



PERIYAR ARTS COLLEGE

CUDDALORE - 607 001

Criterion 3 - Research, Innovations and Extension

3.3 Research Publications and Awards

3.3.2: Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years



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3.3.2: Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

3.3.2.1: Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during last five years

Year	Total number of books and chapters published
2023-2024	22
2022-2023	10
2021-2022	7
2020-2021	4
2019-2020	40

Evidences for the above items are given in the page number 1 to 140



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3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

#	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
2023-2024										
1	Dr J Michael Antony Prabhu Arachi	CURRENT TRENDS AND LATEST RESEARCH EVOLUTIONS IN HEALTH CARE PRACTICES	-	-	-	-	2024	978-81-19757-46-6	Periyar Arts College, Cuddalore	Bharti Publications
2	Dr.A.Murugan	Machine Learning Algorithms	-	-	-	-	2024	976-93-5762-626-7	Thiru Kolanjiappar govt Arts College, Virudachalam	Scientific International Publishing House
3	Dr.G.Kumar	Employability Skills and Aspirations	-	-	-	-	2024	978-81-19243-47-1	Periyar Arts College, Cuddalore	Vijay Nicole Imprints Private Limited
4	Dr R. Murugan	-	BHARATHIYAR IN KATTURAIGALI MADHA KARUTHUKKAL	30th INTERNATIONAL MULTI DISCIPLINARY CONFERENCE ON ARTS, SCIENCE - TECNILOGY	30th INTERNATIONAL MULTI DISCIPLINARY CONFERENCE ON ARTS, SCIENCE - TECNILOGY	International	2024	-	Periyar Arts College, Cuddalore	ANURAGAM, CHENNAI.





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5	Dr.K.Mahendravarmann	Voice of the Marginalised	-	-	-	-	2023	978-93-5747-206-7	Periyar Arts College, Cuddalore	Iterative International Publisher
6	Dr. J.Raja	-	Inaiya yugathil malarinum mellithu Kaamam :MANA CHEMMAIYAK KATHIL THIRUKKURAL	11th WORLD TAMIL CONFERENCE	11th WORLD TAMIL CONFERENCE	International	2023	978-81-953243-2-3	Periyar Arts College, Cuddalore	ULAGA TAMIL AARAICHI NIRUVANAM
7	Dr J Michael Antony Prabhu Arachi	ADVANCES IN BIOTECHNOLOGY AND MOLECULAR BIOLOGY	Phytoremediation	-	-	-	2023	978-3-96492-471-1	Periyar Arts College, Cuddalore	Weser Books, Germany
8	Dr J Michael Antony Prabhu Arachi	NANOSCIENCE & NANOTECHNOLOGY	NanoTechnology and Aquaculture	-	-	-	2023	978-93-94766-32-7	Periyar Arts College, Cuddalore	SCIENG Publications
9	Dr J Michael Antony Prabhu Arachi	"ENVIRONMENT CONSERVATION, CHALLENGES THREATS IN CONSERVATION OF BIODIVERSITY (Vol-V)	Environmental Degradation Conservation Strategies	-	-	-	2023	978-93-94766-31-0	Periyar Arts College, Cuddalore	SCIENG Publications
10	Dr J Michael Antony Prabhu Arachi	LIFE SCIENCES: TRENDS AND TECHNOLOGY	Biofouling	-	-	-	2023	978-93-94766-44-0	Periyar Arts College, Cuddalore	Scieng Publications
11	Dr J Michael Antony Prabhu Arachi	APPLIED TRENDS IN LIFESCIENCES	Prawn Culture	-	-	-	2023	987-93-94766-40-2	Periyar Arts College, Cuddalore	Scieng Publications





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12	Dr J Michael Antony Prabhu Arachi	BIOPROSPECTING AND ITS FUTURE	Bioprospecting and Aquaculture	-	-	-	2023	978-93-94766-42-6	Periyar Arts College, Cuddalore	SciENG Publications
13	Dr J Michael Antony Prabhu Arachi	THE MODERN ERA OF MICROBES - OPPORTUNITIES, THREATS AND CHALLENGES	Parasitology	-	-	-	2023	978-93-94766-43-3	Periyar Arts College, Cuddalore	Scieng Publications
14	Dr J Michael Antony Prabhu Arachi	FRONTIERS IN CHEMICAL, BIOLOGICAL AND PHARMACEUTICAL SCIENCES VOLUME II	Waste management	-	-	-	2023	978-93-88901-77-2	Periyar Arts College, Cuddalore	Bhumi Publishing
15	Dr G.Pushpavalli	-	THEMATOLOGY OF KAMABARAMAYANA :WITH SPECIAL REFERENCE TO MILMAL PAARY'S THEORY	11th WORLD TAMIL CONFERENCE	11th WORLD TAMIL CONFERENCE	INTERNATIONAL	2023	978-81-953243-2-3	Periyar Arts College, Cuddalore	ULAGA TAMIL AARAICHI NIRUVANAM
16	Dr. J.Raja	-	NALVIZHANELLUM VALVIZHARISYUM	PANPATTU NOKIL THAMIZHIYAL - An International Conference	PANPATTU NOKIL THAMIZHIYAL - An International Conference	INTERNATIONAL	2023	978-93-94785-45-8	Periyar Arts College, Cuddalore	PALLAVI PATHIPPAGAM





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17	Dr V.Annapoorani	-	MANIMEGALA I PASIPINI POKKIYA PANPAADU	TAMIL KAPIYANGALIL PANPATTU KOORUGAL - National Conference	KAPPIYANGAL	NATIONAL	2023	978-8119372-8503	Periyar Arts College, Cuddalore	NEWS CENTURY BOOK HOUSE, CHENNAI
18	Dr G.Pushpavalli	-	KAMBA RAMAYANATHIL VAAZHVIYAL NERIGAL	TAMIL KAPIYANGALIL PANPATTU KOORUGAL	KAPPIYANGAL	NATIONAL	2023	978-8119372-8503	Periyar Arts College, Cuddalore	NEWS CENTURY BOOK HOUSE, CHENNAI
19	Dr G.Pushpavalli	-	THIRUMOOLARIN THIRUMANTHIRAM KAATUM MANITHA NEYA MAANBUGAL	ULAGA MUTHTHAMIZH MAANADU AAIVU KOVAI	ULAGA MUTHTHAMIZH MAANADU AAIVU	INTERNATIONAL	2023	978-81-19372-85-0	Periyar Arts College, Cuddalore	KALAI UTHAYAM PUBLICATION AAMBUR
20	Dr G.Pushpavalli	-	THANJAI THIRUMANGALAKUDI BADMASAALI NESAVALAR SAMUTHAYA MAKKALIN VAZHIPAATU MURAIGAL	TAMIL ILLAKIYA MARABU - NATTUPURA MARABU	TAMIL ILLAKIYA MARABU - NATTUPURA MARABU	INTERNATIONAL	2023	978-81-965682-2-1	Periyar Arts College, Cuddalore	BODHIVANAM, CHENNAI





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21	Dr V.Annapoorani	-	PURANAANURU PARISILTHURAI PAADALGALIL PULAVARGALIN MAANBU	ULAGA MUTHTHAMIZH H MAANADU AAIVU KOVAI	ULAGA MUTHTHAMIZH MAANADU AAIVU	INTERNATIONAL	2023	978-81-19372-85-0	Periyar Arts College, Cuddalore	KALAI UTHAYAM PUBLICATION AAMBUR
22	Dr V.Annapoorani	-	YESOTHARA KAAVIYAM KATTUM VAAZHVIYAL ARAM	KAPPIYANGAL KAATUM VAAZHVIYAL ARANGAL	KAPPIYANGAL	INTERNATIONAL	2023	978-81-965440-8-9	Periyar Arts College, Cuddalore	AMUTHAN PUBLICATION PAAPANASAM
2022-2023										
1	Santhosh Kumar B	-	A study of Interrelation of Sustainable Development Goals in India using Data Mining and Machine Learning Approches	International Conference on RTCS 2023	International Conference on RTCS 2023	International	2023	978-81-955309-5-3	Annamalai University	Alagappa University



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2	Ravishankar S	-	A Study on Climate Change with Air Quality Index using Data Mining and Machine Learning Approaches	International Conference on RTCS 2023	International Conference on RTCS 2023	International	2023	978-81-955309-5-3	Annamalai University	Alagappa University
3	Dr.P.Gnanavel	-	Health Conditions of women living in Slums : Study of North Chennai	Nutrition and health Education	Nutrition and health Education	International	2023	Proceedings	Periyar Arts College, Cuddalore	Proceedings of RUSA 2.0 Sponsored
4	Santhosh Kumar B	Data Science and Analytics	-	-	-	-	2022	978-93-5625-324-7	Periyar Arts College, Cuddalore	Scientific International Publishing House
5	Mr. S. Dhanavel, Dr. A.Murugan	-	Micronutrients Performance in Paddy yield using Data Mining and Machine Learning Approaches	The Role of Computational Intelligence in Emerging Research Innovations (NC-RCIERI'23)	The Role of Computational Intelligence in Emerging Research Innovations (NC-RCIERI'23)	National	2022	978-81-962982-4-1	Annamalai University	Kongunadu Publications India Pvt Ltd





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6	Dr J Michael Antony Prabhu Arachi	FISHERIES SCIENCE VOL 1		-	-	-	2022	978-93-93849-02-1	Periyar Arts College, Cuddalore	Sankalp Publication
7	Dr J Michael Antony Prabhu Arachi	TRENDS IN AQUACULTURE	Feed nutrition and management	-	-	-	2022	978-3-96492-304-2	Periyar Arts College, Cuddalore	Weser Books, Germany
8	Dr J Michael Antony Prabhu Arachi	FRONTIERS IN MICROBIOLOGY	Aquatic Microbiology	-	-	-	2022	978-93-94766-29-7	Periyar Arts College, Cuddalore	Scieng Publications
9	K.Ganeshram	Moonru Ratha Thuligal	-	-	-	-	2022	-	Periyar Arts College, Cuddalore	Noolvanam
10	Dr.S.Subash Chandrabose	Recent Trends in Multi Disciplinary Subjects	The Position of Women in Indian Society after Independence			International	2022	978-93-94727-44-1	Periyar Arts College, Cuddalore	Redshine Publications

2021-2022



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1	P. JANAKY	POLEMICS OF PRESENTATION AND REPRESENTATION IN LITERATURE	EXISTENTIAL CRISIS OF WOMEN AND THEIR STRUGGLE FOR IDENTITY IN ASHOKMITRA N'S NOVELLA WATER: A STUDY	-	-	-	2021	978-93-90677-45-0	Periyar Arts College, Cuddalore,	EMERALD PUBLISHERS
2	P. JANAKY	VOICES OF INDIGENEITY, DIASPORA, MINORITY AND MAGINALITY IN LITERATURES IN ENGLISH: A POST-STRUCTURAL STANCE	VIOLENCE AND INJUSTICE, IGNORANCE AND STRUGGLE FOR EMPOWERMENT OF THE MARGINALIZED IN BAMA'S VANMAM: A CRITICAL STUDY	-	-	-	2021	978-93-90677-54-2	Periyar Arts College, Cuddalore,	EMERALD PUBLISHERS





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3	S.Subash Chandrabose	Psycho social environmental issues of employees at workplace	Important constitutional and legal provisions for women employees in India	-	-	-	2021	978-93-90699-18-6	Periyar Arts College, Cuddalore,	Nitya Publications
4	Dr. R. Vijayakumar	Dispersion of Solute with chemical reaction in blood flow	-	-	-	-	2021	978-620-3-86969-9	Periyar Arts College, Cuddalore,	Lambert Academic Publishing
5	Dr.D.Hemalatha	HEALTH INSURANCE SCHEMES IN TAMILNADU	HEALTH INSURANCE SCHEMES IN TAMILNADU	-	-	-	2021	978-93-91772-14-7	Periyar Arts College, Cuddalore,	Forschung Publication,
6	Dr. S. Eakambaram	Least Absolute Error Estimation of Linear and Nonlinear Regression		-	-	-	2021	978-620-2-52465-0	Periyar Arts College, Cuddalore,	Lambert Academic Publishing
7	Dr J. Shyamala	Abdul Majeed Vazhviyalum Padaipakkamum		-	-	-	2021	978-81-85452-43-2	Periyar Arts College, Cuddalore,	Puducherry MozhiyialPanbaatu Araichi Niruvanam
2020-2021										
1	P Venkatachalam	Social Media: Key Issues and Challenges	Issues and Challenges of social media in education	-	-	-	2020	978-80-93541-78-5	Periyar Arts College, Cuddalore	Aram Book House, Erode, Tamilnadu, India





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2	K Anandalakshmi	Social Media: Key Issues and Challenges	Social Media in Education: Positive and Negative Impact on the Students	-	-	-	2020	978-80-93541-78-5	Periyar Arts College, Cuddalore	Aram Book House, Erode, Tamilnadu, India
3	Dr. Ganeshram	KAFKA VIN NUNMOZHIGAL	-	-	-	-	2020	978-81-9337-340-5	Annamalai University	Nool Vanam
4	Dr. N. Paranjothi	Discrete Time Retrial Queueing Model with Vacation	-	-	-	-	2020	978-620-2-52060-7	Annamalai University	Lambert Academic Publisher, Germany
2019-2020										
1	Dr.K.Pajanivelou	Theories and Applied Criticism	-	-	-	-	2020	978-93-80342-924	Periyar Arts College, Cuddalore	Annam, Tanjore
2	N.Dhaivamsam	-	French Missionaries and Socio-Cultural Changes in Pondicherry	Socio - Cultural Settings Of Tamilnadu Upto 1736 AD	Socio - Cultural Settings Of Tamilnadu Upto 1736 AD	National	2020	978-9380187-01-3	Periyar Arts College, Cuddalore	M.Prema Publication
3	Dr.J.Shyamala	-	Works of Chenkottai Avudai Akkal : Gyno Critic Approach	PILC Working Papers, Volume 10	-	National	2020	-	Periyar Arts College, Cuddalore	Puducherry Institute of Linguistics and Culture





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4	Dr.N.Baskaran	-	Periyapuraana thil Thirumanam	Samayam Kaattum Samooga MemPadu	Samayam Kaattum Samooga MemPadu	International	2020	978-9385508-10-3	Periyar Arts College, Cuddalore	Raja Publications, Thricy.
5	Dr.J.Poorani	-	Samaya Kuravargal Naalvarin Nerigal	Samayam Kaattum Samooga MemPadu	Samayam Kaattum Samooga MemPadu	International	2020	978-9385508-10-3	Periyar Arts College, Cuddalore	Raja Publications, Thricy.
6	Dr.J.Poorani	-	Thiruganana Sambantharin Irai Neri	Thamizhiyamum Manithavala Membadum	Thamizhiyamum Manithavala Membadum	International	2020	978-93-87946-29-3	Periyar Arts College, Cuddalore	Raja Publications, Thricy.
7	Dr K.Kavitha	-	Kalithogail Virunthombal	Thamizhiyamum Manithavala Membadum	Thamizhiyamum Manithavala Membadum	International	2020	978-93-87946-29-3	Periyar Arts College, Cuddalore	Raja Publications, Thricy.
8	Dr K.Kavitha	-	Thaayumanavar Padalgail Samooga Membatu	Samayam Kaattum Samooga MemPadu	Samayam Kaattum Samooga MemPadu	International	2020	978-9385508-10-3	Periyar Arts College, Cuddalore	Raja Publications, Thricy.
9	Dr.N.Baskaran	Aiyvuch Chinthanaigal	Ettuththogai agappadalgalil kudumbaram	-	-	-	2020	978-93-90082-01-8	Periyar Arts College, Cuddalore	Shanlax Publications





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10	Dr. R. Bhuvanewari		Combined Dynamic Hierarchical Replication and Replica Consistency Model for Data Grid Environment		International Conference on Recent Trends in Advanced Computing	International	2019	-	Periyar Arts College, Cuddalore	St. Joseph's College of Arts & Science (Autonomous), Cuddalore
11	Mr. S. Dhanavel	-	Innovative Green ICT for Environmental Sustainability	Environment and Health	National Conference on Economic Burden of Pollution and Health in India: Issues and Prospects	National	2019	978-93-88398-50-3	Periyar Arts College, Cuddalore	Shanlax Publications
12	Mr. S. Velraj	-	Role of Information and Communication Technology in Environmental Management	Environment and Health	National Conference on Economic Burden of Pollution and Health in India: Issues and Prospects	National	2019	978-93-88398-50-3	Periyar Arts College, Cuddalore	Shanlax Publications



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13	Dr.k.Murugadass, C.Gunalan		Health Insurance for Healthy Life	Environment and Health	National Conference on Economic Burden of Pollution and Health in India: Issues and Prospects	National	2019	978-93-88398-50-3	Periyar Arts College, Cuddalore	Shanlax Publications
14	V.Abiramasundari	-	Awareness of student-teachers on solid waste management	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications
15	Dr.D.Hemalatha	-	A study of land pollution and its impact overview	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications
16	Dr.R.Unnamalai	-	Impact of climate change on health – A study in Indian context	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications
17	Dr.S.Shanthi	-	Air pollution in environment – Causes and measures	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications





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18	Dr.S.Shanthi	-	Water Management Practices Among Rural People Cuddalore District	Water Resource Management Issues and Prospects	Water Resource Management Issues and Prospects	National	2019	978-93-88398-21-3	Periyar Arts College, Cuddalore	Shanlax Publications
19	Dr.A.Ramya	-	Economic burden of water borne diseases: An overview	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications
20	S.Sudhakar	-	Impact of green house effect on human health	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications
21	M.Ponnambalam	-	Legislation for environmental protection in India	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications
22	Dr.k.Murugadass, C.Gunalan	-	health challenges of women working in BPO	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications





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23	Dr.D.Hemalatha	-	A study on impact of climate change on water resources in India	Water Resource Management Issues and Prospects	Water Resource Management Issues and Prospects	National	2019	978-93-88398-21-3	Periyar Arts College, Cuddalore	Shanlax Publications
24	Dr.D.Hemalatha	-	The impact of e-learning on academic performance	Education on online resources and online scams	Education on online resources and online scams	National	2019	978-0-359-95934-1	Periyar Arts College, Cuddalore	lulu.com
25	Dr.D.Hemalatha	-	Online social networking and mental health	Education on digital culture and social media	Education on digital culture and social media	National	2019	978-0-359-89506-9	Periyar Arts College, Cuddalore	lulu.com
26	Dr.K.Damodaran	-	Edited Book	Economic Burden of Pollution in India	Economic Burden of Pollution in India	National	2019	978-93-88398-49-7	Periyar Arts College, Cuddalore	Shanlax Publications
27	Dr.K.Damodaran	-	Edited Book	Environment and Health	Environment and Health	National	2019	978-93-88398-50-3	Periyar Arts College, Cuddalore	Shanlax Publications



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28	P. JANAKY	CONTEMPORARY SOCIAL CONSCIOUSNESS IN LITERATURE	EXISTENTIALISM IN THAKAZHI SIVASANKARA PILLAI'S NOVEL CHEMMEEN: A STUDY	-	-	-	2019	978-81-948465-1-2	Periyar Arts College, Cuddalore	EMERALD PUBLISHERS
29	DR. GANESHRAM	SUZHALUM SAKKARANGAL	-	-	-	-	2019	9788193373392	ANNAMALAI UNIVERSITY	NOOL VANAM
30	J Karpagam	-	Study on Noise Pollution and Human Cardiovascular System	Environmental Management Issues And Prospects	Nil	Nil	2019	978-93-88398-83-1	Periyar Arts College, Cuddalore	Shanlax Publications, Madurai, Tamilnadu, India
31	P Venkatachalam	-	Effect of Global Warming and Climate Change in Human Health	Environmental Management Issues And Prospects	Nil	Nil	2019	978-93-88398-83-1	Annamalai University	Shanlax Publications, Madurai, Tamilnadu, India



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32	K Anandalakshmi	-	Diagnosing Water Pollution and Waterborne Diseases: A Study	Environmental Management Issues And Prospects	Nil	Nil	2019	978-93-88398-83-1	Periyar Arts College, Cuddalore	Shanlax Publications, Madurai, Tamilnadu, India
33	S.Balamurugan	-	Socio Economic and Cultural Status of Gujjar and Bakerwal Tribes of Jammu and Kashmir	An Impact of Developmental Programmes for Social Transformation of Scheduled Castes and Scheduled Tribes.	-	National	2019	978-93-5391-991-7	Periyar Arts College, Cuddalore	KBN College, Vijayawada
34	N.Swaminathan	-	Anther vidya shakiya srshtriya chandra satra Mahatma Gandhi Vichran da samma Kainata: Vastav ani Vipniyans	Contemporary Gandhi Thoughts	Contemporary Gandhi Thoughts	National	2019	978-81-922248-9-6	Periyar Arts College, Cuddalore	Reality Publisher





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35	S.Subash Chandrabose		Political parties impact on water disputes in India- A study	Tharavu		National	2019	978-81-907153-2-4	Periyar Arts College, Cuddalore	GONV Publications
36	Dr.K.Pajanivelou	Preface Tradition and Silappathikaaram (Inter - Textuality Perspective)	-	-	-	-	2019	978-93-89820-01-0	Periyar Arts College, Cuddalore	Kaalachuvadu, Nagarkovil
37	Dr C. Elumalai	Mahakavi Bharathiyar Vazhkai Varalaru Unmaigalum Punaivugalum	-	-	-	-	2019	978-19-42640-01-1	Periyar Arts College, Cuddalore	Chitra Padippagam, Chennai.
38	Dr.K.Pajanivelou		Eduthuraippiyal Nokkil Rajendira Sozhanin Ettu Kathaigal	Rajendira Sozhan (Asvakosh) Vazhwu-Padaippu-Seyalpadu (Volume - II)	-	-	2019	978-81-93047-51-4	Periyar Arts College, Cuddalore	Paruthi Pathippagam, Jolarpet
39	Dr.V.Panneerselvam	Tholkapiyam Muthal Naveena Ilakkiyam Varai	Kural Koorum Thozhilgal	-	-	International	2019	978-81-943363-7-2	Periyar Arts College, Cuddalore	kalaignaan Pathipagam
40	Dr K.Kavitha	-	Aingurunootril Maradha thinai Padalgalil Vilangugal	Thamizh Ilakkiyangalil Panmuga Sindhanaigal	Thamizh Ilakkiyangalil Panmuga Sindhanaigal	International	2019	978-80-93451-12-9	Periyar Arts College, Cuddalore	Aram Publications, Erode.





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CURRENT TRENDS AND LATEST RESEARCH EVOLUTIONS IN HEALTH CARE PRACTICES

Editors
Prof. Karthi. R
Prof. Porselvi. M
Mrs. Kumudhavalli. D
Dr. J Michael Antony Prabhu Arachi

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Edited By

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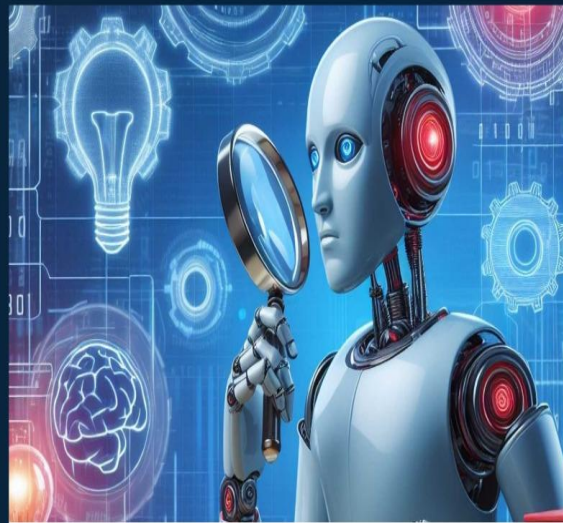


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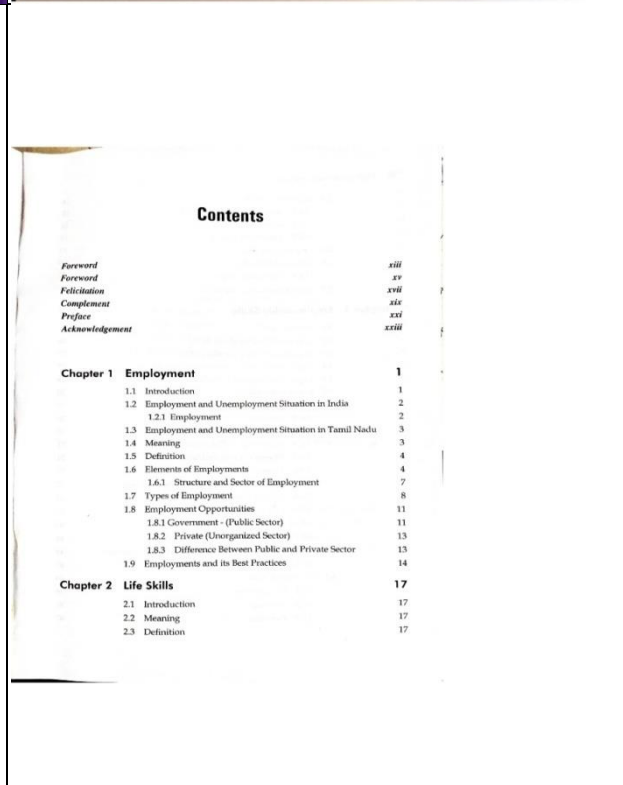
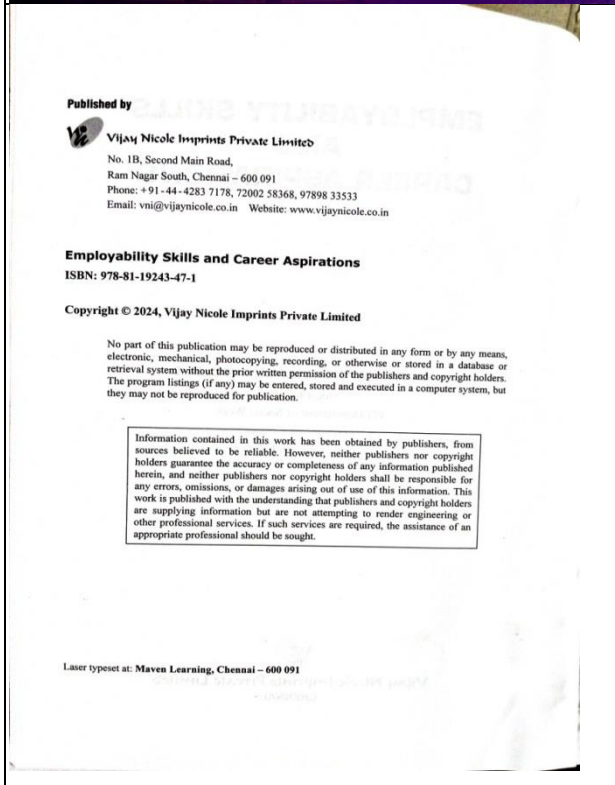
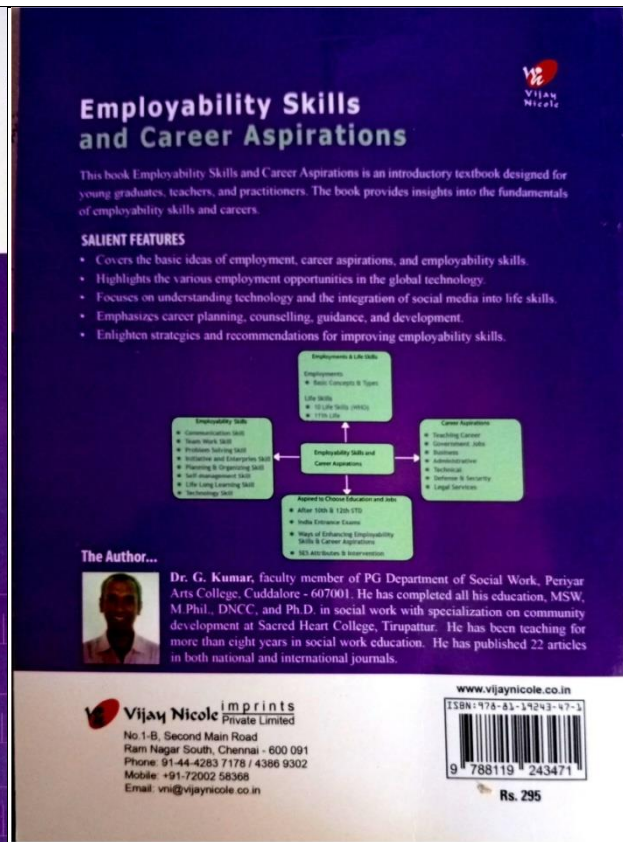
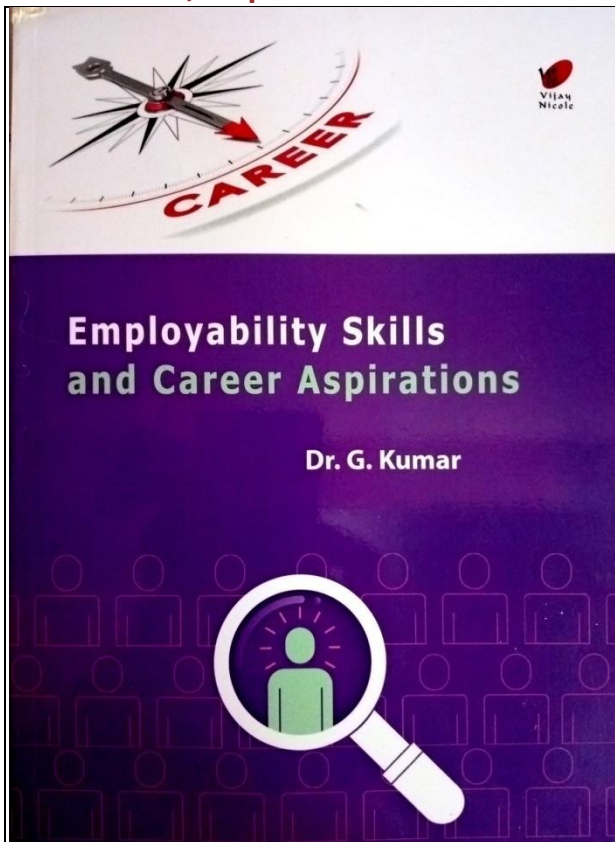
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2. General Tamil Class 11 Tamil Medium, Tamilnadu State Council of Educational, Research and Training, 2019.
3. மார்க்சிஸ்ட் இந்துவார்த்தை மாத இதழ். 10 அக்டோபர் 2013. 4.பகுத்தறிவு 1934 நவம்பர் 11, பக்.16.
4. <https://ta.wikipedia.org/wiki/ஓ.பொ.சி.>
5. <https://www.tamildigitallibrary.in/>

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சாராண மக்கள் நெறியுடன் வாழ வைக்க நெறி பாரதம் முழுவதும் பல்வேறு பெயர்களில் பின்பற்றப்பட்டு வந்தது. குப்தர் காலத்தில் வைதீக நெறி இந்து சமயம் என்று ஒருங்கிணைக்கப்பட்டது. இந்தியாவில் பல சமயங்கள் இருந்தாலும் அவை அனைத்தும் ஒரே கொள்கை உடையவை என்றும் பரம்பொருள் ஒன்று என்று பாரதி குறிப்பிடுகின்றார். மேலும் இந்து சமயக் கருத்துக்கள் மட்டுமல்லாமல் இந்தியாவில் பின்பற்றப்படும் பல்வேறு மதங்கள் குறித்த கருத்துக்களையும், பாரதி தேசத்தை ஒன்றிணைக்க வேதநெறியே வழி என்பதையும் பாரதி தம் கட்டுரைகளில் வெளிப்படுத்தியுள்ளார்

இந்தியாவில் வாழ்ந்த மக்களால் வழிபடப்பெற்ற சமயமே பொதுவாக இந்து சமயம் எனப்பட்டது. பரந்த அளவில் செல்வாக்குப் பெற்ற இந்து சமயமானது சமயம் தோன்றிய காலம், சமயத்தின் மூலக்கடவுள் இன்மை, பன்மைப் பண்பு, நெகிழ்வுத் தன்மை போன்ற காரணங்களால் சமயமாகவே குறிக்கப் பெறவில்லை. வேள்விகளை இரண்டாம் நிலையாகக் கருதிச் சடங்குகளை முதன்மைப்படுத்திய வைதீக தர்மம் பிற்காலத்திற்குரிய சமயம் எனும் அமைப்பாகக் குப்தர்கள் காலத்தில் தான் கட்டமைக்கப்பட்டது. இக்கருத்தினை, "வைதீக நெறி வேள்விவேட்டலைக்கவிட்டு லூசை, புனஸ்காரங்களின் புதிய உடங்குகளை வரித்துக் கொண்டது. இவ்வழியே பிற்காலத்திற்குரிய வடிவில் இந்து சமயம் கட்டமைக்கப்பட்டது குப்தர்கள் காலத்திலே" என்பதைக் குறிப்பர்.



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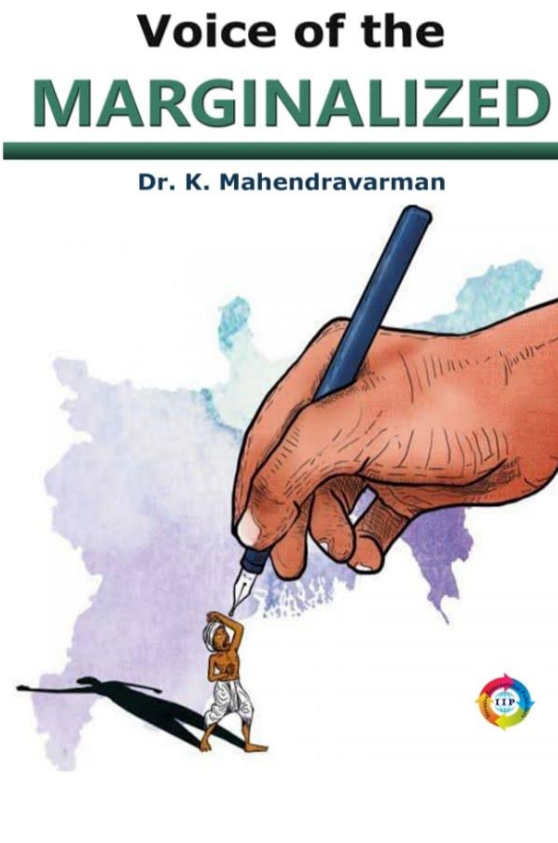



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 <p>Voice of the MARGINALIZED</p> <p>Dr. K. Mahendrarvarman</p>	<p>Title of the Book: Voice of the Marginalized</p> <p>Edition First: 2023</p> <p>Copyright 2023 © Dr. K. Mahendrarvarman, Guest Lecturer, Department of English, Periyar Arts College, Cuddalore, Tamilnadu.</p> <p>No part of this book may be reproduced or transmitted in any form by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owners.</p> <p>Disclaimer The author is solely responsible for the contents published in this book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.</p> <p>ISBN: 978-93-5747-206-7</p> <p>MRP Rs.320/-</p> <p>Publisher, Printed at & Distribution by: Self page Developers Pvt Ltd., Pushpagiri Complex, Beside SBI Housing Board, K.M. Road Chikkamagaluru, Karnataka. Tel.: +91-8861518868 E-mail:publish@iiponline.org</p> <p>IMPRINT: IIP Iterative International Publishers</p> <p>ii</p>
 <p>IIP Iterative International Publisher Chikkamagaluru, Karnataka, India Yovi, Michigan, USA ISO 9001:2015 certified & Registered under Ministry of MSME & Corporate Affairs, Govt. of India UAM: KR-09-0001606 CTN: U80904KA2021OPC143961</p> <p>Certificate of Publication</p> <p>This is to certify that</p> <p>Dr. K. Mahendrarvarman Guest Lecturer, Department of English Periyar Arts College, Cuddalore, Tamilnadu</p> <p>has published book with below details under the Imprint IIP</p> <p>Book Title: Voice of the Marginalized ISBN: 978-93-5747-206-7 Publisher: Selfpage Developers Pvt Ltd. Address: Pushpagiri Complex, Beside SBI Housing Board, K.M. Road Chikkamagaluru, Karnataka</p> <p>ISBN issuing agency: Raja Rammohun Roy National Agency</p> <p><i>Nanjesh Bannur</i> Nanjesh Bannur Chairman, IIP</p>	<p>ABOUT AUTHOR</p>  <p>K. Mahendrarvarman holds Ph.D in English and is currently working as a Guest Faculty at Periyar Arts College, Cuddalore, Tamilnadu. Started working as a Social worker since 2012, he has helped many children to study and pursue career in different stream and ensured that they get all the facilities that would help them grow. Living by his vision, "To provide best and equal education possible", he tutors in District Employment office and in various institutions alongside Cuddalore. The author is a man of varied interest, has his chief research in the areas of Tribal and Dalit Literature respectively. He holds over and above 10 publications to his credit, that includes National and International level. He has been as a Research Assistant in ICSSR Major Research project entitled "Atrocities on women as expounded in Dalit Literature of Tamil Nadu and Puducherry (2016- 2018)". The Author is a recipient of prestigious awards as follows: Dr. B.R. Ambedkar Award (2018), Best Young Achiever Award (2021), Purachiyalar Award (2022), Nature and Humanity Award (2023).</p>  <p>Iterative International Publishers Pushpagiri Complex, Beside SBI Housing Board, K.M. Road Chikkamagaluru, Karnataka. Tel.: +91-8861518868 E-mail:publish@iiponline.org</p>

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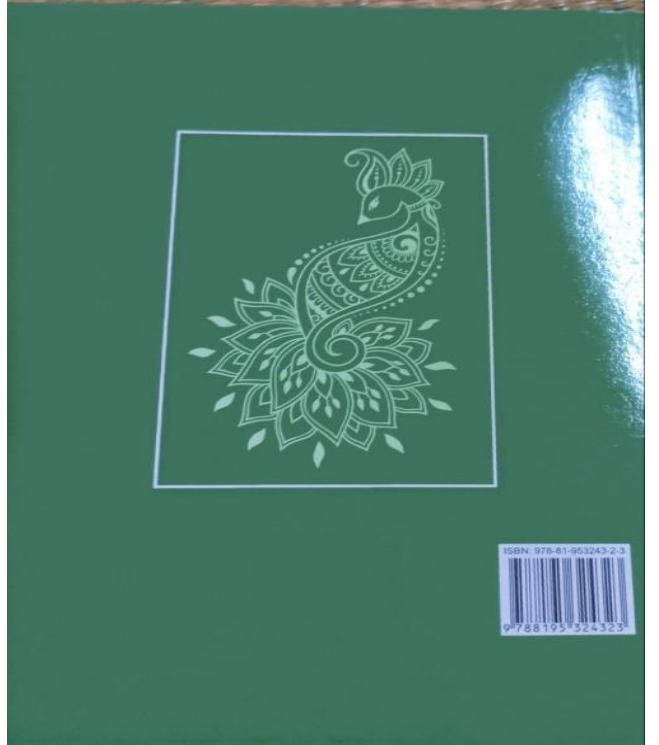
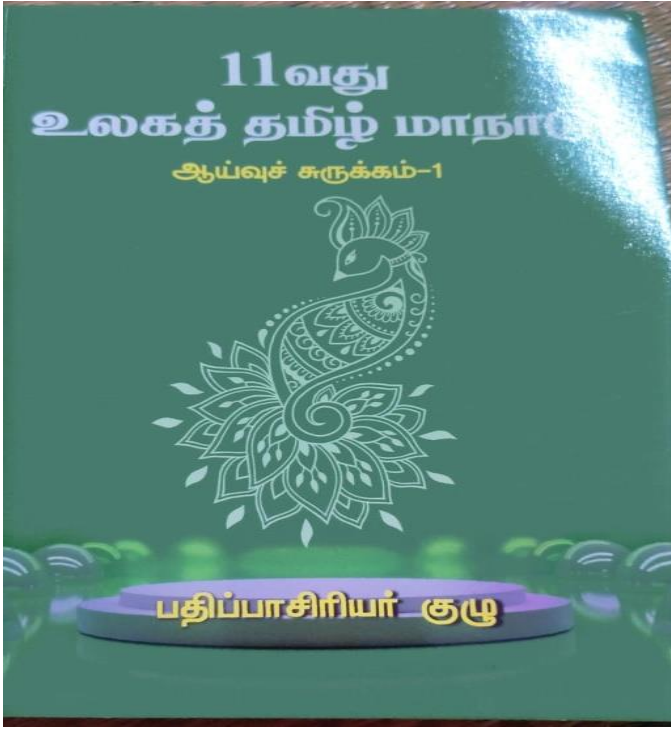
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முனைவர் ஜானகி. கிரானா
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இணையம் அனைவருக்குமானதாக வளர்ந்துள்ளது. தொழில்நுட்ப வளர்ச்சி, பொருளாதார மேம்பாடு, தொழில்நுட்பக்கல்வி, கையடக்கப்பேசிகளின் பயன்பாடு, 4G-5G தகவல் தொடர்பு, கொரோனா பெருந்தொற்று முடக்கம், இணையவழி சேவைகள், இணையவணிகம், இணையவழி கல்வி போன்றவை இதனைச் சாத்தியப்படுத்தியுள்ளது. இணையத்தின் அபரிமித வளர்ச்சியும் பயன்பாடும் சமூக வாழ்விலும் தனி மனித வாழ்விலும் பல நடத்தை மாற்றங்களை உருவாக்கி, பண்பு மாற்றங்களை ஏற்படுத்தியுள்ளது. இம்மாற்றங்கள் தனிமனித - சமூக ஒழுங்குகள் இயக்கத்தினைப் பாதித்துள்ளது. இதனால் பாலியல் வன்சண்டலங்கள் வன்புணர்வுகள் அதிகரித்துள்ளன. எதிர்பாலின சர்ப்பு, பாலியல் தேவை தவிர்க்கமுடியாத உயிரின இயல்பொருட்கள் திகழ்காலத்தில் ஆண் பெண் உரிமைகளைக் கடந்து LGPTQ உள்ளிட்ட பால்புதுமைகளின் உணர்வும் உரிமையும் அங்கீகரிக்கப்பட வேண்டும் என்னும் கருத்தியல் வலிமைபெற்று வருகின்றது. ஆனால் இவ்வாறான உறவுகளில் சமூகக் கட்டமைப்புகளும் ஒழுங்குமுறைகளும் சீரழிக்கப்பட்டுப் பாதகப்பட்டுள்ளமையை உருவாக்குவனவாகப் பாலியல் வன்சண்டலங்கள் அமைந்துள்ளன. இவ்வன்சண்டலங்கள், வன்புணர்வுகள் திகழ்காலத்தில் மட்டும் நடைபெறுவதாகக் கூறமுடியாது. ஆனால் அதிகரித்தும் பொதுச்சமூகத்தின் பார்வைக்கும் வருகின்றன என்று குறிப்பிட முடியும். காரணம் இணைய யுகத்தில் இந்நகரண வாய்ப்புகள் வழிகள் பெருகியுள்ளன. பாலியல் வன்சண்டலங்கள், வன்புணர்வுகள் அதிகரிப்புக்குக் காரணம் மன செம்மை மீன்மையே. இச்செம்மைமீனையை ஏற்படுத்திட திருக்குறள் எவ்வாறு துணை



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Dr.J. Michael Antony PrabhuArachi, Department of Zoology

Advances in Biotechnology and Molecular Biology



Editors
Dr. Vishnu Kiran Manam
Dr. Priyanka Shankarishan

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Advances in Biotechnology and Molecular Biology

PHYTOREMEDIATION
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INTRODUCTION

Phytoremediation means causing remedies using plants. Phytoremediation is an emerging recent technology where plants are used to remove toxicants from the soil or water. This method is cost-effective and an alternative for removing hazardous wastes from the medium. Throughout the world land, surface water, groundwater, and air are affected by contaminants. These contaminants are from industrial wastes, emissions, and military and agricultural activities. They occur because of the lack of knowledge, ignorance, vision, and carelessness. These accumulated toxicants like metals, radionuclides and organic contaminants affect the natural resources causing major strain on the ecosystems.

Plants are found to have great genetic adaptation to remove the accumulated pollutants that settle in the environment. Contaminants like metal, pesticides, solvents, explosives, crude oil, PAH (poly aromatic hydrocarbons) and landfill leachates were effectively removed by the process of phytoremediation. In short, phytoremediation can be defined as the process of using plants efficiently to eradicate or detoxify or fix the environmental contaminants from the soil, water or sediments by natural biological activities and plant processes. Plants are the only organisms that have the property of remarkable metabolic and sorption capabilities, additionally, plants have efficient transport systems that can take up nutrients or contaminants from the growth matrix, soil, or water.



Phytoremediation

Phytoremediation is a solar-driven clean-up technique that is also cost-effective and called Phyto-sequestration. It is very useful in areas where there is a shallow and low level of contamination. Phytoremediation can also be used to treat a wide variety of environmental contaminants. Plants break down and degrade the contaminants and pollutants. They also act as filters or traps in holding and stabilizing the metal contaminants.

The uptake of contaminants in plants occurs primarily through the root system, in which toxicity prevention mechanisms are found. The root system provides an enormous surface area that absorbs and accumulates the water and nutrients essential for growth; it can also absorb other non-essential contaminants. The use of trees (rather than smaller plants) is effective in treating deeper soil contamination because tree roots penetrate more deeply into the ground. Besides, deep-lying contaminated groundwater can be treated by pumping the water out of the ground and using specific

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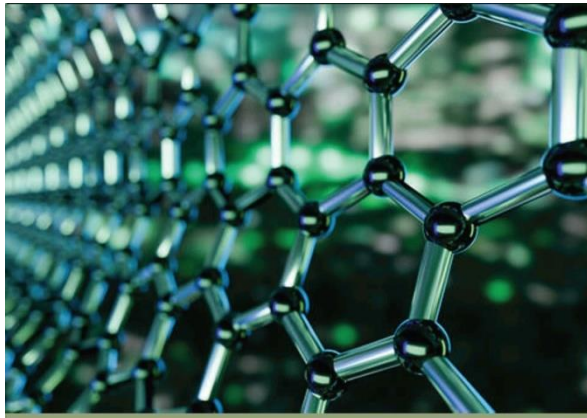
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NANOSCIENCE & NANOTECHNOLOGY

Edited By

Dr. Vishnu Kiran Manam
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NANOSCIENCE & NANOTECHNOLOGY

Chapter

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NANOTECHNOLOGY AND AQUACULTURE

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INTRODUCTION

Nanotechnology is the capacity to produce atoms and molecules which are the smallest in size. Nanotechnology creates and manipulates atoms and molecules. Nanotechnology deals with the study of molecules between 1 to 100 nanometers. The term Nanotechnology is defined as the understanding and control of molecules of dimensions 1 to 100 nm by the United States of National Nanotechnology Initiative. It can be also defined as the ability to study, design, create, synthesize, manipulate and apply functional devices, materials, and systems. Of late new and recent technologies have been employed in the highly integrated fish farming industry. A nanotechnology is a new tool in aquaculture and fisheries development.

Bloom in the population growth is a well-known fact and there is demand for protein. The global population was 2.47 billion in the year 1951 and it has exploded to 6.97 billion in the year 2012 if this trend continues it will be more than 8.9 billion by the mid of this century. The increase in the global population results in a demand for more food sources. Earlier aquaculture played a minimal role in fish production but now there is a tremendous increase in the past two decades (Bhattacharyya et al., 2015). Fish is present in the wild and widespread everywhere. It is also affordable cost and a healthy source of protein for everyone hence the global requirement for fish will be intensified in the future. Nanotechnology has a wide spectrum in the field of research and industrial activities in applied sciences as well as fundamental sciences

APPLICATION

Nanoparticles are used in the growth, nutrition, feeding, breeding, health management, and also in the tracking of animals. Nanoparticles are used in disease treatment in delivery systems, pathogen detection, etc. They are also used to deliver drugs and genes to cells. Nanoparticles in the form of Nanoshells and tubes are introduced into the living system to destroy the target cells (cancer treatment).



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ENVIRONMENT CONSERVATION, CHALLENGES THREATS IN CONSERVATION OF BIODIVERSITY (VOL - V)



Edited By
MR. MUKUL MACHHINDRA BARWANT



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Title: Environment Conservation, Challenges Threats in Conservation of Biodiversity - Volume - V

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ENVIRONMENTAL DEGRADATION -
CONSERVATION STRATEGIES

*DR. J MICHAEL ANTONY PRABHU ARACHI & DR. M. PRAKASH

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ABSTRACT

The need to conserve Mother Earth is crucial else natural resources will be seen only in books for the next generation. The disintegration of the earth or deterioration of the environment through the consumption of assets, like, air, water, and soil is called Environmental degradation. They include the destruction of the environment, eradication of wildlife, and environmental pollution like air pollution, water pollution, garbage, and pollution of the natural environment are the main sources of environmental degradation. They can be conserved by afforestation, soil conservation, etc...According to World Bank experts, between 1995 through 2010, India made one of the fastest progresses in the world, in addressing its environmental issues and improving its environmental quality. It will take a long time for India to go to reach environmental quality similar to those enjoyed in developed economies. The major challenge faced by India is pollution and population explosion. The primary causes of diseases, health issues, and long-term livelihood impacts in India are the major cause of environmental degradation.

INTRODUCTION

We all know that the earth's climate always changes and causes environmental degradation. Human activity is one of the main reasons for speeding up the process. Global climate is becoming warmer increasing the earth's temperature by 1°C. Changes in the Earth's climate have the potential to affect people's health. For example, people can be hurt directly by extreme weather events caused by climate change, such as powerful hurricanes. Drown in floodwaters or get injured by falling trees and other debris during severe thunderstorms. Get heat rashes or heat stroke, and even die from the high temperatures of heat waves.

Climate change can also affect people indirectly, through changes in habitat, and the quality of air, water, and food. A drought can hurt crops and lead to food shortages and malnutrition (not getting enough vitamins and minerals). Global warming can increase the areas where disease-carrying insects can live and reproduce, which may lead to more disease outbreaks in new places. In areas hit very hard, global warming can affect the social structure and economy, too.



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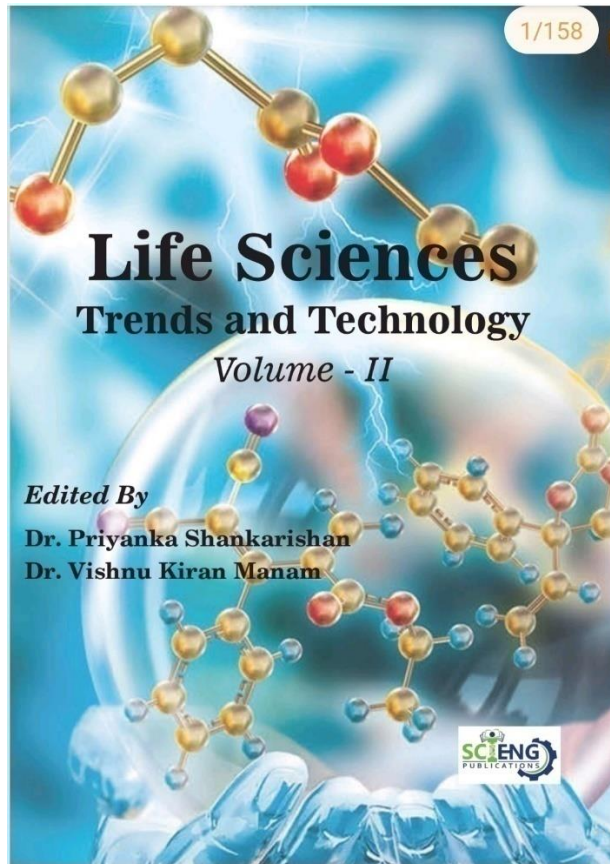
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Trends and Technology
Volume - II

Edited By
Dr. Priyanka Shankarishan
Dr. Vishnu Kiran Manam



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BIOFOULING

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INTRODUCTION

Biofouling – Bio means life and fouling means polluting. Biofouling describes a wide range of organisms attached to the surface immersed in the ocean which affect the surface or substratum of any objects. Fouling phenomena are commonly diverse, ranging from fouling of ship hulls and marine infrastructures. Biofouling is the accumulation of undesirable microorganisms, plants, algae, and/or animals on wetted and water-immersed structures.

The shipping industry is affected by freshwater and marine biofouling creatures and it has become an unsolved problem currently affecting the industrial aquatic processes. These creatures are nothing but the growth of marine organisms on immersed structures like ship hulls, jetty pilings, navigational instruments, aquaculture net cages, and seawater in taking pipes.

Biofouling refers to the accumulation and growth of unwanted organisms, such as bacteria, algae, barnacles, and other marine organisms, on submerged surfaces, such as ship hulls, offshore structures, or underwater equipment. These organisms can attach themselves to surfaces and form a biofilm, often causing negative impacts and challenges. Biofouling can have several detrimental effects. Firstly, it can increase hydrodynamic drag, leading to increased fuel consumption and reduced efficiency for ships and other vessels. This can result in higher operating costs and increased emissions. Secondly, biofouling can impede the function and performance of underwater equipment, such as sensors, sensors, and pipelines, by restricting water flow or obstructing moving parts. Additionally, biofouling can also lead to corrosion and deterioration of the surfaces it attaches to.

FORMATION OF BIOFOULING:

Biofouling is not a simple process but a complex process. The biofouling organisms just simply do not stick to the substratum, but suck the substrate by the sucking process like a suction cup and get attached to the substrate. The initial complex process of biofouling starts with the production of a slimy layer the "biofilm".



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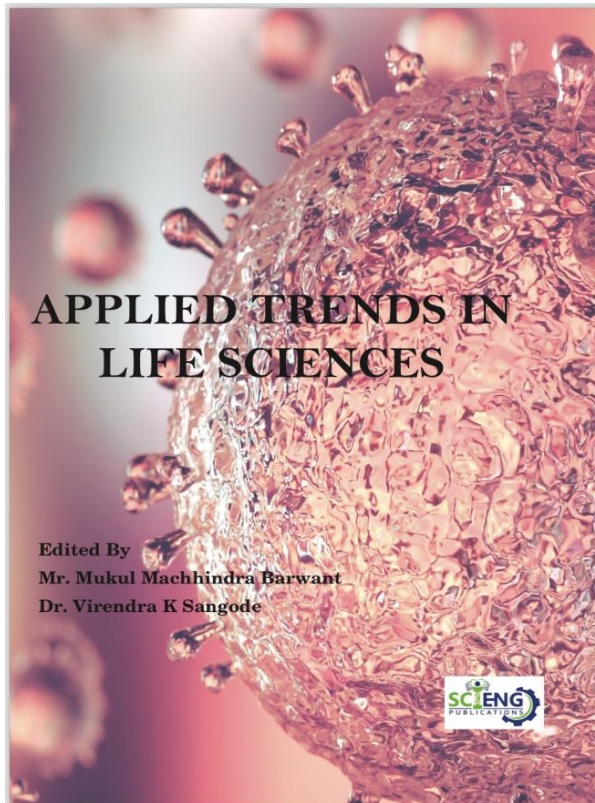
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Chapter

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PRAWN CULTURE

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INTRODUCTION

Prawn culture also known as shrimp farming, is the practice of growing and cultivating prawns or shrimp in ponds or tanks for commercial purposes. It is a rapidly growing industry, with production occurring in many countries around the world.

The process of prawn culture typically involves several stages, including the selection of highly-quality broodstock (adult prawns used for breeding), hatchery production of larvae, nursery rearing of post-larvae, and grow-out in ponds or tanks. The prawns are fed a diet of pellets or other types of feed, and their health is carefully monitored to ensure optimal growth and development.

Prawn culture can be done using various production systems, such as extensive, semi-intensive, and intensive systems, depending on the level of management and inputs required. Intensive systems involve the highest level of management and inputs, while extensive systems rely on natural food sources and require minimal inputs.

The industry faces several challenges, such as disease outbreaks, environmental concerns, and market volatility. However, with proper management practices and advances in technology, prawn culture remains a viable and profitable industry for many farmers and aquaculture producers.

GIANT RIVER PRAWN - MACROBRACHIUM ROSENBERGII

The freshwater macrobrachium species are usually referred to as "prawns" as distinguished from "shrimps", the term used for the saltwater forms. Most of these prawns are caridean crustaceans belonging to the family Palaemonidae. The famous giant freshwater prawn, *Macrobrachium rosenbergii*, is a good example of this group. It composes an important fishery in many natural freshwater bodies in several tropical and sub-tropical countries all over the world. Within recent years-controlled hatching and grow-out culture of marketable forms of this species has rapidly expanded in many countries and is still growing. This species has a fine delicate flavor and fetches good market prices in local markets and foreign trade in both developing and developed countries of the world. There are certain



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BIOPROSPECTING AND ITS FUTURE

Edited By

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DR G. SUMATHI**



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Editors: DR VISHNU KIRAN MANAM & DR G. SUMATHI

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Chapter

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BIOPROSPECTING AND AQUACULTURE

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INTRODUCTION

The word "Bioprospecting" was derived from Biodiversity prospecting. It is the process of exploration of natural resources for micro and macromolecules. The biochemical and genetic information derived from them were developed into commercially viable useful products for aquaculture, agriculture, bioremediation, cosmetology, nanotechnology, etc. The steps involved are collection, scientific analysis, and research and commercialization. Bioprospecting has both advantages and disadvantages. The advantage includes the search for important genes and the use of biological resources. In marine bioprospecting, it is used for the systematic search of important, interesting, and special unique genes, molecules, and organisms. These genes have features that could be useful to society or have the potential for commercial development. Bioprospecting is classified as chemical prospecting, gene prospecting, and bionic prospecting. Bioprospecting has a significant negative impact on the environment if keystone species are removed or local extinctions are caused through over-harvesting of the resources.

Bioprospecting is a process of discovering, developing, and utilizing new products and processes from living organisms. In aquaculture, bioprospecting involves searching for and utilizing new species of marine gives for commercial purposes, such as food, pharmaceuticals, or other products.

POTENTIAL BENEFITS TO BIOPROSPECTING IN AQUACULTURE:

New species of fish or shellfish may have desirable traits, such as fast growth rates, disease resistance, and tolerance to specific environmental conditions, that could be beneficial for commercial aquaculture operations. Marine organisms may produce bioactive compounds such as antimicrobials, antivirals, or antioxidants, that could have therapeutic or health-promoting benefits for humans and animals.

Aquatic plants and algae may contain valuable compounds such as pigments or oils, that could be used in food, cosmetics, and other industries. However, it is important to approach bioprospecting responsibly and sustainably. This means taking into account the potential impacts on the environment, as well as ensuring that the benefits of any commercialization are fairly and equitably shared with the communities and countries



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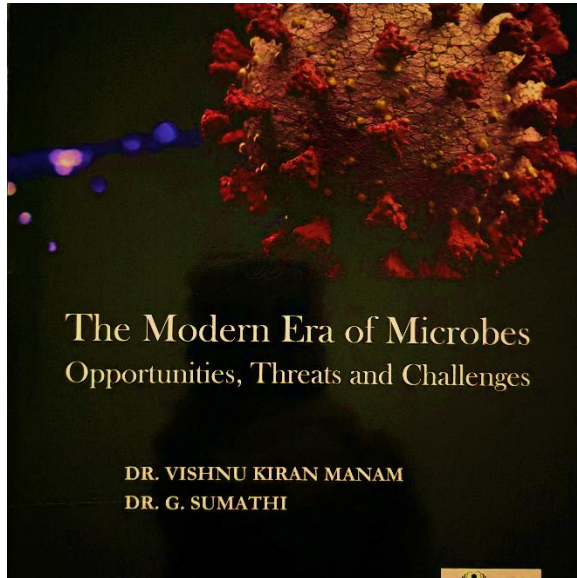
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PARASITOLOGY


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INTRODUCTION


The study of parasites, their hosts, and their interactions is known as parasitology. A parasite is a living entity that depends on its host for sustenance and other needs; the host is the organism that the parasite depends on. Among the parasites were Protozoa, helminths, and certain arthropods are all included in medical parasitology. Whether or not the hosts contain the various phases of parasite development affects the hosts' characteristics.


It is described as a close, necessary association between two heterospecific animals in which the smaller, typically smaller of the two partners, the parasite, is metabolically dependent on the host. The name "parasitology" is derived from the Greek words "para" for besides, "sitos" for food, and "logos" for study. It is the area of science that focuses on understanding how a parasite and its host interact. Numerous methods for studying parasitic organisms are covered in this field, including morphology, ecology, life history, physiology, chemotherapy, serology, immunology, and biochemistry. The study of fish parasites is the focus of the scientific field known as fish parasitology. This covers parasite-based fish diseases and infections.



Roundworm


Hookworm


Fluke


Tapeworm


Nematodes


Protozoa



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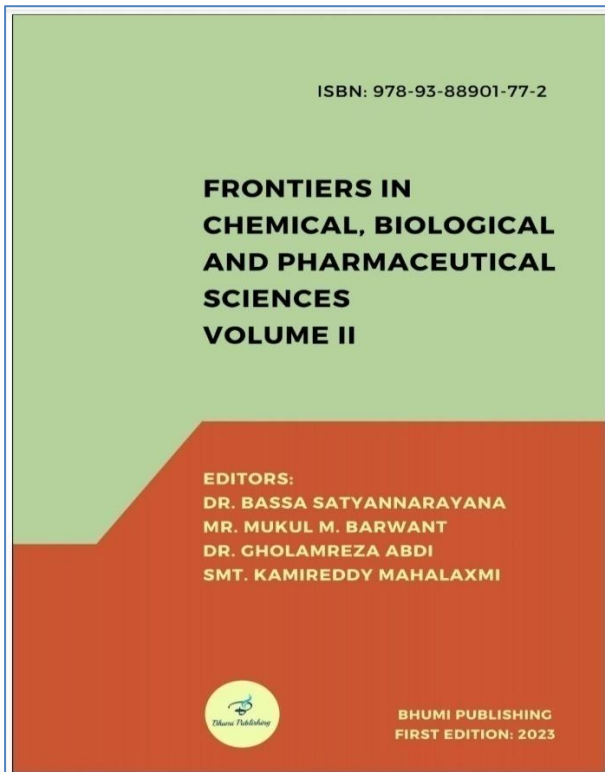
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Chapter
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WASTE MANAGEMENT

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ABSTRACT

Waste management is a crucial aspect of environmental sustainability and human health. This paper explores the various strategies and methods employed in waste management, including waste reduction, recycling, and proper disposal. The key goal is to minimize the negative impacts of waste on the environment, such as pollution and resource depletion. The article also examines the importance of public awareness and education in promoting responsible waste management practices. Collaborative efforts from governments, industries, and individuals are essential for achieving effective waste management and creating a sustainable future.

KEYWORDS: waste management, waste reduction, recycling, proper disposal, environmental sustainability, pollution, resource depletion, public awareness, education, collaboration.

INTRODUCTION

Waste management refers to the process of collecting, treating, disposing of, and recycling waste materials in a manner that is safe, efficient, and environmentally responsible. It involves various activities aimed at minimizing the negative impacts of waste on public health, the environment, and society as a whole. Waste management is crucial for maintaining a clean and sustainable living environment.

TYPES OF WASTES

There are various types of waste generated by human activities. The primary types of waste include:

MUNICIPAL SOLID WASTE (MSW):

This includes household waste, such as food scraps, packaging materials, paper, plastics, glass, and other non-hazardous materials.

HAZARDOUS WASTE:

This refers to waste materials that can cause harm to human health or the environment if not properly managed. Examples include chemicals, batteries, electronic waste, solvents, oils, and certain medical and pharmaceutical waste.

INDUSTRIAL WASTE:

Waste produced by industrial processes, such as manufacturing, construction, and mining. This can include chemicals, heavy metals, sludge, and various by-products.

AGRICULTURAL WASTE:

Waste generated by agricultural practices, such as crop residues, animal manure, agricultural chemicals, and plastic packaging.



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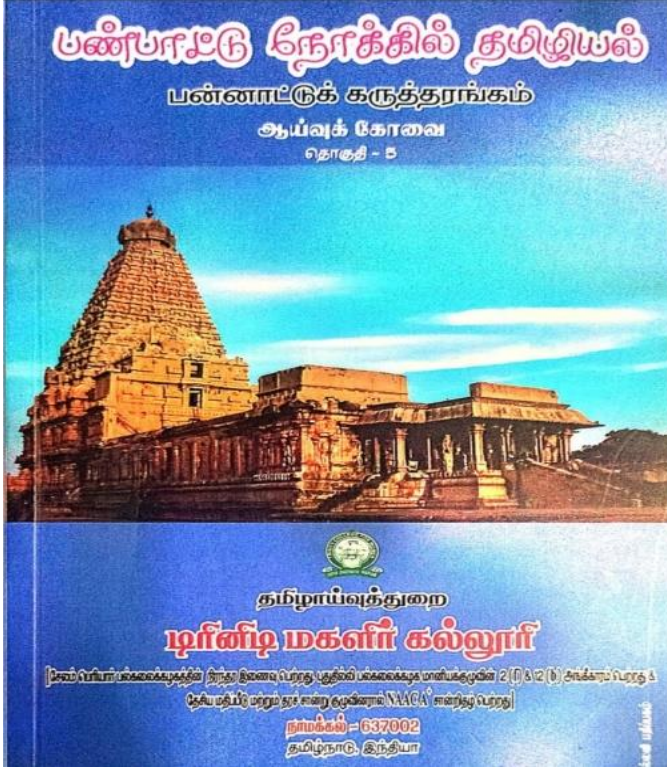
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163. நல்விழா நெல்லும் வல்விழா அரிசியும்

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பண்பாட்டுச் செழுமையிக்க இனக்குழுக்களில் தமிழினமும் ஒன்று. தொன்று தொட்டு வழங்கினரும் வாழ்வியல் கருக்கள், வலிமையான காரணப் பின்புலத்தில், தொடர்ச்சியாகப் பின்பற்றப்பட்டு, சிறிது சிறிதான மாற்றங்களும் மேம்பாடுகளும் வளர்ச்சியும் அடுத்தடுத்தத் தலைமுறைகளுக்குக் கடத்தப்பட்டு பின்னளவில் நிலைபெறத் தன்மை பெறுகையில் பண்பாடாக மாற்றமடைகின்றது. பண்பாடாக நிலைப்பெற்று ஒன்று தொடக்கத்தில் ஒரு காரணத்தோடும் குறிப்பிட்டத் தேவையின் அடிப்படையிலும் தோற்றம் பெற்றிருக்கும். தேவையின் அடிப்படையில் உருவான வாழ்வியல் சூறு நாளடையில் அதன் தேவையை இழந்தும் காரணத்தையிழந்தும் முன்னோர்களின் வழிகாட்டல் - பழக்கம் என்ற நிலையில் பின்பற்றப்படுகின்ற போது அது சடங்காக மட்டுமே கருதப்படும். பண்பாடு சடங்காக மாறுகையில், அதன் காரணத்திற்கு நேர் மாறான, நேர் எதிரான வடிவத்தினைப் பெறுகின்ற தூய்மும் நிகழ்கின்றது. அவ்வாறு தமிழர் வாழ்வின் பண்பாட்டுக் கருக்களில் தேவையாக இருந்த ஒன்று உண்மைப் பொருளை இழந்து நெற்றுச் சடங்காக மாறியது வாழ்ந்து மறும் வழிபாட்டு மரபில் காணப்படும் நெல்தாவல். இதுகளை நல்விழா - வல்விழா வாழ்த்துகள் மனித சமூகத்தில் நல்விழாக்களும் (மங்கல விழாக்கள்) வல்விழாக்கள் (அமங்கல விழாக்கள்) பொதுவானவை. வல் விழா நல் என்பதன் எதிர்ச்சொல் என்பதை நினைவில் கொள்ளுதல் வேண்டும். இதனை,

செல்லாமை உண்டே எனக்குறை மற்றுநின் வல்வரவு வாழ்வார்க்கு உரை என்றும் குறட்பாவின் மூலம் அறியலாம். தமிழர்கள் நல்விழாவினையும் வல்விழாவினையும் கொண்டாரும் முறைமை வெவ்வேறானவை. இந்த வேறுபாடுகள் தவிர்க்க முடியாதவை. தனித்தன்மை கொண்டவை. இவ்விழாக்கள் கொண்டாடத்தின் அடிப்படையில் கடைபிடித்தலின் அடிப்படையில் மகிழ்ச்சி தூய்மை, ஆக்கம் அழிவு, என்னும் எதிர்முனைகளைத் தருகின்றன என்றாலும், இரண்டிலும் சில சடங்கு



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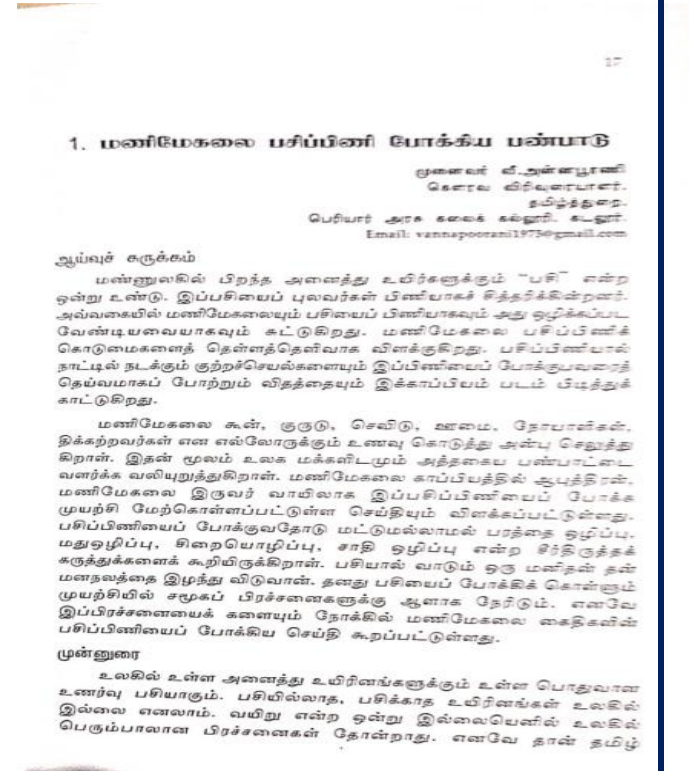
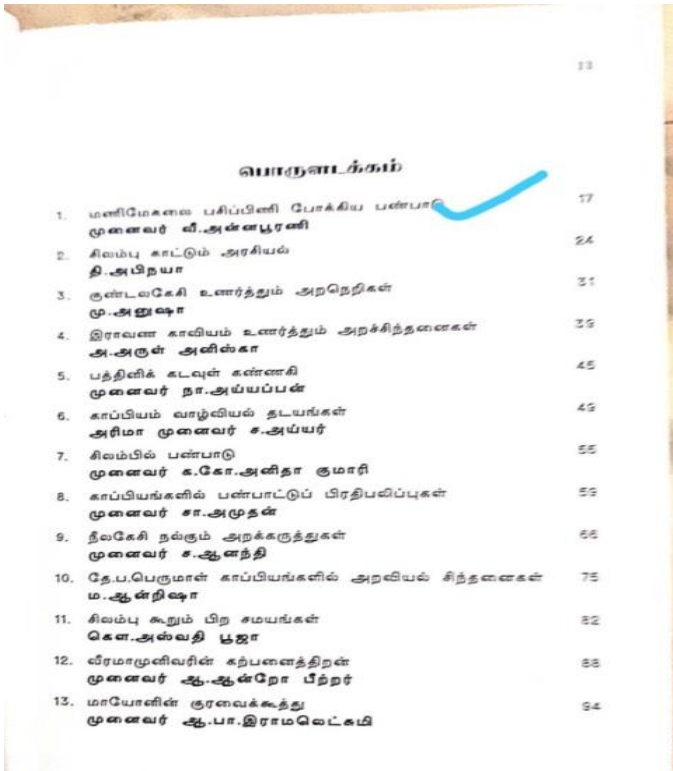
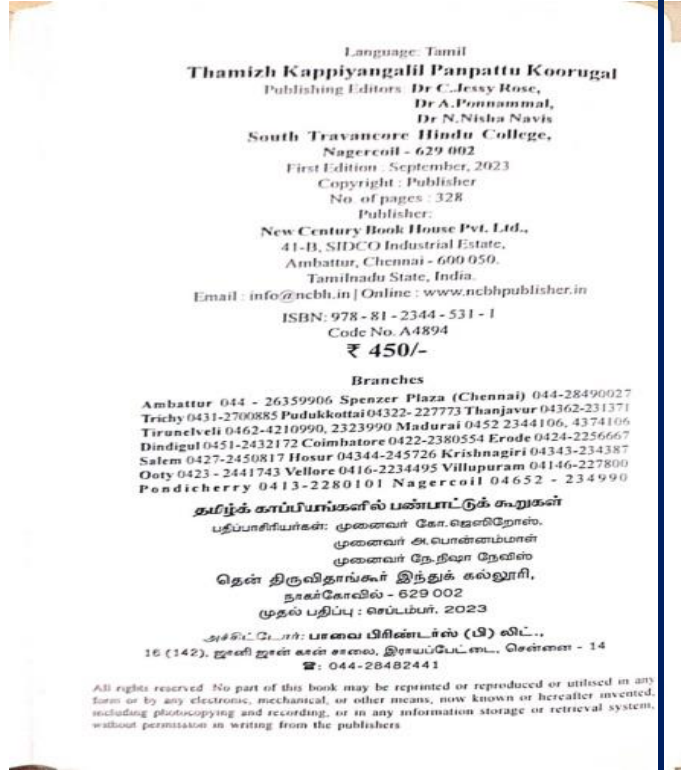
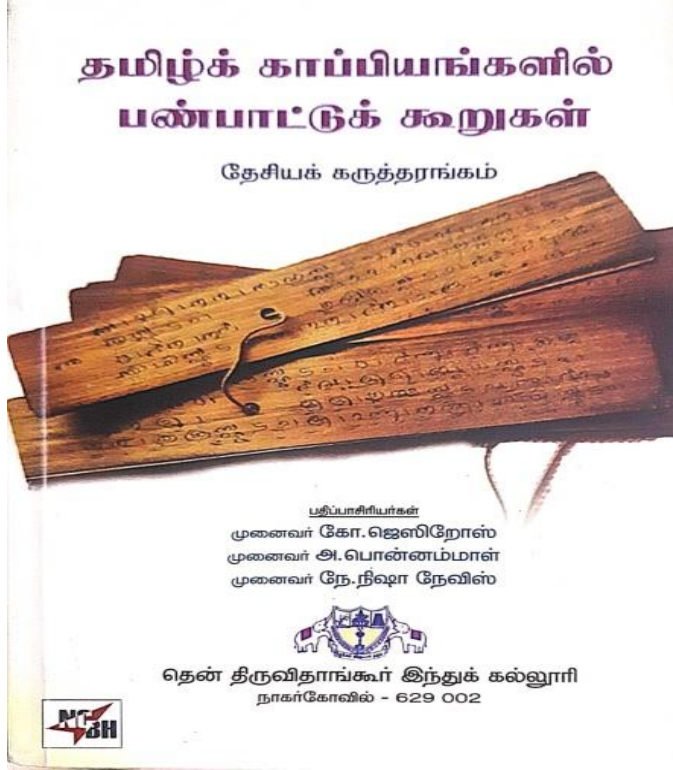
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**தமிழ்க் காப்பியங்களில்
பண்பாட்டுக் கருகுகள்**

தேசியக் கருத்தரங்கம்



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முனைவர் கோ. ஜெனிதோஸ்
முனைவர் அ. பொன்னம்மாள்
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34. கம்பராமாயணத்தில் வாழ்வியல் நெறிகள்

முனைவர் கோ.புஷ்பவள்ளி
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பெரியார் கலைக் கல்லூரி,
உடூர்
Puspaphd007@gmail.com

முன்னுரை
வாழ்வியல் நெறி என்பது செம்மையான வாழ்க்கை முறை
எனலாம். இவ்வாழ்வியலுக்குரிய பண்பாக வள்ளுவர் அன்பு, அறம்
ஆகியவற்றைக் கூறுகிறார். நற்பண்பு கொண்ட இச்சான்றோர் பண்பாக
அன்பு, நானம், ஒப்புறவு, கண்ணோட்டம், வாழ்மை ஆகியவற்றை
வள்ளுவர் காட்டுகிறார். பெண்களுக்குரிய வாழ்வியல் பண்பாக
அச்சம், நானம், மடம், பயிர்ப்பு, விருந்தோம்பல், கணவனைத்
தெய்வமாகக் கொண்டொழுதுதல் முதலிய பண்புகளைக் காட்டுவர்.
இத்தகு வாழ்வியல் நெறிகளைக் கருவிலே திருவுடைய கம்பர் தமது
காப்பியமான கம்பராமாயணத்தில் இருள் கடிந்தெழுமின்ற சூலிநே
போல் உயர்த்திக் காட்டுகின்றார். இதனை ஆய்வதே இக்கட்டுரைவின்
நோக்கமாகும்.

கல்வியின் மென்மை
இவ்வறம் இனிமை பெற, இவ்வாள் அறிவும், பண்பும் பெற
கல்வியே அடிப்படை ஆகும். கல்வி பெற்ற பெண்புரே இவ்வறப்
பண்பை உணர்ந்த இனிது நடத்திச் செல்ல முடியும். வறுமையால்
வாடி வந்தவர்க்கு வேண்டியவற்றைக் கொடுத்து உதவினர். விருந்தினர்
அருந்தி மகிழ உணவை அளித்தனர். கோசல நாட்டு குடும்பங்கள்
இவ்வாறு குறைவின்றி வாழ்ந்தன என்று கோசல நாட்டைப் பற்றி
கூறும் போது கம்பர் கூறுகிறார். இதனை,
பெரும் தடங்கள் பிறை நூலார்க்கெலாம்,
பொருந்து செல்வமும் கல்வியும் பூத்தவால்,
வருந்தி வந்தவர்க்கு ஈதலும், வைகலும்,
விருந்தும் அன்றி வினைவன யாவையே (36)
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முனைவர் கோ. புஷ்பவள்ளி
கௌவுரவ ஷிரிவுரையாளர்.
பெரியார் கலைக் கல்லூரி,
கடலூர்.

பன்னிருதிருமுறை நூல்கள் சைவநெறியை தழைத்து வளர்ப்பதோடு, சமூகஉணர்வுடன் ஆன்மிகநெறியை உணர்த்தும் பெருமையுடையவை எனலாம். அத்தகைய நெறியில் திருமுலர் இயற்றிய திருமந்திரமாலை எனப் பெயர் பெற்ற பத்தாம் திருமுறையில், மனிதனின் வாழ்வியலில் மனிதநேயத்தை வலியுறுத்தும் சிந்தனைகள் இடம்பெற்றுள்ளன. அவற்றை ஆராய்வதே இக்கட்டுரையின் நோக்கமாகும்.

திருமுலர்

நந்திதேவரின் திருவருள் பெற்ற மாணவர் சுந்தரநாதன். அவர் எண்வகைச் சித்திகளும் கைவரப் பெற்ற சிவயோகி, வடநாடு முதலாக பல திருத்தலங்களில் வழிபாடு செய்து தென்னாட்டில் திருவாவடுதுறையில் மாசிலாமணி இறைவனை வழிபட்டுத் தங்கினார். அங்கிருந்து அவர் காவிரிக்கரை வழியாகச் செல்லும் போது ஓரிடத்தில் பசுக்கூட்டங்கள் அழுவதைக் கண்டார். அதற்கு காரணம் அவற்றை மேய்க்கும் 'மூலன்' என்பவன் விதியின் முடிவால் இறந்து போனதே என்பதை உணர்ந்தார். பசுக் கூட்டத்தின் துயர் நீக்க அட்டமா சித்தியின் வலிமையால், தம் உடலை ஓரிடத்தில் வைத்து விட்டு கூடு விட்டுக் கூடு பாயும் சித்தியால் மூலன் உடலில்



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Dr.V. Annapoorani, Department of Tamil



நூல் விவர அட்டவணை

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முனைவர் வீ. அன்னபுரணி
கௌரவ விரிவுரையாளர்,
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கடலூர்.

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உலக மொழிகளுள் மக்கள் வாழ்க்கைக்கு இலக்கணம் கூறும் ஒரே மொழி, தமிழ்மொழி. மக்களின் அகவாழ்க்கைக்கு அக இலக்கண நூல்களும், புறவாழ்க்கைக்குப் புற இலக்கண நூல்களும் எனத் தனித்தனியாக இலக்கணம் எழுதப்பட்டுள்ளது. மன்னன் முதல் சாதாரண மக்கள் வரை அனைவருக்குமான வாழ்க்கைமுறை வரையறுக்கப்பட்டுள்ளது.

புறஇலக்கணத்தில் பாடாண்நிணையில் பாடப்படும் ஆண்மகனின் ஒழுக்கம், வீரம், கொடை, புகழ் முதலியவற்றைச் சிறப்பித்துப் பாடுவதும். மன்னன் பரிசில் கொடுக்கும் முறையைப் பற்றித் தொல்காப்பியம். புறப்பொருள் வெண்பா மாலை போன்ற இலக்கண நூல்கள் பரிசில் கடாநிலை, பரிசில் துறை, பரிசில்நிலை, பரிசில் விடை என்று வரிசைப் படுத்துகிறது.

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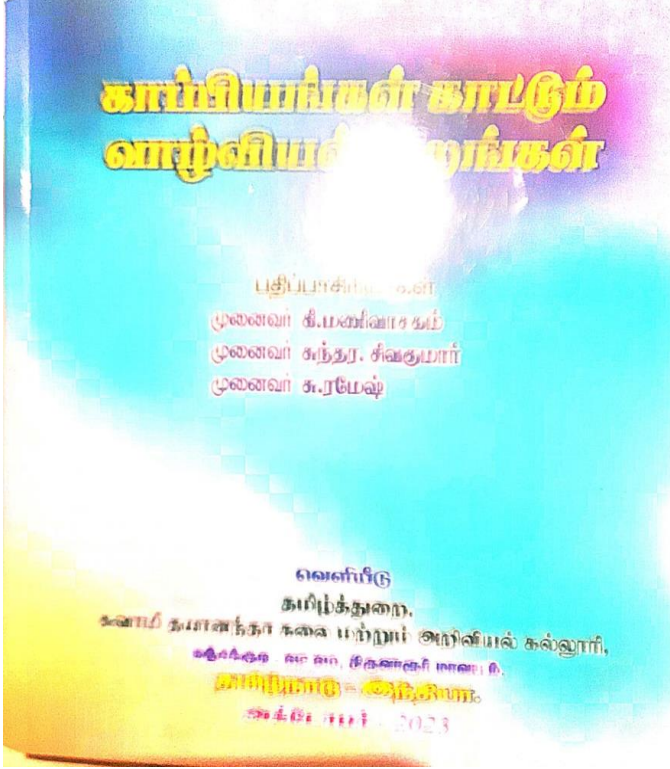
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ஆய்வுக் கருக்கம்

தமிழ்க்காப்பியங்கள் பெருமாளும் ஓர் அரசன் அல்லது தனி மனிதனின் வாழ்க்கை வரலாற்றைப் பற்றி மேற்கொள்ளப்பட்டு அரசன் அல்லது தனிமனிதனின் பிறப்பு காலம் தொடர் அளவுகளின் இனம், தன்மை, விரும்ப, கொடை, சிறப்பு, சாதனை ஆகியவற்றை விளக்கும். வரலாற்றோடு தனிமனித அறத்தையும் சமுதாயத்தின் மக்கள் கடைபிடிக்க வேண்டிய ஒழுக்கநெறிகளையும் அறத்தின் திருத்தமாகக் கூறுவதிலும் தவறவில்லை. தமிழ்க்காப்பியங்கள் பெருமாளும் கதைத்தலைவன் ஒழுக்கநெறியைப் பின்பற்றாமல் போனால் தன் பப்படுவதாகவும் அதனை உணர்ந்த பிறகு அவன் முத்தியடைவதாகவும் கதைப்போக்குகள் செல்லுகின்றன. அன்னப்பூரணி யசோதரகாப்பியத்தில் ஒன்றான யசோதரகாப்பியத்தில் இப்பெரும் வாழ்வியல் அறங்களைப் பற்றி விளக்குவதே இன்னொருவருக்கு அறிவுரை தோக்கமாகும்.

முன்னுரை

சங்க இலக்கியம் தொடங்கி நற்காலம் வரை மக்கள் கடைபிடிக்க வேண்டிய ஒழுக்கங்களைப் பட்டியலிட்டு அவற்றைக் கடைபிடிக்க வேண்டுமென்றும் அவ்வாறு கடைபிடிக்காவிட்டால் வாழ்வின் ஓர்படும் துன்பங்கள் பற்றியும் நூலாசிரியர்கள் குறிப்பிட்டுள்ளனர். ஆனால் காப்பியக்கால படைப்புகளில் நேரடியாக மக்களுக்கு அறிவுரைகளை வழக்குவதைக் காட்டிலும் கதைத் தலைவனோ அல்லது

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Leaf Disease Prediction Using OpenCV-Python
S.Shilpa Sherin¹, Dr. S.Santhosh Kumar²
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Abstract
The proposed system helps in identification of plant disease and provides remedies that can be used as a defense mechanism against the disease. The database obtained from the Internet is properly segregated and the different plant species are identified and are renamed to form a proper database then obtain test-database which consists of various plant diseases that are used for checking the accuracy and confidence level of the project. Then using training data we will train our classifier and then output will be predicted with optimum accuracy. We use Convolution Neural Network(CNN) which comprises of different layers which are used for prediction. A prototype drone model is also designed which can be used for live coverage of large agricultural fields to which a high resolution camera is attached and will capture images of the plants which will act as input for the software, based of which the software will tell us whether the plant is healthy or not. With our code and training model we have achieved an accuracy level of 78%. Our software gives us the name of the plant species with its confidence level and also the remedy that can be taken as acute.
Key words: PYTHON, MY SQL server

A study on Interrelation of Sustainable Development Goals in India using Data Mining and Machine Learning Approaches
B. Santhosh Kumar¹ and Dr. P. Rajesh²
¹Research Scholar, Department of Computer and Information Science, Annamalai University, Annamalaiagar, ²Assistant Professor, PG Department of Computer Science, Government Arts College, Chidambaram, (Deputed from Department of Computer and Information Science, Annamalai University) Tamilnada, India
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Abstract
The Sustainable Development Goals (SDGs) are the best tools and methods for achieving a better and more sustainable future for all by defining priorities and aspirations for 2030. In this paper, analysis, and prediction for consider different SDG goals using data mining and machine learning approaches with different perform accuracy parameters. Furthermore, the SDGs data analysis were utilized using different machine learning classification rules and decision tree approaches to compile a model so to automate the detection of SDG. Numerical illustrations also provided to prove the proposed results using accuracy parameters.
Keywords: Sustainable Development Goals, Data Mining, Machine Learning, Classification, Decision Tree

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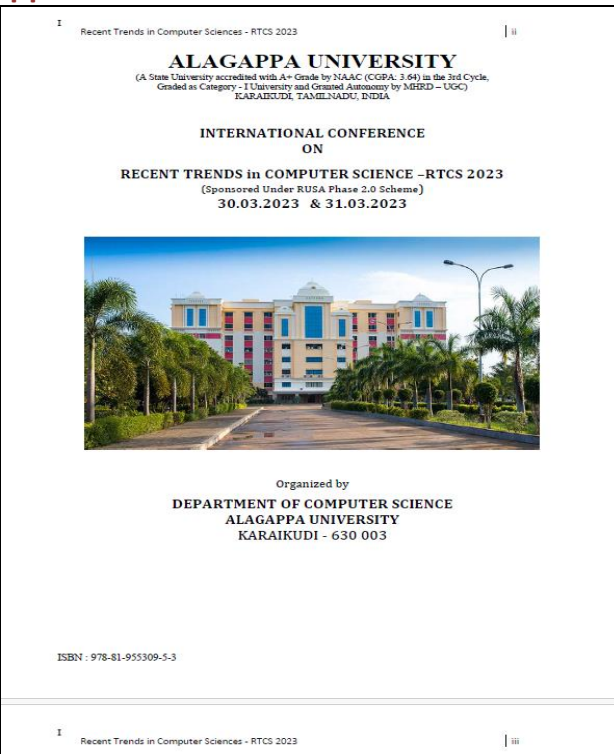
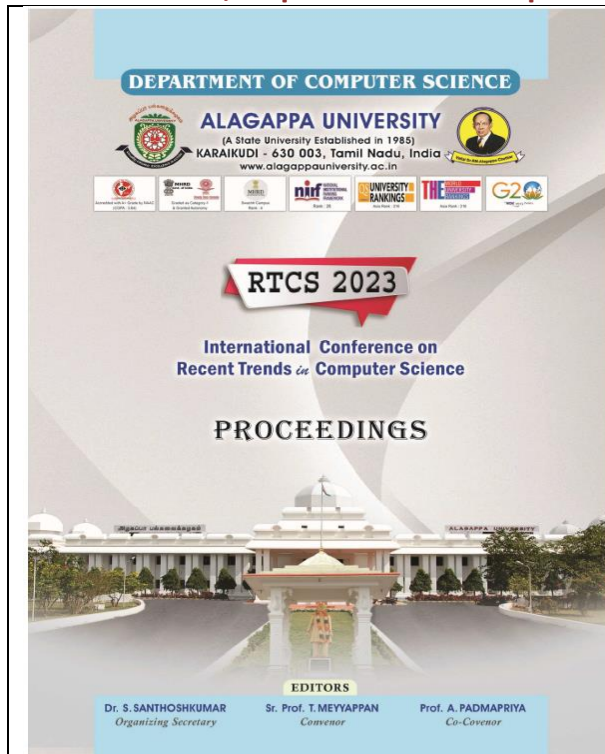
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<p>A Study on Climate Change with Air Quality Index using Data Mining and Machine Learning Approaches S. Ravishankar¹ and Dr. P. Rajesh^{2*}</p> <p>¹Research Scholar, Department of Computer and Information Science, Annamalai University, Annamalaiagar, ²Assistant Professor, PG Department of Computer Science, Government Arts College, Chidambaram, (Deputed from Department of Computer and Information Science, Annamalai University) Tamilnadu, India Email: ¹thru.ravishankar@gmail.com, Email: ²rajeshdatamining@gmail.com</p> <p>Abstract Nowadays, advances in improved climate change data analysis and predictions will result in significantly enhanced national economic opportunities, particularly in the agriculture and energy sectors, as well as different social benefits. Data mining and machine learning algorithms are the best way to analyze and predict various unsolved problems, particularly in climate change-related issues using data mining and machine learning algorithms like data preprocessing, classification, and decision tree approaches. This paper considers different parameters, namely PM_{2.5}, PM₁₀, NO, NO₂, NOx, NH₃, CO, SO₂, O₃, Benzene, Toluene, Xylene and AQI. This paper's most critical analysis and prediction results are finding an optimum and suitable model for predicting climate change through AQI using machine learning with different accuracy parameters. Numerical illustrations were also provided to prove the proposed research. Keyword:Climate Change, Air Quality Index, Data Mining, Machine Learning, Accuracy Methods.</p>		
<p>Hyper-parameter Optimization in K-Nearest Neighbor Algorithm for Personalized Recommender System G. Thenmozhi¹, V.Palanisamy^{2*}</p> <p>¹Research Scholar, ²Professor and Head ^{1,2}Department of Computer Applications, Alagappa University, Karaikudi Email: ¹thenmozhi@uac.ac.in, Email: ²vpu@uac.ac.in</p> <p>Abstract As a result of the massive volume of online information availability, there arises the prerequisite for information filtering technique grounded on user's curiosity and item combinations which are offered by the recommendation systems. The volume of online information availability in the recent decades has risen dramatically. Owing to this speedy progress, the problem of filtering the information by the recommender system based on the individual user's interest becomes a critical issue for the forth-coming customers. Collaborative filtering recommender system is utilized as a significant method to suggest products to the users depends on their preferences. It considered a preferred solution to predict the user's interest by their explicit data (ratings and reviews). It is quite complicate when the user preference and rating data is sparse. Data sparsity is one of the major challenges faced by the recsys which causes uncertain results in prediction. k-nearest neighbor algorithm is proved as a preminent method to alleviate the aforementioned issue with enhanced results. By utilizing the features of nearest neighbor algorithm, users with similar interest are clustered in an iterative manner to identify the preferences of target user. In this paper, hyper-parameter optimized k nearest neighbor algorithm (HPok-NN) is studied to calculate the nearest neighbor to identify the user's interest in the sparse data. By tuning the hyper-parameter (i.e. n_neighbors), the optimal value for k is determined. The studied model comprised as data collection, preprocessing, feature selection, modeling, prediction and evaluation. The efficiency of the studied model is evaluated by error metrics (RMSE and MAE) and accuracy. Keywords: Machine learning, Recommender system, Hyper-parameter and Parameter optimization.</p>		
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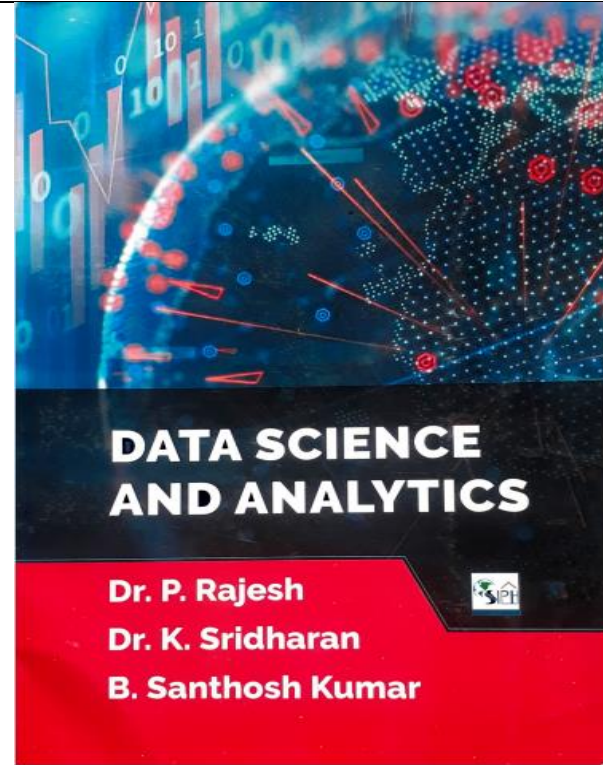
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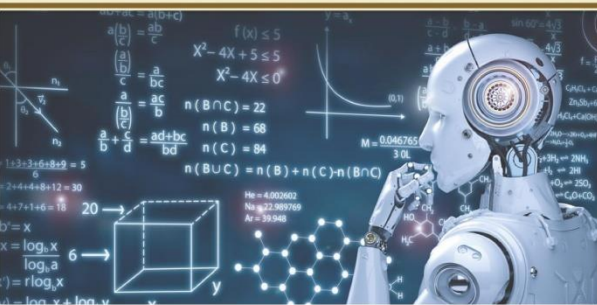


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The Role of Computational Intelligence in Emerging Research Innovations

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MICRONUTRIENTS PERFORMANCE IN PADDY YIELD USING DATA MINING AND MACHINE LEARNING APPROACHES

S. Dhanavel, ¹Research Scholar, Department of Computer and Information Science, Annamalai University

&

Dr.A. Murugan, Assistant Professor, Department of Computer Science, Thiru Kolanjiappur Govt. Arts College, Virudhachalam,

Abstract

In this study, data mining and statistical approaches were established to estimate the agriculture growth using soil micro and macro nutrient level. Agricultural development covers different parameters like weather conditions and soil nutrient level. In this paper, consider four essential plant nutrient elements defined as micronutrients namely, zinc (Zn), iron (Fe), copper (Cu) and manganese (Mn). To archive this objective, analysis of paddy yield and level of soil micronutrients using data mining and machine learning approaches using stochastic gaussian process. Numerical illustrations also provide to prove the results and discussions using different mining parameters namely R2 score, Mean Absolute Error (MAE), Root Mean Squar Error (RMSE), Relative Absolute Error (RAE) and Root Relative Squared Error (RRSE).
Index Terms:Data Mining, Machine Learning, Gaussian Process and Performance Metrics.

Introduction

In India, the field of agriculture for most important for increasing the Indian economy. The current situations the field of agriculture face different problems like weather conditions, labour demands and soil nutrient level. Indian soils have become deficient not only in major plant nutrients like nitrogen, phosphorus and in some cases, potash but also in secondary nutrients, like sulphur, calcium, and magnesium. Micronutrients such as zinc, boron and to a limited extent iron, manganese, copper and molybdenum have also been reported to be deficient.

Deficiency of micronutrients during the last three decades has grown in both, magnitude, and extent because of increased use of high analysis fertilizers, use of high yielding crop varieties and increase in cropping intensity. This has become a major constraint to production and productivity of paddy, sugarcane and wheat. Thus, there is an urgent need for correction of individual nutrient deficiency and for arresting its further spread.

In this research, collect different data regarding agricultural related primary and secondary data for various resources like department of economics and statistics, department of agriculture and other relevant departments for state and central government. Data collection faces different stages in the area of data mining and also finding different hidden information using various statistical analysis. Finally, based on numerical illustrations how to increase the paddy growth using micronutrients. There are four essential micronutrients in plants. Some nutrients control the



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Fisheries Science

Volume - I

J Michael Antony Prabhu Arachi



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Fisheries Science is the study of the river, reservoir, lakes, ponds, on-shore, off-shore, and deep-sea systems. It is a multidisciplinary branch that deals with freshwater and marine ichthyology. It helps to manage and understand fisheries for the students easily. This book deals with the salient features, habits and habitat, life cycle, biology, culture, and economic importance of finfish and shellfish species. Recently there has been considerable decline in the fish population both in freshwater and marine due to overfishing and overexploitation. It has had a greater impact on the fish biodiversity in both the environments freshwater and marine. Fisheries science covers a vast area of research areas including habitat, health ecology, breeding, biodiversity, and fishery management. This book describes the present status and scope along with the recent techniques involved in the culture of finfish and shellfish.



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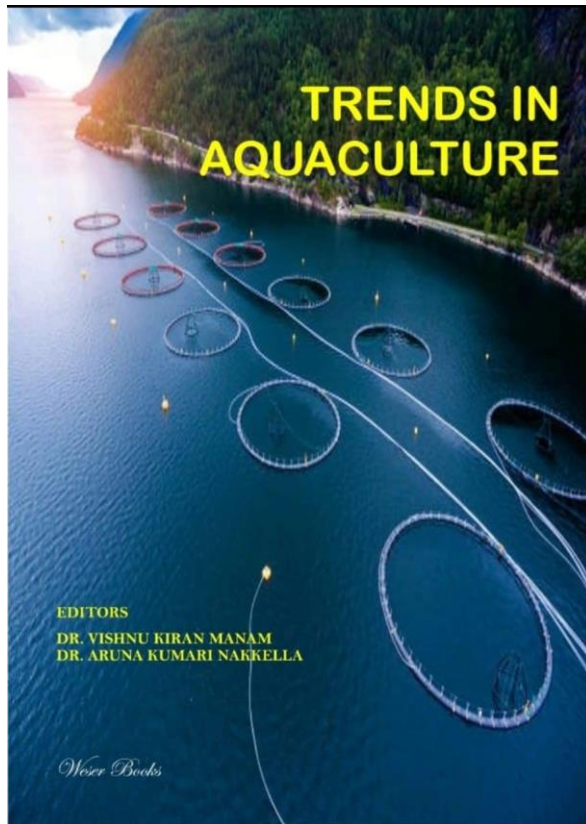
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TRENDS IN AQUACULTURE

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Trends in Aquaculture

FEED NUTRITION AND MANAGEMENT

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ABSTRACT

Aquaculture production has increased considerably nowadays due to intensive culture and deploying biological techniques. Sea food is expected to be the future most worthy food source which is going to be the poor. Sustainability can be achieved by providing nutritious and completely balanced feed. Aquaculture has many issues like efficiency in feeding, prevention of over feeding for fishes, feeding wastage of food, maintaining good health condition in fish, using advanced biotechnological methods and fish consumption connected with human health. Prevention of nutrient deficiency and occurrence of disease in fish can be achieved only by providing adequate nutrients. This study shows the effect of balanced feed on the fish health, well-being and prevention of disease in fishes.

INTRODUCTION

Every animal needs an adequate balanced diet which contains all the required necessary essential nutrients to have optimal growth. These nutrient requirements vary from species to species, sex, age, environment where it lives, different stages of larval development and the health status of the species. A minimum of 35 to 45 nutrients are required for marine fish. To have the best optimal growth and avoid pollution in the environment a thorough knowledge about the feeding behavior and amount of nutrient required by the species is very essential (NRC, 2011). Fishes and other animals derive their energy from the dietary lipid, protein and carbohydrate. The amount of energy required also differs in different life stages of fish. Bowen (1987) reported that the energy required by the fish is much less when compared with the warm blooded organisms and hence it needs high level of protein to energy ratio in the diet. Comparing to the life stages of fish juvenile fishes require low energy high protein and the mature adult fish requires high energy low protein diet.

Arachi & Cowey (1991) observed the reduction in dietary protein and dietary energy ratio had been to be enormously efficient in improving protein utilization and decreasing nitrogenous waste fishes. If there is excess of diet and reduction in the energy it reduces the growth of a fish or any organism. Fish or any aquatic organism consumes only the required amount of feed and once the required get saturated the fish restrains from feeding which affects the fish growth. Excess feeding results in excess deposit of fat in the body, which also affects the quality of flesh reducing the marketing value. Whenever the energy derived from the feed is insufficient there is reabsorption of stored fat from the body for the regular maintenance of activities.

FEED CLASSIFICATION

Feed on the life cycle of the fish the feed is classified into starter feed, larval diet, fry feed, serving feed, grow-out feed and brood-stock feed.

Feed on the moisture content feed is divided into wet feed, moist feed and dry feed.

Feed on nutrients feed is classified into high energy feed, low pollution feed medicated feed and fermented feed.

Feed on the nature of feed ingredients they are again divided into purified feed, semi-purified feed and practical feed.



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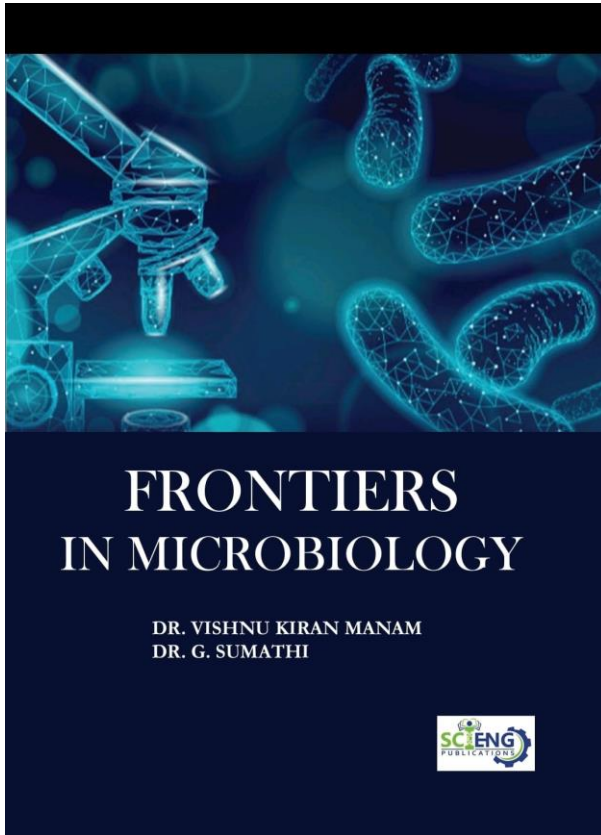
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FRONTIERS IN MICROBIOLOGY

Chapter
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AQUATIC MICROBIOLOGY

DR. J. MICHAEL ANTONY PRABHU ARACHI

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Aquatic microbiology is the study of microbes in aquatic systems such as freshwater and saltwater systems. It includes microscopic plants, animals, bacteria, viruses, and fungi and their behavior, toward other organisms in the aquatic environment. Aquatic microorganisms play a vital role in nutrient circulation within their environment. It also forms an important crucial part of the food chain/web. Many microorganisms obtain their nutrition by breaking down the organic matter of dead plants and animals.

Aquatic Microbiology also focuses on how bacteria, archaea, and viruses are integral parts of the stream, estuarine, and marine ecosystems. This option encompasses a core of oceanography and microbiology courses with heavy coverage of aquatic systems to provide a foundation of knowledge based on the ecology of ecosystems inclusive of microbial processes. It is designed to provide microbiology major with a detailed understanding of the role that microbes play in biogeochemical cycles as well as host/ecosystem physiology. This option complements the Marine Studies Initiative, adding to the scientific opportunities for students to focus their studies on water habitats.

Aquatic organisms generally fall into three broad groups: plankton, nekton, and benthos. They vary in how they move and where they live. The microbiological examination of water and food may be aimed at detecting or quantifying a great variety of organisms including viruses, bacteriophages, bacteria, fungi, yeasts, and protozoa.

Of the many infectious microorganisms found in the environment, bacteria (such as Shigella, Escherichia coli, Vibrio, and Salmonella), viruses (such as Norwalk virus, and rotaviruses), and protozoans (such as Entamoeba, Giardia, and Cryptosporidium) may be found in water.



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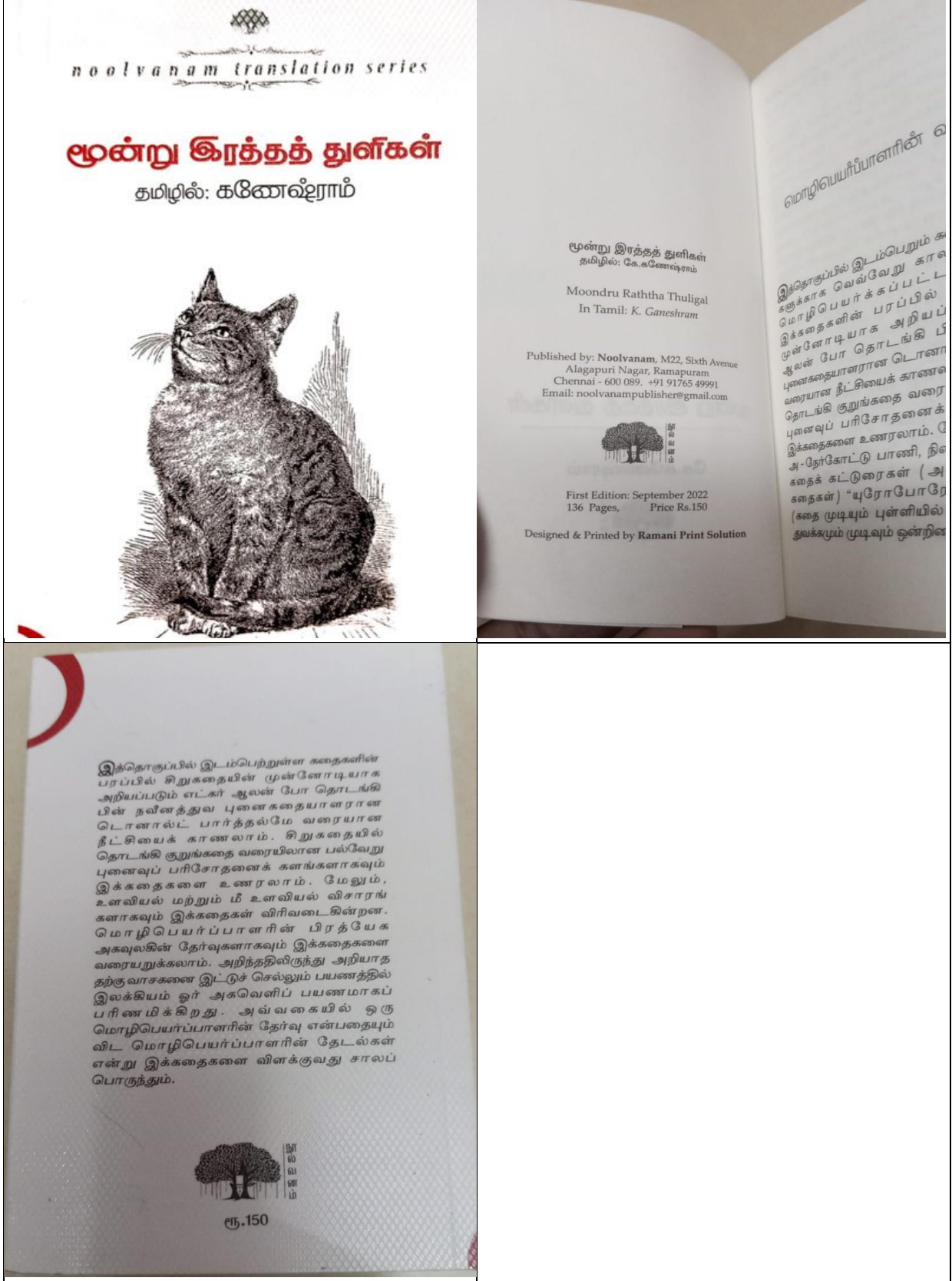
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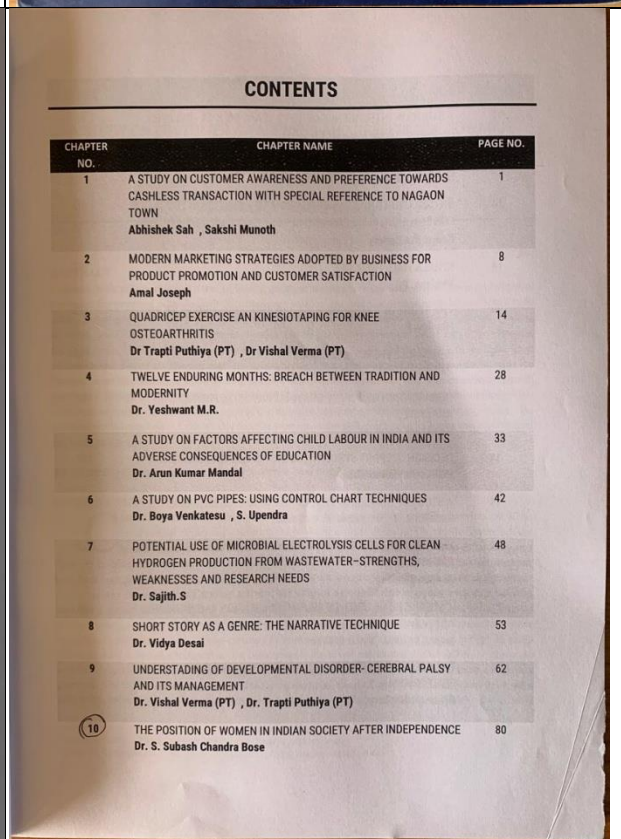
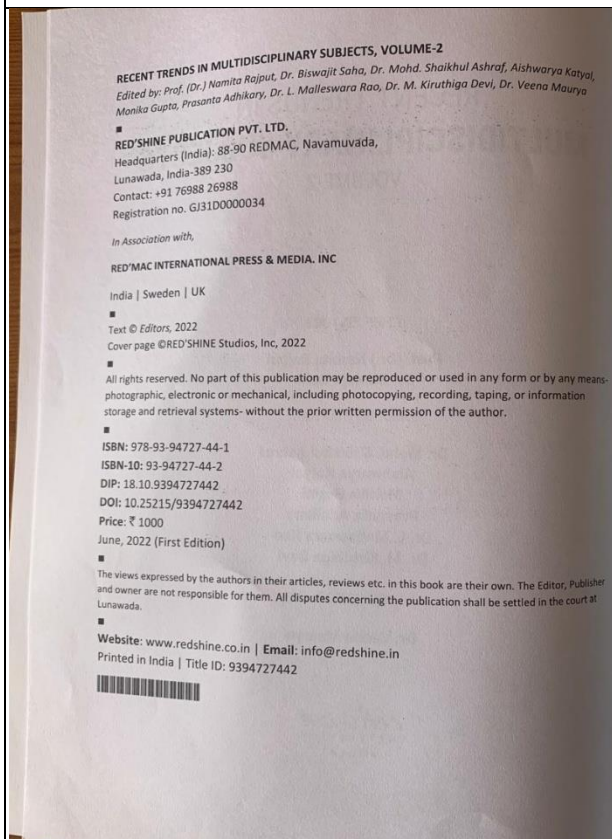
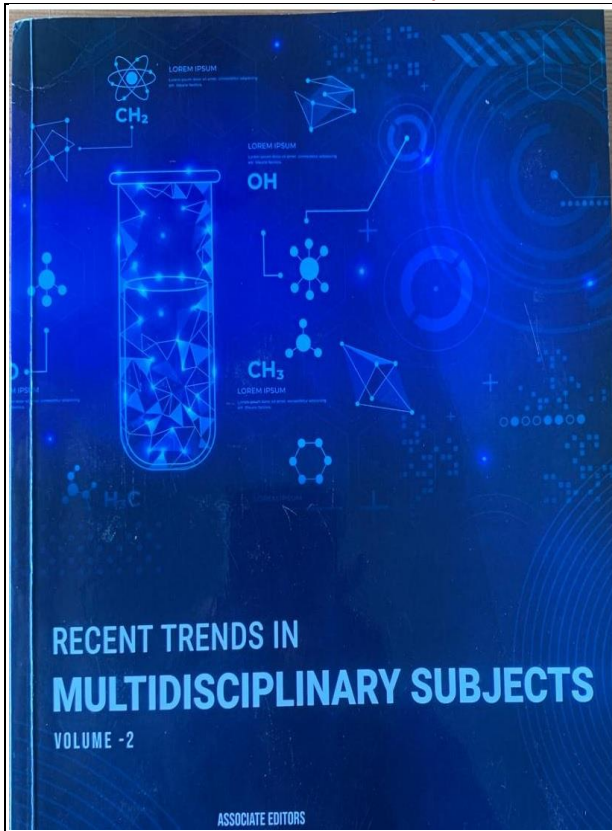
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CHAPTER 10

THE POSITION OF WOMEN IN INDIAN SOCIETY AFTER INDEPENDENCE

*Dr. S. Subash Chandra Bose*¹

Abstract:

Following India's independence, women have played an essential part in the country's rebuilding at all levels and in all sectors of life. Wherever women were given opportunities, whether in the social or educational fields, science, politics, or economics, or art, culture, and literature, they demonstrated through their hard work, dedication, talent, and skill that they could do whatever men could for the advancement of society and the nation. Not only that, but women have made outstanding contributions in a variety of sectors, including science and politics. Following the country's independence, actions were made from time to time with the goal of empowering women via their involvement in many sectors of life, some of which may be considered highly important. The provisions in the Constitution, the Special Marriage Act of 1954, and the Hindu Marriage Act of 1955 for equal right to vote and other rights should be seen in the perspective of the measures taken for women. The Succession Act of 2005 AD, followed by a Supreme Court of India judgement with the specific intention of making it more effective, was the most tangible step toward women's emancipation.

Keywords : Womens, Empowerment, Right's, Constitution, 73 Amendments, conclusion.

Introduction:

Over the course of documented Indian history, the position of women has undergone several transformations. Their social standing deteriorated early in India's ancient period, particularly in Indo-Aryan spoken regions, and their subjection was reified long into India's early modern period. Measures aimed at amelioration were implemented during the British East India Company rule (1757–1857) and the British Raj (1858–1947), including the Bengal Sati Regulation, 1829, Hindu Widows' Remarriage Act, 1856, Female Infanticide Prevention Act, 1870, and Age of Consent Act, 1891. The Indian constitution forbids sex discrimination and authorises the government to take particular steps to protect them. Women's rights under the Indian Constitution are primarily defined as equality, dignity, and freedom from discrimination.

Several women have held high posts in the Indian government, including the President of India, Prime Minister of India, and Speaker of the Lok Sabha. Many women in India, however, continue to confront major challenges. Malnutrition rates are particularly high among teenage girls and pregnant and breastfeeding mothers in India, with serious consequences for children's health. In India, violence against women, particularly sexual assault, is a major problem. Women are now completely participating in fields such as education, sports, politics, media, art and culture, service sectors, science and technology, and so on in India. Indira Gandhi is the world's longest-serving female Prime Minister, having served as Prime Minister of India for a total of fifteen years.

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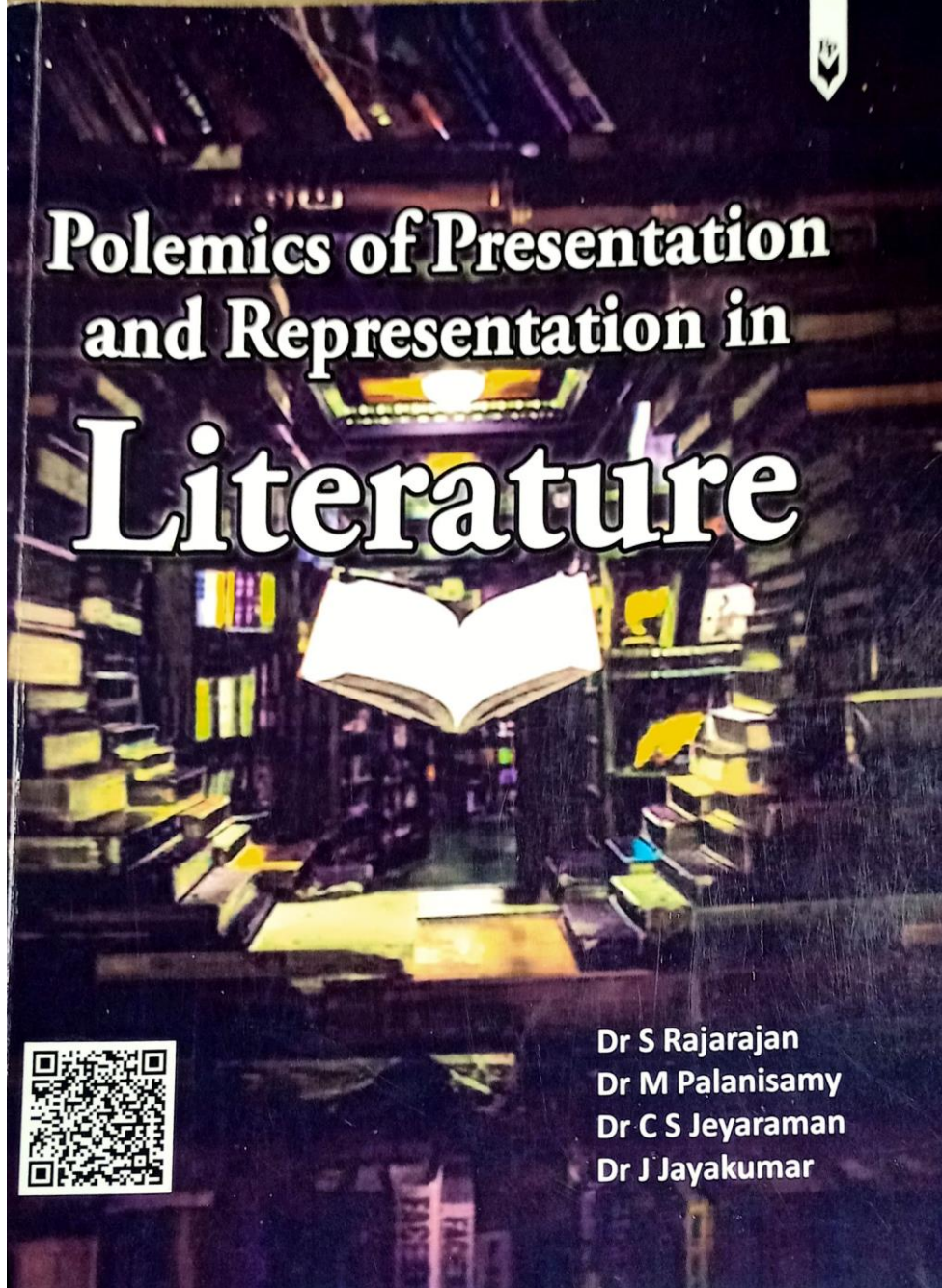
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**Existential crisis of women and their struggle for identity
in Ashokamitran's novella *Water*: A study**

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Water, incredibly one of the most celebrated classics ever written by Ashokamitran has gained him a distinct place in the contemporary realm of Indian writings. He is a humble yet a highly influential and a renowned writer of Tamil literature. To be more specific he had innumerable fans around the world besides reader from the Tamil speaking community. His versatility and his uncompromising dedication towards his literary career have won him both national and international fame. Before taking up his literary career he worked for few years in cinema field. It was through his short stories and novels he made himself to the reading public. His works are marked by incredible humor and satire which he uses them to expose the follies and foibles that existed in the society where he lived in. Like his other works this novella narrates the mundane problems of Chennai people who encounter the problem of water scarcity. Generally, his writings are noted for the concern he has for human's sentiments and their sufferings. On the superficial level it seems to focus on the water crises that persisted in Madras (now Chennai) during 1960's but actually it portrays the pathetic existence of women who caught under the clutches of a society that is driven by patriarchal subjugations. He uses understatement as an effective tool to convey the struggle for identity and survival of certain women characters make this work worth reading. He never fantasises the events rather he speaks the practical problems of these women in a realistic way.

The novella begins with the dramatic portrayal of the busy street of a Chennai city. In fact, the street the speaker mentioned in this novella is peopled with men and women running in hustle bustle to collect water from the pumps of certain houses of the street. Generally, it starts with an introduction of the common people's struggle who faces water crises and gradually shifts to the scenes which depict the existential crisis of the three prominent women



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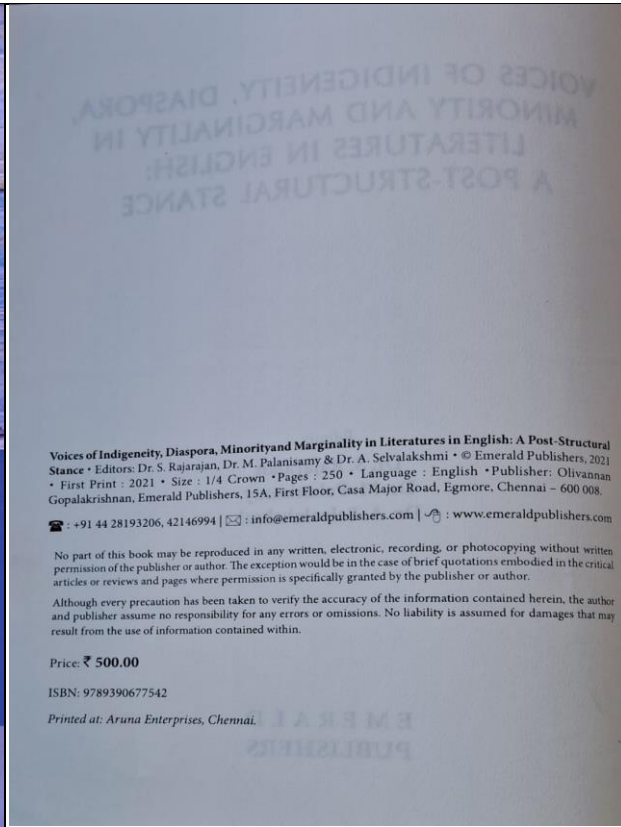
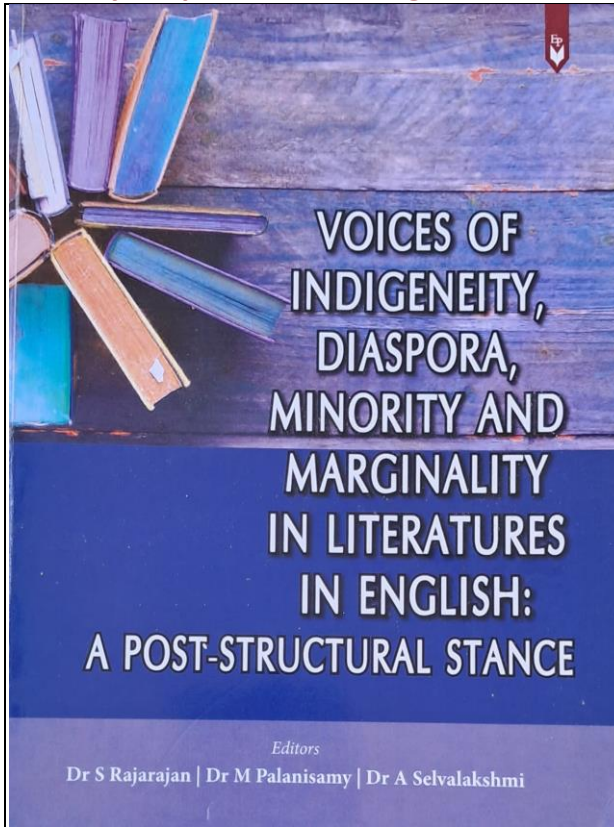
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Violence and Injustice, Ignorance and Struggle for Empowerment of the Marginalized in Bama's *Vanmam*: A Critical Study

Janaky. P
Assistant Professor of English
Periyar Govt.Arts College
Cuddalore

Vanmam, being a novel of Dalit literature stands unique for the struggles of the Dalit were portrayed in a Dalit's perspective which is more genuine and authentic than in a perspective of a writer belonging to the upper caste of the society. Generally, it deals with the story of three enterprising youngsters namely Saminathan, Jayaraju and Anthony who were the first-generation learners from their village whose fathers and forefathers have not been to schools in their life time. Yet they advocate education as the foremost thing to be done to fight against the social discrimination and injustices. Like the other youngsters of their village the three youth also aspire to be educated, years seeking a job, thereby putting an end to all their insults and humiliations that they suppress within. It further narrates the twists and turns that brings about an unexpected disaster in the smooth course of their life. Even though they struggle for a day's gruel their life never went without fun and frolics. But everything comes to a standstill all of a sudden.

Kandampatti, one of the typical villages around the Madurai town depicted in Bama's *Vanmam* is known for the constant fight between the Dalits, the Pallars and the Parayars respectively. The backdrop of the novel is scintillating for it is a village covered up with hilly tops and dense green forest sheltering not only the Dalit people but also people from various castes of the society. The streets of this village were so unique for they are arranged in such a way that they are placed as per the social ladder. For e.g., The first four or five streets were allotted for the Parayars who were Christians. Being Christians, they get all kind of support from the church. Beside them lie the streets of the Pallars who nourishes a relentless vendetta



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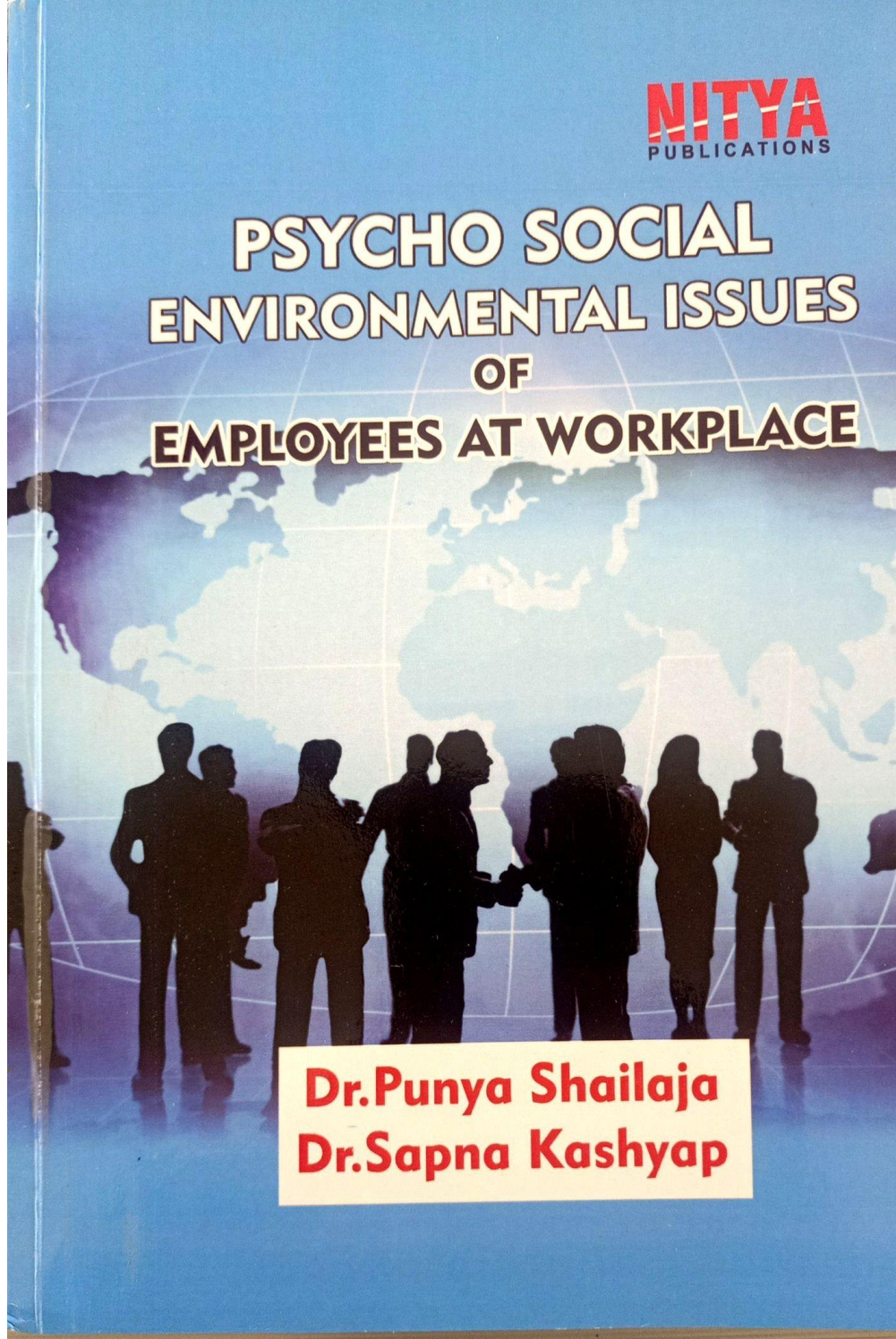
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**PSYCHO-SOCIAL ENVIRONMENTAL
ISSUES OF EMPLOYEES AT WORK PLACE**

Dr. Punya Shailaja

Dr. Sapna Kashyap

Nitya Publications, Bhopal



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CHAPTER-16

IMPORTANT CONSTITUTIONAL AND LEGAL PROVISIONS
FOR WOMEN EMPLOYEES IN INDIA

Dr.S.Subash Chandra Bose

Assistant professor

Department of Political Science

ABSTRACT: The history of labour legislation in India is naturally interwoven with the history of British colonialism. Considerations of British political economy were naturally paramount in shaping some of these early laws. In the beginning it was difficult to get enough regular Indian workers to run British establishments and hence laws for indenturing workers became necessary. This was obviously labour legislation in order to protect the interests of British employers. Then came the Factories Act. It is well known that Indian textile goods offered stiff competition to British textiles in the export market and hence in order to make India labour costlier, the Factories Act was first introduced in 1883 because of the pressure brought on the British parliament by the textile magnates of Manchester and Lancashire. Thus we received the first stipulation of 8 hours of work, the abolition of child labour, and the restriction of women in night employment, and the introduction of overtime wages for work beyond 8 hours. While the impact of this measure was clearly welfares the real motivation was undoubtedly protectionist.

Key words: Legal Provisions, Indian Constitution, Women rights, Labour Laws, conclusion.



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This book presents some basic definitions, governing equations, and their corresponding initial and boundary conditions. We deal with the dispersion of solute in a non-Newtonian fluid (couple stress fluid and Bingham fluid) flowing in a channel bounded by porous beds. The governing equations are solved analytically by applying a perturbation technique, generalized dispersion model, and Taylor dispersion model. Effect of magnetic field on blood flow for distinct situations like interphase mass transfer, chemical reaction, mild stenosed and multi stenosed arteries. Analytical solutions for velocity, mean concentration and dispersion coefficient are presented numerically computed and the results are depicted graphically. The motivation for carrying out the book is outlined and the models developed have been discussed briefly.



Rathinasamy Vijayakumar

DISPERSION OF SOLUTE
WITH CHEMICAL REACTION
IN BLOOD FLOW



Dr. R.Vijayakumar is a faculty in Annamalai University, Tamil Nadu, India. He has obtained his Ph.D, degree in Mathematical Models for Blood Flow with Magnetic Field from the Department of Mathematics, Annamalai University. In mathematics, his research is in Biofluids Mechanics, Peristaltic Transport, Non-Newtonian Fluids, MHD Fluids and CFD, etc.



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Vijayakumar



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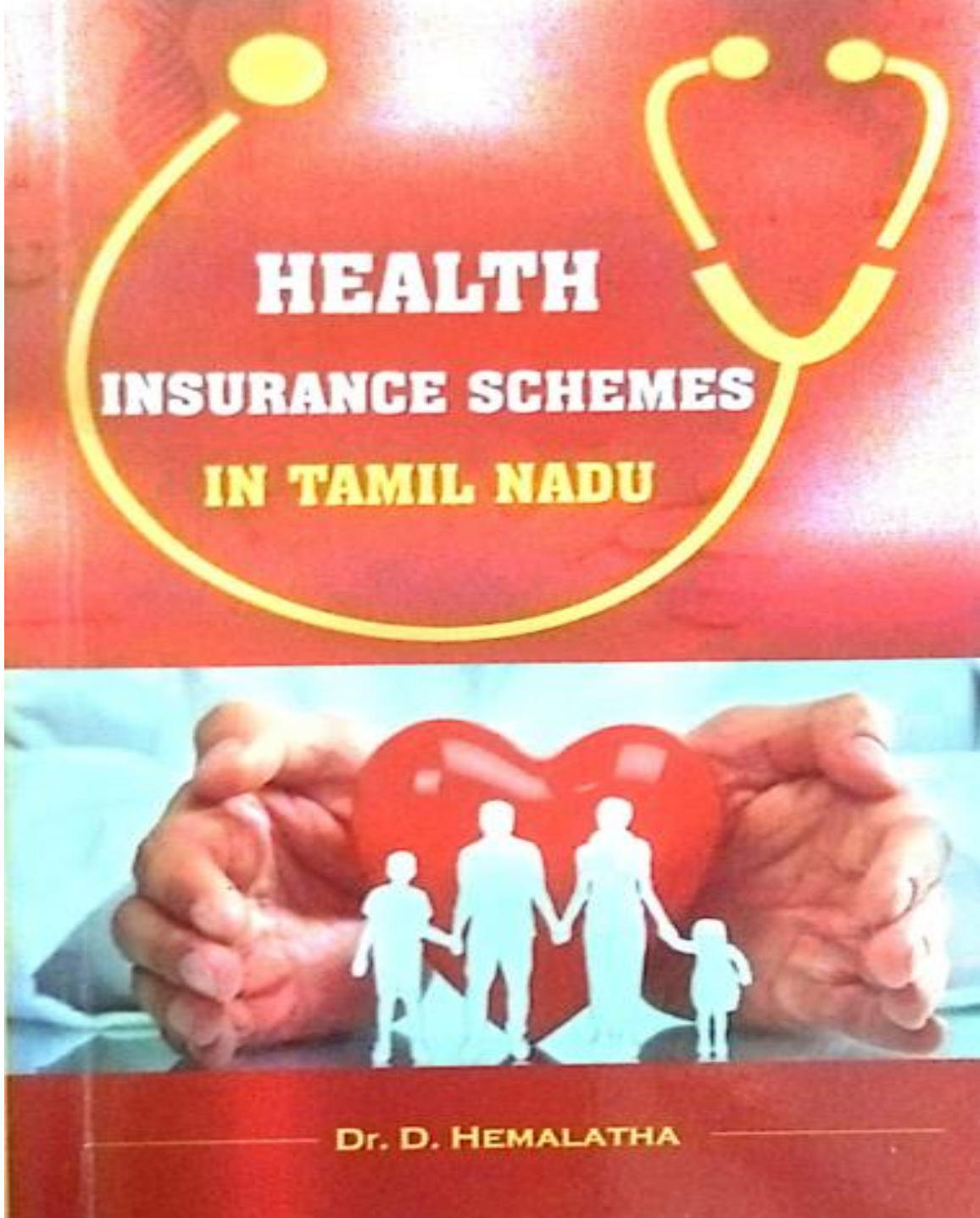
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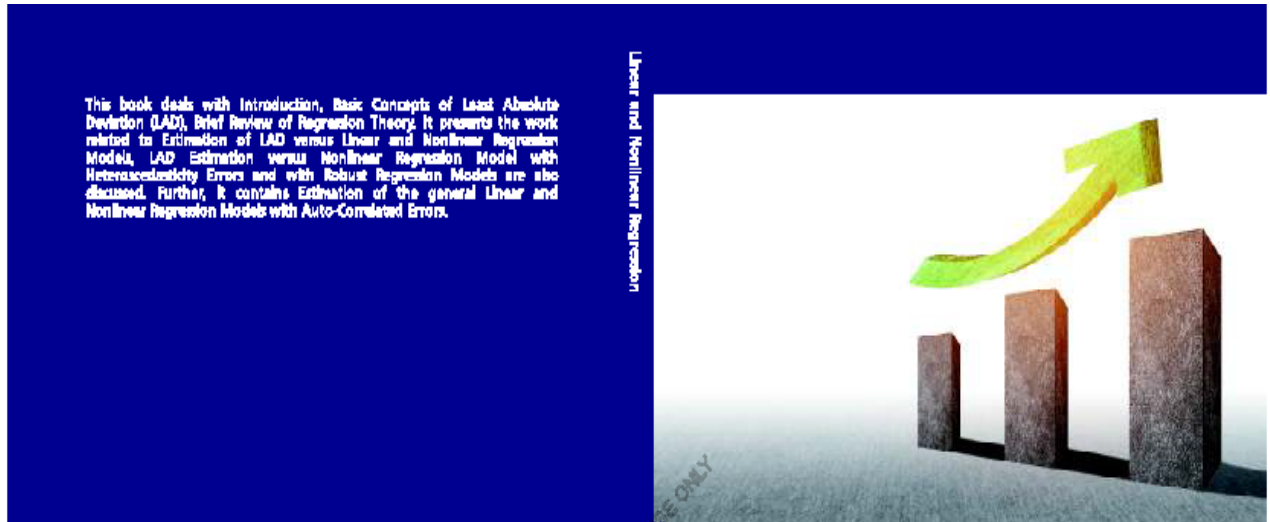
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This book deals with Introduction, Basic Concepts of Least Absolute Deviation (LAD), Brief Review of Regression Theory; It presents the work related to Estimation of LAD versus Linear and Nonlinear Regression Models, LAD Estimation versus Nonlinear Regression Model with Heteroscedasticity Errors and with Robust Regression Models are also discussed. Further, it contains Estimation of the general Linear and Nonlinear Regression Models with Auto-Correlated Errors.

Linear and Nonlinear Regression

S. Eakambaram
M. Salomi

Least Absolute Error Estimation of Linear and Nonlinear Regression

A Monograph on Regression Theory

I am working as an Assistant Professor in Statistics, Periyar Arts College, Tamilnadu, India. I have a good number of publications and presented many papers in the International and National conferences.

Dr. M. Salomi, working as an Assistant Professor in Statistics, Madras Christian College, Tamilnadu, India. She has a good number of publications.



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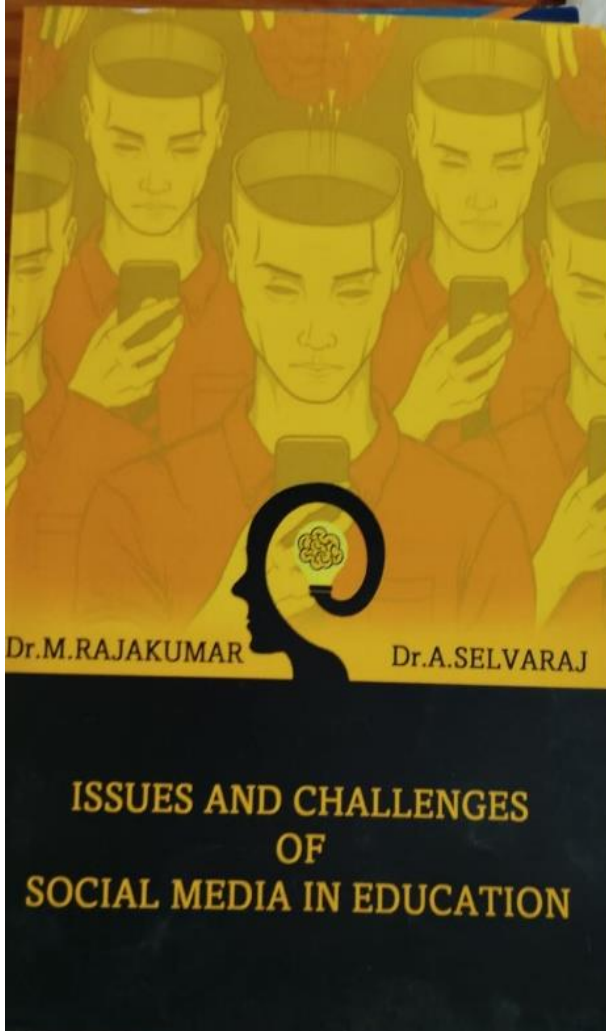
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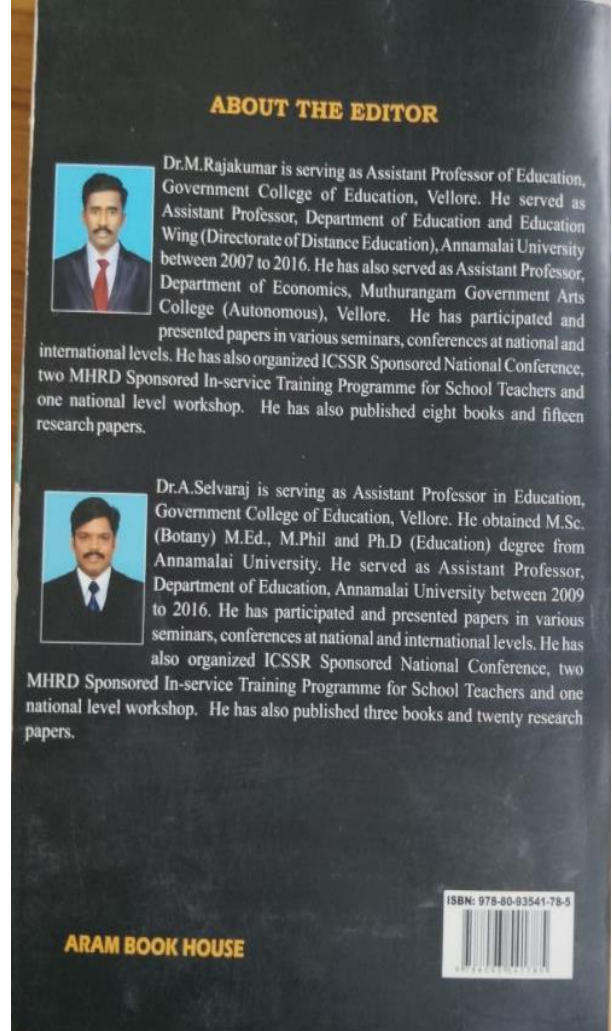
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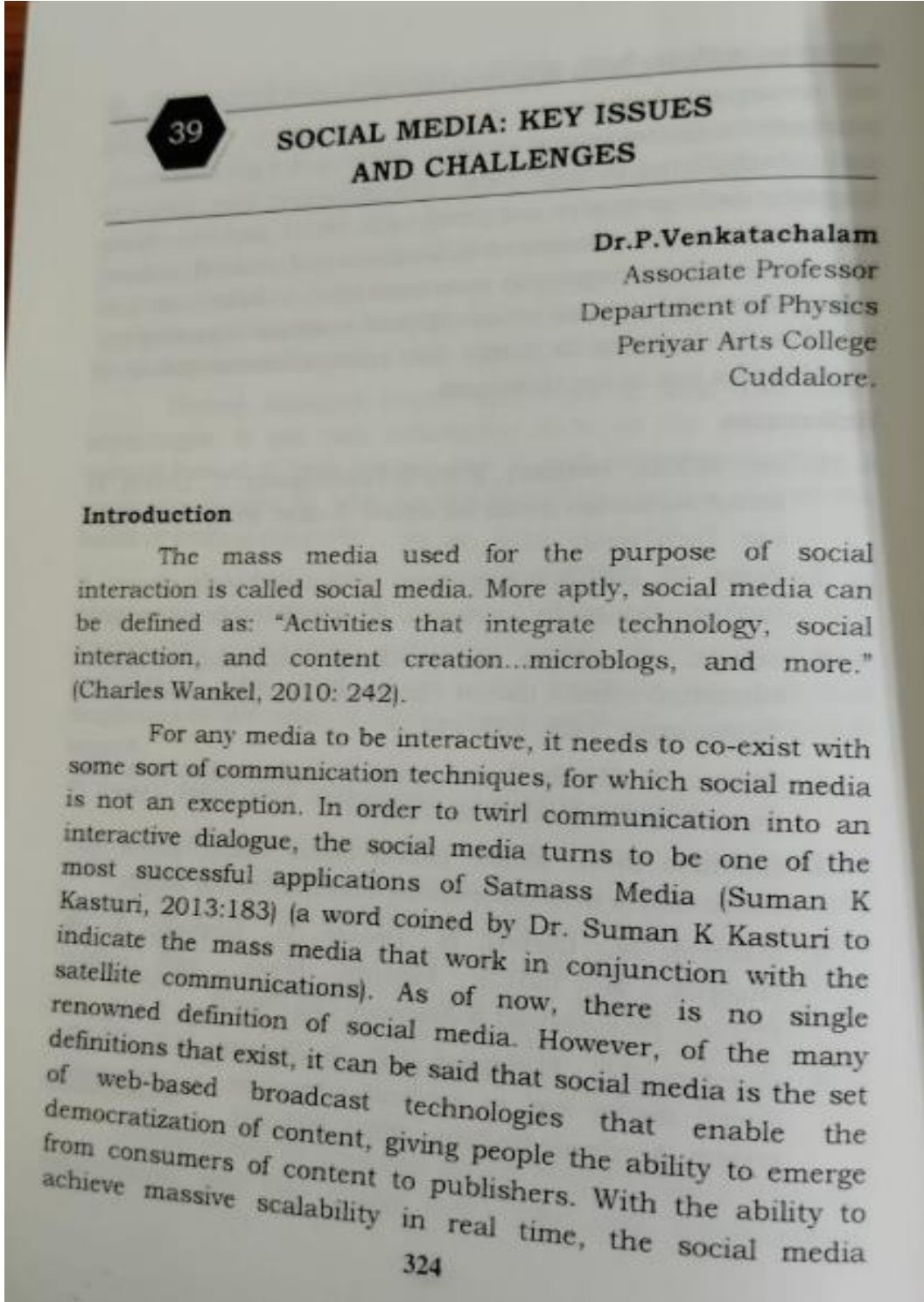
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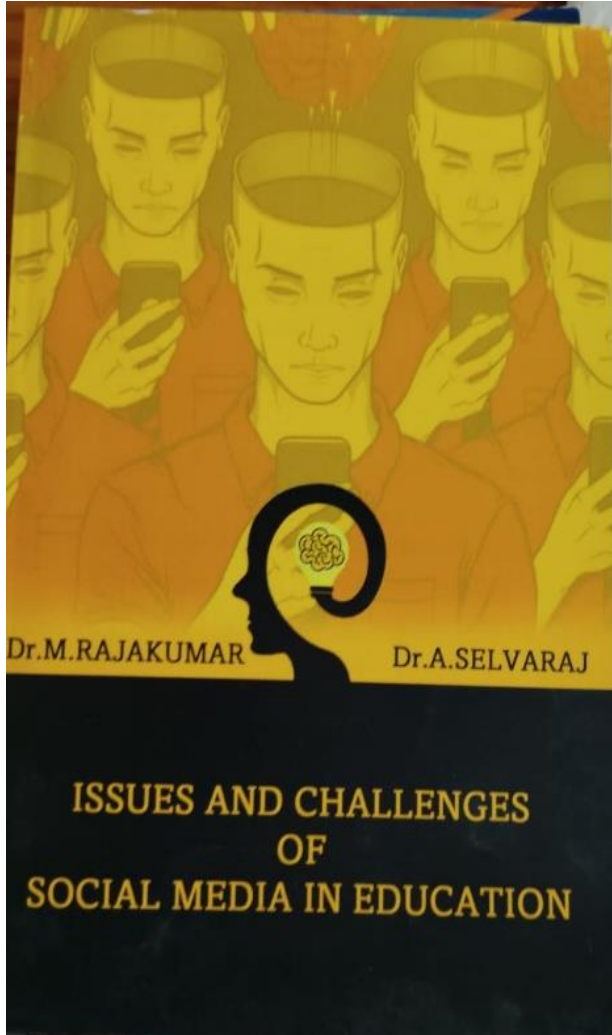
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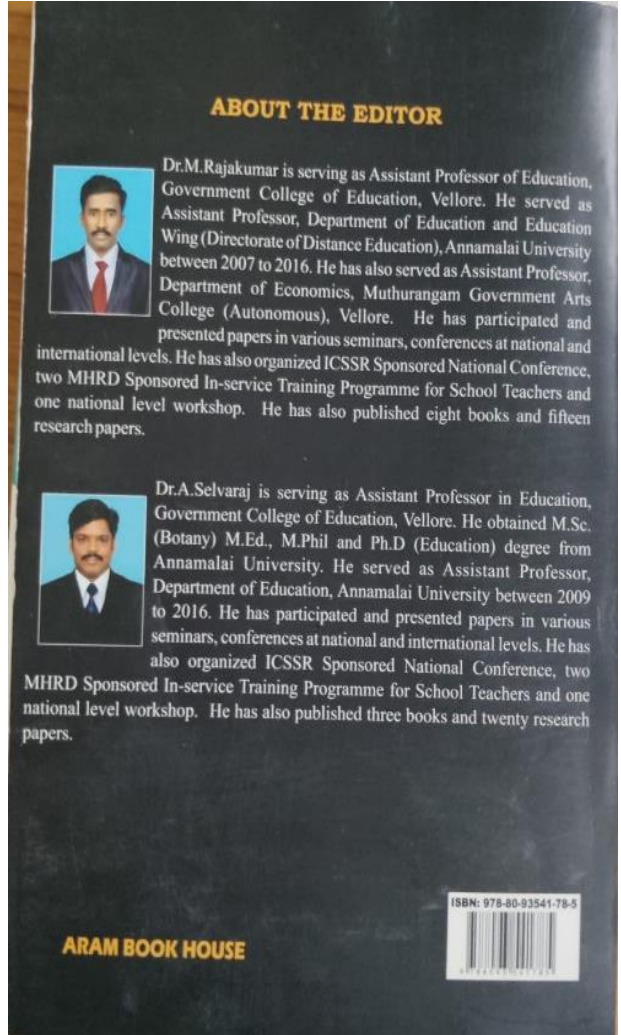
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**SOCIAL MEDIA IN EDUCATION:
POSITIVE AND NEGATIVE IMPACT
ON THE STUDENTS**

Dr.K.Anandalakshmi

Assistant Professor

Department of Physics

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Cuddalore.

Introduction

The growth of social media over past few years has changed the ways in which the internet is experienced by most end users. Social media is built on the idea of how people know and interact with each other. It gives people the power to share, making the world more open and connected with each other.

Social networking has a vital influence on our live as it helps a lot in every field of life such as political field, economic field and educational field. People watch billion of video clipson YouTube daily. Every hour, users upload video content. Every day, more than 90 percent of college students visit a social networking site. People have woven these networks into their daily routines, using Facebook, Twitter, LinkedIn, online gaming environments, and other tools.

Using of social media is not limited only to professionals or elders but also it is been widely used in educational sectors by the students. There are people who can't even write their own name and they are only able to recognize him and people by

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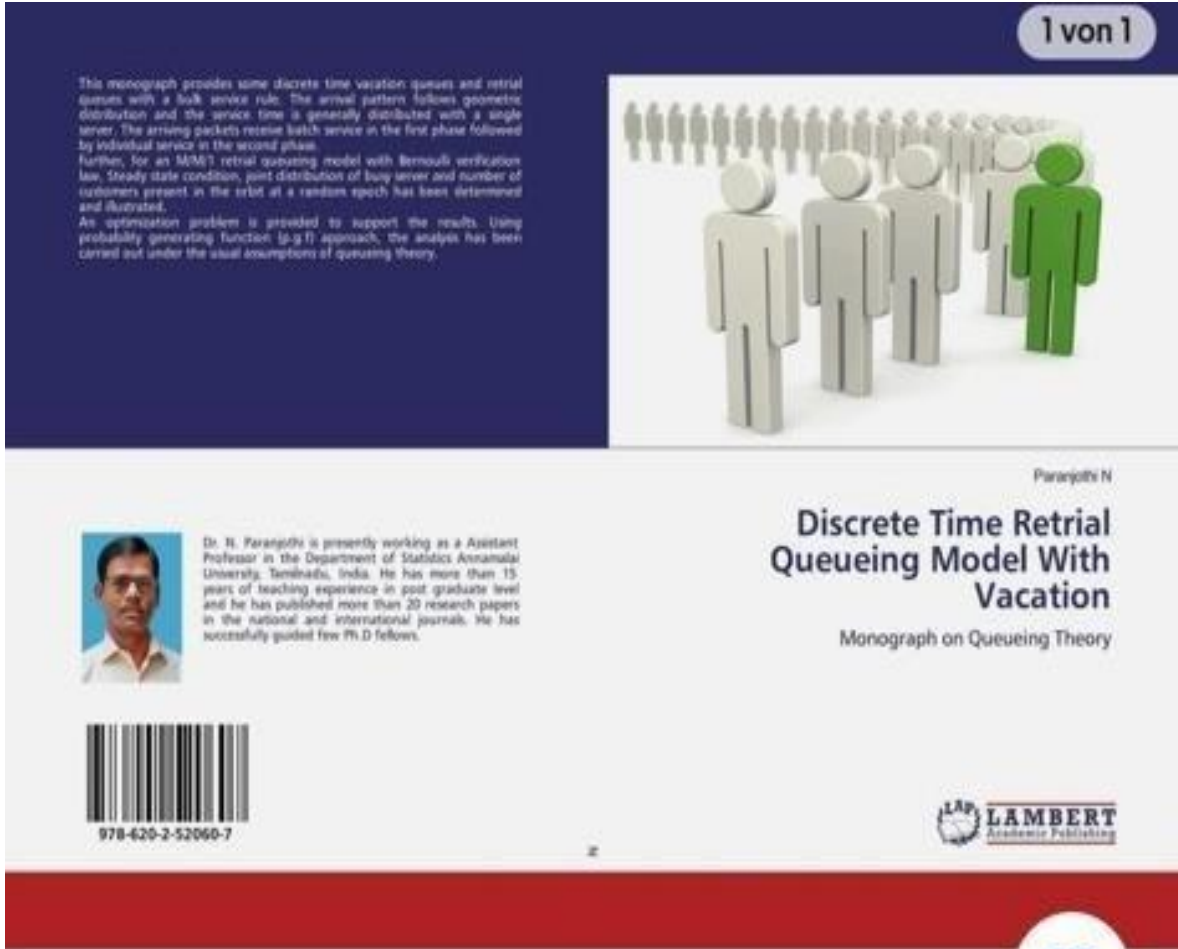
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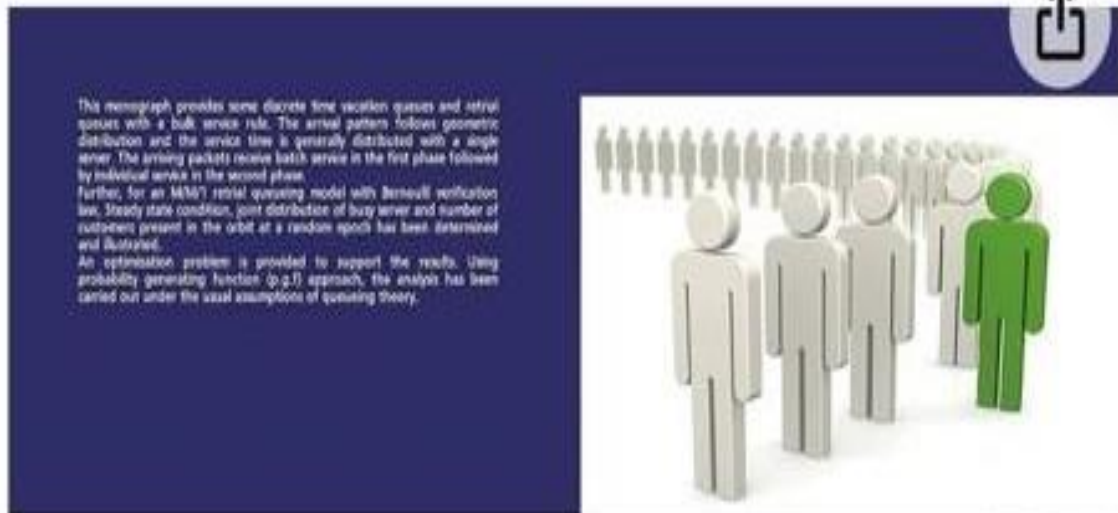
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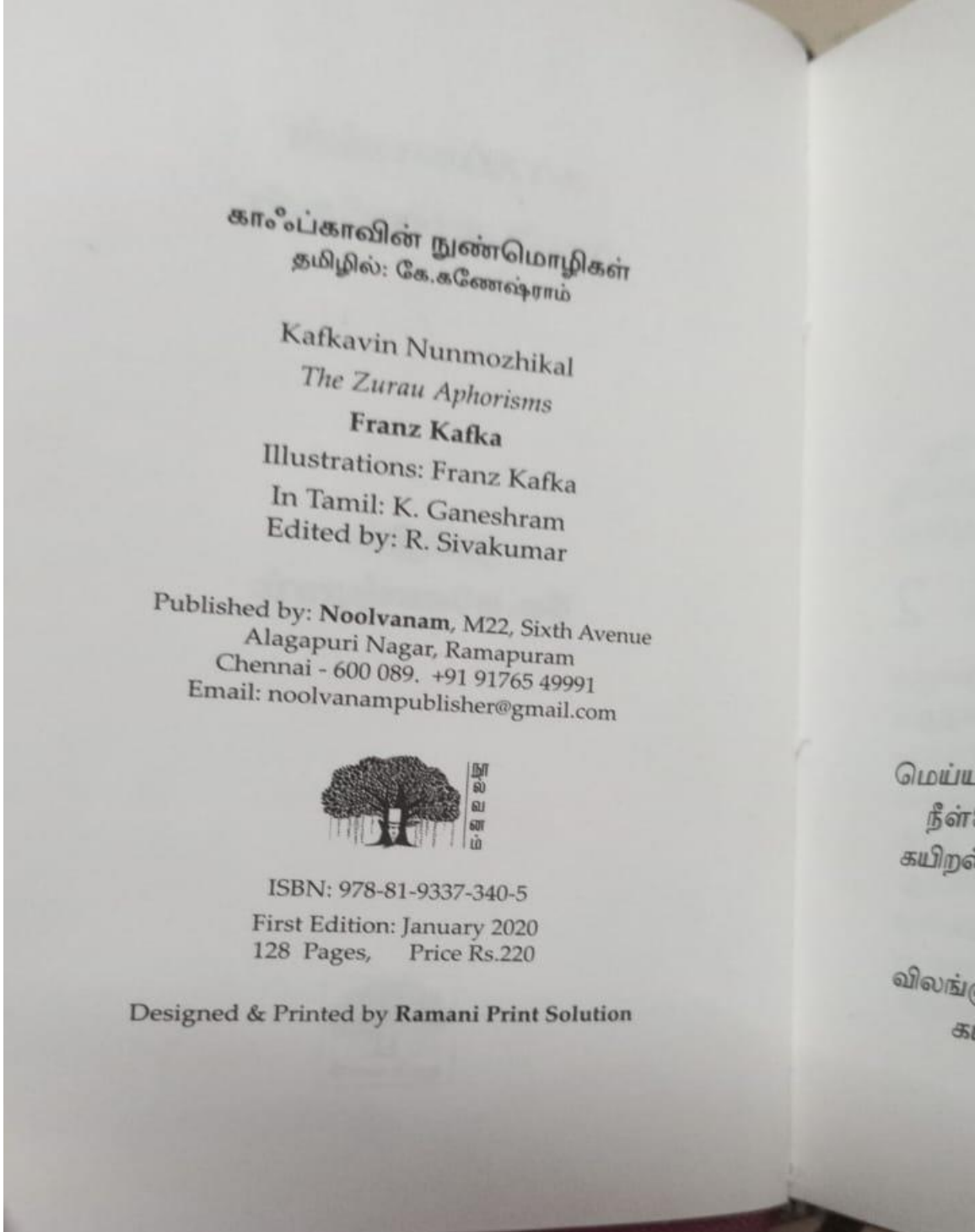
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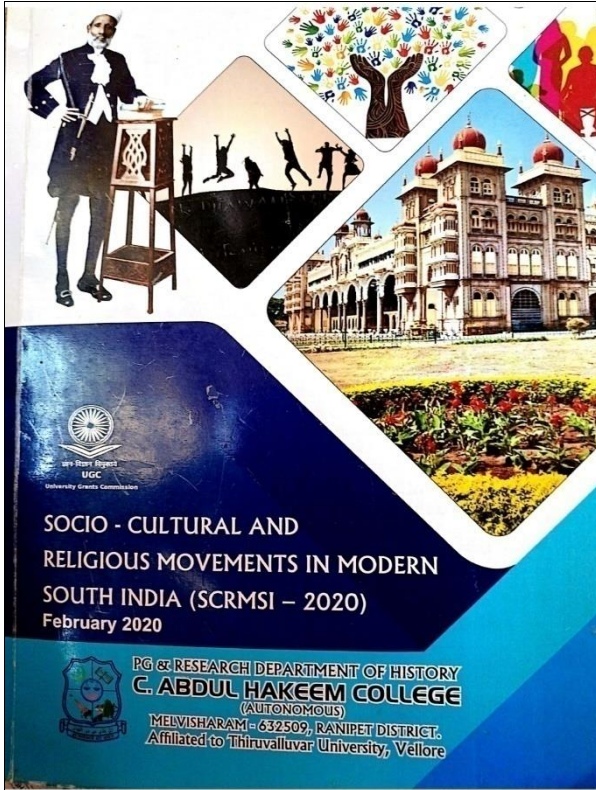
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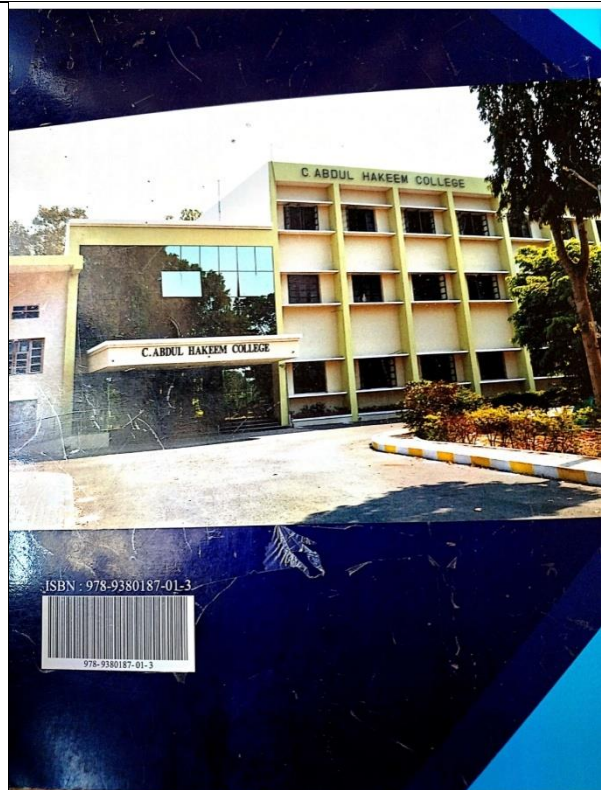
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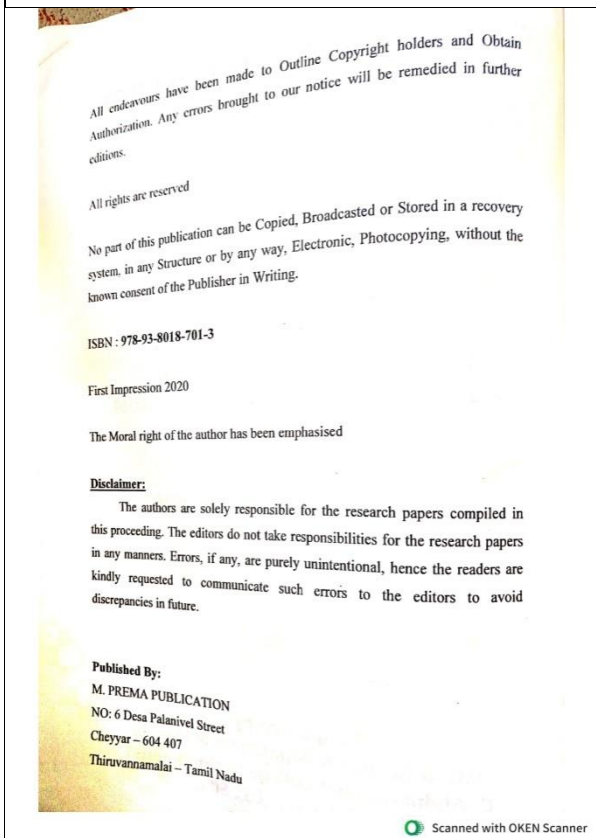
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SCRMSI – 2020 PG RESEARCH DEPARTMENT OF HISTORY, CAHCM

FRENCH MISSIONARIES AND SOCIO-CULTURAL CHANGES IN PONDICHERRY

Dr. N. Dhaivamsam,

Assistant Professor in History,
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Cuddalore.

India, Pandit Jawaharlal Nehru described
Pondicherry as the 'Window of French culture'.

Abstract
The impact of the French colonial policy in French settlements in general and Pondicherry in particular was mostly felt in the spheres of political development, administration, trade and religion. In other fields like agriculture and land settlement, industry, culture and literature the impact was only marginal. While the influence of French colonial policy helped to spread of Christianity in the region. The French colonists followed an active policy in respect of the propagation of Christian religion but it cannot be said that they ever followed a bigoted and aggressive policy of forcible mass conversion of natives into Christianity. Regarding the French presence in India a great difference from colonizers of other nationalists like the Portuguese, the Dutch and the Danes, can and ought to be noted. The French especially their missionaries identified themselves with the local population and nurtured the local customs, manners and culture. They were one with the local people in their aspirations. They learned the language of the people and made contributions to their development. These things were discussed in this paper and provide a clear cut view on the missionaries activities in Pondicherry and the social changes during French rule and after Independence.

Pondicherry is one of the coastal and most beautiful city in South India. A special feature of this territory is its non-contiguous nature; it is spread over four isolated and distant regions, namely Pondicherry, Karaikal, Mahe and Yanam in which the French established their settlement for trade and administration. This small and beautiful town on the Eastern coast of India has always been a land of learning and wisdom. Pondicherry was the capital of French settlement in India that administered with five municipalities and ten communes. Pondicherry remained as a French colony until it was liberated from French rule in 1954 A.D and merged with Indian Union. The French system of local self governance and some of the colonial buildings still exists in Pondicherry proclaiming the colonial flavour. That is why the first Prime minister of

Francois Martin the founder and architect of the French colony at Pondicherry felt the need for Christian religion at Pondicherry to buttress the French settlement and invited the French clergy of the Capuchins to cater to the spiritual needs of the Europeans and the Creoles who were born of the French and the Indians. There was already an active colony of Christians in San Thome at Madras in the early 17th Century. There was a Bishop in San Thome who had the spiritual jurisdiction over Pondicherry also. The Jesuits who were expelled from Siam settled in Pondicherry in 1689 and they were permitted by Louis XIV to propagate and establish Roman Catholic religion in all the French settlements.

The capuchin missionaries established their mission in Pondicherry since 1660 A.D. and the Jesuits arrived and started their missionary activities in 1675 A.D. While the former took care of the religious needs of the Europeans and their children, the latter, the foreign missionaries too joined the fray. The proselytize policy of the French appealed particularly to the down compressed among the native Hindus, who have thronged the Christian missionaries with the hope of achieving some social status and to take benefit of the new opportunities thrown open by the commercial activities of the French company. Thus they built beautiful church for the capuchins is one of the prize-catches of the missionaries was Tanappa Mudaliar alias Lazero de Motta. As a result of conversion, in 1715 A.D. the native Christian's population in Pondicherry numbered to two thousand and it almost tripled by January 1726 A.D. Again the support offered by the French attracted the native Christian population from other places too, to come and reside in their colony. In 1747 A.D, scarcity raged in the Pondicherry region and the Jesuits took to conversion with a vengeance and in this Monsieur and also Madame Duplex and in this Monsieur and also Madame Duplex went all out to support them As such, the proselytize policy earned the French several



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ஆவுடை அக்காள் படைப்புகள் : பெண் மைய ஆய்வு

ஜெ. சியாமளா

மொழி என்பது ஒரு கருத்துப்பரிமாற்றத்திற்கான கருவி என்னும் பொதுப் புரிதலைக் கடந்து வேறோர் தளத்தை நோக்கி நகர்ந்துள்ளது. மொழிவழி உற்பத்தி செய்யப்படும் இலக்கியம் குறித்தான பார்வைகள் இன்று மாறி வருகின்றன. மேலை இலக்கியக் கோட்பாடுகளான அமைப்பியல், பின்னை அமைப்பியல், நவீனத்துவம், பின்நவீனத்துவம், பெண்ணியம், தலித்தியம் ஆகியவை இந்தியச் சூழலில் உள்வாங்கப்பட்ட பின்னர் மொழி, கலை, இலக்கியம், சமூகப் பிரிப்புகள் குறித்தான மாற்றுப் புரிதலை நோக்கி நகர்ந்து கொண்டிருக்கிற சூழல் உருவாகியுள்ளது.

சென்ற நூற்றாண்டின் பின்பகுதியில் பெருவிசையுடன் மேலெழுந்த பெண்ணியச் சிந்தனைகள் சமூகத்தின் பரிணாம வளர்ச்சியில் பெண்ணின் பங்கு பணிகள் கவனத்தில் கொள்ளப்படுவதேயில்லை என்பதை எடுத்துக்காட்டின. அனைத்து நிலைகளிலும் அதிகாரத்தைக் கைப்பற்றும் ஆணின் செயற்பாடுகள் பெண்ணின் இருப்பை/ஆற்றல்சார் பங்குபணியினை எவ்வாறு மறைத்தன என்பதை எடுத்துக்காட்டின மேலும் இலக்கியப் பிரதிகளின் உள்ளீடுகளிலும் பெண்ணியச் சிந்தனைகள் குவிமையம் கொண்டதன் விளைவாகப் பெண்மொழி/ஆண்மொழி, பெண் மைய நோக்கு (Gyno Critic) ஆகிய பார்வைகள் கூர்மை பெற்றுள்ளன.

ஆண்களால் எழுதப்பட்ட இலக்கிய வரலாற்றில் பதிவுபெறாமல் செய்யப்பட்ட பெண் படைப்பின் வீச்சினை வெளிக்கொணர்தல்; சமூகத்தின் பண்பாட்டுக் கட்டமைப்புக் கூறுகளால் பெண் ஒடுக்கப்படும்போது அவள் படைப்பு மனம் எவ்வாறு எதிர்வினையாற்றுகிறது; அப்படைப்பில் பெண் அறிந்தோ அறியாமலோ வெளிப்படும் பெண்மொழியை மீட்டெடுத்து வெளிப்படுத்தல் ஆகிய நோக்கு நிலைகளில் பெண் எழுத்துக்களை அணுக வேண்டியுள்ளது. அவ்வகையில், இக்கட்டுரையானது இலக்கிய வரலாற்றில் அறியப்படாத ஆனால் அறியப்படவேண்டிய ஆளுமையான செங்கோட்டை ஆவுடை அக்காளின் வீச்சினைப் பெண் மைய நோக்கில் நின்று அணுகுவதற்கு முற்படுகிறது.

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பெரியாறுராணாத்தில் திருமணம்

முனைவர் ந. பாஸ்கரன்
உதவிப் பேராசிரியர், தமிழ்த்துறை
பெரியார் அரசு கலைக்கல்லூரி, கடலூர்- 01

திருமணம் என்பது ஓர் ஆணும் ஒரு பெண்ணும் இணையர்களாக இணைந்து இல்லறம் மேற்கொள்ள நடத்தப்படும் வாழ்க்கை ஒப்பந்தம் எனலாம். திருமணம் மனிதவாழ்வியல் ஒழுக்கத்தில் மிக உயரிய இடத்தில் வைக்கப்பட்டு தெய்வத்தன்மையுடையதாகக் கருதப்படுவதால் மணம் என்பதற்கு முன் திரு என்னும் அடைமொழி கொடுத்துத் திருமணம் எனச் சுட்டியுள்ளனர். தமிழரின் வாழ்வில் பண்டைய காலம் முதல் கடைப்பிடிக்கப்படுகின்ற களவு மற்றும் கற்பு வாழ்வியலை பெரியபுராணம் இலக்கியம் வழி சுட்டுகின்றது. கற்பு வாழ்க்கையின் தொடக்க விழாவாக இருக்கும் திருமணத்தைப் பெரியபுராணம் சுட்டுகிறது. இதனை இக்கட்டுரை வழிக் காண்போம்.

திருமணம் - விளக்கம்

ஓர் ஆணும் ஒரு பெண்ணும் சேர்ந்து ஒருவருக்கொருவர் கருத்தொருமித்து ஆதரவு பட்டு வாழும் வாழ்க்கையைக் கூட்டுப்பொருப்பில் நடத்துவதற்கு சமுதாயத்தால் அங்கீகரிக்கப்பட்ட வாழ்க்கையை மேற்கொள்ள செய்யப்படும் ஈக்சடங்காய் உள்ளதே திருமணம் எனலாம். சமுதாயத்தில் ஆணும் பெண்ணும் ஒரு கூரையின்கீழ் வாழ்வதற்கு இத்திருமணம் முக்கியமாக உள்ளது.

“மக்களின் நாகரிக வாழ்வுக்கு உயிர் போன்றது திருமணம்”
(திரு.வி.க.-முடியா? காதலா?...ப.18)

என்ற திரு.வி.க. வின் கூற்று இதனை தெளிவடையச்செய்கிறது. மணம் என்பதைக் கடி - மணம், மன்றல், வதுவை, வரைவு என்ற சொற்களால் கூறுகின்றனர். தொல்காப்பியம் மன்றல், கடி, வரைவு (தொல்-நூ.எ1036,1037,1081,1086) என்ற சொற்களால் திருமணத்தைச் சுட்டுகிறது.

“புனைகடி மாலை மாதர் திறந்திது” (பா.எ.2071)
... “வதுவை” என



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உதவிப் பேராசிரியர், தமிழ்த்துறை,
பெரியார்கலைக்கல்லூரி, கடலூர்-1

முன்னுரை

விவனால் ஆட்கொள்ளப்பட்ட சிவனடியார்களால் பாடப்பட்ட பனுவல் பன்னிரு திருமுறை ஆகும். பன்னிரு திருமுறைகளில் முதல் மூன்று திருமுறைகள் திருஞானசம்பந்தரால் பாடப்பட்டது. நான்கு, ஐந்து, ஆறு ஆகிய திருமுறைகள் நாவுக்கரசால் பாடப்பெற்றது. ஏழாம் திருமுறை சுந்தரரால் பாடப்பெற்றது. எட்டாம் திருமுறை மாணிக்கவாசகரால் பாடப்பட்டது. சமயக்குரவர் நால்வரும் தம் பாடல்களின் மூலம் பின்பற்றிய நெறிகளைக் காண்போம்.

சமயக் குரவர் நால்வரின் சிறப்புகள்

சைவத் திருமுறைகளைப் பாடியவர்களில் பெரிதும் போற்றத்தக்கவர்கள் சமயக்குரவர் நால்வரும் ஆவர். இவர்கள் நால்வரும் சைவத்திற்கு ஆற்றிய தொண்டு எண்ணிலடங்காதவை. சமயக் குரவர் நால்வரும் இல்லையென்றால் சைவ சமயமே இல்லை என்று கூறுமளவிற்கு அவர்களின் பங்கு போற்றுதலுக்கு உரியன என்பதனைப் பின்வரும் பாடல் நமக்குச் சான்றாகிறது.

‘சொற்கோவுந் தோணிபுரத் தோன்றலுமெஞ்’ - சுந்தரனுஞ்
சிற்கோல வாதலுர்த் தேசிகனும் - முற்கோலி
வந்திலரேல் ந்றெங்க மாமறை நூல் எங்கே
எந்தை பிரான் அஞ்செழுத்தெங்கே”

நால்வரின் பக்தி நெறிகள்

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திருஞானசம்பந்தர் தமிழுக்கும், தமிழ்நாட்டிற்கும், தமிழ் பெயாழிக்கும் சைவத்திற்கும், சிவ வழிபாட்டிற்கும் செய்த தொண்டினைக் கருதியே புராணத்தில் நான்கில் ஒரு பாகத்தினைச் சேக்கிழார் அவருக்கே ஒதுக்கிவிட்டார் போலும், அதனால்தான் ‘யிள்ளைபாதி புராணம் பாதி’ என்று கூறியுள்ளார்.

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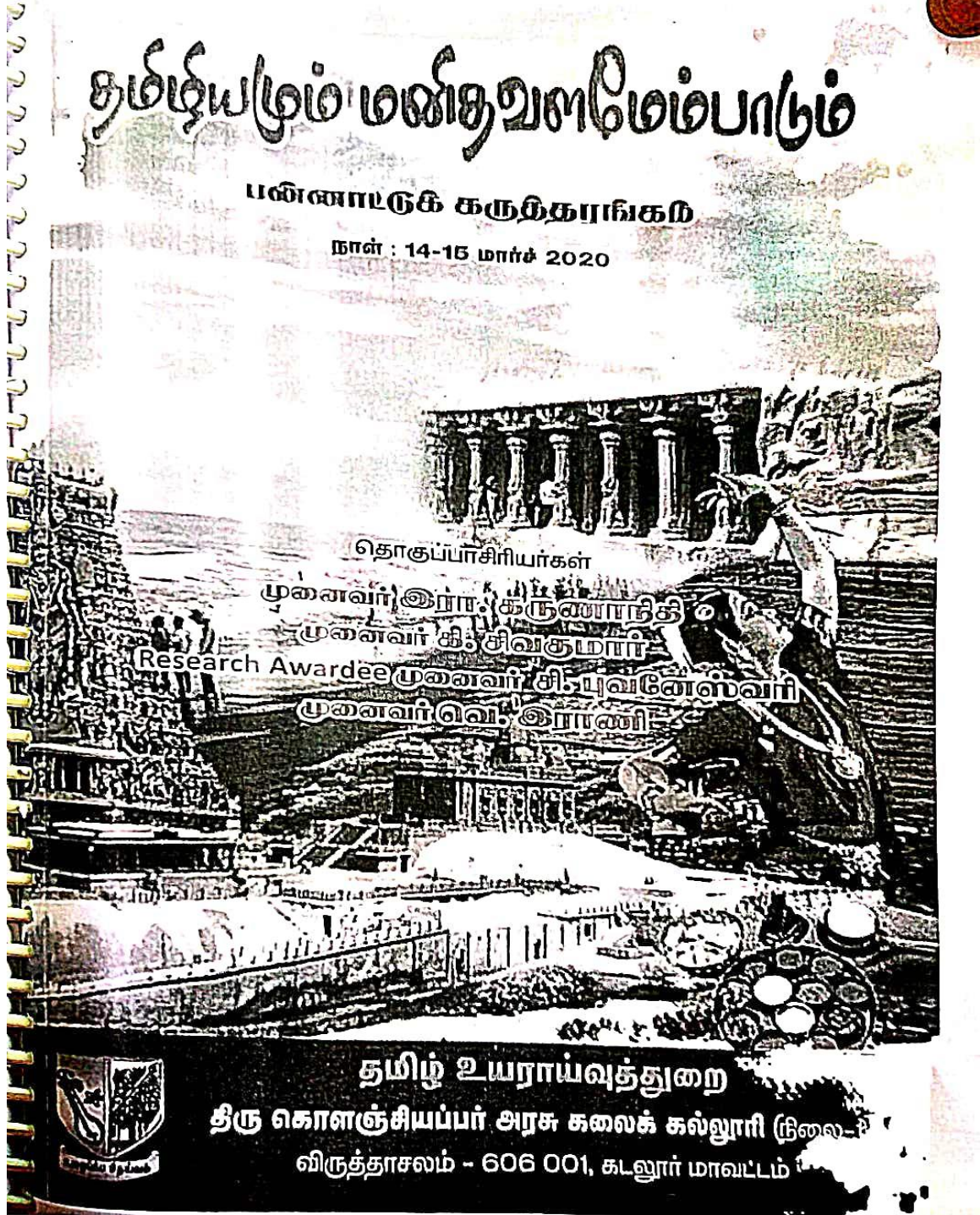
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முனைவர் ஜா. பூரணி
உதவிப் பேராசிரியர், தமிழ்த்துறை,
பெரியார் கலைக்கல்லூரி,
கடலூர்-1

முன்னுரை

இறைவன் சிந்தனைக்கு அப்பாற்பட்டவன், மொழிக்கும் செயலுக்கும் எட்டாதவன். அவனை அடையாளங்கள் காட்டி, அவனுக்கு குணங்களும் செயல்களும் இருப்பதாகக் கூறி, இறைவனுடைய முழுமுதல் தன்மையைக் குறைத்துவிட முடியாது என்றே சொல்லலாம். என்றாலும் சம்பந்தர் போன்ற ஞானிகள் தங்களது அனுபவ நிலையில் சடைமுடியும், பாம்பணியும், மேனி முழுவதும் சாம்பல் பூச்சும், மழுவும், குலமும் கையில் ஏந்தியதோடு இறைவன் விளங்குவதை உணர்ந்து உருகுவது பொய்யாகாது. திருஞானசம்பந்தர் தமிழுக்கும், தமிழ்நாட்டிற்கும், சைவத்திற்கும் செய்த தொண்டினைக் கருதியே புராணத்தில் நான்கில் ஒரு பாகத்தினைச் சேக்கிழார் அவருக்கு ஒதுக்கிவிட்டார். அதனால் தான் “பிள்ளைபாதி புராணம் பாதி” என்று கூறியுள்ளார். மூன்று வயதிலிருந்தே சிவனின் திருவிளையாடல்களைப் பாடத் தொடங்கிய திருஞானசம்பந்தர் முதல் மூன்று திருமுறைகளைப் பாடியவர். இவர் பாடிய தம் பாடல்களின் மூலம் பல கருத்துக்களைச் சமுதாயத்திற்குப் பக்தி சுவையோடு கூடிய நெறிமுறைகளாகக் கூறியிருக்கிறார். அதில் பாடல் நெறி, ஆடல்நெறி, வேடநெறி என்ற முறையில் பிரித்து ஆராய்வதே இக்கட்டுரையின் நோக்கமாகும்.

திருஞானசம்பந்தரின் வாழ்க்கை

சீர்காழியில் அந்தணர் குலத்தில் சிவபாத இருதயர்க்கும் பகவதி அம்மையார்க்கும் மகனாகத் தோன்றினார். மூன்று வயதில் உமையம்மையாரின் ஞானப்பால் உண்டு இறைவன் மீது ‘தோடுடைய செவியன்’ என்று தொடங்கும் பாடலைப் பாடினார். அன்று முதல் பல்வேறு சிவத் தலங்களுக்குச் சென்று அங்கு எழுந்தருளியிருக்கும் சிவ பெருமான் மீது இசையுடன் கூடிய பாடல்களைப் பாடினார்.

“நாளும் இன்னிசையால் தமிழ் பரப்பும் ஞானசம்பந்தன்” என்று கந்தரும், “திராவிட சிசு” என்று ஆதி சங்கரரும் கூறியிருப்பது குறிப்பிடத்தக்கது.





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பன்னாட்டுக் கருத்தரங்கம்

நாள் : 14-15 மார்ச் 2020

தொகுப்பாசிரியர்கள்
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முனைவர் சி. சிவகுமார்
Research Awardee முனைவர் சி. பி. சுவேஸ்வரி
முனைவர் வெ. இராணி

தமிழ் உயராய்வுத்துறை
திரு கௌஞ்சியப்பர் அரசு கலைக் கல்லூரி (நிலை-1)
விருத்தாசலம் - 606 001, கடலூர் மாவட்டம்



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16. ஞானையார் புறப்பாடல்களில் மனிதவள மேம்பாடு முனைவர் ர. ஜெனோவா
17. பெரியபுராணத்தில் விருந்தோம்பல் முனைவர் கா. கருப்புசாமி
18. பாரதிதாசன் பார்வையில் புறநானூறும் மனிதநேயமும் மு. சதீஷ்
19. புறநானூற்று முதுமொழிக்காஞ்சித் துறைப் பாடல்களில் மனிதவள மேம்பாடு முனைவர் இரா. குணசேகரன்
20. அகநானூறு உரைக்கும் தலைவன் தலைவியின் பண்புநலன்கள் முனைவர். கி. தயாளன்
21. மனிதவள மேம்பாட்டில் அ.றிணை உயிர்கள் முனைவர் வீ. ராம்மேரி திலகவதி
22. தமிழ் இலக்கியங்களில் வேளாண்மைச் சிந்தனைகள் முனைவர் க. பழனிவேல்
23. தமிழ் இலக்கியங்களில் இசையும் மனித மேம்பாடும் முனைவர் ஜெ. அம்சவள்ளி
24. குற்றாலக்குறவஞ்சி : சமூகத்தின் தேவையும் மனிதநேய பண்புகளும் முனைவர் மு. சண்முகம்
25. பாட்டாளி மக்களின் மேன்மையைப் பாடிய உலக வானம்பாடிகள் முனைவர் மு. அருணாசலம்
26. கலித்தொகை காட்டும் பரத்தையர் வாழ்க்கை முனைவர் ஏ.வீரப்பன்
27. குறுந்தொகையில் பெண்ணியம் முனைவர் வ. கணபதிராமன்
28. இறையன்பு படைப்புகளில் தத்துவச் சிந்தனைகள் முனைவர் வீ. பன்னீர்செல்வம்
29. கலித்தொகையில் விருந்தோம்பல் முனைவர் கி. கலிகா



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தமிழியல்புறம் மலிதலையெய்யாடு

கலித்தொகையில் விருந்தோம்பல்

முனைவர் கி. கவிதா
உதவிப்பேராசிரியர், தமிழ்த்துறை
பெரியார் அரசு கலைக்கல்லூரி
கடலூர் 1

பண்டையக்காலத் தமிழரின் வாழ்வியல் மிகவும் பண்பட்டதாக இருந்தது. அவர்கள் தாம் மட்டும் உண்ணாமல், பகுத்துண்டு வாழும் பண்பில் உயர்ந்தவர்களாக இருந்தார்கள். விருந்தோம்புவதில் விரும்பத்தக்கவர்களாக இருந்தார்கள்.

பகுத்துண்டு பல்லுயிர் ஓம்புதல் நூலோர் தொகுத்தவற்றுள் எல்லாம் தலை. (குறள்:322)

என்ற குறளுக்கு இணங்க பகுத்துண்டு வாழ்வதே தலையாய அறம் என்று போற்றியும் விருந்தோம்பும் பண்பை கடைபிடித்துப் வாழ்ந்தனர். கலித்தொகையில் இவ்விருந்தோம்பல் பண்பைக் காண்பதே இக்கட்டுரையின் நோக்கமாகும்.

இல்லறத்தின் நல்லறம்

“அறன் எனப்பட்டதே இல்வாழ்கை” என்கிறார் வள்ளுவர்.

“செல்விருந்து ஓம்பி வருவிருந்து பார்த்திருப்பான் நல்விருந்து வானத் தவர்க்கு” (குறள்:86)

என்ற குறளுக்கிணங்க வருவிருந்தோம்பித் தன் மனைவி விரும்புமாறு அவர்களுடன் கூடி இருத்தலே வாழ்க்கை என்கிறது கலித்தொகை.

“மன்னவன் புறந்தர வருவிருந்து ஓம்பி தன்நகர் விழையக் கூடின,

இன்உறல் வியன் மார்ப! அதுமனும் பொருளே”

(நற்றிணை.பா.142)

என்ற வரிகளால் அறியமுடிகின்றது. இதன் மூலம் தலையாய அறம் விருந்தோம்பலே என்பதை உணர முடிகிறது.

விருந்தோம்பும் முறை

விருந்தோம்பலில் உபசரிக்கும் பாங்கே முதன்மையானது. முகம் மலர்ந்து உபசரிக்கும் போது, விருந்துப் பொருள் உப்பில்லாத கூழாக இருந்தாலும் சிறப்பாக இருக்கும். புதிதாக ஈன்று பசு, தன் கன்றினைப் பிரிவுடன் நோக்குவதைப் போல விருந்தினரை நோக்கி விருப்பமுடன் வரவேற்க வேண்டும். இதனை,

“மோப்பக் குழையும் அனிச்சம் முகந்திரிந்து நோக்கக் குழையும் விருந்து” (குறள்:90)



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தமிழ் உதவிப் பேராசிரியர்
பெரியார் அரசு கலைக்கல்லூரி, கடலூர் - 1

மக்களின் நல்வாழ்விிற்குப் பாடுபட்ட எண்ணற்ற ஞானிகளில் ஒருவரான தாயுமானவர் சித்தராக மட்டும் அன்றிக் கவிஞராகவும் விளங்கியவர். இவர் பிற்காலத்தைச் சேர்ந்தவராயினும் இவரது வரலாற்றினை அறிய உதவும் மூலங்கள் மிகக்குறைவாகவே கிடைக்கின்றன. தாயுமானவரின் முக்கியச் சீடரான அருளையர் இயற்றிய அகவல் மற்றும் தாயுமானவரின் பாடல்களைத் தொகுத்து உரை எழுதிய அறிஞர்கள் தங்களது நூல் முன்னுரையில் கூறிய செய்திகள் ஆகிய சிலவே நமக்குக் கிடைத்துள்ளன.

மனம் இதமானவன் மனிதன். மனம் என்றால் என்ன? என்ற ஒரு கேள்வியை எழுப்பிக்கொண்டு பார்த்தோமேயானால், அதனைத் தொடர்ந்து மனிதன் என்றால் என்ன? என்றும் கேட்க வேண்டும். அவ்வாறு கேட்போமேயானால், வருகின்ற விடை மனிதன் என்றால் மனம் தான், மனம் என்றால் மனிதன் தான் என்பதாகும்.

புறத்தே உள்ள அனைத்தையும் அறிவது மனம். அனைத்தையும் அறிகிற மனம் தன்னை அறியாது போனால் அறிவு முழுமை பெறாது. மனம் தன்னையும் அறியும் போதுதான் முழுமை பெறுகிறது. இந்நிலையில் முழுமை பெற்றவர்தான் தாயுமானவர். நெஞ்சுகமே கோயில் நினைவே சுகந்தம் என்பது அவர்தம் வாக்கு. தாயுமானவர் பாடல்களின் வழி எவ்வெவ் குணங்கள் எல்லாம் மனிதனுக்கு இருக்கக் கூடாது என்பதை இக்கட்டுரையின் மூலம் காண்போம்.

பற்று

“பற்று வெகு விதமாகி, ஒன்றை விட்டு ஒன்றனைப்
பற்றி உழல் கிருமிபோல்”

(ச.மெய்யப்பன், தாயுமானவர் பாடல் எண்.10)

பற்று வெகு விதமாகி என்பதால் கிருமிபோல் பற்று பலவாறாகி
ஒன்றைவிட்டு ஒன்றனைப் பற்றி உழல்கின்றது. மனிதனுடைய



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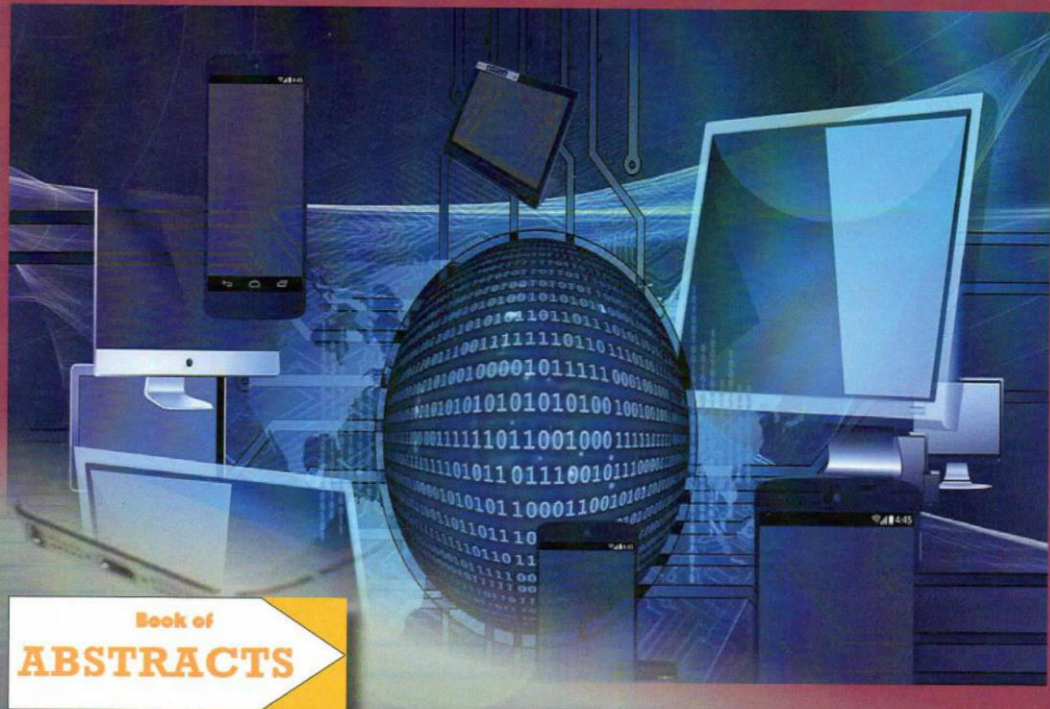
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**DATA MINING APPROACHES TO PREDICT THE FACTORS
THAT INCREASING THE AGRICULTURE GROWTH USING
STOCHASTIC MODEL**

P. Rajesh¹, M. Karthikeyan² and R. Arulpavai³

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ABSTRACT

In the recent times, there has been an increasing demand for efficient strategies in the field of data assimilation about agriculture development. Data mining is equipment that utilizes the prediction efficiently by statistical model sensing concept. This paper proposes an efficient assessment factor of agriculture development using different data like rainfall, temperature, fertilizer and groundwater by adopting stochastic modeling and data mining approaches. Firstly, the novel model and algorithm is proposed to predict the growth of agriculture using stochastic model in data mining approach. Experimental results are done and the various expected estimation the sternness of the approach.

Keyword: Data Mining, Agriculture, Rainfall, Temperature, Groundwater, Fertilizer and stochastic model.

**COMBINED DYNAMIC HIERARCHICAL REPLICATION AND
REPLICA CONSISTENCY MODEL FOR DATA GRID ENVIRONMENT**

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ABSTRACT

Data replication is used for reducing the data access latency and managing effective processing of huge data in the distributed environment. This paper presents a combined dynamic hierarchical replication and replica consistency model for the data grid environment. The location of the best file replica is chosen based on the data transfer time, storage access latency, replica requests in the queue and distance between the nodes in the data grid environment. The replica consistency model requires minimum execution time for the reading and writing operations that ensures high data availability. The main contributions of the proposed approach are optimal allocation of the file replica and maintenance of the replica consistency. The experimental analysis shows that the combined approach requires minimum effective network usage and storage usage than the existing replication techniques.

Keywords : Data Replication, datagrid environment, Replication techniques



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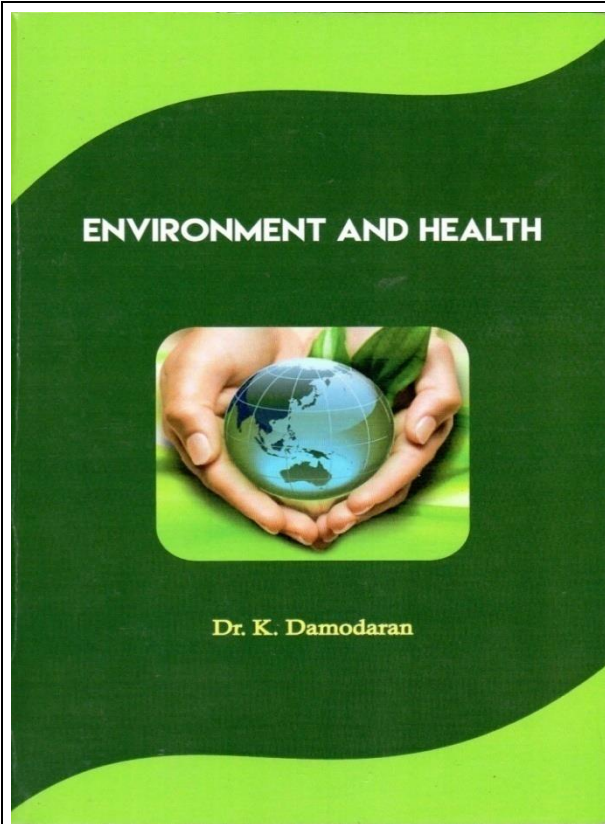
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INNOVATIVE GREEN ICT FOR ENVIRONMENTAL SUSTAINABILITY

S. Dhanavel
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Introduction

For most people, Green ICT is about reducing the impact of ICT on the environment. It is about reducing the energy use of computers, servers and data centers. You might even consider the whole life cycle of ICT equipment and look at the rare material use or think about e-waste and recycling. However, ICT is not only part of the problem of our environmental impact, it is also part of the solution.

From the perspective of an organization or from an ICT department, it makes sense to think about Green ICT as the direct impact of ICT on the environment. This has also been fed by a myriad of publications on how to apply best practices such as total cost of ownership and data center design and management; basically linking Green ICT to cost efficiency, making it good for your wallet as well as the environment. This view was so widespread that Green ICT was declared dead because every sensible organization had already incorporated its principles in their daily practices. This was a very narrow perspective of course, because only the cost efficient practices were considered and more often than not, this was reasoned from the ICT department instead of the entire organization or beyond.

Green ICT is about considering all impacts of ICT on the environment, direct or indirect, positive or negative. We have to minimize the negative impacts and maximize the positive impacts. ICT can have a positive influence and reduce our environmental footprint: it can be used as an enabler for new environmental-friendly technologies, it can be used to make other processes more efficient and thus reduce their impacts, it can be used to dematerialize atoms and avoid the use of (rare) materials. It all depends on how we use ICT, in the end it remains a means to an end.

So, what is beyond the direct impacts of ICT? How can ICT be part of the solution? There are indirect and systemic impacts to consider. Both can become part of the problem as well as the solution.



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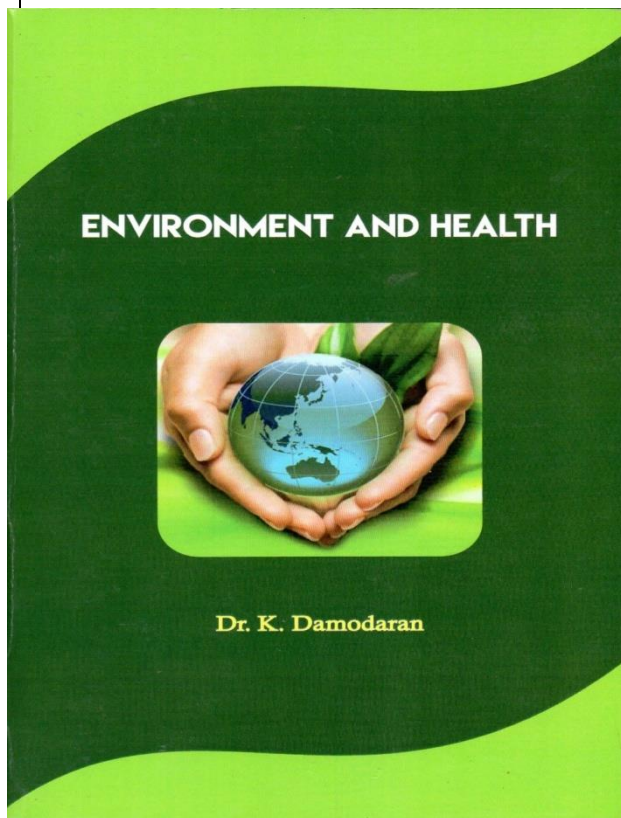
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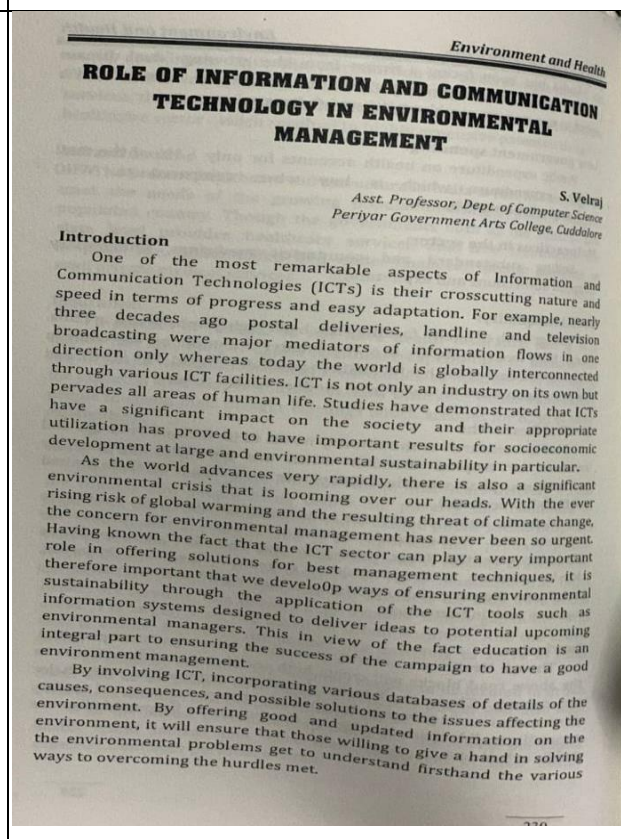


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Environment and Health

HEALTH INSURANCE FOR HEALTHY LIFE

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Living a healthy productive life is a goal for most people. But achieving good health is a daily challenge as a number of factors like food habits, lifestyle changes, life stages and various environmental factors have an impact on the same. Good health helps to solve any kind of problems in our day-to-day life as it is rightly said healthy mind resides in healthy body.

Health can be classified into three categories viz, physical health, mental health and spiritual health. To lead the healthy life in world all these three healths are equally important.

Physical health relates to the health of all parts of the body

Mental health means state of mind, thought process, happiness and peace of mind and Spiritual health refers keeping mind in high spirits with control over the senses.

Caring the health is most important for the healthy life. The importance of health is stressed in proverb with the help two words "HEALTH IS WEALTH". This is a by word of enormous significance.

Pollution and Health Damage:

Good health only guides a person how to use all the available resources in a fruitful way. Such a valuable health today affected by increasing pollution. The way used to grow and process fruits and vegetables also affected by pollutions. Pollution is the greatest problem faced by the world every passing year and causing grave and irreparable damage to the earth. The pollution may be of five basic types namely, air, water, soil, noise and light. All the type of pollution kills many organisms including humans. Picture 1 helps

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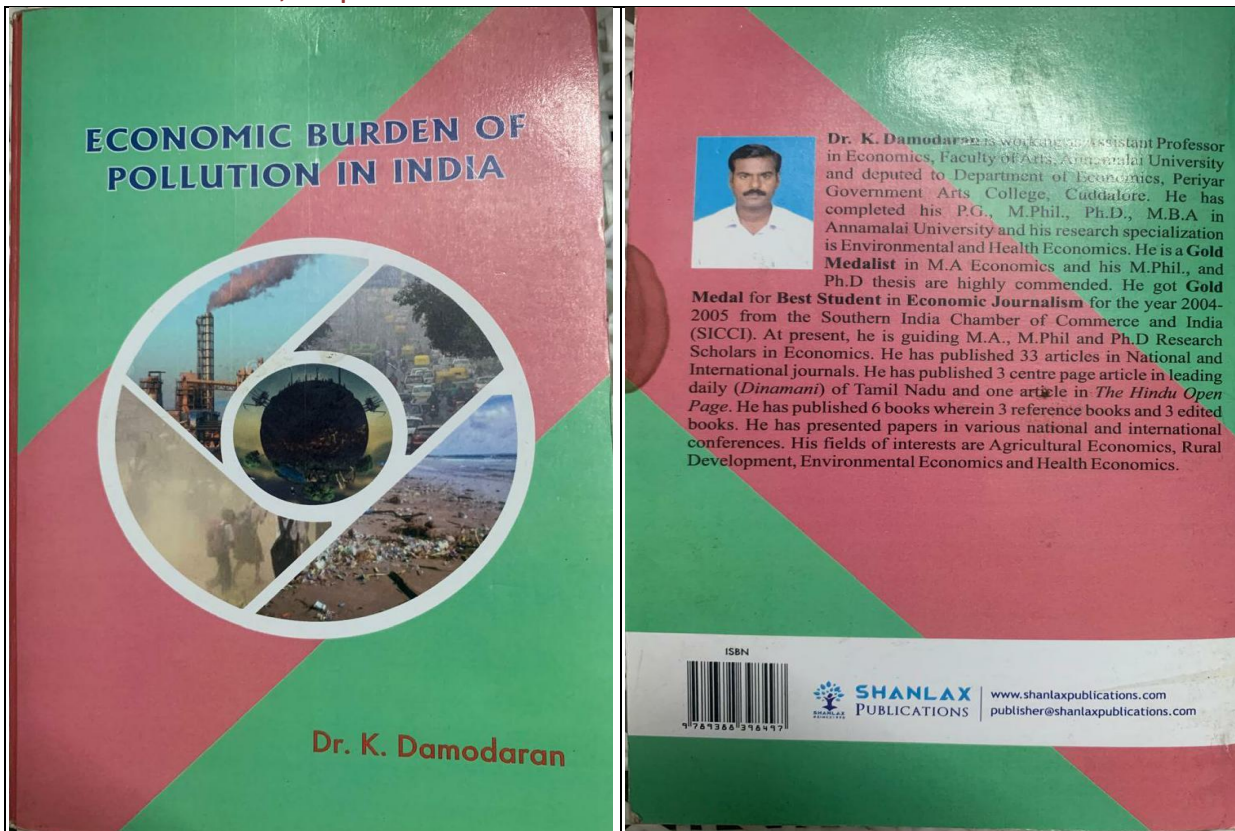
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Dr. K. Damodaran is working as Assistant Professor in Economics, Faculty of Arts, Annamalai University and deputed to Department of Economics, Periyar Government Arts College, Cuddalore. He has completed his P.G., M.Phil., Ph.D., M.B.A in Annamalai University and his research specialization is Environmental and Health Economics. He is a **Gold Medalist** in M.A Economics and his M.Phil., and Ph.D thesis are highly commended. He got **Gold Medal for Best Student in Economic Journalism** for the year 2004-2005 from the Southern India Chamber of Commerce and India (SICCI). At present, he is guiding M.A., M.Phil and Ph.D Research Scholars in Economics. He has published 33 articles in National and International journals. He has published 3 centre page article in leading daily (*Dinamani*) of Tamil Nadu and one article in *The Hindu Open Page*. He has published 6 books wherein 3 reference books and 3 edited books. He has presented papers in various national and international conferences. His fields of interests are Agricultural Economics, Rural Development, Environmental Economics and Health Economics.



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ECONOMIC BURDEN OF POLLUTION IN INDIA

AWARENESS OF STUDENT-TEACHERS ON SOLID WASTE MANAGEMENT

V. Abiramasundari
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Introduction

The role of Environment is recognized in the theories of both Classical and Neo-classical Economics. The economy functions within, and is dependent upon goods and services provided by natural ecosystems. With the existence of environmental problems, many economists notify that, if the environmental sustainability coexists for economic sustainability, then the overall system permits equilibrium between the environment and the economy. (1) Economic policy makers began to incorporate the functions of the natural environment as a natural capital. (2) Economic models influence environmental resource management, in which management policies reflect beliefs about natural capital scarcity. Colby has identified trends in the development of economic paradigms, particularly a shift towards more ecological economics since 1990. (3) One of the salient issues in preserving Environment is the Management of Solid Wastes.

Solid Waste Management

Solid Waste (SW) refers to the range of garbage arising from animal and human activities that are discarded as unwanted and useless. It is generated from industrial, residential and commercial activities in a given area. The whole landfills are typically classified as Sanitary, Municipal, Construction and Demolition of Industrial Waste sites.

Solid Waste Management (SMW) is reducing and eliminating adverse impacts of waste materials on human health and environment to support economic development and superior quality of life. It is the discipline associated with control of Solid Waste materials of Generation, Storage and Processing, Collection, Transfer and Transport, Processing and Recovery and Disposing in a way that best addresses the range of Public Health, Conservation, Economics, Aesthetic, Engineering and Other Environmental Considerations.

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ECONOMIC BURDEN OF POLLUTION IN INDIA

A STUDY ON LAND POLLUTION AND ITS IMPACT: OVERVIEW

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Introduction

Pollution prevention reduces both financial costs (waste management and clean up) and environmental costs (health problems and environmental damage). Pollution prevention protects the environment by conserving and protecting natural resources while strengthening economic growth. Land pollution is a serious problem that impacts humans, animals, and the earth. Without taking measures now to reduce pollution levels, permanent changes to the land can occur. The adverse changes to the environment due to land pollution are subtle, but the problem is much bigger than it appears. Even though most people have a general understanding of pollution, they may not realize the significance of land pollution. Here is a look at land pollution, its causes, its impact, and solutions to the problem. The basic definition of land pollution is the destruction and contamination of the land through the direct and indirect actions of humans. The pollution results in changes to the land, such as soil erosion. Some of the changes are irreversible, while others are not. The effects of land pollution do not necessarily appear overnight. It is the result of long-term destruction from human activities. For instance, the damage from chemicals from an oil spill can take months or even years to be fully realized.

Causes of Land Pollution

There are several known causes of land pollution. Of those, there are six factors that contribute more than others.

Deforestation and soil erosion

When forests are cleared for development and to meet the demand for wood supply, the soil is loosened in the process. Without the protection of the trees, the land becomes barren over time and starts to erode.



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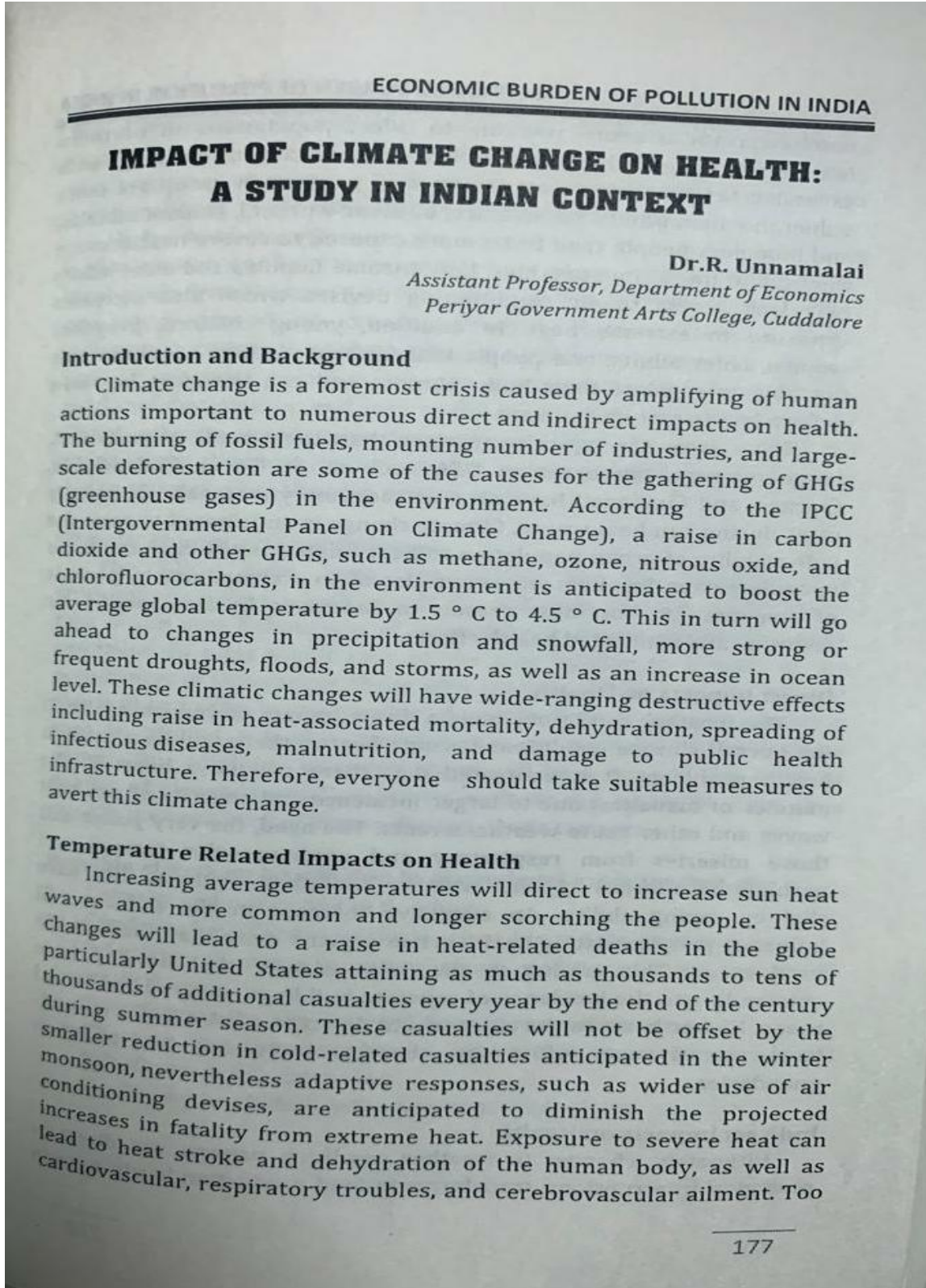
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ECONOMIC BURDEN OF POLLUTION IN INDIA

AIR POLLUTION AND ENVIRONMENT: CAUSES AND MEASURES

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Introduction:

Air pollution refers to the condition in which the existence of toxic substance in the atmosphere, generally by various humans activities and natural phenomena. According to the World Health Organization, outdoor air pollution is classified into four main categories: particulate matter, ozone, nitrogen dioxide, and sulphur dioxide.

Moreover air pollution is divided into primary and secondary pollutants. Primary pollutants are released directly into atmosphere from a source whereas secondary pollutant occurs as a result of complex chemical reaction by mixing both chemicals.

I. Air Pollution

Air pollution may be described as contamination of the atmosphere by gaseous, liquid, or solid wastes or by-products that can endanger human health and both plants and animals. Some of the pollution is also caused by natural disasters like volcanoes, forest fire and hot springs.

The destructive and unnecessary substances which contaminate the air are called air pollutants. For example dust and smoke are air pollutant. But the various air pollutants are added to the atmosphere due to various human activities like burning of fossil fuels, industrial secretion and etc.

Causes of Air Pollution

- Burning of Fossil Fuels
- Automobile Exhaust
- Industrial Emission and
- Various Human Activities.



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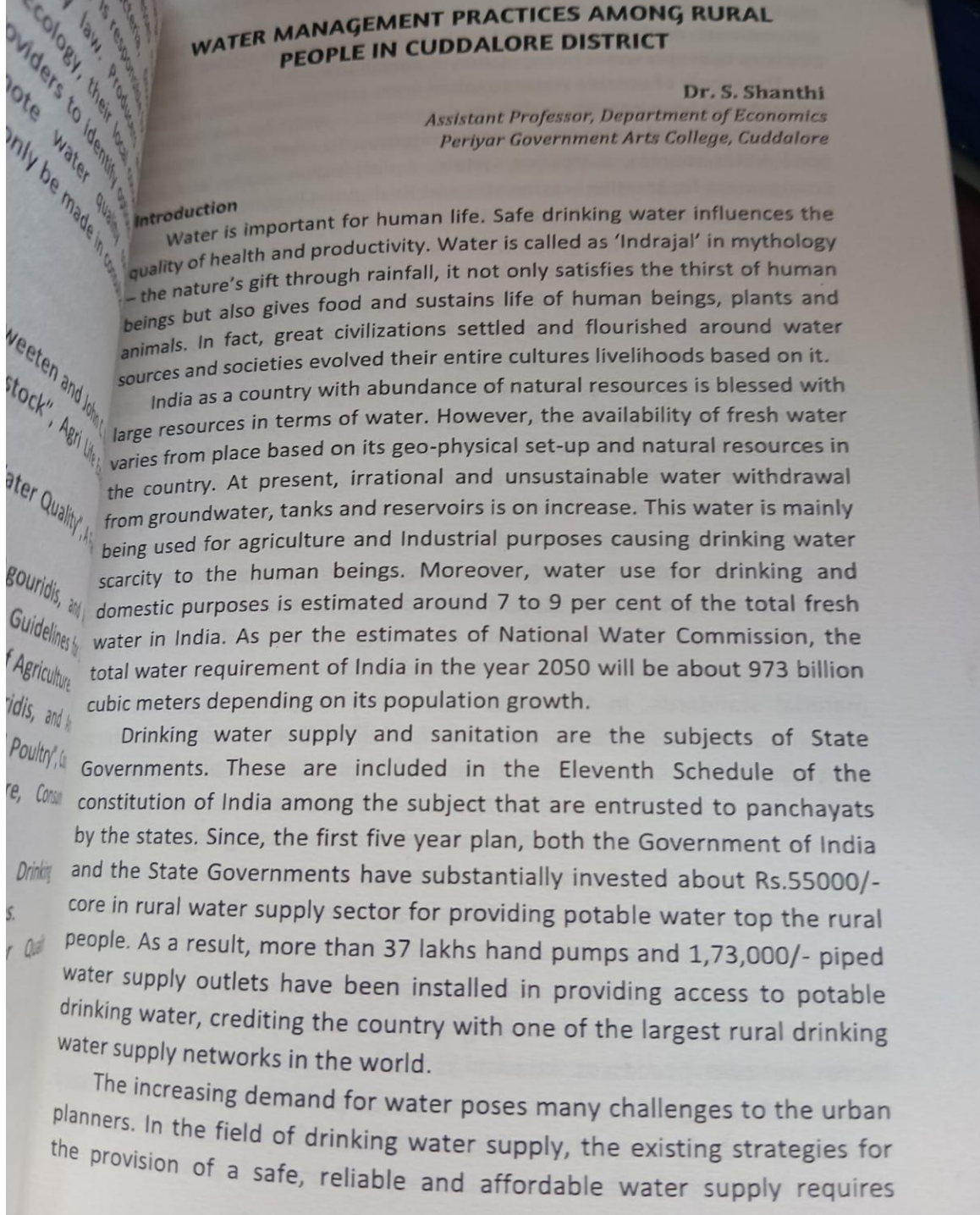
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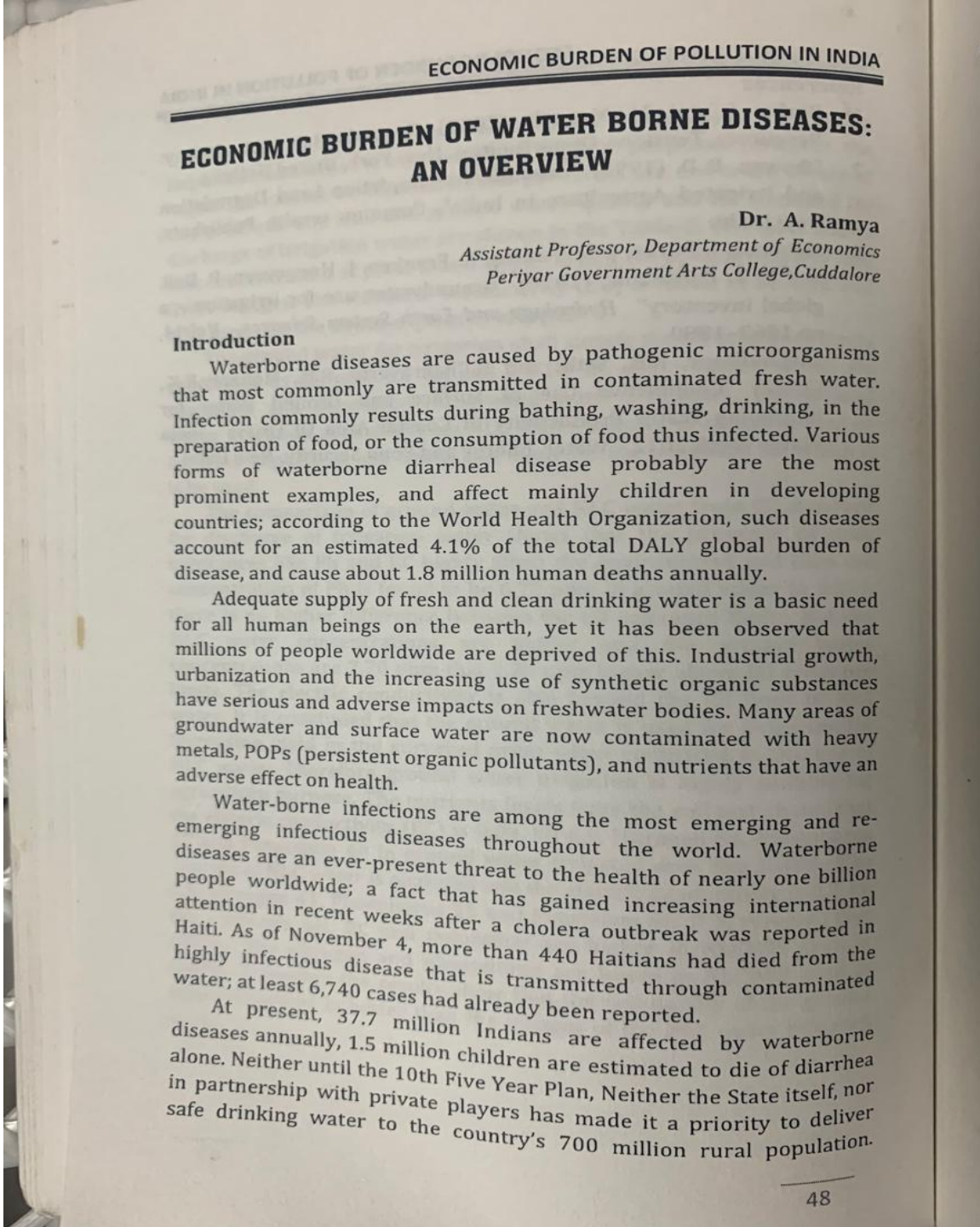
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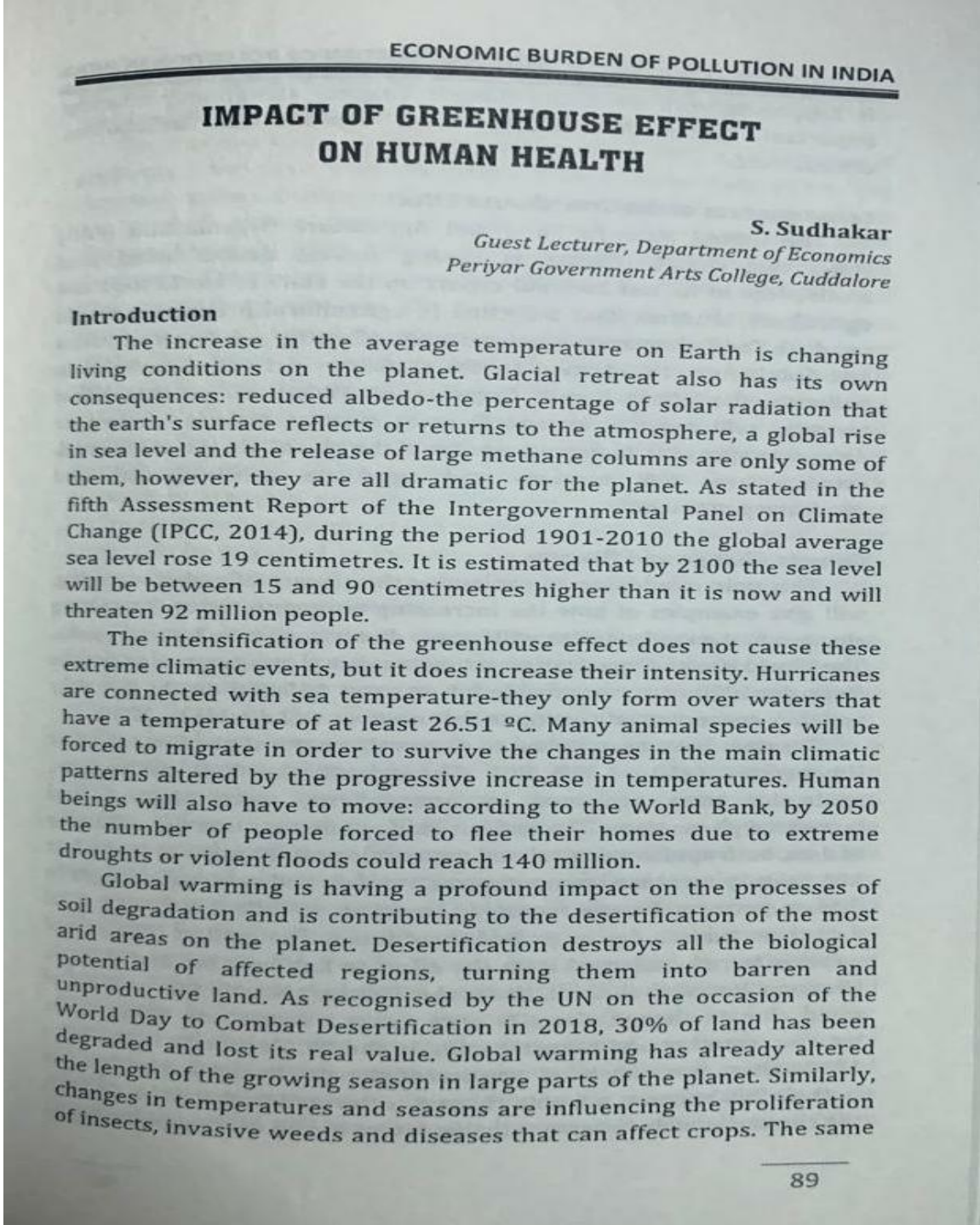
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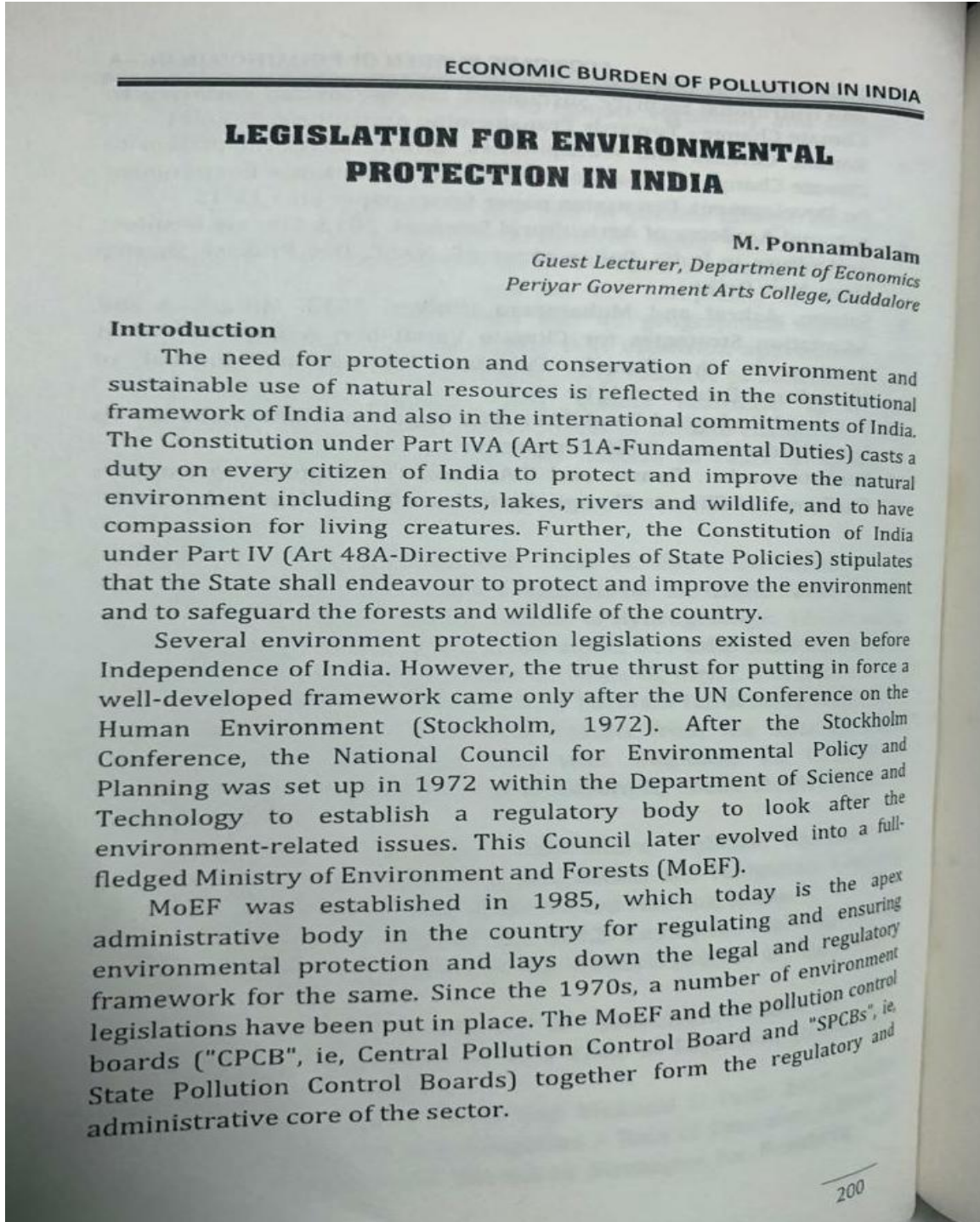
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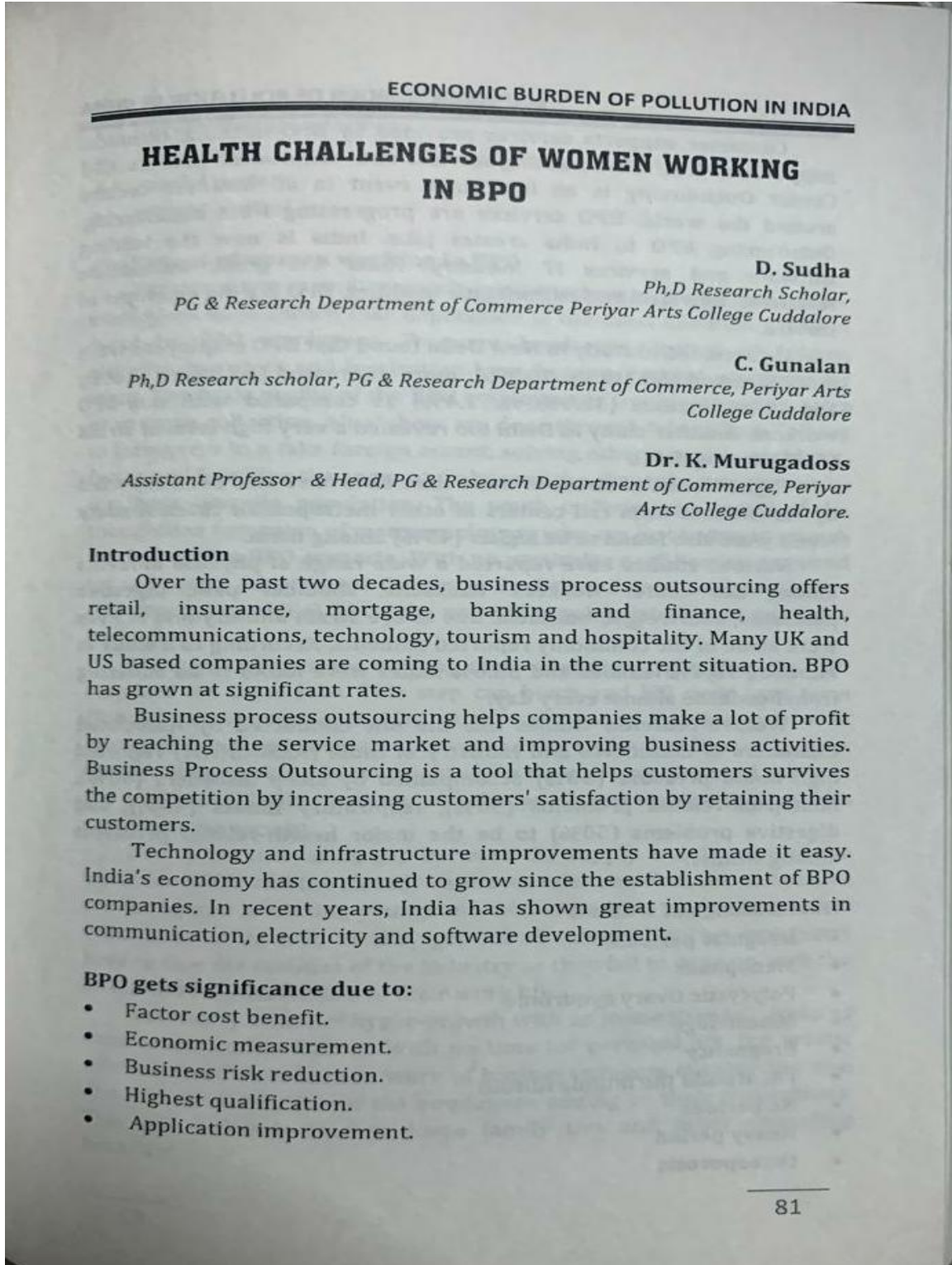
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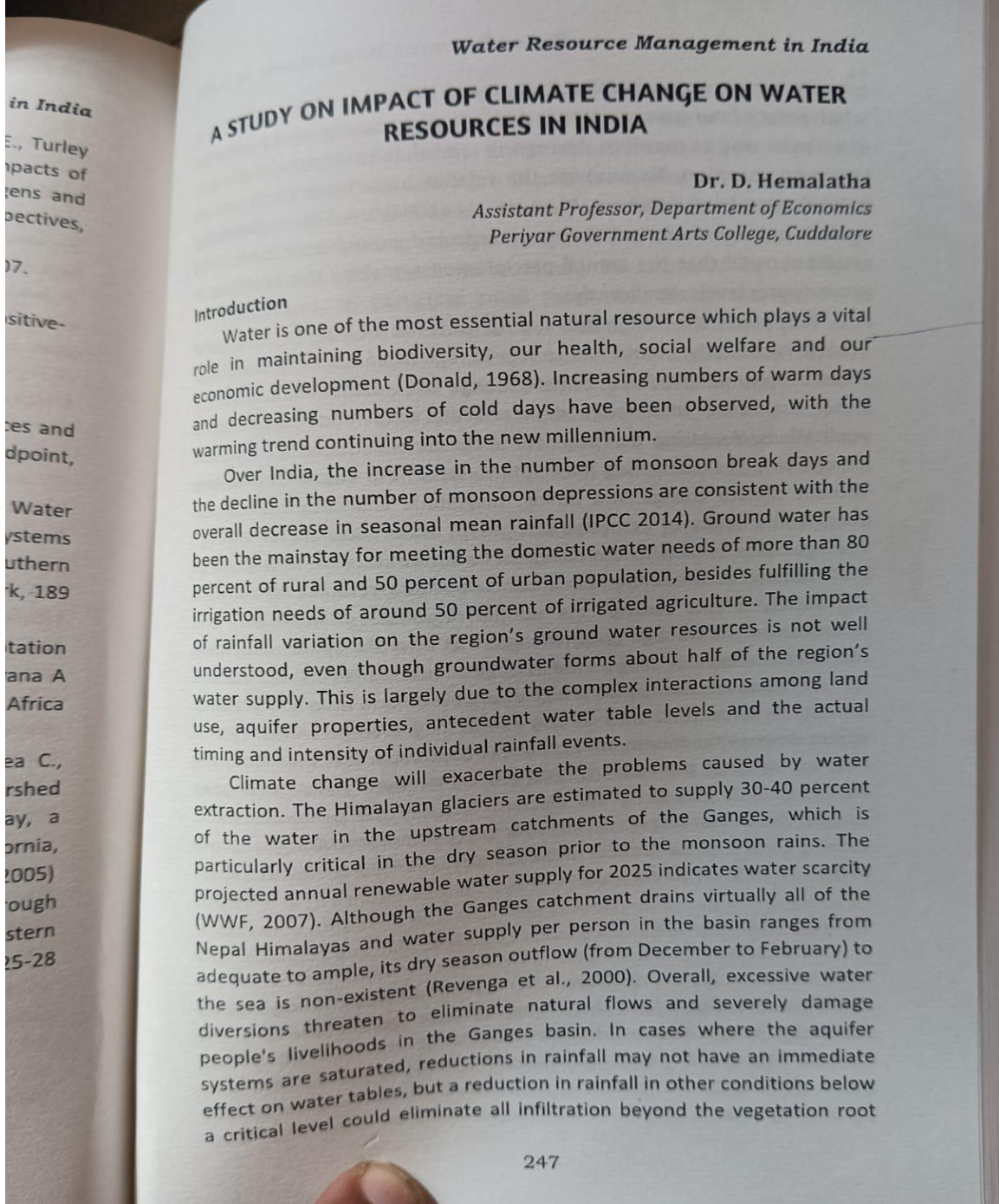
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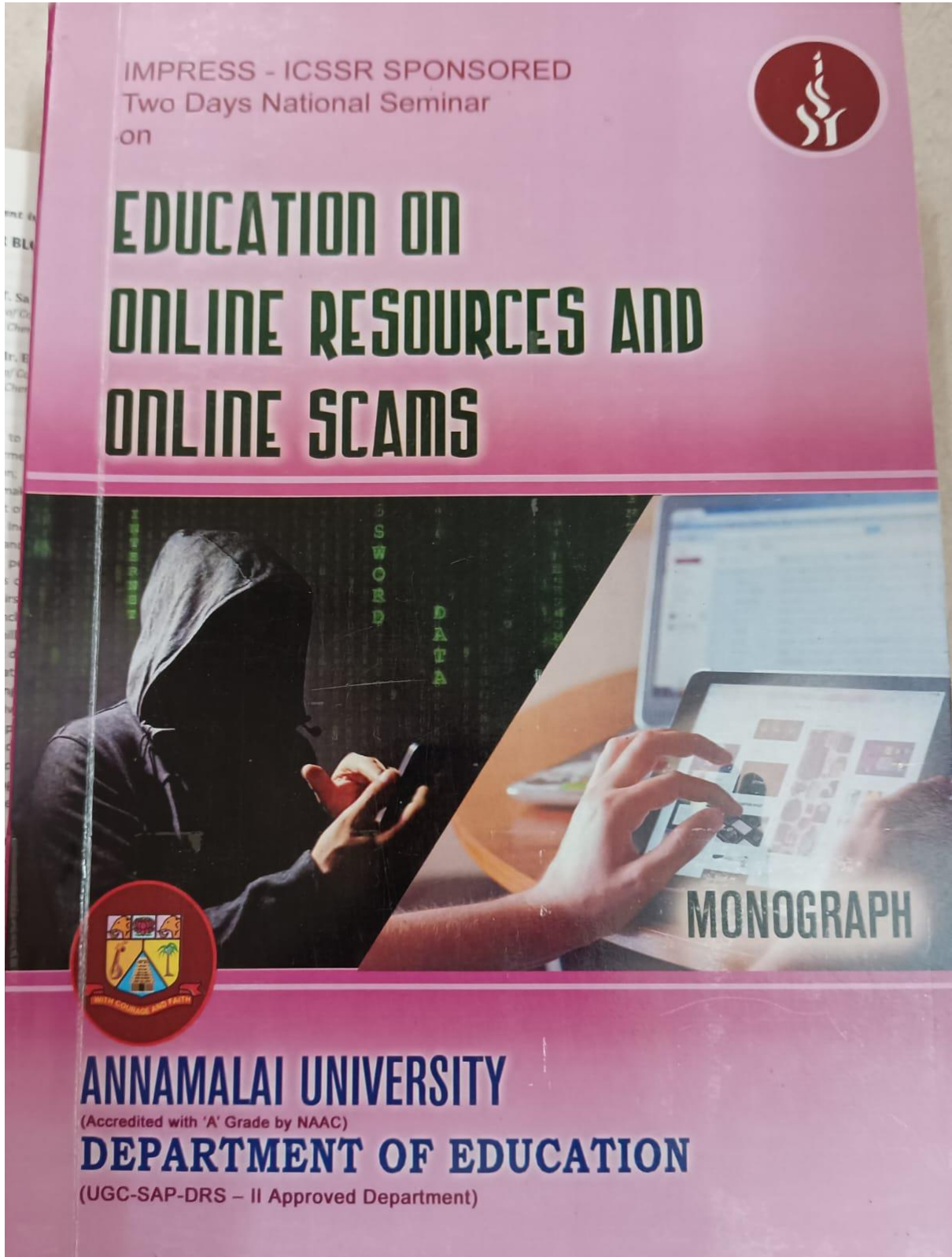
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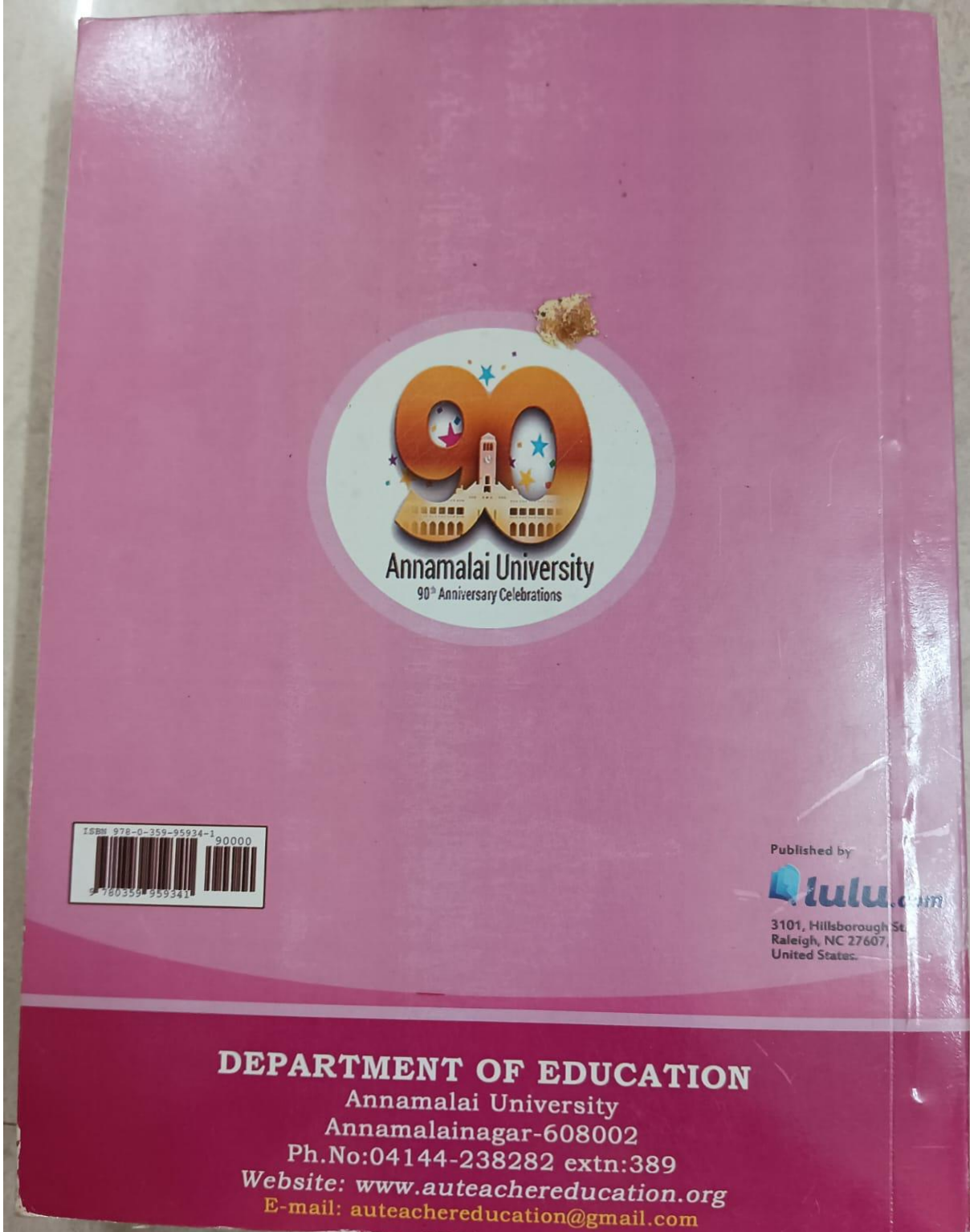
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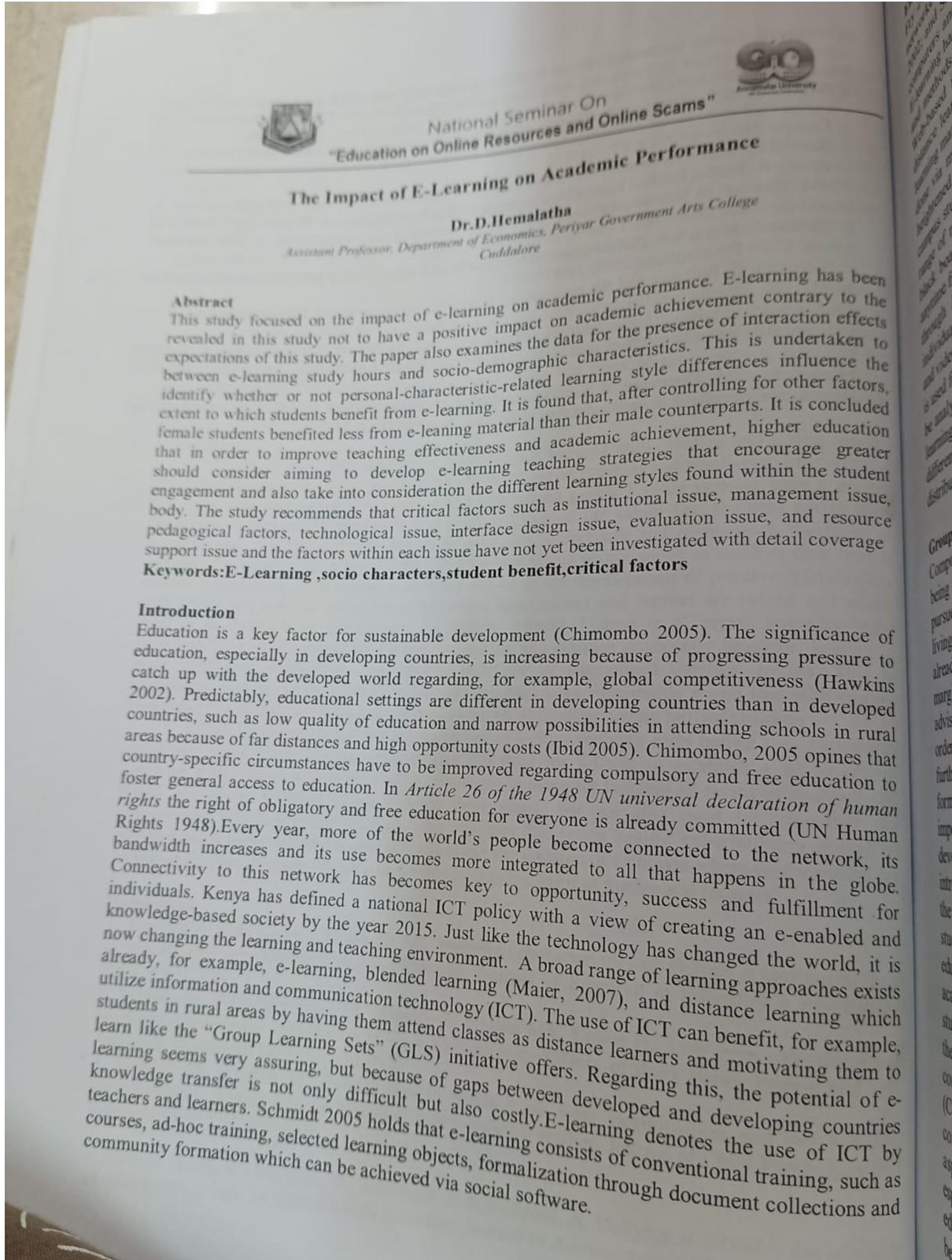
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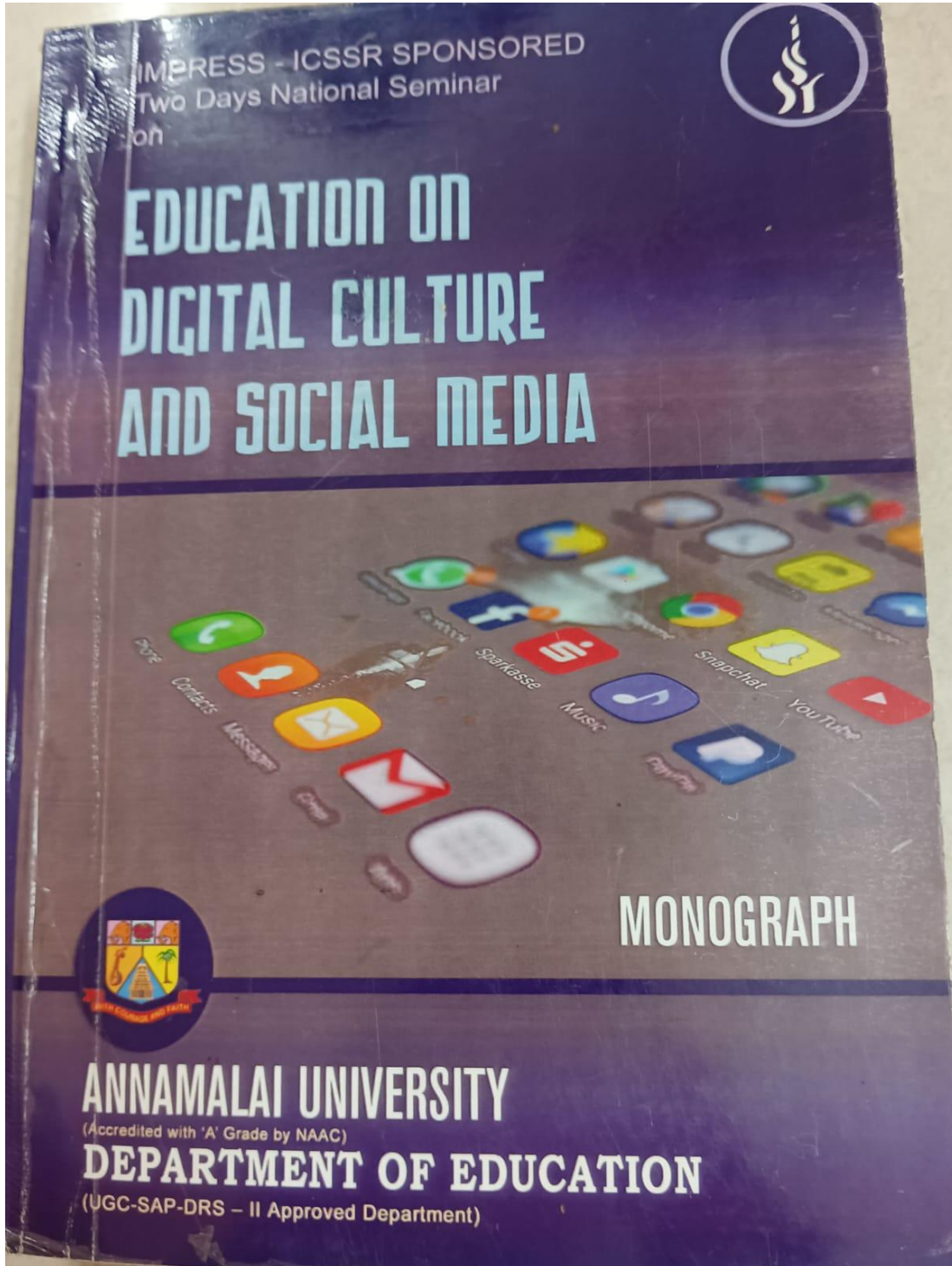
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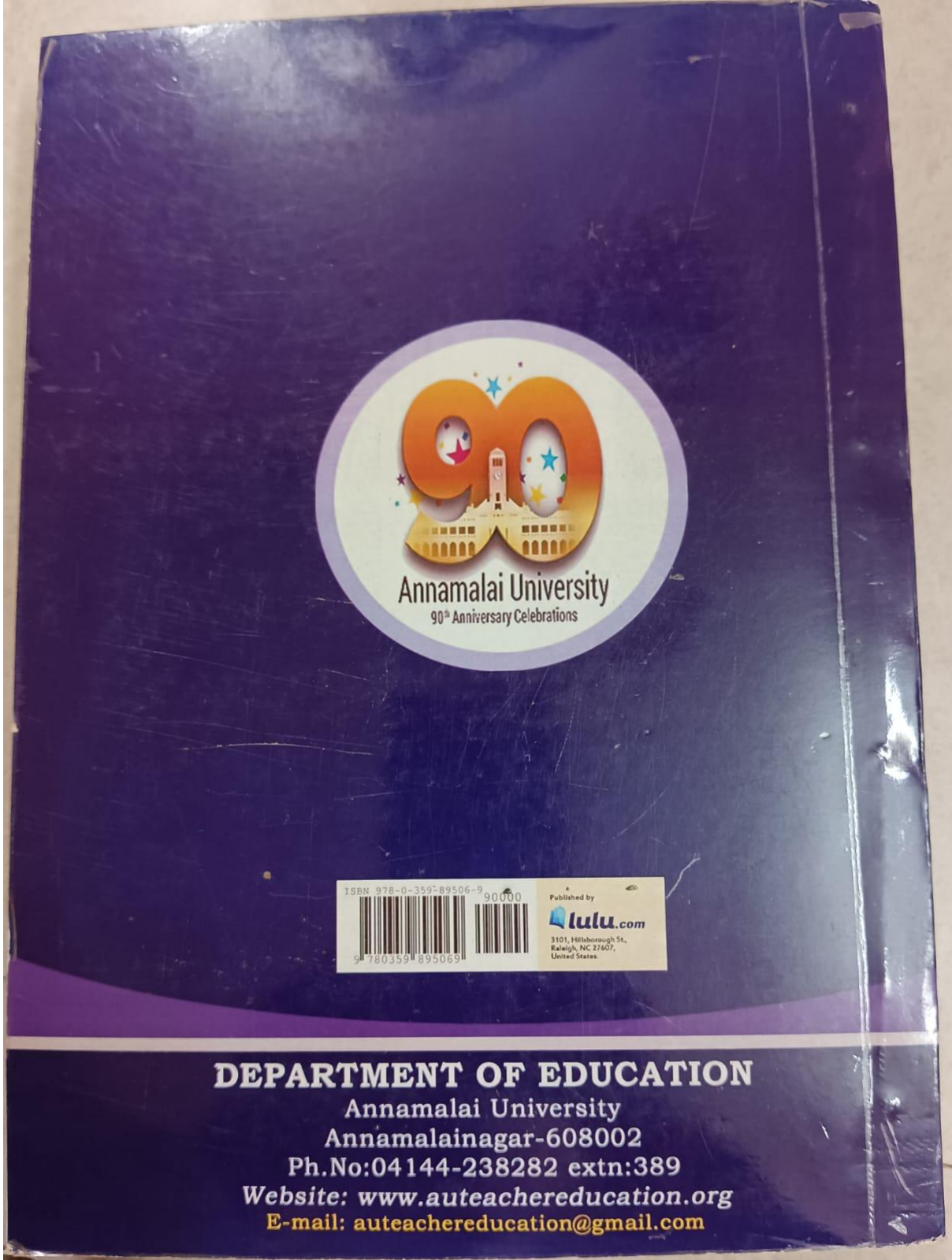
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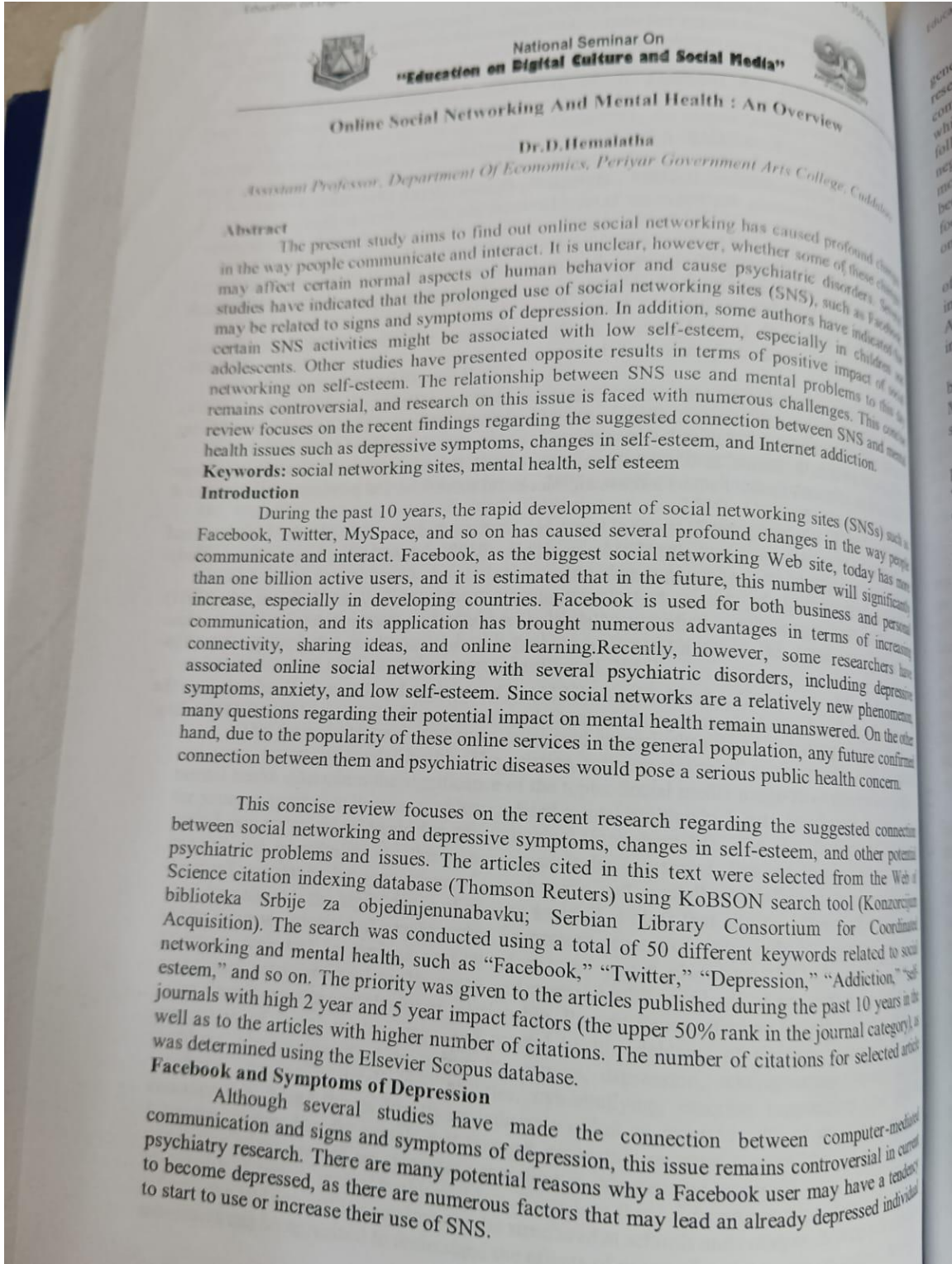
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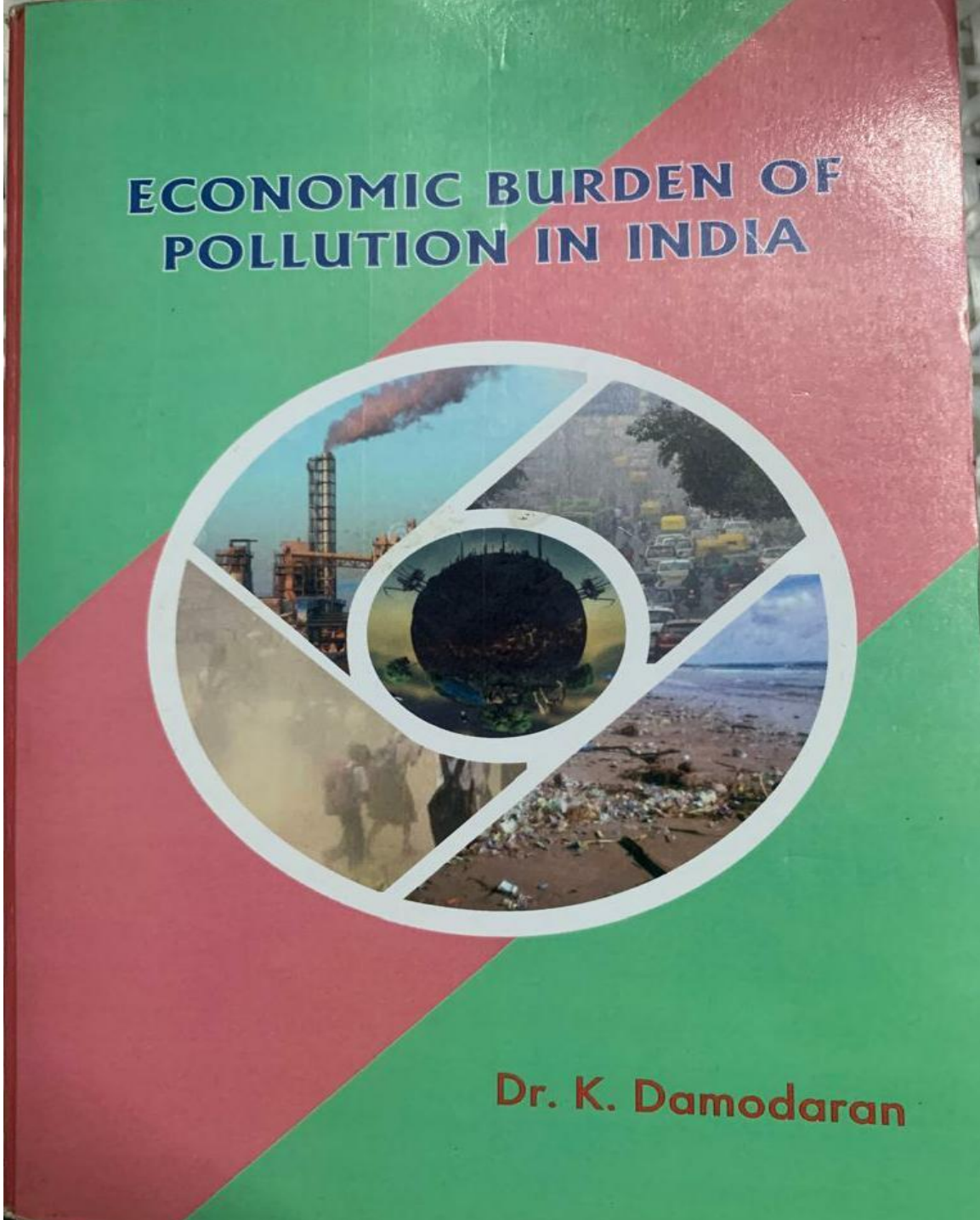
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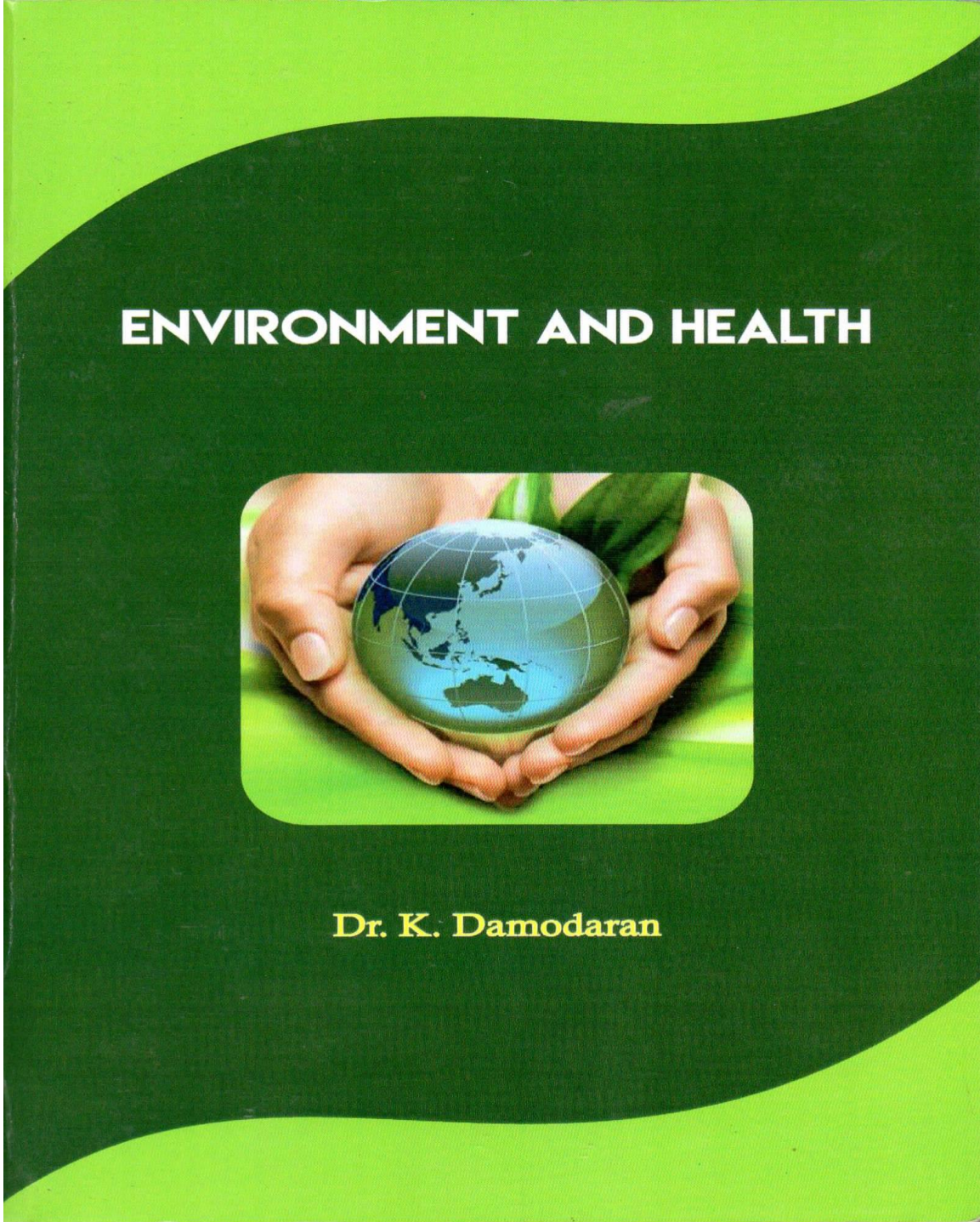
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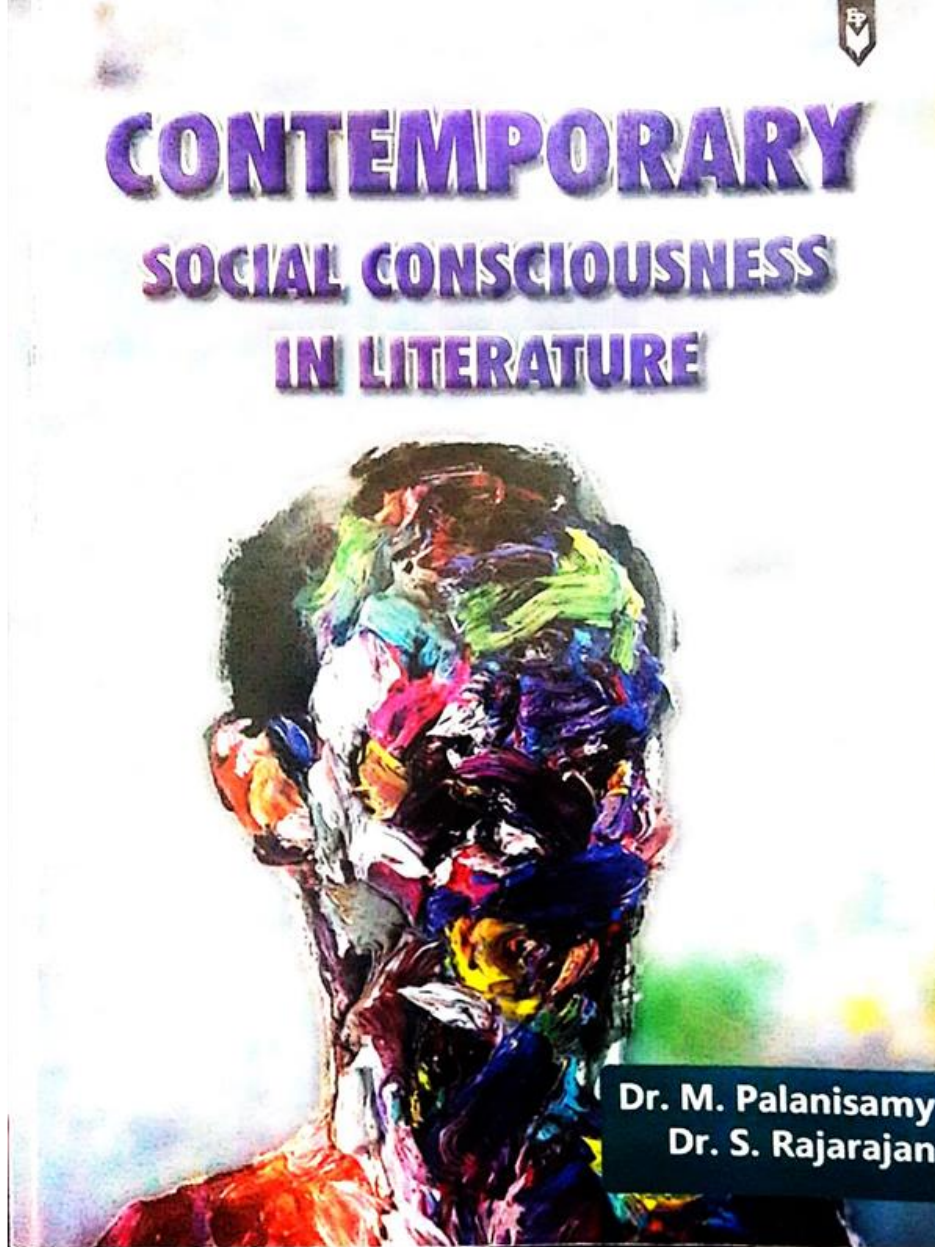
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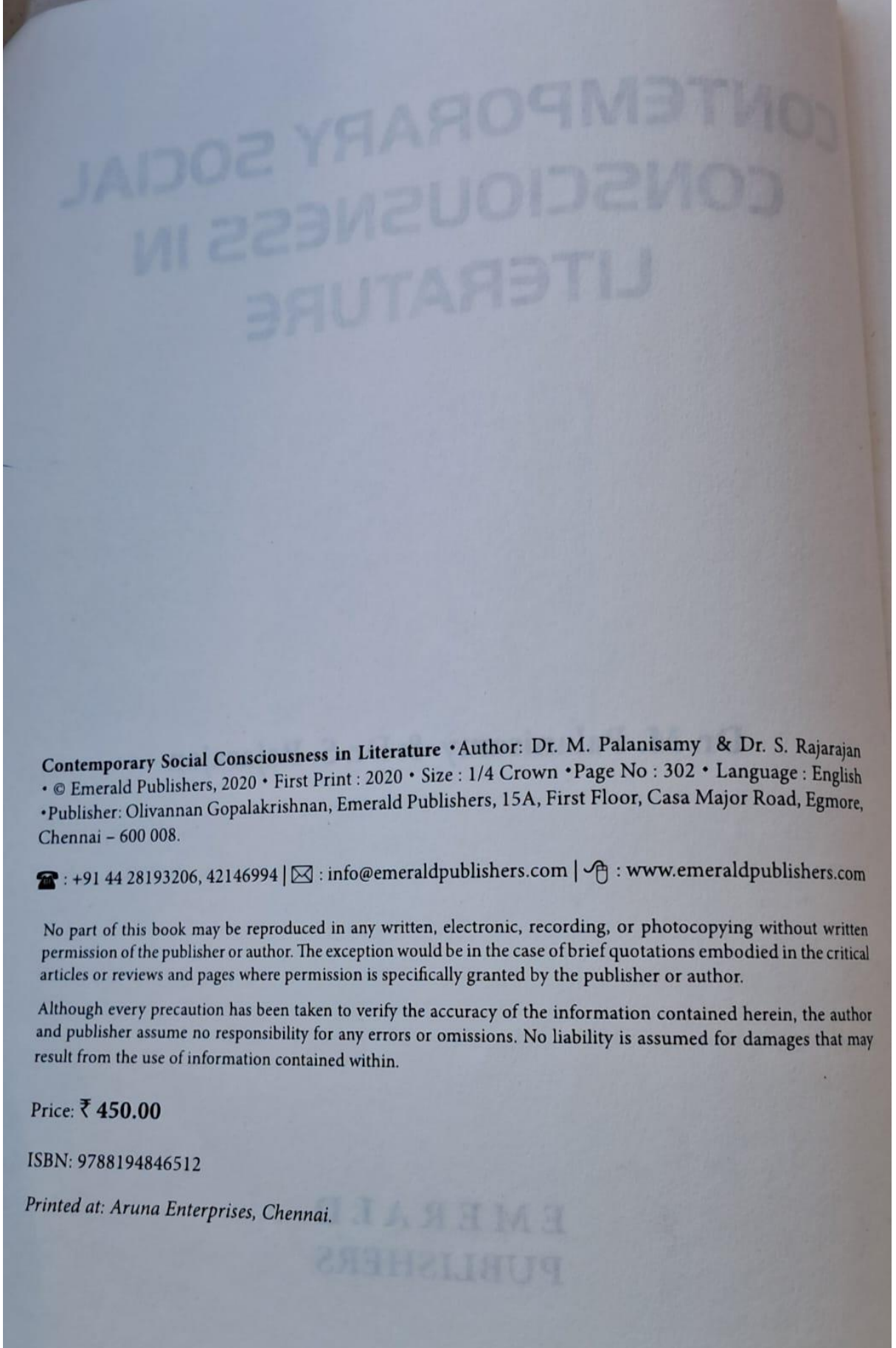
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Existentialism in Thakazhi Sivasankara Pillai's Novel *Chemmeen*: A Study

Janaky .P

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Periyar Govt. Arts College
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Abstract:

Existentialism stressed the individual's unique position as a self-determining factor who has meaningful choice in a meaningless world. As a prolific writer of south India, Thakazhi Sivasankara Pillai uses Chemmeen as a proper medium to propagate some of the traits of Existentialism through the portrayal of the major figures of his masterpiece. Moreover, he caricatures some of his characters in Chemmeen whose choice reminds us of the central idea of the Existentialism. On the superficial level, he demonstrates the day- to- day strife of a certain fisherman community in Nirkunnam, a coastal region of Kerala, a village governed by Taboos and myths whereas in deeper sense, he actually projects the 'Existential choice' of these people in this meaningless world to create their 'Individual identity'. The concurrence of some of the traits of Existentialism is explicitly seen in the dramatic display of characters in Thakazhi sivasankara pillai's highly influential novel Chemmeen.

In fact the panoramic view of the busy coastal villages viz, Nirkunam and Trikunnappuzha has been wonderfully portrayed in Chemmeen. The prominent characters Karuthamma a girl from a fisherman community and Pareekutti the young Muslim trader linger in the mind of the readers. The simplicity of language, treatment of the lives of the common man, the use of taboo and myth of the villages has made this novel a magnum opus. Crossing the



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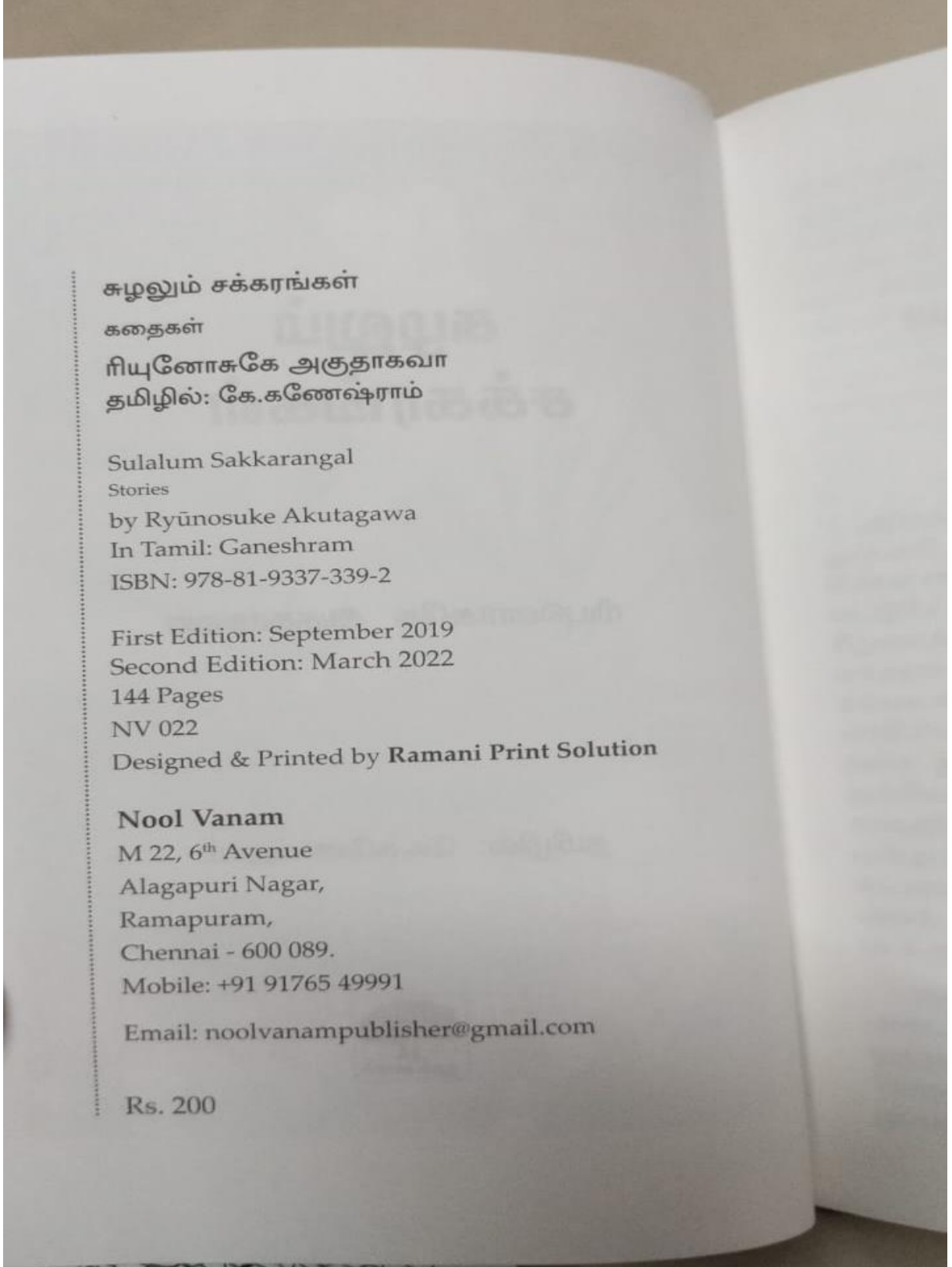
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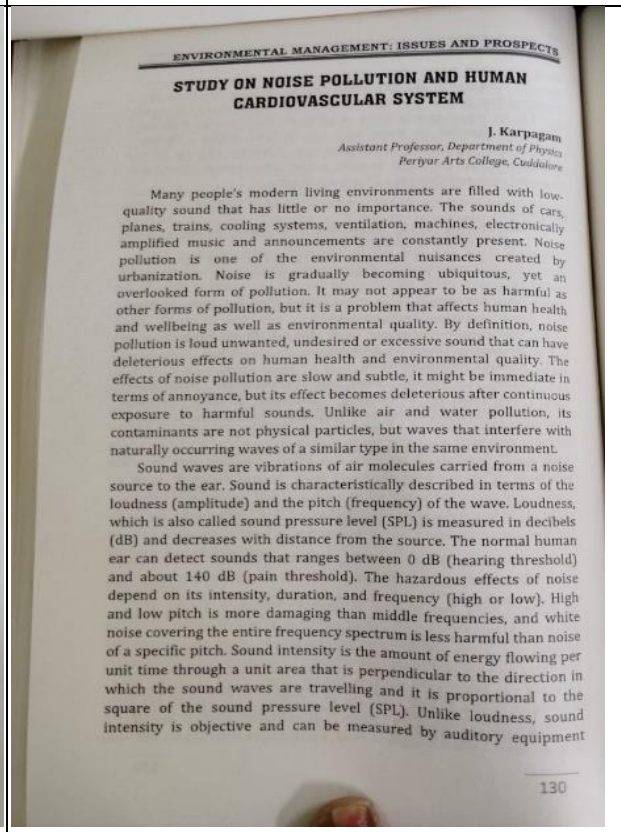
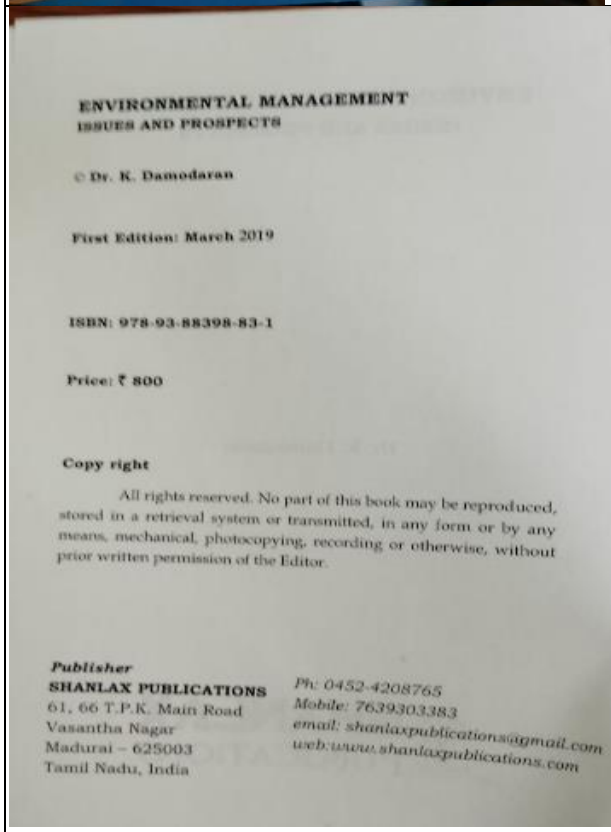
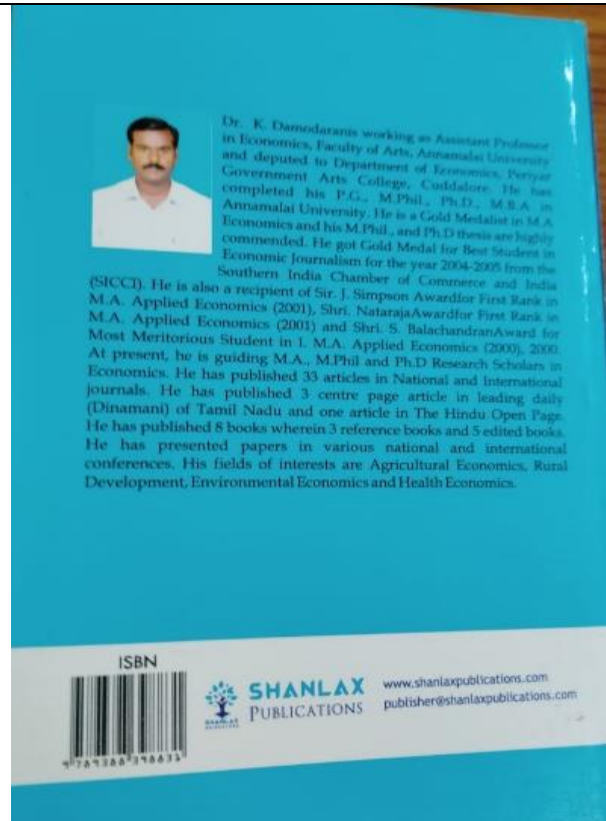
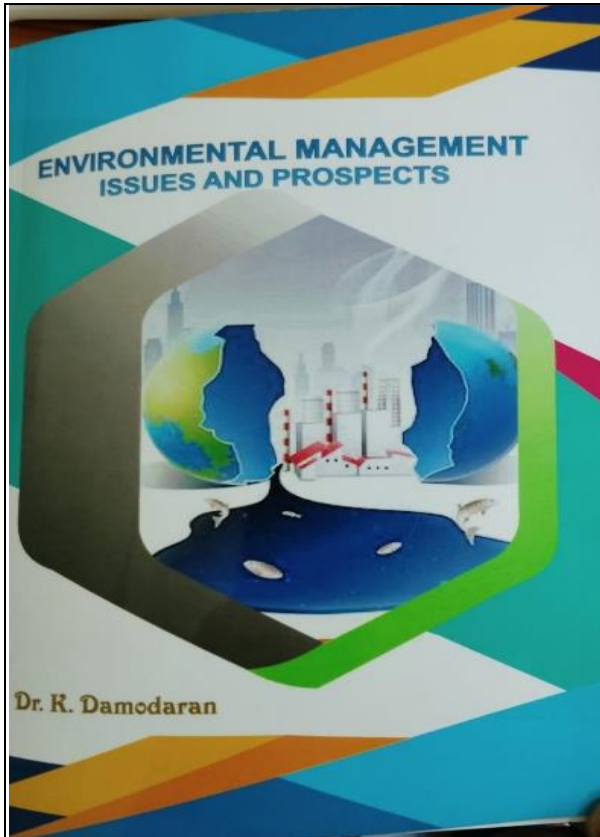
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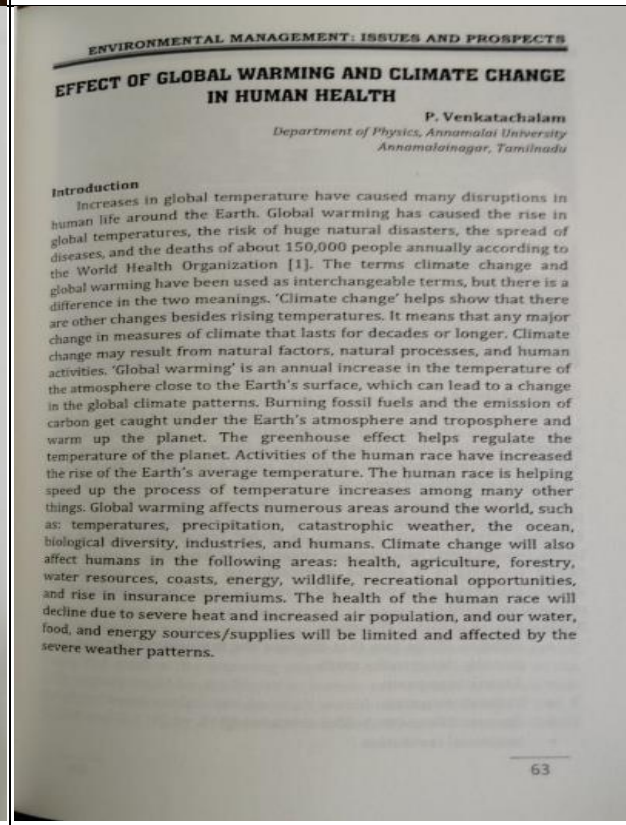
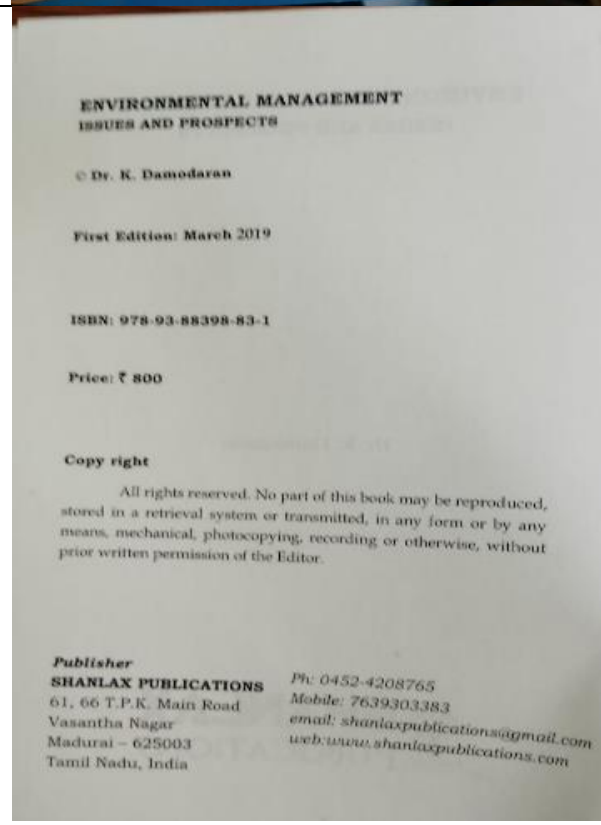
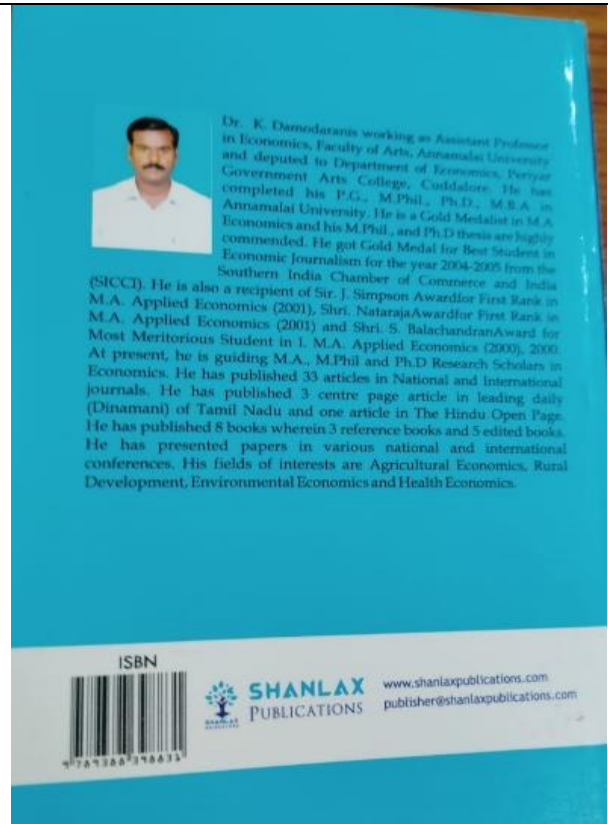
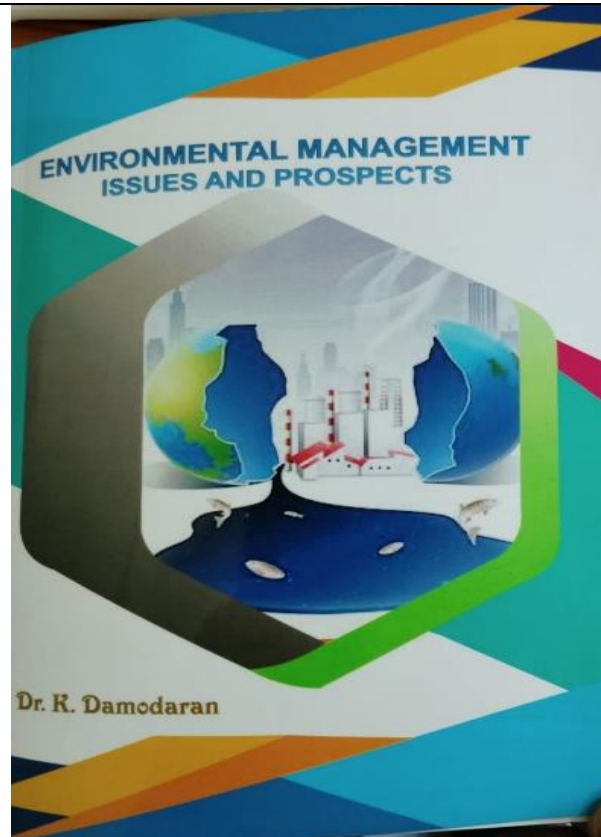
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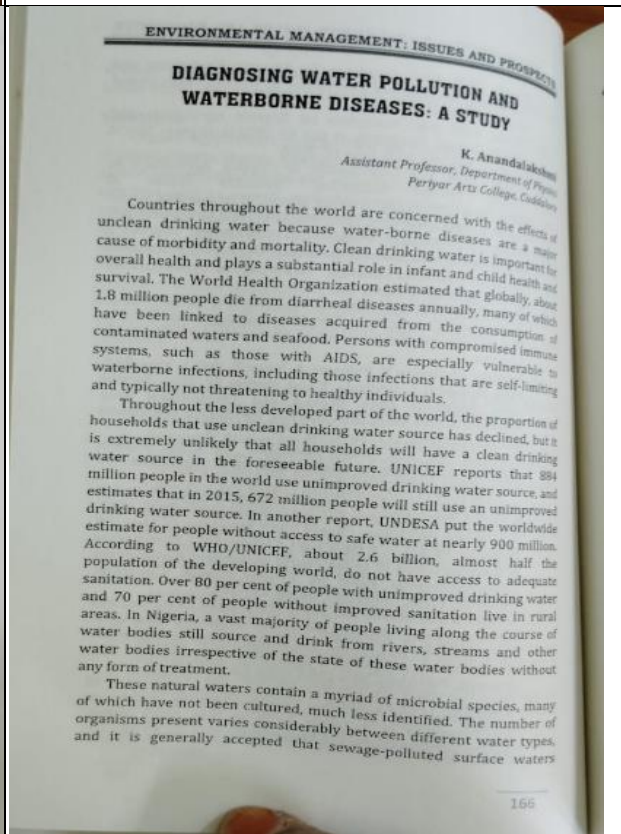
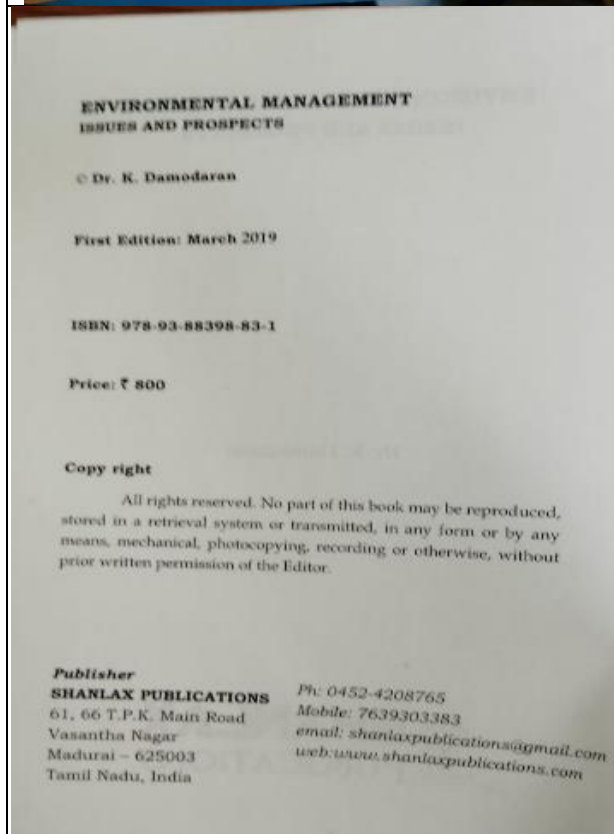
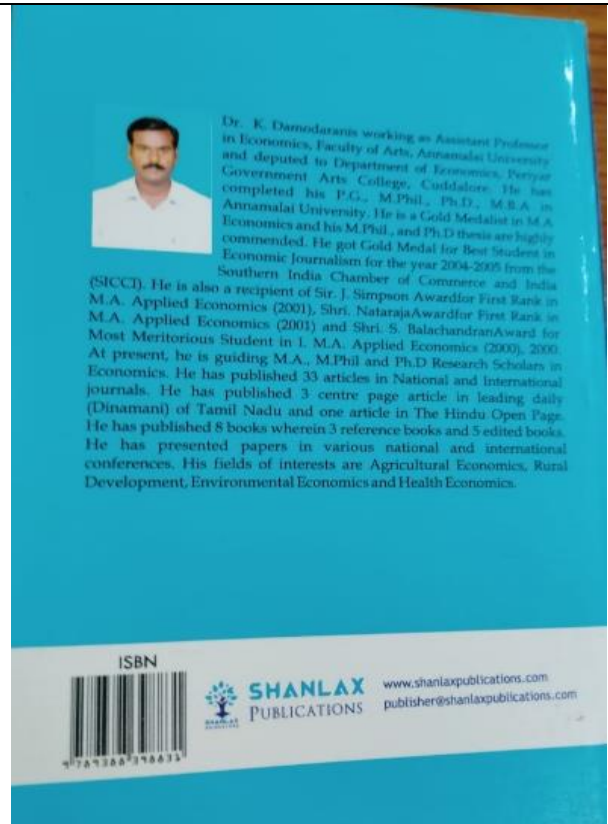
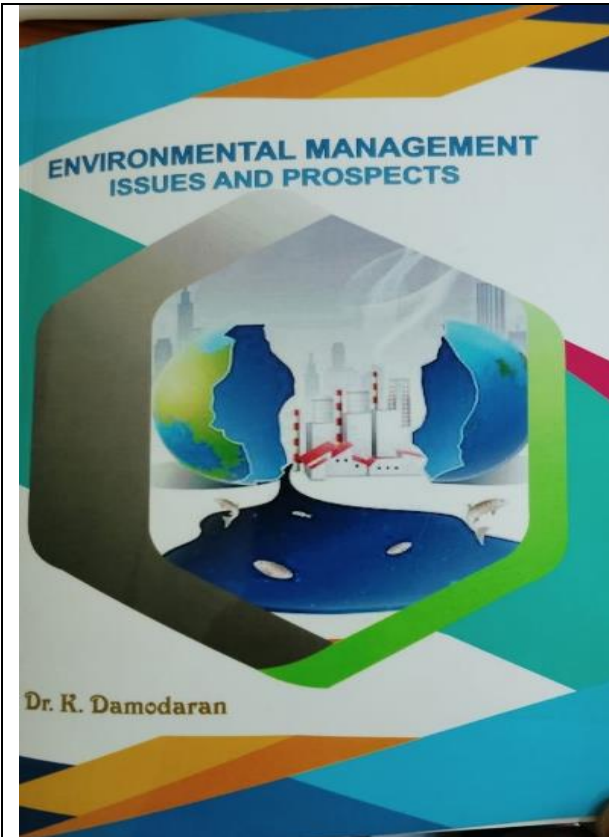
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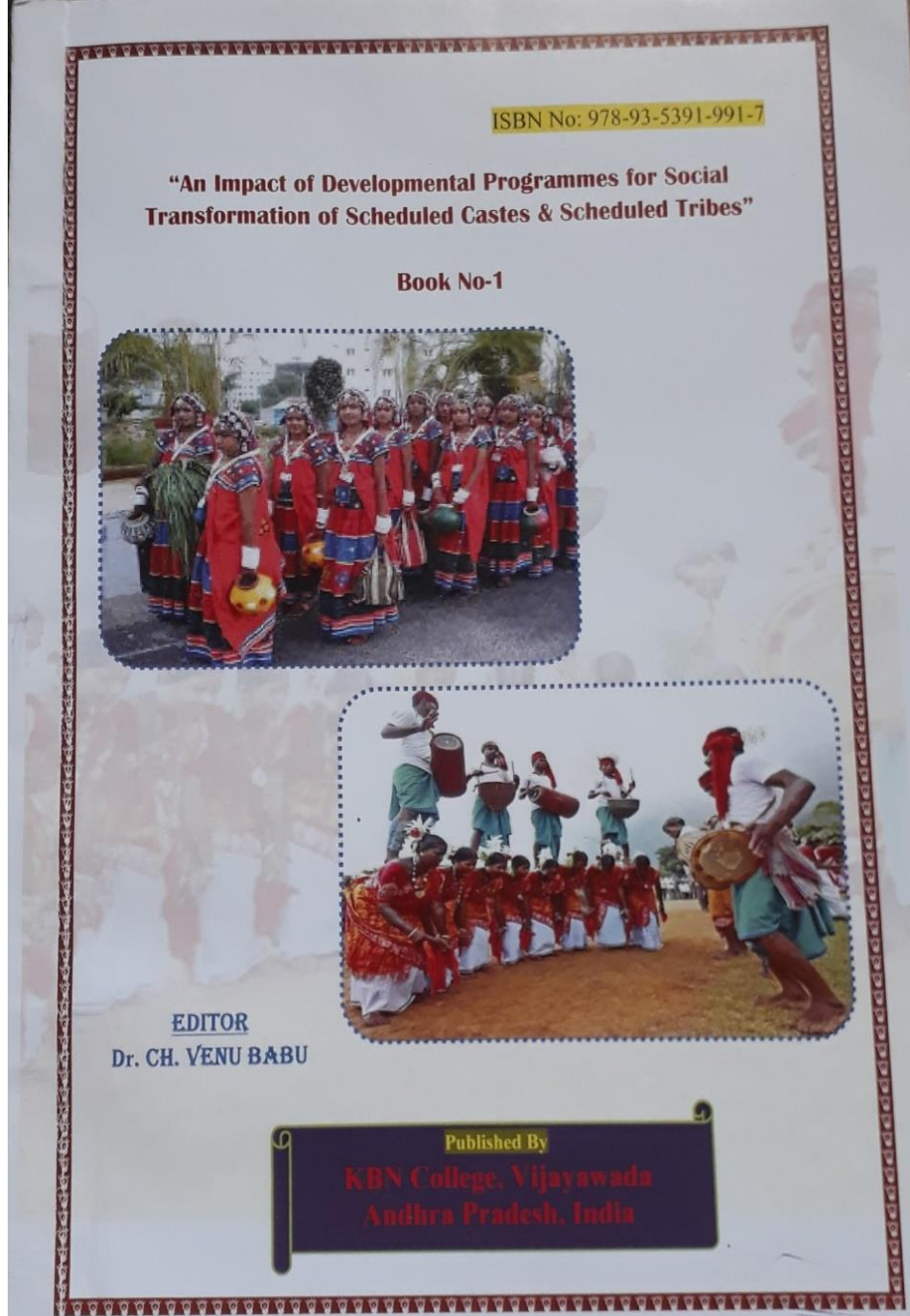
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One day Interdisciplinary National Conference on
Contemporaneity of Gandhian Thought : Reality & Distortion

8

Anthar Vidya Shukiya Rashtriya Charcha Satru 'Mahatma Gandhi Vicharancha SamaKaliNata : Vastav Ani Viprayaas'

Krishnan R
PhD Student of Political Science Dept.,
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Gandhi's Political Thought.

Gandhi is more seen as a Social Reformer and very less as a Political Philosopher.

As Gandhi named in his autobiography "Experiment with Truth", Gandhi had revised his opinions from time to time though his conceptual framework remained the same. He had not altered from his basics. Gandhi's political thought mainly stems from different traditions both Western influenced with a little tint of Eastern. Though he had picked up Western traditions he had not agreed fully into it. He had picked up many traditional concepts from his immediate predecessors as well as from ancient texts like Vedas, Upanishads. One good part is that, Gandhi himself did never claim to be an original thinker. Gandhi considered himself a Hindu. But as a Hindu, he saw all religions as equal, as trying to seek and express the same eternal truths and wisdom. At the core he believed in the power of truth, compassion for others, and nonviolence. However, Gandhi was not prepared to accept any fixed way for either of politics or religion, he is flexible. But when we look into all his sayings we find a conceptual tracing which is very common to any philosopher. Moreover, when we find that many of his own formulations and practical pursuits are identical and matching, we have every reason to accept him as a philosopher in the Indian sense.

Many Political Scientists thought that Gandhi was a combinations of a prophet, politician, teacher, preacher all put together in One Man. Netaji Subhas Chandra Bose, a great admirer and critic of Gandhi, once said that Gandhi had to play the roles of a world teacher as well as the Supreme leader of the Indian National Liberation Movement. In a tone of criticism he further said, often his former role that is the role of a world teacher became so prominent that he had to compromise with his other role as leader of the Indian National Liberation Movement. One may or may not agree with Netaji Bose but it appears that in the context of national liberation movement there is truth in it. But when we go into the depth of Gandhi's Philosophy, we feel that there is no dichotomy in Gandhi's perception. It can be said that Gandhi considered politics as an instrument for the uplift of mankind in Social, Economic, Moral and Spiritual spheres.

Once Gandhi himself admitted to his South African friend that his bent of mind was religious and not political. Romain Rolland in his biography of Gandhi written in 1924, had remarked that if Tilak would not have died Gandhi might have chosen a religious life rather than a political. Since Tilak passed away, Gandhi chosen the Political path and rest is history.

Gandhi worked on transforming the socially weaker people into 'free individuals' in a manner where individuals can enjoy their

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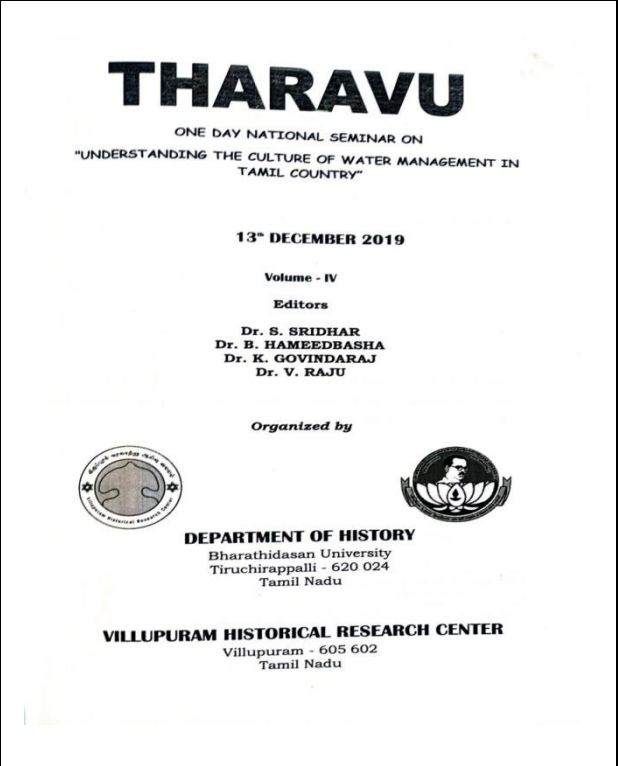
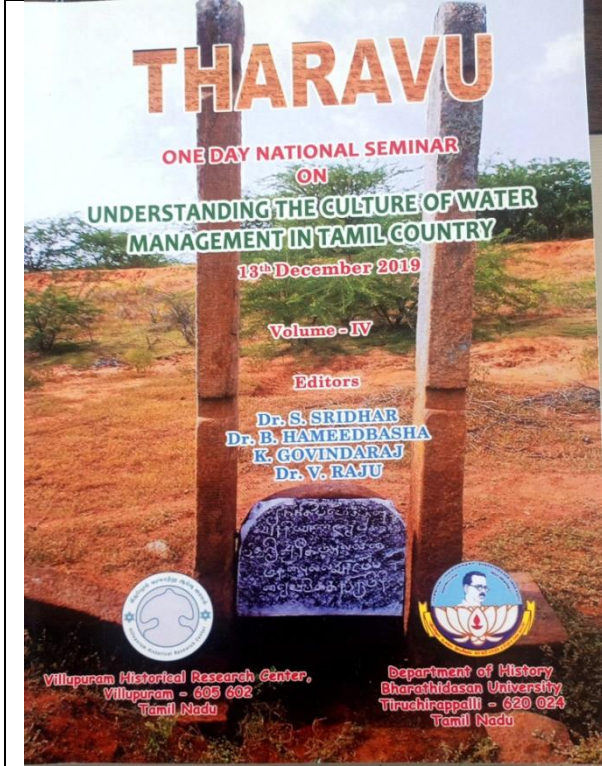
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POLITICAL PARTIES IMPACT ON WATER DISPUTES IN INDIA-A STUDY

Dr. S. Subash Chandra Bose, Assistant Professor, Department of Political Science,
Periyar Government Arts College, Cuddalore

Abstract

In this paper we argue that Indian water-dispute settlement mechanisms are ambiguous and opaque. We distinguish analytically between situations where co-operation is possible, and situations of pure conflict, where the initial allocation of rights is at stake. In the latter case, a search for a negotiated solution may be futile, and quick movement to arbitration or adjudication may be more efficient. However, in India, the process is slow, and effectively binding arbitration does not exist. The entanglement of inter-state water disputes with more general center-state conflicts and political issues compounds problems. We argue that these impacts can be reduced by a more efficient design of mechanisms for negotiating inter-state water disputes: some of the possibilities include a national water commission independent of daily political pressures, a federated structure incorporating river basin authorities and water user associations, and fixed time periods for negotiation and adjudication.

Keyword: Water Dispute Amendment, Bill, Tribunals, Conclusion

Introduction

Water politics, sometimes called hydropolitics, is politics affected by the availability of water and water resources, a necessity for all life forms and human development. Water is a strategic natural resource, and scarcity of potable water is a frequent contributor to political conflicts throughout the world.

The Ministry of Water Resources recently prepared a Cabinet note about creating a permanent tribunal for interstate river water disputes (IWD) resolution. This was after a proposal to this effect in the National Draft Water Policy of 2012. As reports go, the Government is concerned about long delays in dispute resolution and the tendency of States to approach the Supreme Court for redressal of recurring disputes. Setting up a permanent space for adjudication may be helpful, but is certainly not adequate. The doubts stem from two key concerns. One, the preferred approach for IWD resolution is to avoid litigation. This is the basic premise of the guiding legislation the Interstate River Water Disputes Act 1956 (IRWDA).

A permanent tribunal may lead to extended litigation in spite of time-frame restrictions. Two, IWDs are often symptoms of larger interstate relations and have crucial implications for the (re)making of federal democracy. IWD resolution mechanisms should be designed in a changing context of Centre-State and State-State relations. The characteristics of changing interstate relations in the context of

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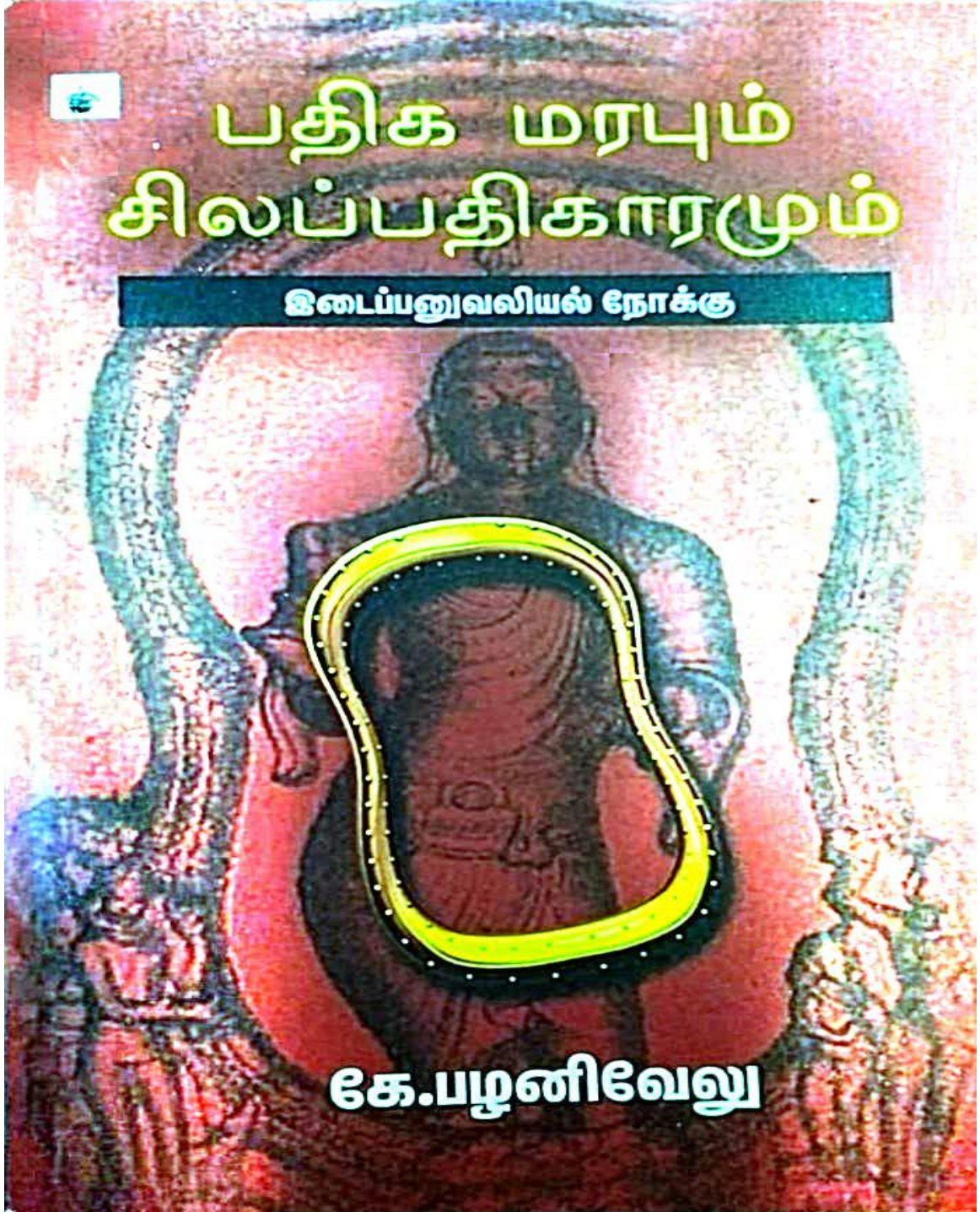
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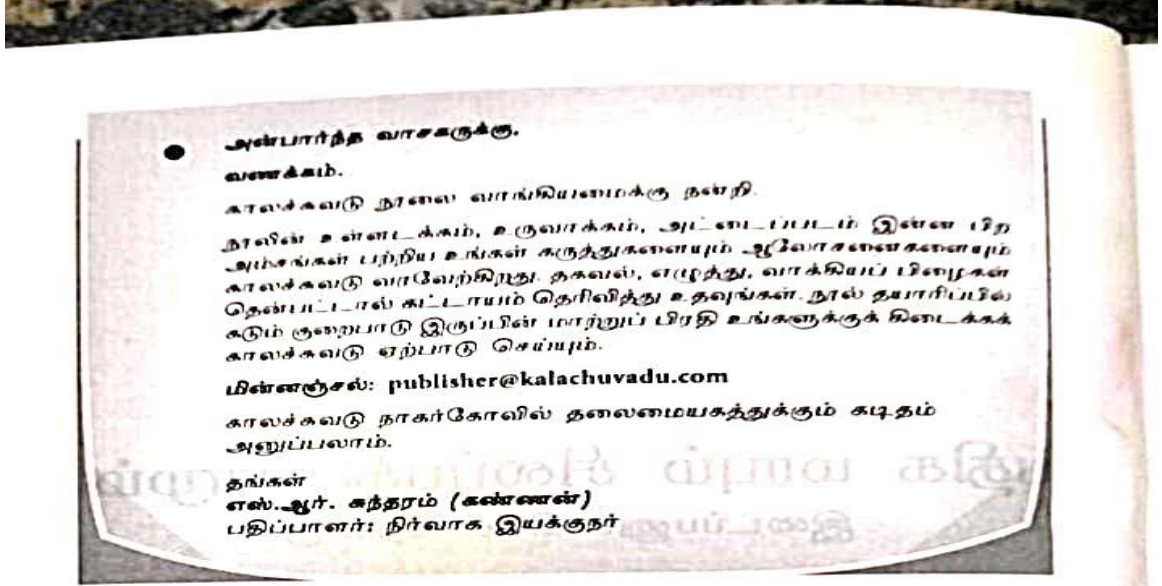
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அச்சிட்டோர்	: மகா பிரிண்டர்ஸ், சென்னை- 600 024.

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எடுத்துரைப்பியல் நோக்கில் இராசேந்திர சோழனின் எட்டுக் கதைகள்

• கே. பழனிவேலு

இராசேந்திர சோழனின் எட்டுக் கதைகள் தமிழ்ச் சிறுகதை உலகில் வந்துள்ள முக்கியமான தொகுப்பு எனச் சுட்டலாம். இந்த எட்டுக் கதைகளில் இடம்பெற்றுள்ள இரண்டு கதைகள் பிற கதைகளின் போக்கிலிருந்து முற்றிலும் மாறுபட்டு இருண்மையாக அமைந்துள்ளதைக் காணமுடிகின்றது. பிற ஆறு கதைகளுடன் ஒப்பிட்டுப் பார்த்தால் இக்கதைகள் சோதனை முயற்சியாக எழுதப்பட்ட கதைகள் போல இருக்கின்றன. ஆனால் இக்கதைகளை இராசேந்திரசோழன் சோதனை முயற்சியாக எழுதினார் எனக் கொள்ள இயலவில்லை காரணம் அனைத்துக் கதைகளும் யதார்த்த வகையில் அமைந்திருக்க இவ்விருகதைகளும் மாறி அமைந்திருக்கின்றன. உள் வெளிப்பயணம், மனவெளிப்பாடு என்ற பெயர்களில் வெளிவந்து கொண்டிருந்த புதிய எழுத்துமுறைகளைக் கண்டல் செய்து எழுதப்பட்ட கதைகளாகவே இவற்றைப் பார்க்கத் தோன்றுகின்றது. குறிப்பாகப் பிற ஆறு கதைகளுடன் இணைத்து வெளியிடப்பட்டமை நோக்கத்தக்கது. இணைத்து யதார்த்த வகையில், பேச்சு வழக்குகள் கலந்த மொழி நடையில் அமைந்து, பாத்திர எடுத்துரைப்புகள் எடுக்கரைப்ப அகியவற்றால்...



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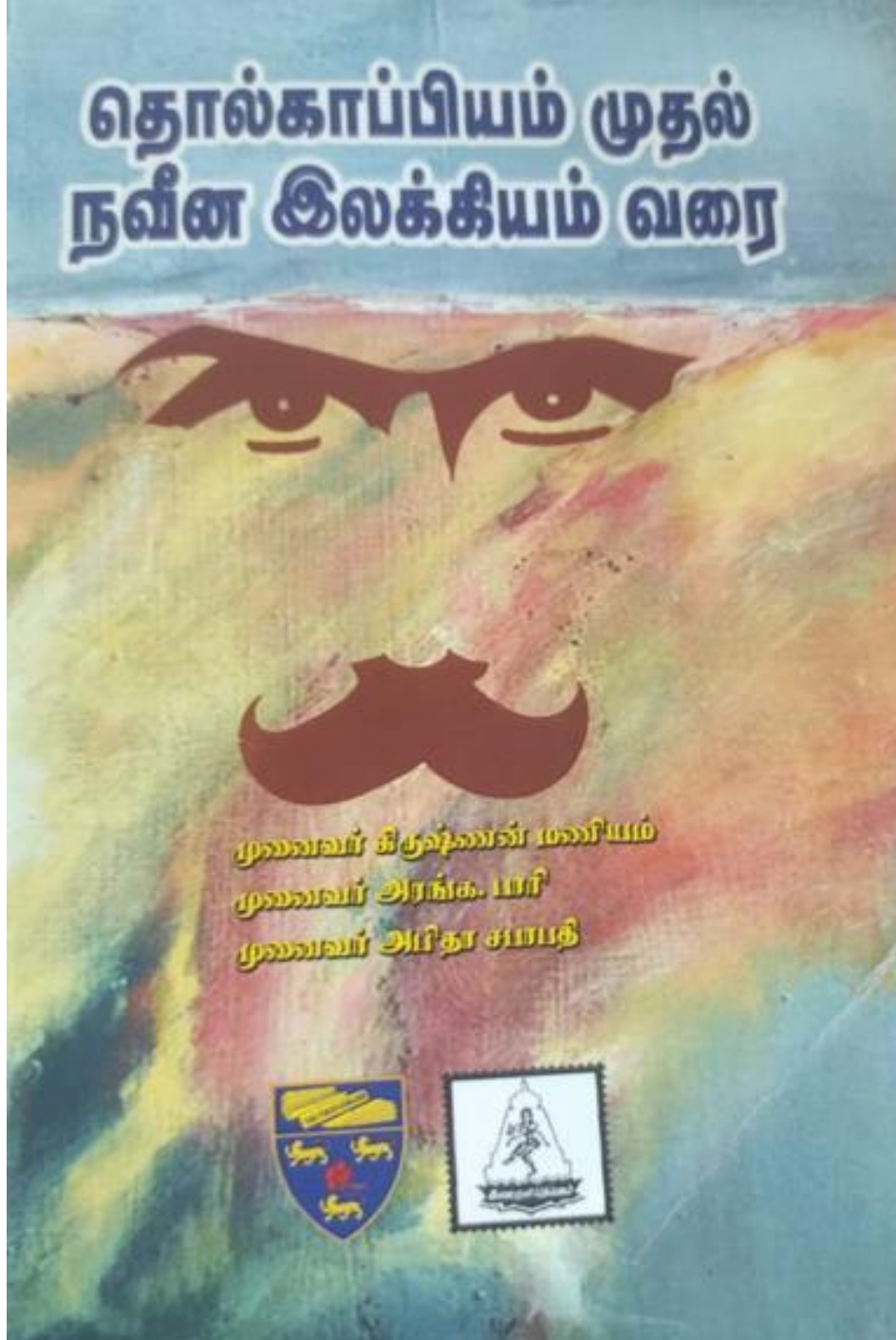
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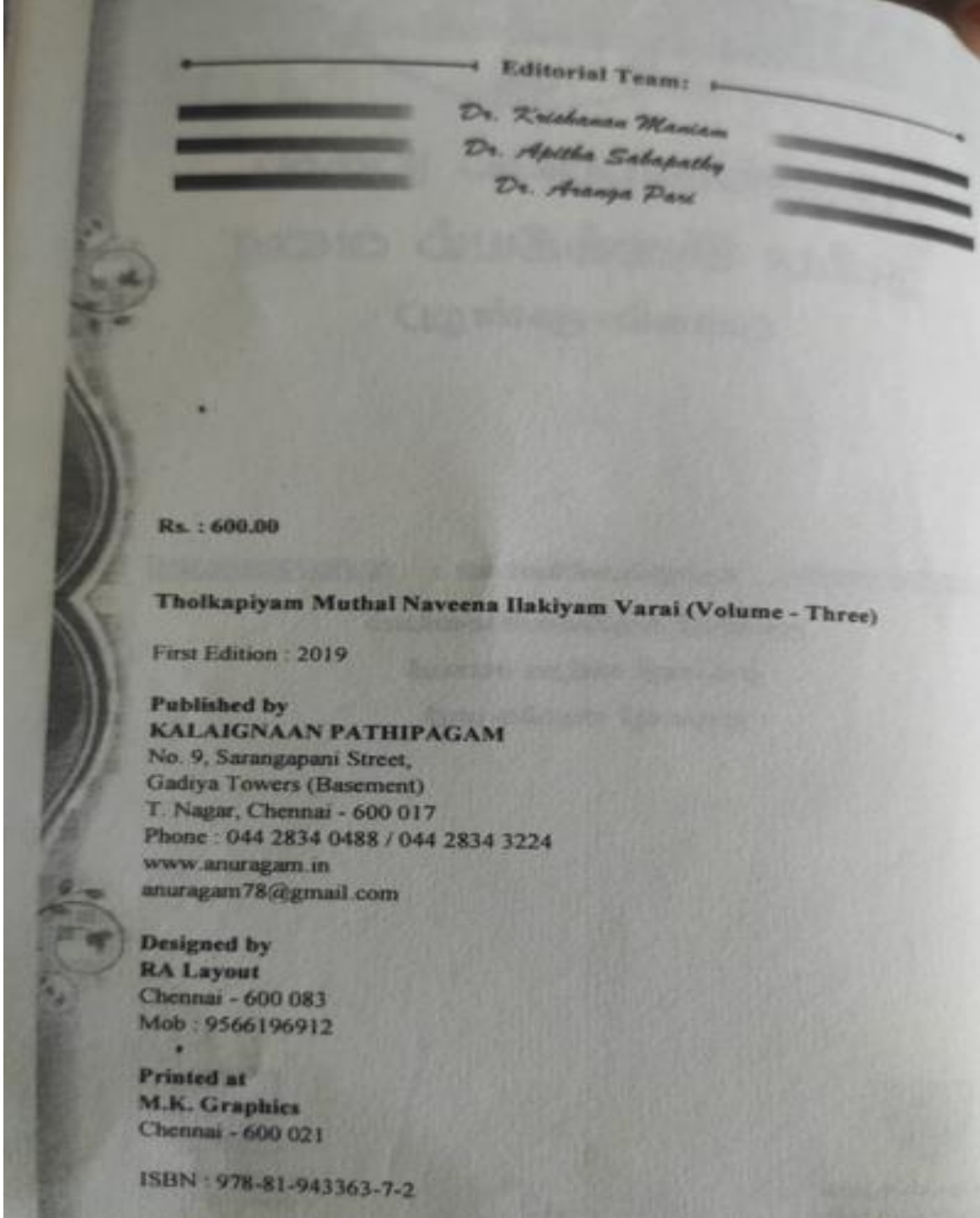
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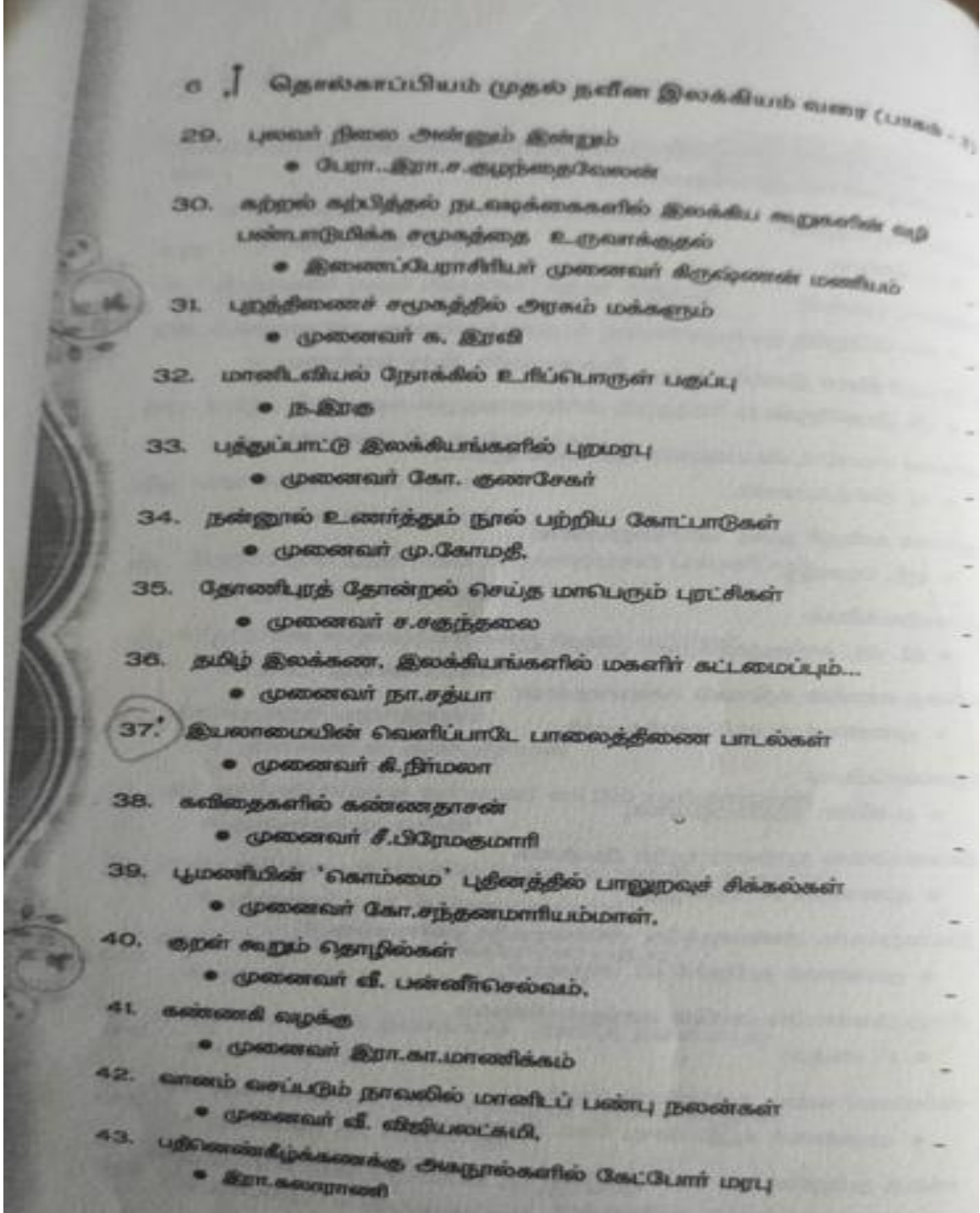
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40. குறள் கூறும் தொழில்கள்

முனைவர் வீ. பன்னீர்செல்வம்,
தமிழ் பேராசிரியர்,
பெரியார் குறக கலைக்கல்லூரி,
உளுந்தூர்

தொழில்களே நாட்டிற்கு வளத்தைத் தருகின்றன. பல்வகை தொழில்கள் நிறைந்திருக்கும் சமுதாயமே சிறந்த சமுதாயமாகும். மக்கள் கல்விக்கும் அறிவுக்கும் நிறமெக்கும் உடல் வலிமைக்கும் தக்கனவாக அவர்கள் செய்யும் தொழில்கள் அமைகின்றன. கல்வியிலும் சொல்வான்மையிலும் அறிவுக்கூர்மையிலும் பிற ஏற்றப் பண்புகளிலும் மிக்குவார் சிலர் அமைச்சர் முதலிய அரசியற்பணிகளில் ஈடுபடுகின்றனர். பிறர் வாணிபம், உழவு மருத்துவம் முதலியத் தொழில்களில் ஈடுபடுகின்றனர். சிலர் கல்வியையே தம் பணியாகக் கொண்டு ஆசிரியத் தொழில் செய்கின்றனர். வீரம் மிகுந்த இளைஞர்கள் படைத்தொழிலில் சேர்வதற்கு ஆர்வம் கொண்டுள்ளனர். பல்வகை கைத்தொழில்களிலும் பிறருக்கு ஏவல் செய்யும் பணிகளிலும் ஈடுபடுவோரும் உளர்.

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அகில இந்திய தமிழ்ச் சங்கம்
கோவை. (தா.சா.365-213)
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