 1992 (The Jaffna kingdom which includes the collection of the different research articles)) are used their academic knowledge and experiences to explain about the Jaffna kingdom. All of these books contain valid data regarding the

origin of the Jaffna kingdom. Therefore, we used these books as a supporting evidence to examine the role of 1stCinkaiyaryan in establishing the Jaffna kingdom in the historical perspective since none of the studies are not considered in this view.

This study employs both primary and secondary sources to achieve our objective. Primary sources consist both Tamil (e.g., Yalpaana Vaipavamalai, Kailaayamalai, and Vaiyapaadal) and Sinhala (e.g., Culavamsa) primary literary source and the archaeological evidences (e.g., Sasana and ruins of buildings). The books (e.g., Ancient Jaffna, Critical History of Jaffna, Origin of the Jaffna Kingdom, Jaffna Kingdom, and Concise History of Jaffna Kingdom) and research articles (e.g., Pathmanathan, 1992; Sittamplam, 1992; Pusparatnam, 1992) are used as secondary sources. Finally, field visit was made to former capital city (Nallur) of the Jaffna kingdom.

Cinkaiyarian I and ther Aryacakkaravarti rulers of Jaffna kingdom:

With the help of Yalpana Vaipavamalai, it is possible to collect the names of the Aryacakkaravarti's of the Jaffna kingdom, who ruled the Jaffna until the invasion of Senpakaperumal on this kingdom. According to the Yalpana Vaipavamalai, nine kings were ruled the Jaffna kingdom. Among them, Cinkaiyaryan was the 1st king of this kingdom. Since one of his hands was abnormal, the king Cinkaiyaryan, who established the Jaffna kingdom, is called as Koolankai Cakkaravarti and/or Vijayakoolankai Cakkaravarti. Nevertheless, he also called as 'Ceyaveera' which can be seen from the Kailayamalai whereas Vaiyapaadal indicate that 'Ceyathunkaveeravararaasasinkan' as his name. In addition, Pathmanathan also in his research states that all these names were used to denote the first ruler of the Jaffna kingdom. Thus, 1stCinkaiyaryan who was known by different names was the first ruler and the founder of the Jaffna kingdom.

The origin of the Jaffna kingdom and the 1stCinkaiyaryan:

The 1stCinkaiyaryan announced Nallur as the capital city of Jaffna kingdom and was ruled there. The Yalpana Vaipavamalai provides information about his contribution in establishing the Jaffna kingdom. According to the Yalpana Vaipavamalai, it came to know that, king Cinkaiyaryan-I laid the foundation for constructing the palace at Nallur according to the Hindu

tradition. Further, he constructed the parapet wall, huge towers, a park, a bathing place at the centre of the park, a pool where he mixed water from the Yamuna river, a court, places for the war equipments and animals and constructed a Brahmin settlement for the Hindu priest Kaasi Bramakula Thilaka Gankathara Iyar and his wife Annapoorani Ambal to settle. Moreover, he constructed Veijilukantha Pillayar temple in the East, Veeramaakaali Amman temple in the West and Sattanathar temple, Thaiyalnaayaki Amman temple and Saalai Vinaayakar temple in the North. He lived in this kingdom with his wife Thilakavathi.

Moreover, the pond called Yamunaaeri and the temples constructed as guarding gods in above mentioned four directions at the Nallur. This confirm that what is said in Yalpaana Vaipavamalai is true. In this way the establishment of the Jaffna kingdom by king Cinkaiyaryan I is also evidently proved.

King Cinkaiyaryan I and his administrative activities:

The king CinkaiyaryanI carried out different activities for the better administration of this kingdom. The Kailayamalai and Yalpana Vaipavamalai give adequate information about his administrative system. According to Kailayamalai, the king Cinkaiyaryan appointed some of his nobles to be responsible for the administration of Jaffna peninsula, the surrounding islands and Vanni regions. According to Yalpana Vaipavamalai there were four administrative divisions such as Melpattu, Vadapattu, Thenpattu and keelpattu and the king appointed some higher officers called Mathakkar to administer above divisions (Pathmanathan, 2011). In sum, the CinkaiyaryanI laid a strong basis for administrative system in the Jaffna kingdom.

King Cinkaiyaryan I and his domination over the Southern Sri Lanka

The literary and the inscriptions confirm that when the Jaffna kings became powerful, they established their domination over the Southern kingdoms through the battles. Particularly, this situation further increased during the period of Varothaya Cinkaiyaryan who was the 5th ruler of it. Further, 9th ruler of this kingdom, Ceyaveera Cinkaiyaryan had conflicts with the Kandian king Buvanehabahu regarding pearling activities, made an

invasion, defeated him and established his domination over the Southern Sri Lanka for 12 years (Sittampalam, 1992). Some scholars (e.g., Pathmanathan, 1992) state that this event was took place during the period of 1stCinkaiyaryan and king Buvanehabahu I who was the ruler of Yapahuwa, which was confirmed by Chulavamsa. According to this, during the period of king Buvanehabahu I the Aryacakkaravarti king invaded Yapahuwa and took away the tooth relic of Lord Buddha. Then king Parakramabahu III redeemed it from Pandya king and became a crowned king at Polonnaruwa. When looking at these information king Cinkaiyaryan I rendered his huge contribution for rise of the Jaffna kingdom from his early days.

Based on the literary and archaeological evidences, it can be clearly said that the Jaffna kingdom was established in the 13th century A.D by the Aryacakkaravarties having Nallur as it capital city. It is also true that the king Cinkaiyaryan I who came from descent of Aryacakkaravarties laid the foundation for it. He appointed officers to administer the different regions of this kingdom. Moreover, he proved his power by settling the Vanniers in the Vanni regions and defeated the Yapahuwa king and established his domination over Southern Sri Lanka for 12 years. The establishment of the Jaffna kingdom and controlling the Southern regions reveal his power of rule. The descents of this king were able to carry out the administrative activities as powerful in the later period. Thus, it cannot be denied that the role of king Cinkaiyaryan I in the establishment and the development of the Jaffna kingdom.

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THE FORT OF JAFFNA: A HISTORICAL PERSPECTIVE

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The European nationals who took control of Sri Lanka established fortresses as centers for their security and administrative activities. Since they dominated the coastal areas initially, most of the fortresses were established in coastal areas. They constructed forts near to strategic centers of coastal areas in order to maintain marine trade, to keep good relationship with mother land, to secure threat that comes from other European peoples and to overcome the insecurity situation that arising from locally. The Dutch and British who came next to the Portuguese have used those forts with some changes or modification based on their interest or needs. Fortresses are the symbols of the legacy in Jaffna, Kayts, Pooneryn, Elephant Pass and Mannar in North Sri Lanka.

Among the fortresses in Sri Lanka, the Jaffna Fort is the second largest and most securitized land area. It is located in the village of “Pannai” under the Jaffna Divisional Secretariat Division of the Jaffna District in the Northern Province. The entrance of the fort is situated on a seaside which crossing road connecting a 450m farm road from Jaffna-Kandy road and Jaffna-Kankesanthurai road. On the geographical basis, the northern aquarium is 9°50' - 9°45' and the eastern slopes is between 79°55' - 80°10'. At 2.1 feet above sea level, the annual temperature of 27.19 Celsius and 1025mm rainfall is located in the dry zone.

The Jaffna Fortress is set up for the purpose of security and business purposes. The Portuguese, who captured Jaffna kingdom with the capital of Nallur, established forts in seaside of “Pannai” area which is located near to Jaffna town by concerning coastal security, inviting paramilitaries via marine route in emergency situation of war and trade relationship with neighbor countries due to easy access center of this location. The Kayts was the trade harbor from the ancient period of Jaffna history. This port was the crucial

port during the period of Parakramabahu I, which is known from Nainativu inscription. In addition, the ports of Pannai, Arali, Chatti etc. were set up near to the Jaffna Fort which is the center of easy access to all those ports (Nelson. W.A, 1984:78-83).

This Study employed a Comparative Studies based on sources materials, History and Archaeology of the Jaffna fort. It also has been designed in a Narrative and descriptive manner. The Jaffna Fortress area is a historically significant site that can be found through archaeological evidence available through the Pali and Sinhala literature. The Arabian coins, the colored broken pieces of Mables, have been discovered during the excavation in the fort area. This shows that, before the Western colonization, Arabian been dominated in the oriental trade. Further, archaeological and literary evidence as well as Yuan Tsuang, Bhagyan, etc. records reveal that the trade relations between northern Sri Lanka and China as early as the 5th century AD. During the excavations carried out in the fort, the Chinese Mabel varieties of ceramics and coins have been discovered. It is known to be the 3rd century AD when looking at the time of these coins.

Since the Excavators discovered Chera, Chola, Pandya, Pallava coins and Indian ceramics around the area of Forts, it has come to be known that this region have been urbanized from the 6th century AD. The Cholas who ruled Sri Lanka in the 10th century AD have maintained contacts with these areas. Vanika Merchant group such as Manikkiramathar, Nanadesikar and Inootuvar were engaged in trade activities during the Cholas period. It is known that Cholas' influences was exhibit in this region from the fact that the northern region of the fortress area is known to date from the so-called Inootuvan vazhavu. The Tamil inscriptions found here are the best historical evidence of the relationship between Jaffna and South India. It is said that the Portuguese had built the Jaffna Fort by destroying the Hindu temples which was made by the Cholas in Jaffna before the Jaffna kingdom. In this regard, the inscription found in the tea shop of "Central Cafe" near the Jaffna Fort, which was donated by Rasendracholas' to the Hindu temple located in Nallur in the 11th century.

It is came to know that the importance of this area during the period of Jaffna Kingdom through the statement of "Pongali neer Singai Nagar" which comes

in Kottagama inscription says about the victory of Aryasakkaravarthi. Since excavators discovered many Sedu coins around the Fortress area, it is come to know that this place was popularized as a trade and administrative center during the period of Jaffna Kingdom. In this regard, when looking at the heritage site of the fortress from the earliest history to the European period, there are many coins and pottery remains are continuously discovered in this area. Thus, this area is considered to be the best trade area, administrative center, early settlement place, and defense place before the Portuguese arrival (Ragupathy, 1987:215).

Portuguese captured Jaffna Kingdom due to the fact that Jaffna Kingdom was located close to South India, it has best ports like Kayts and natural resources and 600 indigenous Catholics were murdered by the King of Sankili Pararasasekaran. In this background, as a result of the invasion of 1619, the Jaffna Kingdom came under the direct surveillance of the Portuguese in February 02, 1620. In order to implement the Jaffna administration and by concerning their safety, the Portuguese decided to opt for the new area and select the “Pannai” area and built the fort by abandoned Nallur. The Portuguese Fortress structure was built in square shape, with high security and strong walls, and the strongest towers in the four corners. Having made their fortress by capturing Jaffna from Portuguese in 1658, the Dutch made many changes in the structure of the fort and built it into a perfect Fort. The five sided Dutch fort was constructed by 1680. The construction of the Jaffna fort can be divided into two distinct stages, the first stage, the ramparts and five bastions with the moat from 1665 to 1710 and the second stage, the outer fortifications from 1765 to 1792. Since the Dutch provided the final form to Jaffna Fort, the Jaffna Fort is mention as the Dutch Fort to date. The inner structure of the main features of Jaffna Fort contains Bastians, Ramparts, Pathways, Gun pints, Guard weapons store, strongest doors, tanks equipped with a water canals, air holes, the atmosphere Organizations Castle interior deliberately set paths, inner building military centers, church, jail, and office of the administrative officials are the best evidence for technological skills of Dutch. The Fort Bastions are named by using the cities name of Dutch such as Zeeland

Bastion, Holland Bastion, Gir land Bastion, Fries land Bastion, Ulreach Bastion, which are joined with Ram part and Cannon bases.



Source: Google

The second stage of construction commences on the creation of outer defenses as indicated on a map dated 1765. On the outer side of the moat was constructed a covered way, the glacis and four ravelins. These outer fortifications give an extra line of defense as well as extending the attack capabilities of the fort. The inner side of the main entrance contains the date 1780 and on the entrance ravelin up until recently was the date 1792 which could be stated as the final year of completion of the fortifications as the fort surrendered to the British three years later.

Jaffna Fort came under British rule in 1795. With getting freedom from British, Jaffna Fort became under Sri Lankan government rule in year 1948. The Jaffna fort was functioned as an administrative and military center until 1795 but has since been operated only for a military purposes while administrative center shifted to close to present District Secretariat office.

From the earliest point of view, it was the trade center that created close link with South Asian and South East Asian countries. Further, The Fort area of Jaffna also has been a defense place during the time of the King of Jaffna.

Having made their fortress by capturing Jaffna from Portuguese in 1658, the Dutch made many changes in the structure of the fort and built it into a perfect Fort. Since the Dutch provided the final form to Jaffna Fort, the Jaffna Fort is mentioned as the Dutch Fort to date. From the Sri Lankan independence to 2010, the Jaffna Fort was used for the military prison sentences. Hence the fortress of Jaffna exposes the symbol of colonization. Thus, the government of Sri Lanka and Dutch government has recognized the value of its historical value and continues the rehabilitation work in order to maintain as a heritage place and also a historic legacy tourist destination.

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MISSIONARY IMPACT AND SOCIAL MOBILITY AMONG INDIAN DIASPORA IN BRITISH COLONIAL SRI LANKA

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Although the successes and failure of Christian Missionary enterprise among South Indian Communities in bringing about social mobility and change has received extensive academic affection, similar interest has not been extended to this subject among the diasphoric South Indian plantation labour communities in other British colonies in Asia. Geoffrey A. Oddie examines the historiography of missionary enterprise in South India from the perspective of their objectives and outcome within the hierarchical social structure. The significance of plantation production to the economic development of the country has been highlighted by many researchers and sufficient attention has been paid to the recruitment system, condition of the economy, as well as the political rights of plantation labour community of Sri Lanka. These include both historical and contemporary analysis; example D. Wesumperuma. A significant gap in knowledge relates to the women workers of plantation community. However, Kumari Jayawadena's analysis of the social, economic and political opportunities and entitlements of women workers on the plantations in Sri Lanka shows us how these have changed over time. She argues that plantations were, by origin, patriarchal institutions characterized by a strict hierarchical order and male domination at all levels.

Substantive numbers South Indians were transported to Sri Lanka, Malaya, Burma and Fiji Island as plantation workers in the nineteenth century. British missionary organizations identified these communities as fertile grounds for Christianization. But the socio-economic conditions in these new locations were more complex and their projects were faced with a range of new problems. This research is intended to examine these new problem and the experiences of both the missionaries and diasphoric South Indian community

in colonial Sri Lanka with some comparative perspective to other colonies in Asia.

Colonial plantation system depended on cheap and servile labour constituting a resident social enclave. The management of this enclave required institutional and legal structures imposed under the authority of the colonial state, racial dominance of the white planters and the inherited traditional caste, religious and ritual differentiation of the immigrant labour community. Christian missionary enterprise had to function within this complex structure and had inevitably to adjust its spiritual and humanitarian objectives accordingly. The outcome of the Christianizing project was therefore not only severely limited in numbers of conversion but also in the expected religiosity and accompanying benefits of liberation from traditional ritual status, social mobility and material advancements.

This study will be based primarily on primary sources obtain Archives and missionary records in Sri Lanka, Burma and Malaya. I have been able to contrast to collect sufficient amount of newspapers information and diaries, memoirs and biographical account of planter's. In addition to this I have conducted field research in several plantations in Sri Lanka and South India which provide ground level information on socio-economic conditions of counter plantation workers.

This research project will address several problems that impact on the eventual outcome of missionary enterprise as following; first; Attitudes of the colonial state and the planter community towards the plantation system of production and the crucial role of the enclave, Second; mechanisms of labour management in the plantation system, particularly the use of non-economic devices such as caste, religion and gender inequality, Third; Modifications and compromises in Missionary agendas to accommodate planter's interest and adjustment of instruments of conversion accordingly. Sever pruning of the role of education to constrain natural urges of social mobility among Indian immigrant plantation labour.

The final outcome of the Christianizing project among plantation labour in Sri Lanka has to be located in the context of similar enterprises in Malaya,

Burma and Fiji Islands. Different combinations of factors produced different results in these different locations illustrating that in the final analysis overseas missionary enterprises in the nineteenth century were compelled to confront in the plantations in North America and the West Indies.

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MUSLIM WOMEN AND SOCIAL-EDUCATIONAL CHANGES IN BANGLADESH: A STUDY IN THE SECOND HALF OF THE TWENTIETH CENTURY

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The socio-educational condition of women is interrelated with the development of a country. A Socio-educational change means the overall development of a modern industrial society and its change in different aspects in education. In the modern developed countries women are seen in an advanced position. A like the males, females are also there in various spheres of the society. In Bangladesh, now, women are taking part in different levels of activities with the similar intelligence and brilliance like the males. Compared to other Muslim majority countries through the females of Bangladesh were backward for a long time in the perspectives of socio-educational development, even then with the passage of time the thoughts and consciousness of females are now in the course of change. Moreover, recently, perception of inevitability to earn social and economic independence awakened the desire for education and activities of women in Bangladesh. Social transformations and changes of Muslim women are playing an important role not only in economic development of the country but also in the shift of thinking and consciousness and culture of educated people of the society.

However, for real progress of women in Bangladesh, it is seen a different problems and obstacles still continuous in the social change and women are disadvantageous position compared to men in different aspects. Never the less women are deprived the real liberty. In Bangladesh most the professional women are engaged in different works for livelihood. But as there are few jobs suited for women in the light of legal right, they are being harassed at every step. There are women workers who work for 10-12 hours a day, due to their needs, but are hardly given the respect and salary that legal right would sanction for them. Though private NGOs (both domestic and international), commercial institutions and banks are providing loans to women, they often exact unrealistically high interest from them. Moreover,

totally unmindful of the physiological and psychological characteristics of women, these institutions are continually goading women workers to work at par with their male counterparts. Above all the social torture and security of women in Bangladesh is at stake. In recent times the country has been plagued by incidents of violence against women, kidnapping and rape of young girls, women's trafficking, acid attacks on women, illegitimate sex, and divorce and dowry harassment cases. The laws and judicial system of Bangladesh has decreed strong punitive measures against anybody found harassing women and ravaging their modesty. Yet in a country which has women as leaders of both the major parties, women do not have any kind of social security. Should we then equate women's empowerment with the upsurge in crime against women and conclude that empowerment alone cannot provide women with security? Here it is the responsibility of researchers Here it is the responsibility of researchers to find the root cause for all this discrimination against women.

Therefore, the question of overall progress of the country is very much closely related with the socio-educational change of the women. Hence, it is important to research about the socio-educational changes of women in Bangladesh that reserves the Muslim majority in respect of population. This research will have got a great impact in the social changes of women in Bangladesh and other developing Muslim countries.

This paper will explore the Muslim women education and main problems in social institutions including marriage, family, law, jobs, social rights, security, religion, economy, culture etc. which are very much related to the changes of the status of women in Bangladesh during the second half of the last century. The study will also find out the major obstacles responsible for the real development of women and gender discrimination in Bangladesh. Finally, the conclusion will truly analyze the situation of women today in the context of recent changes in Bangladesh. It will enumerate the true problems facing women and discuss about ways to solve them.

In this research mainly historical and analytical methodology has been followed. In the process of analysis, the opinions from the books of eminent scholars, the references in the official and demo-official published and unpublished source-materials and other useful literatures related on women

has been taken. Moreover, different modern technologies such as internet, online libraries, website, email etc. have been used to collect facts and figures. Infact, the whole study is based on contemporary source-materials of different government and non-government agencies.

It can be concluded that the Muslim women of Bangladesh were backward in education and in the society during the British period. It is a historical truth that the socio-economic status of women in the society was inferior to that of their male counterparts for a long time. The contemporary intellectuals believed that the continuous degradation of the women was the result of the conservative system of the society and the illiteracy of the women. However, after independence of Bangladesh, it is evident that women in the country were trying to change their condition in a context that was complex and bewildering in its scope. Contributing factors include improved education standards and a degree of social liberalization, primarily in the labour market, where women are increasingly in evidence. Women are embracing the concept of empowerment because of their situations---their disempowerment and their unmet needs. As women has increasingly discovered their commonalities through access to education, improved health service, means to face and struggle for their rights and fight against violence, they have attempted to understand the global and local political, economic and cultural forces that shape these situations.

By and large, however, Bangladeshi society remains one in which traditional, patriarchal attitudes prevail; women are expected to care for the family, including children and older relations, while men are responsible for supporting them. Despite improvements in health care and education, social and economic discrimination of women continues. Moreover, there are signs that violence against women, in the form of rape, cyber crime, black mailing and eve-teasing is on the increase. One reason for this, apart from the general poverty and low awareness of gender equality issues, could be the tensions between groups and individuals generated by ongoing social and political changes.

A HISTORICAL STUDY OF CRIME AND PUNISHMENTS IN PRE-COLONIAL SRI LANKA WITH SPECIAL REFFERANCE TO THE VĒVĀLKĀṬIYA SLAB INSCRIPTION OF KING MAHINDA IV (956-972 A. D.)

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All organized society throughout history inflicted punishments for crimes. This was done in accordance with laws accepted by each society. A given law was enforced when a person committed an offence. The present legal system consists of two parts, namely civil law and criminal law. Civil law pertains to laws of the society such as those dealing with marriage, lands, property, health, water management etc. Criminal law relates to crimes such as theft and murder. Criminal law too consists of two parts, namely iniquitous and non- iniquitous crimes. Grave crimes carry the penalty of death or life imprisonment. In the case of the less serious crimes, the punishment is light. The initial steps toward the growth of the system of a system of judicial administration can be seen very early in the history of Sri Lanka and, by the second and third centuries of the Christian era, regular functioning courts could be found even at urban centers locate at Anuradhapura. In the present research, attention will be focused on main criminal offences of the Pre-Modern Sri Lanka such as murder, treason, robbery and theft, and illegal animal slaughter with special reference to the Vēvālkāṭiya Slab inscription. Special attention will be paid punishments meted out for these crimes. Attention will also be paid to methods of arresting criminals.

The research will be mostly based on primary sources such as inscriptions as an archaeological source. Wherever necessary material will also be obtained from limited secondary sources published on the ancient legal system of the island.

Vēvālkāṭiya is a small village Pahala Kanda Tulana in Kanda Korale, about twenty-one mile to the north- east of Anuradhapura. P. Goldschmidt firstly

visited the place in 1875 and was bring to notice the existence of the inscription. This inscription furnishes us with some definite information concerning the Sinhalese law relating to crimes and wrongs and also concerning the administrative methods that must have prevailed in the Island during the tenth and eleven centuries A. D.

The Vēvālkāṭiya record is unique for this section because it deals with a number of crimes not mentioned anywhere else and further gives the punishment that was to be meted out to each. It is tempting to conclude from this that these punishments were common in Sri Lanka for the crimes they are coupled with. There is however no certainty; for murder (*marā keṭuva*) the punishment was death (*māruvehu marā paṭvanu koṭ isā*) for robbery and violence (*kanda palā sorakam*) the punishment was hanging (*elvanu*). It has been pointed out by Wickramasinghe that hanging as punishment does not appear Sri Lanka till late in history. The goods were to be identified and restored to the owners (*kandapalā sorun gat ayatiyen niyata kalākayatiyahimihaṭ (gena paṭvanu ko ṭisā)*). *Paṭvanu* in the sentence stands for the punishment of the offender. For assault that does not amount to murder (*no marā keṭuva*) a fine fifty *kalandas* weight of gold was to be exacted as penalty for damage to life (*div-milā*). Failing this ge-dad was to be taken. This was some sort of security deposit. Those who aided and abetted in such a crime (*at-pā- valaṭ giyākugen*) had pay a fine of fifty *kalandas*. Failing that the ge dad was to be taken and failing that too their hands were to be cut off (*at kappa paṭvanu koṭisā*). Those who slaughtered buffaloes, cattle and goats were to be put to death (*marā paṭvanu*). This probably refers to stolen animals. For theft cattle, buffaloes and goats, without slaughter, the culprits after identification were to be branded under the armpits (*ovunovun kasila san lakun obā harnā koṭ isā*). If the nature of the offence could not be determined they were to be beaten (*tirā novat koṭā paṭvanu koṭ isā*). Cattle thieves who effaced brand marks were made to stand on red hot iron sandals (*aṇa mākuvan rat kaḷaya- maravāḍiye siṭvanu ko ṭisā*). Those who came within these villages after committing an improper act were to be handed over to the authorities of the village from which they came for punishment (*no yedyennak koṭ van kenekun āta āpā gatadā paḷamu – vū gāmā āttān paṭvannaṭ harnā koṭ isā*). According to this record when the people of the village fail to find the culprit in cases of either theft with assault or assault,

the village had to pay to the state (*radola*) fines of hundred and twenty-five and fifty *kalandas* of gold, respectively. It should be noticed in passing that the terms used for the act of punishment or accomplishment of justice are *paṭvanu* and *harnā koṭ*).

It should be clear now that murder, assault and theft were looked upon as serious crimes, murder and theft with assault being punished with death. It is not possible to explain why in the Anuradhapura slab inscription of Kassapa V the punishment for murder and abetment was banishment to India and not death, this probably was because it was an offence against society and not because it had any religious significance. It shows however the value set upon livestock at this time. The resort to torture, which probably served as a deterrent to this type of crime, again emphasizes the point. The system of fines and collective fines is also interesting.

In conclusion, Vēvālkāṭiya slab inscription shows us that there were crimes in the period and imposed the punishments for those crimes. Further it shows that there was also a procedure whereby judges went on circuit to administer justice as indicated by the Vēvālkāṭiya slab inscription of Mahinda IV. In the present inscription we read in lines 41-45 that the measures of administration of criminal justice in *dasa-gama* which were enacted by the King in Council were promulgated by the following four members of his Curia; *Goluggamu Raksamim Kudasenu, Meykappar Kuburugamu Dokohi, Katiri Agbihi and Kundasala Arayan*. These details carry the implication that by this time a regular system of judicial courts with a penal code, designed to provide security for person and society, had emerged according to the study of Vēvālkāṭiya slab inscription of Mahinda IV.

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ICT SELF-EFFICACY AND THE USE OF ELECTRONIC INFORMATION RESOURCES BASED ON FOUR SOURCES OF SELF-EFFICACY THEORY

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Information Communication Technology Self-Efficacy (ICTSE) is considered to be far more important than competence in specific ICT skills (Sam, Othman, & Nordin, 2005). It is mentioned that individuals with high ICTSE have adequate flexibility and the confidence to adapt the constantly changing landscape of ICT applications.

The Self-efficacy theory (Bandura, 1977) suggests that individuals must feel confident in using technologies in order to effectively employ them. Though ICT was introduced to Sri Lankan university libraries two decades ago, the confidence of usage of ICT and EIR by Humanities and Social Sciences (HSS) faculty undergraduates in the country is far from satisfactory (Hewagamage, 2009; Punchihewa, 2008). As self-efficacy assesses the perceived capability of a person, the goal of this research is to apply the four sources of self-efficacy - namely mastery experience, vicarious experience, social persuasion and peoples' anxiety - for university library users.

The scholarly debate in the literature relating to the subject suggests that Computer Self-Efficacy (CSE) has an important influence on individual reactions pertaining to computing technology. Thus, Internet self-efficacy may be distinguished from CSE as the beliefs that one can successfully perform a distinct set of behaviours required to establish, maintain and utilise the Internet effectively via the above described basic personal computer skills (Eastin and LaRose, 2000). Ren (2000) states that in order to increase self-efficacy, students must gain adequate searching practices, experience, and learning accomplishments, and they should not be overwhelmed with negative emotions. Vicarious experiences was explained by Moos and Azevedo (2009),

mentioned that other people sustaining effort to achieve goals allows the observer to believe that he/she also possesses the capabilities to achieve a similar performance level. Social persuasion can be achieved with the availability of appropriate training and the methods used in training can influence levels of self-efficacy (McElroy, 2002). Although researchers have not found any significant relationship between computer anxiety, attitudes toward the Internet, and computer self-efficacy, a significant relationship between computer anxiety and attitudes toward the Internet exists (Sam, Othman, and Nordin, 2005). The literature related to the ICTSE seems to be limited in the field of Library and Information Science. Therefore, recent digital dissimilarity research has shifted the focus to the divide between those who can effectively use ICT and the Internet and those who cannot.

Objectives

The objectives of the study were to determine the four major sources of information associated with the ICT self-efficacy; factors affecting the ICT self-efficacy; and effective usage of EIR by selected HSS undergraduates in Sri Lanka.

Materials and methods

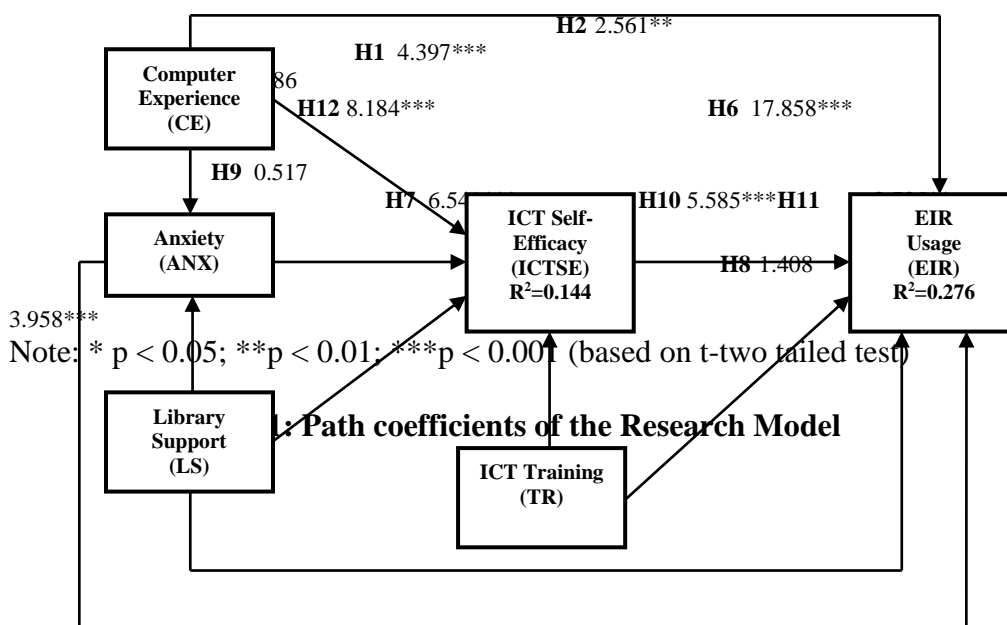
The survey was conducted among final year undergraduates of four randomly selected universities; Peradeniya, Sri Jayewardenepura, Ruhuna and Rajarata University of Sri Lanka. The tool was developed in two stages *viz.* exploratory survey (to identify the ICT background of the university libraries) and descriptive survey (to prepare the efficacy measurements). A pilot survey was conducted using randomly selected 100 students from four universities in the 2014/2015 academic year through a structured questionnaire using a 5-point Likert scale. The main survey was conducted with a sample of 840 participants and 604 responded (72%). The questionnaire developed was sent to ICT experts/professionals of ICT Units of university libraries to obtain face and content validity. The research has developed following factors based on the theory of self-efficacy; ICT self-efficacy (ICTSE), Library support (LS), ICT Training (TR), and ICT anxiety (ANX). Additionally, EIR and Computer experience (CE) were also developed. Both Confirmatory Factor Analysis (CFA) and Partial Least Squares outer loadings/weights confirmed the number of items included in each construct. This research developed thirteen

hypotheses and 06 factors in the model, and the hypotheses were analysed by using Partial Least Squares path modelling.

Results

Of the usable sample of 604 respondents, 21.7% were male and 78.3% were female students. The language of instruction of undergraduates indicated that the majority of respondents pursue their studies in Sinhala (86.6%); 11.6% of the respondents are earning their degrees in English-speaking programs, while 1.8% takes courses in Tamil.

To improve the convergent and discriminant validity of the EIR construct, the CFA was performed and 35 items which showed higher factor loading (<0.5) were included for the scale. For the ICTSE scale, CFA was finalised 23 items. Other four scales were, ICT Anxiety 10 items, Library Support 04 items, ICT Training 03 items and computer experience with 02 items. Altogether the study finalized six constructs and the study model revealed that Mastery experience-(computer experience, use of EIR, ICT Self-efficacy), Emotional affections –(ICT stress), Vicarious experience–(library support), and Social Persuasion-(ICT training) indirectly affect the use of EIR in the libraries. ICTSE has a direct, negative, and significant relationship with ICT anxiety (-0.256 , $p = 0.001$); ICT training also has a direct, negative, and significant relationship with EIR (-0.089 , $p = 0.01$). Eight out of the thirteen hypotheses significantly correlate and support the path of the constructs in the model (Figure 1).



The model described 27% of the variance of the EIR usage. As mentioned by Estin & LaRose (2000), ICT self-efficacy is significantly influenced by library support, ICT training, computer experience, and ICT anxiety, which strongly affect students' EIR use. Further, ICT anxiety has a direct, significant negative influence on EIR use. Such evidence proved that students are with a certain degree of ICT anxiety (Sam et al. 2005), which precludes the use of EIR effectively at the university libraries. Ren (2000) mentioned that self-efficacy decreases when students have lesser support in electronic searches. Therefore, this is identified as a factor that directly affects students' EIR use in these university libraries.

Considering the results of the study, the mastery experience affects vicarious experience, social persuasion and emotional affections. Moreover, emotional affections have a direct and significant negative influence on EIR use. Mastery experience has been found to be an important determinant of self-efficacy. However, the present research found that users with two years of computer experience were the higher respondent group which has indicated more self-efficacious.

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THE EFFECT OF DIGITAL MEDIA ON THE READING HABITS OF CHILDREN

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Reading is considered as a fundamental skill for a child to succeed in life. Reading helps a small child to develop language skills and also expands his world knowledge in a very positive way. Parents also have a great responsibility in inculcating reading habits in small children.

According to Susan B. Neuman ‘encouraging good reading habits and modeling them as well sets up a parent as a role model for the love of reading.’ However, the habit of reading has decreased significantly among small children, young generation and also adults in the present society which is an unfortunate situation. It is no exaggeration to say that electronic media has captured the people’s attention more in the present society and people are moving away from the printed media.

The most serious issue is that this situation is more prominent among children.

‘Today’s children and their families live in an era that is characterized by the prevalence of digital media, with a wide range of technologies influencing both their perceptions of reading and writing and their reading and writing-related practices’ (Strasburger et al. Radesky, Schumacher & Zuckerman).

It can be noticed that smart phones, iPads, cartoons and digital games have influenced the reading habits of children in a very negative way.

In the past mothers used to narrate stories to children when feeding or putting them to sleep. But today they have entrusted these duties to the

digital devices mentioned above which is a very sad situation. Therefore, this study has a timely value. The sample for this study is the parents of children between 3-12 years in the Day Care Center of the University of Colombo.

The objective of this study is to analyze the impact of electronic media on the reading habits of children which is considered as a means to improve children's knowledge, attitudes and also for skills development.

The Day Care Center of the University of Colombo gives shelter to children between the ages of 3-12. The majority of them are children of the members of the academic and the non-academic staff of the University of Colombo and its affiliates. There are both boys and girls in this center. This study was conducted using both qualitative and quantitative methods and the parents of these children as the sample. At the first phase a questionnaire was administered to 50% of parents to gather some background information of these children. At the second phase interviews were conducted with a randomly selected eight-member sample of the above parents. The researchers intend to conduct interviews in future with experts of children's minds and also digital media.

The study revealed that the children involved are spending a considerable time with smart phones, digital games and cartoons.

Table 1 Time spent for watching Television

	Gender	Age	Time of watching TV	Time of watching Cartoons
1	M	3yrs	1hour	1hour
2	F	3yrs	3hours	2hours
3	F	3yrs	2hours	2hours
4	F	4yrs	1hour	½ hour
5	F	5yrs	½-1 hour	½ hour
6	F	5 ^{1/2} yrs	2hours	1 ^{1/2} hour
7	F	5 ^{1/2} yrs	2hours	2hour
8	M	4yrs	3hours	2 ½ hour
9	M	10yrs	2hours	1hour
10	M	7yrs	3hours	2hour
11	M	6Yrs	1hour	1hour
12	M	6Yrs	1hour	½ hour
13	M	8Yrs	1hour	1hour
14	F	7Yrs	1hour	-
15	M	10Yrs	2-3hous	2hours
16	M	9yrs	1-2hours	1hours
17	M	8yrs	2hours	2hours
18	F	11yrs	3hours	1hour
19	F	11yrs	2hours	1hour
20	F	11yrs	2-3hours	2hours

According to the table, children spend 1-3 hours watching television. They watch television once day go home in the evening. This means that they spend most of their time at home watching television. According to the parents, school children are at a risk of catching chronic diseases as a result of this. Apart from this there were comments from the parents about the children's unruly way of talking, expressions that are not suitable for their ages, difficulties in learning and also minor speech disabilities. However,

parents also stressed the positive ways in which these digital media help children in their education, especially to get new information.

Some parents had commented that children did not even read the prescribed school text books, let alone extra reading material. Some children had told the parents that e-reading is easier and more convenient than reading printed material. This shows how badly the children are addicted to electronic media. They know the names of all the websites too.

There were some other interesting facts that were revealed in the study. One is that even when the children select material to read, they tend to select books with their favourite characters. Further some parents commented that they were also partially responsible for this situation. For an example, some parents had declined the children's requests for narrating a story saying that they were too busy. As the sample of parents selected for the study comprised of working mothers who are academics, this situation was very common. They themselves had sometimes given iPads or smart phones to children to keep them occupied while they were preparing for their next day's work.

To minimize these problems several steps can be suggested. Parents can devote at least a small time to read the daily newspaper or a book, setting it as an example for the children to read. Children usually imitate their parents and if the habit of reading is inculcated at a young age, it will be continued throughout their lives. Further, if the children are reluctant to read parents can narrate stories as a first step to make them interested in stories. This will gradually lead the children to read by themselves. More than anything else there should be a rapport between the children and the parents which will minimize the children's addiction to electronic media.

As the study revealed, the present generation of children is at a risk of over addiction to digital media. Our opinion is that it is not too late to address this issue.

Key words: Technology, effects, childhood, digital devices, reading habits

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IS EXCESSIVE *DĀNA* (GENEROSITY) DRIVING MYANMAR INTO POVERTY TRAP?

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This paper will focus on making an investigation of the main causes of poverty in Myanmar. Myanmar is the largest country of mainland in South East Asian region, and second largest overall in size after Indonesia. Since Theravada Buddhism is the main religion, the charity of Myanmar Buddhists has become globally popular in recent years. According to the 'World Giving Index Rankings' in 2016 and 2017, Myanmar ranked first among the generous countries in the world.²⁶⁴ Even then, among Asian countries, Myanmar has the lowest life expectancy and the second-highest rate of infant and child mortality.²⁶⁵ Interestingly, the voice of few people, who claim that the country's economic development is heavily burdened with extreme *dāna* (giving) and a large population of Buddhist monks, has become louder than ever before on social media these days. Hence, this paper aims at investigating the causes of Myanmar's poverty from Buddhist perspective along with economic survey.

Regarding the main causes of Myanmar's poverty, the plausible questions will be raised from *dāna* perspective as follow:

Do the benefits of *dāna* exist in this life according to *kammic* theory? If so, why is Myanmar, the most generous country, stricken by poverty?

Can too much practicing *dāna* drive a country to a poverty trap?

Do Myanmar Buddhists practice *dāna* according to Buddha's instructions or the act of their *dāna* slightly go wrong?

²⁶⁴ https://www.cafonline.org/docs/default-source/about-us-publications/1950a_wgi_2016_report_web_v2_241016.pdf?sfvrsn=4, retrieved on 1 March 1, 2018.

²⁶⁵ <http://www.worldbank.org/en/country/myanmar/overview>, retrieved on 1 Feb, 2018.

Is a large population of Buddhist monks and nuns responsible for the causes of poverty in Myanmar?

Definition of Poverty:

Poverty is defined by different academicians in different ways depending on socio-cultural and economic data. Fundamentally, poverty is the inability of having basic needs such as food, cloth, shelter, minimum health care, living expenditures and so on. The World Bank defines extreme poverty as living on less than US\$1.90 per day,²⁶⁶ and moderate poverty as less than \$3.10 a day.²⁶⁷ Marshall (1998) defines poverty in terms of lack of resources, mainly material but could also be cultural.²⁶⁸

According to Buddhism, poverty is considered as suffering (*dukkha*). The Buddha said “Not getting what one wants is *dukkha*”.²⁶⁹ The goal of the Buddhist path is to end *dukkha*. Buddhism mainly considers about two kinds of poverty emerged from materials and lack of spiritual quality. In the *Anguttarnikāya*,²⁷⁰ the Buddha explains these two kinds of poverty and their consequences. Buddhism does not value any kinds of poverty but seeks to eliminate both of poverty revealing their fundamental roots.

Myanmar’s Current Economic Situation:

Myanmar has plenty of natural resources such as oil and gas, minerals, precious stones, gems, gold, tin, timber and forest products, and hydropower potential. Despite these, it has been stuck in the poverty trap for many decades. In the early 1960s, Myanmar was the richest country in Asia with wealthy natural resources, but then it closed its economy to the outside world and is now the poorest country in the region. The Asian Development Bank (ADB) placed the number of poor in the country at 25.6% and with the latest census pegging the population at 51.4 million, it means an estimated 13 million people are in various levels of poverty.

²⁶⁶ <http://www.worldbank.org/en/topic/poverty/overview>. Retrieved on 1 March, 2018.

²⁶⁷ *The World Bank*. Retrieved 13 March 2015. https://en.wikipedia.org/wiki/Measuring_poverty Retrieved on 1 March, 2018.

²⁶⁸ (Marshall 1998)

²⁶⁹ “*Yampicchaṃnalabhati taṃpi dukkham*” Vin.iii P-10.

²⁷⁰ A.ii. P-309.

Dāna Practice of Myanmar Buddhists:

In Buddhist teachings, the act of giving is the first of the three bases along with *Sīla* (morality) and *Bhāvanā* (mental culture). Giving is the first of ten meritorious actions (*puñña-kriya*), that one can perform in order to accumulate merits that will bring beneficial results in both this life and future lives.²⁷¹ In the Pali *Sutta*-s (discourses) we read time and again that “talking on giving’ (*dānakathā*) was invariably the first topic to be discussed by Buddha in his “gradual exposition” of the Dhamma.²⁷² As for Myanmar Buddhists, an important and noteworthy sentiment is expressed: “*ahlu ye sat lat nae ma kwar*”, literally, “our hands are always associated with offering.” This is one of reasons why Myanmar has reached the peak of World Giving Index. In this regard, *Paul Fuller, a lecturer in Buddhist Studies at the University of Cardiff in UK, states the distinctive features of Myanmar Buddhists*: first, the centrality of “action” in Buddhist ethics; second, the prominence of the acquisition of “merit” (*puñña*); and third, the idea that making donations is central to an individual’s identity as a devout Myanmar Buddhist.”²⁷³

Causes and Solutions to Poverty in Myanmar:

The causes and solutions to poverty in Myanmar are very complex. From Buddhist perspective, the cause of *dukkha* or poverty mentioned in the early discourses are simply identified as greed, hatred, and ignorance. If we look back the past and current situation of Myanmar, the role of these three unwholesome roots is more or less obvious. From the view of economic expertise, the cause of Myanmar’s poverty is due to mismanagement over natural resources or inefficient governance in the past decades. Some pointed out that the country has been facing with the longest civil war in the world and such prolonged conflicts and political unrests cause major damaged to the country’s economy.

²⁷¹ <https://drarisworld.wordpress.com/2016/09/03/dana-giving-in-theravada-buddhism/> retrieved on 1 March 2, 2018.

²⁷² Bhikkhu Bodhi. Introduction. *Dāna: The Practice of Giving*. Bhikkhu Bodhi, ed., BPS, Kandy, 2003, viii. Print.

²⁷³ , Paul Fuller, 04 Sep 2015The act of giving: what makes Myanmar so charitable?, Myanmar Times Edition, 04 Sep 2015, <https://www.mmtimes.com/lifestyle/16317-the-act-of-giving-what-makes-myanmar-so-charitable.html>.

In terms of solution, Aung San Suu Kyi, the leader of Myanmar people, identified six sectors that have to be prioritized to meet the pressing needs of the ordinary citizens: (1) jobs (2) water (3) roads (4) electricity (5) education and (6) health (Myanmar Newsweek, 2013).²⁷⁴

The problem is not that Myanmar does not have enough resources to provide for the basic needs of everyone. It has more than enough. Nevertheless, due to mismanagement of resources and prolonged civil wars, it has been poverty-stricken for many decades. Thus, we have come to the conclusion that practicing *dāna* and a large population of Buddhist monks are not the main cause of poverty in Myanmar. Indeed, the ultimate purpose of practicing *dāna* is to eliminate or reduce our unwholesome psychological roots which are the main cause of *dukkha* or poverty.

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²⁷⁴ (Henry Ngun Ceu Thang 2014)

BUDDHIST CONTRIBUTION TO GENDER EQUITY THROUGH THE PROMOTION OF BHIKKUNĪ LEADERSHIP

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The main objective of this paper is to engage in a critical study of the *Bhikkunī* leadership in the Buddhist era and to show how Buddhism emphasized gender equity with special reference to the Pali Canon. I would like to pay attention on the way *Bhikkunīs* play a Leadership role in contemporary Society and evaluate their contribution towards sustainable equity within the Society.

The data for the study have been collected from both primary and secondary sources and relevant monographs and religious texts. Study of ethnographic factors conducted using observation and interview methods, with *Bhikkunīs*, *Bhikkus* and Lay people as pertinent to the subjects.

The position of women in male dominant pre-Buddhist Indian society had been pathetic. Man, by birth, has a strong desire for power. That is why, throughout history, man has fought wars. Participation by man in these wars was important than that of the woman. This research will investigate the relevant conditions of the pre-Buddhist period and show how the situation changed in the sixth century BC. The epoch-making contribution of women during this period will also be discussed. Historical details and the excavations of Mohenjo-Daro and Harappa civilizations (before 3000 BC) had proved, with the seals and the statues found, that woman and man had equal freedom.²⁸⁶ It is interesting to know that although Indian society was at one time Matriarchal in nature it later became Patriarchal. Women were venerated as *Jaganmātā* (global mother).²⁸⁷ The period of Brahmins was considered as the golden age of Indian history. Brahmins became very strong in this period and they were even about to challenge the crown. They clearly understood this situation and women were to be separated completely

²⁸⁶ Kengan Paul, Bader: *Clarisse women in Ancient India*, London., 1923(p23)

²⁸⁷ Sinha & Bannerjee, *History of India*- vol. i, (p.42)

from the freedom and rites that had been enjoyed during the Vedic period. Thus was established the patriarchal way of society. This was the time the priests and Brahmins did all the religious rituals and the *Ksastriya* was the class under them. Women were denied all religious and sacrificial rites.²⁸⁸

The transformation of the woman to ascetic tradition was a process that took time under the dominant male *Brāhmanical* tradition. The social background of woman during this period was the changing in the attitude to certain extent. Ven. *Jaina Mahāveera*, a contemporary of the Buddha, had *Śvetāmbara* as female ascetics. When the Buddhism arose women had an inferior position. Indian religions were categorized as Brahmanism to distinguish from Hinduism. Buddhism was the only religion that gave unlimited freedom to women.²⁸⁹ At the outset of Buddhism all were either Hindus or of some other sect. A clear example being that of King Pasenadi of Kosala who had doubts when he heard that queen Kosala Mallikā bore him a daughter. Then, in society, male children were regarded as more useful than female ones. The King was, up to that time, an adherent of *Brāhmanical* religion and sought guidance and teaching from the Buddha. “A woman child, Lord of men, may prove to be a better offspring than a male”.²⁹⁰ There are several instances where woman have been given fair treatment. There are many *sutta*-s which the Buddha preached that have regard for women.

Even though the *Bhikkhu-sāsana* (order of monks) was established after few months of his enlightenment, the *Bhikkunī* Order was established five years later. Community of *Bhikkunī* has been a feature of life in Buddhist societies since early times.²⁹¹ The Buddha recommended the renunciation path as the most effective means for achieving liberation and many women were attracted to this path beginning with the Buddha’s own stepmother, Mahāprajāpatī Gotamī. Like other renunciation in the Buddha’s day, Buddhist monks and nuns lived a simple celibate life, limiting desires, attachments and worldly distractions in order to focus on spiritual practice. Free of mundane involvements, Buddhist renunciation was able to

²⁸⁸ Clarisse, *Women in ancient India* (p.28)

²⁸⁹ Clarisse, *Woman in Ancient India*, (p.18)

²⁹⁰ Sanyutta Nikaya, iii,2,6

²⁹¹ I.B. Horner, *Women under Primitive Buddhism: Laywomen and Almswomen*, Delhi:Motilal Banarasidass,1989. P.103

concentrate wholeheartedly on achieving liberation and enlightenment.²⁹² This was the landmark in Indian history as the Buddha allowed the women to enter the Order. There were eight special Rules (*garudhamma*)²⁹³ and were incorporated later in the *Bhikkunī vinaya*. Even though there are many controversial comments on eight rules, it was the acceptance of these rules that allowed high ordination for the *Mahāprajāpatī*. Critical study of the *Aṭṭagarudhamma* is a major point to understand the status of the women in this era.

The order of *Bhikkunī* began when Mahāprajāpatī Gotamī asked the Buddha to admit women to the *Saṅgha*. Despite some initial hesitation, the Buddha acknowledged that women are fully capable of realizing the fruits of the path and achieving liberation. With the Buddha's approval, the *Bhikkunī* ordination was established. Under the able leadership of Mahāprajāpatī Gotamī the community of *Bhikkunī* flourished and thousands of women became *Arahanth*-s, purifying their minds and liberating themselves from suffering and rebirth. The ancient Buddhist texts record the names of many of those *Bhikkunī*-s, who were recognized by the Buddha for their special attainments.

Throughout Buddhist history there have been great *Bhikkunī*-s, but the lives of *Bhikkunī*-s have generally been overshadowed by those of monks. In patriarchal Buddhist societies, where preference is given to male children in families, schools and monasteries, female children have had to struggle for food, health care, education and the right to live a contemplative life. Even though Buddhist women may pursue a religious life, *Bhikkunī*-s have often been poorly supported, undereducated and neglected. In the last two decades, a new awareness of the inequalities that exist between nuns and monks has developed and changes are being made to correct these inequalities. With the leadership of Mahāprajāpatī Gotamī many women were absorbed into the *Bhikkunī* ordination. Buddha opened the doors of the dispensation to all castes and he said that just as the water from various directions flow into the ocean and are known as the sea water, similarly those who entered the

²⁹² Gotami Sutta, A: N

²⁹³ Gotami Sutta, A: N

sāsana from whatever the castes would be known as recluses, the sons of the *Sākya* (*samanā-sākya-puttā*). All sorts of women absorbed into the Order for many varied reasons. The *Bhikkunī* leadership revolutionized the life of women and established the gender equality.

The Leadership included Mahāprajāpatī, Yasodharā, Nandā, Ubharī, Khemā, Selā and Alavikā from royal clans; Somā, Uppalavannā, Bhadrā, Kundallakesī, Patacarā, Sujātā, Addhakesī belongs to (*Seṭṭhi*) milliners class; Sundarī and Rohinī were Brāhmin class; Ambapālī, Addhakasī, Abhayamātā, Vimalā were prostitutes (*Nagarasobhinī*); Sumangala mātā got badly treated by her husband; Cāpā was a daughter of a deer hunter; Subhā was a daughter of a goldsmith; Candrā was a begging woman and Kisāgotamī defended her children.²⁹⁴ Regardless of the controversies surrounding the founding of the order, a successful and vibrant nuns' order, led by Gotamī, ran parallel to the monks' order during the Buddha's time. Gotamī and other nuns were the perfect role models for Buddhist women in the past and historically inspired the society with great influence. An interesting and famous Subha's story is the revelation of her understandings.²⁹⁵ How far Ambapālī had gone deep into the thoughts of impermanence she says: "my black hair was like the colors of wasps but now they are like jute". There are more stories which are impressive in every way. The *therī* verses are more like the best medicines to the society. There were very skillful *therī*-s who did an important service to then society. There were philosophers like *Bhikkunī* Dhammadinnā, *Khemā* and so on, as well as great Orators. When following the Biographies of the chief 80 female disciples of the Buddha, it is easy to understand how they contributed to the society.

These kinds of *Bhikkunī* characters have proved that emancipation or *Nibbāna* is common and attainable by both genders that follow the right path. The Buddha Offered the Chief places to the *Bhikkunī*-s²⁹⁶ as well as the *Bhikku*-s. This shows how *Bhikkunī* leadership was effective in establishing gender equity in society. The Buddha Offered the Chief places to the

²⁹⁴ Apadānapāli

²⁹⁵ Terī gātā

²⁹⁶ Apadāna

Bhikkunī-s²⁹⁷ as well as the *Bhikkus*. This shows how *Bhikkunī* leadership was effective in establishing gender equity in society.

Presently, the *Bhikkunī*-s contribution to the sustainable development of the world is at an appreciable level. Even though the *Bhikkunī* community vanished from the world for few decades, re-establishment was highly successful. Now more than ten countries have well established *Bhikkunī* communities and they work for gender equity and sustainable world development.²⁹⁸ When considering the Buddhist traditions, not only in Sri Lanka but also in Thailand, Vietnam, Myanmar, Tibet, India, Taiwan and many other countries, the *Bhikkunīs* are very much concerned about creating wonderful women in the society. The path to the modern feminism is opened by the leadership of the Mahāprajāpatī Gotamī in Buddhist era.²⁹⁹ The *Bhikkunīs* are doing much social work all over the world focusing especially on women and children. There are many associations in the world which are controlled and conducted by the *Bhikkunī*-s for social development. The Sakyadhita international conference is one of the major steps taken by the *Bhikkunī*-s to give leadership to gender equity.³⁰⁰ It is conducted by Sakyadhita International Association of Buddhist Women which was established in 1988 in the United States. An international conference is held every two years. The conference brings together lay persons and nuns from different countries and traditions to share their experiences, research and to encourage projects to improve conditions for Buddhist women especially in developing countries. Since 1987, Sakyadhita has held 13 international conferences on Buddhist women in Asia and three in North America. The conferences feature papers, workshops and presentations on topics relevant to Buddhist women. The global gatherings are open to all, regardless of gender, ethnicity, or religion.

The Taiwanese *Bhikkunī* community gives standard *Bhikkunī* leadership for sustainable development of social and religious harmony. Taiwan is renowned for its highly educated nuns who are outstanding in fields such as

²⁹⁷ Apadāna

²⁹⁸ Dr. Bhikkuni Kusuma, *The Bhikkunī vinaya*; (pg.23)

²⁹⁹ Karma Lekshe Tsomo, *The Buddhist woman*; (pg.59)

³⁰⁰ Karma Lekshe Tsomo, *The Buddhist woman*; (pg: 62)

education, social service and the Arts. Ven. Hiuwan was the first *Bhikkunī* who started social works in Taiwan. Taiwanese *Bhikkunī*-s promote *Vinaya* studies, standing for women's equality in Buddhism, helping Children's developments and female successes, helping poor Buddhist nuns in developing countries such as Sri Lanka by building Nagananda University in Sri Lanka to help in educating Nuns and giving alms donations to the Sri Lankan Buddhist nuns to have a healthy life.³⁰¹ Especially in Asian countries *Bhikkunī*-s are very much forward in religious activities such as spiritual and material development. They are contributing to the same level as the Buddhist monks.

With a new global ethic of social justice and equality for women, the inequalities present in Buddhist societies have been exposed as being contrary to Buddhist ideals. The Buddha is often held up as a model of social equality and Buddhism is generally regarded as a path that offers equal opportunities for all, regardless of race, class, or gender. The disparity between Buddhist social ideals and the inequalities that exist in Buddhist societies can no longer be ignored. For Buddhism to be taken seriously as a resource for positive change in society today, Buddhists must correct the social injustices that exist in their own societies and institutions, and bring social realities in line with Buddhist teachings. For women, this means gaining equal opportunities for education, ordination, and access to Buddhist teachings. The changes must not have been merely token or cosmetic or occasional, but thorough and genuine which requires a transformation of attitudes about women. To demonstrate that Buddhists are acting in good faith and that the Buddhist teachings truly have the power to transform society, Buddhist women must have an equal voice and equal opportunities to achieve well-being and enlightenment. The changes that are occurring for Buddhist women around the world today are very encouraging and can become a beacon of hope for women in other societies.

Bhikkunī Leadership towards gender equity and sustainable social development is equivalent to the contribution rendered by the *Bhikkus* in the

³⁰¹ Cheng, Wei-yi, (2007). *Buddhist Nuns in Taiwan and Sri Lanka: A critique of the Feminist perspective*, New York: Routledge.

world. Dedication of *Bhikkunīs* should be improved more be more equivalent to *Mahāprajāpatī Gotamī* and *Anulā devī*; create a social awareness of the importance of the *Bhikkunīs*; making arrangements to get higher education with government help; take a suitable decision about *Bhikkunī* High Ordination; suitable social and religious rights as Buddhist monks; establishing associations to engage in social works for *Bhikkunī-s* and *Bhikku-s* together are very important for the successful career of the *Bhikkunī-s*. However, the *Bhikkunī* Leadership more than contributes to the society to drive the eradication of gender discriminations through the SMJM (Silmata Jathika Mandalaya) in Sri Lanka. *Bhikkunī* Leadership is highly effective in women's life to help them escape from the all types of violence, especially Domestic violence. *Bhikkunī* Leadership always guides the women for the success in the modern life.

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A STUDY ON SELF-DEFEATING BEHAVIOR: THE BUDDHIST PERSPECTIVE

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Human behavior signifies the mental, physical and verbal actions of an individual and such behavior could be usual, unusual, common, uncommon, acceptable, unacceptable, logical, illogical, destructive, constructive and defeating etc. However, in the Buddhist teaching human behavior is basically analyzed based on morality, immorality, skillfulness and unskillfulness. The terms such as *puñña*, *pāpa*, *kusala*, *akusala*, *adhammacariyā*, *visamacariyā*, *dharmmacariyā*, *samācariyā* and etc. indicate the nature of human behavior. It is obvious that human behavior reflects the nature of one's wholesome or unwholesome temperament and personality. It is the Buddhist perspective that human behavior is influenced by various factors such as culture, environment, education, social norms, heredity, genetics, etc. Furthermore, the five laws such as: seasonal changes and climate or the natural law of non-living matter (*utuniyāma*), laws of heredity or the law of living matter (*bījanīyāma*), the law of moral causation or consequences of one's actions (*kaṃmanīyāma*), natural law or nature's tendency to perfect (*dharmmanīyāma*) are very influential on human behavior.

This paper aims at to discuss the attitudes towards self-defeating behavior in Buddhism and the way the Buddha explained human behavior by paying special attention to the Buddhist canonical scriptures.

The data for the study has been collected based on qualitative methodology and hypothesis. Primary and secondary resources and relevant monographs in the field of both religious and non-religious texts are used in this investigation.

Human behavior is basically classified as moral or immoral in the Buddhist teaching and most common Pāli terms are the *dharmmacariyā*, *samācariyā*, *adhammacariyā*, and *visamacariyā*. Immoral behavior can be unethical,

illogical irritating, destructive self-defeating etc. such behavior is commonly known as unusual or uncommon and is unacceptable to the general society. There are various characteristics of such behavior and some discourses clearly point out the nature of such unwholesome behavior by emphasizing their signs or traits that form the characteristics. Characteristics denote a distinguish feature or equality or attitude belonging to a person through which others come to know about the behavior and nature of an individual. According to the teachings, one may find some basic aspects of characteristics such as:

- Physical characteristics,
- Covert non-functional characteristics, (*anusaya*)
- Covert functional characteristics (*pariyutthana*)
- Covert operational characteristics, (*vitikkamma*)

The physical characteristics signify the bodily characteristics or the external characteristics through which one may come to know a human being or any other being or object. The functional characteristics signify the way something designed for performance of activities. For instance, five aggregates are a one functional unit that makes different psycho-physiological performances based on dependently arising causes and conditions. Thus, our existence is dependent on the aggregates of clinging and it becomes good or bad due to the degree of their contamination with defilements.

The operational level signifies the external performances, which are visible by other. Thus, what we call characteristics is a result of mental and physical process conditioned by many elements of existence. This suggests that human behavior according to Buddhist teachings is not just an external factor but it has a deep mental function. As there can be many in the psychological functions of sensation, perception, mental formation and consciousness, mental disorders and abnormal behaviors can be gradually formed and developed. Which are inter-related and inter-affected. A mental disorder cannot be identified at once and the only way that it can be identified is through the abnormal behavior of an individual. This type of behavior is known as abnormal due to fact it is not normal. This signifies that the individual concerned is suffering from some sort of mental disorder. The Pāli

term for mental disorder is *vipallattha*, *vipariyattha*, *vipallāsa*, *vipannadiṭṭhi māyāvi* etc. For instance, there are many types of mental disorders and one may be affected with one or more such mental disorders.

Disregard for morality, self-pride and related overwhelming feeling could lead to inflicting harm, loss of compassion and kindness, falsehood, disregard for one's beloved ones, unseemly behavior etc. The result of self-defeating behavior is total failure in all activities due to the gradual development of negative feelings and thoughts within oneself leading to various types of mental disorders. The key elements of one's success such as the ethical, mental, physical, social and sexual behaviors are diverted in the wrong direction.

Key words: Self-defeating, human attitude, Buddhist teaching, social experience

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A REVIEW ON GEIGER'S PALI LANGUAGE CLASSIFICATION

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In linguistic point of view, the Pali language that represents Prakrit era of Middle Indo-Aryan stage. Besides, this is also called 'māgadhī' or 'tanti' by the two key traditional grammar texts and modern scholars. Just as the other languages of the Middle Indo-Aryan era, the language that Buddhist canonical texts were written, named as Pali also developed over centuries across a few linguistic stages. Professor Geiger, in his book 'Pali Literature and Language' has given four linguistic stages regarding the development of the Pali language. According to his classification, the second and third linguistic stages should definitely be reformed. In addition to the aforementioned four stages, a new development stage of Pali should be added. The purpose of this research paper is, basically, depending on the above points and the facts aforementioned require critically examining of the Geiger's linguistic classification of Pali.

This paper investigates the fundamental features for his linguistic classification on second and third groups and the why the limits of literature of those groups should be changed? Considering the modern works of Pali language, it can be found out that the new linguistic characteristics in modern Pali literature. Therefore, how the new developmental linguistic stage should be added in his linguistic classification of Pali?

The above-mentioned facts are comparatively analysis with the assist of Pali literature. Also, the viewpoints on Pali linguistic classification of both western and eastern scholars are referred critically and analytically.

Pali was a dialect of Prakrit in ancient India. According to the reliance of the Theravada tradition, it was the language that the Buddha used for his communication. Historical Buddhist canon it's sub-classifications and large number of Buddhist and non-Buddhist texts are written in Pali, which

developed in various linguistic stages with the light of Vedic Sanskrit and the other contemporaneous Prakrit languages belong in middle Indo-Aryan stage. Therefore, some linguistic features, which are shown the relationship between Pali, other Prakrit and Vedic Sanskrit exist in Pali. With reference to the Pali texts and as Geiger has presented the linguistic classification it is as follows:

1. The language of the Gāthās
2. The language of the canonical prose
3. The later language of the post-canonical and commentaries
4. The language of the later poetry

Forms of Vedic speech and metricized characteristics coming in canonical texts, specially, in the *Dhammapada*, *Suttanipāta*, and the *Thera-Theri gāthā* are significances. Phonologically it contains many archaic Old-Indo Aryan forms in these texts. Therefore, in the first stage, it can be seen the admixed and metricized language.

The characteristics of the second stage are the homogeneousness and uniform of the language than the language of the first stage. The old shape of the Pali has been diminished and animation of the language has been protected in the second stage. The language of the canonical proses is represented the literary limitation of the second category. The language of the post canonical texts, great commentaries and their sub-commentaries is deputized the third category. Within the language of this period, the linguistic significant features of the second stage and the artificial and erudite language usages can be seen. The archaic forms of the Pali language are totally diminished in the third stage. Entirely Sanskritization and artificialized language can be seen in the fourth stage.

Specially, the attention will be trended in this research on the literary limitation of the second and third categories. As it is mentioned in his book, canonical proses, the post canonical texts and the commentaries are represented the second and third categories. It can clearly be identified that the linguistic features of the *Nettipakaraṇa* and *Peṭakopadesa* are completely similar with the language of the second stage. The language of the commentaries and sub commentaries is totally different from the

language of *Nettippakaraṇa* and *Peṭakopadesa*. Therefore, above mentioned literary limitation should be revised and the *Nettippakaraṇa* and *Peṭakopadesa* should be included in the second category.

Scrutinizing the above examples, it is possible to know the language similarity of those texts. Although it represents the same stage, the language of the *Nettippakaraṇa* and *Peṭakopadesa* is totally different from commentaries and sub commentaries. According to the given examples, the second and third language classifications should definitely be revised. The limitation of the second group should be extended till the period of post canonical and per commentaries and the third category should be stated from the commentaries.

The language of the fourth stage is largely Sanskritized and it has been used as a symbol of the erudition. The climax of the Sanskritization which formed with the third stage, in Pali literature, can be seen in the fourth category. Furthermore, the roots of the Sinhalaization also exist in the language of this stage. In studying on comparative basis the fourth linguistic stage and the Pali literature that has been composed after fifteenth centuries, it is possible to find different types of linguistic features, which is not analogous with the fourth category. Therefore, it should be noted that the language of the modern literature is shown the characteristics of the new category. Inclination of the Sinhalese language, Sinhalization of Pali words, origin of the new Pali words and non-identification of the conclusive or clear meaning of the certain new Pali words are features of this new category. Hence, linguistic features of the modern literature are entirely different from the all stages mentioned by the Geiger.

Accordingly, the above facts, Geiger's explanation on developmental stages of Pali language needs a revision. Limitation of literature of the second and third stages should be innovated and according to the above-mentioned facts, the new linguistic category also should be added for his classification.

1. The language of the *Gāthā*-s (the *Dhammapada*, the *Sutta-nipāta*, the *Thera-Their gāthā*)
2. The language of the canonical prose (Canonical texts, *Nettippakaraṇa*, *Peṭakopadesa*)

3. The later language of the post-canonical and commentaries (Commentaries and sub-commentaries)
4. The language of the latter poetry (the *Mahāvamsa*, the *Rasavāhini*, the *Jinacarita*, the *Dāṭhāvamsa*)
5. The language of the modern literature (the *Abhinavasāsanavamsa*, the *Sāsanavamsadīpa*, the *Dasabodhisatthupattikathā aṭṭhakathā*)

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THE PHILOSOPHICAL STUDY ON NATURE OF MIND- BODY

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The science is the supreme power of the world. At present things are accepted only depending on empirical evidences. The universe is the biggest place and there are many heavenly bodies exist on that such as planets, stars. Scientists have done lot of observations about this universe and attempted to prove them. In addition, they have invented, there are another solar system in the universe. But in Buddhist literatures lord Buddha has preached about the universe and has explained don't waste your time to find about this infinite universe before this investigation.

When the man began to think he had more problems about the world such as what is the universe? what is the origin of the world and how? how does man think?, they asked these questions from themselves. As the result of these questions philosophical concepts started to arise. The best example for this is Buddhist philosophy, because the Buddha had lot of questions before his enlightenment. According to these questions, he wanted to know the reality of the word. Eventually he found what he wanted.

The mind- body problem is another main problem which had been among humans. In Ancient time people tried to find what is mind and body? They wanted to know where is the mind? Some people thought it is in the head. Therefore, some ancient men made holes' top of the heads who has mental illnesses and tried to drive out them through those holes. As the result, the psychological concepts were begun to arise. According to these, it can be understood human beings had a biggest curiosity about mind -body problem. Mind and body is a vast and complex subject as well as it is a metaphysical problem. If the body is taken, it is physical and mind is a non-physical thing. If the body is taken inside that collection of organs such as lungs, muscles, a heart, and bones and on outside appearances such as eyes, ears, skin. If the

body is explained like this, the mind cannot be described like body, because it cannot be seen to anyone's naked eye.

Is there a relationship between mind and body?

When this research was done many books and web sites have been referred and few interviews were held.

In the past philosophers attempted to find the way to get a good understanding about the relationship between mind and body. There were some schools and they made theories based on this mind body problem such as monism, idealism, materialism, dualism. They have given their consideration to this problem.

If the dualism is taken, that is a philosophical theory, which is explained the physical things and mental states both are real, but totally distinct and separate entities. Rene Descartes is a dualistic philosopher who called both mind and body are distinct kind of substance. Furthermore, body is extended and unthinking and mind is unextended and thinking. He rejected popular Aristotelian concept of mind and body.

Descartes explained when anyone is thinking about anything it should be started from a doubt. Furthermore he presented his famous statement about thinking that is '*I think, therefore I am*' (*Cogito Ergo Sum*). The meaning of this is 'I exist as the result of thinking'. Likewise mind and body was explained by Descartes as 'ghost in the machine'.

Monism is the other famous theory who has given ideas about this relationship between mind and body and there are two basic types of monism. One of them is materialism who believed the nothing exists apart from the material world and other one is phenomenal who believed that the physical objects and events are reducible to mental objects events. Only mental objects exist. They believed that ultimately the mind and the brain are the same thing where as dualistic believed that the mind and the brain are separate.

On other hand, Idealism supposes in short that mind is all that exists and the whole world is so compassed. Idealism rejects physicalist ideas and dualistic theories.

In Buddhist philosophy there are main three parts known as *citta*, *mano*, *viññana*. Before the Buddha mentioned these things people distinguished between *Citta*, *Mano* and *Viññana*. In this, *Citta* and *mano* are related. The *viññana* is often translated as consciousness. According to the Buddha, the body is viewed ambivalently.

Some philosophical problems are unsolved problems such as mind -body problem until today. Some philosophers explained that, mind is the brain. But it is an incorrect idea because the brain is physical thing and it can be seen and can be operated on in surgery. Likewise, the brain is the control center of the body of human being. Through the nervous, it is receiving and sending signals to other organs.

The mind is playing a biggest role when man is thinking. If there are many schools who has given their consideration to mind and body concept according to above facts, but anyone couldn't find a good answer for what is the mind- body, Is there a relationship between them or not. The Buddha has explained this body is like a clay pot because suddenly it can be destroyed. When being is die the body is going to decay. Body has no value after death.

My point of view is that when a person alive then both mind and body exist together. But when that person died then the mind is going to separate from the body. This is like, when current is supplied to the fan then it will be worked. The current is the power which is helped to work of fan and if there is no power, the fan is does not work and will be useless thing. If there is no external power of the body then it can not be worked. Therefore, the body depends on mind and mind doesn't depend on the body.

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**THE CAUSAL NEXUS BETWEEN THE ECONOMIC GROWTH
AND GOVERNMENT EXPENDITURE ON TRANSPORTATION
AND COMMUNICATION: THE SRI LANKAN CASE**

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There are two main approaches to explain the theoretical relationship between economic growth and public expenditure. They are Wagner's Law Approach and Keynesian Approach. Wagner's law approach which states that national income causes public expenditure and second, Keynesian approach which states that public expenditure causes national income (Sirinivasan 2013, 336). Bulks of studies have been done to support the both of above approaches in developing economies. There is a long-run equilibrium relationship between public expenditure and economic growth and a one-way causality that runs from economic growth to public expenditure in the short run and in the long run in India, supporting the Wagner's law of public expenditure (Sirinivasan 2013, 344). On the other hand, some studies (e.g., Muthui, Kosimbei, Maingi and Thuku 2013, 251) show that key public expenditure components such as education, transport and communication, public order and security are the major drivers of economic growth in Kenya. Further, some of other studies (e.g., Birundu 2013, 26) found that government expenditure on transportation significantly affects the output level of GDP positively. They explain that an increase in government expenditure on transportation and communication will increase the output level of GDP in Kenya whereas Kayode, Onakoya and Abiodun (2013) conclude that transportation is insignificant in determining economic growth of Nigeria. However, widely reported associations between the two variables are more due to growth causing investment in the transport and

communication sector and not vice-versa in developing countries (Bose and Haque 2005, 103). A number of studies have been conducted in developing countries such as India, Kenya and Nigeria to identify the causal relationship between economic growth and public expenditure on transport and communication (T&C). Even though, there are some studies examine the relationship between total government expenditure and economic growth using Sri Lanka data, but there is no study focused on relationship between economic growth and public expenditure on T & C using Sri Lankans' data. Thus, this study will fulfill that knowledge gap. Since public expenditure on T&C was indicated as a separate component after the 1981 in the CBSL annual reports, this study considered the period of 1981-2016 due to the availability of the data.

The aim of this paper is to investigate the short run and long run relationship and the direction of relationship between government expenditure on T&C and economic growth.

This study used annual time series data of real government expenditure on T&C (RTNC) and Real Gross Domestic Production (RGDP) in Sri Lanka for the period of 1981 - 2016. Expenditure was taken as the sum of current expenditure and capital expenditure. The data were collected through the annual reports of Central Bank of Sri Lanka. All the variables were measured in terms of Sri Lankan Rupee (in millions). All the series were converted into natural logarithm form. The stationarity property of each series was performed by employing Augmented Dickey Fuller (ADF) unit root test approach. Johansen cointegration test was utilized to find out the existence of cointegrating equations and long run relationship between RGDP and RTNC. Vector Error Correction Model (VECM) was employed to find out the short-run dynamic impact of independent variables on the dependent variable. To identify a causal relationship between RGDP and RTNC Granger causality test was employed.

The results of ADF test indicate that all the data series are stationary at their first difference $I(1)$. Thus, we used Johansen cointegration test examine the number of cointegrating equations and long run relationship between the variables. The results are presented in Table 1.

Table 1: Result of Johansen Cointegration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No of CE (S)	Eigen value	Trace Statistics	0.05 critical value	Probability
None*	0.474753	27.31967	20.26184	0.0045**
At most 1	0.147543	5.427508	9.164546	0.2398
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No of CE (S)	Eigen value	Max eigen statistics	0.05 critical value	Probability
None*	0.474753	21.89216	15.89210	0.0050**
At most 1	0.147543	5.427508	9.164546	0.2398

*Note:** denote rejection of null hypothesis at 1% level*

The results both trace and maximum Eigen value test reveal that, there is one cointegration equation between the variables at 1% significance level. Since there is one cointegrating equation now we used VECM to examine the short run dynamic relationship between the variables and long run adjustment of RGDP. However, the results of VECM do not show any statistically significant relationship between RGDP and RTNC in the short run. The result of the Granger causality test is presented in Table 2.

Table 2: The Result of Granger Causality test

Null Hypothesis	Observations	F-value	Prob.
LNRTNC does not Granger Cause LNRGDP	35	0.06293	0.8035
LNRGDP does not Granger Cause LNRTNC		6.95667	0.0128***

*Note: *** denote rejection of null hypothesis at 5% level*

The results indicate that there is a unidirectional causality relationship between RGDP and RTNC that runs from RGDP to RTNC

The results of cointegration test confirmed the existence of long-run equilibrium relationship between economic growth and government expenditure on T&C in Sri Lanka. According to the VECM estimation, there is no short-run relationship between RGDP and RTNC. Granger causality test detected a unidirectional causality relationship that running from RGDP to RTNC. This results support to the findings of growth causing investment in the transport and communication sector and not vice-versa in developing countries. Accordingly, those finding are supported by both theoretical (Wagner's law) and empirical studies (e.g., Sirinivasan 2013, Bose and Haque 2005).

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MIGRATION TOWARDS SUSTAINABLE DEVELOPMENT: NATIONAL LABOUR MIGRATION POLICY IN SRI LANKA AND FEMALE LABOUR MIGRATION

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Even though overseas employment had not been considered as a suitable strategy for sustainable economic growth earlier, recently the Agenda for Sustainable Development considers “migration” to be a matter of concern to act upon enhancing sustainable development. During the last two decades, female labour migration has increased as the slightly unstable economic situation of the country severely affected the household (United Nations Sri Lanka, 2015). Mostly unskilled, low educated women got opportunities to enter into this labour market. With the open economy of the country, both married and single women in Sri Lanka largely migrated to Middle East countries as domestic workers. They became the breadwinners of the family. Labour migration has become the second largest foreign exchange of the country. As a result, Sri Lanka introduced the “National Migration Policy” in 2009 to protect the migrant workers and their families. Good governance, protection and empowerment of migrant workers and linking migration with development are the objectives of this policy. Concerning the third objective of the National Labour Migration Policy, this study focuses on the action taken by the government to integrate female migrants within the development process.

As far as female labour migration is considered, it reported that 34% of the total migrant population of 233,942 (SLBFE, 2016) were in the Middle East which remain the main destination for those employees (mainly Saudi Arabia, UAE, Kuwait and Qatar). In 2016, 80% of the total migrant employees were recruited by these four countries (SLBFE, 2016). Though the statistics show that female migrant number has decreased in 2016, still a large number of female migrants are working in Middle East countries. Although there were several studies conducted on women labour migration

previously, the major focus was on violence against women, labour exploitation, empowerment, vulnerability and the kind (Hettiarachci 2007; Wickramasekara 2013, Pinnawala 1997). Moreover, Pinnawala (2009) discusses the impact of push and pull factors in women labour migration. However, to what extent the government achieved its policy goals are still unexplored. Therefore, the objective of this study is to explore how policy relates to the linking of development and the migration process in recognition of the contribution of labour migration to employment, economic growth, development and generation of income (National Labour Migration Policy 2008).

Empirical data were gathered to address how returned migrant women are well established, and are engaged in the process of sustainable development. In order to do so, 10 cases of returnee women migrants from Ridigama Divisional Secretariat were selected. Ridigama is located in Kurunegala District in Sri Lanka and it has the highest number of female migrants at the time of pilot survey done in 2015. Since the study explores the implication of National Labour Migration Policy, 40 government officials were also selected from the Sri Lanka Bureau of Foreign Employment which is the main governing body of implementing the policy. In addition, it included all the managers from top to bottom in each section of the organization. To collect empirical data, purposive and snowball sampling methods were employed. Furthermore, semi-structured interviews and in-depth interviews were conducted to collect primary data. This research was based on a qualitative methodology and a case study research design. The collected data were analysed using thematic analysis. This paper presents a section of analysed data of a study conducted to evaluate the success of implementing the National Labour Migration Policy in Sri Lanka.

National Labour Migration Policy (NLMP) is indeed gender neutral as it has given importance to both male and female migrants. This policy aims to promote the migration of skilled workers by securing their employment (NLMP,2009: 32). Furthermore, the government has recognised the contribution of female labour migration in foreign exchange, and through the implemented policy they have been placed in a secure employment environment. Since then the policy has introduced the training programme

for female domestic workers. They were trained to operate household items, housekeeping, nursing, language skills and they were advised how to adjust into a new culture and society. In addition, they were guided on how to make complaints if they face any problems in the host house. Though the government aimed to provide necessary and essential skills for the female labour migrants to compete with the international labour market, it places women in a family role rather than a market role. The “Family Background Report” (FBR) which introduced later to restrict migration of women with children under the age of five ensures the role of women confines into the domestic sphere. As a result, the right of women to work overseas is obstructed. Nevertheless, there is no such restricted policy for men in the family to migrate, and hence this FBR policy is prejudiced alongside continuing the stereotyped gender roles in Sri Lanka.

Though the NLMP has aimed at empowering the migrants, still women remained as dependents, since men in the family are the decision makers over the remittance. Majority of returnee migrant women did not have their own savings and either husband or parents in the family managed their foreign remittances. In case of married women, money they earned was lavishly spent by husbands for their personal entertainments; as a result, migration process continues as they need money to survive further. This shows how patriarchal values still exist in the country and men have the power to make decisions concerning family responsibilities though they are not the sole breadwinners of families.

However, when implementing the FBR, officials at SLFEB revealed that it is difficult to implement the policy as most of the women are suffering from poverty and they are submitting fraudulent documents with the help of *Grama Niladari* and some other Sub-agents. These lead women and their children into situations that are more vulnerable during migrant women’s absence in the country of origin.

Moreover, the study reveals that the government has not taken any measures to empower returnee migrant women in line with sustainable development goals. However, Sri Lanka Bureau of Foreign Employment has initiated

some programmes to empower returnee male migrants, such as loan schemes to start their own business. This is justified by the officials providing that those women migrants do not possess sufficient capital at their return. Therefore, women were excluded from the policy objectives, and ultimately the expected objectives have not been achieved.

Since there is no any intervention for returnee women migrants to participate in the development process, they returned to the reproductive role from the productive role that they have engaged in for a short period of time in the Middle East.

Sri Lankan Government has introduced an innovative policy to empower returnee migrants in line with sustainable development agenda. However, it does not have a substantial positive impact on returnee women migrants, due to the disparity between the rights, needs of women to work overseas and the newly introduced “Family Background Report”. The policy still considers returnee migrant women to be dependent, and women were excluded from the development process. This concludes the National Labour Migration Policy itself seems to be a barrier for the self-actualization of women.

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IMPACT OF MIGRATION OF SRI LANKAN PROFESSIONALS TO QATAR ON SKILL DEVELOPMENT AND BRAIN DRAIN

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In recent years, migration of professionals increasingly gained importance in migration studies around the world due to the continuous growth in the movement of highly-skilled persons from developing countries to developed nations. The early studies on the subject viewed the migration of the most skilled members of developing nations as a drain on the human capital of these countries. However, recent studies on the subject argue that developing nations have the potential to gain from the migration of their highly-skilled members to developed countries through technology and knowledge transfers that take place via return migration (Kone and Özden 2017).

Migration of the most skilled members of the country is not a new phenomenon for Sri Lanka. During the colonial period, highly educated persons in executive positions migrated to other countries of the British empire for employment (Collyer et al. 2009). Beginning in the mid-1950s, professionals such as doctors and engineers migrated to western countries in search of greener pastures (Institute of Policy Studies of Sri Lanka, 2013).

With the boom in the oil industry in the mid-1970s, the Gulf region also became an alluring destination for Sri Lankan professionals. In the past few decades, the number of Sri Lankan professionals who migrate to the Gulf region has considerably increased. Among the Gulf nations, Qatar has attracted the highest number of professionals since 2011. (SLBFE, 2015).

Even though the number of Sri Lankan professionals who migrate to the Gulf region has continued to increase over the years, there is a dearth of empirical studies on the subject, particularly on the usefulness of the skills they obtain in the host Gulf countries and their long term plans. The present study on the migration of Sri Lankan professionals to Qatar attempts to

address this vacuum in the literature on the migration of professionals from Sri Lanka.

Each year, a substantial number of Sri Lankan professionals migrate to Qatar due to various reasons. Some of these migrants return to Sri Lanka with the skills and knowledge they accumulated abroad. However, a significant number of professionals do not return to Sri Lanka at the end of their work contracts which prevents Sri Lanka from capitalizing on the skills and knowledge these professionals gain in Qatar.

Objectives

- i To identify the skills obtained by Sri Lankan professionals working in Qatar
- ii To examine the perceptions of Sri Lankan professionals regarding the skills they gain in Qatar
- iii To analyze the factors that prevent Sri Lankan professionals in Qatar from coming back to Sri Lanka

This study is based on primary data collected using two instruments; in-depth interviews with 12 key informants and an online survey of 125 professionals (64 quantity surveyors, 47 engineers and 14 chartered accountants) currently working in Qatar.³⁰² The key informants were identified using judgment sampling. Since a list of all members of the population was unavailable, the sample for the online questionnaire was selected using a combination of non-probability methods of convenient, snowball and judgments sampling. The data gathered was analyzed using a mixed methodology; the information from the key informants was used in a thematic qualitative analysis whereas the data collected from the questionnaire were analyzed using quantitative techniques.

The primary skills and career benefits gained by working in Qatar identified by the respondents were communication skills (76%) and industrial exposure

³⁰² This study defines a professional migrant as a migrant with at least two years of tertiary education in a given profession which is the most commonly used definition of professional migrants in migration literature and the basic definition of highly skilled migrants used by the International Organisation for Migration, 2008.

(71%). In addition, technical skills and personality development were also recognized as valuable skills gained in Qatar by 65% of the respondents.

Most of the respondents (84%) believe that the skills they obtain in Qatar are exceptional and that they would not be able to gain them from similar jobs in Sri Lanka. This view is especially shared by junior professionals who get ample opportunities to expand their horizons by working in mega-scale projects in Qatar. The vast majority (97%) of Sri Lankan professionals in Qatar believe that the skills they have gained in Qatar are valuable for Sri Lanka. They believe their exposure to cutting-edge technologies and the confidence, efficiency and commitment to work they develop by working in billion-dollar projects in Qatar would be valuable for Sri Lanka. Therefore, though Sri Lanka loses the services of these professionals for a short duration of time, eventually the country has the potential to gain net benefits when they return with enhanced skills and knowledge.

However, the problem is that the majority (70%) of Sri Lankan professionals in Qatar have extended their stay in the country way beyond their initial plans. The primary reasons for their extension of stay are escalation of their needs and expectations after migrating to Qatar (72%), getting accustomed to the high-quality lifestyle in Qatar (51%) and lack of confidence in the future development prospects of Sri Lanka (39%). Not only do Sri Lankan professionals extend their stay in Qatar, but the likelihood of their return to Sri Lanka for employment in the near future is also low. Around 30% of these professionals intend to find work in other companies in Qatar or other Gulf countries upon completion of their current employment contracts while nearly 21% have plans to migrate to countries like Australia, Canada, New Zealand, etc. permanently without returning to Sri Lanka. These factors prevent Sri Lanka from capitalizing on the skills they gained in Qatar.

Currently, Sri Lanka does not have a proper policy framework that encourages professional migrants to return to Sri Lanka. Therefore, though short-term migration of professionals to Qatar is potentially beneficial for Sri Lanka, the absence of incentives for professionals to come back to Sri Lanka prevents the country from reaping those benefits. Instead of a potential brain gain, it makes migration of professionals to Qatar a drain on the country's

human capital. Therefore, it is important to implement policies to encourage professionals who have worked overseas for a certain amount of time to return to Sri Lanka. These policies should be designed in a way that makes maximum use of the overseas experience of the professionals for the development of Sri Lanka.

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ELICITING CUSTOMER-DEFINED ATTRIBUTES OF FOOD QUALITY FOR POWDERED MILK PRODUCTS

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In the current world context, an ever-growing number of consumers require more information on the products they consume. In response to that, governments and respective food processing industries in almost all developed and most of the developing countries are intensifying their efforts to improve food quality. It is claimed that customer demand for quality of food product has increased in relation to that for quantity, especially for the products that are sensitive and possesses a large number of substitutes and consumers are rich enough to exercise their choices in the market place. On this basis, the specific objective of this study was to identify and categorize consumer's perceived quality attributes, and in turn, to establish the priorities on quality attributes of food using the Kano Analytical framework, where those attributes pertaining to milk powder were of special interest.

A two-stage research program was adopted to identify the preferable forms of quality attributes of milk powder based on the Caswell (1998) and Lakni and Jayasinghe-Mudalige (2010) (Phase I), and in turn, to classify which into the Kano Categories (Phase II) (Berger et al., 1993). Data were collected from teachers attached to 12 schools in the Kandy district, i.e. $N^1 = 250$ during July and $N^2 = 300$ in August 2017 by way of structured questionnaire-based personal interviews and were subjected to the Kano analytical procedure.

The results suggest that out of 17 attributes taken into account, 02 attributes, namely: "Calorie content" (CAL) and "Appearance" (APP) had fallen into the upper-right quadrant showing the Kano Categories (Figure 1). This suggests that the respondents, in general, perceive these two attributes as

‘One-dimensional’, i.e. they would be happy as the level of these attributes increase in the milk powder product they purchase.

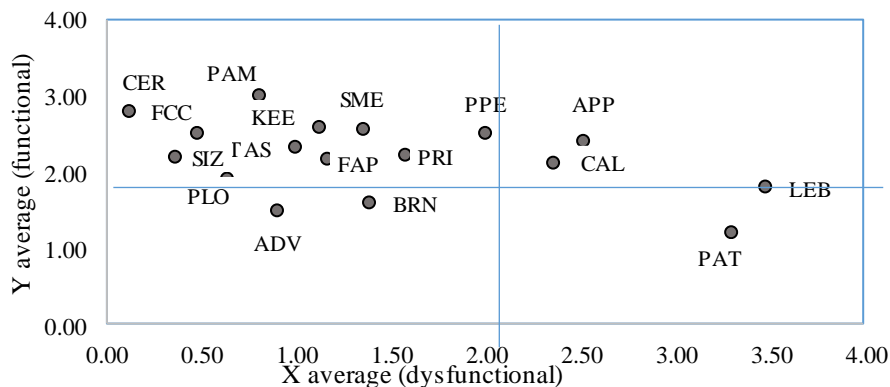


Figure 1: Classification of quality attributes into KANO Categories

Other 10 attributes, namely: “Certification” (CER), “Past purchase experiences” (PPE), “Food additives and preservatives” (FAP), “Fat and cholesterol content” (FCC), “Taste” (TAS), “Size” (SIZ), “Smell” (SME), “Keeping ability” (KEP), “Price” (PRI) and “Package material” (PAM) were classified as ‘Attractive’ attributes with regard to the Kano Categories (see, top-left quadrant in Figure 1).

We may notice that the attributes of TAS, SME, and PPE as having “Experience” characteristic, because consumer’s capability to distinguish this characteristic for a given milk powder product increases as they start consuming it regularly. On the other hand, the FCC and FAP are showing “Credence” characteristics with respect to the level and nature of information environment, i.e. the buyer cannot judge product quality even after purchase and use, and rest of the attributes can easily be “Searched” through the information available without greater effort, i.e. the buyer can judge quality by evaluating the product prior to purchase.

Another 03 attributes, namely: “Brand name” (BRN), “Advertising” (ADV) and “Place of origin” (PLO) were classified under the ‘Indifferent’ category (see, bottom-left quadrant in Figure 1). This suggests that consumers loyal to a certain market setting can rather be insensitive to the Place of origin of

milk powder (PLO) and did not bother about the Brand name and Advertising seriously on their decision to purchase milk powder.

The remaining 02 attributes, namely: “Pathogens in food” (PAT) and “Labeling” (LEB) were considered as having ‘*Must-be*’ characteristics; thus, be included in the bottom-right quadrant in relation to Kano Categories. This is a clear indication that consumers prefer to have a product that is absolutely free from harmful pathogens, or in other words, the level of food safety is a serious concern. Also, it was judged that milk powder products must be subjected to an accredited system for labeling so that consumers can easily make their decision to purchase milk powder when the label of the product is complete and more descriptive in terms of valid and reliable information covering those attributes showing ‘Search’ to ‘Experience’ and up to those of ‘Credence’ characteristics.

The results suggest that the change of customer expectations, as competition increases, means that the role of food quality becomes more important as it can be used to provide increased customer value through the provision of information and functions. Thus, the responsibility of securing the quality of milk powder products is now laid mostly in the hands of producers and processors as the consumers are faced with a Monopolistically Competitive Market for a product in this nature. The respective governments, in fact, can act as facilitators in this process to guide the industry by avoiding potential failures in the market than acting as a regulator by creating failures in policy.

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A STUDY OF THE ANCIENT IRRIGATION SYSTEM OF ANURADHAPURA

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The oldest settlement evidence of Anuradhapura goes back to the early Iron Age and dates back to 900-600 BC based on radio carbon analysis (Daraniyagala S.U: 1992, page 709) The irrigation was the key factor for the evolution of the ancient village system which can be considered as a significant development in the Iron Age. There is archaeological evidence to prove that there were human settlements in Anuradhapura even before the arrival of king “Vijaya”. The excavations done in inner city (Athulunuwara) had found some pottery which proves that there were human settlements prior to ‘Vijayas’ arrival. Since they had a technology and civilization in clay pottery it might be assumed that they might have had the technology in irrigation and the concept of tanks too. The ideas on irrigation tanks had been spread later as large tanks and thousands of small tanks in each and every village in the later period of the Anuradhapura era. These tanks greatly influenced on the development of agriculture of the country. Canals and tanks were constructed by successive kings too.

Many scholars have done research on the tanks in Anuradhapura. Among them there are archaeologists, historians, sociologists, irrigation engineers, and anthropologists. R.L Brohier (1930) has studied the ancient irrigation system in Sri Lanka and revealed his findings in a book called “Ancient Irrigation Works of Ceylon”. H.W Coodrington through his books, “Ceylon Coins and Currency” and “Short History of Ceylon” has mentioned about a tax system related to the tanks. C.W. Nicholas also has done research on Sri Lankan Irrigation System. Since the Rajarata kingdom has been transferred to the South as a result of the foreign invasions and several other factors

many tanks have been ruined due to none maintenance. Under British rule, many of them have been renovated.

In the resent past local researchers have done research on irrigation on the basis of new scientific research methods. Specially, An Excavations have been conducted by Dr. Siran Daraniyagala and Robin Cunningham, in the inner city (Athulunuwara) of ancient Anuradhapura city and they found evidence of ancient water management system in the beginning of the first millennium B.C.

Objectives

To investigate the cascade system of irrigation in ancient Anuradhapura.

To investigate the water supply systems of the citadel and monasteries, of ancient Anuradhapura.

To investigate the irrigation system of agriculture of ancient Anuradhapura.

This study was done mainly based on the archaeological and literary sources. The historical resources, excavation reports, and interviews were the primary sources that have been used for the study. The prior research reports also have been used as secondary sources. It is noticeable that some basic elements like, Biso Kotuwa, Sorowwa, cannels and other elements related to the tanks have some timely changes even though the giant tanks are still remaining as originals. Yet, some small types of tanks are not visible as tanks, and need an exploration in recognizing. To observe such tanks, the literature and previous archeological research were used. The irrigation system and the cannels in and around the sacred city of Anuradhapura also were not visible and need a considerable effort in mapping. Hence, the study focused on much literature in searching the irrigation system in the particular area. Apart from that, the previous archaeological research was studied to assure the findings as well. Specially, the guidance and the knowledge of the adults around the area about these canals and irrigations were a great support to identify the particular places.

Ancient Scared City of Anuradhapura can be recognized as one of the most significant archeological sites in Sri Lanka as well as in South Asia. Dr. Siran Deraniyagala has done a research in the inner city (Athulunuwara) area

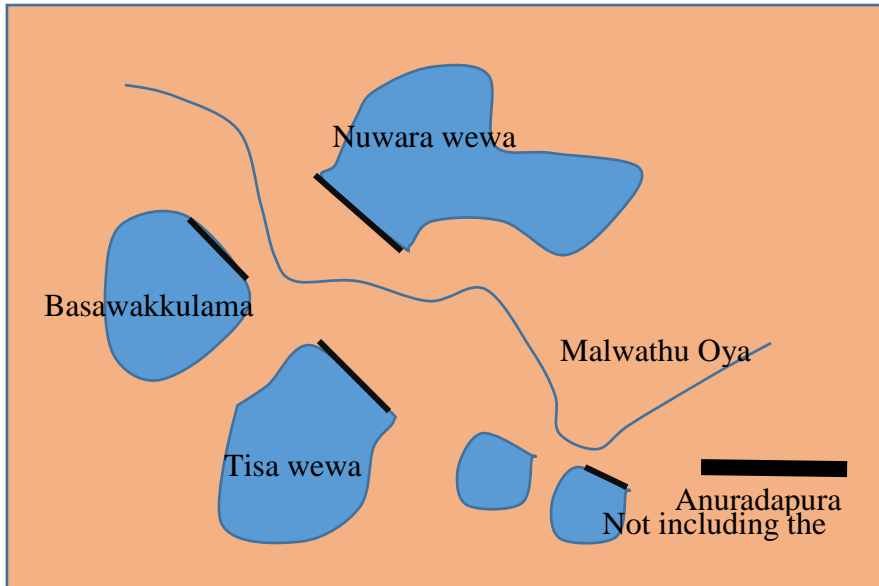
of ancient Anuradhapura city which is about 250 acres of land in size in 1960(Daraniyagala S.U: 1992, page 709) based on the number of research had been done by local and international research on the same matter. He has done an archaeological excavation and as a result more than 14 excavations have been done in the area since 1984 in a large scale using modern scientific research methods covering the 250 acres of land area. The findings of the researches that have been done reveal adequate evidence to explore the fact that there had been Human settlements and well developed irrigation system in the area.

King Vijaya who arrived in 6th century B.C ruled in Thambapanni, and his follower The King Panduwasadewa established his kingdom in Upathissa Gramaya, which was situated in the middle of the country giving up the Kingdom of Thammannawa. Next, King Pandukabhaya after his summit made 'Anuradha Grama' which was situated around "Malwathu Oya" as his kingdom. (බස්නායක, එම්. ටී, 1997) The reason King Pandukabhaya moved his kingdom to the area could be the possibility of getting the needy water for agriculture. King Pandukabhaya has made the 'Anuradha Grama' as a well-developed and well-guarded city. According to the Mahawansa the king also made three tanks named "Jaya Vapi", "Abhaya Vapie" 'Gamini Vapi' in order to supply the water to the inner city. 'Abaya Tank' is known as 'Basawakkulama tank' today. During the period of King Dewanamiyathissa, the necessity for the water of the city had been increased and 'Thissa Wewa' has been built accordingly. At the beginning the tank was small in size, and it has been enlarged in the period of King Dhatusena, bringing water from Kala Wewa through 'Jayaganga' (Yoda Ela). Through 'Halpanu Oya' canal from 'Malwathu Oya' water has been sent to the middle of the Anuradhapura ancient city and the need for the water of both 'Maha Sangha' and citizens were fulfilled with that water. Adequate archaeological evidences have been revealed by the excavations done in the area and there can be seen some ruins of the parts of irrigation system such as 'Biso Kotuwa' and 'Sorowwa'. Apart from that, there are some ruins of a brick made system which was used in purification of water. There is a special creation in the middle of the city which was used to get water to the Alms Hall. It was kind of a well and there

is a stair case from top to bottom of the well, that anybody can step down and get the water even though the level of the water goes down.

The archeological excavations further reveal that there was an underground drainage system, for getting water from Malwathu Oya, 'Thissa Wewa', 'Abaya Wewa' and 'Bulankulama Wewa'. It is considered that the Elephant Fountain (Eth Pokuna) in Abhayagiriya was watered by the 'Bulankulama Wewa'. There is a notice in one of the inscription of 'Ruwanweli Seya' of King 'Kanitta Thiisa' about some tanks named 'Mathaka Wewa', 'Asanaka Wewa', 'Gothika Wewa' and an Amuna. These tanks also might be filled by Malwathu Oya. According to the Dakkhina Thupa Puwaru Lipiya there were several tanks including an Amuna called "Rathakamawa". There is a notice in a Giri Lipiya in 'Purawasankulama' about a few tanks named 'Nakara Wewa', 'Bandakara Wewa', 'Watanakaraka Wewa', 'Salagala Wewa', 'Kada Wewa', 'Patagamaka Wewa', 'Nakara Wewa', 'Balaka Wewa', and 'Malaka Wewa' including an Amuna in the name of Barajaka Too (Brohier, R.L 1934). King "Mahasen" also continued the constructions of the Tanks and Gaminiwapi or Gaminithissa is one of them. Today the tank has been recognized as Perimiyanikulama in the North direction to the Anuradhapura city.

The tanks in small sizes might be enlarged later as the timely need. At first these tanks were created in natural places where the water gets collected which were created as a result of natural phenomena. The 'Nuwara Wewa' is one such tank which was a small tank at the beginning in the name of 'Nakara Wewa'. King II Moggallana also has built a tank across the "Malwathu Oya" in the same way. In this way in 5th and 6th century B.C. the ancient Anuradhapura city was facilitated with water by a well-developed irrigation system. In this system of irrigation, many tanks including Abhaya Wewa and many other canals, drains, amunu and creations were made to full fill the need of the citizens. In spite of that, the tanks were created in order to facilitate the agriculture outside of the city. As a whole, the water management system of ancient Anuradhapura city was well planned considering the factors like increasing population, the environment, the landscape, and the need.



Keywords: irrigation, tank, management, settlements

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සහ සමාගම, කොළඹ,

AN ANCIENT CLAY CANOE BURIAL TRADITION IN SRI LANKA

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By nature, early human societies were more attracted to make burials. Because death may be an uninterpreted metaphysical aspect to early communities. In primitive societies, birth represents procreation, the beginning and the known: death represents the departure, termination, the known and mysterious – hence the phenomena beyond control. (Seneviratne 1990: 145) Ancient people believed that the "spirits" of the dead were kept alien within the community which in turn gave rise to the ancestor – worship. (Radcliff Brown 1976: 155). The Early Iron Age was the prominent cultural phase related to the burial practices in Sri Lanka. However, the clay canoe burial system is considered as a specific burial tradition in the island due to its morphological dynamics. Therefore, the aims of the present work are to examine the research history, chronological and spatial parameters as well as the material culture dynamics of the clay canoe burials in Sri Lanka.

History of research in this custom can be traced back to the 1950s in the island. P.E.P. Deraniyagala recorded the *Bandattara* clay canoe burial located near the fourth milepost of the *Matara – Akuressa* road in 1952. (Deraniyagala 1952) In the *Ibbankatuva* cist burial site excavations during 1988 – 1991, researchers recorded a clay canoe burial as a 'Crematory flat form' in their reports. (Bandaranayake *et al* 1994, Weisshaar 1992) Next is the *Kalotuvawa* clay canoe burial site located in *Gampaha* district. (Perera 2000) Then, Somadeva discovered another clay canoe burial site at *Ranchamadama* government school premises near *Kolabage – Āra* in *Ratnapura* district in 2007. Totally, six clay canoes and two pit burials were uncovered during excavations. (Somadeva 2008) After that, Adikari and Dissanayake excavated four clay canoes at *Nikawalamulla* near *Ruwanwella* in *Kegalle* district. (Dissanayake 2009) In 2010 Somadeva

identified another clay canoe burial site in *Haldummulla* in *Haputale* DS division of *Badulla* district. Totally, four individual clay canoes were identified. (Somadeva 2010) Somadeva also discovered another clay canoe burial site at *Kalupahana Watta* near *Beragala* junction in the same district in 2011. (Somadeva 2011) Perera discovered one more clay canoe burial site at *Dummalasooriya* located near *Madampe* in *Puttalam* district. (Personal comm. with Nimal Perera) As a summary, most previous studies on the relevant area are isolated and regional scale studies. Therefore, the present paper attempts to understand the archaeological dynamics of this specific burial tradition in an island-wide context.

The current investigation involved assessing and analyzing chronological variations, geographical distribution and material culture diversity of the clay canoe burial tradition in Sri Lanka. Excavated data and excavation reports were the primary research materials for the present study. Personal communication with excavators, a comparative approach for chronological sequences and spatial and environmental approach for geographical distribution were the prime data analysis methods of the present paper.

Results of this research are depending on up to date investigations carried out related to the clay canoe burials. As a pioneer investigator, Somadeva argued that the earliest radiometric dates assigned to some sites recovered from the adjacent area of the central mountains extend back to the late third millennium BCE. (Somadeva 2010, 2014) In addition, he noted that he could observe some quartz chips interred in the burial pots in *Ranchamadama* clay canoe burials. (Somadeva 2010) Based on radiometric dates, he argued that the origin of this culture overlaps with the upper limits of the prehistoric microlithic culture in Sri Lanka. (Somadeva 2014, Deraniyagala 1992).

Name of the site	Radiometric date
<i>Ranchamadama</i>	1359 cal. \pm 163 B.C (Somadeva 2008)
<i>Haldummulla</i>	1750 cal. \pm 230 / 1700 cal. \pm 170 B.C (Somadeva 2010)
<i>Kalupahanawatta, Beragala</i>	2400 cal. \pm 250 / 2300 cal. \pm 250 B.C (Somadeva 2011)
<i>Ibbankatuwa (Crematory Platform)</i>	770-395 BC (Weisshaar 1992)
<i>Kalotuvava</i>	135 cal. \pm 51 B.C (Perera 2000)
<i>Nikawalamulla</i>	384 B.C. / 170 A.D. (Dissanayake 2009)
<i>Dummalasooriya</i>	86 – 345 A.D.

Table 01: Radiometric dates obtained for clay canoe burials

On the other hand, sites such as *Kalotuvava*, *Nikawalamulla* and *Dummalasooriya* represent the latest dates of third century B.C to fourth century A.D. (For a general overview of radiometric dates see table 01) Therefore, chronological sequences proposed that the origin of this burial tradition possibly goes back to the third or second millennium BCE and sustained for a prolonged period in the history. However, this clarification should be verified through further investigations.

Compared to the cist and pit burials, clay canoes represent a relatively low diversity of artefacts. (Perera 2000, Somadeva 2008, 2010, 2011, 2014) Majority of them are fragments of earthenware vessels. Some clay canoes contained a large number of pots and some are in very few. Plain Red Ware, Black and Red Ware and Buff Ware are common. Some of them are interior and exterior decorated ones. Few canoe burials especially sites

located in the upper latitudes represent some terracotta or glass beads and quartz chips. (Somadeva 2014) However, there is no sign of any metal object recovered from the clay canoes in the island. This material culture dynamic proved that the clay canoe burial tradition had its own special characteristics.

History of research suggests that the clay canoes are discovered in the various parts of the country. However, observations verified that the majority of sites are recorded from the wet and intermediate zones. Compared to the other types of burials, clay canoe burial sites are relatively low in numbers. Explorations suggested that clay canoe burials are highly disturbed by cultural formations, especially treasure hunters' activities. Local people called *Mukkaru Sohon* (Burials of *Mukkarus*) for clay canoes. According to legends, they believed that *Mukkarus* were the gem miners who migrated to the island from India in the ancient times. Finally, according to the above - mentioned morphological characteristics, it can be concluded that the clay canoe burials are unique burial tradition in the island compared to the other types of burials. Carbon 14 dates (eg. Beragala :2400+250 BC and Dummalasuriya:86-345 AD) confirmed that this clay canoe tradition was continued for nearly three millennia since the late third millennium BC in Sri Lanka. Therefore, a series of further studies are needed to verify the above-mentioned dynamics of this specific burial tradition.

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AN ARCHAEOLOGICAL STUDY OF PREHISTORIC PAINTINGS FOUND IN VEHERAYAYA

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The reviewing of Prehistoric Paintings in Sri Lanka, in the context of distribution was carried out in this study, and the identified paintings can be classified into two types. These are: engravings on a surface of the rock and paintings on a rock surface. The engravings could be identified at *Dorawakakanda, Kondagala, Hakbelikanda and Maleeyadikanda*. The paintings depicted on rock surfaces have been found at *Adiyagala, Henanigala, Tantirimale, Alugalage, Hulan nuge, Kiripokuna* and other places. The Prehistoric paintings have been coloured as Monochrome and Polychrome. Red, gray, yellow, orange, white and black colours are common in paintings.

Depending on the area where the prehistoric paintings are located, the hill country and low land dry zone are more prominent. The low land rainforests zone can be identified as an attractive region of prehistoric maninhabitants. Nevertheless, prehistoric paintings can be identified to a small extent in the vicinity of the Ratnapura District. Concerning a new interpretation to the Sri Lankan prehistoric paintings of it is more important to provide an archaeological interpretation of prehistoric paintings in the Ratnapura district. District zone can be categorized into several stages prehistoric paintings, paintings of the Gampola period and paintings of the Kandy period. The prehistoric paintings of Ratnapura district are under the impression of many researchers. Physically they have received quantitative evidence of the paintings of the Gampola Period and Kandy Period. However, Archaeological data of the prehistoric painting is minority.

The prehistoric paintings that have been found in Ratnapura district have not been properly interpreted. Those at Veherayaya, Budugala, Sankpala and Rassagala are the main prehistoric paintings in Ratnapura District. Among

the prehistoric painting sites, the destruction and vandalization of the Veherayaya paintings were observed.

In the past, several archaeological research teams and the department of archeology have noted that this site had been observed, but there is no initial record of the paintings. At present, only Udeni Arunasiri has carried out archaeological research. According to the contents of the research, it is possible to identify a reference to the art and color of the paintings. Veherayaya, which has limited and minimal research, is the primary purpose of the study is to do formal reporting and to emphasize the coherent significance of Prehistoric paintings.

The Methodology included the sources of literature, field visits, interviews and map studies. The primary source and secondary source were used for the field. Explorations, such as photographs, field notes, geological maps, charts and measurements.

The Veherayaya archaeological site is located Weelioya gramaseva division, Sabarahamuwa province, Rratnapura. It was necessary to travel about 32 km towards Balangoda - Kaltota road and turn left at the Kaltota junction and went straight Kaltota - Welioya road about 13 km.

The location of the painting is identifiable on the rocky ground of the earth's surface as a rock shelter. The cave is facing the slippery slope. In the upper part of the cave roof, there is a Pre-Brahmi inscription. The distribution of paintings can be identified on the rock surface connecting to the bedrock. There is a 50 feet × 10 feet space in front of the rock shelter. Near the paintings, there is an inhabited house with smaller clay walls. The painted wall is about 30 feet × 45 feet in size, but the surface of the rock is slightly damaged by the flowing of water. Several species of lichens and leeches have grown on the rock surface due to the high humidity in the region. The paintings, which are completely open to the outside, are somewhat shrouded by caves up to 40 feet high. The rest of the pieces are shown that there were stylish paintings. However, present, clear and identifiable paintings can be seen only in the upper and lower parts of the rock surface. As the painting spreads it was possible to identify the distribution of the central part of the rock surface.

The contextual subject of paintings is possible to identify animal and human figures; and geometric shapes, those are hand-held human figures, elephant and deer figures. Human and elephant figures have been painted similarly. Human and elephant figures be observed on the prehistoric paintings of Sri Lanka. It can be used to identify some of the metaphors with a certain size, compared with other images. The elephants figure found is slightly larger compared to other paintings. A range of geometric line-formats can be seen on the surface of the paintings and shapes drawn on the rock surface. The lines of geometric have spread over other paintings. The geometric shapes of the drawings include horizontal, vertical dots, and line strips can be seen. Generally, in conjunction with paintings, human figures can be identified largely with long-sleeved body and legs.

With regard to pigments, red and white are commonly used. Colour usage is very low and white and grey commonly used for human figures and animal figures.

The Veherayaya where was carried out this research, can be identified as a unique place in the region, depicts prehistoric paintings. The possibility of comparison with the prehistoric paintings are in Sri Lanka and the features and objects that are characteristic of the paintings is implied the prehistoric significance of these paintings.

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REMOTE SENSING FOR MONITORING THE CULTURAL HERITAGE: A CASE STUDY OF SACRED CITY OF KANDY

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Cultural Heritage Management (CHM) is one of the most important disciplines in archaeological studies. The ICOMOS charter for the interpretation and the presentation for Cultural Heritage Sites has been referred Cultural Heritage as *"a place, locality, natural landscape, settlement area, architectural complex, archaeological site, or standing structure that is recognized and often legally protected as a place of historical and cultural significance"* (ICOMOS, 2008). This mainly refers to that the heritage is material based (ICOMOS, 1999). Further, UNESCO-World Heritage Convention has been emphasized the importance of the documentation, managing and the monitoring of world heritage (ICOMOS, 1990; UNESCO, 2013) with several operational guidelines (UNESCO, 2008). When considering the management and the protection of cultural heritage in Sri Lanka, utilization of global situations and the global enforcements of new framework documentation, planning, managing, and monitoring of cultural heritage are very significant. With these perspectives, it is necessary to identify recent global technological adaptations and most effective methodologies, which are using for documentation, managing and monitoring of cultural heritage at present in worldwide.

Most of the countries are monitored their cultural heritage sites and visible monuments, with on-site observations, especially, including data collection, periodic observations of archaeological sites and multi-analysis based investigations. In some cases, on-site observations are time consuming and it may be a not cost-effective method (Hadjimitsis et al., 2013: 64). Within this practice, remote sensing is using along with GIS applications, as technological integrations for heritage management and monitoring process (ibid) in last few decades. Remote sensing is a way of acquisition of

information about an object or phenomenon without making any physical contact with the object (Parcak, 2009). Aerial photographs and satellite imagery technologies, which are involved an electromagnetic radiation in order to identify and detect various objects and phenomena. The Multi Spectral Remote Sensing images are very efficient for obtaining a better understanding of the earth surface (Nusrath, 2012: 58-67). It is a way acquiring information and extracting the features in form of spectral, spatial and temporal about some objects, area or phenomenon, such as vegetation, land cover classification, urban area, agriculture land and water resources. Geographic Information System (GIS) is a kind of computer based framework to gather, manage and analyze the spatial data. This can be use for analyze the spatial location and organize the layers of information into visualizations with different methods (Esri, 2018). Part of remote sensing is integrated within GIS. Hence, along with GIS, remote sensing based studies can be done by successfully.

This study is structured to identify the uses of remote sensing technology in monitoring process in the Cultural Heritage Management in Sri Lanka, with especial reference to selected monuments and areas in the Kandy, the world heritage city. Also, this research will be questioned about the utilization of the remote sensing along with GIS applications. The methodology of this study has based on field exploration, using remote sensing and satellite images, GIS application. Further, the discussion will be carried out basically, with the data gathered from remote sensing applications and their analysis.

Kandy world heritage city has been under taken several documentation procedures from the last century up to date. However, historical recordings can be identified since the very earliest period. Further, some of the remarkable evidences are provided by the Dutch and British records. Recently, government department of archaeology, central cultural fund and some individual researches have been conducted various researches on documentation, managing and monitoring the Kandyan Heritage. Apart from those studies, UNESCO and ICOMOS were also interested in research, managing and monitoring the Kandyan Heritage, based on World Heritage process (ICOMOS - Advisory Body Evaluation, 1988; Report on ICOMOS Monitoring Mission to Dambulla, Kandy and Galle, 1998 and etc.).

However, this study differs from the above process and this will be carried out by remote sensing based applications for monitoring the cultural heritage.



Figure 01: Kandy Sacred City Area (Google Earth Pro, 2018)

This researcher applied Landsat, Sentinel 2 and Google satellite imageries for analysis purpose from the year 2002 to 2018. GPS locations have been taken from using mobile GPS and the use of CTDroid Sri Lanka application. Further, the some of the data, which has been gathered from field studies, have been analyzed by using Arc. GIS 10.5. The study has been followed by several satellite images to identify the differences and the issues of the Kandy sacred city area in recent years. Further, *Normalized Difference Vegetation Index (NDVI)* and algorithms were applied for the study. NDVI is one of powerful analysis tools in GIS, which is employing the Multi-Spectral Remote Sensing data technique to find vegetation index, land cover classification, vegetation, water bodies, open area, scrub area, hilly areas, agricultural area, thick forest, thin forest with few band combinations of the remote sensed data.

Following maps are representing the land cover classification of Kandy sacred city in last sixteen years.

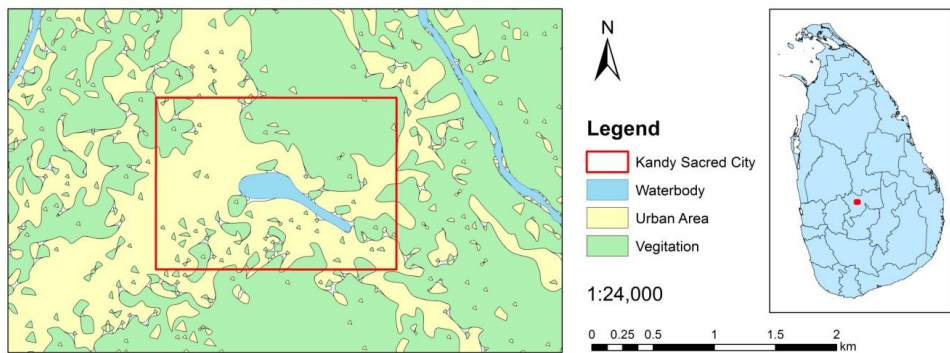


Figure 2: Kandy City area in 2002

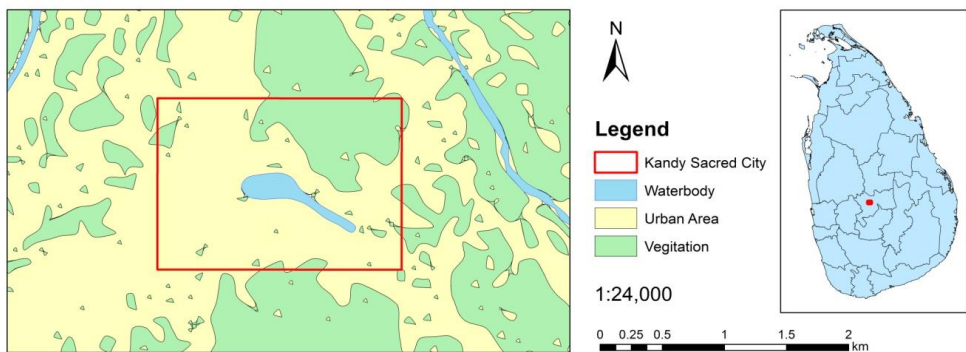


Figure 3: Kandy City area in 2018

In order to remote sensing based monitoring assignment of the Kandy sacred city area, several facts can be recognized. Specially, when considering completely the sacred city area, changes of the natural vegetation can be identified. This effect is nearly showing the percentage of 19.5% for last sixteen years and percentage of 1.65% per year. The urban activities are showing more than 18.5% percent of development, and for one year, this can be a percentage of 1.16%. Moreover, along with field investigations, the study is showing renewals and the conservations of the protected monuments are increased in percentage of 1.70% per year. Moreover, traffic based issues can be seen. Air pollution is also increased in last decades. In addition, highly protected monument premises were

also effaced by new construction, some are called temporary buildings. However, some monuments and the areas were not affected by illegal constructions or activities, due to ongoing management process.

The study is showing considerable issues in the sacred city of Kandy, which can be affected cultural heritage, as the instant of, changes of the natural vegetation, urban activities, renewals and the conservations, traffic and air pollution, illegal and new construction. As a living heritage, some of the activities can be expected. However, it must be in minor level, but here it is high. According to these results it is necessary to overtake a risk assessment analysis of cultural heritage in Kandy. Further, monitoring of the surroundings areas is also necessary.

The use of remote sensing along with GIS applications in heritage monitoring process is very effective. This is kind of a low and cost-effective method and it does not need much of human resources. Use of on-site observations and data collection can be lead in to multi-analysis based investigations via remote sensing and GIS applications. Further, this can be recommended in heritage management and the monitoring purpose in Sri Lankan context.

Keywords: Cultural Heritage Management, Sacred city of Kandy

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REVISITING OF THE PUNCH- MARKED COIN FINDING PLACES IN SRI LANKA

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Punch-marked Coins are the earliest coin type found in Sri Lankan coinage³⁰³. The coins had been circulated from 3rd century B.C. to 4th century A.C.³⁰⁴ Punch-marked Coins found in Sri Lanka belong to imperial series and have a Northern Indian origin³⁰⁵. The coins have been unearthed from many regions of Sri Lanka. Most researches have been conducted on the basis of North Central, North-West and North of the Island as these regions unearthed plenty of artefacts, but less in Wet Zone in early and the historical period in Sri Lanka. Furthermore, any information on Wet Zone has not mentioned in the historical resources such as Mahavamsa, Deepavamsaya. In addition to this, the historical sources mainly were focused on to discuss and explain all aspects of major centers such as Anuradhapura and Polonnaruwa in the Dry Zone and have not focused on the other regions. In addition to this, any epigraphic evidence related to trade and coins of the Punch-marked Coins circulated period in the Wet Zone of Sri Lanka cannot be identified. However, plenty of Punch-marked Coins and Roman Coins have been unearthed from the Wet Zone³⁰⁶

Henry Parker had been conducted a research on Punch Marked Coins in his book of 'Ancient Ceylon' in 1909. Under the chapter XII- The Earliest Coins. He has presented the information under the sub-topic of 'The PurāṇaDaranas, Or Sālākas'. Here, he has mentioned that Punch Marked

³⁰³ H.W Codrington, Ceylon Coins and Currency (Ceylon: A.C.Richards, Acting government printers, 1924), 16.

³⁰⁴ R. Cunningham, and C. Batt, (Dating the Sequence. In: Cunningham, R., ed. Anuradhapura: British – Sri Lankan Excavations at Anuradhapura Salgaha Watta 2, 1, The Site (Oxford: Archaeopress, 1999), 128.

³⁰⁵ K.W.C. Tharangani, A Comparative Study of Punch-marked Coins Found in Sri Lanka and South India (M. Phil., University of Peradeniya, 2015), 201.

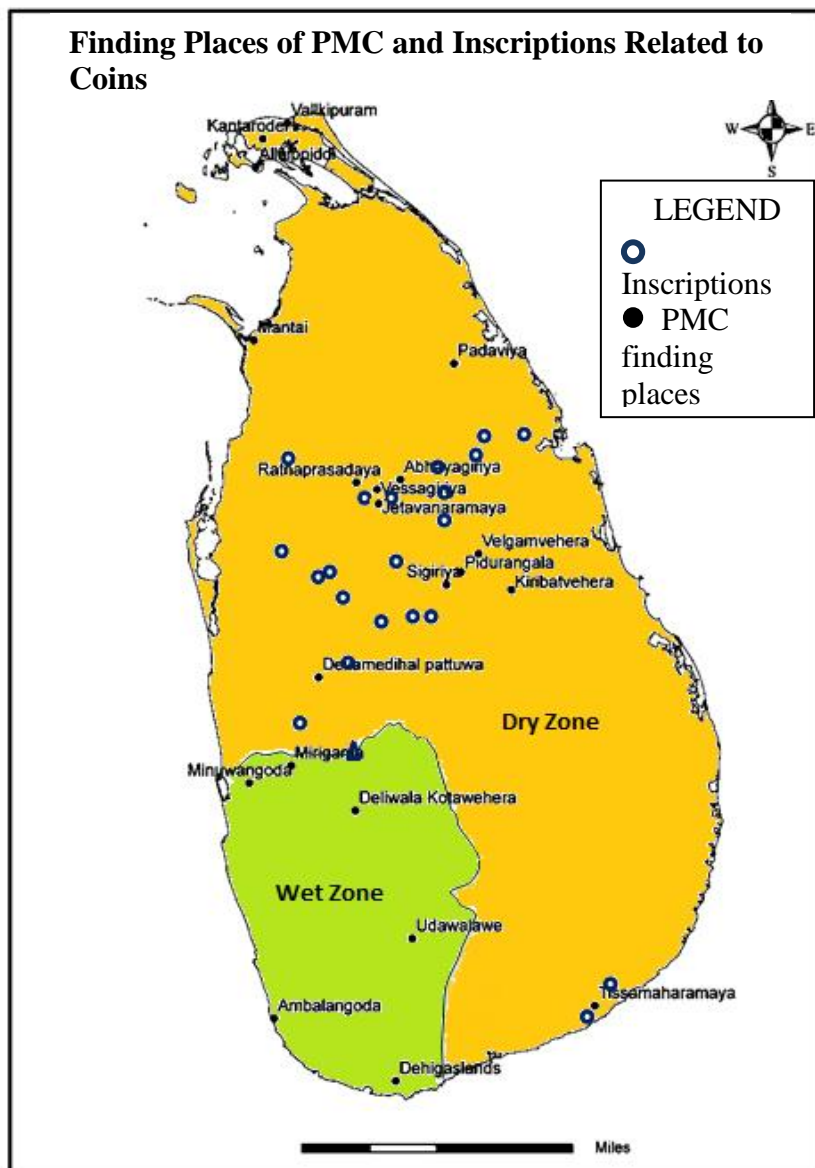
³⁰⁶ D.P.M. Weerakkodi, Taprobane (Brepols Turnhout, 1997), 2-29.

Coins were imported from India. A brief description of the shapes, symbols, weight, and metal of the coins have included.

H.W. Codrington has conducted a research on numismatics. The work has been published as a book named Ceylon Coins and Currency (1924). It includes coins from the beginning of the coinage system to the British period. He has mentioned that the Punch-marked Coins have arrived from India.

Anuradhapura was active as the political capital of ancient Sri Lanka and it seems that the coins were unearthed from far away from the Anuradhapura and its hinterland. GIS application and numismatics epigraphic evidence are used to understand the economic history of the wet zone of ancient Sri Lanka.

It reveals that not only dry zone but also the wet zone had played a vital role in the economic history of Sri Lanka. The following map shows the occurrence of the PMC and the inscriptions regarding coin system.



Map 1 Finding Places of PMC and Inscriptions Related to Coins

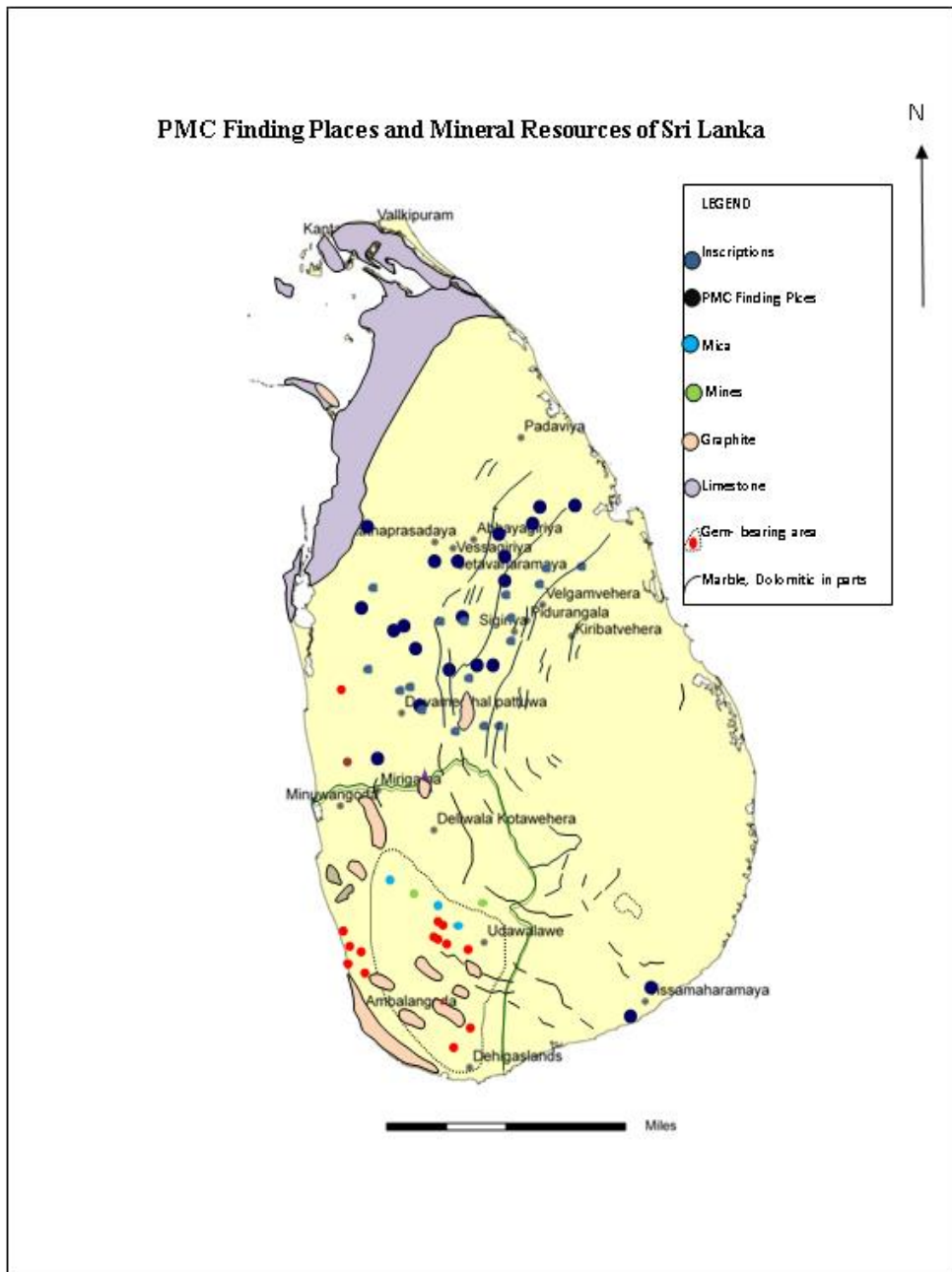
Sources: ASCAR 1892/191-11/1921-22/1951/1953/1955/1956/1965-66/1966-67; Senanayaka 2002:08

The map shows that there are 05 hoards located in the wet zone. The interesting thing is the biggest hoard containing 1028 coins have been unearthed from Minuwangoda in the wet zone³⁰⁷. In addition to this another coin hoard containing 275 coins found from Meerigama also located in the wet zone (Artifact Register: Colombo Museum). The coin hoard from Ambalangoda, located in coastal site. Two other hoards found in the countryside. The rest of PMC hoards located in the dry zone. The Majority of PMC located at Anuradhapura and the hinterlands. Then the three hoards yielded from north of the island named Kantarodai, Vallipuram, and Allaipitti. Mantai also unearthed a coin hoard. In further south-east region also yielded PMC which consider as another kingdom prevailed parallel to Anuradhapura kingdom.

The reason for the loss of epigraphic or historical evidence regarding trade or coins is quite questionable. The wet zone has not yielded any pieces of evidence related to trade except coins. It seems that the region was thinly populated. Inscriptions in the island have mentioned on the meritorious gifts for Buddhist monasteries, kings' orders and to advice to the public³⁰⁸. In further, it is visible that inscriptions always located in the regions which bear high population density as well as Buddhist monasteries. It seems that inscriptions are located in populated regions. The loss of the inscription shed light on the population in the Wet Zone allowing the argument that the area had been thinly populated. The following map gives a clue for the occurrence of the PMC in the Wet Zone

³⁰⁷ එම්.එච් සිරිසෝම, පී.අමරසිංහ , . ශ්‍රී ලංකාවේ පුරාණ කාසි -1 හස් එබ්බ කතාපණ. (කොළඹ: පුරාවිද්‍යා දෙපාර්තමේන්තුව,1986),11.

³⁰⁸S.Paranavitana, Inscription of Ceylon (Ceylon: Department of Archaeology,1970)



Map 2: PMC Finding Places and Mineral Resources of Sri Lanka

Sources: ASCAR 1892/191-11/1921-22/ 1951/ 1953/ 1955/ 1956/ 1965-66/ 1966-67; Cooray 1967:

Plate 37; 1984:228 Senanayaka 2002:08

According to the above map, it seems that the PMC located in the Wet Zone is rich with plenty of minerals such as graphite, gem(precious stones), kaolin, mica, thorionite³⁰⁹. PMC are appeared nearby the graphite ores as well as in the circle of gems. The other PMC hoard bearing sites in the Dry Zone such as Anuradhapura and hinterlands, Mantai, Jaffna, and Tissamaharama were capitals, hinterland, and harbours. The overlook at the minerals of those regions shows that the sites bear crystallize limestone. In addition to this Mantai bear graphite as well. The crystallize limestone has less specific gravity that means it can be broken down easily. The mineral cannot use for any purposes neither building material nor other purposes because of the low specific gravity nature of the mineral. Instead of this, the graphite is quite different from the crystallize limestone.

The graphite has been used to make crucibles. In addition to this, the gems were precious stones. Hence the present writer surmises that the PMC have occurred in the wet zone of Sri Lanka to obtain graphite and precious stones in the wet zone. As a result of this, a lot of PMC have unearthed from the wet zone. The amounts of the coins in the coin hoards are higher than the other hoards in the island.

The excavations have unearthed only a few coins most of the time. Anuradhapura Salgahawatta excavation has unearthed 16 PMC and three of them are silver plated³¹⁰. Anuradhapura citadel excavation unearthed 02 coins and the excavation at Tissamaharama unearthed one coin, Godavaya also have unearthed one coin³¹¹. In addition to this excavation at Mantai also yielded coins. Apart from these other surface findings such as Jaffna yielded 20 coins, 28 from Akurugodella, 32 from Niyadell.³¹² It seems that the

³⁰⁹ P.G.Cooray, *The Geology of Ceylon* (National Musuem of Ceylon Publication, 1967), Plate 37; 1984, 228)

³¹⁰ O.Bopearachchi, *Coins*, ed. R.Conningham (Oxford: Archaeopress 2006), 7-8.

³¹¹ S.U.Deraniyagala, *The Prehistory of Sri Lanka: An Ecological Perspective* (Colombo: Department of Archaeology, 1992), 139, 142

R.Walburg, *Coins and Token from Ancient Ceylon: Ancient Ruhuna Sri Lankan –German project in Southern province*, Vol.2. (2008.), 261, 265.

³¹² O. Bopearachchi, R.M.Wickremasinghe, *Ruhuna: An Ancient Civilization Re- Visited Numismatic and Archaeological Evidences on Inland and Maritime Trade* (R.M. Wickremesinhe. 1999), 32.

above-mentioned coin hoards bear fewer coins than the other coins found in the wet zone.

Hence it can be hypothesized by concerning all the corroborative evidence that the occurrence of the huge amount in one hoard in the Wet Zone may be the result of the attraction for the mineral resources in the Wet Zone. The Indian traders might have attracted to the graphite ore and gem mines in the wet zone sometimes authority of the economic sector might not handle by the capital center of the kingdom Anuradhapura. In some cases, it can be argued that the area was thinly populated. However, sometime the rulers may handle the mineral resources and economic activities in the Wet Zone but they may not mention them in their chronicles or inscriptions because the region was thinly populated. The reason for the thin population may be the climatic condition in the Wet Zone. The thick vegetation, as well as rainfall, may effect for the population for the people in the PMC circulated period when the main occupation was paddy cultivation or shifting cultivation.

Finally, the economic history of Sri Lanka shows that the Punch-marked coins located in the wet zone have come for the attraction of the mineral resources and the other located as the result of trade purpose in day -to- day life

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CHOREOGRAPHING KANDYAN DANCERS FOR THE CAMERA DURING THE BRITISH COLONIAL RULE

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Introduction

The way colonial photographers and filmmakers manipulated and positioned colonized bodies should be considered a process of choreography. This paper examines how the Kandyan dancer's body, his dance movements, and dance costumes were manipulated and captured on colonial photographs and films that were produced during the British colonial period for Euro-American audiences. Using Andre Lepecki's notion of choreography where he articulates it as a mechanism that disciplines, captures, and archives bodies,³¹³ I argue that colonial photographers and filmmakers executed choreographic instructions to manipulate the dancer's body in their camera frames which I consider an act of colonial choreography. However, the dancers' bodies archived in photos and films also carry traces of resistance. Contrary to the view that colonized people were silent subjects in their encounters with the colonial masters, I see Sri Lankan dancers raise their voice through their movements and expressions, although they were unnoticed or ignored by the white person behind the camera.

In this paper, I analyze the British commercial photographer Joseph Lawton's photograph of "religious dancers at the Bo tree ceremonies" (1870/71) and "devil dancers of Kandy" section of *Charming Ceylon* (1930), a travel film produced by White American filmmaker James A. FitzPatrick. I contend that the awkward movements of the Kandyan dancers in the photo of 'two religious dancers' and the film *Charming Ceylon* express traces of the choreographic instructions of their authors Lawton and FitzPatrick. In this paper I use the term "awkward" to characterize the mismatch between the photographers' possible intention and the dancers' responses. Through these

³¹³ André Lepecki, "Choreography as Apparatus of Capture," *TDR* 51, no. 2 (2007).

contradictory and awkward moments, the dancers mocked the person behind the camera where they returned the gaze to the colonizer and to the Euro-American audience to reclaim the accurate depiction of the dancers.

The two main research materials I examine in this research are Joseph Lawton's photograph of "religious dancers at the Bo tree ceremonies" (1870/71), and James A. FitzPatrick's "devil dancers of Kandy" section of his travel film *Charming Ceylon* (1930). Although there were many differences between Lawton and FitzPatrick, their portrayal of Sri Lankan dancers follows the method of exoticizing the natives. Photographing two dancers in the midst of the ruins of the ancient city Anuradhapura is not an accident. I contend that capturing ancient ruins and capturing native dancers in photographs both come under the one colonial project of recording and reconstructing the ancient wisdom of the Orient, which started from the mid nineteenth century. After sixty years from Lawton's photograph, FitzPatrick features "Devil Dancers of Kandy" in his travel documentary *Charming Ceylon* in 1931. Although he did not pronounce it as oriental, he too framed the dancers within the Euro-American parameters of the primitive and the exotic. Capturing and manipulating the dancers had been made possible for both Lawton and FitzPatrick by a combination of technologies of capturing, which should be understood within the context of colonialism.

Based on French philosophers Gilles Deleuze and Felix Guattari's notion of apparatus of capture (1987), dance scholar André Lepecki articulates "choreography as apparatus of capture", where he considers manipulation and capturing bodies as choreography.³¹⁴ For Lepecki, choreography is an apparatus that subjectifies the dancers. I consider both the colonizer's camera and colonial choreography apparatuses of capture. Sri Lankan dancers were captured on two levels. On one level, the dancers' bodies were captured through the colonizer's camera. On the other level, within those photos and films, the dancers were captured in the choreography directed by colonial photographers and filmmakers. For example, when FitzPatrick captured the "devil dancers of Kandy", he captured them not only through his video camera but also through the technology that Lepecki defines as

³¹⁴ Lepecki.

“choreography.” They are biopolitical mechanisms that manipulated and captured the colonized Sri Lankan dancers.

Colonial visual representation of Sri Lankan dancers through photography and travel films should be studied against the backdrop of Orientalism and exoticism. While the Orientalist discourse started to articulate the ancient Sri Lankan culture from the 1870s, colonial exoticization of it continued until the mid-twentieth century. The exotic Sri Lankan natives were portrayed through their costumes and ornaments. Therefore, costumed and ornamented male bodies such as Kandyan chiefs and Kandyan dancers received the attention of colonial photographers and filmmakers. In this context, with the intention of making profit, colonial commercial photographer Joseph Lawton and filmmaker James A. FitzPatrick turned their camera towards the Kandyan dancers’ bodies, which had been conceived by the Euro-American audiences as exotic. However, the Oriental and exotic Kandyan dancing bodies that satisfied the Euro-American audience were not easy to capture.

To satisfy their audiences Lawton and FitzPatrick had to choreograph the dancers’ bodies by manipulating them in their *mise-en-scenes*. While Lawton positioned ‘religious dancers’ against the selected settings, FitzPatrick created fictional devil dancers to choreograph the ‘devil dancers of Kandy’ scene for his film. Presenting Sri Lankan dancers to Euro-American audiences was possible using capturing technology. Sri Lankan dancers were captured both through white men’s camera and their choreography. Therefore, the Kandyan dancers’ bodies were captured, and they became subjects of both the camera and choreography. However, these technologies also captured the awkward moments, tensions, and mockery of the Kandyan dancers.

Although the Kandyan dancers were presented as an exhibit by manipulating them, the awkward moments, contradictory facial expressions, and laughter captured in Lawton’s photo “religious dancers at the Bo tree ceremonies” and FitzPatrick’s “devil dancers of Kandy” scene disrupt the colonial exhibitionary order. In what I call awkward moments, the Kandyan dancers return the gaze to the colonizers through their bodily expressions, facial

expressions, and laughter. In these ways, the Kandyan dancers mock the colonial photographer, filmmaker, and the audience who are the consumers of those photos and films. It is a mockery directed at the photographer and the filmmaker who ignored the dancers' bodily and facial expressions. It is also a mockery directed at the consumers who believe these capture a true depiction of the real encounter between the cameramen and the dancers.

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REPRESENTATION OF THE WAR IN SRI LANKAN PERFORMANCE ART

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Sri Lankan civil war (1983-2009) shattered the social, political, and economic backdrop of the Sri Lankan society calling into questions the notions of humanism and tolerance between the majority and minority ethnic groups of the country. Over thirty years, the war destroyed the material as well as psychological existence of both the Sinhala and Tamil communities and the whole ordinary lifestyle of the Sri Lankan citizen in general. Even though the armed struggle between the LTTE carders and the government forces came to an end in May 2009, it is still questionable whether the roots of the war or causes for such massacre have been eliminated entirely from the Sri Lankan grounds.

Remnants of the brutality of the war and its aftermath are still present in lives of the victims of the war, irrespective of their ethnic origin or geographical location. It is evident that the victims, therefore, do not readily accept the idea that the war is over, except for the military aspect of it. The shattered consciousness and damaged inter-ethnic harmony have not yet been remedied. In this context, art has been an eminent medium of expression, as it has always been, for those who had been victimized by the war or those who empathized with the horror and sorrow of the victims on an emotional level.

Thus, the present research intends to address the question of how Sri Lankan artists have used performance art³¹⁵ as a medium of expression to conceptualize the social and cultural issues experienced or witnessed by the artists during and after the war. This study critically analyzes the use of

³¹⁵ Performance Art is a genre of art which developed in the 1960's, where art is presented 'live' usually by the artist or with collaborators or materials.

performance art in portraying violence as experienced during the war and the different ways in which local artists engaged with that experience. Based on an examination of some selected pieces, the study examines the ways in which the artists used the notions of time and space and spatial closeness with the audience to conceptualize the socio-cultural orientation of the war.

From a theoretical point of view, Marina Abramović, argues that ‘a piece of performance art’ consists of four elements: time, space, the performer's body and the relationship between the audience and the performer. According to her, performance is a mental and physical construction that an artist steps into, in front of an audience in a specific time and space. So its scale provides an amplified and direct experience of the time and space for both the performer and the audience.³¹⁶ The present study analyzes how the Sri Lankan performance artists use the above elements in portraying the war and violence.

The present study, which is qualitative in nature, used interviews, field work and observations of artistic dialogue in post-war Sri Lankan performance art genre as its primary methods of data collection. This study primarily engages with seven works of art created by three renowned Sri Lankan artists: G.R. Constantine, Bandu Manamperi and Janani Cooray. The works of art that the present study engages with are *The Broken Palmira*, *Bandaged Barrel Man*, *Bandaged Man: Body in Ashes*, *Golden Barrel Man*, *Pasting Pieces*, *Red Hands* and *Our Blood*.

The beginning of performance art in Sri Lanka dates back to the early 1990s. The 1992 exhibition titled ‘Anxiety’ by Jagath Weerasinghe, which opened with a performance of breaking coffins and spreading flowers set the pace for performance art in Sri Lanka. Yet the first artwork presented by a local artist was *Broken Palmyra*, created by G.R. Constantine in 1994. It is significant as it was based on the ideas of war and violence.

³¹⁶ Abramović, Marina, and Klaus Biesenbach. *Marina Abramović: The Artist is Present* (New York: The Museum of Modern Art, 2010): 212.

In the qualitative analysis of the aforesaid artworks, it became clear that early artists like G.R. Constantine, Bandu Manamperi and Janani Cooray were competent in identifying and then reimagining the subtleties of the destruction caused by the war between the Sri Lankan armed forces and the LTTE. Their art used the human body as a powerful medium to communicate shared physical and emotional experiences. It was also evident that their use of said themes had been heavily influenced by their own experience and the experience they had witnessing the sorrow of the victims. Their expression was not a mere reflection of the existence and the violent nature of the war; it was mainly a portrayal of the war-torn societies and their social, cultural and political instabilities and reflections of a damaged consciousness of the victims and their loved ones.

Their use of time and space reflected their conceptualization of the disorganized nature of the post-war Sri Lankan society. Another important characteristic of their art was their interaction with the audience and the public, sharing their thoughts of the moment. Thus, this present research suggests that contemporary performance artists in post-war Sri Lanka practically used the narratives of the war and violence, with a critical perspective on the true social, political background of a war-torn country, to share the unspoken truths of the victims of the armed struggle. The study engages with how the discourse on contemporary Sri Lankan performance art in a post-war Sri Lankan context emerged, too shape and developed in the midst of a peace building process and a social and political rebuilding process in the country.

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EVIDENT SPIRIT AND SACREDNESS IN AFRO SRI LANKAN COMMUNITY: REJUVENATION OF AFRO SRI LANKAN CULTURAL PRACTICES

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The Sri Lankan Kaffirs, a group of people of Afro-Portuguese origin who evolved in the aftermath of the European colonization project in Sri Lanka, are one of the iconic examples for lesser known communities. At the time of the Portuguese, Sri Lanka was considered a major trading post especially for cinnamon. By 1597 the Portuguese had expanded their rule and control over the southern lowlands.³¹⁷ Africans were brought from the Mozambic Island via India as slaves and soldiers in 1638 by the Portuguese. When the Dutch colonialists arrived, the Kaffirs worked on cinnamon plantations along the southern coastal belt. Both the Dutch and the British used the Kaffirs in their naval forces and as domestic workers.³¹⁸

The present research is an attempt to demonstrate the rejuvenation of Sri Lankan Afro-Portuguese communities in the post-colonial period and to explain how this minority group protects their culture and identity within the mainstream culture of Sri Lanka. A case study carried out during *in situ* field work in Afro-Portuguese communities in the north-western region of Sri Lanka is used to validate this argument.

The Portuguese identified the Kaffirs either as *kafre* or *cafre*, and these communities continued to be used for manual labor in the cinnamon plantations belonging to Dutch colonists. According to etymology, the word Kaffir had been borrowed from English approximately in the 18th century, and it had first appeared in the Sri Lankan census between 1871 and 1911.

³¹⁷ Harshana Rambukwella, *The Politics and Poetics of Authenticity* (London: UCL Press, 2018): 27.

³¹⁸ ටිකිරි බණ්ඩා සේරුවේ අබේසිංහ, *පෘතුගීසීන් හා ලංකාව 1597-1658*. (කොළඹ: ලේක්ෂවුස් ඉන්වෙස්ට්මන්ට්, 1969): 104.

However, some local linguists argue that the word “*kapiri*” derives from the Arabic word *kafre*. The elders in the Puttalam Kaffir community claimed their ethnic identity to be “*Lanka Caffres*” or “*Lanka Kapiri*” as noted in their birth records.

Though the Kaffir community is scattered with its extremely limited number of members across the country, the largest community could still be found in Sirambiadiya, a remote village located in Puttalam in the North-Western province of Sri Lanka.

Rejuvenation of Afro Sri Lankans:

The Kaffir community had to be resilient in the wake of many socio-political changes that occurred over a period of more than five decades. The Kaffirs have recently gained widespread attention from scholars and researchers mainly for their music and dance traditions, and as a result, their identity has become known to the outer world. They are a dynamic group of people, and they have preserved their Euro-Asian identity through language, music, songs and dance.

Maintaining the native languages of a context is the fundamental and essential key to preserving the cultures and traditions of that context. As languages disappear, the oral traditions that go along with them also fade away, which is an immense loss to the world as well as to the concerned native population. The language used by Sri Lankan Kaffirs is called Creole, and this is an indication of their Afro identity. Today this Creole language can only be heard in the “*manjas*”, a type of songs used within that community, mainly among the elderly population. This language was spoken until two generations ago.³¹⁹ Now it is considered an extinct language.

The *Manja* tradition contained thousands of *Manja* songs in the past. The present members of the community claim that they own fifty to hundred songs of them and that only few of them are in actual use today. The transmission of that music and their songs to their younger generation had happened only using the oral transmitting method. (Alex, 2015). The peak

³¹⁹ සුනිල් ආරියරත්න, *බයිලා කපිරිකප්පා විමර්ශනයක්* (කොළඹ: එස්. ගොඩගේ සහ සහෝදරයෝ, 1999): 44.

level of the song with fast tempo is the most fascinating moment in that music owing to energetic beating on the instruments and energetic dance on the floor. Features such as the shuffling of feet and fast movement with bent backs, which define their dance tradition, have their parallels in the traditional dance moves in some parts of northern Nigeria. The combination of this energetic music and dance is a unique feature of their identity.

The audience of Kaffir performances differ from performance to performance. Some organisations invite them to perform at an organised place or on a stage in front of an audience. Sometimes the nature of their performance is determined by the expectations of the organiser. Therefore, most of the time, there is a difference between the way they perform in their village and the way they perform outside. This may strongly affect the originality of their performances.

The gradual changes that have taken place in the socio-economic, political and cultural milieu in the country after independence in 1948 have made the Kaffirs get adjusted according to the socio-political environment of the country. The previous occupations did not remain the same after the European colonial era. The Kaffirs had to find any available employment for themselves. Through employment, intermarriage, and their contacts with other neighbouring local communities, they have tried to establish themselves within the mainstream social system.

In 2016, the government proposed to provide equal rights to the Kaffir community of African origin in the country. It was proposed to give all members of this community all the rights enjoyed by the other communities. As a result, their children were absorbed into mainstream schools while their culture had also been recognized as one that should be preserved. Nevertheless, the proposal is under discussion, and some argue that the government should focus on providing this community with basic needs before presenting an equal rights bill.

The Sri Lankan Africans are very proud of their identity as “Kaffir”, and they enjoy the uniqueness that their small population has. Only time will

resolve what will die out first, the name “kaffir”, or their music and dance, or the dwindling population which might soon disappear as they further assimilate into the mainstream community of the country.

For this research, both primary and secondary sources were used in order to obtain data. Audio and video tapes of Kaffirs performances were used as primary Sources. Participant observation, interviews with relevant personnel, and informal discussions with members of the community have also been conducted. The secondary sources that were used for this study include books, magazines, articles published in newspapers and journals.

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