2016-2017

Explanatory Note for the Evidences

The evidences related to the Books and Chapters in edited volumes published by the faculty of Department of Tamil run from page no: 2 to 108. The titles are given in near equivalent English terms.

S.No	Title of the book / Chapter published
1	Scientific properties in classical literature
2	Classical Literatures Scientific Properties
3	Vazhakkai Sithiram
4	Poets in the view of U.V. Saminatha Iyer
5	Human birth in Na.Subbhurediyar
6	Patterns and hospitality in the works Pirabanjanin Padaipukalil
7	Diet and hospitality in Kurunthokai
8	Biological problems of contemporary Sangakaala womens
9	Diets of Sangakala Tamils showing Purananooru
10	Biological elements in the Ullum Puramum novel of the Vannanilavanin
11	Kurinji Nila Unavu in Pathupattu
12	Diet and hospitality in Sangam literature
13	Diet and hospitality in Perumpāṇārruppaṭaiyil
14	Diet and hospitality in Pudhu Kavithai
15	Flowers and medicinal properties in Natrinai
16	Personality traits of Sangam women
17	Vannanilavan
18	Biology in the stories of So. Dharman
19	Thirumanthira Addanga yogathil praanayamam
20	Rituals and beliefs of transgender people
21	Panatrupadail unavu muraikalum viruthobalum
22	Diet and hospitality in Sangam literature
23	Biological Thoughts in Pudhukavithaigalil
24	The virtues and medicinal properties of flowers in Tamil literature

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தமிழ் இலக்கியங்களில் வாழ்வியல் சிந்தனைகள்

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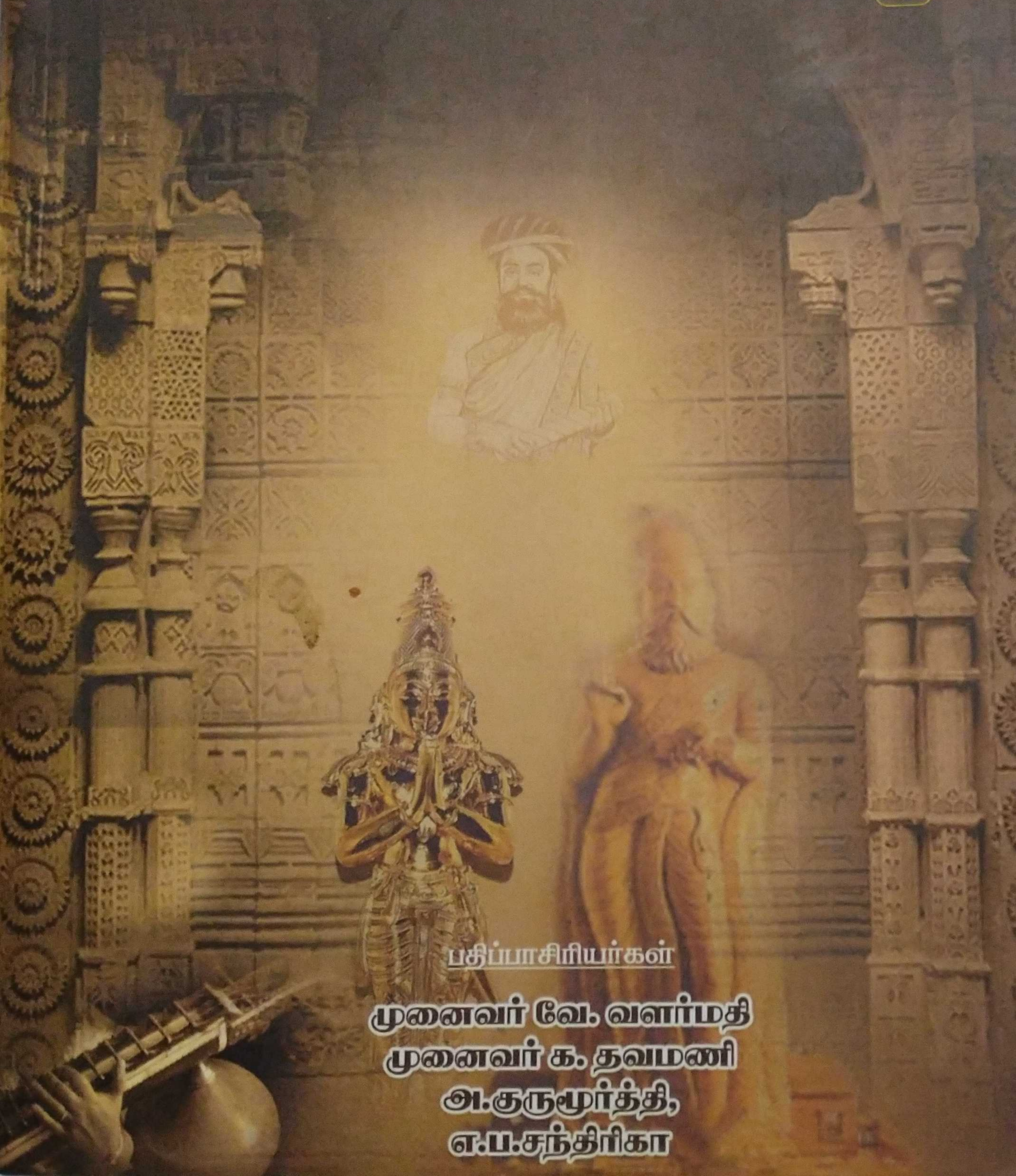

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மனமதுசெம்மையானால்...

முனைவர் ஆர்.நிர்மலாதேவி, தமிழ்த்துறைத் தலைவர், வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி), ஈரோடு - 638 012.

மனிதரைமேம்பாடுறச் செய்தலே
இலக்கியத்தின் தலையாயநோக்கம்

என்பது பிரபஞ்சனின் வேதவாக்கு தமிழ் சமூகத்தின் வாழ்வியல் விழுமியங்களைச் சங்ககாலந்தெட்டு இன்று வரை எடுத்துக்காட்டும் காலக் கண்ணாடியாகத் திகழ்பவை இலக்கியங்களே இவ்விலக்கியங்களில் புதைந்துகிடங்கும் வாழ்வியல் சிந்தனைகளை ஒன்றுதிரட்டிஅவற்றைக் கடைபிடித்து நல்லொழுக்கத்துடன் வாழும் மனிதன் கடவுளுக்கு ஒப்பாவான். அவ்வாறு கடவுளாக வாழ்ந்தவர்கள் பலர் நாயன்மார்களும், ஆழ்வார்களும் தமிழுக்குத் தொண்டு புரிந்த சான்றோர்களும், நம் நாட்டைச் சீர்படுத்த உழைத்த உத்தமர்களும், தமக்காகவாழாமல் பிறருக்காக வாழ்ந்த இரவலர்களும், தமிழுக்கேதங்களை அர்பணித்த புரவலர்களும் நிறைந்த நாடுநம் செந்தமிழ் நாடு. இவர்களெல்லாம் தம் மனம் என்ற குதிரையின் கடிவாளத்தினைத் தம்முடைய கட்டுபாட்டுக்குள் கொண்டு வந்ததால் தான் அவர்களால் சாதனை புரியமுடிந்தது.

இதனைத் தான் திருமூலர் மனமது செம்மையானால் மந்திரம் செபிக்க வேண்டாம் என்றார். ஔவையார் மனம் தடுமாறேல் என்று ஆத்திச்சூடியிலும்,

சந்தனமென்குறடுகாண்தேய்ந்தகாலத்தும்
கந்தம் குறைபடாதுஆதலால் - தம்தம்
தனம் சிறியர் ஆயினும் தார்வேந்தர்கேட்டால்
மனம் சிறியாஆவரோமற்று

என்று மூதுரையிலும் எடுத்துரைத்துள்ளார். மனம் இருந்தால் மார்க்கம் உண்டு, கடலைவிட ஆழமானது, காற்றைவிட வேகமானது அத்தனை உணர்ச்சிகளின் ஊற்றுக்கண் ஆக்கம், அழிவு ஆகியவற்றைத் தீர்மானிப்பது என ஏகப்பட்ட பெருமைகளை தன்னகத்தே கொண்டது மனிதமனம். மனம் ஒரு குரங்கு என்பது சோவின் நகைச்சுவை நாடகம். மனம் என்பது சிந்தனை, நோக்கு, உணர்ச்சி, மனஉறுதி, கற்பனை போன்றவற்றில் வெளிப்படுகின்ற அறிவு மற்றும் உணர்வுநிலை சார்ந்த அம்சங்களின் தொகுப்பைக் குறிக்கிறது. மனமே நீ மாறிவிடு, மனமே வசப்படு, மனமே ரீலாக்ஸ் ப்ளிஸ், மனமும் மனிதமும் என நெஞ்சைத் தொடும் வாசகங்கள்.

சங்க இலக்கியத்தில் செவ்வியல் பண்புகள்

(தேசியப் பயிலரங்க ஆய்வுக் கட்டுரைகள்)

பதிப்பாசிரியர்

முனைவர் த. கீதாஞ்சலி

தமிழ்த்துறை, எஸ்.ஜி.எம். கல்லூரி,
பொள்ளாச்சி.

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செவ்வியல் இலக்கியங்களில் அறிவியல் பண்புகள்

முனைவர் ஆர். நிர்மலா
உதவிப்போராசிரியர் - தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
பவானி - 638 012.

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"மொழியெனப் படுவது உணர்வினால் முனைப்பது
மொழியெனப் படுவது மாந்தரின் முனைப்பு
மொழியெனப் படுவது கல்விக்கு அடிப்படை
மொழியெனப் படுவது பண்பெளிர் விளக்கம்
மொழியெனப் படுவது உள்ளுயிர் முழக்கம்!
மொழியெனப் படுவது இனநல முயக்கம்"

என்று மொழிக்கு விளக்கம் தருகிறார் பாவலரேறு பெருஞ்சித்திரனார். மொழி என்பது உயிருக்கு நிகரானது. தாயின் கருவில் உயிரும் உருவும் பெற்று நிறைந்த குழந்தைஅறிவாற்றல், கலையாற்றல், உடலாற்றல், உணர்வாற்றல், ஆன்மீகயாற்றல் ஆகியவற்றைப் பெற்றதைப் போல் மொழி சிறப்பு வாய்ந்தது. எண்ணங்கள், கருத்துக்கள், அனுபவங்கள் முதலியவற்றை வெளிப்படுத்த உதவும் கருவி மொழி.

சிந்தனையைச் சாத்தியப்படுத்துவதும், வெளிப்படுத்துவதும் மொழியே மொழி இல்லையென்றால் சிந்தனை இல்லை. மொழி தான் நம் அடையாளம். மொழி நமக்கு விழி என்கிறார் சுப. வீர. பாண்டியன்.அறம் செய்ய விரும்பு என்று வாழ்வைச் சொல்லித் தருவது மொழி. அகரத்தைக் கூட அறமாகச் சொல்லிப் போதிப்பது நம் பண்பாடு.

மொழி அறிவின் அடித்தளம். இயற்கை மனிதனுக்களித்த ஒப்பற்ற பெருவரம். மனிதனின் மகத்தான சாதனைகள் எல்லாம் அம்மொழியாலே சாத்தியமாகின்றன. சமூக, அரசியல் சிந்தனைகள், அமைப்புகள், மாற்றங்கள் ஆகிய அனைத்தும் இதனாலேயே உருவாகின்றன. நீதி, கலாச்சாரம், நாகரிகம், என்பனவெல்லாம் இதனாலேயே உற்பத்தியாகிப் பரவுகின்றன. மனிதத்தின், இயற்கையின் உன்னதமான மூலப்பொருள்களைக் கொண்டு அன்றாடம் புதுமை படைக்க மொழி உதவுகிறது. மொழி என்பது மனிதனின் கையில் கிடைத்த அமுதசுரபி. கருவிலே பெற்ற திருவைப் போல் ஒவ்வொரு மனிதனும் கருங் கொண்ட போதே தனக்கெனச் சொந்தமாகப் பெற்ற பெருநிதியம் தான் அவனது தாய்மொழி. இதைத்தான் பாரதிதாசன்,

"சொந்த உயிர் சொந்த உடல்
சொந்த மொழி மூன்றும்
வந்தபடி நிலைக்குமடி
வழியிற் பிரிவதில்லை"

வாழ்க்கைச் சித்திரம்

முனைவர் ஆர். நிர்மலாதேவி

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நூற்றாண்டுத் தமிழறிஞர்களும்

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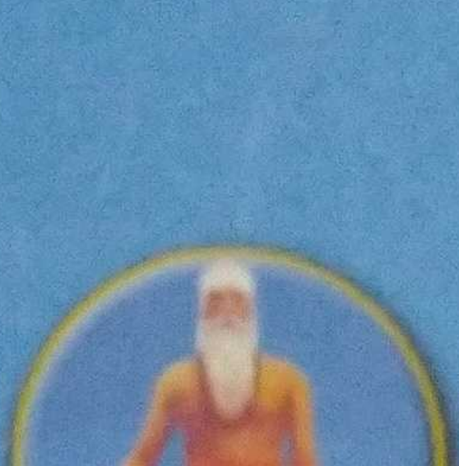

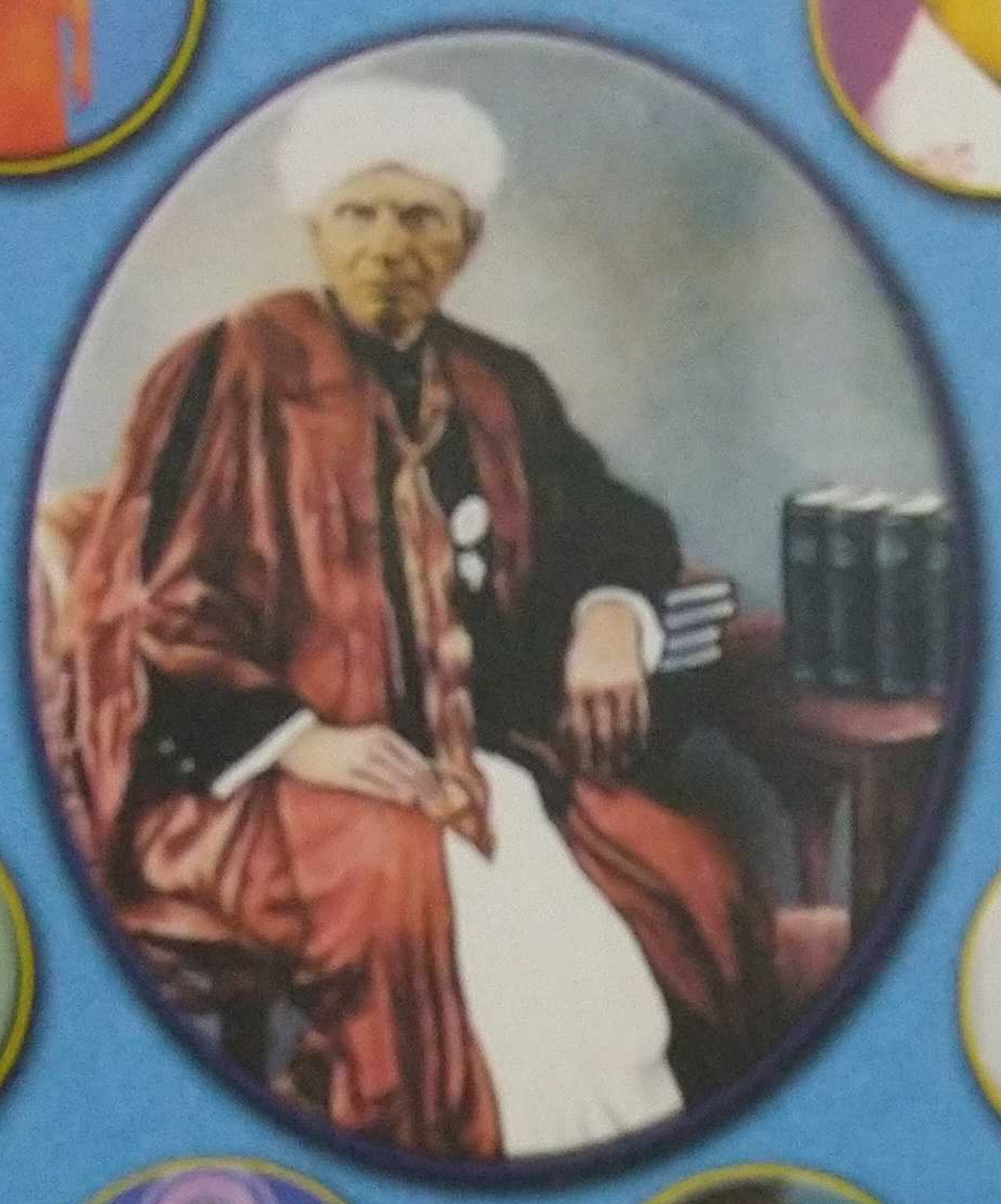

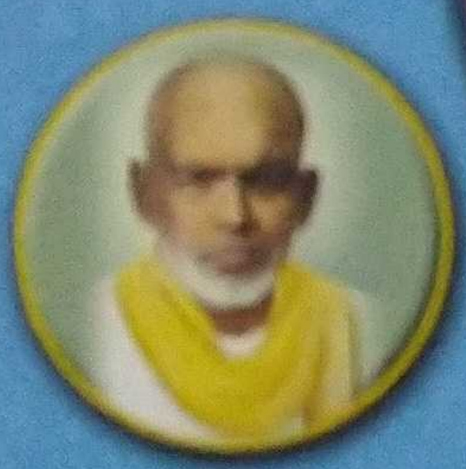

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முனைவர் ஆர். நிர்மலா தேவி
தமிழ்த்துறைத் தலைவர்
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 638 012.

என்று தோன்றியது என வரையறுக்கப்பட இயலாததாக மிகப் பழங்காலத்திலேயே தோன்றிச் சிறப்புற்று இன்று வரை தன் இளமை நலங்குன்றாது வழங்கி வரும் நம் அருமைத்தமிழ் மொழிக்குப் பல்வகை அணிகள் புனைந்து போற்றிய பெரியோர்கள் பலர். ஆங்கிலக் கல்வி நம் நாட்டிலே பரவிய பின்னும், தமிழ் ஆர்வமிக்கவர்களாகத் தமிழ் மொழிக்குத் தன்னை அர்ப்பணித்துத் தமிழ் வளர அரும்பாடுபட்ட பெரியோரில் ஒருவர், பன்மொழி வித்தகர், நம் பழம்பெரும் நூல்கள் எல்லாம் கரையானுக்கு ஆளாகாமல் காப்பாற்றி, ஓலைச் சுவடிகளையெல்லாம் நூல் வடிவமாக்கி தமிழன்னைக்குச் சமப்பணம் செய்தவர், அவர் தான் நம்மால் அன்போடு தமிழ்த் தாத்தா என்று அழைக்கப்படும் உ. வே. சாமிநாதையர்.

இளமைக் காலம் தொடங்கி தான் கண்டும் கேட்டும் அறிந்த வரலாறுகளைப் பத்திரிகையில் வெளியிட்டு, அவற்றினை ஒன்று திரட்டி நான் கண்டதும் கேட்டதும் என்ற தலைப்பில் நூலாக வெளியிட்டுள்ளார். நகைச்சுவை செய்திகளின் பொக்கிஷமாக விளங்கும் இந்நூலில் சங்கீத வித்துவான்கள் பற்றியும், ஆராய்ச்சிக் கட்டுரைகளையும், உபன்யாஸங்களையும், பெரியோர் வரலாறுகளையும் உள்ளடக்கி பன்னிரண்டு தலைப்புகளில் வெளியிட்டுள்ளார். நம் நாட்டில் தம்முடைய மனக்கருத்தைச் செய்யுளில் அமைத்து வெளியிடும் ஆற்றல் வாய்ந்த புலவர்கள் பலர் வாழ்ந்து, தமிழ் இலக்கியத்திற்குத் தொண்டாற்றியுள்ளனர். அவர்களுடைய செயல்களும், பல வகையான செய்யுட்களைப் பாடிய வரலாறுகளையும் தெளிவாக எடுத்துரைக்கும் நூல் கண்டதும் கேட்டதும்.

தமிழ் தந்த வளம்

தம்பிரான் ஒருவர் திருவனந்தபுரத்தில் வரையாது வழங்கும் வள்ளலைத் தரிசித்துப் பாடலைப் பாடிப் பரிசு பெற்ற சிறப்பினைக் கூறுவது தமிழ் தந்த வளம். தமிழ் பாடலால் அரசரை மெய்மறக்கச் செய்து தமிழால் அவர் உள்ளத்தில் நீங்காத இடம் பெற்றதோடு, அளவிடற்கரிய பொருள்களைப் பெற்று தன் மடத்திற்குத் திரும்பி வந்து தாம் பெற்ற பொருள்களைத் தன் ஞானாசிரியர் முன் இதைத் தமிழ் தந்த வளம் என்று காணிக்கையாகச் செலுத்திய தம்பிரானின் புகழை எடுத்தியம்பும் மனம் கவர்ந்த பாடல்

ந. சுப்புரெட்டியாரின் படைப்புகள் : கலையும் கருத்தியலும்

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14. **லெ. கமலா** — 69
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13. ந.சுப்புரெட்டியாரின் நோக்கில் மானுடப்பிறப்பு

முனைவர் ஆர். நிர்மலா தேவி
தமிழ்த்துறைத் தலைவர்
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 638 012.

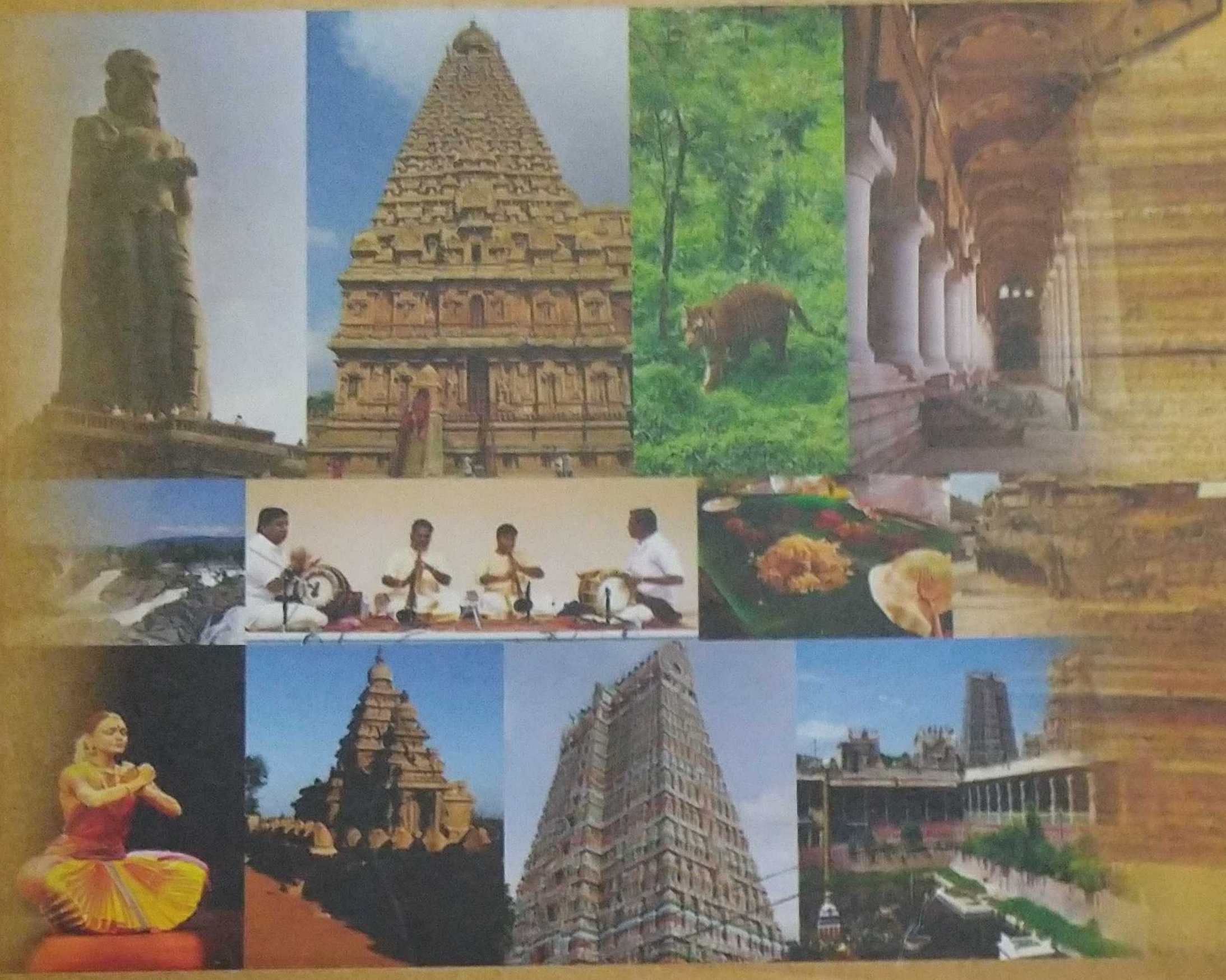
"அறிவிலே தெளிவு, நெஞ்சிலே உறுதி
அகத்திலே அன்பினோர் வெள்ளம்
பொறிக ளின்மீது தனியர சாணை
பொழுதெலாம் நினதுபே ரருளின்
நெறியிலே நாட்டம் கரும யோகத்தில்
நிலைத்திடல் என்றிவை அருளாய்
குறிகுணம் ஏதும் இல்லதாய் அனைத்தாய்க்
குலவிடும் தனிப்பரம் பொருளே"

என்ற பாரதியாரின் கனவினை நனவாக்கியவர் முனைவர் ந.சுப்புரெட்டி அவர்கள். கல்லூரியில் பயிலும் போதே அறிவியல் கருத்துக்களைப் பரப்ப வேண்டும் என்று கனவு கண்டவர். தான் கண்ட கனவினை நனவாக்கும் விதமாக அறிவியலில், பல துறைகளில் சிறுவர்களுக்காகவும், வளர்ந்தவர்களுக்காகவும், பொது மக்களுக்காகவும் நூற்றுக்கணக்கான நூல்களை எழுதியுள்ளார். அதில் பதினான்கு நூல்கள் அறிவியல் சார்ந்தவை. இனிமை, எளிமை, தெளிவு நிறைந்தவை இவர் தம் நூலின் சிறப்பியல்புகள்.

ஆசிரிய பயிற்சி பெறும் மாணவர்களுக்கு தமிழ் வழி அறிவியல் பரப்பும் வகையில் அறிவியல் பயிற்றும் முறை என்ற நூலையும், அணுவின் அற்புத ஆற்றலை விளக்கும் முகமாக அணுவின் ஆக்கம், அணுக்கரு பௌதிகம் ஆகிய நூல்களையும், தகவல் தொடர்பு சாதனைகளான வானொலி, தொலைக்காட்சி பற்றி இளைஞர் வானொலி, இளைஞர் தொலைக்காட்சி என்ற நூல்களையும், மின்னணுவின் அதிசயத்தை அதிசய மின்னணு என்ற தலைப்பிலும், நமது உடலின் செயல்பாடுகளை விளக்கும் முகமாக நமது உடல் நூலையும், விண்ணுலக பயணம் பற்றி இராக்கெட்டுகள், அம்புலிப் பயணம், தொலை உலகச் செலவு, வான மண்டலக் காட்சி ஆகிய நூல்களில் தெள்ளத் தெளிவாகக் காட்டியுள்ளார். அறிவியலில் தான் கண்டு அனுபவித்த சிறப்புகளையெல்லாம் அறிவியல் விருந்து என்ற தலைப்பில் படைத்துள்ளார். உயிரியலில் ஜீன்களால் விளையும் பல துறைகளை அறிவியல் கல்வி பயிலாதவர்களும் புரிந்து கொள்ளும் முறையில் வாழையடி வாழை என்ற நூலில் பதிவு செய்துள்ளார்.

தமிழ் இலக்கியங்களில்
உணவு முறைகளும், விருந்தோம்பலும்

தொகுதி 3



பதிப்பாசிரியர்

முனைவர் ஆ. மகாலட்சுமி

தமிழ் இலக்கியத் துறை, என்.ஜி.எம். கல்லூரி (தன்னாட்சி)

பாலக்காடு ரோடு, பொள்ளாச்சி – 642 001

339. **முனைவர் ஆர். நிர்மலா தேவி** 1365
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விருந்தோம்பலும்

340. **முனைவர். ஏ. ஜோதிமணி** 1369
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341. **முனைவர் ஹ. அல்தாஜ் பேகம்** 1373
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342. **முனைவர் ம. கஸ்தூரி** 1377
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ஆரோக்கியத்திற்கான உணவு

343. **முனைவர் க. பன்னீர்செல்வம்** 1382
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உண்ணும் முறையும்

344. **முனைவர். ச. கலைவாணி** 1386
ஆண்டாள் பாசுரங்களில் விருந்தோம்பலும்
ஆரோக்கிய உணவுகளும்

345. **முனைவர் ப. வடிவேல்** 1390
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(பொருநராற்றுப்படை வழி)

346. **முனைவர் ஆ. சிவசாமி** 1393
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347. **முனைவர் ப. அன்பரசி** 1397
நற்றிணையில் விருந்தும் விருந்தோம்பலும்

348. **முனைவர் ந. தனசேகர்** 1401
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349. **முனைவர் ப. பிரதீபா** 1404
பொருநராற்றுப்படை நவிலும் பழந்தமிழர்
விருந்தோம்பலும் உணவுகளும்

350. **முனைவர் ச. யுவராணி** 1408
வள்ளுவர் கூறிய ஆரோக்கிய உணவும் - உணவு
முறைகளும்

351. **முனைவர் அ. வெண்ணிலா இராஜேஷ்** 1412
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352. **முனைவர் ம. சித்ரகலா** 1417
உணவும் விருந்தோம்பலும் அன்றும் இன்றும்

339. பிரபஞ்சன் படைப்புகளில் உணவு முறைகளும் விருந்தோம்பலும்

முனைவர் ஆர். நிர்மலா தேவி
தமிழ்த்துறைத் தலைவர்
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 638 012

உண்டாலம்ம இவ்வுலகம் இந்திரர் அமிழ்தம்
வைதாயினும் இனிதெனத் தமியர் உண்டலு மிலரே
(புறம் - 182)

சாகாமற் காக்கும் அமிழ்தம் எனினும் தனியே உண்ணாது விருந்தினருக்குக் கொடுத்துத் தாமும் உண்பர் நல்லோர். அத்தகைய சான்றோரால்தான் உலகம் நிலைத்து வாழ்கிறது என்னும் செய்தி, பகுத்துண்ணுல் என்னும் பண்பாட்டை பண்டைத் தமிழர்கள் அடிப்படையாகக் கொண்டிருந்ததை நமக்கு எடுத்துரைக்கிறது. அதாவது போருக்குச் சென்ற அரசன் வேற்று நாட்டில் வெற்றிக் கொடியை நாட்டி அந்நாட்டிலிருந்து கவர்ந்து வந்த பொருள்களைத் தனக்கு உதவியாக இருந்த வீரர்களுக்கும், ஒற்றர்களுக்கும், தூதுவர்களுக்கும் பகிர்ந்தளிப்பான். அவ்வாறு அளிக்கும் போது அவரவர் தகுதியை அறிந்து பங்கீடு செய்வதனைத்தான் தொல்காப்பியர் பாதீடு துறையாகப் பதிவு செய்துள்ளார்.

நோயின்று உய்த்தல் நுவல்வழித் தோன்றும்
தந்துநிரை பாதீடு உண்டாட்டுக் கொடையென
(தொல். புறம் நூ-.61. 6-7)

வெட்சி மறவர்கள் பகைப்புலத்திலிருந்து தாம் கவர்ந்து வந்த பசுக்களைத் தம் பணிக்கு உதவிய ஒற்றர் முதலிய யாவர்க்கும் படுநோயின்று உய்த்தல், நுவல் வழித்தோற்றம் பகுத்துக் கொடுத்தலாகும். இவ்வாறு பகுத்துக் கொடுக்கும் பண்பே விருந்தோம்பல் பண்பாக மலர்ந்தது. இப்பண்பை உலகப் பொதுமறை

சாவா மருந்தெனினும் விருந்தினரைப் புறக்கணித்து உண்ணோம்

விருந்து புறத்ததாத் தானுண்டல் சாவா
மருந்தெனினும் வேண்டற் பாற்றன்று (குறள் - 82)

என்றும், சிலப்பதிகாரத்தில் கண்ணகியின் கூற்றாக,

அறவோர்க் களித்தலும் அந்தண ரோம்பலும்
துறவோர்க் கெதிர்தலும் தொல்லோர் சிறப்பின்
விருந்தெதிர் கோடலும் இழந்த என்னை
(சிலம்பு 2 : 85- 87)

என்றும், குமணன் என்ற வள்ளல் தனக்குக் கொடுத்த செல்வத்தைத் தான் மட்டும் வைத்துக் கொள்ளாது தன்னைச் சுற்றியுள்ள

தமிழ் இலக்கியங்களில் உணவு முறைகளும், விருந்தோம்பலும்

தொகுதி 3

பதிப்பாசிரியர்
முனைவர் ஆ. மகாலட்சுமி

தமிழ் இலக்கியத் துறை, என்.ஜி.எம். கல்லூரி (தன்னாட்சி)
பாலக்காடு ரோடு, பொள்ளாச்சி – 642 001

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தமிழ் இலக்கியங்களில் உணவு முறைகளும் விருந்தோம்பலும்

(பன்னாட்டுக் கருத்தரங்கம்)

பதிப்பாசிரியர்	:	**முனைவர் ஆ. மகாலட்சுமி**
பதிப்புரிமை	:	பதிப்பாசிரியர்
முதற்பதிப்பு	:	ஜனவரி, 2017
வெளியீடு	:	**தமிழ் இலக்கியத்துறை** **என்.ஜி.எம் கல்லூரி** பொள்ளாச்சி - 642 001.
கணினி அச்சாக்கம்	:	பிரடாக் பிரிண்ட், கோயம்புத்தூர் - 29.
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385. **முனைவர் மா.ஆ. சுகந்தி** 1555
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386. **முனைவர். நீ.வ. கருப்புசாமி** 1559
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387. **முனைவர். மா. போ. ஆனந்தி** 1562
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388. **முனைவர் பு.இரா. திலகவதி** 1567
ஆசாரக்கோவை கூறும் உணவு தொடர்பான உணர்வுகள்

389. **முனைவர் சி.ஜே. பிரசில்லா சகாயமேரி** 1571
புறநானூற்றில் உணவியல்

390. **முனைவர் கோ.பா. தாட்சாயிணி** 1575
பண்டைத் தமிழரின் உணவு பழக்க வழக்கங்கள்

391. **முனைவர் செள.பா. சாலாவாணிஸ்ரீ** 1580
பெரும் பாணன் வழி கண்ணனார் நவிலும் உணவு

392. **முனைவர் கே.ஆர். கமலாமுருகன்** 1585
பழமொழிகள் சுட்டும் உணவுச் சிந்தனைகள்

393. **முனைவர் செள. கீதா** 1590
சிறுபாணாற்றுப்படையில் உணவும் விருந்தோம்பலும்

394. **முனைவர் வெ. ராதா** 1593
தமிழ் இலக்கியங்களில் உணவுமுறைகளும் விருந்தோம்பலும்

395. **முனைவர். மு. செல்வி கதிஜா பேகம்** 1597
பெரும்பாணாற்றுப்படையில் உணவு

396. **முனைவர். தி. ஆனந்தவள்ளி** 1601
பெரும்பாணாற்றுப் படையில் உணவுமுறையும் விருந்தோம்பலும்

397. **முனைவர் பெ. சுமதி** 1604
அகநானூற்று மக்களின் உணவுப் பண்பாடு

398. **முனைவர். கு. நாகராஜன், முனைவர். மு. கவிதா** 1608
இல்லங்களிலும் இதிகாசத்திலும் விருந்தோம்பல் அன்றும் இன்றும்

399. **முனைவர். ஜெ. சுமதி** 1613
குறுந்தொகையில் உணவு முறைகளும் விருந்தோம்பலும்

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399. குறுந்தொகையில் உணவு முறைகளும் விருந்தோம்பலும்

முனைவர். ஜெ. சுமதி
உதவிப் பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 12.

'உடம்பை வளர்த்தேன் உயிர் வளர்த்தேனே' என்று திருமந்திரம் கூறுகிறது. உடம்பை நல்ல முறையில் பேணிக்காக்க உணவு மிக இன்றியமையாததாகும். நம் முன்னோர்கள் உடலையும் உள்ளத்தையும் சிறப்பாக வைத்துக்கொள்ள சிறந்த உணவுகளை உண்டு வாழ்ந்து வந்துள்ளனர் என்பதை பல இலக்கியங்கள் எடுத்துக்காட்டுகின்றன. அவ்வகையில் குறுந்தொகையில் கூறப்பட்டுள்ள உணவுமுறைகளையும் விருந்தோம்பும் பண்பையும் இக்கட்டுரையில் காணலாம்.

தானிய உணவு வகைகள்

சிட்டுக்குருவிகள் வீட்டின் முற்றத்திலே உலர வைத்த புழுங்கல் அரிசியை தின்று தனது குஞ்சுகளுடன் இல்லத்திலே தங்கியிருந்தன என்பதை

கூம்பிய சிறகர் மனையுறை குரீஇ
முன்றில் உணங்கல் மாந்தி (பா-46)

என்ற பாடல் வழி அறியலாம்.

தோழி அறிவனிடம், குற்றமற்ற தெருவில் நாய் இல்லாத முன்றிலில், செந்நெல்லாகிய சோற்றை வெண்ணையோடு ஓரில்லத்தில் பிச்சையாகப் பெற்று வயிறு நிரம்ப உண்டு வாழ்வாயாக என்று கூறினாள் அறிவர் என்போர் துறவு உள்ளமும் எதிர்கால அறிவும் உடைய மேலோர். அவர் இவ்வுலகத்தே வேண்டுவது சோறும் நீரும். எனவே அவற்றை நன்கு பெறுக என வாழ்த்தினாள்.

ஆகுஇல் தெருவின் நாய்இல் வியன்கடைச்
செந்நெல் அமலை வெண்மைவெள் இழுது
ஓர் இல் பிச்சை ஆரமாந்தி (பா-277)

பிச்சை எடுப்போருக்கு ஒரே வீட்டில் வயிறு நிரம்பக் கிடைத்தல் இன்பமாதலின் 'ஓரிற்பிச்சை' என்றாள். அறிவன் என்பவர்கள் கொல்லாமை முதலிய அறங்களைக் கடைபிடித்து வரும் அந்தணர் இல்லங்களிலே சென்று ஏற்று உண்ணும் வழக்கம் உடையவர்கள் என்பதை அறிய முடிகிறது.

மதுபானங்கள்

பண்டைக் காலத்தில் மக்கள் கள் குடித்துள்ளனர் என்ற குறிப்பு பல இலக்கியங்களில் உண்டு. கள்ளைக் குடிப்பதோடு மட்டுமன்றி அவற்றை தயாரிப்பது, கெட்டுபோகாமல் பாதுகாத்து வைத்த விதமும்

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தமிழ் இலக்கியங்களில் வாழ்வியல் சிந்தனைகள்

3

பதிப்பாசிரியர்கள்

முனைவர் வே. வளர்மதி
முனைவர் க. தவமணி
அ.குருமூர்த்தி,
எ.ப.சந்திரிகா

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(தொகுப்பு - 3)

மொழி : தமிழ்

பதிப்பு ஆண்டு : 2017

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17.மணிமேகலையில் வாழ்வியல் சிந்தனைகள்
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- **ம.உமாதேவி**
28. சைவமும் வாழ்வியல் நெறிமுறைகளும் 1011
- **திருமதி. க. கவிதா**
29. குறுந்தொகையில் வாழ்வியல் சிந்தனைகள் 1017
- **ம.காயத்ரி**
30. தமிழர் மரபும்மாற்றமும் 1022
- **முனைவர் ந. சதீஷ்குமார்**
31. தொல்காப்பியப் பொருளதிகாரத்தில் வாழ்வியல் பதிவுகள் 1027
- **எ.ப.சந்திரிகா**
32. திருக்குறளில் வாழ்வியல் சிந்தனைகள் 1032
- **சாமுண்டீஸ்வரி**
33. வைரமுத்து புதினங்களில் வாழ்வியல் சிந்தனைகள் 1037
- **இரா.சுப்பிரமணி**
34. தமிழ்மொழி காட்டும் இறைவழிபாடு 1041
- **முனைவர்.ஆ.செந்தாமரை**
35. இராசசிம்மனின் ஆட்சியில் கோயில் கலைச்சிறப்பு 1046
- **முனைவர்.க.தவமணி**

சங்ககாலப் பெண்கள் வாழ்வியல் சிந்தனைகள்

முனைவர் மு.ஹேமலதா., உதவிப்பேராசிரியர் - தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி), ஈரோடு-12.

தமிழ் இலக்கிய வரலாற்றில் சங்ககால இலக்கியங்கள் தொன்மையும் சிறப்பும் மிக்கவையாக இடம்பெறுகின்றன. சங்ககால இலக்கியங்கள் தமிழரின் பொற்கால இலக்கியங்களாகப் போற்றப்பெறுகின்றன. அவை பண்டைத் தமிழர் தம்வாழ்வில் கொண்டிருந்த சிறந்த கொள்கைகளையும்இ உயர்ந்த எண்ணங்களையும் நமக்கு உணர்த்துகின்றன.

"மங்கைய ராகப் பிறப்பதற்கே - நல்ல
மாதவஞ் செய்திட வேண்டும் அம்மா"

என்ற கவிமணியின் வாக்கிற்கேற்ப பெண்கள் சிறப்புடன் விளங்கினர் எனலாம். **சங்ககாலத்தில் பெண்கல்வி**

உலகில் முதன் முதல் பெண்கல்வி தமிழகத்தில் தான் தோன்றியது. பெண்டிர் உரிமையோடு வாழ்ந்து பெருமை பெற்றனர். சங்ககாலத்தில் ஆணுக்கு நிகராகப் பெண்களும் கவிதை இயற்றினர். சங்ககாலப் பெண்பாற் புலவர்கள் அவர்களுக்குத் தோன்றிய கருத்தினைத் தங்கள் விருப்பப்படி வெளிப்படுத்தியுள்ளனர். சங்ககாலத்தில் 41 பெண்பாற்புலவர்கள் இருந்ததாகக் கூறப்படுகிறது. அதில் 29 பேர் அகம் பற்றிப் பாடியுள்ளனர். அவர்கள் படைத்த செய்யுட்கள் பெண்களின் மேம்பாட்டினையும், உணர்ச்சியையும் இயம்புகின்றன.

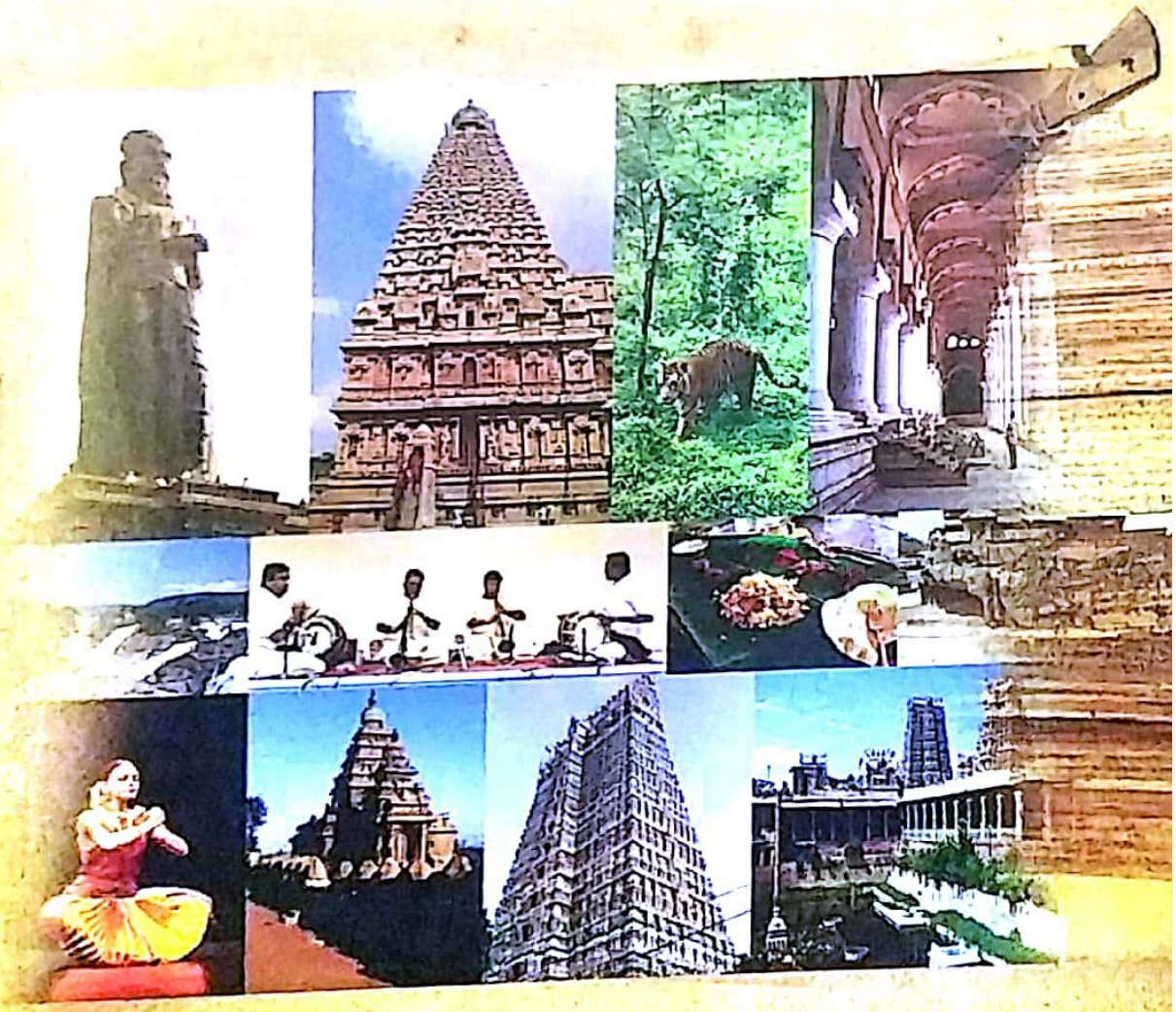
சங்ககாலப் பெண்களின் வீரம்

பண்டைய மகளிர் வீரத்தைப் பெண்பாற் புலவர்களே பெரிதும் விளக்கியுள்ளனர். பொன்முடியார் தாயின் கடமையை ஒரு புறநானூற்றுப் பாடல் மூலம் விளக்குகிறார்.

"ஈன்று புறந்தருதல் என்தலைக் கடனே
சான்றோ னாக்குதல் தந்தைக்குக் கடனே
வேல்வடித்துக் கொடுத்தல் கொல்லற் குக் கடனே
நன்னடை நல்கல் வேந்தர்க்குக் கடனே
ஒளிறுவாள் அருஞ்சம முருக்கிக்
களிறெறிந்து பெயர்தல் காளைக்கு கடனே" (புறம்,312)

தமிழ் இலக்கியங்களில் உணவு முறைகளும், விருந்தோம்பலும்

தொகுதி 3



பதிப்பாசிரியர்
முனைவர் ஆ. மகாலட்சுமி

தமிழ் இலக்கியத் துறை, என்.ஜி.எம். கல்லூரி (தன்னாட்சி)
பாலக்காடு ரோடு, பொள்ளாச்சி – 642 001

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முனைவர் மு. ஹேமலதா
உதவிப் பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
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மனிதன் உயிர்வாழ்வதற்கு இன்றியமையாது தேவைப்படுவது உணவாகும். ஆதிகாலத்தில் உணவுத் தேடலை ஒட்டியே மனிதனின் வாழ்க்கைமுறை கட்டமைக்கப்பட்டிருந்தது. வேட்டையாடுதலில் தொடங்கி விவசாயம் கண்டறிந்ததுவரை அனைத்திற்கும் மனிதனின் அடிப்படைத் தேவையான உணவைத் தடையின்றிப் பெறவேண்டும் என்ற நோக்கமே முதன்மையானதாக அமைந்திருந்தது. காலப்போக்கில் நாகரீக வளர்ச்சியில் தனக்குத் தேவையான உணவைத் தானே உற்பத்தி செய்யத் தொடங்கினான். அதிலும் நம் முன்னோர்களான சங்கத் தமிழர்கள் சுவைமிக்க உணவுப் பொருட்களைச்சமைப்பதிலும் சரி அவற்றைப் பகிர்ந்தளிப்பதிலும் வல்லவர்களாக விளங்கினர். அவரவர் வாழ்ந்த நிலத்திற்கேற்ப உணவு வகைகளும், உணவு முறைகளும் மாறியிருந்தன. பொருளாதார நிலையை ஒட்டியும் உணவின் தரம் மாறுபட்டிருந்தது என்பதை சங்க இலக்கியங்கள் வாயிலாக நன்கு அறிய முடிகிறது. சங்கத் தமிழர்கள் உணவின் சிறப்பையும் தேவையையும் உணர்ந்திருந்ததோடு அதைப் பிறருக்குக் கொடுத்து வாழ்வது இன்றியமையாதது என்பதையும் நமக்கு உணர்த்துகின்றனர். அதன் அடிப்படையில் மக்கள் வாழ்வியலைச் சிறப்புற எடுத்துக்காட்டும் புறநானூற்றின் வாயிலாகச் சங்ககால மக்களின் உணவுப் பழக்கத்தை இக்கட்டுரையில் காண்போம்.

நெய்யில் பொறித்த பன்றி இறைச்சி

மக்கள் தங்கள் வாழ்க்கைத் தரத்திற்கேற்ப உணவை உண்கின்றனர். செல்வச் செழிப்புமிக்கவர்கள் வகைவகையான உணவுகளை உண்பதையும் வறியவர்கள் வயிறு நிறைந்தால் போதும் என்று உண்ணும் முரண்பட்ட வாழ்க்கைநிலையை இன்றும் நாம் சமுதாயத்தில் காண்கிறோம். சங்ககாலத்திலும் அரசர்கள், வணிகர்கள் போன்ற செல்வச் செழிப்புமிக்கவர்கள் ஒன்றன்பின் ஒன்றாகப் பலவகையான உணவுப் பொருட்களை உட்கொண்டனர். பெரும்பாலும் மரக்கறி உணவைக்காட்டிலும் புலால் உணவையே சங்கத்தமிழர் விரும்பி உண்டனர். நெய்யைக் காய்ச்சி உருக்கி அதில் பன்றியின் ஊன் துண்டங்களைப் போட்டு பொறித்ததை

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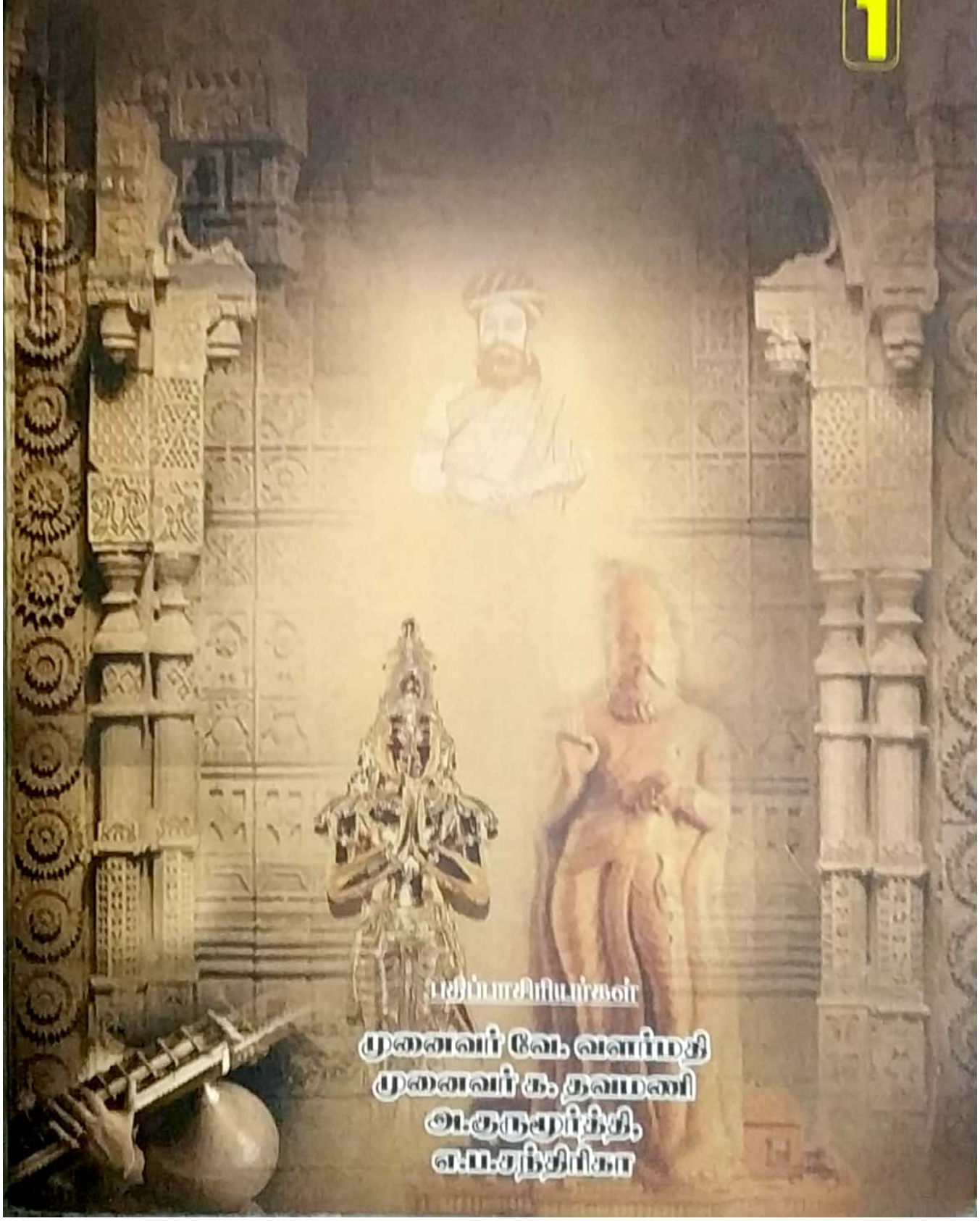

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முனைவர். ந.மு.கவிதா, உதவிப்பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி) ஈரோடு-12.

சமுகப்பார்வையும், சமுகத்தின் மீது அக்கறையும் கொண்ட எழுத்தாளர் மனித உறவுகளில் உள்ள விரிசல்களையும், அதற்கான காரணங்களையும் காணாமல் போகமாட்டார். குறிப்பாக ஒரு படைப்பாளர் மனிதர்களைப் படித்து, அவர்களது இதயத்துடிப்புகளில் ஒளிந்திருக்கும் விருப்பு வெறுப்புகளை, ஏக்கங்களை எதிர்பார்ப்புக்களை ஆராய்ந்து அதனை வெளிப்படுத்துவார். மற்றவர்களைவிட மனித உறவுகளை விரிவாக பேசப் படைப்பாளர்களுக்கே வாய்ப்புகள் அதிகம். உறவுகளில் விரிசல் ஏற்பட்டுவிட்டால் அங்கு மனநிறைவும், மகிழ்ச்சியும், இருக்காது. வாழ்க்கை நெருக்கடியில் அன்பையும், மகிழ்ச்சியையும் நாம் இழந்தாலும், இன்னும் அடைவதற்கு ஏதாவது ஒரு எதிர்பார்ப்பு இருக்கும். அதனால்தான் சக மனிதர்களை நேசிக்க முடிகிறது.

எந்த ஒரு படைப்பாளரும், படைப்பும் சமுக மாற்றங்களை பெரிய அளவில் ஏற்படுத்த முடியாது. அவ்வாறு மாற்றங்களை ஏற்படுத்திய படைப்புகளையும் இனம் காண முடியவில்லை. ஆனால், அப்படைப்புகள் மனித வாழ்வின் பல்வேறு பரிணாமங்களை வெளிப்படுத்த முடியும். அத்தகு படைப்புகளை உருவாக்கிய எழுத்தாளரை வாசிக்கும்போது நம் மன அரங்கில் அதிர்வு ஏற்பட வேண்டும். நாம் வாசித்த படைப்புகளின் சொந்தகாரர் இந்த நூற்றாண்டின் வாழ்வியல் விழுமியங்களைப் பதிவு செய்யும் இலக்கியவாதி என உணரும் தருணத்தை நமக்குள் உண்டாக்க வேண்டும். தன் வாழ்வின் கடந்தகால, நிகழ்கால அனுபவங்களைச் சொல்லும் துணிவும் படைப்பாளருக்கு இருக்க வேண்டும். வேறும் கற்பனைகளையும், தான் படித்தவற்றையும் வைத்துக் கொண்டு எழுத்துலகில் வலம் வர முடியாது. அனுபவமும், கலைநுணுக்கமும், நடப்பியலையும் உள்வாங்கி இருக்க வேண்டும். அவ்வரிசையில் மனித வாழ்க்கையின் அனைத்துப் பிரச்சனைகளையும் தனது விசாலப் பார்வையில் கண்டுணர்ந்து சுவாரசியமாக அழுத்தமாக சிந்தித்து, தனது எண்ணங்களை அழுத்தமாக எடுத்துச் சொல்லும் சிறந்த படைப்பாளர் வண்ணநிலவன். இவர் நெல்லை மாவட்டத்தில் வாழும் மக்களின் இயல்பான வாழ்க்கை போக்கை உள்ளது உள்ளபடியே தன் படைப்புகளில் எழுதியுள்ளார்.

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தமிழ் இலக்கியங்களில் உணவு முறைகளும், விருந்தோம்பலும்

தொகுதி 3

பதிப்பாசிரியர்

முனைவர் ஆ. மகாலட்சுமி

தமிழ் இலக்கியத் துறை, என்.ஜி.எம். கல்லூரி (தன்னாட்சி)

பாலக்காடு ரோடு, பொள்ளாச்சி – 642 001

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தமிழ் இலக்கியங்களில் உணவு முறைகளும் விருந்தோம்பலும்

(பன்னாட்டுக் கருத்தரங்கம்)

பதிப்பாசிரியர்	:	**முனைவர் ஆ. மகாலட்சுமி**
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வெளியீடு	:	**தமிழ் இலக்கியத்துறை** **என்.ஜி.எம் கல்லூரி** பொள்ளாச்சி - 642 001.
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325. பத்துப்பாட்டு காட்டும் குறிஞ்சி நில உணவு

முனைவர் ந.மு.கவிதா
உதவிப்பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 12.

மனிதன் உயிர் வாழ்வதற்கு இன்றியமையாத தேவை உணவுப் பொருட்களாகும். உணவு இயற்கையின் நன்கொடையாகும். ஆடையில்லாத மனிதன் அரை மனிதன் என்பது போல உணவில்லாத மனிதனும் உயிர் வாழ முடியாது. மக்களின் அடிப்படைத் தேவைகளான உணவு, உடை, உறைவிடத்தில் உடையும் உறைவிடமும் இல்லாமல்கூட உயிர் வாழ்ந்திருக்கின்றனர். ஆனால் உணவில்லாமல் எவரும் வாழ்ந்ததில்லை.

மனித சமுதாயத்தினர் வளர வளர உணவையும் பல்வேறு வகையாகப் பகுத்து உண்ணக் கற்றுக் கொண்டனர். உணவை மையமாக வைத்து உலகில் பல போராட்டங்கள் எழுந்தன. ஆதி மனிதனும் உணவைத் தேடுவதையே தன் முதன்மைத் தொழிலாகக் கொண்டான். மனிதன் சாதனைகள் பல படைக்க வேண்டும் என்றால் அவன் முதலில் உணவு பற்றிய கவலை இல்லாமல் இருக்க வேண்டும். உணவின் பிண்டமாகிய உடம்பு உயிரைச் சுமக்க வேண்டுமென்றால் அதற்கு உணவு கொடுத்துக் கொண்டே இருக்க வேண்டும். இதனையே,

உண்டி கொடுத்தோ ருயிர் கொடுத்தோரே
உண்டி முதற்றே யுணவின் பிண்டம் ***(புறம் -8)***

என்று புறநானூறும்

மண்டினி ஞாலத்து வாழ்வோர்க் கெல்லாம்
உண்டி கொடுத்தோ ருயிர் கொடுத்தோரே
(மணிமேகலை. 9)

என்று மணிமேகலையும் எடுத்துறைக்கின்றது.

நிலமும் உணவும்

பழந்தமிழர் சமுதாயத்தில் சாதிப்பிரிவினை இல்லை. ஆனால் நிலத்தையும் தொழில்பண்பையும் அடிப்படையாகக் கொண்டு வாழ்ந்து வந்தனர். மக்கள் அவர்கள் வாழும் நிலத்திற்கு ஏற்ப வேறுபட்டனர். குறிஞ்சி நிலங்களில் வாழ்ந்தவர்கள் குறவர் குறத்தியர் எனவும், முல்லை நிலங்களின் வாழ்ந்தவர்கள் ஆயர் ஆய்ச்சியர் எனவும், மருத நிலங்களில் வாழ்ந்தவர்கள் உழவர் உழத்தியர் எனவும், நெய்தல் நிலங்களில் வாழ்ந்தவர்கள் பரதவர் பரத்தியர் எனவும், பாலை நிலங்களில் வாழ்ந்தவர்கள் எயினர் எனவும் அழைக்கப்பட்டனர். இதனால் பிறப்பால் உயர்வு, தாழ்வு இல்லாது அவரவர் ஆற்றலுக்கு ஏற்ப உழைத்து, உண்டு, உடுத்து, உறங்கி, மகிழ்ந்து வாழ்ந்தனர்.

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தொகுதி 3

பதிப்பாசிரியர்
முனைவர் ஆ. மகாலட்சுமி

தமிழ் இலக்கியத் துறை, என்.ஜி.எம். கல்லூரி (தன்னாட்சி)
பாலக்காடு ரோடு, பொள்ளாச்சி – 642 001

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தமிழ் இலக்கியங்களில் உணவு முறைகளும் விருந்தோம்பலும்

(பன்னாட்டுக் கருத்தரங்கம்)

பதிப்பாசிரியர்	:	**முனைவர் ஆ. மகாலட்சுமி**
பதிப்புரிமை	:	பதிப்பாசிரியர்
முதற்பதிப்பு	:	ஜனவரி, 2017
வெளியீடு	:	**தமிழ் இலக்கியத்துறை** **என்.ஜி.எம் கல்லூரி** பொள்ளாச்சி - 642 001.
கணினி	:	பிரடாக் பிரிண்ட், கோயம்புத்தூர் - 29.
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293. சங்க இலக்கியங்களில் உணவு முறைகளும், விருந்தோம்பலும்

ஜோ. கனகவள்ளி
உதவிப்பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 12.

பண்டைத் தமிழர்கள் சுவையிக்க உணவுப் பொருள்களைச் சமைப்பதில் தேர்ந்திருந்தனர். அவரவர் வாழ்ந்த நிலத்திற்கேற்ப உணவு வேறுபட்டது. அவரவரின் பொருளாதார நிலையையொட்டியும் உணவின் தரம் வேறுபட்டிருக்கும் என்பதிலும் ஐயமில்லை. மரக்கறி உணவோடு புலாலுணவும் பெரிதும் விரும்பியுண்ணப்பட்டது. அதனோடு பல்வகையான மது வகைகளையும் விரும்பியுண்டனர். மனனர்கள் இரவலர்க்கு அளித்த விருந்துகளில் புலாலுணவே பரிமாறப்பட்டது என அறிகின்றோம்.

நெல் வகை

தமிழகத்து மருத நிலங்களில் பல வகையான நெல் வகைகள் பயிரிடப்பட்டன. இராசா அன்னம் என்பது உயர்வகை நெல்லாகும். பண்டமாற்றில் விலையை அறுதியிட நெல்லே பயன்பட்டது. அரிசியைப் புழுக்கிக் காய வைத்து இரும்பு உலக்கையினால் குத்தி அரிசியாக்கினர்.

இருங்காழ் உலக்கை இரும்புமுகம் தேய்த்த
அவெப்புமாண் அரிசி அமலை வெண்சோறு
சுவைத்தால் அலவன் கலவையொடு பெறுகவிர்.
- சிறுபாண், 193-195.

என்பதால் நெற்சோற்றை நண்டுக் கறியோடு உண்டனர் என அறிகின்றோம். நெற்சோற்றோடு காய்கறி வகைகளையும் உண்டனர். கடுகு இட்டுக் காய்கறிகளைத் தாளித்தனர்.

புளிக்குழம்பு

முளிதயிர் பிசைந்து தயிர் குழம்பு வைத்து பரிமாறிய தலைவியைக் குறுந்தொகையில் சந்திக்கின்றோம். அது நன்கு தாளிக்கப்பட்டு இனிமையாக இருந்தது. 'தீம்புளிப் பாகர்' என்பார் புலவர்.

முளிதயிர் பிசைந்த காந்தல் மெல்விரல் - கநற் 167
மாங்கனிச்சாறும் களாப்பழமும், துடரியும் நாவற்பழமும் புளிப்புக்காகப் பயன்படுத்தப்பட்டன. விரால்மீன் குழம்புக்கு மாவின் தீங்கனி புளியாகப் பயன்பட்டதை.

ஓங்குசினை மாவின் தீங்கனி நறும்புளி
மோட்டிரு வராஅல் கோட்டுமீன் கொழுங்குறை
- புறம் 399

என்ற பாடலின் மூலம் அறியலாம்.

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காய் வகைகளை உணவில் பயன்படுத்தினர்

மாங்காயை நசுக்கிப் பின் சாறெடுத்துப் பருகினர் என்பதனை

வளியொடு சினைஇய வண்டளிர் மாஅத்துக்
கிளிபோல் காய கிளைத்துணர் வடித்துப்
புளிப்பதன் அமைத்த புதுக்குட மலிர்நிறை
வெயில் வெரிந் நிறுத்த பயிலிதழ்ப் பசுங்குடைக்
கயமண்டு பகட்டிற் பருகி

மாதுளங்காயை மிளகுப்பொடியும் கறிவேப்பிலையும் இட்டுப் பசுவெண்ணெயில் பொரித்துப் பார்ப்பார் உண்டனர். அக்காலத்தில் உறுகாய்ப் போடும் பழக்கமும் இருந்துள்ளது.

கறியுணவு (இறைச்சி)

எயினர்கள் களர்நிலத்தில் வளரும் ஈச்சம்பழம் போன்ற மேட்டு நிலத்தில் விளைந்த சோற்றினை நாய் வேட்டையாடிக் கொணர்ந்த உடும்புக்கறியோடு உண்டனர். மருத நிலத்தவர்கள் வினைஞர் தந்த வெண்ணெற் சோற்றைக் கோழியிரைச்சியின் வற்றலோடு உண்டனர்.

கடலோரத்தில் வாழ்ந்த உலைஞர்களின் உணவு பற்றியும் பெரும்பாணாற்றுப்படை குறிப்பிடுகின்றது. மீன் உணவினை உண்டதற்கான சான்றுகள் பெரும்பாணாற்றுப்படையில் அறிய முடிகிறது.

அக்காலத்தில் பன்றியிறைச்சியை விரும்பி உண்டனர். வேட்டுவர்கள் பன்றி வேட்டையாடுவது பற்றி இந்நூலே பேசுகிறது. மழை வறண்ட காலத்து நீர் பெறுவதற்காக வெட்டிய குழிகளில் பதுங்கிக் கொண்டு நடுயாமத்திலே வாகைப் பூவின் வடிவினைக் கொண்ட பற்களையுடைய பன்றியின் வரவை எதிர்பார்த்திருப்பாராம்.

இவ்வாறே முயல்களை வேட்டையாடி உண்டனர். பகற்பொழுதிலே திறந்த வாயையுடைய வேட்டை நாயுடன் கானகம் சென்று வேலிகளில் வலையை மாட்டி வைத்துப் பசிய புதர்களிலிருந்து முயல்களை வெளிப்படச் செய்து அகப்படுத்துவர் அதன் இறைச்சியை விரும்பியுண்டனர். ஆட்டுக்கிடாயினை அறுத்து உண்டுள்ளனர். (பெரும்பாண் 111 - 116)

பசும்பால் உணவு

ஆயர்கள் பெரிய சுற்றத்தைக் கொண்ட நண்டின் சிறு குஞ்சுகளைப் போன்ற தினைச் சோற்றைப் பாலுடன் கலந்துண்டனர்.

இருங்கிளை ஞெண்டின் சிறுபார்ப் பன்ன
பசுந்தினை மூரல் பாலொடும் பெறுகுவீர்
(பெரும்பாண் 167 - 68)

மாதுளங்காயொடு மிளகினைச் சேர்த்து வெண்ணெயில் பொரித்துண்டனர்.

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வரகரிசி உணவு

உழவர்கள் வரகரிசியினை அவரைப் புழுக்கோடு உண்டனர்

நெடுங்குரல் வரகின் குறளவிழ்ச் சொன்றிப்
புகரினர் வேங்கை வீகண் டன்ன
அவரை வான்புழுக் கட்டுக் பியல்வுற்
றிணக்கலை மூரல் பெறுகுவீர் (பெரும்பாண் 192 - 196)

பூச்சிகள்

சமையலுக்கு உணவாகக் கொண்டனர். நன்கு புளித்த மோரில் சமையல் ஊறப்போட்டுப் புளிங்கறி சமைத்துண்டனர்.

கார்ப் பெயல் தலைஇய காண்பு இல் காலைக்
களிற்று முக வரியின் தெறு ம்வீ பூப்பச்
செம்புற்று சமையின் இன்அளைப் புளித்து

இறைச்சி கூட்டு உண்டனர். ஊன் துண்டங்களைக் கம்பியிலே கோத்து நெருப்பில் வாட்டி உண்பதுண்டு.

காழிற் கூட்ட கோழுமீன் கொழுங்குறை
(பொருந் - 105)

மன்னர்கள் பாணர்க்கும் புலவர்க்கும் அளித்த பெருவிருந்துகளில் ஊன் சோறே பரிமாறப்பட்டது.

கள்ளை உண்டனர்

கள்ளுண்ணுவதை அக்காலத்தோர் தவறாகக் கருதவில்லை. அதனை மகிழ்ச்சியிலும் துன்பக் காலத்திலும் உண்டனர் என்பதற்கும் மற்றவர்களுக்குப் பரிமாறினர் என்பதற்கும் சான்றுகளாக பின்வரும் பாடல்கள் உணர்த்துகின்றன.

இன்கடும் கள்ளின் ஆமூர் (புறம் 80)

நன்கு புளித்த கள் தேள்கடுப்பன்ன கடுமையுடையதாகும் எனப் பாடியுள்ளனர். தேறலைப் புளிக்க வைப்பதற்கு அதனை மூங்கிற் குழாயினுள் ஊற்றி நிலத்தினடியிலே புதைத்து வைத்தனர்.

நிலம்புதைப் பழுநிய மட்டின் தேறல
புலிவேய் குரம்பைக் குடிதொறும் பகர்ந்து (புறம் 120)

உள்நாட்டுக் கள்ளைத் தவிர வெளிநாட்டு மது வகைகளையும் வருவித்து உண்டனர். பெரும்பாலும் மன்னர்களும் செல்வந்தவர்களும் இதனை உண்டனர். மாங்குடி மருதனார் நெடுஞ்செழியனை,

ஒண்டொடி மகளிர் பொலங்கலத் தேந்திய
தண்கமழ் தேறல் மடுப்ப மகிழ்சிறந்து
ஆங்கினிது ஒழுகுமதி (மதுரை - 24)

என வாழ்த்துகின்றார்.

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பழங்கள்

பழங்கள் உடலுக்கு ஊட்டத்தையும், ஆற்றலையும் தருவன என்பது உலகச் சான்றோர் அனைவராலும் ஒப்புக் கொள்ளப்பட்ட உண்மையாகும். உலகியல் வாழ்விற்கு மட்டுமின்றி, ஆன்மீக நெறியில் செல்பவர்க்கு பழங்கள் சிறந்த உணவாகும். பிற உணவுகளைத் தவிர்த்து, காய்கனிகளை மட்டுமே அருந்துவது மன ஒருமைப்பாட்டிற்கு ஏற்றது என்று சான்றோர் பலரும் நவில்கின்றனர்.

'இரவில் படுக்குமுன் பழம் சாப்பிடுதல் உடலுக்கு நல்லது' என்பது ஜெர்மானியர் கருத்து. தினம் ஓர் ஆப்பிள் சாப்பிட்டால் வைத்தியர் தேவையில்லை என்பர் ஆங்கிலேயர். ஒவ்வொரு மாதுளைக் கனியிலும் சொர்க்கத்தின் அமிர்தத்தின் ஒரு துளி இருக்கிறது என்றும், அத்திப்பழம் உடல் மூட்டுகளில் உண்டாகும் வலியை நீக்கிவிடுகிறது என்றும், கண்ணில் நோய் வரும்போது மட்டும் பேரீச்சம்பழம் உண்ண வேண்டாம் என்றும் கூறப்படுகிறது. இத்தகைய கனிவகைகள் பலவற்றையும் தமிழ் மக்கள் காலம் அறிந்து, இடமறிந்து, அளவறிந்து பயன்படுத்தினர் என்பதற்குத் தமிழ் இலக்கியங்கள் சான்று பகரும். பெரியோர்களைக் காணும்பொழுது அவர்கட்குக் கனி கொடுத்து வணங்குதல் தமிழர்தம் மரபாகும். சீறாப்புராணத்தில் முகம்மது நபியைக் காணவந்த ஊசா, நபிகள் நாயகத்திற்குக் கனி கொடுத்து வணங்கும் காட்சியைக் காண்கிறோம்.

தமிழர்-மா, பலா, வாழை, நாவல்கனி, களாக்கனி, நெல்லிக்கனி, மாதுளங்கனி, அத்திப்பழம், விளாம்பழம், புளியம்பழம், ஈச்சம்பழம் போன்ற பலவகைக் கனிகளையும் எலுமிச்சை, நாரத்தை போன்ற கனிகளையும் நன்கு பயன்படுத்தினர் என்பதை இலக்கியங்களில் பரக்கக் காணலாம்.

பெரும்பாணாற்றுப் படை அக்கால மக்கள் பலாப்பழம், வாழைப்பழம், நுங்கு, சேப்பங்கிழங்கு, தேங்காய் முதலியவற்றைப் பயன்படுத்திய தன்மையை அழகுற வர்ணிக்கின்றது.

கானற் பலவின் முழவு மருள் பெரும் பழம்

என்னும் தொடரும்,

வன்கோட் பலவின் களை விளை தீம்பழம்

என்னும் தொடரும் மலைபடுகடாம் காட்டும் பலவின் காட்சியாகும்.

முடிவுரை

இவ்வாறு சங்க இலக்கியத்தில் கள்ளும் ஊனும் பெரிதும் பாராட்டப்படும் நிலை, வீரம் நிரம்பிய காலத்தின் சிறப்பியல்பு என்பதனை அறிய முடிகிறது. விருந்தோம்பலும் உணவு முறையும் பெரிதும் மேற்கூறிய விளக்கங்கள் மூலம் சிறப்பாக அமைந்திருந்தன என்பதை அறிய முடிகிறது.

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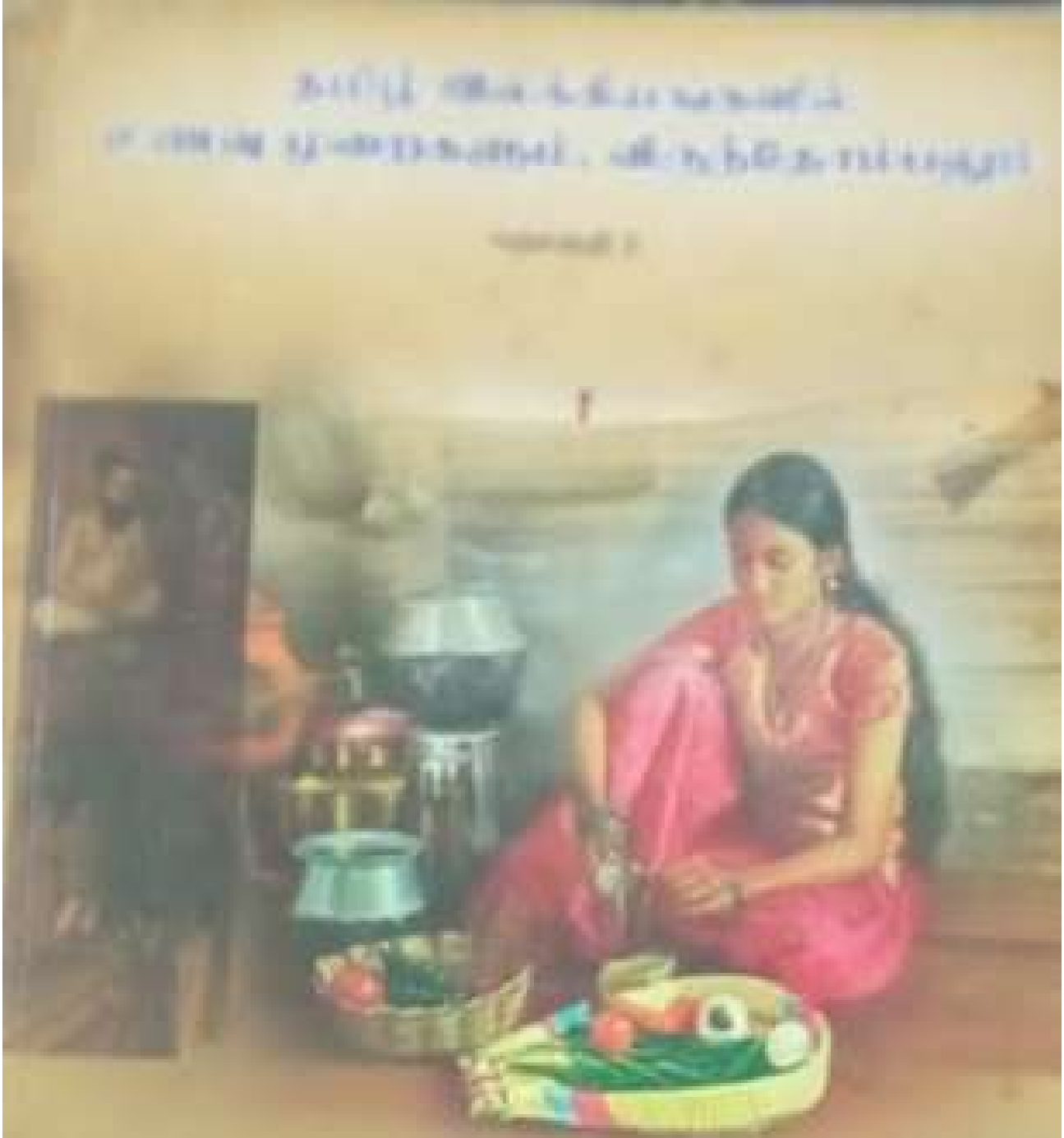

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உதவிப் பேராசிரியர், தமிழ்த்துறை
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ஈரோடு - 12.

...ன்னுரை

கல்தோன்றி மண்தோன்றாக் காலத்தே வாளொடு
முன்தோன்றிய மூத்தகுடி

...ன்ற முன்னோர் கூற்றின்படி மூத்த குடியினராகிய தமிழரின் ...ாரம்பரியமும் பண்பாடும் கலையொழுக்கமும் என்றும் தமிழனத்தின் ...டையாளத்தை உலகிற்கு எடுத்துக்காட்டுவதாகும்.அகம், புறம் என்று ...ாழ்க்கையை இரு கூறாகப் பகுத்து நல்ல குடும்பச் சூழலையும் ...ரசியல் அமைப்பையும் கொண்டு வாழ்க்கையில் உயர்ந்திருந்தனர். ...ிவ்வுண்மைகளைப் பண்டைய இலக்கியங்களில் நாம் காணலாம். ...ன்றைய சூழலில் நவீனமயமாதல், நகரமாயமாதல், தொழில் மயமாதல், ...மேற்கத்திய மயமாதல் போன்ற பல்வேறு காரணங்களால் காலம் ...காலமாக நாம் பின்பற்றி வந்த பழக்கவழக்கங்கள் பண்பாடுகள் ...போன்றவற்றில் மாற்றம் ஏற்பட்டுள்ளன. இந்நிலை பொருளாதார ...வளர்ச்சியைக் கொடுத்தாலும் தனிமனிதனின் வாழ்வியல் கூறுகளைச் ...சிதைத்துவிட்டன. இழந்த நம் பாரம்பரியத்தையும் பண்பாட்டையும் ...மீண்டும் கட்டிக்காக்க வேண்டுமாயின் தமிழர்களின் விலைமதிக்க முடியாச் ...செல்வமான இலக்கியங்களை கற்று அதன் நம் தொலைந்தவற்றை ...மீட்டெடுக்க வேண்டும். அதன் அடிப்படையில் நம் முன்னோரின் ...வாழ்வியலை பழந்தமிழ் இலக்கியமான பெரும்பாணாற்றுப்படை வழி ...காண்பதே இந்தக் கட்டுரையின் நோக்கமாகும்.

அந்தணர் உணவு

பார்ப்பார் என்று அழைக்கப்படுகின்ற அந்தணர்கள் இல்லத்தில் சமைக்கப்படும் உணவு என்னென்ன என்று கூறப்படுகிறது. தமிழ்குடியிலே தோன்றிய பார்ப்பார்களையே கடியலூர் உருத்திரங்கண்ணனார் குறிப்பிடுகிறார். கல்வியில் சிறந்து விளங்கும் இவர்கள் புலால் உண்ணமாட்டார்கள் காய்கறிகளையே உண்டனர் என்பதையும் அவர்கள் இல்லத்திற்கு சென்றால் எவ்வாறு விரும்தோம்பல் செய்வார்கள் என்பதையும்,

மறை காப்பாளர் உறைபதிச் சேப்பின்
பெருநல் வானத்து வடவயின் விளங்கும்
சிறு மீன்புரையும் கற்பின், நறுநுதல்
வளைக்கை மகடூஉ வயினறிந்து அட்ட,
...ர்க்கடைப் பறவைப் பெயர்ப்படு வத்தம்,
...வெண்ணையின், மாதுளத்து

தமிழ் இலக்கியங்களில் உணவு முறைகளும், விருந்தோம்பலும்

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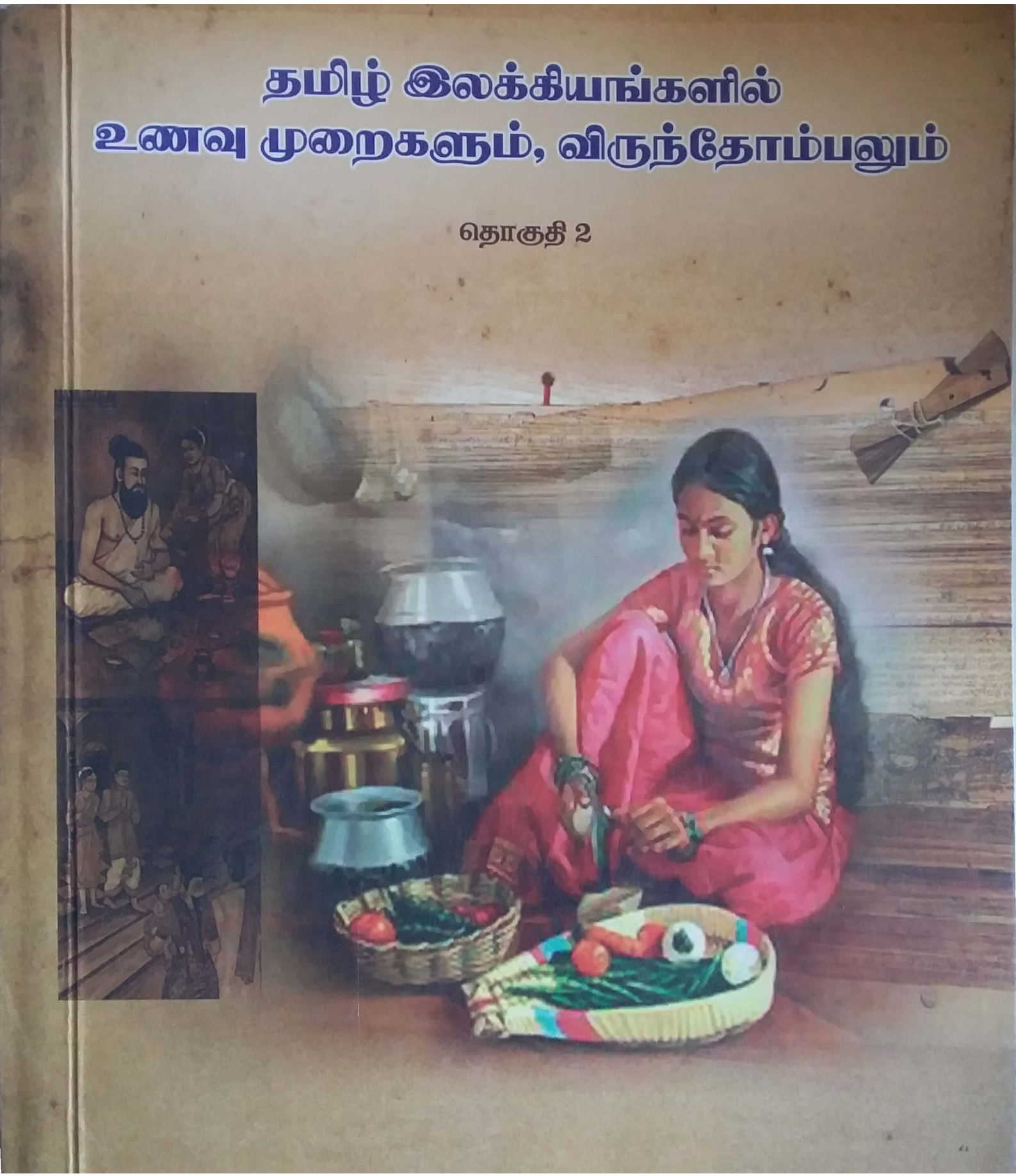

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ச. புஷ்பா

உதவிப்பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 12.

தற்கால மக்களின் வாழ்க்கையை நடப்பியல் தன்மையில் பிரதிபலித்துக் காட்டுவது இக்கால இலக்கியங்கள். தமிழ் இலக்கியங்களில் புதுக்கவிதை தனியிடத்தை பிடித்துள்ளது என்றால் மிகையாகாது. பாமர மக்களிடையேயும் தென்றல் என உலாவரும் இலக்கியம் புதுக்கவிதை. இவற்றில் மக்களிடையே உள்ள விருந்தோம்பல் பண்பும், உணவு முறைகளையும் பற்றி காண்போம்.

உயிரினங்கள் தோன்றிய நாள்தொட்டு முதலில் உணர்ந்த உணர்வு பசி. பசி என்ற உணர்வைக் கட்டுப்படுத்த கண்டுபிடித்த ஒரு பொருள் உணவு. கற்கால மனிதன், பசிக்கு விலங்குகளைக் கொன்று அதன் மாமிசத்தை அப்படியே உண்டான். பின் நெருப்பைக் கண்டுபிடித்து மாமிசத்தை சுட்டு பகிர்ந்து உண்டு வந்தான். தாவரங்களின் இலை, காய், கனி, விதை, மலர் போன்றவற்றையும் உணவாகக் கொண்டான்.

முறம் பசித்தீ அணைப்பதற்கு
எதுவும் வழிமுறை புரியாமல்
மண்டி இட்டு மிருகம் போல்
நக்கித் தண்ணீர் குடித்தானே!
குரங்குஇ கரடி இவையெல்லாம்
காய் கனி பறித்து உண்பதுபோல்
எக்கி வாயால் கடித்தானே!
சிக்கி முக்கி நெருப்பால் சமைத்தானே
அவனே உணவைத் தந்தவனாம்.
(தமிழ் நாடன் கவிதைகள்,ப.220)

என்று மனிதன் உணவை எப்படி உருவாக்கினான் என்பதைத் தமிழ் நாடன் தனது கவிதையின் வரிகளில் படம் வரைந்து காட்டியுள்ளார். [illegible] வளர்ச்சியின் விளைவாக உணவுப் [illegible] விருந்தளித்து தானும்

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நல்லமுத்துக் கவுண்டர் மகாலிங்கம் கல்லூரி, பொள்ளாச்சி

(தன்னாட்சி)

தமிழ் இலக்கியத்துறையும் நியூ செஞ்சுரி புக் ஹவுஸ் நிறுவனமும்

இணைந்து நடத்தும்

பன்னாட்டுக் கருத்தரங்கம்
(International seminar)

06.01.2017 – வெள்ளிக்கிழமை

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திரு/செல்வி/திருமதி/முனைவர் .....ச. புஷ்பா..... அவர்கள் நல்லமுத்துக் கவுண்டர் மகாலிங்கம் கல்லூரித் தமிழ் இலக்கியத்துறையும் நியூ செஞ்சுரி புக் ஹவுஸ் நிறுவனமும் இணைந்து நடத்தும் தமிழ் இலக்கியங்களில் உணவு முறைகளும் விருந்தோம்பலும் என்னும் பன்னாட்டுக் கருத்தரங்கில் பேராளராகக் / ங்கேற்பாளராகக் கலந்து கொண்டு ..புதுக்கவிதை.....காட்டும்.....உணவு.முறைகளும்..விருந்தோம்பலும் ..... என்னும் தலைப்பில் ஆய்வுக் கட்டுரை வழங்கிச் சிறப்பித்தார் எனச் சான்றளிக்கப்படுகிறது.

டாக்டர் பி.கே. கிருஷ்ணராஜ் வாணவராயர்	முனைவர் பொ.மா. பழனிசாமி	முனைவர் ஆ. மகாலட்சுமி
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வேளாளர் மகளிர் கல்லூரி,
ஈரோடு.

"இலைஇலபிடவம் ஈர்மலர் அரும்ப
புதல்இவர் தளவம் பூங்கொடிஅவிழ
பொன்எனக் கொன்றைமலரமணிஎன
பல்மலர் காயாங் குறுங் சினைகளுல
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முல்லைநிலத்தில் பிடவம், தளவம், கொன்றை, காயாம் போன்ற மலர்கள் மலர்ந்தால் கார்காலம் தொடங்கியதற்கான அறிகுறியாகக் கொண்டு, தலைவியைப் பிரிந்துசென்ற தலைவன் தேரோட்டியிடம் விரைவில் தேரினைச் செலுத்துமாறு நற்றிணையில் பாடப்பட்டுள்ளது. பொன் வைக்கமுடியாத இடத்தில் பூவை வை என்பது கிராம மக்களிடையே இன்றும் உள்ள பழமொழியாகும். எனவே, மங்கலநிகழ்ச்சியில் பொன்னுக்குப் பதிலாகப் பூ இருந்தால் போதும்.

"மங்கலம் ஆகி இன்றிஅமையாது
யாவரும் மகிழ்ந்துமேற்கொளமெல்கி
பொழுதின் முகமலர்வுஉடையதுபூவே"

- நன்னூல், நூற்பா 30

அதாவது பூ மங்கலப் பொருள், எல்லா நிகழ்வுகளுக்கும் இன்றியமையாதது. எல்லோரும் மகிழ்ந்து ஏற்றுக்கொள்ளும் மென்மைத் தன்மை உடையது. தத்தமக்கேற்ற பருவத்தில் பக்குவத்தில் மலரும் என்று நன்னூல் குறிப்பிடுகிறது. ஆரிய

முதலாவது உலகத் தமிழ் மரபு மாநாடு

பன்னாட்டு தமிழ் ஆய்வுக் கருத்தரங்கம்

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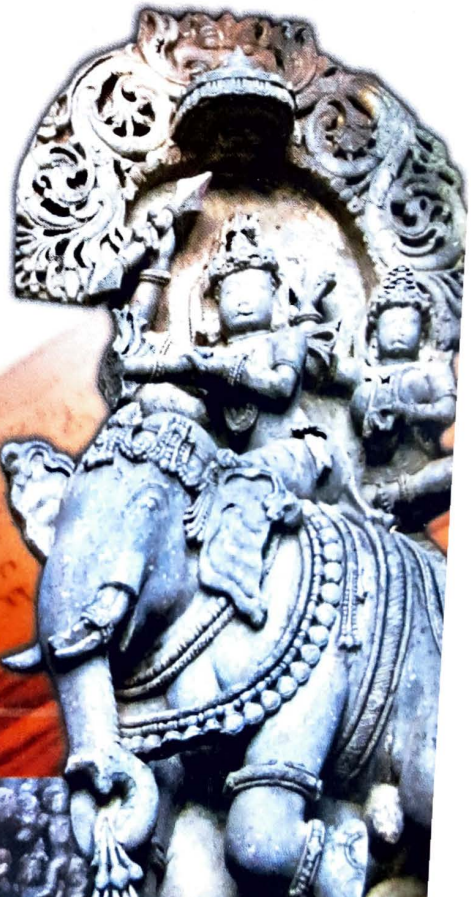

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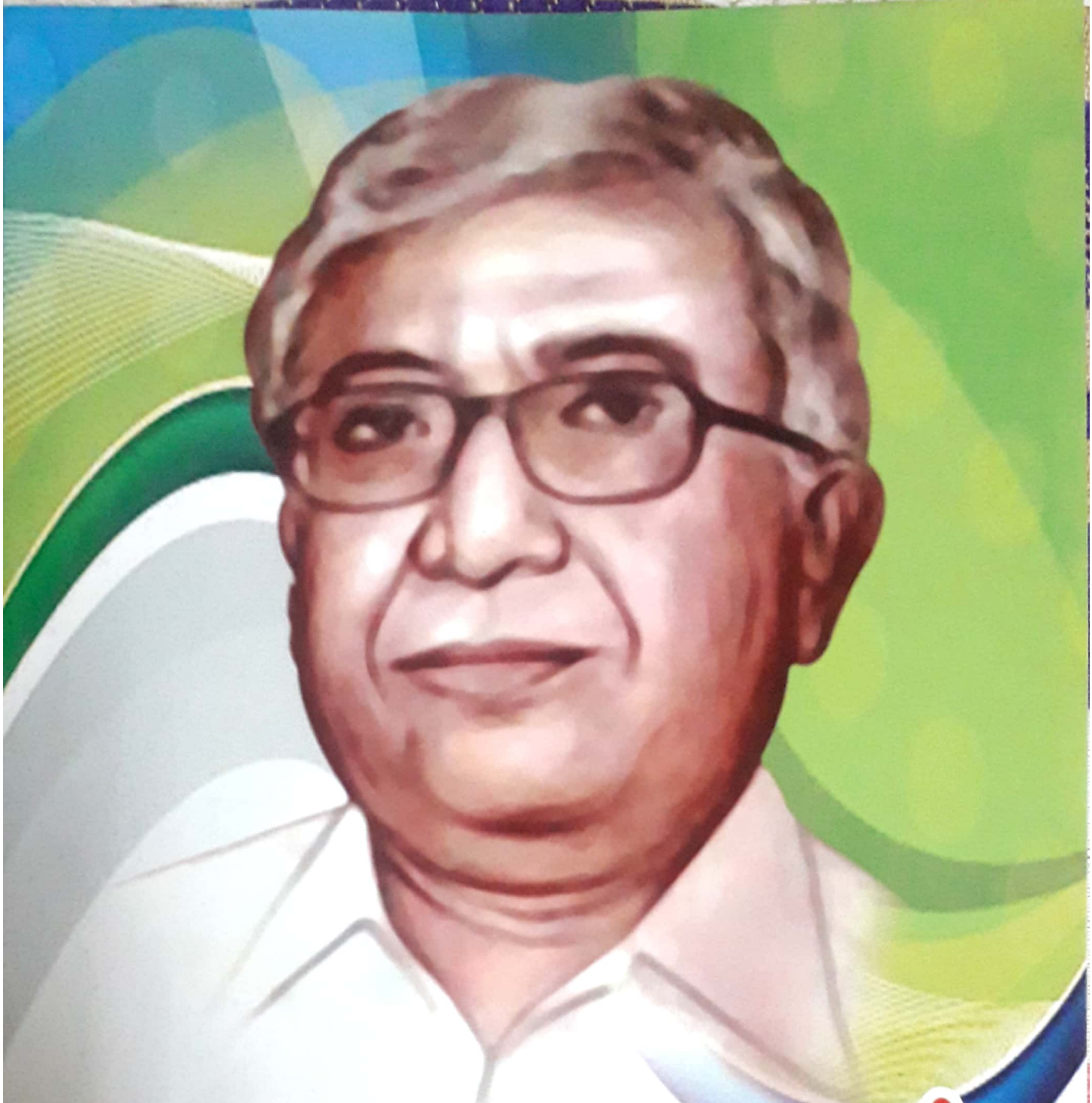
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி),
ஈரோடு.

ஆளுமை (Personality) என்பது ஒருவரின் குண இயல்பு அல்லது தனித்தன்மை எனலாம். ஆளுமை என்பது ஒருவரை மற்றவரிடமிருந்து வேறுபடுத்திக் காட்டும் சிறப்புப் பண்பாகும். ஆளுமை என்பதை ஒருவரின் உளவியல் கையொப்பம் என்றும் கூறலாம். உலகத்தோடு ஒட்டியும் ஒட்டாமலும் ஒழுகும் ஒருவரின் நடத்தை, விருப்பங்கள், இயல்புகள், இலக்குகள், நோக்கங்கள் ஆகியவற்றின் தொகுப்பே ஆளுமை ஆகும். சங்ககாலப் பெண்கள் தங்கள் இல்லறத்தையும் சமூகத்தையும் சிறந்த முறையில் நெறிப்படுத்தி ஆளும் தலைமைப் பண்பு மிக்கவர்களாக இருந்தனர். அறம், அன்பு, வீரம் இவற்றோடு அறிவிற் சிறந்த படைப்பாளிகளாகவும் விளங்கினர். சங்ககாலப் பெண்பாற் புலவர்கள் பலர் பெண்களின் உணர்வுகளைத் தங்கள் பாடல்களில் பதிவு செய்துள்ளனர்.

அன்பு

அன்புள்ளம் என்பது ஒரு மனிதனின் சிறந்த ஆளுமைப் பண்பாகும். சங்கப்பாடல்களில் காணப்படும் பெண்கள் அனைவரும் அன்புடை நெஞ்சம் கொண்டவர்களாகவே காணப்படுகின்றனர். தலைவி, தோழி, செவிலித்தாய், நற்றாய் போன்றோர் அன்பு வழிப்பட்டவர்களாகவே காணப்படுகின்றனர். அதிலும் தலைவி மிகுந்த அன்பு மனம் கொண்டவளாகக் காட்சியளிக்கிறாள். தலைவன் மேல் அதிகப்படியான அன்பும் நம்பிக்கையும் கொண்டவளாக விளங்குகிறாள்.



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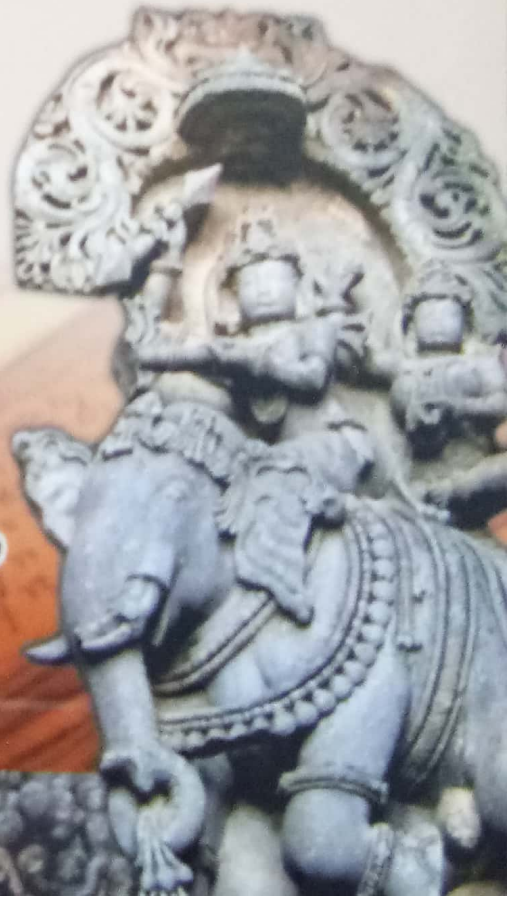

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சோ. தர்மன் கதைகளில் வாழ்வியல் நெறி

திருமதி. ஜோ. கனகவள்ளி
உதவிப் பேராசிரியர் - தமிழ்த் துறை,
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி),
ஈரோடு.

இலக்கியம் என்பது மொழியின் வாயிலாக வாழ்க்கை முறையினை எடுத்துக்காட்டுவதாகும். படைப்பாளி தன்னைச் சுற்றி நடப்பவைகளைக் கூர்ந்து கவனித்து கிடைக்கும் அனுபவங்களைச் சொல்லோவியமாக்கி அறமுரைத்து, சிந்திக்கச் செய்து மக்களை நல்வழிப்படுத்துவதே ஆகும்.

மனிதன் தனது மனதில் வீசும் எண்ணங்கள், அம்மனித வாழ்க்கையில் தோன்றும் சிந்தனைகள், அனுபவச் சுரங்கத்தில் கற்பனைகள் இவையே இலக்கியத்தை கவினுறு படைப்பாக்குகின்றன.

இத்தகைய சிறப்புடைய இலக்கியம் மனித வாழ்வை செம்மைப்படுத்த உதவுகிறது.வாழ்வை வளப்படுத்தவும், நெறிப்படுத்தவும் சினைக்கிறது. நுண்மையான கருத்துகளுக்கு வண்ணமும் வடிவமும் அளிக்கிறது. தெளிந்த சிந்தனையின் உயிரோட்டமாகவும் இருக்கிறது. பண்பை புலப்படுத்தி மறைபொருளைஉள்ளுறுத்துகிறது. கற்போரையும் கேட்போரையும் ஆட்படுத்தவல்லது. மானுடத்தில் வாழும் குரலாக ஒலிக்கிறது. இத்தகைய சிறப்புடைய இலக்கியங்கள் தமிழில் எண்ணற்றவை. அவற்றை புராணங்கள், இதிகாசங்கள், சங்க இலக்கியங்கள், நீதி இலக்கியங்கள் என்று பலவாறு நம் முன்னோர்கள் தொகுத்துள்ளனர்.தற்கால இலக்கியங்கள் நாவல், புதுக்கவிதை, சிறுகதை என்பனவாகும். இதில், சிறுகதைத்தொகுப்பு ஒன்றில் சோ.தர்மன் கதைகளில் வாழ்வியல் நெறியினைக் காண்போம்.

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தமிழ் இலக்கியங்களில் வாழ்வியல் சிந்தனைகள்

1

பதிப்பாசிரியர்கள்

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முனைவர் க. தவமணி
அ. குருமூர்த்தி,
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தமிழ் இலக்கியங்களில் வாழ்வியல் சிந்தனைகள்

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திருமந்திர அட்டாங்க யோகத்தில் பிராணாயாமம்

முனைவர் அய்யம்மாள், உதவிப் பேராசிரியர் தமிழ்த்துறை வேளாளர் மகளிர் கல்லூரி, ஈரோடு

ஆசனம் பயிற்சிக்குப் பின் ஆல்வாசனத்தில் அமர்ந்து கொண்டு பயில வேண்டுவது பிராணாயாமம். யோக சாதகர்களுக்குப் பிராணாயாமம் ஓர் அடிப்படையான பயிற்சி. புறத்தே செல்வதும் உள்ளே புகுவதுமாகிய பிராணனை (காற்றை) நெறிப்படுத்தி அடக்குதல் என்பது இதன் பொருள். 'பிர' என்றால் தலைமையான, உயர்ந்த என்று பொருள். இவ்வுலகில் உருவம் எடுத்திருக்கும் அனைத்தும் ஆகாசத்தினின்று உண்டானவையே வாயுவாகவும், நீராகவும், கடினப் பொருளாகவும் உள்ளது. யாவும் ஆகாசமே. சூரியன், சந்திரன் உள்ளிட்ட கோள்கள், மனிதன், விலங்கு, மரம், செடி ஆகிய யாவும் ஆகாசமே. இந்த ஆகாசம் எந்த சக்தியினால் பிரபஞ்சமாக உருவாக்கப்பட்டிருக்கின்றதோ அந்த சக்திக்குப் பிராணன் என்று பெயர். ஆகாசம் உருவமாய் உருவெடுக்கும் பொழுது அவ்வுருவத்திற்குச் சக்தியாய் ஆகாசத்தின் உடன் வருவது இப்பிராணனே ஆகும். இது விசை எனப்படும். இந்த பிராணனே ஒவ்வொருவரின் உடலிலும், எண்ணங்களைத் தோற்றுவிக்கின்ற மனமாக உருவெடுக்கின்றது. இந்த மனதில் தோன்றும் எண்ணங்களுக்குச் செயல் வடிவமாக இருப்பதும் பிராணனே. பிராணனை அடக்கி ஆளத்தெரிந்த சாதகன் இயற்கையிலுள்ள மனங்கள் யாவற்றையும் அடக்கி ஆளத் தெரிந்தவன் ஆகின்றான். இவ்வகை சாதகனுக்கு உபாயமாக இருப்பதே பிராணாயாமம் ஆகும். பிராணன் என்பது ஒருவன் உடலினுள் இருக்கும் உயிர்நாடி எனப் பொருள்படுகிறது.

பிராணயாமம் என்பது பிராண - ஆயாம் என்னும் கூட்டுச் சொல்லில் 'ஆயாம' என்னும் சொல் அடங்குதல் என்னும் பொருளில் வருகிறது. உயிர் சக்தியான பிராணனை அடக்கி ஆண்டு அதனை அறிவதே பிராணயாமம் ஆகும். பிராணயாமம் என்னும் இப்பகுதி பிராணயாமம் பற்றிய கருத்துக்களும் பிராணின் அளவுமுறைகள் முதலானவையும் விளக்கப்பட்டுள்ளன.

திருமூலர் கூறும் பிராணயாமம்

மனமாக உள்ள பிராணன், வாய்வாகிய பிராண வாய்வால் அடக்கப்படுவதும் அவ்வாறே ஒழுங்குபடுத்தப்படுவதும் அதனால் மனோலயத்தில் இறைவனைக் கண்டு மகிழ்ந்திருப்பதும் பிராணயாமம் ஆகும். மனம் பிராண வாய்விற்கு அடங்காது. திரிதலையும் அம்மனதை அடக்கி பிராணவாயுவைச் செய்தலையும் திருமூலர் தம் திருமந்திரத்தில்,

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"மன்மனம் எங்குண்டு வாயுவும் அங்குண்டு
மன்மனம் எங்கில்லை வாயுவும் அங்கில்லை
மன்மனத் துள்ளே மகிழ்திருப் பார்க்கு
மன்மனத் துள்ளே மனோலயம் ஆகும்"

திருமந்திரம்- பாடல்.600

என்று கூறி விளக்குகிறார். அதாவது நினைத்தலைச் செய்யும் மனம் எங்கே உள்ளதோ அங்கே பிராணவாயுவும் உண்டு. மனம் நினைக்கவில்லையனால் பிராணவாயுவில் அசைவு உண்டாகாது. அம்மனத்தில் நினைப்பதை விட்டு, அதனை அடக்கி அதனுள் மகிழ்ந்திருப்பார்க்கு நினைக்கும் மனமே நினையாத மனமாகி அடங்கிவிடும் என்கிறார். ஆன்மாவிற்கு உயிர் ஒளியைச் சுமந்து செல்லும குதிரையே மூச்சு எனப்படும். 'பிராணன்' ஆகும். இக்குதிரையைத் திருமூலர் குறிப்பிடும் பொழுது,

"ஐவர்க்கு நாயகன் அவ்வூர் தலைமகன்
உய்யக் கொண்டேறும் குதிரை மற்று ஒன்று உண்டு
மெய்யர்க்குப் பற்றுக் கொடுக்கும் கெடாது போய்ப்
பொய்யரைத் துள்ளி விழுந்திடும் தானே"

திருமந்திரம்- பாடல்.546

என்று கூறியுள்ளார். மெய், வாய், கண், மூக்கு, செவி என்னும் ஐம்பொறிகளுக்கும் தலைவன் மனம். அந்த மனத்திற்குத் தலைவன் ஆன்மா. ஆன்மா என்ற அந்தத் தலைவனைச் சுமந்து செல்லும் குதிரையே உயிராற்றல் எனப்படும் உஷ்ணம் ஆகும்.

கண்டம் எனப்படும் விசுக்தியைக் கடந்து அகண்டாகாரமாய இறைவெளியைப் பற்றி நிற்போர்க்கு அந்தக் குதிரை அடிமையாய்த் தொண்டு செய்யும். தலைவனின் கட்டளைக்குக் கீழ்படிந்து நடக்கும். எனவே மூச்சு ஓட்டமும் தொடர்ந்து நடக்கும். மரணம் ஏற்படாது.

ஐம்பொறிகளின் வயப்பட்டு கண்டத்திற்குக் கீழே உள்ள ஆசைகளில் சிக்கிக் கிடப்போரை எந்த நிடத்திலும் தூக்கி எறிந்துவிட்டு அந்தக் குதிரை பறந்துவிடும். எந்த வினாடியிலும் அவர்களின் உயிர் எமன் கையில் சிக்கிவிடும்.

இந்த பிராணன் என்னும் குதிரையை பிராணன், அபானன் என்று இரண்டு குதிரையாகக் கொண்டு வெளியே விட்டு உள்ளே நிறுத்தும் திறமையைப் பெற குருவின் அருள் வேண்டும். இதனைத் திருமூலர் தம் பாடலில்,

"ஆரிய னல்ல குதிரை இரண்டுள
வீசிப் பிடிக்கும் விரகறி வாரில்லை
கூரிய நாதன் குருவின் அருள்பெற்றால்
வாரிப் பிடிக்கவசப்படுந் தானே" திருமந்திரம்- பாடல்.547

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என்று குறிப்பிடுகின்றார். இப்பேறு பெற்றறோர். சிவன் அருளால் அளவில்லாத காலம் நீரில் மூழ்கியிருந்தாலும் நிலத்தில் புதையண்டிருந்தாலும் உடம்பழியாது உயிர் வாழ்வார். இதனைத் தம் பாடல் வழி திருமூலர்,

"ஈராறு கால் கொண்டெழுந்த புரவியைப்
பேராமற் கட்டிப் பெரிதுண்ண வல்லிரேல்
நீராயிரமும் நிலமாயி ரத்தாண்டும்
பேராது காயம் பிராண் நந்தி ஆணையே"

திருமந்திரம்- பாடல்.702

என்று நந்தியின் மீது ஆணையிட்டு உறுதிபடக் கூறுகிறார். இக்குதிரைகளை அடக்கி ஆண்டு அதன் வழியே மேல் நோக்கிச் செல்லுமாறு அமைத்துவிட்டால் கள்ளுண்ணாமலேயே மகிழ்ச்சியுண்டாகும். உடலில் சோர்வு நீங்கும் சுறுசுறுப்பு கிடைக்கும். இப்பலன்களைக் கூறுப்போது திருமூலர்,

"புள்ளினம் மிக்க புரவியை மேற்கொண்டாற்
கள்ளுண்ண வேண்டாம் தானே களிதரும்ந்
துள்ளி நடப்பிக்குஞ் சோம்பு தவிர்க்கும்
உள்ளது சொன்னோம் உணர்வுடை யோர்க்கே"

திருமந்திரம்- பாடல்.548

என்று கூறியுள்ளார்.

பதஞ்சலி கூறும் பிராணாயாமம்

ஆசனத்தில் அமர்ந்த பிறகு பிராணாயாமம் பயிற்சியை மேற்கொள்ள வேண்டும்.

"தஸ்மின் ஸதி ச்வாஸ ப்ரச்வாஸயோ:
கதி விச்சேத ப்ராணாயாம்"

பதஞ்சலி யோகசூத்திரம்- பாடல்.49

பிராணாயாமத்தில் உள் மூச்சு வெளி மூச்சு ஆகிய மூச்சுப் பயிற்சியை ஒழுங்குபடுத்துவதாகும். பிராணன் என்பது பொதுவாக மூச்சு என்று மொழிபெயர்க்கப்படுகிறது, ஆனால் அது மூச்சல்ல. பிரபஞ்சத்தில் உள்ள சக்திகளின் தொகுதியே பிராணன். ஒவ்வோர் உடலிலும் உள்ள சக்தி இது. இந்தச் சக்தியின் மிகவும் புலப்படுகின்ற வெளிப்பாடு சுவாசப்பையின் இயக்கம், மூச்சை உள்ளே இழுக்கும் போதே இந்த இயக்கம் உண்டாகிறது. இந்த இயக்கத்தை ஒழுங்குபடுத்தவே பிராணாயாமத்தில் நாம் முற்சிக்கிறோம். மூச்சை வசப்படுத்துவதன் மூலம் இதனை தொடங்குகிறோம். பிராணனை வசப்படுத்த இதுவே மிகவும் எளிய வழியாகும்.

"பாஷ்ய ஆப்யந்தர ஸ்தம்ப வ்ருத்தி:
தேச கால ஸங்க்யாயி: பரித்ருஷ்டோ
தீர்க்க ஸுஷ்ம"

(பதஞ்சலி யோகசூத்திரம்- பாடல்.50)

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பிராணாயாமத்தில் மூவகை செயல்பாடுகள் உள்ளன. மூச்சை உள்ளிழுப்பதும், வெளியே விடுவது, சுவாசப் பைகளின் உள்ளேயாவது வெளியேயாவது மூச்சை நிறுத்தி வைப்பது. காலத்திற்கும் இடத்திற்கும் ஏற்ப இவைவேறுபடும். இடம் என்பது, பிராணனை உடலில் ஒரு குறிப்பிட்ட இடத்தில் நிறுத்தி வைப்பதாகும். காலம் என்பது, பிராணனை ஒரு குறிப்பிட்ட இடத்தில் எவ்வளவு நேரம் நிறுத்தி வைப்பது என்பதாகும்.

ஒவ்வொரு செயல்பாடும் எத்தனை விநாடிகளுக்கு நிகழ வேண்டும் என்பது தெரிய வேண்டும். இந்த பிராணாயாமத்தின் விளைவாக வருவது உத்காதம் அதாவது குண்டலினி சக்தியின் விழிப்பாகும்

"பாஹ்ய ஆப்யந்தர விஷய
ஆக்ஷேபீ சதுர்த்த"

பதஞ்சலி யோகசூத்திரம்- பாடல்.51

சிந்தனையோடு கூடிய நீண்ட பயிற்சியால் சாருகின்ற கும்பகம், அதாவது நிறுத்தி வைத்தல். நான்காவது பிராணாயாமம். மற்ற மூன்றிலும் சிந்தனையின் பங்கு இல்லை.

"யதே ப்ரகாச ஆவரணம்"

பதஞ்சலி யோகசூத்திரம்- பாடல்.52

சித்தத்தில் இயல்பாகவே எல்லா அறிவும் உள்ளது. அது சத்வத்தால் ஆக்கப்பட்டது. ரஜஸும் தமஸும் அதை மூடிக்கொண்டிருக்கின்றன. பிராணாயாமத்தின் மூலம் இந்த மறைவு நீக்கப்படுகிறது என்று பதஞ்சலி யோக சூத்திரம் கூறுகிறது.

பிராணயாமத்தின் அளவு முறை

பிராணாயாமத்தில் மூவகை செயல்பாடுகள் உள்ளன. மூச்சை உள்ளிழுப்பது, வெளியே விடுவது, சுவாசப் பைகளின் உள்ளேயாவது வெளியேயாவது மூச்சை நிறுத்தி வைப்பது. காலத்திற்கும் இடத்திற்கும் ஏற்ப இவைவேறுபடும். இடம் என்பது, பிராணனை உடலில் ஒரு குறிப்பிட்ட இடத்தில் நிறுத்தி வைப்பதாகும். காலம் என்பது, பிராணனை ஒரு குறிப்பிட்ட இடத்தில் எவ்வளவு நேரம் நிறுத்தி வைப்பது என்பதாகும். ஒவ்வொரு செயல்பாடும் எத்தனை விநாடிகளுக்கு நிகழ வேண்டும் என்பது தெரிய வேண்டும்.

பதினாறு மாத்திரை அளவு இடது நாசியில் சுவாசித்து, அறுபத்து நான்கு மாத்திரை அளவு சுவாத்தை உள்ளே நிறுத்தி பின் முப்பத்திரண்டு மாத்திரை அளவு வலநாசி மூலம் சுவாசித்தக் காற்றை வெளியே விட வேண்டும். இதுவே பிராணாயாமம். குருவருளால் கணக்கறிந்து காற்றை உள்ளுக்குள் இழுக்க வேண்டும்.

இழுத்தக் காற்றை உள்ளே நிறுத்தி மெல்ல வெளியே விடுதல் வேண்டும். காற்றை உள்ளே இழுக்கும் நிலை 'பூரகம்' என்று பெயர் பெறும். காற்றை உடம்பின் உள்ளே நிறுத்துவது 'கும்பகம்' என்று பெயர் பெறும். காற்றை மெல்ல வெளியே விடுவது 'இரேசகம்' என்று பெயர் பெறும். இவ்வாறு நாள்தோறும் காலையும் மாலையும் மூச்சுக் காற்றைப்

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பூரக கும்பக இரேசக நிலைகளில் பயிற்சி செய்தால் மூச்சுக் காற்று தன்வசமாகிவிடும். இதனைத் திருமூலர்,

"ஏறுதல் பூரகம் ஈரெட்டு வாமத்தால்
ஆறுதல் கும்பம் அறுபத்து நாலதில்
ஊறுதல் முப்பத் திரண்டதி ரேசகம்
மாறுதல் ஒன்றின் கண்வஞ்சக மாமே"

திருமந்திரம்-பாடல்.550

என்று கூறுகிறார். பிராணாயாமத்தின் ஆளவுமுறை குறித்து ஔவைார்,

"இரேசகம் முப்பத்தி ரண்டது மாத்திரை
பூரகம்பத் தாறு புகும்"

ஔவையார்-சித்தர் பாடல்.254

என்றும்,

"கும்பக நாலோடு அறுபது மாத்திரை
தம்பித் திடுவது தான்"

ஔவையார்-சித்தர் பாடல்.254

என்றும் குறிப்பிடுகிறார்.

பிராணயாம மாத்திரை அளவுமுறை			
	பூரகம்	கும்பகம்	இரேசகம்
திருமூலர்	16	64	32
ஔவையார்	16	64	32

இவ்வளவின்படி காற்றைப் பயன்படுத்தினால் பிராண யோகத்தில் வெற்றி பெறலாம். இவ்யோகத்தில் வெற்றி பெறுவோர் மரணத்தை வெல்வர். இதனைத் திருமூலர்,

"ஏற்றி இறக்கி இருகாலும் பூரிக்கும்
காற்றைப் பிடிக்கும் கணக்கறி வாரில்லை
காற்றைப் பிடிக்கும் கணக்கறி வார்க்குக்
கூற்றை உதைக்கும் குறியது வாமே"

திருமந்திரம்-பாடல்.553

என்று கூறுகிறார். மூச்சுக் காற்றை முதலில் வெளியே விட்டுவிடுதல் வேண்டும். பின்னர் உடம்பிலுள்ள தச நாடிகளும் மகிழும் வண்ணம் உள்ளே இழுத்து மூச்சுக் காற்றைக் கீழ் நோக்கிய கபாலவாயுவொடு கலக்கச் செய்து கும்பித்து இருத்தல் வேண்டும். இவ்வாறு மூச்சுக் காற்றை இரேசித்து

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மகிழ்ச்சியில் கும்பிக்கச் செய்தால் எமனுடைய பயம் இல்லாமல் போய்விடும். இதனைத் திருமூலர்,

"இட்ட தவ்வி டிளகா திரேசித்துப்
புட்டிப் படத்தச் நாடியும் பூரித்துக்
கொட்டிப் பிராணன் அபானனுங் கும்பித்து
நட்டம்இருக்க நமனில்லை தானே"

திருமந்திரம்-பாடல்.555

என்று பிராணனின் அளவு முறையால் கிடைக்கும் பயன்கள் பற்றிக் கூறுகிறார்.

பிராணன் என்பது உம்பில் உள்ள உயிர் சக்திகள், ஆயாமம் என்றால் அடங்குதல். இதில் மூவகை உண்டு. சாதாரணமானது, நடுத்தரமானது, உயர்ந்தது. பிராணாயாமத்தில் மூன்று பகுதிகள் உண்டு. உள்ளிழுத்தல் (பூரகம்), அடங்கல் (கும்பகம்), வெளிவிடல் (இரேசகம்). பன்னிரண்டு நொடியுடன் ஆரம்பிப்பது சாதாரண வகை. இருபத்து நான்கு நொடியுடன் ஆரம்பிப்பது நடுத்தரமானது. முப்பத்தாறு நொடியுடன் ஆரம்பிப்பது உயர்ந்த வகையானது. சாதாரண பிராணாயாத்தில் உடல் வியர்க்கும். நடுத்தரமானதில் உடல் நடுங்கும். உயர்ந்த பிராணாயாமத்தில் உடல் அந்தரத்தில் மிதக்கும், பேரானந்தம் பிறக்கும்.

வேதங்களில் காயத்திரி என்ற மந்திரம் உள்ளது. அது மிகப் புனிதமான மந்திரம். இந்தப் பிரபஞ்சத்தைப் படைத்த பரம் பொருளின் மகிமையை நாம் தியானிப்போம். அவர் நமது மனங்களை ஒளிபெறச் செய்யட்டும். ஓங்காரத்தை இந்த மந்திரத்தின் முதலிலும் முடிவிலும் சேர்ததுக் கொள்ள வேண்டும். ஒரு பிராணாயாமத்தில் மூன்று முறை காயத்திரியை உச்சரியுங்கள். பூரகம், கும்பகம், இரேசகம் என மூன்றாகப் பிரிக்கப்பட்டுள்ளதாக எல்லா நூல்களும் கூறுகின்றன என்று இராஜயோக சுருக்கம் கூறுகிறது.

ஆன்மாவிற்கு உயிர் ஒளியைச் சுமந்து செல்லும் குதிரையே மூச்சு எனப்படும் 'பிராணன்' பிராணன், அபானன் என்ற இரு குதிரைகளை அடக்கி ஆண்டால் கள்ளுண்ணாமலே மகிழ்ச்சியுண்டாகும். உடலில் சோர்வு நீங்கி மகிழ்ச்சி பிறக்கும். காற்றை உள்ளே இழுத்தல் பூரகம், காற்றை உள்ளே நிறுத்தல் கும்பகம், காற்றை மெல்ல வெளியே விடுவது இரோகம் எனப்படும் இம்மூச்சுக் காற்றை சரியாகப் பயன்படுத்தலாம் எமனை மெல்லலாம். ஆயுள் பலன் அதிகரிக்கும். இளமை உண்டாகும். பேரானந்தம் பிறக்கும் என்ற உண்மைகள் சித்தர் பாடல்களின் சித்தர் பாடல்களின் வழி நிருபிக்கப்பட்டுள்ளன.

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தமிழ் இலக்கியங்களில் வாழ்வியல் சிந்தனைகள்

1

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திருநங்கைகளின் சடங்குகளும் நம்பிக்கைகளும்

முனைவர் ந.கோமதி, உதவிப் பேராசிரியர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி, திண்டல், ஈரோடு.

மனித இனத்தில் மக்கள் நம்பிக்கையின் அடிப்படையில் பல பழக்கவழக்கங்களை மேற்கொள்கின்றனர். நாளடைவில் இவையே சடங்காக மாறிவிடுகின்றன. அதுபோலவே திருநங்கைகள் சமூகத்திலும் பலதரப்பட்ட நம்பிக்கைகளும் பழக்கவழக்கங்களும் சடங்காக மாறியுள்ளன. குறிப்பிட்ட நிகழ்ச்சிகள் தொடர்ந்து மக்களால் கைகொள்ளப்படுமானால் அவை சடங்குகள் எனப்படும். சடங்குகளுக்கு நம்பிக்கைகள் தான் ஆதாரம்.

'திருநங்கைகள் சடங்குகள் யாவும் அவர்களுடைய சமூகத்தினைக் கட்டிக்காக்கவும் கட்டுக்கோப்பாக வைத்திருக்கவும் முரண்பாடுகளைக் களைந்து ஒற்றுமை ஏற்படுத்தவும் சடங்கு முறைகளைக் கடைபிடிக்கின்றனர்.' (ந.அறிவுராஜ், மூன்றாம் பாலினம் ஒரு சமூக இன வரைவியல், ப.11) என்ற ந.அறிவுராஜ் அவர்களின் கருத்திலிருந்து திருநங்கைகள் சடங்குமுறைகளுக்கு மிக முக்கியத்துவம் அளிப்பது புலனாகிறது.

திருநங்கைகள் மேற்கொள்ளும் சடங்குகளை வாழ்வியல் சடங்குகள், இறப்புச் சடங்குகள் என்று இருவகையாகப் பிரிக்கப்படுகின்றன. இவற்றுள் வாழ்வியல் சடங்குகளாக 1) தத்தெடுக்கும் சடங்கு, 2) அறுவை சிகிச்சைக்கு முன் செய்யும் சடங்கு, 3) பாலூற்றும் சடங்கு, 4) புட்டு சுற்றும் சடங்கு, 5) தாலி கட்டும் சடங்கு, 6) மருமகளாக மடிகட்டும் சடங்கு, 7) வழிபாட்டுச் சடங்கு என ஏழு வகையாகப் பகுக்கப்படுகிறது.

1. தத்தெடுக்கும் சடங்கு

திருநங்கைகள் அடுத்த தலைமுறைகளை உருவாக்க இயலாத காரணத்தினால் அவர்கள் சமூகத்திற்குள்ளே அவர்களைத் தாயாக, மகளாக, மருமகளாக, பேத்தியாகத் தத்தெடுத்துக் கொள்கின்றனர். குறிப்பாகத் திருநங்கைகள் மகளாக, மருமகளாகவே தத்தெடுக்கின்றனர்.

2. அறுவை சிகிச்சைக்கு முன் செய்யும் சடங்கு

திருநங்கைகள் தங்கள் சமூகத்தில் புதிதாக இணைந்த புதியதிருநங்கையை தத்தெடுத்த பிறகு இரண்டாவதாகச் செய்யும் சடங்கு

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அறுவை சிகிச்சை சடங்காகும். 'ஆணாக இருந்து பெண்ணாக மாறும்போது மட்டும் சில சடங்கு முறைகள் செய்கின்றனர்' (மகாராசன் (தொ.ஆ), அரவாணிகள், ப.111) இச்சடங்குகளைச் செய்வதால் திருநங்கைகள் அறுவைசிகிச்சையின் போது ஆண் உறுப்பு நீக்கப்படுவதால் ஏற்படும் காயம் விரைவில் குணமடையும் என நம்புகின்றனர். ஆகவே முழுப் பெண்ணாக மாற்றக்கூடிய சடங்கினைச் செய்வதால் இவை அறுவைசிகிச்சைச் சடங்கு என்றழைத்தனர்.

3. பாலூற்றும் சடங்கு

பாலூற்றும் சடங்கு என்பது இறந்தவரை புதைத்த குழிமேட்டில் இரண்டாம் நாள் அவருடைய உடல் உறுப்புகளைப் பிண்டமாகச் செய்து வைத்து அதன் மேல் பாலூற்றி வழிபடுவதைப் போல், அறுவை சிகிச்சையின் மூலம் நீக்கிய ஆண் உறுப்பை அடக்கம் செய்து அதன் மேல் பால் ஊற்றி செய்யப்படும் சடங்கு முறையாகும்.

இந்தச் சடங்கு முறை அறுவை சிகிச்சை செய்த நாற்பதாம் நாள் பெண்ணாகி விட்டதை அவருக்கும், அவரைச் சார்ந்த சமூகத்தினருக்கும் உணர்த்த நடத்தப்படுகின்றது. பாலூற்றும் சடங்கில் கலந்து கொள்பவர்கள் பேசக் கூடாது. பேசினால் இதன் சக்தி குறைந்துவிடும் என்று திருநங்கைகள் நம்புகின்றனர்.

4. புட்டு சுற்றும் சடங்கு

புட்டு சுற்றும் சடங்கு என்பது பூப்புச் சடங்காகும். பெண் பருவமடைந்தால் அவளுக்குச் செய்ய வேண்டிய சடங்கினைப் போன்று திருநங்கைகளும் சடங்குகள் செய்துகொள்கின்றனர். 'பெண் சடங்கு என்பது ஒரு குச்சியை எடுத்துத் திருநங்கையின் ஆசனவாய் வழியாக விடுவர் அப்படி விடும்பொழுது ஆசன வாயிலிருந்து இரத்தம் வரும். இந்த இரத்தத்தைக் கண்ட அரவாணிகள் பூப்படைந்துவிட்டதாகக் கருதுகின்றனர்.' (ந.அறிவுராஜ், மூன்றாம் பாலினம் ஒரு சமூக இன வரைவியல், ப.56) பெண்களின் பூப்பின் போது உதிரப் போக்கு முக்கியமாக அமைவது போல திருநங்கைகளின் பூப்புச் சடங்கிலும் உதிரப் போக்கு முக்கியத்துவமாகிறது.

5. தாலிகட்டும் சடங்கு

இச்சடங்கு கூத்தாண்டவர் கோயில் வழிபாட்டின் போது செய்யப்படும். கூத்தாண்டவர் எனப்படும் அரவானுக்குத் திருநங்கைகள் அனைவரும் பூசாரி கையால் கூத்தாண்டவர் முன்பு தாலி கட்டிக் கொள்கின்றனர். தாலி கட்டும்பொழுது பூசாரி மந்திரம் சொல்கிறார். திருநங்கைகள் தாலிகட்டிய அன்றே தாலியை அறுத்துக் கொண்டு சடங்குகள் செய்கின்றனர். அதாவது திருநங்கைகள் தங்கள் பிறப்பைத் தெய்வத்திற்குச் சமமான பிறப்பாகக் கருதுகின்றனர்.

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6. மருமகளாக மடிகட்டும் சடங்கு

பொதுவாகச் சமூகத்தில் நிறை மாதக் கர்ப்பிணிப் பெண்ணுக்குச் செய்வதைப் போன்று வளைக்காப்பினை ஒரு திருநங்கைக்குச் செய்து அத்தைமார்கள் மருமகளாகத் தத்தெடுத்துக் கொள்கின்றனர். இதனை மடிகட்டும் சடங்கு என அழைக்கின்றனர். ஒரு சில பகுதிகளில் தத்தெடுக்கும் சடங்கின் போதே தாய் மருமகளாகவும் தத்தெடுத்துக் கொள்கின்றனர். இத்தகைய முறைப்படி இவர்களுக்குள் உறவுமுறைகள் வளர்க்கப்படுகின்றன.

7. வழிபாட்டுச் சடங்குகள்

திருநங்கைகள் மிகவும் இறை நம்பிக்கை உடையவர்களாகக் காணப்படுகிறார்கள். பௌத்மாதா மற்றும் கூத்தாண்டவர் இருவரையும் முக்கியத் தெய்வங்களாக வணங்குகின்றனர். பௌத்மாதவைத் தாயாகவும் கூத்தாண்டவரைக் கணவராகவும் கருதுகின்றனர். திருநங்கைகளின் வழிபாட்டுச் சடங்குகளில் அன்னாசிபழம் முக்கியத்துவம் பெறுகிறது.

இறப்புச் சடங்கும் நம்பிக்கையும்

- திருநங்கை இறந்தவுடன் அவர்கள் சார்ந்த சாதி, சமய முறைப்படி ஈமச் சடங்குகள் நடைபெறுகின்றன. ஈமச் சடங்கின்போது ஆண்களை அருகே அணுகவிடுவதில்லை. மேலும் சமூகத்தில் பெண்களுக்கு நடக்கும் சடங்கைப்போலவே நடக்கிறது.
- தென்னங்கீற்று மட்டையால் வேயப்பட்ட பாடையில் இறந்தவர் உடலை எடுத்துச் செல்வதால் இறப்புச் சடங்கை 'மட்டை' என அழைக்கிறார்கள்.
- 'திருநங்கைகளின் இறப்புச் சடங்கில் திருநங்கைகள் தவிர மற்றவர்கள் கலந்து கொள்வதில்லை' (மகாராசன், அரவாணிகள், ப.113)
- 'அரவாணிகள் செத்தப்பிறகு அதைத் தலைகீழாகப் போட்டு வச்சு பிணத்தை செருப்பு வைச்சு அடிச்சிட்டே சுடுகாட்டிற்கு எடுத்துச் செல்கின்றனர்.' (கு.சின்னப்பன், அரவாணிகள் வாழ்வியலும் கூத்தாண்டவர் திருவிழாவும், ப.135)
- இந்த அரவாணியின் மருமகள்கள், சேலாக்கள் அனைவரும் வளையல் உடைத்து, ஆபரணம் நீக்கி, வெள்ளைப்புடவை அணிந்து கொள்கிறார்கள். 30 நாள் விரதம் நின்று காக்கைக்குச் சோறிடல் வேண்டும். இறந்தவர் காக்கை வடிவில் வந்து உணவருந்திச் செய்வார் என்றும் நம்புகின்றனர். (நேர்காணல் : ரம்யா (37), 16.11.2015, சிவகிரி)

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- இறப்பு வீடுகளில் 49 நாட்கள் வரை சாமிபடங்களை மூடி வைப்பதாகக் கூறுகின்றனர். (நேர்காணல் : லதா (41), 24.12.2015, அத்தாணி)

திருநங்கைகளின் பொதுவான நம்பிக்கைகள்

திருநங்கைகளின் நம்பிக்கைகள் யாவும் அவர்களுடைய சடங்கு சார்ந்ததாகவே அமைந்துள்ளது. இவர்கள் தங்கள் சமூகத்தை அடையாளப்படுத்துவதற்காக அவர்களது வாழ்வின் ஒவ்வொரு நிலையிலும் நம்பிக்கைகளை வழுவாது காப்பாற்றி வந்துள்ளனர்.

அவர்கள் பின்பற்றும் நம்பிக்கைகள்

- சமயம் தொடர்பான நம்பிக்கைகள்
- உணவு தொடர்பான நம்பிக்கைகள்
- தத்தெடுப்பு தொடர்பான நம்பிக்கைகள்
- அறுவை சிகிச்சைத் தொடர்பான நம்பிக்கைகள்
- இறப்புத் தொடர்பான நம்பிக்கைகள் என்பனவாகும்.

சமயம் தொடர்பான நம்பிக்கைகள்

- உறுப்பு மாற்று அறுவை சிகிச்சைக்கு போகும் முன் கட்டாயம் சாமி பூஜை போட வேண்டும். தேங்காய் கோணலாக உடைந்தாலோ அழுகி இருந்தாலோ அறுவை சிகிச்சைக்குப் போகக் கூடாது என்று நம்புகின்றனர்.
- அரவாணிகளின் இறப்பு வீடுகளில் சாமி படங்களை 49 நாட்கள் வரை மூடி வைத்திருக்க வேண்டும்.
- கூத்தாண்டவர் கோயிலில் தாலிகட்டிக் கொண்டால் தன் துன்பம் நீங்கி நன்மை பிறக்கும் என நம்புகின்றனர்.
- அறுவை சிகிச்சை செய்து கொண்ட அரவாணி ஒரு முறையேனும் போத்தராஜீ மாத்தா கோயிலுக்குச் சென்று வந்தால் மாத்தா அருள் கிடைக்கும் என்றும், அடுத்த பிறவியில் நல்ல பிறப்பு கிடைக்கும் என்றும் நம்புகின்றனர். (நளினி (39), 19.12.2015, ஆப்பக்கூடல்).
- பௌத்மாதாவை கைசுட்டிக் காட்டினால் கண்ணை அழித்துவிடும் என்று நம்புகின்றனர்.
- பாலூற்றும் சடங்கின் போது விநாயகருக்குப் பால் ஊற்றினால் அரவாணியின் வாழ்க்கைப் பாலைப் போன்று தூய்மையாக இருக்கும் என்று நம்புகின்றனர்.

உணவு தொடர்பான நம்பிக்கைகள்

- சாப்பாட்டிற்குப் போடப்பட்ட இலையைத் தாண்டக் கூடாது.
- அரவாணிகள் சேவல் கறியை உண்பதில்லை. காரணம் அவர்கள் வழிபடும் போத்தராஜீ மாத்தாவின் வாகனம் சேவல். ஆகவே,

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சேவல் கறி சாப்பிட்டால் தங்களுக்கு தீங்கு ஏற்படும் என்று நம்புகின்றனர். 'சேவல் என்பது ஆண்களுக்கு இணையான ஒன்று என்ற காரணத்தினால் சேவலின் கறியை உண்பதில்லை அரவாணிகள்' (மகாராசன் (தொ.ஆ), அரவாணிகள், ப. 114).

- அதுபோலவே அரவாணிகள் பன்றிக் கறியையும் உண்பதில்லை. பன்றிக் கறி சமைக்கும் வீட்டில் தண்ணீர்கூட வாங்கிக் குடிக்க மாட்டார்களாம். காரணம் முஸ்லீம் ஆட்சிக் காலத்தில் அரசனுக்கு உதவியாகவும், அந்தப்புறங்களைக் கவனித்துக் கொள்ளவும், நம்பிக்கைக்கு உரியவர்களாக 'யூகை' அமைக்கப்பட்டார்கள். அரவாணிகளின் பல்வேறு பழக்க வழக்கங்கள் முஸ்லீம் மதத்தைப் பின்பற்றியுள்ளன. அந்த வகையில் முஸ்லீம்களால் வெறுக்கப்படும் பன்றியின் கறியை உண்பது இல்லை என்கின்றனர். (நேர்காணல் ; ரேவதி (42), 10.10.2015, உக்கடம்)

த்தெடுப்புத் தொடர்பான நம்பிக்கைகள்

- தத்தெடுக்கும் சடங்கில் கலந்து கொள்ளும் திருநங்கைகள் அனைவரும் அமர்வதற்கு முன்பாக முதலில் பாயைத் தொட்டு வணங்கவேண்டும்.
- இச்சடங்கில் கலந்து கொள்ளும் அனைத்துத் திருநங்கைகளும் தலையில் முக்காடிட்டுக் கொள்ள வேண்டும். (நந்தினி (47), 28.11.15, அந்தியூர்)

அறுவை சிகிச்சை தொடர்பான நம்பிக்கைகள்

- அறுவை சிகிச்சைக்குச் செல்லும் அரவாணி, தான் குடியிருக்கும் வீட்டில் காமாட்சி (நெல்) விளக்கினை எரியவிட்டு செல்கின்றனர். அறுவை சிகிச்சை முடிந்து வரும் வரை எரிந்து கொண்டே இருக்க வேண்டும். இடையில் நின்று விட்டால் சிகிச்சை பெறும் அரவாணிக்குக் கெடுதல் ஏற்பட்டுவிடும் என்று நம்புகின்றனர். (சி. இராமச்சந்திரன், தமிழ்ச் சமூகத்தில் அரவாணிகள், ப.41)
- அறுவை சிகிச்சையின் போது பயபக்தியுடன் பௌத்மாதாவை வழிபட்டு விரதமிருந்தால் முகம் பொலிவுபெறும் என நம்புகின்றனர். (பிரியா (32), 02.01.2016, கள்ளிப்பட்டி)
- அறுவை சிகிச்சை செய்து கொண்ட திருநங்கை 40 நாட்கள் ஆண்களைப் பார்க்கக் கூடாது.
- அறுவை சிகிச்சையின் போது பால், காப்பி போன்ற பானங்களை அருந்துவதில்லை.
- நிர்வாணம் (ஆப்ரேஷன்) செய்தவர் இரத்தம் வழிந்து கொண்டிருக்கும் நிலையில் தூங்கிவிட்டால் அவர்

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இறந்துபோவார் என்று அரவாணிகள் நம்புகின்றனர்
(பால்சுயம்பு, திருநங்கைகள் உலகம், ப. 35)

இவ்வாறு திருநங்கைகளின் வாழ்வில் இடம் பெறும் சடங்குகளை ஒட்டியே அவர்களது நம்பிக்கைகள் அமைகின்றன. அவற்றைப் பின்பற்றுவதால் திருநங்கைகளின் வாழ்வில் மகிழ்ச்சியும் அமைதியும் ஏற்படுவதாக நம்புகின்றனர். இச்சடங்குமுறைகளும் நம்பிக்கைகளும் மற்ற இருபாலினத்தவரிடமிருந்து தனித்த பண்பாட்டு அடையாளத்தைத் திருநங்கைகள் பெறுவதாக அறிய முடிகிறது.

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தமிழ் இலக்கியங்களில் உணவு முறைகளும், விருந்தோம்பலும்

தொகுதி 2

பதிப்பாசிரியர்
முனைவர் ஆ. மகாலட்சுமி

தமிழ் இலக்கியத் துறை, என்.ஜி.எம். கல்லூரி (தன்னாட்சி)
பாலக்காடு ரோடு, பொள்ளாச்சி – 642 001

தமிழ் இலக்கியங்களில் உணவு முறைகளும் விருந்தோம்பலும்

(பன்னாட்டுக் கருத்தரங்கம்)

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ப. அருணாதேவி
முனைவர் பட்ட ஆய்வாளர்
தமிழ் உயராய்வு மையம்
எஸ்.எ.ப்.ஆர்.மகளிர் கல்லூரி, சிவகாசி.

மனிதனின் அடிப்படைத் தேவைகளில் முதன்மையானது உணவாகும். பண்டைய மனிதனது முதல் தொழிலே உணவு தேடுதலாக இருந்தது. அவர்கள் இயற்கையாய் கிடைத்த காய், கனி, கிழங்கு, பழங்களை உண்டனர். நெருப்பை கண்டுபிடித்தப் பின்பு சமைத்து உண்டனர். இவ்வாறு நாளடைவில் ஏற்பட்ட வளர்ச்சியினால் பல வகையான உணவுமுறைகள் உருவாக காரணமாக இருந்தது. அவற்றை நோக்கும் போது பாணராற்றுப்படையில் உணவுமுறைகளும் விருந்தோம்பல் முறைகளைப் பற்றி ஆராய்வதாக இக்கட்டுரை அமைகிறது.

குறிஞ்சி நிலத்தார் உணவு

குறிஞ்சிநிலத்தலைவன் பகை மன்னரின் காவல் நிலத்தில் புகுந்து அஞ்சாமல் போரிட்டு பசுக்கூட்டங்களை கவர்ந்து வருவர். அவற்றைக் கள்ளுக்கு விலையாகக் கொடுத்துக் குடித்து மகிழ்வர். பின்பு ஆட்டுக்கிடாயை கொன்று தின்பர் என்பதனை,

நாள் ஆதந்து, நறவுநொடை தொலைச்சி,
இல்அடு கள்இன் தோப்பி பருகி
மல்லால் மன்றத்து மதவிடை கொண்டி,
(பெரும் 140-143)

வீட்டிலேயே நெல்லால் சமைத்த கள் 'இல்அடுகள் இன் தோப்பி' என்பதாகும். இவ்வாறு குறிஞ்சி நில மக்களின் உணவுமுறையை அறியலாம்.

முல்லை நிலத்தார் உணவு

முல்லை நிலமக்களாகிய இடையர்களின் உணவு புன்செ தானியங்களாக இருந்துள்ளது. அவை தினையரிசி, வரகரிசிச் சோ மற்றும் பாலும் உண்டனர். இதையே விருந்தினருக்கும் இடுவார்க

மடிவாய் கோவலர் குடிவயிற் சேப்பின்
இருங்கிளை ஞெண்டின் சிறுபார்ப்பு அன்ன
பசுந்தினை மூரல் பாலொடும் பெறுகுவிர்
(பெரும் 166-

ல்லை நிலச் சிற்றூர்களில் இருந்தவர் வரகரிசி வரைப்பருப்புடன் கலந்து செய்த 'கும்மாயம்' எனப்பெ ணவை உண்டனர். இதனை,

தமிழ் இலக்கியங்களில் உணவு முறைகளும், விருந்தோம்பலும்

தொகுதி 2

பதிப்பாசிரியர்
முனைவர் ஆ. மகாலட்சுமி

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தமிழ் இலக்கியங்களில் உணவு முறைகளு விருந்தோம்பலும்

(பன்னாட்டுக் கருத்தரங்கம்)

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வெளியீடு	:	**தமிழ் இலக்கியத்துறை** **என்.ஜி.எம் கல்லூரி** பொள்ளாச்சி - 642 001.
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ப. சுகன்யாதேவி
உதவிப்பேராசிரியர், தமிழ்த்துறை,
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி),
ஈரோடு-12.

முன்னுரை

மனிதனின் மிக முக்கியமானதொரு அங்கம் உணவு என்பதாம். க்களின் அன்றாடவாழ்வில் குறிப்பாக இன்றைய கிராமங்களில் ழந்தமிழர்களின நடை, உடை, உணவு, பழக்கவழக்கங்கள், ிந்தனைகள், மதிப்பீடு, மிகமுக்கியமாக விருந்தோம்பல் போன்ற ல்லாப் பாவனைகளிலும், பழந்தமிழ்ப்பண்பாடு அழியாது இன்றளவும் ிலவிவருவது ஒரு தனிச்சிறப்பு எனலாம்.

விருந்து புறத்ததாத் தான் உண்டல்சாவா

ன்ற குறளின் மூலமாக திருவள்ளுவர் தெளிவுபடுத்துகிற செய்தி ானா மருந்தெனிலும் விருந்தினரைப் புறக்கணித்து உண்ணோம் என்ற தமிழரின் ஆழ்ந்த உள்ளக்கிடக்கை என்பதாம்

விருந்தோம்பல்

முகம் தெரியாத ஒருவரின் பசிக்கு உணவளிக்கும் போது ஒருவன், பண்பாளனாகிறான். விருந்தோம்பல் என்ற தமிழரின் பண்பாட்டு நிலை பசிக்கு உணவளித்தலில் ஆரம்பமாயிற்று எனலாம்.

ஒரு சமுதாயத்தின் மகோன்னதமான பண்பாட்டிற்கு அளவுகோலாக இருப்பது விருந்தோம்பல்தான். தமிழர்களின் வாழ்வியலை ஆராயும் போது இது பலவகைகளில் வெளிப்படுகிறது. 'மன்னனுயிர்த்தே மலர்தலையுலகம்' என்பார்கள். மன்னர்களின் விருந்தோம்பல் பண்பு இலக்கியங்களில் பல இடங்களில் வெளிப்படுகிறது.

கடவுளுக்கும் உணவு படைத்தபண்பு

தெய்வ வழிபாடு தமிழரின் வாழ்வோடியைந்த ஒன்றாகும். ஒவ்வொரு கடவுளுக்கும் விருப்பமான குறிப்பிட்ட உணவு வகைகள் உண்டு என்பது மக்களுடைய நம்பிக்கையாக இருந்ததோடு மட்டுமல்லாமல் அது தமிழரின் பண்பு நலனைக் காட்டும் வாயிலாகவும் அமைந்திருக்கிறது. தெய்வத்திற்க்கு ஒப்ப உணவையும் அவர்கள் மதித்தனர். தமிழகத்தின் பெரிய கோயில்கள் ஒவ்வொன்றும் ஓர் உணவுக்குப் பகழ்பெற்றவை.

பஞ்சாமிர்தத்திற்குப் பழநி கோவில்.
பிட்டுக்குத் - திருசெந்தூர்முருகப்பெருமாள்

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தமிழ் இலக்கியங்களில் வேற்றியல் சிந்தனைகள்

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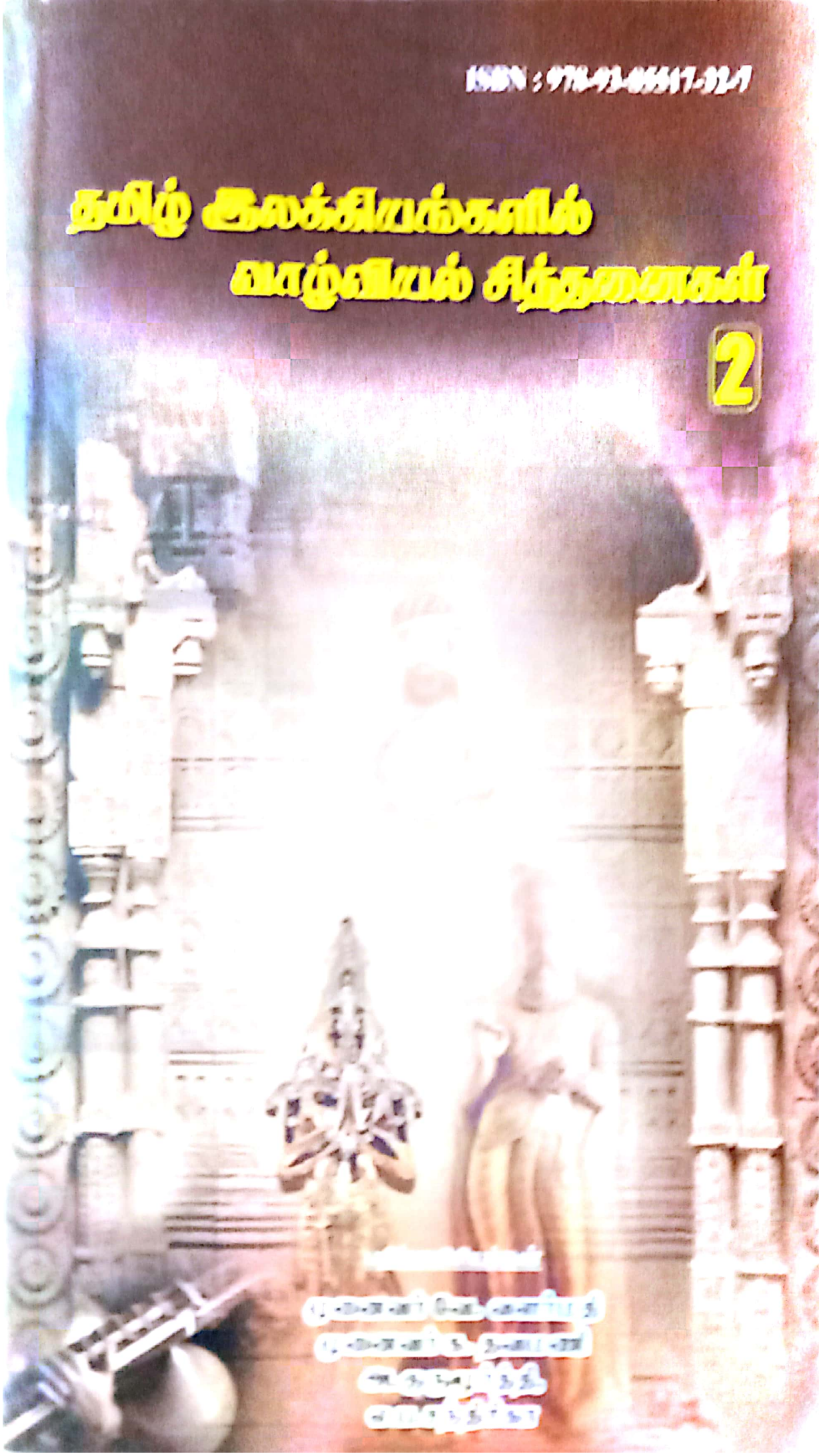

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புதுக்கவிதைகளில் வாழ்வியல் சிந்தனைகள்

கி.மோகனாம்பிகை, அரசு கலைக்கல்லூரி, சேலம். தமிழ்த்துறை, வேளாளர் மகளிர்

மனிதனுக்கு சிறகுகள் இல்லை என்ற குறையைத் தீர்க்கவே கவிதை. எல்லா மனிதரும் சகல மனிதரோடும் ரத்த சம்பந்தமான உறவை உண்டாக்கிக் கொள்ள முடியாததை சுட்டு செய்பவே கவிதை. ஒரு அளவு தாண்டி ஆண் பெண் உள்பட்டப் பிரபஞ்சப் பொருள் எதுவும் அழகாயில்லையென்று எல்லாம் தாண்டிய அழகிற்காக உண்டானது கவிதை. வாழ்வியலோடு இணைந்த இக்கவிதை சமுதாயம் சிந்தனைக்குரியது.

வாழ்வியல் எண்ணம்

எண்ணங்களின் எல்லையே வாழ்க்கையின் எல்லையாக மலர்கின்றது. உள்ளத்தில் புதைந்து கிடக்கும் ஆற்றலை வெளிக்கொணரும் விதமாக எண்ணங்கள் அமைய வேண்டும். இதைத் தான் நம் பாரதத் தாயின் புதல்வனும் தன் கவிதையில்

"எண்ணிய முடிதல் வேண்டும்
நல்லவே எண்ணல் வேண்டும்
திண்ணிய நெஞ்சம் வேண்டும்
தெளிந்த நல்லறிவு வேண்டும்" பாரதி – ப.131

என வாழ்வில் எண்ணங்கள் சுமையாகும் போது செயலின்வேகம் கூடும். சரியான திசையில் செயல்கள் பயணப்படும் போது வெற்றியின் இலக்கு கிடைக்கும் என்பதை அறிவுறுத்தியுள்ளார்.

வாழ்வியல் நூல் வழிக்கவிதை

திருக்குறள் வாழ்வியல் நூல். திருவள்ளுவர் வழியே நம் வாழ்க்கை வழி. அவ்வழியில் நடப்பதுவே அறிவுடைமை எனும் கருத்துகளை பட்டுக்கோட்டையார் தம் கவிதையில் சிறப்பாக எடுத்துரைக்கிறார்.

"வள்ளுவர் வழியினிலே - இனி
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சங்ககாலம்

சங்ககாலத்தின் பழமையும், பண்பாடும், சங்ககால இலக்கியங்கள் வழி புலப்படும். போரும் இல்லாமலும், வேலைப்பாடு இல்லாத காலத்தில் இயற்கையோடு இணைந்த வாழ்வைத்தான் சங்ககால மக்கள் வாழ்ந்தனர் என்பதற்கு நல்ல இலக்கியங்களே சான்று பகருகின்றன.

குறிஞ்சிப்பாட்டு

"குறிஞ்சிக்குக் கபிலர் என்பது போல மலர்களின் எண்ணிக்கைக்குக் குறிஞ்சி" என்ற சிறப்புப் பெயர் பெற்றது குறிஞ்சிப்பாட்டு. குறிஞ்சிப் பாட்டில் 99 வகையான தொன்மலர்களை விளைப்படுத்தி வகைப்படுத்தி வரையறுக்கிறார் கபிலர். தற்காலத்தில் மலர்கள் என்பது இறைவனுக்கும் பெண்களுக்கும் உரியதாகவே கருதப்படுகிறது. ஆனால் கபிலர் தன் குறிஞ்சிப்பாட்டில் தலைவன் எண்ணெயும் மயிர்ச்சாந்தும் பூசி, அகிற்புகை ஊட்டிய தன் குறிஞ்சியில் பல வகை மலர்களை அணிந்திருந்ததாகக் குறிப்பிடுகிறார். மேலும் பிச்சி மலரால் செய்த ஒற்றை வடத்தையும், ஒரு காதில் அசோக மலரையும், மார்பில் பூமாலையையும், ஆபரணமாகவும் அணிந்திருந்தான் என்பதை,

"எண்ணெய் நீவியசுரிவளிர் நறுங்காழ்த்
தண்ணுறுந் தகரம் கமழ மண்ணி

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Contemporary literature has emerged as the most interesting and fertile area of study. It is one of the most critically debated terms in current scenario. In recent years contemporary literature has registered a remarkable growth. It has emerged as a vibrant area of research and mainstream literature in the present century. Contemporary era witnessed a tremendous growth due to globalization in all fields and on the other hand social evils have got multiplied as the society encounters many problems. The main objective of the conference is to provide a platform for academicians to trace the different societies by analyzing its literature.

It is our immense pleasure to present this book and the articles presented here prove that '***Social Perspectives in Contemporary English Literature***' is multi-faceted and multi-located, analyzing social issues it explores. It examines the social issue from a contemporary perspective, assessing the significance in current society. They also show the depth of various social issues that has recently received considerable attention from the contemporary perspectives.

At this juncture, we express the deep sense of gratitude to the Management, the Principal, and other faculty members who have been a source of inspiration in our academic pursuits. We take this opportunity to thank the entire faculty and students of our institution and other institutions who have contributed their papers. Our erstwhile colleagues of the department deserve our thanks for their constant support and encouragement. Without them, this great task would not have been possible. We are indebted to our students of the Department of English for their co-operation and support at each level of this venture.

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We all are known that one of our academic agendas is "Lab to Land" (University to Village). Now as an Educational based trust we want to promote "Land to Lab". That can be redefined as "'Village to University". The purpose is to integrate people with the mainstream academic excellence for sustainability.

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A STUDY OF INCESSANT REFLECTION IN WRIGHT'S *THE OUTSIDER*

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Abstract

Wright introduced a new voice of protest against human slavery, pretensions, hypocrisy, discrimination, perversion and disintegration of the contemporary life. His entire work represents a quest for freedom and meaning of life, not only for the 'blacks' and the oppressed but also for whole humanity. It is true that he and his literary output have been the subject of debate and denunciation, contradiction, and controversy, but the fact remains that he is a significant American novelist abiding human concerns and appeal. "The artist is a revolutionary figure", says Richard Wright. Fabre says that neither technical innovation nor originality of political and social thought accounts for Wright's importance. It is the mark of Wright's originality – in his understanding of the exceptional significance of 'blacks' in twentieth century history. African Americans, and later Wright would say all colonized people represent mankind arriving in the industrial world. A quest for liberation from racial strife in Mississippi broadened for Wright into a question for liberation of the Third World and then into struggle against all oppression. As writer and intellectual militant in the cause of what he saw as the representative experience of our times, says Fabre, citing Ralph Waldo Emerson, Wright became himself a representative man.

A novel is basically an art of imitation and it depends on the individual novelist how successfully he carries out his task of imitating the society of which he himself is a part. Like any other artist the novelist is a maker, as he is essentially making an imitation of life and creating a fictional world removed to some extent from the real world. He is making, it might be said, a working model of life as he sees and feels it; his conclusions about it being expressed in the characters he invents, the situations in which he places them and in the very words he selects accordingly for those purposes. The novelist recreates the world of reality in his work and that is what Henry James in his *The Art of Fiction* points out: "The novelist must write from his experience and characters must be real and such as might be met within actual life"(14). Therefore the stress is given on the fact that the imitation must be as perfect and as real as possible and that is the vital task to be fulfilled by the novelist.

African American literature is the literature of an oppressed people;it may sometime be, of necessity, of Anglo - Saxon or Anglo - American in form but never constant in tone, or in philosophy; at its best, it reflects the ultimate of the 'black' experience or the life of the 'black' people in America: a people oppressed, but people who refuse to be oppressed; a people who refuse to be dehumanized or made into machines; a people who refuse to give up their ancient inheritance of secular play, warmth and gaiety of love and joy, or a continual awareness of the deepest spiritual meanings for freedom, peace and human dignity. The African tradition in AfricanAmerican literature is a literary creation that embodies many different ways in which the AfricanAmerican writers explore what Africa is, what it means to him or her, and what it means to the world. This tradition appears in varied forms in poetry and prose and is reinforced from generation to generation. In the eighteenth and nineteenth centuries, Africa was viewed in African American literature and songs as a lost homeland, an image vividly remembered. In the twentieth century, however, Africa is regained. Thus when examined chronologically, the African tradition in AfricanAmerican literature seems to have begun as a fading memory of a lost native land, progressed to intense fascination, and culminated into a cultural reunion.While African American literature is well accepted in the United States, there are numerous views on its significance, traditions, and theories. To the genre's supporters, African American literature arose out of the experience of 'Blacks' in the United States, especially with regard to historic racism and discrimination, and is an attempt to refute the dominant culture's literature and power.

Like many other Black Americans who concluded that America was beyond redemption with respect to racial justice, Richard Wright chose exile in the 1950s. Living in France allowed him to interact not only with French intellectuals, but also with other intellectual warriors of the African Diaspora. In this way, Wright's stature as an

international creative intellectual was established. While his earlier novels spoke on behalf of poor and racially exploited African Americans, Wright broadened the scope of his concern to include African and Asian elites in his non-fictional writings. Employing some of the same themes, especially the expression "in it but not of it" to describe the position of 'Blacks' in the capitalist and anti-'Black' world, Wright sought to understand the crisis of Third World elites as the victims of modern Western civilization. Maintaining and yet going beyond some of the themes addressed in *The Outsider, Black Power* (1954) and *White Man, Listen!* (1957) can be viewed as Wright's intellectual discovery and critical examination of the Third World.

The Outsider suggests that Wright was moving in a new direction, the leading character was moving in a new direction, for, although the novel was not primarily concerned with race problems, as earlier books had been. On the contrary Wright deliberately posed the situation of the American Negro as an example of the contemporary predicament, just as Ralph Ellison had done in *Invisible Man*. One of the characters says:

Negroes, as they enter our culture, are going to inherit the problems we have, but with a difference. They are outsiders and they are going to know that they have these problems. They are going to be self-conscious: they are going to be gifted with a double vision, for, being Negroes, they are going to be both inside and outside of our culture at the same time. (TOS 129)

As an alienated Westernized African American who was living in France, Wright saw himself linked to the ideological expatriates of the Third World. In the West but not of the West, Wright does not feel intellectually or emotionally damaged by the West. His life experiences as an outsider have shaped his alienated consciousness. He is a cultural nomad, a homeless man, feeling a certain indifference to Western civilization because Wright holds the view that human existence possesses little meaning. In the introduction to *White Man, Listen!*, Wright asserts:

I'm a rootless man, but I'm neither psychologically distraught nor in any wise particularly perturbed because of it. Personally, I do not hanker after, and seem not to need, as many emotional attachments, sustaining roots, or idealistic allegiances as most people. I declare unabashedly that I like and even cherish the state of abandonment, of aloneness; it does not bother me; indeed, to me it seems the natural, inevitable condition of man, and I welcome it. I can make myself at home almost anywhere on this earth and can, if I've a mind to and when I'm attracted to a landscape or a mood of life, easily sink myself into the most alien and widely differing environments. I must confess that this is no personal achievement of mine; this attribute was never striven for….I've been shaped to this mental stance by the kind of experiences that I have fallen heir to. (WML xxiii-xxiv)

Though Wright has chosen to live as an expatriate in Paris, and though his uprooted life experiences may be unsettling and contentious, Wright is not silenced by these conditions. Drawing on his critical, intellectual, and literary skills, he is able to investigate the underside of modern Western colonialism, finding in the allegory of exile the discursive field on which to articulate an anti-colonial politics. Throughout the age of Western colonialism, a rigid division existed between the European colonizers and their African and Asian colonized peoples. It was a division which, although millions of transactions were permitted across it, was given a cultural correlative of extraordinary proportions, Since, in essence, it maintained a strict social and cultural hierarchy between whites and non-whites, between members of the dominant and members of the subject peoples. It was this asymmetry in power that Fanon was later to characterize as the Manichaeismof colonial rule in his classic work, *The Wretched of the Earth* (1963). As an expatriate from white supremacist America, Wright identifies with the ideological condition of the Third World's colonized tragic elites. This is so because Wright, too, exists, in some significant respects, outside the limits of Western culture. He is a Western man, but white supremacy prevents him from living fully as a free man. Therefore, he and the Westernized and tragic Third World elites are in Western civilization, but they are not of it.

As one who saw himself as a 'black' man of modern Western civilization, Richard Wright also knew that racism had not allowed him, or other 'black''people, actually to enjoy the full meaning of modern Western culture. By using the phrase, "in it but not of it," Wright captured his own sense of homelessness and rootlessness to characterize his existence as a modern Westernized 'black' man. He also employed this 'outsider consciousness' as a lens with which to analyze the existential condition of all Third World elites who were caught in the cauldron of Western civilization's white supremacy. This experience of being simultaneously inside and outside of American culture produced Wright's third force or view of the world. He had been a member of the American Communist Party, but he had resigned, even as he maintained a Marxian analysis of modern society. He came to see that Communists, like segregationists, were petty power

wielders, interested in manipulating the people for their own interests. He spelled out this indictment in his novel of ideas, *The Outsider*.

Wright left America, believing that white supremacy rendered the nation beyond redemption. While exiled in France, Wright gained an interest in Africa. Going to pre-independent Ghana as a Westernized 'black' man, Wright had an ambivalent adventure. Once again, he found himself both inside and outside of traditional African civilization. Unswervingly in favour of a modern, secular Africa, Wright severely criticized traditional African religions, belief systems, and leadership. He saw them as barriers to modernization and industrialization, which would be major weapons against white supremacy and exploitation in Africa. In the final analysis, Wright could not identify with Africa based upon a common racial heritage as a 'black' man, but he did identify with Africa based upon a cultural history of common suffering and exploitation by the West. This again was Wright's third way of viewing social reality.

Perhaps Richard Wright's novel of ideas, *The Outsider* (1953), is his most sustained and compelling inquiry into the question of the possibility and quality of 'black' freedom in an 'anti-Black' American world. Wright also is concerned with the issue of power and the knowledge that buttresses its performance. Ultimately, he constructs the image of a self-possessed 'black' man, who is fearless, knowledgeable, and courageous. Untamed by the culture of modern society, he is an intellectually authoritative existential-nihilist - a rebel-criminal who creates and tries to live by his own social rules (Hayes 173). Significantly, to counteract prevailing literary notions of the 'Black' man as ignorant and submissive, Wright was engaged in creating a new conception of the 'Black' man. Finally, *The Outsider* represents Wright's disillusionment with the Communist Party and with the possibility of racial justice in America.

The Outsider is the story of Cross Damon, a disillusioned 'Black' man in Chicago, who takes the opportunity of a train crash that he is involved in to change his identity and disappear in the attempt to refashion his life. In New York, under several assumed identities, he encounters both Communists and a segregationist. Knowing and seeing the world from the standpoint of a new freedom derived from his outsider consciousness - a double vision that accompanies his will to break all of the rules of modern civil society - Damon develops the cynical view about human life and the will to power. Damon's knowledgeable double vision puts him in possession of the double lies of the Communist Party nihilists' will to power. Employing a critical Marxian analysis of capitalist industrialization, Damon mocks the Communists' quest for power, suggesting that they are similar to Western imperialists. Intellectually powerful, he sees through and challenges the ideological duplicity of his Communist Party adversaries.

Wright was an outsider all his life. As a boy growing up in Mississippi, he felt himself outside the pale of a loving, understanding, and protecting family. He felt himself outside the accepted world of the privileged, the educated, the dominant white culture, the bourgeois class. He had lived in dire poverty among bigots, fanatics, and insensitive people who believed in the primacy of skin color, in money and privilege, and despised all those who were different, or who thought differently.Wright appears to have concluded that the problems of racial justice and brotherhood are a part of the larger problems of human relations and that the most successful methods of attack are those directed on the wider front. Contrary to the existentialists, Wright argues that science and industrialism are neutral in value and, therefore, might be transformed into morally good forces. To this he adds that some unknown ethical and social idealism might be found to provide a form of discipline for living in a mass society. And, finally, as such optimistic idealism would suggest, naked man is ultimately benevolent and retains a primal innocence which could overcome all guilt and existential dread.

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Liberating Literature in the Golden Notebook

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Abstract: Every beginning should initiate with some sweetness in it as per our culture. Let me begin my research paper with a notable personality who won the Noble Prize in Literature in 2007. In the maze of women's writings Dorris Lessing is the personality who speaks out the universal language of women's emancipation. The history of 'female literature' would have had a much wider scope today, if it was not for woman's supposedly inferior position that did not allow her to develop any artistic qualities. However, female writers in the eighteenth and nineteenth century found a way to insert a critique in their stories which provides an implicit way to express their disapproval. *The Golden Note Book* can be considered as an attempt to expose the emotion of a woman who chooses to be "free".*The Golden Note book* was published in 1962, at the time when second wave feminism began to emerge and one year before Betty Friedan's path-breaking novel "The feminine mystique (1963)".The novel received the feminism bible of the women's liberation movement. Doris Lessing can be designated as a pioneer in discerning social trends, anticipating rather than merely confirming them. The Golden notebook is highly intellectual, politically involved "free women" preceded the women's liberation movement.In The Golden notebook, the key issue which we mainly dealt with is human relations, especially relationships between men and women as a key image of modern humanity, through which women are liberated in literature and as well as in society.

Keywords *– Liberation, Feminism, Female Tradition and Representation.*

LIBERATING LITERATURE IN THE GOLDEN NOTEBOOK

The narrative strategies of twentieth-century writing by women are the expression of two systemic elements of female identity: a psychosexual script and a sociocultural situation, both structured by two major traits, situated in the gendering process and in the hegemonic process. This signifies that a female character in twentieth-century novels is situated in an environment where she both has to deal with gender prejudice in her personal life and in society as a whole. (BlauDuplessis, 1985) which can be viewed as a theme in *The Golden Notebook*.The very structure of the novel makes the theme reach; it reflects not only the fragmentation of Anna's inner world, but also the chaotic society she lives in. Doris Lessing, employed woman as the first person narrator of the novel. She has certainly served as spokeswoman for women's rights in her life and work. After women receive the license, tremendous phenomenon directly illustrate a series of problems in women's political life. Compared to traditional women, the 'Free Women' of *The Golden Notebook* enjoys free professional life, but they don't get deserved happiness although they walked out bravely from the kitchen. The relationship between women and children is also a big issue in the crusade of feminism. Feminism has successfully provided the equality of parental rights to women. But the right couldn't produce harmonious relationship in the lack of 'fathers' protection' between women and children. Lessing's novel tells us that males are not the enemies of women but they are their collaborators.

Women's writing, particularly in *The Golden Notebook* is about the fact that women are assessed from a completely different point of view if we compare it to men. It seems that female authors of the present era are still pushed on a marginal position or overlooked passively. Women's writing has always been inscribed with definition to men. Subsequently, if a woman writer didn't get a place in the dominant society, it means her work is being described as inferior, inadequate or negatively connoted as 'feminine.' Social conventions are mirrored in its ideology and plot structure of a certain society.Doris Lessing was crowned as icon of the feminists by Women's Liberation Movement. The present novel epitomizes "Second Wave Feminism." The protagonists of the novel are "Free Women" who had embodied the modernity of late fifties. They are divorced, they make lovers and have a career, they want an independent life and obtain the same liberty as men enjoys. This personal story is encompassed by their political engagement as communist. As communism in the end failed to engender social change, the upcoming women rights movement did succeed in altering society profoundly, by conflating the personal and the political. In brief, the personal is connected to the political.

In the present novel the reader meets with Anna and Molly; two articulate women with a shared political (communist) interest. Both dealing with problems related to their love, life as well as motherhood. Anna has written a successful novel Frontiers of War, for which she still receives royalties and therefore she is free for volunteer service in parties. Molly, another character, is a minor actor of the theater. Both are divorced and entrusted with the care of a child. Janet and Tommy, after a year of separation, caught up with each other, and soon it becomes clear that Tommy is a worrisome teenager, and Anna is dealing with a writer's block. Anna Wulf Freeman, before her marriage experiences a mental breakdown, thinking as if the world around her is falling apart. She experiences her own reaction as normal, against the chaos and horror surrounding her. Anna tries to take control over her life. She resolves her writers block by writing in four different notebooks "and not one because, as she recognizes, she has to separate things off from each other, out of fear of chaos, of formlessness and of breakdown." (Doris Lessing: Essays, Reviews, Interviews, 3) She has a red notebook concerned with her communist politics; a black notebook to record her life in Africa in 1940s, a blue one as diary and finally a yellow notebook in which she creates her fictional alter-ego. Paul has an alter-ego for Ella and Julia has an alter-ego for Molly.

Each and every notebook is written in the first person narrative and covers the years from 1950 to 1957. The present novel is the fifth notebook which is called The Golden Notebook. The present novel is about the events which have taken place in the same year. In the notebook, out of five sections, there is a section entitled "Free Women." The Golden Notebook is a synthesis of her blue diary and a final "Free Women" section. In the present novel, Anna's split is symbolized in four notebooks, and her split is actually conflated in The Golden Notebook section. Anna transfers her split to her lover Saul Green, but he is even more

fragmented within himself than Anna is. “They are crazy, lunatic, mad etc. They break down into each other, into other people, break through false patterns they have made of their pasts, the patterns and formulas they have made to shore up themselves and each other, dissolve” (4). At the end of their affair Saul Green gives Anna the theme of her next book, which begins with “the two women were alone in the London flat,” exactly same as it was in the beginning of the real novel The Golden Notebook. Anna gives Saul her Golden Notebook and at last which is the theme of her next book. The first sentence of the novel is written in it as: “on a dry hillside in Algeria a soldier watched the moonlight glinting on his rifle.” “Pressures, inner and outer, end the notebooks; a heavy black line is drawn across the page of one after another. But now that they are finished, from their fragments, can come something new, *The Golden Notebook*.” (Preface of The Golden Notebook, vii) Almost at the end of The Golden Notebook section, Anna looks back at her life in the form of film sequences, the film which runs on by a project director. She names each section of her life as; “the Mashopi film,” “the film about Paul and Ella,” and “the film about Michael and Anna” etc. It is here where Anna is finally able to confront herself with the chaos her life has confronted. “Time had gone, and my memory did not exist, and I was unable to distinguish between what I had invented was all false. It was whirl, an order less dance, like butterflies in a shimmer of heat, over the damp sandy beach.” (151)

The book in its beginning resembles the “Free Women” section, but later on it is reduced to mere incomplete fragments. When Anna starts her yellow diary about Ella, she contemplates: “I see Ella, walking slowly about a big empty room, thinking, and waiting. I, Anna, see Ella. Who is of course, Anna? But that is the point, for she is not. The moment I, Anna, write: Ella rings up Julia to announce, etc., and then Ella floats away from me and becomes someone else. I don’t understand what happens at the moment Ella separates herself from me and becomes Ella. It is clearly the moment when Anna starts to fall apart; Lessing stops her right before the point of suicide.” (179) Instead of a coherent narrative on Ella, the last entry of the Yellow Notebook comprises nineteen fragments of possible stories. Each story is entitled “a short story” or “a short novel” and dates or carefully noted down or omitted. Then Anna’s diary follows Blue Notebook, where amongst other things her love affair with Saul Green is described. This affair seems to contain the semen of the nineteen stories that preceded it. It is not clear why Lessing has put the ideas of the story first, and then she experiences, why these stories have come out. But it might be a last indication of how Anna’s mind has got fragmented. Through the character of Anna, Lessing questions the appropriateness of realist forms to represent the fragmented nature of modern reality, and the crises of belief with which intellectuals on the New Left had to grapple. In abandoning conventional narrative, The Golden Notebook also explores the relationship between language and ideology and the possibility of the new revolutionary literary form. The Golden Notebook is a highly self-conscious and experimental work, as Doris Lessing herself has claimed: “The Golden Notebook was a carefully constructed book. And the way it’s constructed says what the book is about...” Yet after the book was published 1962, “… very few people have understood” (Doris Lessing: Essays, Reviews, Interviews, 79). The book was mainly praised for Lessing’s perspective representation of women’s consciousness subsequently; the book was almost exclusively defined as a work that has left its mark upon the ideas and feelings of a whole generation of young women.

Since the last two centuries, women writer and their writings have gone through some substantial changes. Although burning with a creative energy like some of her other male contemporaries of the nineteenth century, she has confined herself to the sidelines of a patriarchal society. Where she was valued only on account of her marital and domestic obligation; she was not entitled to many rights. May be she has written a manuscript under a male pseudonym for acceptance; maybe she has burned or buried her manuscript because of the afraid of the consequences it might have after, or maybe she implicitly inscribed a counter narrative by which she would manage to articulate some of her ambitions. To express artistry as a woman she often designates an oppositional choice for their fictional heroines, according to their limited options in society. A choice between marriage and death, for there is no compromise being offered to them. Gradually, women gained more rights and subsequently more freedom of choice. During the First and Second Wave of Feminism women fought for egalitarianism, compared to men’s privileges. Although many battles have been won, The Golden Notebook proved that women were not liberated completely. As Lessing imbedded her protagonist in the bigger social picture of the society, she managed to depict the way men and women related to each other in that time in a very accurate manner.Maybe Anna Wulf succeeded in achieving wholeness eventually, she did not, however, succeed in finding a way of living, where she can have a satisfying love life and at the same time deal with society‘s, or men‘s, prejudice about “Free Women”. Anna has not been able to free herself from determining patterns and stereotypes, yet. Still the question of identity remains throughout women’s life from birth to death no matter we are fighting to overthrow the role patterns that society has imbibed on us.

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The Tolerated Bigotry: The Lurking Voice From The Forlorn Society of Herta Müller

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"When we don't speak . . . we become unbearable . . ."

- Herta Müller, *The Land of Green Plums.*

Abstract: Women, in spite of being ignored for many centuries in various aspects have attained a great indomitable place in literature. They grew in numbers as they reflect the other sector of the prevailing society in much more candid way than their male counterparts. They have unearthed the field of literature in every possible way. Women's literature gained much attention when many women writers voiced for their fellow females and echoed those voices against suppression and discrimination not only based on gender but also in the society in all means. It received great accolades in the various parts of the world. Whenever there is suppression and discrimination of women, there arises the voice through the literary works which is mightier than the sword. Herta Müller, a minority Romanian born German and a 2009 Nobel Laureate, explores through her writings the unspoken silences which become unbearable when they are purposely silenced in a totalitarian regime. Men of this minority group also bear the pains of the regime. But these entire traumas get intensified in their households.Müller in ***The Passport,*** a novella of 85 pages portrays how the officials under the regime force the commodification of women as an act of bribery. This paper explores how the women fall prey to the anger of the males and the other various exploitations in the bereft rural society.

As the title suggests, this novella is about a village miller trying to get the passport in order to leave his birthplace as it became very torturous place ruled by the totalitarian regime.

Irigaray notes, "Commodities, women, are a mirror of value of and for man," (Irigaray 1985: 177). She says that women are considered to be valuable commodity. All the people in the village, when a family or father or husband wants to migrate, they perform their paper works by means of satiating the sexual desire of the officials by sending their household women. With a heavy heart, Windisch, need to accept this destiny of his daughter. Katharina's principle of exchange differs from Amalie's. While the former is the beneficiary of her own labour, the latter's an act of the disrupted society.

The female characters are the highly victimized category of people being the object of desire, victims of violence and accomplices of the patriarchal order that prevailed in the society. The women in ***The Passport*** try to escape various political situations and other patriarchal oppressions, by commodifying their bodies; those who never oblige for such commodification, are threatened, marginalized and are prone to lead a life in fear and anxiety. And so, they have

developed complex mechanisms for the negotiation of their desires. Karin Bauer remarks about Müller's portrayal of gender in her essay on 'Gender and the Sexual Politics of Exchange':

> Erotic desire and sexual longings are inextricably bound to relations of power in Müller's writing, often foreclosing the possibility of differentiating between expressions of female desire and the instrumentalization of sexuality as a means to an end. . . . Sexuality, Müller maintains, is abused in dictatorships in all realms of everyday life (154)

Both Amalie and her mother Katharina, in ***The Passport***, engage in such an exchange of sexual relations. Like the mother, Katharina, the daughter Amalie, is also forced to prostitute. Her life in Russia, as a prisoner, for five years is the real trial for her survival. The main mode of survival is to indulge herself in the act of prostitution for Katharina.

The extreme climatic conditions and the insatiable hunger never let Katharina to lead a common life. The scanty ration of bread and grass soup are helpless in substantiating her hunger. As an act of escape from the starvation and the freezing climate, and for the survival, she exchanged herself. She slept with a cook for the hot and sweet potatoes during a winter. The next winter, she lay down with a doctor and he gave her a note attesting her illness and so she might not go to work in the mine for the next three days. During the next winter, she went to another person, a grave digger, who gave her the warmth along with some left-over meals from the funeral meals offered to him by the villagers (*TP*, 74-76).

Windisch's concern for his daughter is revealed in the opening chapter through his discussion with the night watchman: "My daughter," says Windisch, weighing the sentence in his head, "my Amalie is no longer a virgin either."(*TP*. 10) This knowledge about his daughter does not ease the pain in his heart, lessen his sense of shame and help him ignore the loss of face and honour, when Amalie goes to the priest and the militiaman, on summons. This ultimate bribe succeeds, when his sacks of flour and money failed to procure the passport.

An article review speaks about Muller's views on the female and her sexuality:

> Only women can sustain life, although they do this compromised and violated, suffering under conditions of personal degradation and impoverishment. The female and her sexuality is a recurrent and persistent theme throughout the novel. The female is both whore and mother, and, like the nature that subsists and endures despite its impoverishment, she is the carrier of seed and sun, bringing regeneration and light to each family's feelings of despair and discoloration. Muller pedals through the thickets with her own set of wheels, mobilizing and reasserting these themes of gender and the regime's contempt for women. (www.romania-insider.com)

The portrayals of many such women characters in the works of Herta Müller, withdraw themselves from the society as they have exchanged madness in the place of fear. "The mad woman's withdrawal from the society signals the withdrawal from the village economy" (Bauer.162) and they become a burden to their family and society.

Karin Bauer rightly points in the article 'Gender and the Sexual Politics of Exchange', in *Herta Müller*:

> The women's descent into madness thus presents not only a way to escape the pressures of normality and the restrictive moral code of the village, but also a means of evading the subjugation to power. The escape is paid for, however, with mental derangement and death. (162)

Apart from these lunatic women characters, there are Amalie, and her mother, Katharina and the village postwoman who are mentally well. But, they become victims of their circumstances in the repressive society. Müller's texts, thus, raise its lurking voice from the despotic society being a replica of the 'waste land' of T. S. Eliot and all her characters stand a testimony to the tolerated bigotry of a forlorn minority community.

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Voices From The Land of The Dispossessed: a Glimpse on Herta Muller's Novels

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ABSTRACT:- Individual Identity is a highly sorted out factor when there are atrocities perpetrated in the name of nation and race. This identity – seeking tendency prevails in each and every human leading them to explore themselves. A study of Herta Muller's fictional works brings us closer to the divided post-war world during the cold war. It places us amidst a complex, and splintered literary history, unexplored in Western Europe and the U. S., several from our awareness lost and censored behind the Iron Curtain.

Keywords:- *atrocities, post-war world, cold war, splintered, Iron Curtain*

"A work of rare force, a feat of sustained and overpowering poetry…Müller hasthe ability to distil concrete objects into language of the greatest intensity and to sear these objects on to the reader's mind".
- The New York Times

The Nobel Committee described her as a writer 'who, with the concentration of poetry and the frankness of prose, depicts the landscape of the dispossessed'. Müller's works depicts the persecution of Romanian ethnic German by Stalinist Soviet occupying forces in Romania and the Soviet – imposed communist regime of Romania.According to the Nobel Committee, Herta Müller, who charted the hardships and humiliations of Nicolae Ceausescu's brutal regime, won the 2009 Nobel Prize in Literature for depicting the landscape of the dispossessed.

"What can't be said can be written. Because writing is a silent act, a labor from the head to the hand"
- Herta Müller.

Born on August 17, 1953, in the German-speaking village of Nitchidorf, in the Romanian Banat in Western Romania, Herta Müller left her village to study German and Romanian literature at the University of Timisoara. There she became part of the Aktionsgruppe Banat, a group of idealistic Romanian-German writers seeking freedom of expression under the Ceausescu dictatorship. After completing her studies, she was employed as a translator in an engineering factory, but was dismissed for her refusal to cooperate with the Securitate. She had become an internationally well-known author since the early 1990s when her works such as *The Passport, The Land of Green Plums, Travelling on One Leg, The Appointment*and*The Hunger Angel* were translated into English. Though she has about 20 books to her credit, only 5 are translated into English. Besides English, her works have been translated into more than 20 languages. She has received over 20 awards which include the 1994 Kleist Prize, the 1995 AristeionPrize (European Literary Prize) for *Herztier*, the 1998 International IMPAC Dublin Literary Award for *The Land of Green Plums*, and the 2009 Franz Werfel Human Rights Award for her novel *EverythingI Possess I Carry With Me (The Hunger Angel).*

Müller started her career in 1982 with a collection of short stories entitled *Niederungen*(English – *Nadirs* in 1999). Two years later, this was followed by *Druckender Tango* (Oppressive Tango). In these two works Müller depicted the hypocrisy of village life and its ruthless oppression of nonconformists. She also portrayed the zealously fascist mentality of the German minority, its tolerance and corruption. Not surprisingly, she was sharply criticized at home for destroying the idyllic image of German rural life in Romania.

Later Müller migrated to the West with her husband, Richard Wagner, who is also a novelist and essayist. *The Passport* (1989), her first translated novel into English, portrays the efforts of a Romanian-German peasant family to get passports to leave the country who were unable to live under the brutal hardships of Nicolae Ceausescu. Like her earlier works it exposes the brutal corruption of the village by showing how its officials, from postmaster to priest, demanded ever more material and sexual favours from those petitioning to leave the country.

The Land of Green Plums (1996) deals with "the issues faced by the writers and their relationship with the government censorship of their works". It is Müller's richest portrayal to the date of life in the Romanian dictatorship where the novelist links the repressive childhood of her narrator with the brutal oppression of the state. The novel opens in a women's university dormitory in Nicolae Ceausescu's Romania, where Lola, a poor girl from the provinces, has come to study Russian. In a Communist country short on consumer goods, Lola and

her roommates dream of whisper-thin nylon stockings while making to do with what they have. Lola, unprepared for city life by her village childhood, has brutal sexual encounters, hangs herself with a bent and is posthumously expelled from the Communist Party.

Müller's *The Land of Green Plums*, studies the effect of political persecution on individuals and how that experience and its memories, in turn, shape the lives of those affected.The narrator of the novel is one of her roommates, soon herself an object of political suspicion, so that when she finally leaves the university, packing her pot of mascara, she finds an unpleasant surprise in her bed. When she picks up the blanket to pull off the cover, she finds a pig's ear that is sewed in the middle of the sheet like a button. Later she learns that this is the girls' way of saying farewell.

Müller lets her plot develop around simple people living uneventful lives. It is because her characters are so plebian, that the tragedy strikes as particularly harsh. With no legitimate claim to martyrdom, the events circumscribing the lives of the narrator and her friends accentuate the trauma as suffered by a nation and that which unapologetically wields the ultimate power to transform identities.

According to Larry Wolff, *"The Land of Green Plums* is a graphically observed detail in which the author seeks to create a sort of poetry out of the spiritual and material ugliness of life in Communist Romania". The narrator watches the Romanian police guards in the streets of the city as they greedily pocket green plums. She had been warned by her father not to eat green plums as it is dangerous. But the guards do not hesitate. She also watches the guards grabbing the young women in the streets. After witnessing such things, she even thinks that one of these men must have followed Lola and mauled her with the greedy desire of a starved dog. When the narrator ponders Lola's pathetic fate, the novel encompasses not only the political persecution of dissidents and the harassment of a national minority but also the particular kinds of oppression and vulnerability that women experience under a regime of policemen. In the end, the narrator decides to kill herself, as Lola did, but to immigrate to Germany, as most of Romania's Germans have done, both before and since the fall of Ceausescu in 1989.

The Land of Green Plums also addresses issues such as vampirish complicity in the bloody rituals of an oppressive regime, whose hungry subjects, whether stealing fresh offal or green plums, ingest political poisons with historically protracted, corrosive consequences. Through this novel, Müller conveys certain sadness over the historical implications of emigration, the impending doom of her own native culture and society. She also offers a potent and repellent depiction of the world she left behind in Romania. As the novel is based on a close friend from Aktionsgruppe Banat and written after the deaths of two friends in which Müller suspected the Securitate's involvement, she dedicated it to Romanian friends who were killed under Ceausescu's rule.

Characterized by the same sense of profound isolation found in Müller's *The Land of Green Plums, Travelling on One Leg* is a poignant exploration of exile, homeland and identity. It traces the disorientations of exile through the troubled mind of the protagonist Irene, a 30 year-old woman whose circumstances are partly drawn from Müller's life. Like her, Irene, a fragile woman born to a German family in Romania, emigrates to West Berlin from "the other country" (Romania is never identified directly in the novel). Certain elements introduced in the first chapter – bushes, fingernails, crumbling earth, the sucking of the tide – become the symbols of intense sexual longing that reappear throughout the book.

The narration is spare to the point of madness, a poetry of anguish built upon images of division or inversion – 'Irene walked on her head'. When she is photographed, it seems to her that the picture shows "the other Irene", an alter ego that shadows her life; when she walks through an apartment for the first time, the rooms are said to walk through her instead. Irene's immediate reason for emigrating is to be with Franz, a drunken tourist from Marburg whom she meets at a beachside café in Romania. When she reaches Germany, Irene finds herself drawn into intimate relationships, not only with Franz but also with his friends, Thomas and Stefan. All three men, especially Thomas, seem to be miserable in one way or another. Irene can't understand how a person would go about being sad in the disordered West; in "the other country", she says, the reasons for unhappiness were always obvious.

Despite being born to a German family, Irene's place in Germany is as a recent émigré and an unassimilated Romanian German. She feels neither longing for Romania nor any comfort in her newly adopted Germany. Politically and socially isolated, Irene moves within the emotional orbit of these three men, while at the same time moving between West Berlin, Marburg and Frankfurt, taking a dissonant journey within strange yet familiar territory. The action in this volume may be slight, but Irene's innermost consciousness – where the political has indeed become the personal – is magnificently portrayed.

Müller's another powerful novel *The Appointment* (2001) is about a Romanian woman who sews notes, saying "Marry Me" into suits of men bound for Italy. The thuggery of the government forms a backdrop to the novel. Writing in *The New York Times Book Review*, Peter Filkins describes, *The Appointment* as a backdrop to the brutality and betrayal with which people treat one another in their everyday lives, be they spouses, family members or the closest of friends.

'I no longer know, either, how long we travelled. I thought travelling for a long time meant getting far away. As long as we're travelling, nothing can happen to us. All is well, as long as we're travelling'.-*The Appointment,* Herta Müller.

The novel goes into great detail about living under a stagnated dictatorship. The unnamed narrator contemplates the innumerable ways in which the treachery of the government infects its citizens. The entire novel –takes place during the unnamed narrator's tram ride to her appointment. The tram ride from the seventh floor apartment she shares with her second husband, the alcoholic Paul, until she misses her stop and gets off on the wrong street; a tram ride that takes about ninety minutes and for which she's risen particularly early.

The tram ride to her appointment with Major Albu seems to trigger thoughts of just about everything in our narrator, expressed as a jumbled interior monologue, and the reader is privy to what seems to be her entire life. She remembers her father's indiscretions with a person Müller calls "the woman with the braid" and how our narrator wished to take that woman's place; she remembers her good friend, Lilli, who was shot and killed while trying to escape across the border to Hungary with her lover, a sixty-six year old military officer; she remembers her own indiscretions with Nelu, the garment factory supervisor whom she had a brief affair, then rebuffed, leading him to betray her; she remembers how she net her current husband, Paul, at a flea market where she sold the wedding ring her first husband had given her; she remembers her first husband, who betrayed her grandparents; she remembers her former father-in-law, a man she refers to as "the Perfumed Commissar", who dispatched her grandparents to a forced labor camp.

"I myself am nothing, apart from being summoned", says the narrator as she rides the tram to her interrogation by the Securitate. There her interrogator, Major Albu, places a wet kiss on her hand before questioning her relentlessly for hours. These sessions, however do not happen on a regular schedule, but at Albu's whim, thus forcing the narrator to live a life in which she fears being called in on any given day, never knowing if she will be arrested for good.

With the sceptre of the regime constantly hovering over her, it is no surprise that the narrator can trust no one. Even love suffers under such conditions. Often, she has to lie or keep her mouth shut to protect the people whom she loves most. She realizes that in the world, no bond is unbreakable, no loyalty is lasting, and no future is certain. Instead, life amounts to a sequence of arbitrary episodes, each undermining the other. Because of this, her private effort to impose order on a wide array of losses amounts to a political stance in itself. The narrator's isolation and the numbing way in which she walks through life while wondering, is more a test of endurance than a pleasure. The novel follows the twists and turns of the narrator's memories and consciousness as she thinks of a world in which 'happiness had become a liability', and even 'tenderness has its own meshes'.

Ms. Müller,intense and birdlike, has a new novel out, called *The Hunger Angel,* signals a bit of a departure from her earlier work. Though similar in subject matter, it looks beyond her own experience to a trauma endured by her parent's generation. It portrays the persecution of ethnic Germans in Romania by the Stalinist regime of the Soviet Union and deals with the deportation of Romanian Germans to a Gulag concentration camp by Soviet occupying forces as an example for the fate of German population in Transylvania after World War II. It is about the journey of a 17-year old boy Leo Auberg who is deported to the Soviet concentration camp to live long five years of '*superhuman inhumanities*'.

Müller wrote this novel when she was inspired by the experience of poet Oskar Pastior, the Romanian-born German poet and translator who wanted to write a book on the sufferings in the Gulag but died in 2006. His oral memories Müller had made notes of, but also by what happened to her own mother who also lived in the Concentration Camp of Gulag Archipelago.

'I know you'll come back'. These are the words the grandmother of seventeen-year-old Leopold Auberg says to him the night he is collected by Russian soldiers for deportation to a labor camp in the Ukraine. From the very first page of this compelling new novel it becomes clear that Müller is an author who wields an extraordinary power over words. Equally astonishing is her convincing handling of such a serious subject: extensive research and collaboration with the late Romanian-German poet Oskar Pastior about his experiences in the Gulag have given this work a life force of its own.

As the reader joins the young narrator his family is helping him pack his few belongings together into an old gramophone case, trying to overcome their fear and helplessness at his departure. He is herded onto a cattle train with other camp internees and undergoes the grueling and exhausting journey to the Gulag. Müller has distilled Leo's struggle into words of breathtaking intensity that take us on a journey far beyond the Gulag and into the depths of one man's soul. Once in the camp, the stereotypical issues the reader may expect to be confronted with are barely mentioned, here the focus is on the smaller – and at first glance insignificant – details which threaten the internees' dignity and emphasize the control they have lost over their lies.

Most startling is the way in which the author subverts the reader's conceptions of what would be imagined to be the worst elements, such as the unrelenting hunger which consumes Leo: ultimately this is what keeps him alive, acting as his connection with the world. Hunger becomes an insatiable angel who haunts the camp, but also a bare-knuckled sparring partner, delivering blows that keep Leo feeling the rawest connection to

life.When they are released from the camp the reader expects elation, but instead they are frightened: despite its harsh and bleak conditions the camp has become their world, its walls their safety, its oppressions their routines.

Echoes of Kafka, a Jewish novelist and short-story writer, whose disturbing, symbolic fiction, written in German, prefigured the oppression and despair of the late 20th century, can be found throughout Herta Müller's life and work. Like Kafka writing German in Bohemia, she left as a double outsider, a writer evoking alienation in a minority language. Müller has a highly individual voice, and this novel, which also shines a light on a fascinating but still neglected aspect of German history, deserves to be brought to the attention of an international readership. The language is poetic and masterful, but also joyous in its simplicity and imagery: a young woman in the camp – who had been discovered through the footprints outside her hideaway back home – claims that she will never forgive the snow. Every other substance would have swallowed the evidence of her existence – water, sand, dirt – but the freshly fallen snow can never be a silent accomplice.

Müller's intense sufferings distilled her vision as an artist. Her works are characterized by pure, poetic language and metonymic metaphor that recur and evolve throughout her tales. The oppressiveness of theme is alleviated by the beauty of her prose and the flashes of humor behind some of her imagery. Thus, HertaMüller, came out as a German's literary comet and her award coincides with the anniversary of the fall of the Communism in Europe.

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Reconstructing Nationality In The Global Context: Double Consciousness Of Diaspora In Bharati Mukherjee's *Wife* And *Jasmine*

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Since the past few decades, writings of immigrants gain attention in the global literary field. Many diasporic writes like V.S.Naipaul, Salman Rusdie, Amitav Ghosh, Gita Mehta, Arundathi Roy, BharatiMukerjee express their longing for their ideality through their works. As United States becomes the dominating force in all fields, people of other countries migrate to US to lead a better economical and social life. Beyond their desired upliftment, these immigrants have lost their identity of their nation and so they are forced to assimilate themselves as Americans. Especially Indians who have come from a rich cultural tradition, feeling isolated due to their migration, strive to retain their Indiannessand also their American identity. One of the renowned Indian diasporic writers, BharatiMukerjee brings the double consciousness of Asian Americans, specially Indian Americans to the global arena through her protagonists in her novels *Wife* and *Jasmine*. This paper tends to highlight the struggle of survival of these characters in between "home of origin" and "world of adoption".

I. INTRODUCTION

Immigration becomes the major focus of the modern world that ensures the economic and social upliftment of the individuals. Migration becomes inevitable,and the shift from the homeland towards another represents the globalization of various cultures and societies. Meanwhile, migration also reflects the coercion through which the capitalistic culture of the host country influences the immigrants in various aspects.

Western countries such as United State, Canada and Australia stand as the pioneer in welcoming immigrants.For their better survival, people mainly from Asian countries move towards America. Particularly Indians, fancying for independent western life, migrate towards western for the establishment of money and existence. Beyond their social and economic revival, these immigrants suffer from psychological trauma while searching their identity. Inheriting from the rich cultural tradition Indians feel isolated in the alien land. They strive to come out of their Indianness as they are forced to accommodate themselves on the migrated society.

Many immigrant writers from different origins have emerged to imprint their diasporic experiences of dislocation and mental torments through their works. Salman Rushdie, an eminent Indian diasporic writer says, "Writers in my position, exiles or emigrants or expatriates, are haunted by some sense of loss, some urge to reclaim , to look back, even at the risk of being mutated into pillars of salt" (10). Indian diasporic writers like JhumpaLahiri, V.S. Naipaul, Chitra Banerjee and many others indent these words of Rushdie through the characterization in their novels. They find novel as an effective genre to represent their exiled condition in a striking manner. Their writings surpassingly depict their alliance to the motherland and at the same time, express their alienation and rootlessness in the land of migration.

Bharati Mukherjee, a noteworthy Indian diasporic writer has occupied an enviable position in contemporary literary arena. Mukherjee's writings mainly focus on the Indian women expatriates and their multifaceted expatriate life experiences. In her novels *Jasmine* and *Wife*, the protagonists serve as the symbols of duality of culture. As W.E.B. Dubois's double consciousness, these protagonists feel to retain with their culture of origin and in meantime, forced to assimilate the culture of the host land. They consciously splitting their inner selves of Indianness "to create a character that would be accepted into mainstream society"(1). They who want to retain their traditional culture, are expected to see themselves through the eyes of others. So forcibly, these immigrants look at themselves with engrossed contempt and disdain which results in double consciousness – being Indian inside, they live a foreigner's life.

In Mukherjee's *Wife()*, Dimple, the protagonist feels alienated in America where life as an immigrant becomes unbearable, whereas she is forced to make efforts towards the process of economic, social and cultural adjustment. Mukherjee, herself has emphasized in an Interview, that many of her works are about psychological transformation especially about women immigrants from Asia. She states clearly that,

> The immigrants in my stories go through extreme transformations in America and at the same time they alter the country's appearance and psychological make-up. And so we are given a writer whose voice tells the tales of her own experiences to demonstrate the changing shape of American Society. (645-654)

As an Indian born Canadian/American novelist, she has made a deep impression on the literary canvass. In her novels, she depicts the issues of her own cultural location of West Bengal, her displacement to Canada where she was located as racial minority and an invisible writer and later final relocation to USA, where she was acknowledged. As FakrulAlam states, "Her struggle with

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identity first as an exile from Indian, then an Indian expatriate in Canada, and finally as an immigrant in the United Stateshad lead to her current contentment of being an immigrant in a country of immigrants"(10).

Dimple Dasgupta in *Wife*, is one of her autobiographical sketches of her experience as an expatriate in Canada. She has come from a well-to-do middle class Bengali family of Calcutta. Her habit of reading novels and film magazines has made her negate the harsh and gruesome realities of life and acquire a romantic disposition towards life. Looking for a neurosurgeon as life- partner, Dimple is even ready to give up her B.A examinations and lives in fantasy. This unrealistic romantic dream leads towards cynicism and misery.

Mukherjeee has clearly depicted the condition of an average young Indian woman through Dimple's expectations on marriage life. But soon after the marriage, Dimple understands the discrepancy between premarital dreams and the marital realities. Once after the migration to America, Dimple feels alienated due to the lonely stay in Sen's apartment. In the beginning she is amazed to watch TV but later she is haunted by those violent programmes on American women's lives. Fascinated and fully addicted by TV shows, Dimple believes these unreal stories are the real exposures towards America.

Due to her psychological changes, she makes herself lonely throughout the novel. Though her inner self is longing for love and freedom, she never expresses it. Despite the fact that Dimple can easily be adapted to the new culture, as she has accepted new life after her marriage, it is her Indian psyche troubles her to admit it. Suffering by unreal expectations that she has been developing in the new world that she has entered, Dimple experiences the dislocation due to the relocation.

Being an ordinary Indian woman,Dimple tries to prove her identity as American by various means. She wears Marsha's American clothes and to the extreme and she has a close relationship with Milt Glasses. With the borrowed outfits and flirting with Milt, Dimple enjoy all the Indian prohibited freedom.At one stage, Dimple's Indian conscious makes her to think over these American behavioursand feels guilty of her extra-marital affair.

There is a cultural conflict as well as a psychological conflict in Dimple's inner space, since she has migrated. Not able to withstand her inner conflict and her increasing liability, she looks for a job in the new land. As Amit Basu, her normal Indian husband does not like his wife to go out for a job. He wants her to stay at home for regular chorus. This subjugation becomes another reason for Dimple to show him that she is capable of doing anything alone.

Threatening multi-faceted surroundings lead her a loss of self-confidence and she is haunted by insomnia. She fends off insecurity by attaching her ideas of America to things that appear controllable and closer to her original ideas of an American life. She wants to identify with immigrant group, to maintain even some social relations and sense of self within the community. Mukherjee has depicted the protagonist Dimple as trapped between two cultures, and aspires to a third, imagined world. She focuses on Dimple's deliberated reproduction of a moral and cultural suicide (Dimple's adultery), murder of her husband, and especially in her self-induced miscarriage in Calcutta on the threshold of her long-awaited migration to the United States.

Jasmine(1989) is one of Mukherjee's best novels, through which the author explicitly pictures Jasmine as an Indian woman who celebrates her new nationality. Unlike Dimple, the protagonist Jyoti who later becomes Jasmine is praised for her successful duality in American society. Narrating the story in Jyoti's first person point of view, Mukherjee makes her speak in more personal and revealing voice.

Starting her life journey in Trinidad as JyotiVidh, she has adopted many names at various stagessuch as Jasmine, Jase, Jane to attain her identity at the time of mobility. Born in a small village, she gets married to Prakash, a modern Indian, who tries to make her a modern woman. She is named as Jasmine and asked to call him by his name.But soon Prakash's demise gives her frustration. Jasmine thought to kill herself and so fly to Florida with illegal passport. In *Wife*, Dimple struggles a lot to set herself in new culture. Whereas in *Jasmine*, Jasmine voluntarily inserts herself indifferent places to identify herself as American woman. The frequent move from one place to another –from Hasnapur to Florida, then to Flushing, later towards Manhattan reveals the voluntary migration of Jasmine. However, she is torn between traditional and modern, her old and new self, living in mother land and as exile which make her to live a state of duality like Dimple.

In Flushing, she needs to look back her Indian culture, where Indian migrants form an Indian society to protect themselves form alienation. Later when she migrates towards Manhattan she placed herself as a caregiver and this makes her to relate with Indian care giver. In Iowa, Janeis againrenamed as Jane where she fully looks at herself as American woman. Mukherjee, though portrays Jasmine as an integrated migrant woman, she pictures the psychological state of Jasmine - being Indian in America.

Bharati Mukherjee's portrayal of an Indian-American woman's location in NewYork in 70s and 80s reveals how women are disrupting the boundaries of their particular social andpsychological location. The diasporic movements and the changing concept of the identity of the protagonists clearly spotlighted both the novels.

Through these protagonists, Mukherjee focuses upon the multiculturalism in which they are confronted leads to the struggle for a new life but not a complete break with the past. The bicultural perception of the protagonist explore their double consciousness that create a deep awareness of the social reality in the Global context. In her own words, "The immigrants in my stories go through extreme transformations in American and at the same time they alter the country's appearance and psychological make-up. And so we are given a writer whose voice tells the tales of her own experiences to demonstrated the changing shape of American society".

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CONCEPT AND VIEWS OF E.V.RAMASAMY ON WOMEN EDUCATION REVEALED THROUGH HIS WRITINGS IN KUDI ARASU

Dr. P.KARTHIKA & Mrs K.SUGANYA

E.V.Ramasamy was the most illustrious social revolutionary of the millennium. He made immense sacrifices while participating in the non-cooperation movement and carrying out the constructive the success of Vaikom agitation, 1924-25, the first major peaceful struggle in modern India for social equality. He was the founder of the famous Dravidian Movements such as Self- respect movement (1925) and Dravidar Kazhagam (1944) in Tamil Nadu. E.V.Ramasamy spread the principles of human dignity, rationalism, gender equality and social justice. He educated people through his writings and speeches to think freely and judge everything in the light of rational thought, experience and social good particularly on women empowerment. He considered education as a powerful tool to develop the society of women, who have stagnated once upon a time as bonded labours and raised to a respectable position today. E.V.Ramasamy believed wholeheartedly that education, particularly the women's education, has got the strength to create a revolution. E.V.Ramasamy have spoken very high about women's education, whenever he got the opportunity. This paper focuses the views of E.V.Ramasamy revealed from his writings in Kudi Arasu, Tamil Weekly and his thoughts on the role of education in the upliftment of women in the society.

The writings of E.V Ramasamy in Kudi Arasu, disseminating many ideas about the women upliftment through education. He started Kudi Arasu along with his associate V.M.Thanga Perumal. The objective of the Kudi-Arasu was to teach equality, brotherhood, self-respect among the Indians particularly Tamils. The Kudi Arasu inculcated new awakening and self-consciousness among the Tamils in the fields of political, economic, social, language and religion. Kudi Arasu was published from 2.2.1925[1] to 5.11.1949. It was registered three times under the Press Act of the Government of India. Contribution of E.V.Ramasamy towards Women Welfare is huge as he played a major role, throughout his life, towards women upliftment. He keenly believed that women should realise their rights and be worthy citizens of their country.

As a rationalist and ardent social reformer, E.V.Ramasamy advocated forcefully throughout his life that women should be given their legitimate position in society as the equals of men and that they should be given good education and has the right to property. He thought age and social customs was not a bar in marrying women. He was keen that women should realise their rights and be worthy citizen of their country. According to E.V.Ramasamy, "All men and women should live with dignity

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in preaching against the evil. It urged the higher castes to give up their arrogance towards them and felt that the need of the hour was not the reform of the downtrodden people but of the higher castes in their attitude towards them. The press considered the evil as a social problem besides being a political problem. It questioned how the people of a nation would achieve progress while one sixth of it was in darkness. The press exposed the real dangers to Indian society in continuing the practice of untouchability.[12]

Charged with the emotional atmosphere thus created, many of the so-called untouchables in Madras Presidency joined the movement as volunteers and marched side-by-side along with other caste-Hindus in the struggle for freedom. They were admitted into the Village Congress Committees and in some places into the Panchayat Boards and Municipal Councils also. In several public meetings, surprisingly, the orthodox took the depressed by hand and seated in their midst.[13] There were villages where people of all castes were drawing water from the same well but at different intervals. Inter-dining was also arranged in some villages. In a hurry of fulfill the Delhi conditions they even went to the extent of including the Harijans, who were generally timid, to mix with them freely and endeavour to win the freedom.[14]

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THE CHOLA ADMINISTRATION SYSTEM

Dr.N.KAVITHA & K.RADHIKA

Administration of Chola was unique as the whole of South India was brought under a single government .The Chola Empire consisted of entire South Indian peninsula extending east to west from coast to coast, and bounded by an irregular line along Tungabhadra river and the Vengi frontier in the north. The Chola dominion extended up to the banks of the

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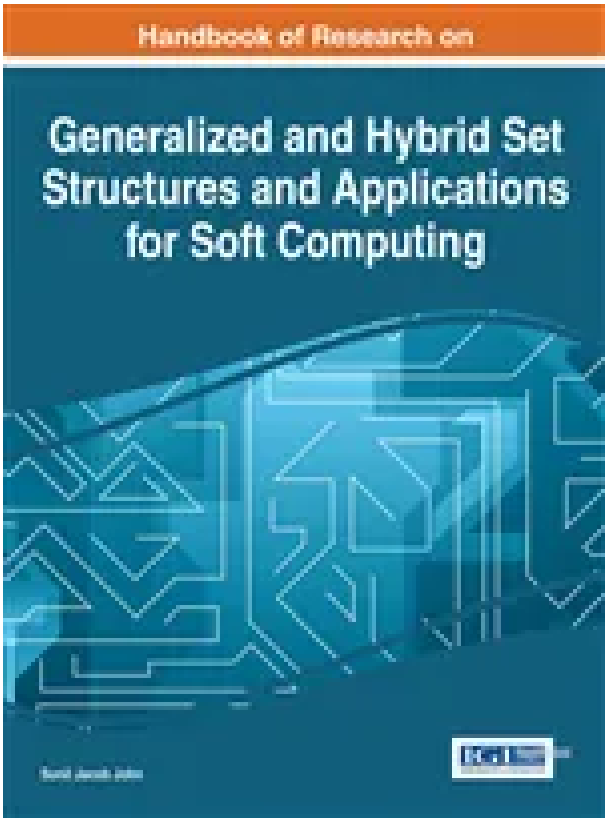
Handbook of Research on
Generalized and Hybrid Set Structures and Applications for Soft Computing

Chapter 4
Intuitionistic Fuzzy Filters for Noise Removal in Images

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Vellallar College for Women, India

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ABSTRACT

Image processing is any form of information processing in which both input and output are images. Most of the image processing involves in treating the image as two dimensional representations and applying standard techniques to it. Images contain lot of uncertainties and are fuzzy/vague in nature. Various fuzzy filtering techniques are defined for noise removal in image processing and these existing filters helps to enhance the image using only the membership values. Further, by incorporating intuitionistic fuzzy filters, vagueness and ambiguity are managed by taking the non-membership values also into consideration. In this paper, light is thrown on some important types of noise and a comparative analysis is done. This paper also presents the results of applying different noise types to an image and investigates the results of various intuitionistic fuzzy filtering techniques. A comparison is made on the results of all the techniques.

1. INTRODUCTION

Digital image processing is a technique of enhancing the images which are prone to noise. Noise is the undesirable effect that contaminates an image, which is the result of errors in the image acquisition process, that result in pixel values not reflecting the true nature of the scene. During image acquisition or transmission, several factors are responsible for introducing noise in the image which affects the accuracy of the results. Depending on the type of disturbance, the noise can affect the image to different extent. The main objective of processing an image is to extract clear information from the images corrupted by

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noise. Such technique for noise removal is called filtering or denoising. Denoising by appropriate filters increases the brightness and contrast and wide variety of special effects to an image. In order to get a noise free image, several linear and non linear filtering techniques are used.

Fuzzy set, introduced by Zadeh (1965), provide a tool to deal theory of imprecision. In recent years, many fuzzy filters have been developed to give better results than traditional filters in noise removal. In literature, there are several other authors Mike Natchtegael, Dimitri Van de Ville, Etinne E. Kerre were working on fuzzy filters and on its extension. There is another way of generalization where fuzzy sets are generalized into intuitionistic fuzzy sets by taking into account non- membership values in addition to membership values. Among extensions of FSs, Atanassov's (1999) IFSs deal vagueness from imprecise information .

In this paper, statistical tools for data in intuitionistic fuzzy environment are defined which are helpful in designing IF filtering algorithm in image processing. This paper is an initiation to model the vagueness associated with the image which will find applications in noise removal in image processing.

1.1 Literature Review

Now-a day, researches are going in filtering technique from non-fuzzy to fuzzy. Gonzalez (1998) has defined traditional statistical filters in digital image processing.

Mike Natchtegael, Dimitri Van de Ville, Etinne E. Kerre (2003), Russo (1996) were working on fuzzy filters and on its extension. Nguyen and Berlin Wu defined new statistical approach for fuzzy data (2006). Ioannis et.al (2005) initiated an attempt towards intuitionistic fuzzy image processing and presented an intuitive approach for intuitionistic fuzzification of images. Moreover, an issue of applying the theory of IFSs in the field of image processing is discussed, which is the first stage of IF image processing.

Ioannis and George (2005) have worked on IF contrast enhancement. Tamalika Chaira (2008) have proposed a new method for IF segmentation and edge detection of medical images. Parvathi, et. al (2005) have developed an algorithm on intuitionistic fuzzy approach for image enhancement using contrast intensification operator. Also some attempt was made to define theoretical concepts in IF statistical tools for filters by Parvathi, et. al (2012), which is an initiative to define theoretical concepts.

The remaining part of the paper is organized as follows. Section 2 gives basic definitions of IFS operators. Section 3 deals about the framework of intuitionistic fuzzy image processing (IFIP) and Section 4 describes intuitionistic fuzzy filters in image processing with the proposed algorithm. The results and performance analysis are discussed in Section 5. Section 6 concludes the paper.

1.2 Types of Noise

Noise is an unwanted effect produced in an image. It degrades the image to different extend during image acquisition or transmission. A noisy image can be modeled as follows (Gonzalez, 1998):

$$C\left(X,Y\right) = A\left(X,Y\right) + B\left(X,Y\right)$$

where *A(X,Y)* is the original image and *B(X,Y)* is the noise in the image and *C(X,Y)* is the resulting noise image. To remove different types of noise, different filtering techniques are applied. Various types of noise in an image are discussed below.

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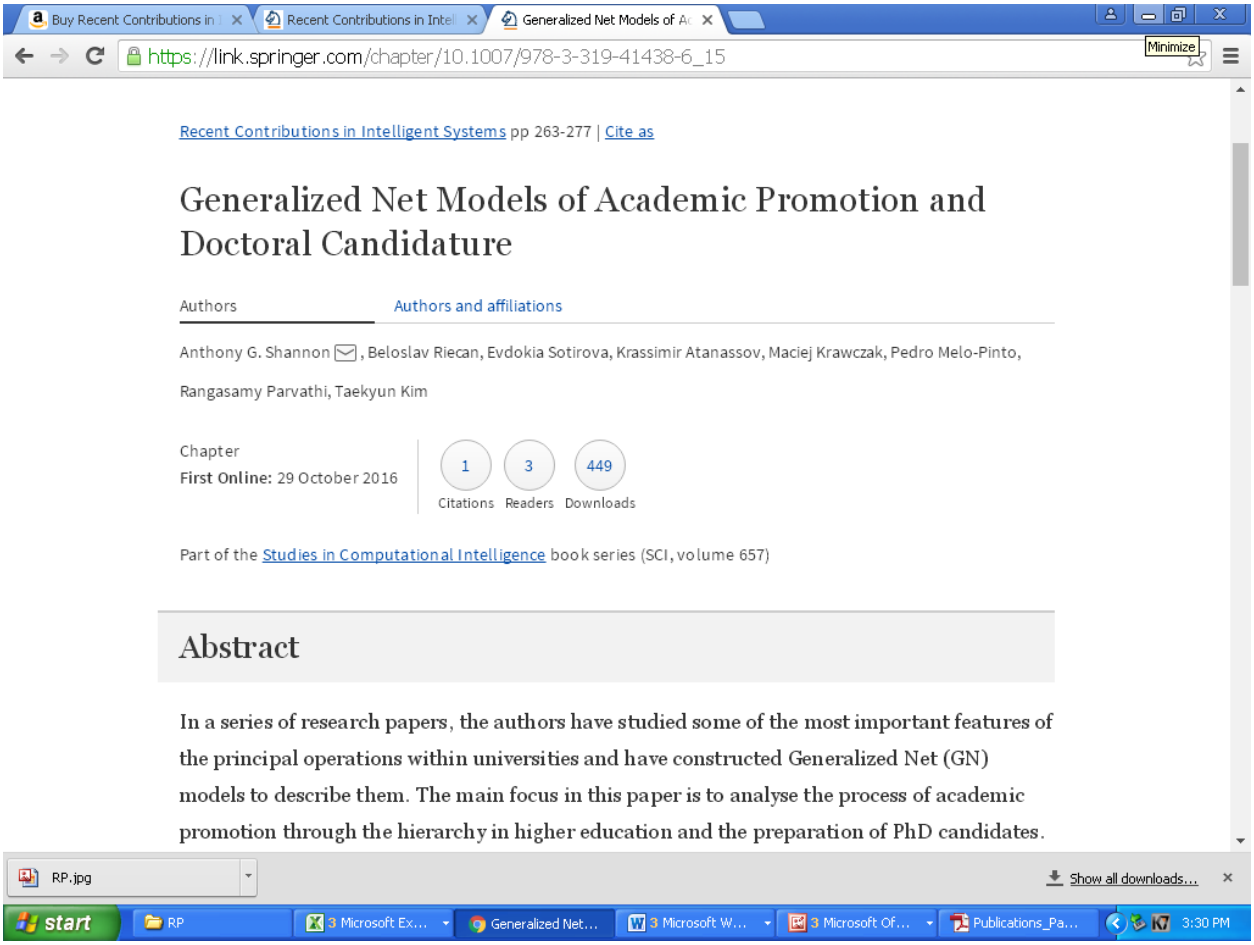

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Generalized Net Models of Academic Promotion and Doctoral Candidature

Authors | Authors and affiliations

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Chapter
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Abstract

In a series of research papers, the authors have studied some of the most important features of the principal operations within universities and have constructed Generalized Net (GN) models to describe them. The main focus in this paper is to analyse the process of academic promotion through the hierarchy in higher education and the preparation of PhD candidates.

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An application of intuitionistic fuzzy directed hypergraph in molecular structure representation

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Abstract: In this paper, essentially intersecting, essentially strongly intersecting, skeleton intersecting, non-trivial, sequentially simple and essentially sequentially simple Intuitionistic Fuzzy Directed Hypergraphs (IFDHGs) are defined. Also, it has been proved that if IFDHG H is ordered and essentially intersecting, then $\chi(H) \leq 3$. An IFDHG H is strongly intersecting if and only if $H^{\langle r_i, s_i \rangle}$ is intersecting for every $\langle r_i, s_i \rangle \in F(H)$ is proven and an application of IFDHG in molecular structure representation is also given.
Keywords: Intuitionistic fuzzy directed hypergraph (IFDHG), Essentially intersecting IFDHG, Molecular IFDHG of water.
AMS Classification: 05C72, 05C65, 47N60.

1 Introduction

The first definition of fuzzy graphs was proposed by Kaufmann, from the fuzzy relations introduced by Zadeh. Although Rosenfeld introduced another elaborated definition, including fuzzy vertex and fuzzy edges, the first definition of intuitionistic fuzzy graphs was proposed by A. Shannon and K. Atanassov [4], see also [3].

S. Arumugam · Jay Bagga
Lowell W. Beineke · B.S. Panda (Eds.)

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Evenly Partite Directed Bigraph Factorization of Wreath Product of Graphs

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Abstract. In this paper, some necessary and sufficient conditions for the existence of an evenly partite directed bigraph ($\overrightarrow{K}_{p,q\oplus q}$) factorization in the product graphs $(C_m \circ \overline{K}_n)^*$ and $(K_m \circ \overline{K}_n)^*$, for $m \geq 3$, $n, p, q \geq 2$ are obtained.

Keywords: $\overrightarrow{K}_{p,q\oplus q}$-factorization · m-partite graph · Wreath product of graphs · Symmetric digraph

1 Introduction

Let G be a graph. Then, for any positive integer s, sG denotes s disjoint copies of G, $G(s)$ denotes the graph obtained from G by replacing each edge by s edges and G^* is the *symmetric digraph* of G obtained by replacing every edge of G by a symmetric pair of arcs. An *m-partite graph* G has the partition of the vertex set V into m subsets such that uv is an edge of G if and only if u and v belong to different partite sets. The graph with vertex set V having partite sets V_1,V_2,...,V_m such that $|V_i| = n_i$ and edge set $E = \{(u, v) \in V_i \times V_j,$ $i, j \in \{1, 2, \ldots, m\}$ and $i \neq j\}$ is called a *complete m-partite graph* and is denoted by $K_{n_1,n_2,\ldots,n_m}$. $\overrightarrow{K}_{p,q\oplus q}$ denotes an *evenly partite directed bigraph* having partite sets V_1, V_2 and V_3 with $|V_1| = p$, $|V_2| = |V_3| = q$ such that all arcs are oriented from the p vertices (tails) at V_1 towards q vertices (heads) at V_2 and V_3 and there is no arc between V_2 and V_3. *Decomposition* of G is a partition of G into edge - disjoint subgraphs $G_1, G_2, ..., G_l$ such that $E(G) = E(G_1) \cup E(G_2) \cup ... \cup E(G_l)$; in this case we express $G = \bigoplus_{i=1}^{l} G_i$. In particular, if F is any graph and $G_i \cong F$, then it is called an *F-decomposition* of G and is denoted by $F|G$. A spanning subgraph of G is called an F - *factor* of G, if each component of G is isomorphic to F. Decomposition of G into F - factors is called an F - *factorization* of G and we denote it by $F\|G$. The *wreath product* of the graphs G and H denoted by $G \circ H$, has vertex set $V(G) \times V(H)$ in which two vertices (u_1, v_1) and (u_2, v_2) are adjacent whenever $u_1u_2 \in E(G)$ or $u_1 = u_2$ and $v_1v_2 \in E(H)$. For other definitions which are not mentioned here, see [1].

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Breast Cancer Detection and Classification using Artificial Neural Network with Particle Swarm Optimization

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***Abstract*— Breast cancer is among the most common causes of deaths today, coming fifth after lung, stomach, liver and colon cancers.Primary prevention in the early stages of cancer becomes more complex. The early diagnosis of breast cancer is accomplished by X-ray mammography. It is the main test used for screening and its analysis and processing are the keys to improve breast cancer prognosis. It detects around 80% to 90% of breast cancer. As a result, a large number of images need to be examined by limited number of radiologists, resulting in misdiagnosis due to human errors by visual fatigue. This paper focuses on detection of breast cancer classification using Artificial Neural Network whose weights are optimized by Particle Swarm Optimization. Segmentation is used to identify the suspicious region from the mammogram image. Intensity, Texture and Shape features are extracted from the segmented mammogram image. The feature extracted from the known segmented images are used to train using ANN-PSO and tested for the detection of breast cancer, classifies as normal or abnormal. This helps the radiologists to increase the accuracy of mammogram examination to diagnose the cancer.**

Keywords*— *Breast Cancer, Mammogram, Neural Network, Particle Swarm Optimization.

I. INTRODUCTION

Cancer is the type of diseases that causes the cells of the body to change its characteristics and cause abnormal growth of cells. Most types of cancer cells eventually become a mass called tumor. Breast cancer is a major cause of death in women. Most breast cancer cases occur in women aged 40 and above but certain women with high-risk characteristics, often hereditary, may develop breast cancer at a younger age. Several imaging techniques are available for detecting breast cancer such as ultrasound imaging, MRI imaging and digital Mammography. Breast tumors and masses usually appear in the form of dense regions in mammograms. A typical benign mass has a round, smooth and well circumscribed boundary; on the other hand, a malignant tumor usually has a speculated, rough, and blurry boundary. If the cancer can be detected early, the options of treatment and the chances of total recovery will increase.The objective of this paper is to increase the effectiveness and efficiency of the classification process in order to reduce the number of false-positive of malignancies.

This paper is organized as follows: Section 2 describes the literature review. Section 3 describes the proposed methodology. Section 4 describes the experimental result analysis and discussion and section 5 describes the Performance Evaluation. Finally, Section 6 describes conclusion with future work.

II. LITERATURE REVIEW

Currently, breast cancer detection is a challenging issue for women. Breast cancer is curable, if it is detected in an initial stage. Number of researchers has tried to arrive an exact solution for this work by proposing different classification techniques.

Abdulla and Zaki [8] proposed a method for detection of masses in digital mammogram using ANN and GLCM features extraction, and achieved 91% sensitivity and 84% specificity for classifying 90 mammogram images randomly selected from the Mini-Mias database. Islam et al. [9] also proposed a classification method using ANN and GLCM features to classify benign-malignant classes of mammogram images which achieved 90% sensitivity and 84% specificity.

A comparative study on GLCM feature extraction for breast cancer classification by R.Nithya and B.Santhi [2], the study used a sample of 50 mammogram images from the Digital Database for Screening Mammography (DDSM) Database shows an excellent result. R.Nithya and B.Santhi [10] proposed a method for Classification of normal and abnormal patterns in Digital mammograms for the breast cancer diagnosis using ANN and GLCM features. The work shows that the sensitivity and specificity more than 90% for a sample set of 50 digital mammogram images from the DDSM Database.

The overall literature survey says that various methods and classification techniques are applied for classifying the images into normal or abnormal. The existing methods are tested with only limited number of mammogram images from the MIAS database.

III. PROPOSED METHODOLOGY

The proposed system consists of four phases for breast cancer detection from the mammogram image. The anticipated research uses the data set obtained from Mammographic Image Analysis Society (MIAS) [7]. The set consists of 322 images that fall into one of the following classes: 67 benign, 54 malignant and 201 Normal images.The overview of proposed methodology is depicted in Fig.1.

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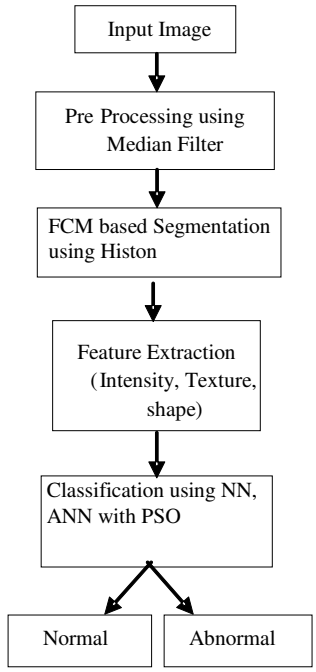


Fig. 1Diagrammatic representation of proposed method

A. *Pre-Processing*

The input image which is obtained is preprocessed to remove the noise and to enhance the quality of the image. Before any image-processing algorithmapplied on mammogram, preprocessing steps are very important in order to limit the search for abnormalities without undue influence from background of the mammogram. Digital mammograms are medical images that are difficult to be interpreted, thus a Pre-Processing phase is needed in order to improve the image quality and make the segmentation results more accurate. The mammogram images are preprocessed by using median filter. Median filtering is useful for reducing speckle noise that can do a better job of preserving edges than simple smoothing filters.

B. Segmentation

From the enhanced image, the suspicious region is identified using Histon based Fuzzy c-means segmentation algorithm. Segmentation is an important step in many medical imaging applications and a variety of image segmentation techniques already exist. Segmentation is the process of partitioning an image into multiple segments, so as to change the representation of an image into something that is more meaningful and easier to analyze.*Mohabey and Ray[11]*introduced the concept of histon means for the visualization of color information for the evaluation of similar color regions in an image. Histon is the segregation of the elements at the boundary, which can be applied in the process of the image segmentation. Histon based Fuzzy c-means segmentation find the cancer detected regions in the imageandachieve the better segmentation results.

1). *Fuzzy C-Means Algorithm:* FCM is a method of clustering which allows one piece of data to belong to two or more clusters (i.e.) it allows the pixels to belong to multiple classes with varying degrees of membership. It is based on minimization of the objective function defined as follows.

$$J = \sum_{j=1}^{N} \sum_{i=1}^{c} U_{ij}^{m} ||x_j - v_i||^2 (2)$$

where U_{ij} represents the membership of pixel x_j in the *i*th cluster, v_i is the *i*th cluster center, and *m* is a constant. The parameter *m* controls the fuzziness of the resulting partition, and m=2 are used in this study.

The FCM algorithm assigns pixels to each category by using fuzzy memberships. Let $X = \{x_1, x_2, x_3 ..., x_n\}$ which denotes an image with *N* pixels (set of data points) to be partitioned into c cluster centers or centroids and $V = \{v_1, v_2, v_3 ..., v_c\}$ be the set of centers.

Step 1: Randomly select 'c' cluster centers.

Step 2: Calculate the fuzzy membership 'U_{ij}' The cost function is minimized when pixels close to the centroid of their clusters are assigned high membership values, and low membership values are assigned to pixels with data far from the centroid. The membership function represents the probability that a pixel belongs to a specific cluster. In the FCM algorithm, the probability is dependent solely on the distance between the pixel and each individual cluster center in the feature domain. The membership functions and cluster centers are updated by the following:

$$u_{ij} = \frac{1}{\sum_{k=1}^{c} \left(\frac{||x_j - v_i||}{||x_j - v_k||} \right)^{\frac{2}{m-1}}} \quad (3)$$

Step 3: Compute the cluster centers 'v_j' using:

$$v_i = \frac{\sum_{j=1}^{N} u_{ij}^{m} x_j}{\sum_{j=1}^{N} u_{ij}^{m}} \quad (4)$$

Step 4: Repeat step (2) & (3) until the minimum '*J*' value is achieved.

The cluster center or centroids is calculated by using K-Means clustering algorithm, the FCM converges to a solution for v_i representing the local minimum or a saddle point of the cost function. Convergence can be detected by comparing the changes in the membership function or the cluster center at two successive iteration steps. The suspicious regions will be identified from this method.

2). Histon Process

Histon is basically a contour plotted on the top of the histograms by considering a similar color sphere of predefined radius around a pixel. The base histogram is considered to be the lower approximation and the histon as upper approximation. The upper approximation is a collection of all points, which may or may not belong to one segment but certainly share a unique property that the elements have similar colors. For segmentation, only the upper approximation is considered and the histogram based technique is applied on the histon to find the regions in the image. For every intensity value in histogram, the number of pixels encapsulated in the similar intensity sphere is evaluated. This count is then added to the value of the histogram at that

particular intensity value. This computation is carried out for all the intensity values that lead to the formation of histon.

The steps of Histon process are given by:

- Using the difference between the nearest neighbors, calculate the pixel value.
- The formula to find the difference between the nearest neighbors for all the pixels values as follows

Difference of a particular pixel = Nearest neighbor 1 - Nearest neighbor 2

- After finding the pixels values update the pixels values update the pixels values by setting a threshold. Here we used the threshold value as greater than 1 or less than 1.
- Then to find the intensity values of a pixel, we find the difference between the nearest neighbors for the particular pixel values. Using the above formula we find the intensity values of a pixel.
- After finding the intensity values of a pixel, we have to update the values in the image by setting the threshold. The threshold value is greater than or less than 1
- Update the count values in the particular intensity value of a pixel and we check one by one via histogram and plot the values.
- Here, with the difference between the neighbors the intensity values of a pixel is calculated. By keeping threshold, the intensity value of a pixel is calculated. (i.e) if the calculated difference between the neighbors is greater than one means replace the pixel value with 2 and if the calculated difference between the neighbors is less than one means replace the pixel value with 0

The above process repeats until the eligibility criterion occurs.

By using the above process, we compute and rearrange the pixel values to find the roughness areas without affecting the lower dimensional areas. Finally we consider upper approximation for further processing. These values are given to k-means for clustering the medical images.

3). Centroid Selection using k-means algorithm

K-means clustering is to minimize the sum of squared distances between data and the corresponding centroid of the cluster.Here, K-means clustering groups the pixels into two distinct clusters (k=2) based on the values of Histon. Centroid is calculated in this approach using k-mean clustering algorithm. The step-by-step of K-means clustering algorithm is presented as follows:

Let X = {x1, x2, x3 ...xn} be the set of data points and V = {v1, v2, v3 ...vc } be the set of centers.

Step 1: Initialize the cluster centers by Histon process.
Step 2: Calculate the distance between each data point and cluster centers.
Step 3: Assign the data point to the cluster centre whose distance from the cluster centre is minimum of all the cluster centres.
Step 4: Recalculate the new cluster centre using

$$v_i = \left(\frac{1}{c_i}\right)\sum_{j=1}^{c_i} x_i \qquad (1)$$

Where 'Ci' represents the number of data points in ith cluster.
Step5: Recalculate the distance between each data point and newly obtained cluster centres.
Step6: If no data point was reassigned then stop, otherwise repeat from step 3.
After calculating the centroid values, it will assign to the FCM for better clustering on medical images.

4). FCM based segmentation using Histon

The step by step procedures are given by:

Step 1: Roughness areas are computed and initialize the cluster centers using Histon process.

Step 2: Centroid selection using k-means algorithm.

Step 3: FCM assigns the cluster centers from the above step for better clustering on medical images.

The suspicious regions will be identified from this method.

C.Feature Extraction

After the segmentation is performed, the segmented breast image is used for feature extraction. A feature is significant piece of information extracted from an image which provides the more detailed understanding of an image. Several types of features like Intensity, Texture and shape features are extracted. Shape measurements are physical dimensional measures that characterize the appearance of an object.

1). Intensity Feature

Mean reveals the general brightness of an image. Bright image should have high mean while dark image should have low mean, and also mean values characterize individual calcifications. Standard deviation or variance reveals the contrast of an image. Image with good contrast should have high variance. Standard Deviations (SD) also characterize the cluster. Skew measures asymmetry (unbalance) the distribution of the gray level. Image with bimodal histogram distribution (object in contrast background) should have high variance but low skew distribution (one peak at each side of mean). Energy measurement is closely related to skew. Highly skew distribution usually gives high-energy measurement. Entropy measures the average number of bits to code each gray level. It has inverse relationship with skew and energy measurement. Highly skew distribution tends to yield low Entropy. These are summarized in Table 1. Then features are calculated for classification.

2). Texture LBP

Texture features is useful in differentiating normal and abnormal cells. The texture feature extraction is calculated by using Local Binary Pattern Operator. LBP operator combines the characteristics of statistical and structural texture analysis.

TABLE I. INTENSITY FEATURE

Intensity	Formula
Mean	$\mu = \sum_{x=1}^{N_g} x.p(x)$
Variance	$\sigma^2 = \sum_{x=1}^{N_g} (x-\mu)^2 . p(x)$
Skewness	$\mu_3 = \sigma^{-3} \sum_{x=1}^{N_g} (x-\mu)^3 . p(x)$
Kurtosis	$\mu_4 = \sigma^{-4} \sum_{x=1}^{N_g} (x-\mu)^4 . p(x) - 3$
Entropy	$f_1 = \sum_{x=2}^{2N_g} p_{i+j}(x) \log\{p_{i+j}(x)\}$

The LBP operator is used to perform gray scale invariant two-dimensional texture analysis. The LPB operator labels the pixel of an image by thresholding the neighborhood (i.e. 3 × 3) of each pixel with the center value and considering the result of this thresholding as a binary number. When all the pixels have been labeled with the corresponding LBP codes, histogram of the labels are computed and used as a texture descriptor.

Algorithm

Step 1: Given a pixel in the image LBP can be computed by comparing it with its neighbors

$$LBP(x_c, y_c) = \sum_{n=0}^{p} 2^n C(I_n, I_c) \quad (5)$$

Where, $C(I_n, I_c) = \begin{cases} 1 \; ; \; if \;\; I_n > I_c \\ 0 \; ; \; else \end{cases}$. I_n is the gray level value of the central pixel, I_c is the value of its neighbors. P is the number of involved neighbors.

Step 2: After LBP pattern of each pixel is identified, a histogram is used to represent the texture image

$$H_i = \sum_{x,y} I\{ f_l(x,y) = i\}, i = 0, \ldots n-1, \quad (6)$$

Where n is the number of different labels produced by the LBP operator, and I{A} is 1 if A is true and 0 if A is false.

Step 3: When the image patches whose histograms are to be compared have different sizes, the histograms must be normalized to get a coherent description

$$N_i = \frac{H_i}{\sum_{j=0}^{n-1} H_j} \quad (7)$$

3). Shape Features

Shape values can be used to distinguish between benign and malignant tumors. Benign lesions usually have smooth shapes and so they produce a regular shape, whereas malignant lesions present irregular shapes. The features are Eccentricity, Orientation, Solidity and Extent. The eccentricity of the image gives a measure of just how 'squashed' it is. The eccentricity is obtained using the ellipse that has the same second-moments as a region. It is the ration of the distance between the foci of the ellipse and its major axis length. The value is between 0 and 1. Solidity is the measurement of the overall concavity of a particle. Solidity is defined as the image area divided by the convex hull area. Thus a particle becomes more solid. Solidity of a convex shape is always one and it is lower for an object with rough perimeter or having holes in it. Orientation is used to find an object in an image. Extent of an image shows that how far the cancer region may have spread. It is the proportion of the pixels in the bounding box (the smallest rectangle containing the region) that are also in the region. These are summarized in Table II

TABLE II. SHAPE MEASUREMENTS

Shape Measurements	Formula
Eccentricity	$\frac{c}{a}$ Where ,***c*** is the distance from the center to a focus. ***a*** is the distance from that focus to a vertex
Solidity	$\frac{Total\ Area}{Convex\ Area}$
Orientation	Scalar; the angle (in degrees ranging from -90 to 90 degrees) between the x-axis and the major axis of the ellipse that has the same second-moments as the region.
Extent	$\frac{Total\ Area}{Area\ of\ the\ bounding\ box}$

D. Classification

Classification is the final step in mammogram abnormality detection. The extracted features are considered as input to the classifier to classify the detected suspicious areas into normal, benign or malignant. Classifier such as artificial neural network (ANN) has performed well. The classification of breast cancer detection is divided into the training phase and the testing phase. During training, the features are extracted from the segmented images are input to ANN whose weights are optimized by particle swarm optimization in which the diagnosis is known. Whenever an image is taken as input to the algorithm, it is simulated with the trained networks and goes for testing the image.

1). Artificial Neural Network

An Artificial Neural Network (ANN) is inspired by the way biological nervous systems process information. An ANN consists of a collection of processing elements that are highly

interconnected and transform a set of inputs to a set of desired outputs in which each connection has a weight associated with it. The advantage of ANN is their capability of self-learning, and often suitable to solve the problems that are too complex to use the conventional techniques, or hard to find algorithmic solutions. The neural network trained by adjusting the weights so as to be able to predict the correct class. In this work, a method that combines ANN with PSO algorithm was proposed to optimize the weights of target value.

Algorithm

Step 1: Extract features from mammogram images.

Step 2: Create input and target for normal and abnormal class.

Step 3: The initial weights are chosen randomly.

Step 4: Calculate the predicted output.

An issue in neural network is difficult to train: the training outcome can be nondeterministic and depend crucially on the choice of initial parameters. To address the issue hybrid approach of neural network with particle swarm optimization learning algorithm for cancer prediction.

2). Neural Network with Particle Swarm Optimization

Algorithm

Step 1: Extract features from mammogram images.

Step 2: Create input and target for normal and abnormal class.

Step 3: The weights are optimized by Particle Swarm Optimization algorithm.

Step 4: Output node predicts the correct class (i.e.) Normal or abnormal

Using the above algorithm the weightage can be optimized on target values for the efficient breast cancer detection using PSO. The result shows that one can easily and effectively detect breast cancer at an early stage.

IV. EXPERIMENTAL RESULT ANALYSIS AND DISCUSSION

The proposed system for medical image segmentation for breast cancer detection was evaluated. It is implemented in the working platform of MATLAB. The input image is pre-processed to remove the noise and to enhance the quality of the image using Median filter. From the enhanced image, the suspicious region is identified using FCM segmentation. Segmented image is used for feature extraction. The features are Intensity feature like Mean, Variance, Skewness, Kurtosis and Entropy, The texture feature extraction using local binary pattern and shape measurements like Ecc (Eccentricity), Ori (Orientation), Sol (solidity) and Ext (Extent). The extracted features values are passed to train the Neural Network to classify whether region is normal or abnormal using PSO algorithm. Thus one can able to find out whether it is affected by cancer or not.

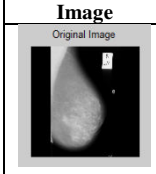
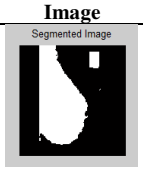
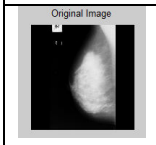
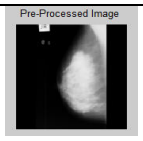
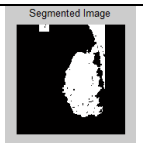
Original Image	Pre-Processed Image	Segmented Image	Classification
			Abnormal
			Normal

Fig 2. Experimental Result

V. PERFORMANCE EVALUATION

The various assessment metrics are used to calculate and analyze that our proposed technique is the efficient mammogram image segmentation and classification of breast cancer. The metric values like Sensitivity (SE), Specificity (SP) and Accuracy (AC) are used to evaluate the performance of the classifier. The formulas are given in Table II. Sensitivity is a proportion of positive cases that are well detected by the test and the specificity is proportion of negative cases that are well detected by the test. Classification accuracy depends on the number of samples correctly classified.

TABLEIII. FORMULA FOR MEASURES

Measures	Formula
Sensitivity	SE=TP/(TP+FN)
Specificity	SP=TN/(TN+FP)
Accuracy	AC=(TP+TN)/(TP+FP+TN+FN)

Where, TP is the number of true positives; FP is the number of false positives; TN is the number of true negatives; FN is the number of false negatives. Confusion matrix is shown in Table IV.

TABLE IV. CONFUSION MATRIX

Actual	Predicted	
	Positive	***Negative***
Positive	TP	FP
Negative	FN	TN

TP - Predicts abnormal as abnormal.
FP - Predicts abnormal as normal.
TN - Predicts normal as normal.
FN - Predicts normal as abnormal.

TABLE V. CONFUSION MATRIX FOR TESTING ANN-PSO

Method	Actual	Predicted	
		Cancer(Positive)	***Normal(Negative)***
ANN-PSO	***Cancer(Positive)***	41(TP)	7(FP)
	Normal(Negative)	6(FN)	246(TN)

TABLE VI. CONFUSION MATRIX FOR TESTING ANN

Method	Actual	Predicted	
		Cancer(Positive)	*Normal(Negative)*
ANN	*Cancer(Positive)*	32(TP)	16(FP)
	Normal(Negative)	13(FN)	239(TN)

TABLE VII. PERFORMANCE COMPARISON BETWEEN ANN AND ANN_PSO

Test Image	Methods	Sensitivity	Specificity	Accuracy
48 Malign 252 Normal	ANN-PSO	87.23%	97.23%	95.66%
	ANN	72.72%	93.6%	88.66%

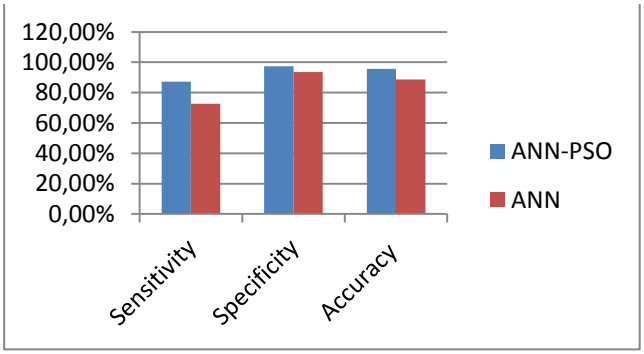


Fig. 1. Comparison between ANN and ANN with PSO

To evaluate this work, the proposed method trained with 322 mammogram images and tested with 300 mammograms (48 malignant and 252 normal) images. Confusion Matrix for testing ANN-PSO and ANN is shown in Table IV and TableV. The result in Table VII shows the classification effectiveness of normal and abnormal mammogram images with the help of extracted features. Figure 3 show the computed sensitivity, Specificity and accuracy for testing data of proposed and existing method. ANN-PSO reveals a better classification rate in sensitivity, specificity and accuracy.

VI. CONCLUSION AND FUTURE SCOPE

Breast cancer is one of the major causes of death among women. Breast cancer is curable when detected in early stages. The classification of mammogram images is emphasized in this paper for cancer diagnosis using Artificial Neural Network with PSO algorithm. It provides a faster diagnosis of breast cancer into normal or abnormal with accurate results. The result indicates that this system can facilitate the doctor to detect the breast cancer in the early stage of diagnosis as well as identify the suspicious region. The future work is to stage the breast cancer in the abnormal mammogram images. It will help the doctor and radiologists to analyze the stage of cancer, the patient is in and according to which he/she can take necessary and appropriate treatment steps.

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A SURVEY ON RISK PREDICTION OF CARDIOVASCULAR DISEASE USING GENETIC INFORMATION

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ABSTRACT- Cardiovascular disease (CVD) has become the world's number one cause of morbidity and mortality. It leads to millions of deaths every year which are supposed to occur decades later. Around two-thirds of these deaths are due to acute events, which frequently occur suddenly and are often fatal before medical care can be given. Unexpected acute events are resulting in affliction and high treatment costs. Hence CVD becoming huge burdens even for developed countries. So, early prediction and intervention would be a huge benefit to society. Many groups have developed prediction models for CVD by classifying its risk based on risk factors such as age, sex, etc. Recent studies have uncovered that many genetic variants are associated with CVD outcomes. However, the potential clinical utility of genetic information has been uncovered initially and is expected for further development.

Keywords: Cardiovascular disease (CVD), genetic variants.

1 Introduction

Cardiovascular disease such as heart attack, stroke, and hypertension is caused by disorders of the heart and blood vessels and by far continues to be the leading cause of death in the world for both developed and developing countries. Vulnerable plaque easily ruptures in blood vessels, thereby including the occurrence of a stroke, heart attack, etc. The deaths related to CVD are mainly due to acute events, which frequently occur suddenly. According to health informatics, which has been listed by the U.S. National Academy of Engineering as one of the 14 grand engineering challenges of the 21st century, deals with the acquisition, transmission, processing, storage and retrieval of health information for early detection, early diagnosis and early treatment of diseases.

Therefore risk prediction is of utmost importance to allow early intervention and treatment of complex CVD to prevent the occurrence of acute events and decrease costs. It is for this reason that

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risk prediction has become an important field to study. It is therefore, in addition to traditional approaches, new strategies for screening and early intervening CVD are demanded. The art of electro-cardiograph (ECG) interpretation is basically one of the pattern recognition. To date, in addition to this traditional ECG approach and demographic information some risk prediction models have been built such as Framingham, ATP-III, SCORE, PROCAM, QRISK and MUCA. These current risk prediction models have had some initial success in CVD prediction. However, they did not have good performance in predicting the end point of individuals who were assessed to have an intermediate risk of developing CVD.

The traditional risk factors or biomarkers for predicting CVD outcomes include age, sex, systolic blood pressure, smoking habits, diabetes, total cholesterol, high-density lipoprotein (HDL) cholesterol, low-density lipoprotein (LDL) cholesterol, diabetes mellitus, family history, etc. While traditional risk factors can explains only half of the incidence of CVD. Therefore further efforts are needed to improve the performance of risk prediction models. For further efforts, Genome-Wide Association Studies (GWAS) for CVD outcomes/traits can be overviewed. Genomics summarized recent studies on genetic variants that are associated with CVD outcomes/traits and perspective of using genetic information for developing a personalized risk prediction model for CVD. The genetic variants associated with CVD outcomes and other complex disease can also be searched in web of science and PubMed.

The genetic markers reviewed were those associated with CVD outcomes (coronary heart disease, stroke, heart failure, etc) established traditional factors (systolic blood pressure, total cholesterol, HDL cholesterol, LDL cholesterol, body mass index, hypertension, etc) and biomarker. It is now becoming apparent that new and personalized biomarkers are needed in order to predict acute CVD outcomes more accurately. Recent studies have been focusing on looking for new genetic, molecular, imaging or physiological biomarkers with better clinical prediction outcomes and for this advancements in different computing and information technologies are needed.

The common CVD outcomes/traits are Myocardial Infarction (MI), stroke, Heart Failure (HF). Myocardial infarction (MI) is the diseased state of the heart that leads to the damage in the depolarizing myocardium (heart muscle), resulting in heart attack. Stroke is a kind of severe disease which has been one of the most frequent diseases that can cause sudden deaths. Even if the unattended patients attacked stroke and survived, a great or small part of the heart will still be always affected, and work of heart involvement and the possibility of chronic HF will be produced. Moreover, arrhythmias will be caused. There are other severe cardiovascular outcomes, such as HF,

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a kind of common disease, which can cause leg swelling, shortness of breath, and the other severe symptoms. HF can be led by other diseases, such as rheumatic heart disease, anemic heart disease and toxic heart disease.

2 Reviews

A. GWAS

GWAS are developed to identifying inherited genetic variants that are associated with complex disease. This identification enables a clarification of the disease mechanisms and improves the efficacy of disease diagnostics and therapeutics. Currently, the procedures involved in introducing the genetic information into the developed risk prediction models are: (1) Identifying the genes that will be used in the prediction by studying the disease mechanism. (2) Identifying the association between the genes and the risk of disease using GWAS. (3) Developing clinical trials to make sure that the genes can predict the risk of the disease. (4) Using the outcomes of gene detection, predict whether the sample suffer from the diseases. (5) If the detected gene is found in the human blood, the person will suffer from the disease. Therefore the person should take appropriate therapy to prevent the disease earlier.

In the case of complex diseases, associated genetic variants will refer to hundreds or thousands of Single-Nucleotide Polymorphisms (SNPs), which are distributed in large regions with a particular locus on different chromosomes. Traditional methods (fragment length polymorphism, single-strand conformation polymorphism) are hard to apply on a large-scale population and multiple SNPs. The method for SNP genotyping should be high-throughput, low-cost, robust, automated, easily developed, accurate analysis of high volume data, simple operation and so on. It is difficult to combine all of these attributes into a single technology.

B. Personalized Risk Prediction Models

Personalized risk prediction modeling, in addition to the traditional population-based modeling is an emerging field of studies in health informatics. To assist the development in this area, the National Public University Center in Uruguay with the aim of developing and applying strategies to improve cardiovascular risk stratification and sub clinical vascular disease detection. The data can be valuable for the development of patient-specific evaluation metrics for CVD outcomes.

At present, combination of imaging biomarkers of atherosclerotic plaques with clinical features for better prediction of stroke on over 1000 patients. These models present interesting ideas on combing images with physiological or clinical information for CV risk prediction.

C. Critical Analysis

By combining or mining both GWAS and National Public University center we can gain large amount

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of sufficient information about gene variants which are associated with several diseases including CVD. Further this information can also be used for disease detection of individuals. Further new CVD outcomes can also be identified using different kind of genes.

3 Challenges of Genetic Association into CVD

Several studies have the potential of adding genetic variants into CVD risk prediction which can improve the performance of the risk prediction model and clinical utility. Even though there is a need of better performance on developing individual CVD risk prediction. It is still hard to carry out because it needs abundant studies with clinical trials. There are many challenges that are existed in large-size samples in the clinical trials.

Firstly, there are a large number of genes that have or will be discovered to associate with complex disease. The established risk factors have been explained half of the CVD risk. Secondly, different races, lifestyles, and living environments could induce these genetic variants to be differently explained. Many genes were detected in the subject's body, but they did not explain the disease because of the special life styles and the living environments. Thirdly, it takes too much time to genotype SNP and collects useful information for evaluating the merits of genetic CVD risk prediction for clinical use.

Lifestyle changes have been found to be an effective approach to prevent CVD. Few objective and quantifiable indices are currently available in clinical practice to assist the assessment of lifestyle changes, for example, via exercise.

4 Conclusion

CVD is one of the most common causes of death worldwide and represents a major financial burden for national economies. The epidemic of CVD has caused huge losses and caught the attention of society. Effective prediction and prevention of CV disease, particularly which resulted from high-risk asymptomatic atherosclerosis, has now become a top priority. With the advancement of technologies, screening and improved selection of individuals for more effective prevention is now possible through (1) Preclinical atherosclerotic plaques develop slowly over several decades before they rupture or obstruct an artery becoming clinically manifest. (2) Screening methods are now available for detecting the presence and severity of such plaques. (3) Current prophylaxis with aggressive risk factor modification can largely reduce morbidity and mortality from heart attacks and strokes by 50%.

Genes will be generally stable in human body for a long time after birth, so gene detection will play an important role in predicting and preventing all kinds of diseases (including CVD),

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and also extends and improves human life. However, more efforts should still be made before integrating genetic information into CVD risk prediction model clinically, because the genes that can fully explain complex CVD have not yet been identified.

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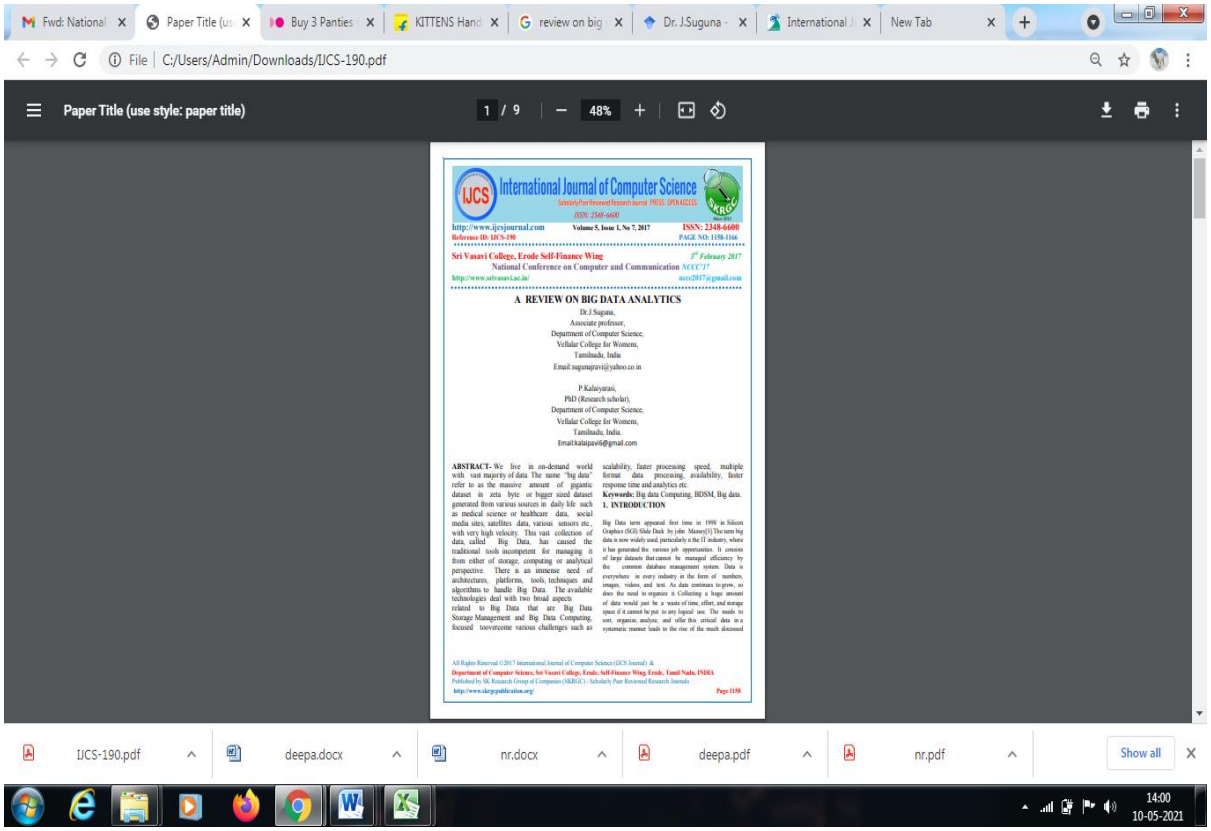

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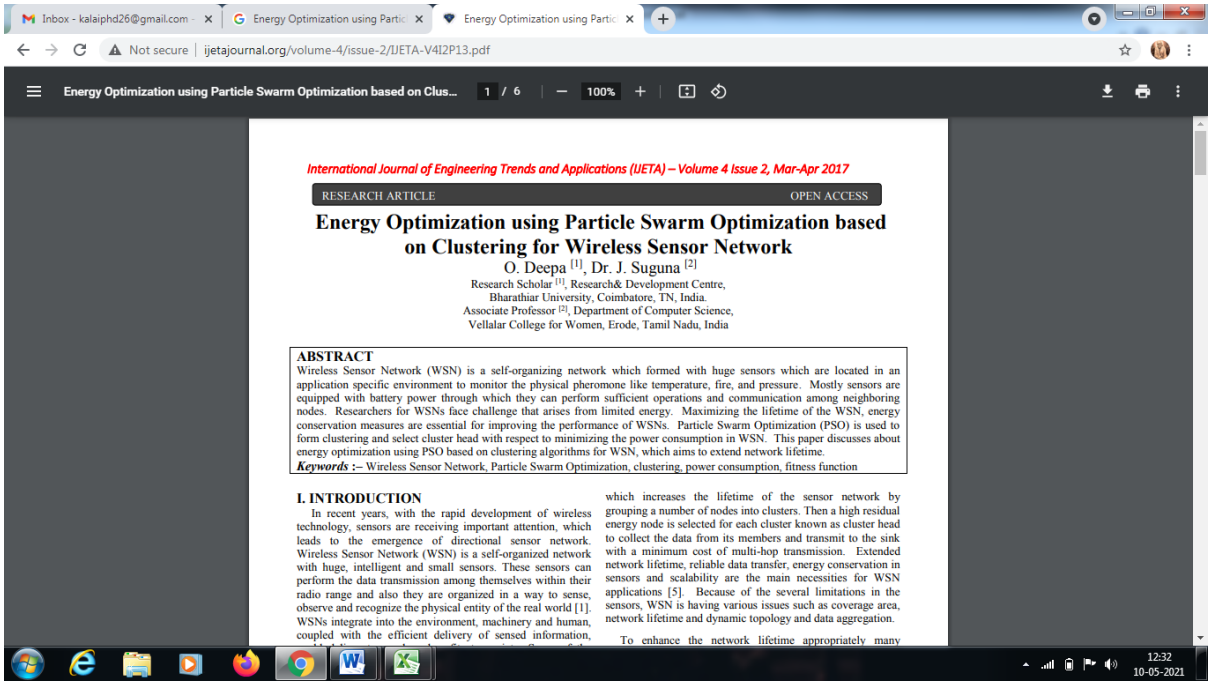

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RESEARCH ARTICLE OPEN ACCESS

Energy Optimization using Particle Swarm Optimization based on Clustering for Wireless Sensor Network

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ABSTRACT
Wireless Sensor Network (WSN) is a self-organizing network which formed with huge sensors which are located in an application specific environment to monitor the physical pheromone like temperature, fire, and pressure. Mostly sensors are equipped with battery power through which they can perform sufficient operations and communication among neighboring nodes. Researchers for WSNs face challenge that arises from limited energy. Maximizing the lifetime of the WSN, energy conservation measures are essential for improving the performance of WSNs. Particle Swarm Optimization (PSO) is used to form clustering and select cluster head with respect to minimizing the power consumption in WSN. This paper discusses about energy optimization using PSO based on clustering algorithms for WSN, which aims to extend network lifetime.
Keywords **:–** Wireless Sensor Network, Particle Swarm Optimization, clustering, power consumption, fitness function

I. INTRODUCTION

In recent years, with the rapid development of wireless technology, sensors are receiving important attention, which leads to the emergence of directional sensor network. Wireless Sensor Network (WSN) is a self-organized network with huge, intelligent and small sensors. These sensors can perform the data transmission among themselves within their radio range and also they are organized in a way to sense, observe and recognize the physical entity of the real world [1]. WSNs integrate into the environment, machinery and human, coupled with the efficient delivery of sensed information, which increases the lifetime of the sensor network by grouping a number of nodes into clusters. Then a high residual energy node is selected for each cluster known as cluster head to collect the data from its members and transmit to the sink with a minimum cost of multi-hop transmission. Extended network lifetime, reliable data transfer, energy conservation in sensors and scalability are the main necessities for WSN applications [5]. Because of the several limitations in the sensors, WSN is having various issues such as coverage area, network lifetime and dynamic topology and data aggregation.

To enhance the network lifetime appropriately many

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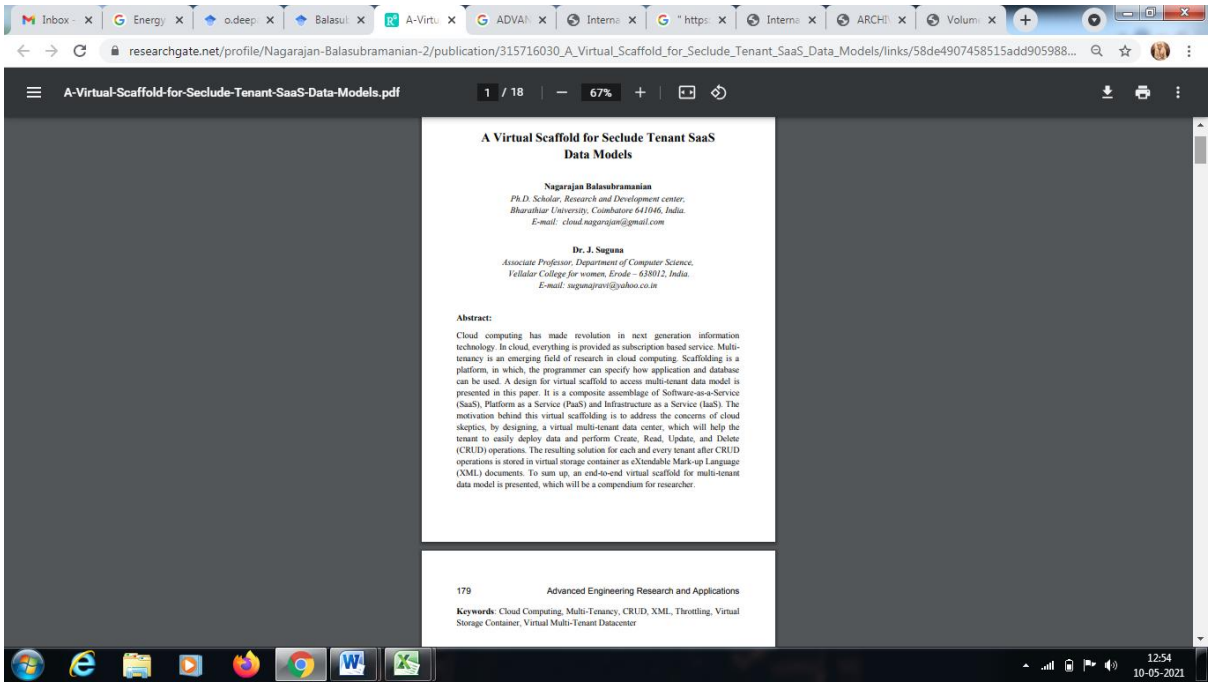

A Virtual Scaffold for Seclude Tenant SaaS Data Models

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Abstract:
Cloud computing has made revolution in next generation information technology. In cloud, everything is provided as subscription based service. Multi-tenancy is an emerging field of research in cloud computing. Scaffolding is a platform, in which, the programmer can specify how application and database can be used. A design for virtual scaffold to access multi-tenant data model is presented in this paper. It is a composite assemblage of Software-as-a-Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS). The motivation behind this virtual scaffolding is to address the concerns of cloud skeptics, by designing, a virtual multi-tenant data center, which will help the tenant to easily deploy data and perform Create, Read, Update, and Delete (CRUD) operations. The resulting solution for each and every tenant after CRUD operations is stored in virtual storage container as eXtendable Mark-up Language (XML) documents. To sum up, an end-to-end virtual scaffold for multi-tenant data model is presented, which will be a compendium for researcher.

Keywords: Cloud Computing, Multi-Tenancy, CRUD, XML, Throttling, Virtual Storage Container, Virtual Multi-Tenant Datacenter

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A SURVEY ON CLASSIFICATION ALGORITHMS IN DATA MINING FOR PREDICTION OF DIABETES

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ABSTRACT

Data mining is a process of extracting information from a dataset and transform it into understandable structure for further use, also it discovers patterns in large data sets. Data mining is one of the essential areas of research that is more popular in health organization. Healthcare providers use data mining and data analysis to find best practices and the most effective treatments. Nowadays, diabetes is considered as one of the diseases which cause more deaths than any other disease in the world. To avoid the dangerous complications of the diabetes, patients should control the blood glucose level. Many researches have been conducted in the diabetes area by using of data mining as analytic powerful tool to extract knowledge from available massive data.

Keywords: *Data Mining, Classification , Diabetes, Knowledge Discover Database, Healthcare, Dataset.*

I INTRODUCTION

DATA MINING

Data Mining is the process of extracting hidden knowledge from large volumes of raw data. It is one of the tasks in the process of knowledge discovery from the database. There are two primary goals of data mining tend to be *prediction* and *description*. *Prediction* involves some variables or fields in the data set to predict unknown or future values of other variables of interest. On the other hand *Description* focuses on finding patterns describing the data that can be interpreted by humans. The Disease Prediction plays an important role in data mining.

The tasks of data mining are very diverse and distinct because there are many patterns in large database. Different kinds of methods and techniques are needed to find different kinds of patterns. Based on the kinds of patterns we are looking for, tasks in data mining can be classified into summarization, classification, clustering, association and trend analysis.

II DIABETES

Diabetes is the most common disease nowadays in all populations and in all age groups. It is a disease in which the body does not produce or properly use insulin. The cells in our body require glucose for growth for which insulin is

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A STUDY ON CLASSIFICATION TECHNIQUES IN DATA MINING FORPREDICTION OF LIVER DISORDER FROM USA LIVER PATIENTS DATA

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ABSTRACT

Data mining is an activity of extracting some useful knowledge from a large data base, by using any of its techniques. Liver disorder is considered as one of the major problem which is unknowingly growing in modern society. The depth and severity of the disease will be rectified in matured stages, because the early symptoms are not much more effective. Data mining technique could be used for finding the type of Liver disorder using distinct symptoms .. There are various data mining techniques and algorithms used for finding the liver disorder, namely Decision Tree, Naïve Bayes, Neural Network, Fuzzy Logic, and Hybrid Genetic Algorithm are analyzed on liver disorder data set.So the identification of liver disorder in initial phase is a vital activity to make awareness about the disease. The dataset used in this work is Liver functional test data from USA liver patients.

Keywords *—Data Mining, Classification Techniques`, liver disease, Liver Functional Test Data, USALiver Patients.*

INTRODUCTION

The liver is an important organ in our body. It weighs about 3 lb (1.36kg). It is reddish brown in colour and is divided into four lobes of unequal size and shape. Blood is carried to the liver via two large vessels called the hepatic artery and the portal vein.

Liver Disorder Several diseases states can affect the liver. Some of the diseases are Wilson's disease, hepatitis (an inflammation of the liver), liver cancer, and cirrhosis (a chronic inflammation that progresses ultimately to organ failure). Alcohol alters the metabolism of the liver, which can have overall detrimental effects if alcohol is taken over long period of time. Hemochromatosis can cause liver problems.

DATA MINING AND ITS TECHNIQUES

Data Mining (DM) is the process of discovering knowledge or facts that are hidden from large data

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Data Mining using HADOOP on Bio-NER

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Abstract

Biomedical named entity recognition (Bio-NER) is the critical step in text mining, where the data redundancy and performance of processing huge data is the challenging issue. Conditional Random Field is the conditional probability model used to overcome traditional FP-tree algorithm challenges, even in CRF achieving better performance is nontrivial due to internal sequential process. Here parallelism is introduced by combining and parallelizing the Limited-Memory Broyden-Fletcher-Goldfarb-Shanno (LBFGS) and Viterbi algorithms called parallel CRF or MRCRF (MapReduce CRF). The MRLB (Map Reduce LBFGS) algorithm and MRVtb (MapReduce Viterbi) algorithm enhance the parameter estimation and no data redundancy. MRCRF algorithm exhibits better performance improvement and information accuracy compared to traditional systems. Additionally the new IMRCRF (Improved Map Reduce CRF) shows better performance in terms of processing huge data from several nodes.

Keywords— Biomedical Named Entity Recognition, Conditional Random Fields, Map Reduce.

I.INTRODUCTION

In the 21st century, it is increasingly inseparable from the network, people visit dozens or even hundreds of pages, or upload photos or speech every day, which makes the data content on the network into a geometric growth, and the traditional technical architecture has become increasingly unable to meet the current needs of the vast amounts of data. Therefore, researching massive data processing and storage become more and more popular nowadays. Big data is a large data that it becomes difficult to process the conventional database systems. If the data is very large, moves very fast, or doesn't fit the structures of the database architectures. To gain value from this data, choose another way to process the data. Big Data in general is defined as high volume, velocity and variety information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision making. Big Data is the frontier of the firm's ability to store, process and access large volume of data it needs to operate effectively, make decisions, reduce risks, and serve customers. However, the amount of data generated can often be very large for a single computer to process in a reasonable amount of time. Furthermore, the data itself may be too big to store on a single machine. Therefore, in order to reduce the time taken to process the data, and to allocate the storage space for large files, it is necessary to write programs that can execute on multiple computers and distribute the workload among them.

II.HADOOP

Hadoop is the foundation for most big data architecture. Apache hadoop is an open source java programming framework for fast storing and fast processing large data sets with cluster of commodity hardware. Cluster is a set of machine in single LAN (Local Area Network). The Hadoop is mainly constituted by the underlying distributed file system HDFS (Hadoop Distributed File System) and MapReduce layer of parallel programming model engine. Hadoop is used by various universities and companies like Google, eBay, Facebook, IBM, LinkedIn and Twitter.

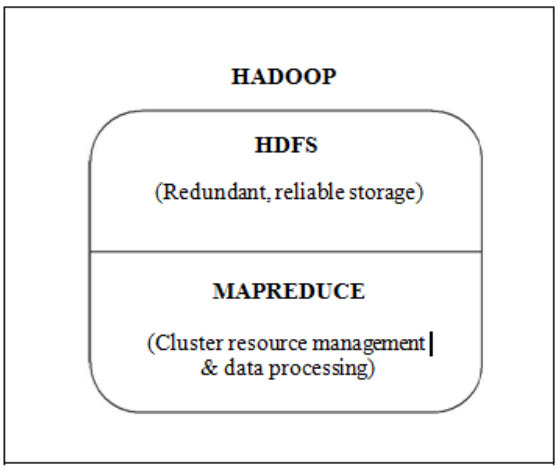

Fig. 1.HDFS and MapReduce

A. HDFS

HDFS is a reliable distributed file system that provides high-throughput and scalable access to data. MapReduce is a distributed framework for executing the work in parallel. Hadoop has the master/slave architecture for both processing and storage. Figure 1 shows the HDFS and MapReduce. HDFS is a specially designed file system for storing massive amount of data sets with cluster of commodity hardware with

steaming access pattern. Steaming access pattern means write once and read any number of times but don't change content of files in file system. HDFS differ from other file system by its significant. HDFS is a very large distributed file system which is highly fault-tolerant, provides high throughput access to the large data and deployed on low-cost hardware. HDFS is mainly used for storing data, and simply adding the number of servers can achieve growth in storage capacity and computing power.

B. MAP REDUCE

MapReduce can make full use of the computing resources of each server's CPU, which efficiently handles with the stored data and calculations. To address the above issues, Google developed the Google File System (GFS), which is a distributed file system architecture model for processing large amount of data and created the MapReduce programming model. The MapReduce programming model is for processing the massive amount of data in parallel. Hadoop is open source software which manage MapReduce framework, written in Java, originally developed by Yahoo.

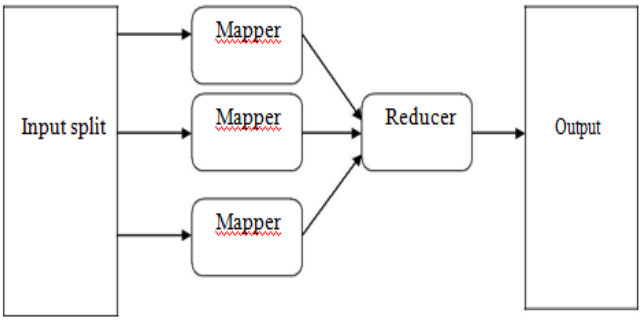

Fig .2. MapReduce Architecture

A MapReduce consists of two tasks namely the Map and Reduce task. Each Map task takes key-value pair as input and produce key-value pair as an output. The input data are split into various input splits. Based on the number of input splits Mapper will be assign. Record Reader is an interface between input split and Mapper which is used to convert record into key value pair. Mapper will read key value pair as an input and produce key value pair as an output. Now the Reducer will combine all the intermediate values associated with a particular key. Both input pairs of Mapper and Reducer are managed by the HDFS. The advantage of MapReduce is highly scalable, transparent fault-tolerant processing and automatic parallelization. Figure 2 shows the MapReduce architecture. MapReduce has been adopted by Google, Microsoft and Facebook.

III.CONDITIONAL RANDOM FIELDS

Conditional random fields (CRF), is a type of conditional probability model, has been widely applied in biomedical named entity recognition .The advantage of the CRF model is the ability to express long-distance-dependent and overlapping features. CRF has shown empirical success recently in Bio-NER, since it is free from the so-called label bias problem by using a global normalization. However, when facing large-scale data, the time efficiency of the CRF model with the traditional stand-alone processing algorithm is not satisfactory. For example, CRF takes approximately 45 hours (3.0GHz CPU, 1.0G memory, and 400 iterations) to train only 400K training examples. It is caused by the problem of CRF that the model parameter estimation cycle is long, because it needs to compute the global gradient for all features. The time complexity and space complexity of the whole algorithm show non-linear growth with the growth of the training data. To efficiently handle large-scale data, faster processing and optimization algorithms have become critical for biomedical big data. Hence, it is vital to develop new algorithms that are more suitable for parallel architectures. The CRF model needs to consider three key steps, i.e., feature selection, parameter estimation, and model inference. The parameter estimation step is very time-consuming because of the large amount of calculations especially when the training data set is large, which becomes the most important reason that degrades the performance of the CRF model. An optimization algorithm called Limited memory BFGS (L-BFGS) is a popular method that has been used to do parameter estimation of CRF. However, since it is an iterative algorithm, achieving high parallelism is not easy and demands considerable research attention for developing new parallelized algorithms that will allow them to efficiently handle large-scale data. It is a challenging task to parallelize such a dependent iterative algorithm. The task of making iterations independent of each other and thus leveraging and boosting parallel architectures is non-trivial. In this paper, we solve such an inter-dependent problem with an efficient strategy. Current methods of improving time efficiency of the CRF model focus on how to reduce the model parameter estimation time. However, the complexity of the model inference step increases quickly with the increase of constraint length of training data set as well. The model inference step can be performed using a modified Viterbi algorithm. The Viterbi algorithm within the MapReduce framework parallelizes the model inference step with a simple strategy.

IV.CONDITIONAL RANDOM FIELDS USING MAPREDUCE

Nowadays, FIM is most significantly employed by researchers as a result of it's wide applied in planet to search out the frequent itemsets. As a volume of information will increase day by day, the issues of measurability and potency become a lot of severe. As an answer to the current downside, we have a tendency to style a parallel mining of frequent itemset mistreatment CRF formula on MapReduce framework. during this paper we have a tendency to incorporate CONDITIONAL RANDOM FIELDS (CRF), instead of ancient FP-Tree. CRF has major four blessings over ancient FP-tree like; it involves solely 2 spherical of scanning that minimizes I/O overhead. Then the CRF may b e a extremely improved thanks to

partition a information, that significantly reduces the search area.

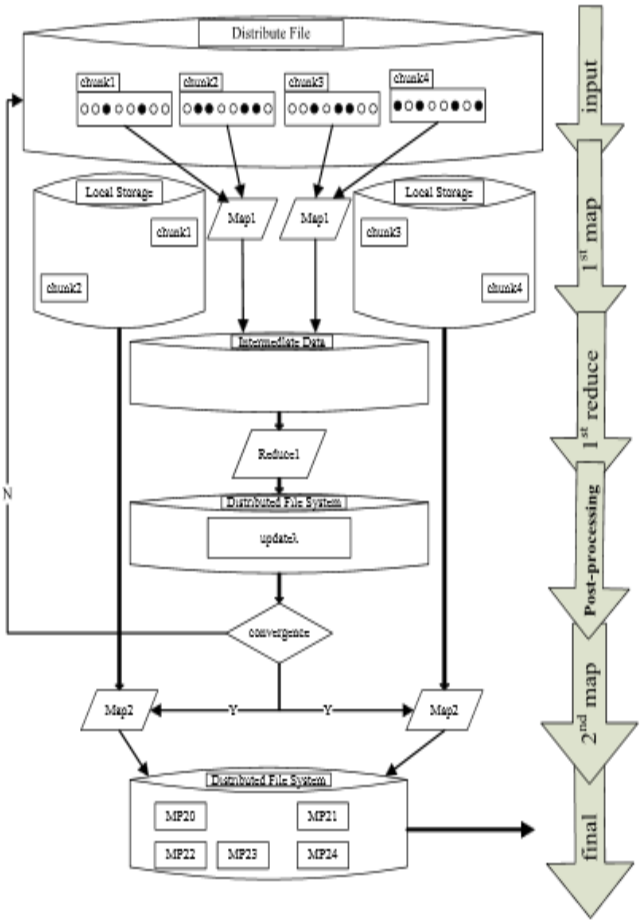

Fig. 3. Flow of the MapReduce CRF

Next is the frequent items in each transaction are inserted as nodes into the CRF for compressed storage. At last all frequent itemsets are generated without traversing the tree recursively by checking the leaves of each CRF which significantly reduces computing time. The sequences of steps followed are,

i. Datasets Partitioning
ii. MRLB
iii. MRViterbi

i. Datasets Partitioning

The CRF partitions the info set into M smaller sets and allocates every partitioned off subset to one map task. within the case of the Viterbi formula, the output of every map operate may be a partial state sequence for the native partition. Hence, we have a tendency to don't would like a combined output, and that we will save the scale back stage. The output of map that isn't any longer the intermediate result are going to be directly output and becomes the ultimate result. In MapReduce, the info set is split into several subsets, whose size depends on the amount of map tasks which will be run in parallel. to confirm the context {of every|of every} word in each sentence of Bio-NER, one sentence can't be split into 2 map tasks. Additionally, so as to realize optimum resource utilization and minimize the necessity for replication, we are going to develop a load reconciliation technique to partition an outsized dataset.

$$D_i = \begin{cases} \lceil N/M \rceil, & \text{if } R \neq 0,\ i = 1, ..., R; \\ \lfloor N/M \rfloor, & \text{if } R \neq 0,\ i = R+1, ..., M; \\ N/M, & \text{if } R = 0,\ i = 1, ..., M; \end{cases}$$

Where M denotes the amount of map tasks, and R resembles N mod M. we will divide the coaching information into M random subsets with about equal size. If N mod M = zero, each map tasks has one input split with [N/M] sentences. If N Mod M = zero, R map tasks have the input split with [N/M] sentences et al have the input split with [N/M] sentences.

ii. MRLB

Parameter estimation for giant dataset, the model can hugely increase the time consumption. Concerning ninetieth of the full computation time of L-BFGS is employed for the parameter estimation. If the parameter estimation is accelerated, time consumption can slow down sharply. Therefore, the most a part of parallelization of the L-BFGS formula is parallelized objective operate gradient calculation.

We can extract the factor as follows,

$$\frac{\partial L(\vec{\lambda})}{\partial \lambda_k} = \sum_{i=1}^{N} \left(\sum_{t=1}^{T} f_k(y_t^i, y_{t-1}^i, x_t^i) - \sum_{y} p(y^{i'}|x^i) f_k(y_t^{i'}, y_{t-1}^{i'}, y_t^i) \right) - \frac{\lambda_k}{\sigma^2},$$

iii. MRViterbi

The MRViterbi partitions the info set into M smaller sets so as to balance the load and allocates every partitioned off subset to one map task, every map optimizes a partition in parallel. Within the Viterbi formula, the output of every map operate may be a partial state sequence for the native partition. Hence, no have to be compelled to mix the output and scale back method time is saved. The output of map that isn't any longer the intermediate result are going to be directly output and becomes the ultimate result.

V.FREQUENT ITEMSET MINING

Frequent items are an item that occurs frequently in the dataset. Frequent itemset mining (FIM) is a one of the core data mining operation. Frequent itemset mining is mainly used for market basket analysis. Consider an example a set of items

that contains bread and butter which always occurs frequently together. A traditional frequent itemset mining algorithms are Apriori and FP-growth algorithm. Apriori algorithm is a level-wise iterative approach were k items are used to generate the k+1 items. Apriori algorithm consists of two steps join step and prune step. Initially candidate items are generated by joining process after that by checking the minimum support count frequent items will be generated. The process will be repeated until all k frequent items generation. However it has a disadvantage that many candidate items should generate which increases the computing time. To overcome that a pattern growth approach algorithm is proposed which significantly reduce the size of candidate sets. FP-Growth algorithm adopts a divide and conquers strategy for finding frequent itemsets. It also has some disadvantage that frequent items are generated by repeated scanning of database and recursive traversing of tree.

i. Generating one Itemsets and K Itemsets

ii. Generating Frequent K Itemsets

i. **Generating one Itemsets and K Itemsets**

Phase1 consists of two round of scanning the database. At the first round of scanning the database frequent one item will be generated based on the minimum support count. At the second round of scanning the database all k-items will be generated by pruning the infrequent items from each transaction.

ii. Generating Frequent K Itemsets

Phase2 consists of a two process decompose each 'h' itemsets into 'k' itemsets. After decomposing process the repetitive construction of K-CRF-Tree and all 'k' frequent itemsets are generated by checking the leaves of CRF-Tree where 'k' is from M down to 2. After decomposing process 'k' itemsets are generated that are used for the construction of K CRF Tree. Initially the root is labelled as null.

Then each 'k' itemsets are inserted into the tree. If first frequent item exists as one of the children of the root, then it denote the child as a temporary 1st root, if it is not exist then add a new node for this item as a child of the root node and denote it as temporary 1st root. Then the sth frequent item of the k itemset, where 's' is from 2 to k - 1, check if the sth frequent item exists as the children of the temporary $(s-1)^{th}$ root, then denote the child as a temporary s^{th} root. If it does not exist, then add a new node under this item as a child of the temporary $(s-1)^{th}$ root and denote it as a temporary s^{th} root. This process is repeated until K-CRF Tree is constructed. By checking the leaf node all k frequent items will be generated.

VI. CATEGORICAL DATA

Three groups of key words in MEDLINE by using GoPubMed are,

i. First group is biological-process and disease,
ii. Second group is cellular-component and disease,
iii. Third group is molecular-function and disease.

There are two effective parallel implementations currently, i.e., the CRF based on MPI (Message Passing Interface) and GPU (Graphics Processing Units). MPI and GPU are not suitable for large volumes of data in data-intensive applications. The drawback of MPI is communication delay in a big data environment for data-intensive applications, because a large amount of data are exchanged between a large number of nodes, and network communications will spend long time, such that the MPI method shows low performance. Due to the capacity limits of global memory and the bottleneck of data transmission for data intensive applications in a big date environment, the GPU method also shows low performance. Hadoop, an implementation of MapReduce, has a master-slave file system HDFS, which is the underlying support for the MapReduce data processing function. Hadoop can easily realize the computation of data storage migration computation", thus greatly improve the computational efficiency of the system. MapReduce deals with huge amount of data, for data-intensive applications. Virtual machine instances are used in a public cloud to run Hadoop applications and the CPU instructions, memory space within a virtual machine have to be translated and mapped to its physical machine host. Therefore, the intermediate operation degrades the efficiency of running Hadoop jobs, and deploys them on physical machines directly. Meanwhile virtual machine templates enables public cloud running in Hadoop applications and more execution nodes can be instantiated. Therefore, the scalability capacity will be much better, but this is not the focus of this paper. To analyze the speed in a efficient way, a local cluster interacts with the virtualization hypervisor, reveals the real performance of Hadoop jobs.

VII. RESULTS AND DISCUSSIONS

The experiment dataset is collected from different groups of key words in MEDLINE by using GoPubMed. The first group is biological process and disease, the second group is cellular-componentand disease, and the third group is molecular-function and disease. The unparallel CRF was carried out on a single machine.There are two effective parallel implementations currently, i.e., the CRF based on Message Passing Interface and Graphics Processing Units. However, they are not suitable for large volumes of data in data-intensive applications.

A. Message Parsing Interface and GPU

The strongest weakness of MPI is communication latency in a big data environment for data-intensive applications, because a large amount of data are exchanged between a large number of nodes, and network communications will spend long time, such that the MPI method shows low performance. Due to the capacity limits of global memory and the bottleneck of data transmission for data-intensive applications in a big data environment, the GPU method also shows low performance. Hence, we have the proposed algorithm compared with the sequential CRF algorithm, but not compared with other parallel implementations of the algorithm.

B. Hadoop to overcome weakness of MPI and GPU

Hadoop 2.6.0**,** YARN (Yet Another Resource Negotiator) or MRv2 is a Next generation of map reduce, fundamental idea is to split up the two major functionalities Job Tracker, resource management and job scheduling into separate deamons. The idea is to have a global ResourceManager (RM) and per application ApplicationMaster(AP). The ResourceManager and per-node slave, the NodeManager (NM), cast the data-computation framework. The ResourceManager is the ultimate authority that arbitrates resources among all the applications in the system. The per-application ApplicationMaster is a framework specific library, engaged with the NodeManager(s) to execute and monitor the tasks and it negotiate resources from the ResourceManager.

Hadoop, an implementation of MapReduce, has a master slave file system HDFS, which is the underlying, support for the MapReduce data processing function. With the HDFS, Hadoop can easily realize "computation to the data storage migration", thus greatly improve the computational efficiency of the system. MapReduce can deal with huge amount of data, especially for data-intensive applications.Recognition of biomedical named entity using conditional random fields in this paper is a data-intensive application in the big data environment, so the Hadoop method is a suitable method.

Virtual machine instances are usually used in a public cloud to run Hadoop applications. The CPU instructions and memory space within a virtual machine need to be translated and mapped to its physical machine host. Therefore, this intermediate operation degrades the efficiency of running Hadoop jobs and deploy them on physical machines directly. Meanwhile running Hadoop applications on a public cloud can be enabled by virtual machine templates and more execution nodes can be instantiated. Therefore, the scalability capacity will be much better, but this is not the focus of this paper.

C. MRCRF implementation

MRCRF is a combination of LBFGS and Virterbi algorithms where the dataset is divided into different chunks and the infrequent items are removed and merge the resultant from different chucks into single. Frequent item set mining is the process under these process and the non duplicate record means the not highly refereed or the biomedical field not been discussed or the documents not available for particular disease or molecular combination etc., all over the system.To analyze the speedup of IMRCRF in a more efficient way, a local cluster with less interaction with the virtualization hypervisor reveals the real performance of Hadoop jobs. A document of 100000 records uploaded respectively, the dataset is divided into different chunks for mapreduce process. Minimum four chucks are used to achieve the better performance.

D. PARAMETERS FOR EVALUATION

The performance for proposed methods can be evaluated by using the following parameters. Parameters which are considered for evaluating the experiments are:

i. Minimum support
ii. Scalability

i. Minimum Support Count

Minimum support count plays the important role in mining frequent itemsets. When we increase the minimum support threshold the running time of the proposed algorithm reduces. A small minimum support slows down the performance of the evaluated algorithms. This is because an increasing number of items satisfy the small minimum support when the minsupport is decreased; it takes an increased amount of time to process the large number of items.

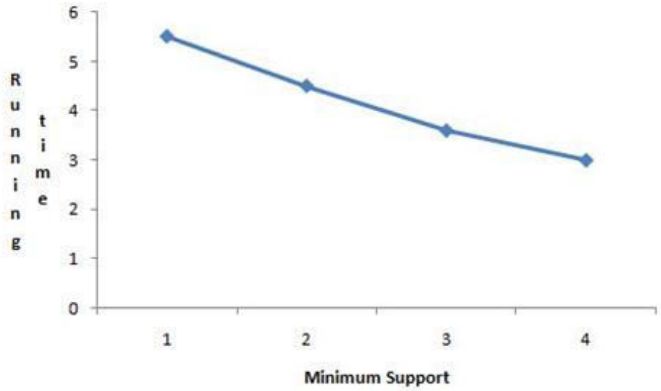

Fig 4 Execution time of four different minimum support counts.

ii. Scalability

In this experiment, we evaluate the scalability of the proposed algorithm when the size of input dataset grows dramatically. The parallel mining process is slowed down by the excessive data amount that has to be scanned twice. The increased dataset leads to a long scanning time. An output of the second MapReduce job are distributed and stored in intermediate files based on the length of itemset; these files are accessed by the third MapReduce job as an input. Further, the decomposed results are written into these external files. In summary, the scalability of the proposed algorithm is higher when it comesto parallel mining of an enormous amount of data.

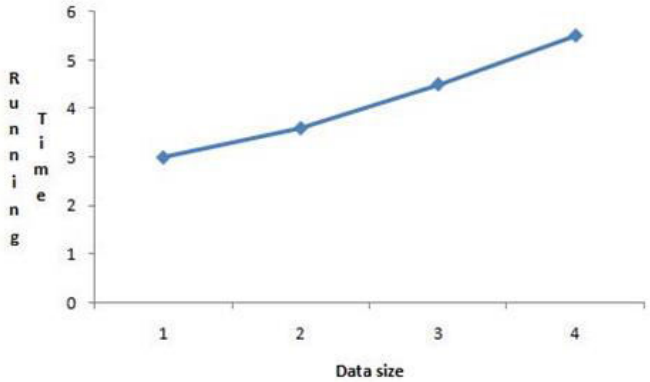

Fig 5 Running time of different sized datasets.

VIII.RELATED WORKS

There has been some prior works proposed in the literaturefor accelerating CRF. These methods essentially gain acceleration by omitting important information of labels and losing accuracy. Pal et al. proposed a Sparse Forward Backward (SFB) algorithm, in which marginal distribution is compressed by approximating the true marginal using Kullback-Leibler (KL) divergence [25]. Cohn proposed a Tied Potential (TP) algorithm which constrains the labeling considered in each feature function, such that the functions can detect only a relatively small set of labels [2]. Both of these techniques efficiently compute the marginal with significantly reduced runtime, resulting in faster training and decoding of CRF. Although these methods could reduce computational time significantly, they train CRF only on a small data set. In order to handle large data, Jeong et al. proposed an efficient inference algorithm of CRF for large-scale natural language data which unified the SFB and TP approaches [11]. Lavergne et al. addressed the issue of training very large CRF, containing up to hundreds output labels and several billion features. Efficiency stems here from the sparsity induced by the use of penalty term [15]. However, none of these works described so far explore the idea of accelerating CRF in a parallel or distributed setting and thus their performance is limited by the resources of a single machine. Given that CRF is weak in processing massive data, the idea of parallelization is introduced into the algorithms. Xuan-Hieu et al. proposed a high-performance training method of CRF on large-scale data by using massively parallel computers [38]. In [19], a novel distributed training method of CRF is proposed by utilizing the clusters built from commodity computers. The method employs Message Passing Interface (MPI) and improves the time performanceon large datasets. Recently, in [21], an efficient parallel inference on structured data with CRF based on Graphics Processing Units (GPU) is introduced and it is testified that the approach is both practical and economical on very large data sets. These methods achieve significant reduction in computational time without losing accuracy. However, they are not suitable for a distributed cloud environment, where usually the communication cost is higher. In our approach,we overcome this limitation by a parallel implementation of CRF based on MapReduce which is suitable for huge data sets [32]. MapReduce is an excellent model for distributed computing on large data sets, which was introduced by Google in 2004. It is an abstraction that allows users to easily create parallel applications while hiding the details of data LI ET AL.: HADOOP RECOGNITION OF BIOMEDICAL NAMED ENTITY USING CONDITIONAL RANDOM FIELDS 3041 distribution, load balancing, and fault tolerance. At present, it is popular in text mining of various applications, especially natural language processing (NLP) [8], [31], [37].Laclavik et al. presented a pattern of annotation tool based on the MapReduce architecture to process large amount of text data [13]. Lin and Dyer discussed the processing method of data intensive text based on MapReduce, such as parallelization of EM algorithm and HMM model [18]. Palit and Reddy proposed two parallel boosting algorithms, i.e., ADABOOST.PL and LOGITBOOST.PL, scalable and parallel boosting with MapReduce [26].

IX.CONCLUSION

To solve the scalability and efficiency in the existing parallel mining algorithms for frequent itemsets for frequent itemsets, we applied the parallel mining of frequent itemsets using Frequent Itemset Ultrametric Tree on MapReduce framework. We incorporate the Frequent Itemset Ultrametric Tree rather than conventional FP trees, thereby achieving compressed storage and avoiding the necessity to build conditional pattern bases. The proposed algorithm integrates three MapReduce jobs to accomplish parallel mining of frequent itemsets. At the end of the third MapReduce job all frequent K itemsets are generated. To evaluate the performance of the proposed MRCRF algorithm on MapReduce framework we use synthetic datasets in our experiments. The future research direction is the distributed cache technique is used to store the intermediate result of each MapReduce job which will significantly improves performance of parallel mining of frequent itemsets using MRCRF on MapReduce framework.

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EXPLORING ON CLASSIFICATION AND PREDICTION OF DIABETICS USING DATA MINING AND NEURAL NETWORK

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ABSTRACT- Data mining is the process of pattern discovery and extraction where huge amount of data is involved. Its applications can greatly benefit all parties involved in the healthcare industry. The huge amounts of data generated by healthcare transactions are too complex and voluminous to be processed and analyzed by traditional methods. It provides the methodology and technology to transform these mounds of data into useful information for decision making. Different techniques are used to find interesting patterns for medical diagnosis and treatment. Diabetes is a group of meta bolic disease in which there are high blood sugar levels over a prolonged period. Diabetes has affected over 246 million people worldwide with a majority of them being women. According to the WHO report, by 2025 this number is expected to rise to over 380 million. This paper concentrates on the overall literature survey related to various data mining techniques for predicting diabetes. This would help the researchers to know various data mining algorithm and method for the prediction of diabetes mellitus. In regard to this emerge, we have reviewed the various paper involved in this field in terms of method, algorithms and results.

Keywords: Data Mining, Classification Techniques, Diabetes Mellitus, Neural Network and Health Care.

I INTRODUCTION

The development of Information Technology has generated large amount of databases and huge data in various areas. The research in databases and information technology has given rise to an approach to store and manipulate this precious data for further decision making. Data mining is *the extraction of hidden predictive information from large data bases.* It is the computational process of discovering patterns in large datasets involving methods at the intersection of artificial intelligence, machine learning, statistics, and database systems. Classification is the processing of finding a set of models which describe and distinguish data classes or concepts. The derived model is based on the analysis of a set of training data. The derived model may be represented in various forms, such as classification (IF-THEN) rules, decision trees, mathematical formulae, or neural networks. The diabetes prediction and awareness system is developed and implemented using classification based data mining algorithm. It helps the user to know whether they are diabetic or non-diabetic. It

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also raises awareness among the user and helps to keep track of their health status.

II DIABETES DISEASE

Diabetes describes a group of metabolic diseases in which the person has high blood glucose either because insulin production is inadequate, or because the body's cells do not respond properly to insulin, or both. Patients with high blood sugar will typically experience polyuria; they will become increasingly thirsty and hungry. Diabetes can be classified into three types.

- **Type 1 diabetes (insulin-dependent diabetes)**
- **Type 2 diabetes (insulin resistance)**
- **Gestational diabetes**

A. *Determination of diabetes disease:*

Doctors can determine whether a patient has a normal metabolism, prediabetes or diabetes in one of three different ways - there are three possible tests:

- The A1C test
- The FPG (fasting plasma glucose) test
- The OGTT (oral glucose tolerance test)

Complications of diabetes are:

Foot complications - Skin complications - Heart problems-Hypertension - Mental health-Neuropathy

III LITERATURE SURVEY

In this year 2014 **Soumadip Ghosh et.al. [1],** "A NOVEL NEURO-FUZZY CLASSIFICATION TECHNIQUE FOR DATA MINING", in this study, they proposed a novel Neuro-fuzzy classification technique for data mining. The inputs to the Neuro-fuzzy classification system were fuzzified by applying generalized bell shaped membership function. The proposed method utilized a fuzzification matrix in which the input patterns were associated with a degree of membership to different classes. Their objective was to analyze the proposed method and, therefore compare its performance with two powerful supervised classification algorithms Radial Basis Function Neural Network (RBFNN) and Adaptive Neuro-fuzzy Inference System (ANFIS). They assessed the performance of these classification methods in terms of different performance measures such as accuracy, root-mean square error, kappa statistic, true positive rate, false positive rate, precision, recall, and f-measure. The results suggest that the proposed NFS classifier has the potential to significantly improve the conventional classification methods for use.

In this year 2014 **G.Keerthana et al. [2],** "PERFORMANCE ENHANCEMENT OF CLASSIFIERS USING INTEGRATION OF CLUSTERING AND CLASSIFICATION TECHNIQUES", in this paper, performance comparison of simple classification algorithms and integrated clustering and classification algorithms are carried out. It was found that the integrated clustering-classification technique was better than the simple classification technique. In this paper four different classifiers are integrated with the simple k-means clustering algorithm and density based clustering algorithm. This integration technique was applied on "Diabetes" data set. From the observation and analysis it was concluded that the performance of Density Based + NavieBayes is better than other algorithms.

In this year 2015 **Áurea Celeste Ribeiro et.al. [3],** "DIABETES CLASSIFICATION USING A REDUNDANCY REDUCTION

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PREPROCESSOR" This work proposes a classification methodology based on efficient coding of the input data, which is carried out by decreasing input data redundancy using well-known ICA algorithms, such as Fast ICA, JADE and INFOMAX. The classifier used in the task to discriminate diabetics from non-diabetics is the one class support vector machine. Classification tests were performed using noninvasive and invasive indicators. The results suggest that redundancy reduction increases one-class support vector machine performance when discriminating between diabetics and non diabetics up to an accuracy of 98.47% while using all indicators. By using only noninvasive indicators, an accuracy of 98.28% was obtained. The ICA feature extraction improves the performance of the classifier in the data set because it reduces the statistical dependence of the collected data, which increases the ability of the classifier to find accurate class boundaries.

In this year 2015 **M.Mounika et.al. [4],** "PREDICTIVE ANALYSIS OF DIABETIC TREATMENT USING CLASSIFICATION ALGORITHM", The data mining tool and classification algorithm is applied to clinical datasets for the prediction of blood glucose level. he successful diabetic treatment and effective classification calculation for predictions are discussed. It is cleared that drug prescription is effective for old age groups with type-2 diabetes, drug prescription and dietary controls is effective for adult age groups where as young age groups need to concentrate on other factors such as dietary controls, physical exercise, smoke cessation and insulin. Therefore this prediction gives a positive mode of treatment for different age groups. Classification algorithm such as Naïve Bayes, OneR and ZeroR is applied to diabetes datasets collected from the clinic and blood sugar level for young, old and adult patients is predicted using the rule generated by each models. This experiment shows that Naïve Bayes is the fastest and ZeroR is the slowest. The performance comparison is found using weka data mining tool.

In this year 2016 **S.Poonkuzhali et.al. [5],** "DESIGN OF A DATA ANALYTICS MODEL TO PREDICT DIABETES USING MACHINE LEARNING TECHNIQUES" the proposed data analytics system will use a hybrid classifier model that uses two different data mining classification techniques to classify the disease. The prediction of individual instance of data is done by a machine learning framework that uses Artificial Neural Networks. A Multilayer Perceptron Neural Network is created and it is trained using Back Propagation Algorithm that will classify the patients tested positive as 1 and patients tested negative as 0. This trained neural network gave a total mean square error of 0.1213 on test. The system thus produced a recognition rate of 80%.

This research work aims at providing an automated diagnosis system which works at a very high recognition rate than the previous systems. Early diagnosis of the disease can help the patient avoid the severe health complications due to diabetes. This will help the patients to take continuous care of their health by properly following the physician's advice. This system helps in early diagnosis of this disease. This Artificial Neural Network trained with back propagation resulted in 80% recognition rate which is found to be slightly higher.

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In this year 2016 **Mehrbakhsh Nilashi et.al. [6],** "A SOFT COMPUTING APPROACH FOR DIABETES DISEASE CLASSIFICATION" The aim of this study is to classify diabetes disease by developing an intelligence system using machine learning techniques. In this method is developed through clustering, noise removal and classification approaches. Accordingly, we use expectation maximization, principal component analysis and support vector machine for clustering, noise removal and classification tasks, respectively. They also develop the proposed method for incremental situation by applying the incremental principal component analysis and incremental support vector machine for incremental learning of data. Experimental results on Pima Indian Diabetes dataset show that proposed method remarkably improves the accuracy of prediction and reduces computation time in relation to the non-incremental approaches. The hybrid intelligent system can assist medical practitioners in the healthcare practice as a decision support system.

In year 2016 **Dr. Meena Arora et.al. [7],** "RANDOM FOREST V/S SCALED CONJUGATE GRADIENT TO PREDICT DIABETES MELLITUS", this study takes after the procedures utilizing random forest tree as a base learner alongside standalone information mining procedure scaled conjugate gradient to characterize patients with diabetes mellitus utilizing diabetes hazard variables. This characterization is done crosswise over three diverse ordinal grown-ups bunches in PIMA Indian dataset. Test result demonstrates that, general execution of adaboost group strategy is superior to anything sacking and in addition standalone random forest tree. They can be utilized for the investigation of vital clinical parameters, expectation of different maladies, estimating errands in solution, extraction of medicinal learning, treatment arranging backing and patient administration. Various calculations were proposed for the expectation and determination of diabetes. These calculations give more precision than the accessible customary frameworks. This paper incorporates calculations of random forest tree and scaled conjugate gradient. From the perception SCG have the slightest characterization exactness and Random forest tree give the better grouping precision results.

IV CONCLUSION

Data mining has played an important role in diabetes research. Data mining would be a valuable asset for diabetes researchers because it can unearth hidden knowledge from a huge amount of diabetes-related data. We believe that data mining can significantly help diabetes research and ultimately improve the quality of health care for diabetes patients. Improving the quality of patient care and reducing healthcare costs are the ideal goals of many programs. Data mining has helped these programs succeed. Healthcare facilities and groups use data mining tools to reach better patient-related decisions. Patient satisfaction is improved because data mining provides information that will help staff with patient interactions by recognizing usage patterns, current and future needs, and patient preferences.

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A STUDY ON EFFECTIVE CLASSIFICATION AND PREDICTION OF HEART DISEASE USING DATA MINING TECHNIQUES

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ABSTRACT- The objective of our work is to analyze various data mining tools and techniques in health care domain that can be employed in prediction of heart disease system and their efficient diagnosis.There is a growing need in the health care scenario to store and organize sizeable clinical data, analyze the data, assist the health care professionals in decision making, and develop data mining methodologies to mine hidden patterns and discover new knowledge from clinical data. Healthcare industry today generates large amounts ofcomplex data about patients, hospitals resources, diseasediagnosis, electronic patient records, medical devices etc.The large amounts of data are a key resource to beprocessed and analyzed for knowledge extraction thatenables support for cost-savings and decision making.Data miningbrings a set of tools and techniques that can be applied to thisprocessed data to discover hidden patternsthat provide healthcare professionals an additional source ofknowledge for making decisions.

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Classification techniques are greatly deployed in several application domains for the purpose of classification, estimation and prediction. In this paper we survey different papers in which one or more algorithms of data mining used for the prediction of heart disease.

Keywords: Data Mining, Heart Disease, Health Care, Classification Techniques

I. Introduction

Data mining is a collection of techniques for efficient automated discovery of previously unknown, valid, novel, useful and understandable patterns in large databases. The patterns must be actionable so that they may be used in an enterprise's decision making process. Data mining is often a complex process and may require a variety of steps before some useful results are obtained. Often data pre-processing including data cleaning may be needed. In some cases, sampling of data and testing of various hypothesis may be required before data mining can start. Data mining has found many applications in the last few years for a number of reasons such as growth in OLTP data, growth in data due to cards, growth in data due to the web, growth in data due to other sources, growth in data storage capacity, decline in the cost of processing, availability of software. A typical data mining process include requirement analysis, data selection and collection, cleaning and preparing data, data mining exploration and validation, implementing , evaluating and monitoring , results visualization.

Cardiovascular Disease

Heart diseases are one of the leading causes of death for men and women. Heart disease, also known as cardiovascular disease, refers to diseases that affect or involve the heart, the blood vessels (which include the arteries, capillaries and the veins) or both. In short, they affect the cardiovascular or circulatory system of the body. The cardiovascular system enables the movement of oxygenated blood from the heart to different parts of the body through arteries and deoxygenated blood back to the heart through veins. There are many types of heart diseases in India and it is necessary for every individual to be aware of them. Coronary artery disease, angina and

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valvular heart diseases are some of the heart diseases that are often seen. There are several ways to recognize heart diseases such as heart attacks and quite a few ways to control or prevent them.

Types of cardiovascular disease

1 Coronary heart disease

2 Stroke (cerebrovascular disease)

3 Rheumatic heart disease

4 Deep vein thrombosis and pulmonary embolism

5 Congenital heart disease

Causes of Heart Diseases

The different factors that cause heart diseases are:

- Smoking
- Lack of sleep
- High blood pressure
- High cholesterol levels
- Diabetes
- No or limited physical activity
- Unhealthy eating habits
- Overconsumption of alcohol
- Depression and mental stress
- Pollution

II. Literature Review

In year 2008, LathaParthiban, et. al. [8] performed work, "Intelligent Heart Disease Prediction System using CANFIS and Genetic Algorithm". In this paper, a new approach based on coactive neuro-fuzzy inference system (CANFIS) was presented for prediction of heart disease. The proposed CANFIS model combined the neural network adaptive capabilities and the fuzzy logic qualitative approach which is then integrated with genetic algorithm to diagnose the presence of the disease. The performances of the CANFIS model were evaluated in terms of training performances and classification accuracies and the results showed that the proposed CANFIS model has great potential in predicting the heart disease.

In year 2012, Chaitrali S. Dangare, et. al. [2] performed work, "Improved Study of Heart Disease Prediction System using Data Mining Classification Techniques". This paper has analyzed prediction systems for Heart disease using more number of input attributes. The system uses medical attributes such as sex, blood pressure,

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cholesterol like 13 attributes to predict the likelihood of patient getting a Heart disease. Until now, 13 attributes are used for prediction. This research paper added two more attributes i.e. obesity and smoking. The data mining classification techniques, namely Decision Trees, Naive Bayes, and Neural Networks are analyzed on Heart disease database. The performance of these techniques is compared, based on accuracy.This analysis shows that out of these three classification models Neural Networks predicts Heart disease with highest accuracy.

In year 2013, K.Rajeswari et. al. [10] "Feature Selection for Classification in Medical Data Mining".In this paper they have analyzed the approach of feature selection for classification and also presented a novel approach for the feature selection by using association and correlation mechanism. The aim of this paper is to select the correlated features or attributes of medical dataset so that patient need not to go for many tests and in future it is used for preparing the clinical decision support system which is helpful for decision making of disease prediction in a cheaper way. Other approach is mentioned in this paper is after removal of some attributes accuracy of classifier is also improved which support our statement of disease prediction in cheaper way by avoiding all unwanted tests for disease prediction. By using association rules and correlation attributes features can be selected. As medical field contains large number of attributes and information so dimensionality reduction is must now. The accuracy of classifiers after removal of attributes is discussed in this paper.

In year 2013 VikasChaurasiaet, et. al. [14] performed work "Early Prediction of Heart Diseases Using Data Mining Techniques". The main objective of this manuscript is to report on a research project where they took advantage of those available technological advancements to develop prediction models for heart disease survivability. They used three popular data mining algorithms CART (Classificationand Regression Tree), ID3 (Iterative Dichotomized 3) and decision table (DT) extracted from a decision tree or rule-based classifier to develop the prediction models using a large dataset. They used 10-fold cross

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validation methods to measure the unbiased estimate.Observation shows that CART performance is havingmore accuracy, when compared with other two classification methods.

In year 2013 ,M.Akhiljabbar et. al. [1] "Classification of Heart Disease Using K- Nearest Neighbor and Genetic Algorithm". In this paper they propose a new algorithm which combines KNN with genetic algorithm for effective classification. Genetic algorithms perform global search in complex large and multimodal landscapes and provide optimal solution. Experimental results shows that our algorithm enhance the accuracy in diagnosis of heart disease. In this paper they have presented a novel approach for classifying heart disease. As a way to validate the proposed method, they have tested with emphasis on heart disease on A.P besides other machine learning data sets taken from UCI repository. Experimental results carried out on 7 data sets show that our approach is a competitive method for classification. This prediction model helps the doctors in efficient heart disease diagnosis process with fewer attributes. Heart disease is the most common contributor of mortality in India and in Andhra Pradesh. Identification of major risk factors and developing decision support system, and effective control measures and health education programs will decline in the heart disease mortality.

In year 2014, Mohini D Patilet.et. al. [9] "Effective Classification after Dimension Reduction: A Comparative Study ". The paper discusses in brief about the dimension reduction techniques. It also describes the system developed for dimension reduction and use of the tool WEKA for dimension reduction and preprocessing. Finally a comparative study of the results obtained by the system and WEKA is done. They have presented a comparative study on dimension reduction. Firstly they discussed the concept of dimension reduction, its need and areas of application. Then they focused upon some of the techniques used for reducing dimensions. And this is possible because of the fuzzy rough theory which helps to increase the accuracy and also the use of neural network classifiers which provide a good performance.

In year 2015, [13]S. Udhaya kumara, et.al. "A Novel Neighborhood Rough set Based

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Classification Approach for Medical Diagnosis". In this study, a novel neighborhood rough set classification approach is presented to deal with medical datasets. Fivebenchmarked medical datasets have been used in this research work for studying the impact of proposed work in decisionmaking.Experimentalresultof the proposed classification algorithm is compared with other existing approaches such as rough set,nearest neighbor, support vector machine, Back propagation algorithm and multilayer perceptron to conclude that theproposed approach is cheaper way for disease prediction and decision making. The performance of classification algorithmsmeasured based on various classification accuracy measures.

In year 2015, R. Kavithaet. al. [6] "A Framework for Heart Disease Prediction Using K nearest Neighbor Algorithm". This study proposes a framework to develop a heart disease prediction process using k-nearest neighborwith wrapper filter. Heart disease diagnosis is mostly done with doctor's knowledge and practice. But the cost spentby the patients are more in order to take test in which all the test does not contribute towards effective diagnosis ofdisease. The feature which contributes towards effective diagnosis istermed as critical feature. In this study proposes a framework to find the subset of critical feature using K nearestneighbor and wrapper filter. This in turn produces a prediction model. Finally they exhibit the ideas of diagnosingheart disease with critical feature.This prediction model helps the experts in efficientdecision making process with fewer attributes todiagnose the heart disease.

In year 2015 A. Shaikhet. al. [12] "Performance Evaluation of Classification Methods for Heart Disease Dataset".This paper evaluates the performance of three basic classifiers such as k-NN, Naïve Bayesian and Decision Tree for medical data, which has been acquired from online machine learning repositories. Decision Tree classifier predicts poorly for the sparse dataset, specially, when dataset comprises of varying attribute values. To evaluate the performance of each different classification method the dataset has been portioned into three different cases. Thus, aim is to evaluate each learning algorithm at different variations related to highly dimensional data. The

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experimental results based on the considereddataset represent that k-NN predicted the significantly better results than Naïve Bayesian. Decision Tree produced less accurate results.

In year 2016, S. Kiruthika Devi, et. al [7] "Prediction of Heart Disease using Data Mining Techniques". In this paper data mining classification techniques in the field of health care addressed are namely Decision trees, Naive Bayes, Neural Networks and Support Vector Machines. Hybridizing or combining any of these algorithms helps to make decisions quicker and more precise. Using advanced data mining techniques to excavate valuable information has been considered as an activist approach to improve the quality and accuracy of healthcare service while lowering the healthcare cost and diagnosis time. Using this technique presence of heart disease can be predicted accurately.

III. Conclusion

As the heart disease patients are increasing world-wide each year and huge amounts of data is available for research, researchers are using data mining techniques in the diagnosis of heart disease. Feature selection really helpful for dimensionality reduction and also for building cost effective model for disease prediction. Analysis presented by different researcher's shows that different data mining techniques and classifiers are defined in this work which has emerged in recent years for efficient and effective heart disease diagnosis. The analysis shows that using different techniques and taking different number of attributes we get different accuracies for predicting heart diseases. Taking analysis from some papers published by the researcher's it is shown that techniques such as neural networks give best accuracy in predicting heart diseases thanother techniques.

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IMPACT ON E-LEARNING IN EDUCATION

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Abstract

Designing online learning involves choosing components which help enhance student learning and allow learners to engage with the content. In institutions of higher education, the issue of utilizing modern information and communication technologies for teaching and learning is very important. It looks at the meaning or definitions of e-learning as given by different researchers and the role that e-learning plays in higher educational institutions in relation to teaching and learning processes, and the advantages and disadvantages of its adoption and implementation. This can help instructors to design courses more effectively, detect anomalies, inspire and direct further research, and help students use resources more efficiently. Additionally, quantitative and qualitative data will be collected to evaluate the outcome and effectiveness of the online courses. Our long term objective is to create a full featured learning system targeted for academic environment.

Keywords: *e-learning, Micro-learning, Gamification, Technologies, synchronous and asynchronous, ADDIE model, Benefits and Drawbacks*

Introduction

E-learning is a computer based educational tool or system that enables you to learn anywhere and at any time. Today e-learning is mostly delivered though the internet, although in the past it was delivered using a blend of computer-based methods like CD-ROM. Technology has advanced so much that the geographical gap is bridged with the use of tools that make you feel as if you are inside the classroom. E-learning offers the ability to share material in all kinds of formats such as videos, slideshows, word documents and PDFs. Conducting webinars (live online classes) and communicating with professors via chat and message forums is also an option available to users.

E-learning provides the learners with the ability to fit learning around their lifestyles, effectively allowing even the busiest person to further a career and gain new qualifications. Some of the most important developments in education have happened since the launch of the internet. These days' learners are well versed in the use of smartphones, text messaging and using the internet so participating in and running an online course has become a simple affair. Message boards, social media and various other means of online communication allow learners to keep in touch and discuss course related matters, whilst providing for a sense of community.

In the fast-paced world of e-learning the available technologies to make a course exciting are always changing, and course content can and should be updated quickly to give students the very latest information. This is one of the reasons why many businesses are now offering training via e-learning - other reasons includes low costs and the ability for employees to study in their own time and place. Overall, traditional learning is expensive, takes a long time and the results can vary. E-learning offers an alternative that is faster, cheaper and potentially better.

Benefits of E-Learning

Whether you're a high-school teacher looking to engage your students in a more interactive way, or a corporate trainer hired by a large company to design training curricula, e-learning packs a punch when it comes to benefits that make the creation and delivery processes easier and hassle-free. Important benefits are outlined below:

No Boundaries, No Restrictions

Along with locational restrictions, time is one of the issues that learners and teachers both have to face in learning. In the case of face-to-face learning, the location limits attendance to a group of learners who have the ability to participate in the area, and in the case of time, it limits the crowd to those who can attend at a specific time. E-learning, on the other hand, facilitates learning without having to organize when and where everyone who is interested in a course can be present.

More Fun

Designing a course in a way that makes it interactive and fun through the use of multimedia or the more recently developed methods of gamification enhances not only your engagement factor, but also the relative lifetime of the course material in question.

Cost Effective

This is directed to both learners and teachers, but there is a good chance that whatever your role you had to pay exorbitant amounts of money at some point to acquire updated versions of textbooks for school or college. While textbooks often become obsolete after a certain period of time, the need to constantly acquire new editions is not present in e-learning.

Expected Benefits

It is intended to enrich and complete the traditional face-to-face teaching and learning in control with highly interactive, self-learning tools, including hypertext, exercise bases, simulations, and virtual and remote laboratories. It also seen as a substitution for traditional face-to face teaching and learning, providing open distance learning in the context of continuing education. Successful e-Learning students share certain qualities and abilities.

They are

• **E-Learning requires motivation and self-discipline.** Successful e-Learning students are able to study independently and incorporate study time into their busy lives. Students should set aside regular study time. e-Learning requires a real commitment to keep up with the flow of the process and to finish within the required period of time.

• **Define your goals and plan for success.** Define your goals and objectives for your e-Learning experience. Understand the requirements and plan ahead so that you will know what's expected of you and how your performance will be evaluated.

• **e-Learning requires good reading and writing skills.** The ability to efficiently read and interpret instructions is a critical skill in e-Learning. Most activities and communications are also written, so it is important to be comfortable with your ability to express yourself through writing.

• **Incorporate work, life, and other educational experiences as part of the learning process.** e-Learning requires the student to make inferences based on experience as well as facts. Meaningful reflection and critical analysis of information are an essential part of the learning process. Look for opportunities to apply what you have learned in your life.

• **Be willing and able to commit adequate time to the e-Learning process.** e- Learning is a convenient way to receive education and training, but it is not easier than the traditional educational process. In fact, it often requires more time and commitment.

• **Have access to the necessary equipment and create some personal space.** It is important that you have a place to study in a peaceful and focused manner. To be a successful e-Learner you must believe that meaningful, high quality learning can take place without a traditional classroom. When properly designed and executed, e-Learning is a highly effective and rewarding learning environment.

E-Learning vs. Traditional Learning

E-Learning, in comparison with traditional learning, significantly reduces the time needed to locate information. It also offers access to online resources, databases, periodicals, journals and other material you wouldn't normally have access to from a library. If a student has trouble understanding part of the coursework, finding tips on the matter couldn't be easier than having immediate access to supplementary, unlimited and mostly free material online! Those characteristics can potentially maximize the time spent actually learning rather than looking for information.

The future of e-learning

E-learning is here to stay. As computer ownership grows across the globe e-learning becomes increasingly viable and accessible. Internet connection speeds are increasing, and with that, opportunities for more multimedia training methods arise. With the immense improvement of mobile networks in the past few years and the increase in telecommuting, taking all the awesome features of e-learning on the road is a reality with smartphones and other portable devices. Technologies such as social media are also transforming education constantly. Generally speaking, learning is expensive, takes a long time and the results can vary.

E-learning has been trying for years now to complement the way we learn to make it more effective and measurable. The result now being that there are a number of tools that help create interactive courses,

standardize the learning process and/or inject informal elements to otherwise formal learning processes. Several e-learning trends give us a view to how e-learning and learning tools will be shaped in the future:

Micro-learning focuses on the design of micro-learning activities through micro-steps in digital media environments, which already is a daily reality for today's knowledge workers. Micro-learning is an important paradigm shift that avoids the need to have separate learning sessions since the learning process is embedded in the daily routine of the end-user. It is also perfectly suited for mobile devices where long courses can be overkill.

Gamification is the use of game thinking and game mechanics in a non-game context to engage users and solve problems.

Personalized Learning is the tailoring of pedagogy, curriculum and learning environments to meet the needs and aspirations of individual learners. Personalization is broader than just individualization or differentiation in that it affords the learner a degree of choice about what is learned, when it is learned and how it is learned.

Synchronous e-learning vs. asynchronous e-learning

In today's e-learning environment the type of learning that takes place is generally divided into one of two categories: ***synchronous*** and ***asynchronous***. Both strategies have their own pros and cons, and the technique that is right for a student greatly depends upon their method of absorbing the information that is being provided.

What is synchronous learning?

Examples of synchronous e-learning are online chat and videoconferencing. Any learning tool that is in real-time, such as instant messaging that allows students and teachers to ask and answer questions immediately, is synchronous. Rather than learning on their own, students who participate in synchronous learning courses are able to interact with other students and their teachers during the lesson.

The main benefit of synchronous learning is that it enables students to avoid feelings of isolation since they are in communication with others throughout the learning process. However synchronous learning is not as flexible in terms of time as students would have to set aside a specific time slot in order to attend a live teaching session or online course in real-time. So it may not be ideal for those who already have busy schedules.

What is asynchronous learning?

Asynchronous learning on the other hand can be carried out even when the student or teacher is offline. Coursework and communications delivered via web, email and messages posted on community forums are perfect examples of asynchronous e-learning. In these instances, students will typically complete the lessons on their own and merely use the internet as a support tool rather than venturing online solely for interactive classes.

A student is able to follow the curriculum at their own pace without having to worry about scheduling conflicts. This may be a perfect option for users who enjoy taking their time with each lesson plan in the curriculum and would prefer to research topics on their own. However, those who lack the motivation to do the coursework on their own may find that they do not receive significant benefit from asynchronous learning. Asynchronous learning can also lead to feelings of isolation, as there is no real interactive educational environment.

Technologies used in e-learning

E-learning makes use of many technologies - some of which have been developed specifically for it, whilst others conveniently complemented the learning process, for example computer games. Communication technologies are also widely used in e-learning.

Technologies to improve the quality of content are manifold. Software such as Flash and PowerPoint will help you make your presentations slick and interesting, with high quality, graphically rich content. There are word processing packages and HTML editors available these days that make formatting your text or web pages a breeze, removing a lot of the complexity. There are also lots of online services available that you can use to create interactive elements for your courses such as quizzes and games.

Analysis of e-Learning

- To develop student independence and responsibility for own learning
- To give students drill and practice exercises
- To make the learning process more interesting and engaging.

These goals include using e-learning for more traditional efforts to improve student academic performance as well as newer objectives related to the development of technical and social skills important in the marketplace. Thus e-learning programs are expected to influence a broad array of skills, and due to their potential to affect the educational system—from pedagogy to curriculum—their integration needs to be done at multiple levels of the educational system. Their research demonstrated positive results on student learning and curriculum delivery. The evaluation of student and teacher outcomes are summarized below:

Student Outcomes:

- laptops lead to more student writing and to writing of higher quality
- laptops increase access to information and improve research analysis skills.

Laptop Students…

- spend more time engaging in collaborative work than non-laptop students
- participate in more project-based instruction
- become collaborators (interact with each other about their work)
- direct their own learning
- report a greater reliance on active learning strategies
- readily engage in problem solving and critical thinking
- consistently show deeper and more flexible uses of technology
- spend more time doing homework on computers.

Teacher Outcomes:

- Teachers who use laptops use a more constructivist approach to teaching
- Teachers who use laptops feel more empowered in their classrooms
- Teachers who use laptops spend less time lecturing.

ADDIE model

Well-developed e-learning courses can be delivered many times to different learners using the same materials. In addition, individual course components (e.g. units, lessons and media elements such as graphics and animations) can be reused in different contexts. For example, interactive e-lessons developed for a given self-paced e- learning course can be integrated into facilitated courses or can become part of another self-paced e-learning curriculum.

An instructional design model can be used to define the activities that will guide e-learning development projects. Instructional design is the systematic development of specifications using learning and instructional theory to ensure the quality of training. In job‑related training, the aim of instructional design is to improve employee performance and to increase organizational efficiency and effectiveness.

There are many instructional systems design models, most of which are based on popular ones such as the ADDIE model, which is diagrammed below. The ADDIE model includes five stages: Analysis, Design, Development, Implementation and Evaluation. The five stages in the ADDIE process are described below:

Analysis

A needs analysis should be conducted at the start of any development effort to determine whether: training is required to fill a gap in professional knowledge and skills; and e-learning is the best solution to deliver the training. The needs analysis allows the identification of general, high-level course goals. Target audience analysis is another crucial step. The design and delivery of e-learning will be influenced by key characteristics of the learners (e.g. their previous knowledge and skills, geographical provenience, learning context and access to technology). Analysis also is needed to determine the course content:

>> Task analysis identifies the job tasks that learners should learn or improve and the knowledge and skills that need to be developed or reinforced. This type of analysis is mainly used in courses designed to build specific job-related skills (also called "perform courses").

>> Topic analysis is carried out to identify and classify the course content. This is typical of those courses that are primarily designed to provide information (also called "inform courses").

Design

The design stage encompasses the following activities:

>> formulating a set of learning objectives required to achieve the general, high-level course objective;

>> defining the order in which the objectives should be achieved (sequencing); and

>> selecting instructional, media, evaluation and delivery strategies.

Adapting existing models to match specific needs is wiser than proceeding without any plan. However, flexibility is needed to select and adapt a model to a given situation. E-learning projects vary considerably in complexity and size. The process described below is comprehensive – it covers all the options that can be

included in a complex learning project. However, some of the steps can be skipped or simplified according to project's objectives and requirements, such as budget, expertise or organizational constraints.

The outcome of the design stage is a blueprint that will be used as a reference to develop the course. The blueprint illustrates the curriculum structure (e.g. its organization in courses, units, lessons, activities); the learning objectives associated with each unit; and the delivery methods and formats (e.g. interactive self‐paced materials, synchronous and/or asynchronous collaborative activities) to deliver each unit.

Development

In this stage, the e-learning content is actually produced. The content can vary considerably, depending on the available resources. For example, e-learning content may consist of only simpler materials (i.e. those with little or no interactivity or multimedia, such as structured PDF documents) which can be combined with other materials (e.g. audio or video files), assignments and tests. In that situation, storyboard development and the development of media and electronic interactions would not be conducted. The development of multimedia interactive content is comprised of three main steps:

>> content development: writing or collecting all the required knowledge and information;

>> storyboard development: integrating instructional methods (all the pedagogical elements needed to support the learning process) and media elements. This is done by developing the storyboard, a document that describes all the components of the final interactive products, including images, text, interactions, assessment tests; and

>> courseware development: developing media and interactive components, producing the course in different formats for CD-Rom and Web delivery and integrating the content elements into a learning platform that learners can access.

Implementation

At this stage the course is delivered to learners. The courseware is installed on a server and made accessible for learners. In facilitated and instructor-led courses, this stage also includes managing and facilitating learners' activities.

Evaluation

An e-learning project can be evaluated for specific evaluation purposes. You may want to evaluate learners' reactions, the achievement of learning objectives, the transfer of job‐related knowledge and skills, and the impact of the project on the organization.

Advantages or Benefits of E-learning

The adoption of E-learning in education, especially for higher educational institutions has several benefits, and given its several advantages and benefits, e-learning is considered among the best methods of education. Some of the advantages that the adoption of eLearning in education, obtained from review of literature includes the following:

1. It is flexible when issues of time and place are taken into consideration. Every student has the luxury of choosing the place and time that suits him/her. The adoption of e-learning provides the institutions as well as their students or learners the much flexibility of time and place of delivery or receipt of according to learning information.
2. E-learning enhances the efficacy of knowledge and qualifications via ease of access to a huge amount of information.
3. It is able to provide opportunities for relations between learners by the use of discussion forums. Through this, e-learning helps eliminate barriers that have the potential of hindering participation including the fear of talking to other learners. E-learning motivates students to interact with other, as well as exchange and respect different point of views. ELearning eases communication and also improves the relationships that sustain learning. e-Learning makes available extra prospects for interactivity between students and teachers during content delivery.
4. E-learning is cost effective in the sense that there is no need for the students or learners to travel. It is also cost effective in the sense that it offers opportunities for learning for maximum number of learners with no need for many buildings.
5. E-learning always takes into consideration the individual learners differences. Some learners, or instance prefer to concentrate on certain parts of the course, while others are prepared to review the entire course.

6. E-learning helps compensate for scarcities of academic staff, including instructors or teachers as well as facilitators, lab technicians etc.
7. The use of e-Learning allows self-pacing. For instance the asynchronous way permits each student to study at his or her own pace and speed whether slow or quick. It therefore increases satisfaction and decreases stress.

Disadvantages of E-learning

E-learning, in spite of the advantages that it has when adopted in education, also has some disadvantages. The disadvantages of e-learning that have been given by studies include the following:
1. E-learning as a method of education makes the learners undergo contemplation, remoteness, as well as lack of interaction or relation. It therefore requires a very strong inspiration as well as skills with to the management of time in order to reduce such effects.
2. With respect to clarifications, offer of explanations, as well as interpretations, the e-learning method might be less effective that the traditional method of learning. The learning process is much easier with the use of the face to face encounter with the instructors or teachers.
3. When it comes to improvement in communication skills of learners, e-learning as a method might have a negative effect. The learners. Though might have an excellent knowledge in academics, they may not possess the needed skills to deliver their acquired knowledge to others.
4. Since tests for assessments in e-learning are possibly done with the use of proxy, it will be difficult, if not impossible to control or regulate bad activities like cheating.
5. E-learning may also probably be misled to piracy and plagiarism, predisposed by inadequate selection skills, as well as the ease of copy and paste.
6. E-learning may also deteriorate institutions' role socialization role and also the role of instructors as the directors of the process of education.
7. Also not all fields or discipline can employ the e-learning technique in education. For instance the purely scientific fields that include practical cannot be properly studies through e-learning. Researches have argued that e-learning is more appropriate in social science and humanities than the fields such as medical science and pharmacy, where there is the need to develop practical skills.
8. E-learning may also lead to congestion or heavy use of some websites. This may bring about unanticipated costs both in time and money disadvantages.

Challenges of E-Learning

The e-learning challenges include

- Teachers insufficiently trained in their own subjects, and have little to no computer experience
- Large class sizes (average 60 students but often higher)
- Poorly equipped classrooms, dormitories and kitchens. Lack of teacher housing, especially in rural areas.
- Expensive and slow Internet connections.
- Shortage of text books for students, and extremely limited teaching materials for teachers
- Reference books, labs, teaching and learning aids are in short supply
- Outdated curricula
- Declining enrollment of girls in each year of secondary school due to early marriage, safety concerns and family or social obligations
- Fees are often beyond the reach of poor and particularly rural parents
- Pass rates for the national exam are low and stagnant or declining
- Insufficient funding.

CONCLUSIONS

We proposed a general formulation of interesting model for e-learning. Elearning involves the use of digital tools for teaching and learning. It makes use of technological tools to enable learners study anytime and anywhere. It involves the training, delivery of knowledge and motivates students to interact with each other, as well as exchange and respect different point of views. It eases communication and improves the relationships that sustain learning. Despite some challenges discussed, the literature has sought to explain the role of e-learning in particular and how eLearning has made a strong impact in teaching and learning.
This paper explained the advantages and disadvantages of e-learning suggests the need for its implementation in higher education for faculty, administrators and students to enjoy the full benefits that come with its adoption and implementation.

Ideally, effective e-learning courses should include both asynchronous and synchronous learning activities. This allows students and teachers to benefit from the different delivery formats regardless of their

schedules or preferred learning methods. This approach provides students with access to immediate help if needed, while still giving them the ability to learn at their own pace.

Good design and planning, while crucial for every type of training programme, are even more important for e-learning projects. In traditional training, the largest effort is in the delivery of training sessions, while in e-learning, it is in the design and development of structured materials which must be self‑contained and able to be used multiple times without making ongoing adjustments.

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Breast Cancer Detection and Classification using Artificial Neural Network with Particle Swarm Optimization

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***Abstract*— Breast cancer is among the most common causes of deaths today, coming fifth after lung, stomach, liver and colon cancers.Primary prevention in the early stages of cancer becomes more complex. The early diagnosis of breast cancer is accomplished by X-ray mammography. It is the main test used for screening and its analysis and processing are the keys to improve breast cancer prognosis. It detects around 80% to 90% of breast cancer. As a result, a large number of images need to be examined by limited number of radiologists, resulting in misdiagnosis due to human errors by visual fatigue. This paper focuses on detection of breast cancer classification using Artificial Neural Network whose weights are optimized by Particle Swarm Optimization. Segmentation is used to identify the suspicious region from the mammogram image. Intensity, Texture and Shape features are extracted from the segmented mammogram image. The feature extracted from the known segmented images are used to train using ANN-PSO and tested for the detection of breast cancer, classifies as normal or abnormal. This helps the radiologists to increase the accuracy of mammogram examination to diagnose the cancer.**

Keywords*— *Breast Cancer, Mammogram, Neural Network, Particle Swarm Optimization.

I. INTRODUCTION

Cancer is the type of diseases that causes the cells of the body to change its characteristics and cause abnormal growth of cells. Most types of cancer cells eventually become a mass called tumor. Breast cancer is a major cause of death in women. Most breast cancer cases occur in women aged 40 and above but certain women with high-risk characteristics, often hereditary, may develop breast cancer at a younger age. Several imaging techniques are available for detecting breast cancer such as ultrasound imaging, MRI imaging and digital Mammography. Breast tumors and masses usually appear in the form of dense regions in mammograms. A typical benign mass has a round, smooth and well circumscribed boundary; on the other hand, a malignant tumor usually has a speculated, rough, and blurry boundary. If the cancer can be detected early, the options of treatment and the chances of total recovery will increase.The objective of this paper is to increase the effectiveness and efficiency of the classification process in order to reduce the number of false-positive of malignancies.

This paper is organized as follows: Section 2 describes the literature review. Section 3 describes the proposed methodology. Section 4 describes the experimental result analysis and discussion and section 5 describes the Performance Evaluation. Finally, Section 6 describes conclusion with future work.

II. LITERATURE REVIEW

Currently, breast cancer detection is a challenging issue for women. Breast cancer is curable, if it is detected in an initial stage. Number of researchers has tried to arrive an exact solution for this work by proposing different classification techniques.

Abdulla and Zaki [8] proposed a method for detection of masses in digital mammogram using ANN and GLCM features extraction, and achieved 91% sensitivity and 84% specificity for classifying 90 mammogram images randomly selected from the Mini-Mias database. Islam et al. [9] also proposed a classification method using ANN and GLCM features to classify benign-malignant classes of mammogram images which achieved 90% sensitivity and 84% specificity.

A comparative study on GLCM feature extraction for breast cancer classification by R.Nithya and B.Santhi [2], the study used a sample of 50 mammogram images from the Digital Database for Screening Mammography (DDSM) Database shows an excellent result. R.Nithya and B.Santhi [10] proposed a method for Classification of normal and abnormal patterns in Digital mammograms for the breast cancer diagnosis using ANN and GLCM features. The work shows that the sensitivity and specificity more than 90% for a sample set of 50 digital mammogram images from the DDSM Database.

The overall literature survey says that various methods and classification techniques are applied for classifying the images into normal or abnormal. The existing methods are tested with only limited number of mammogram images from the MIAS database.

III. PROPOSED METHODOLOGY

The proposed system consists of four phases for breast cancer detection from the mammogram image. The anticipated research uses the data set obtained from Mammographic Image Analysis Society (MIAS) [7]. The set consists of 322 images that fall into one of the following classes: 67 benign, 54 malignant and 201 Normal images.The overview of proposed methodology is depicted in Fig.1.

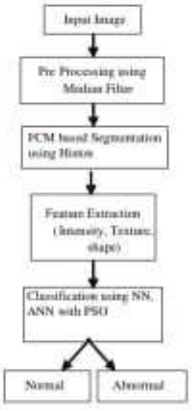

Fig. 1Diagrammatic representation of proposed method

A. *Pre-Processing*

The input image which is obtained is preprocessed to remove the noise and to enhance the quality of the image.

more clusters (i.e.) it allows the pixels to belong to multiple classes with varying degrees of membership. It is based on minimization of the objective function defined as follows.

$$J = \sum_{i=1}^{N} \sum_{j=1}^{C} U_{ij}^{m} ||x_i - v_j||^2 (2)$$

where U_{ij} represents the membership of pixel x_i in the ith cluster, v_j is the jth cluster center, and m is a constant. The parameter m controls the fuzziness of the resulting partition, and m=2 are used in this study.

The FCM algorithm assigns pixels to each category by using fuzzy memberships. Let $X = \{x_1, x_2, x_3 \ldots, x_n\}$ which denotes an image with N pixels (set of data points) to be partitioned into c cluster centers or centroids and $V = \{v_1, v_2, v_3$ the set of centers.

Step 1: Randomly select 'c' cluster centers.

Step 2: Calculate the fuzzy membership 'U_{ij}' function is minimized when pixels close to the c their clusters are assigned high membership values, membership values are assigned to pixels with data far from the centroid. The membership function represents the probability that a pixel belongs to a specific cluster. In the FCM algorithm, the probability is dependent solely on the distance between the pixel and each individual cluster center in the feature domain. The membership functions and cluster centers are updated by the following:

$$u_{ij} = \frac{1}{\sum_{k=1}^{c} \left(\frac{\|x_i - v_j\|}{\|x_i - v_k\|} \right)^{\frac{2}{m-1}}} \quad (3)$$

Online Proceeding

An improved model based on genetic algorithm for detecting intrusion in mobile ad hoc network

P. Bharathisindhu ✉ & S. Selva Brunda

Cluster Computing **22**, 265–275(2019) | Cite this article
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Abstract

In any data communication between networks, it is very essential to maintain a high level of security to make sure that the data communication is safe and trusted. There may be chance for intrusions and misuses of information in a network. Intrusion detection systems (IDSs) has become an important component in terms of computer and network security. Detection can be host based or network based. The existing approaches being utilized in intrusion detection are not efficient. This paper presents a genetic algorithm based IDS to detect the malicious nodes in the network. Cloud computing understands users in network nodes in ad hoc or fixed manner to have long term connectivity for service utilization. The proposed approach performs better compared to Gaussian Naïve Bayes classifier approach. The objective value of chromosome is calculated through a set of iterations. The experimental results show that the computation time is reduced with high successful detection and network

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DIGITAL TECHNOLOGY-A ROAD MAP FOR A NEW ERA

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ABSTRACT

Digital technologies are quickly changing our economy and our society. The digital revolution is responsible for a whole raft of new opportunities and over the years to come will be one of the strongest drivers for growth, jobs and well-being. Digital disruption isn't an isolated event but is something that has repeatedly happened over the last three decades, with different waves occurring across different types of industry segments. Some areas in digitization include products and services that previously were analogue are becoming digital, such as music, film, travel arrangements, media and translations.

Digital business platforms empower flexible and dynamic digital business. Executing digital business will require a digital platform that evolves as business opportunities and threats change. For developed markets and especially for emerging markets the adoption of new technology is more important than new invention. Information communications technology (ICT) is not only one of the fastest growing industries directly creating millions of jobs but it is also an important enabler of innovation and development.

Digital Technologies on the Economy:

At a time of slowed growth and continued volatility, many countries are looking for policies that will stimulate growth and create new jobs. Information communications technology (ICT) is not only one of the fastest growing industries directly creating millions of jobs but it is also an important enabler of innovation and development.

The number of mobile subscriptions (6.8 billion) is approaching global population figures, with 40% of people in the world already online. In this new environment, the competitiveness of economies depends on their ability to leverage new technologies. Here are the five common economic effects of ICT.

Direct job creation:

The ICT sector is, and is expected to remain, one of the largest employers. In the US alone, computer and information technology jobs are expected to grow by 22% up to 2020, creating 758,800 new jobs. In Australia, building and running the new super-fast National Broadband Network will support 25,000 jobs annually. Naturally, the growth in different segments is uneven. In the US, for each job in the high-tech industry, five additional jobs, on average, are created in other sectors. In 2013, the global tech market will grow by 8%, creating jobs, salaries and a widening range of services and products.

Contribution to GDP growth

Findings from various countries confirm the positive effect of ICT on growth. For example, a 10% increase in broadband penetration is associated with a 1.4% increase in GDP growth in emerging markets. In China, this number can reach 2.5%. The doubling of mobile data use caused by the increase in 3G connections boosts GDP per capita growth rate by 0.5% globally. The Internet accounts for 3.4% of overall GDP in some economies. Most of this effect is driven by e-commerce – people advertising and selling goods online.

Emergence of new services and industries

Numerous public services have become available online and through mobile phones. The transition to cloud computing is one of the key trends for modernization. Now-a-days the government shifts its government IT infrastructure into the cloud and launch mobile and e-services for citizens and businesses. ICT has enabled the emergence of a completely new sector, the app industry. Research shows that Facebook apps alone created over 182,000 jobs in 2011, and that the aggregate value of the Facebook app economy exceeds $$12 billion.

Workforce transformation

New "microwork" platforms help to divide tasks into small components that can then be outsourced t contract workers. The contractors are often based in emerging economies. Microwork platforms allo entrepreneurs to significantly cut costs and get access to qualified workers. In 2012, oDesk alone had over million registered contractors who performed 1.5 million tasks. This trend had spillover effects on oth industries, such as online payment systems. ICT has also contributed to the rise of entrepreneurship, making it

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PROVIDE SECURITY AND PRIVACY AWARE OF WEB BROWSER WITH E-LEARNING APPLICATION

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Abstract: Nowadays E-learning popularity is increasing as more and more people are taking online courses. It becomes the need of the hour. We are living in the electronic age where electronic transactions such as e-mail, e-banking, e-commerce, and E-learning etc.,, are becoming more and more prominent. To access online for this services, web browser is today's almost unique software used. These days' hackers know that browsers are installed into all computers, and can be used to compromise a machine by distributing malware via malicious or hacked websites. Also these sites use JavaScript to manipulate web browsers and can drive user system to failures, each web browsers have features that define theirs behaviors, unfortunately most of users are unwilling to enable or disable this features, because many of them still do not understand even basic security concepts, This paper will briefly describe some specific web browser features
misconfiguration and associated risks, also we present an application that will check configuration of selected web browser in order to find all misconfigured features, and propose to student through tailored e-learning awareness program to reconfigure them securely .

Keywords: E-learning, security, Privacy, Browsers security, Computer Security, Applications.

I. INTRODUCTION

E-learning can be defined as technology based learning in which learning material is delivered electronically to remote student via a computer network [1]. WWW has today become the de facto standard platform for e-learning. E-learning, security is an essential issue. Due to the close relation to the WWW many of the security problems in e-Learning are similar to ones of the general WWW and therefore at least some of the solutions developed there will also apply to e-Learning [2]. However, there are certain aspects, which are specific to e-Learning. This paper shows how it is vital to take care about students Web Browsers security. To access to this e-learning material (texts, image, audio, video, animation, etc.) student use his web browser to communicates with web server hosting the E-learning application via a transport protocol HTTP, a transport protocol defines data formats but also algorithms for packaging and unpack aging application payloads, the data format is Html, CSS and other media (pdf,mp3,flash etc.) that browser can read with plug-in, true plugins are any software deployed by the server to the client that extend the functionality of the browser, JavaScript make e-learning web sites more interactive. Most of users use theirs home computer, laptop not only to acquire the knowledge but also to surf to the internet, they are increasingly exposed to security threats while using theirs home PC systems [3]. Internet users are becoming more vulnerable to security threats due to the use of information communication technologies [3] [4] [5]. This vulnerability is due to the fact that they do not possess the knowledge to understand and protect themselves, most of internet users think that their web browser is only the software that they can visit a web page by tapping URL and click to green "Go" button . Internet users therefore in many cases venture onto the internet without any idea of what the risks are and what they must do to protect themselves. Novice users are likely to face a range of internet threats as their unfamiliarity with the technology can limit their ability to recognize the threats and understand the requisite protection [8,7].Home users does not have luxury of a "watchful eye" as users accessing the internet from their corporate workstations [8], they have no enforcement to ensure that they obtain information security awareness knowledge and implementing it. The majority of home users are likely to be vulnerable targets unless safeguards are automatically provided for them [6].

II. RISK OF BROWSING INTERNET TO ACCESS THE E-LEARNING

browse internet to access to the e-learning platform and to other web site, they use an internet browser, all of these browsers have repeatedly been affected by vulnerabilities or are not securely configured that have allowed hackers to do practically anything on student computer all he has to do was to visit a website and it could take control of his computer. Let us envisage the following scenario where an e-learning environment allows students to access a system from remote access points:

- ✓ Load course material onto e-learning platform for students to retrieve.
- ✓ Open web browser and to log on to the E-learning platform.
- ✓ Retrieve course material and lectures from an E-learning platform.
- ✓ Submit assignments to an e-learning platform from where lecturers retrieve and mark such assignments.
- ✓ Store assignment marks on a e-learning platform.

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A SURVEY ON UNIVERSAL ACCESS TO MOBILE CONNECTIVITY

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ABSTRACT

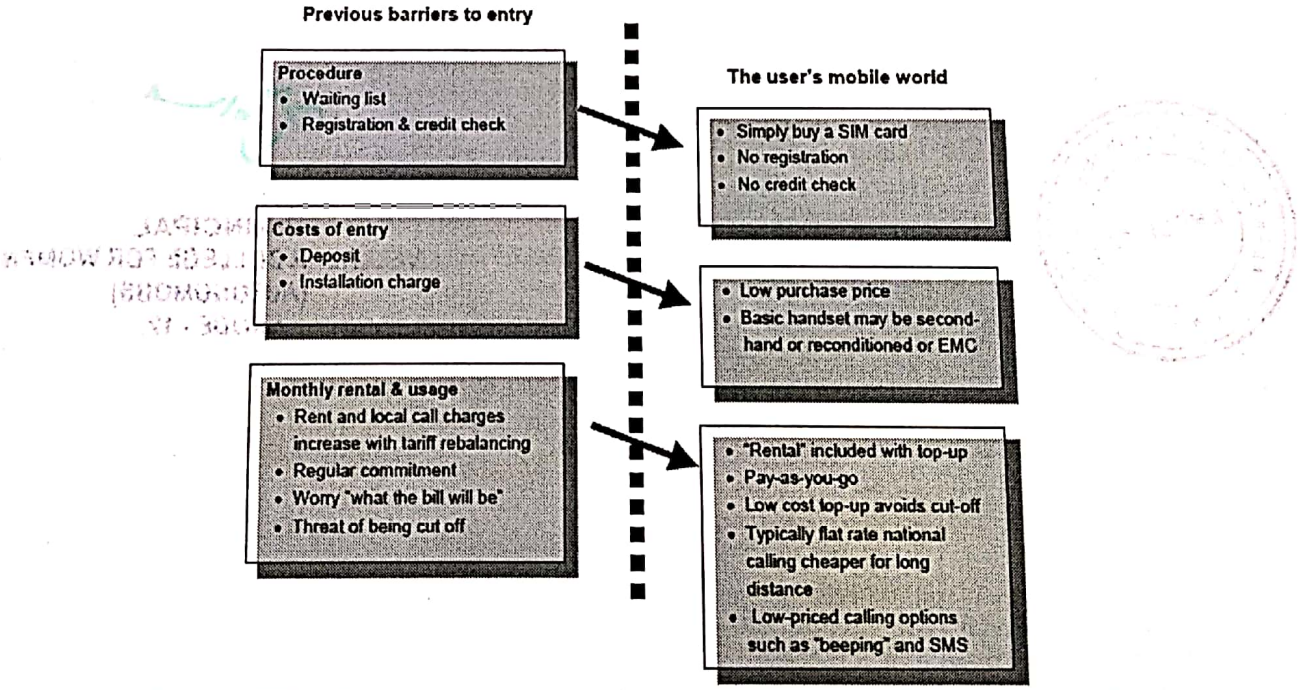
Mobile technology has a clear and seamless evolutionary path leading to broadband capability over the coming years. According to a survey, 2.6 billion people will still have access to a fixed broadband connection at home and 1.4 billion will be using both fixed and mobile broadband services. The opportunities for fixed–mobile convergence (FMC) services in emerging markets are still significant and should not be ignored alongside larger-scale mobile broadband deployments. There are around 55,619 villages in the country that do not have mobile coverage. Mobile coverage to remaining uncovered villages would be provided in a phased manner. The Department of Telecommunications will be the nodal department and project cost will be around 16,000 Cr during 2014-18. It is recognized that no country's telecoms and information policy can be complete without a broad vision and strategy for achieving access to an advanced broadband infrastructure, providing access to information services on a national scale and regionally balanced basis. Mobile technology has a clear and seamless evolutionary path leading to broadband capability over the coming years. GPRS and EDGE services are widely available and HSPA, the first evolution of WCDMA, is delivering the full mobile broadband experience for millions of users across the world.

Keywords: Fixed–Mobile Convergence (FMC), GPRS, Broadband Connection,CDMA

1. INTRODUCTION

The technological advances in both computer hardware and software have greatly enhanced people's access to and use of information, particularly via the internet and mobile devices. Based on this capability and access, the following trends and drivers have the potential to impact emergency management activities:

- Internet access expansion
- People as both producers and consumers of information
- Spontaneous reporting
- Crowd sourcing
- Increased emergency management use of the internet and social media



Universal Service (US) refers to the provision of telecoms services to all households within a country. *Universal Access (UA)* refers to the provision of services on a shared basis. UA programs typically promote the installation of public payphones or public access businesses in rural villages or low-income urban areas with the aim of providing basic telecoms services.

Mobile operators are providing UA in the majority of developing markets and this is in part due to the lower costs and speed of mobile network deployment verses fixed networks.

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E-LEARNING AND ITS EFFECTS ON TEACHING AND LEARNING IN A GLOBAL AGE

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ABSTRACT

E-learning presents an entirely new learning environment for students, thus requiring a different skill set to be successful. Critical thinking, research, and evaluation skills are growing in importance as students have increasing volumes of information from a variety of sources to sort through. Also, particularly in courses that are entirely electronic, students are much more independent than in the traditional setting. This requires that they be highly motivated and committed to learning, with less social interaction with peers or an instructor. Students in online courses tend to do as well as those in classrooms, but there is higher incidence of withdrawal or incomplete grades.

E-learning can be viewed as computer assisted learning, and as pedagogy for student centered and collaborative learning. Early developments in e-learning focused on computer assisted learning, where part or all of the learning content is delivered digitally. More recently the pedagogical dimension of e-learning has become prominent. E-learning comprises all forms of electronically supported learning and teaching. The information and communication systems, whether networked learning or not, serve as specific media to implement the learning process.

Keywords: E-learning, efficient, computer-based.

1. INTRODUCTION

E-learning can be defined as a learning process created by interaction with digitally delivered content, network-based services and tutoring support E- learning is any technologically mediated learning using computers whether from a distance or in face to face classroom setting (computer assisted learning).Education or training to ICT-based personalized, flexible, individual, self-organized, collaborative learning based on a community of learners, teachers, facilitators, experts. E-learning is the use of Internet technologies to enhance knowledge and performance.

E-learning technologies offer learners control over content, learning sequence, pace of learning, time, and often media, allowing them to tailor their experiences to meet their personal learning objectives. To manage access to e-learning materials, consensus on technical standardization and methods for peer review of these resources. E-learning presents numerous research opportunities for faculty, along with continuing challenges for documenting scholarship. Innovations in e-learning technologies point toward a revolution in education, allowing learning to be individualized (adaptive learning), enhancing learners' interactions with others (collaborative learning), and transforming the role of the teacher. The integration of e-learning into education can catalyze the shift toward applying adult learning theory, where educators will no longer serve mainly as the distributors of content, but will become more involved as facilitators of learning and assessors of competency.

E-learning refers to the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance. E-learning can be used by medical educators to improve the efficiency and effectiveness of educational interventions in the face of the social, scientific, and pedagogical challenges noted above. E-learning is also called Web-based learning, online learning, distributed learning, computer-assisted instruction, or Internet-based learning.

2. E-LEARNING METHODS

E-LEARNING MODES

Distance learning and computer assisted instruction. Distance learning uses information technologies to deliver instruction to learners who are at remote locations from a central site. Computer assisted instruction (also called computer-based learning and computer based training) uses computers to aid in the delivery of stand-alone multimedia packages for learning and teaching.

MULTIMEDIA LEARNING

Multimedia uses two or more media, such as text, graphics, animation, audio, or video, to produce engaging content that learners access via computer. Faculty, administrators, and learners find that multimedia e-learning enhances both teaching and learning. These advantages can be categorized as targeting either learning delivery or learning enhancement. Learning delivery is the most often cited advantage of e-learning and includes

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IMPACT OF DIGITAL INDIA ON EDUCATION SECTOR

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ABSTRACT

The Digital India is a dream project of the Indian Government to transform India into a digitally empowered society and knowledge economy. It is an initiative of government of India to integrate the Government Departments and the people of India. It aims at ensuring that the Government services are made available to citizens electronically and promote digital literacy. The outcome of Digital India is to produce Wi-Fi locations for people, creating job, universal phone connection, High speed internet, e-Services, e-Governance, Digitally motivated people, e-education and e-health making India to be pioneer in IT use solution. This paper gives an impact of Digital India project on education system.

KEYWORDS: Digital India, E-Education, Cloud Computing, Mobile Applications.

1. INTRODUCTION

Digital India is an innovative thought of Mr. Narendra Modi's government. Digital India programmeis the outcome of the changes brought by the Information and Communication Technology (ICT) [1]. It is coordinated by Deity (Department of Electronics and Information Technology, Government of India), implemented by the entire government - both at the centre and state [2]. The project aims to connect the 2.5 lakh villages across India through broadband highways, public internet access, universal access to mobile connectivity, e-governance (reforming government through technology), e-kranti (electronic delivery of services), information for all, electronic manufacturing, early harvest programmes, and IT for jobs—known as the nine pillars of Digital India. The cost of this project is estimated at Rs 1,13,000 crore [6].

MAJOR SERVICES LAUNCHED UNDER THE DIGITAL INDIA PROGRAMME [7]

- **eSign:** eSign framework allows for online digital signature using Aadhaar authentication.
- **Centre of Excellence on Internet of Things (IoT):** In partnership with NASSCOM, DeitY and ERNET in Bangalore, Centre of Excellence will enable rapid adoption of IoT technology and encourage a new growth strategy. IoT will help the citizens in services like transport system, parking, electricity, waste management, water management to create smart cities, smart health services, smart manufacturing and smart agriculture, etc.
- **MyGov.in app:** Citizen-centric platform empowering people to connect with the governmentand contribute toward good governance.
- **Digi Locker :** Digital Locker facility provides citizens a shareable private space on a public cloudand making all documents / certificates available on cloud. Help the citizens to digitally store their important documents like pan card, passport, mark sheets and degree certificates.
- **Swach Bharat Mission mobile app:** This App helps the people and the government organizationsto access information regarding the cleanliness and achieving the goal of Swachh Bharat Mission.
- **Digitize India Platform:** This initiative will involve digitization of data and records on a large scalein the country to make easy and quick access to them possible.
- **National Scholarship Portal:** One-stop-solution for end-to-end scholarship process right from submission of student application, disbursal to end beneficiary for all the scholarships provided bythe Government of India.
- **Develop pilot Massive Open Online Courses (MOOCs):** An initiative to provide quality education in an affordable and scalable manner.

INITIATIVES UNDERTAKEN BY THE GOVERNMENT TO BUILD ICT INFRASTRUCTURE FOR DIGITAL INDIA [7]

- **BharatNet:** Aims to provide broadband access to 2,50,000 Gram Panchayats (GPs) through a network of Optical Fiber Cable.
- **Smart Cities:** Creation of 109 smart cities by 2022.
- **Common Service Centers (CSCs):** CSCs are centers through which e-governance and related services will be made available to villages.

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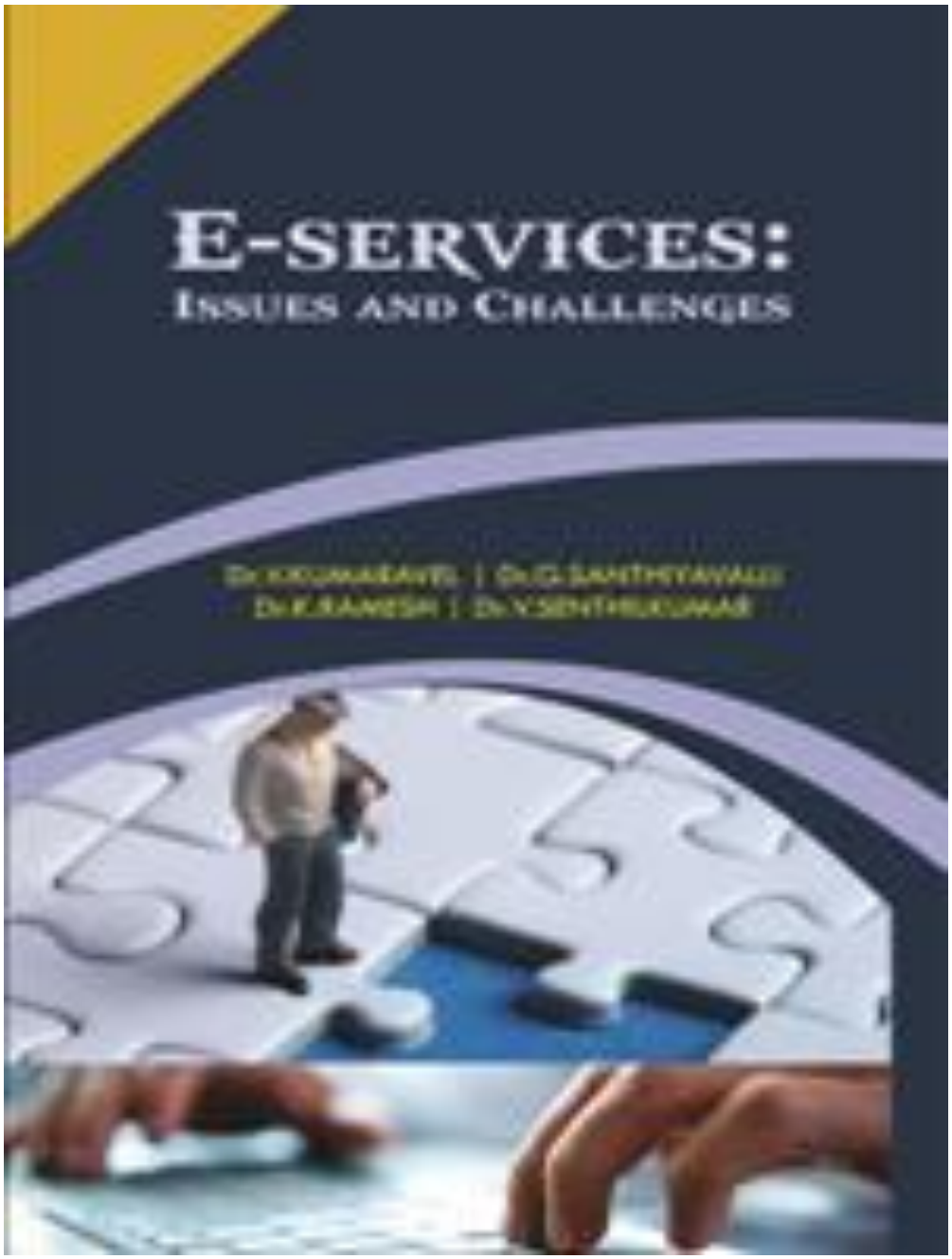
E-SERVICES:
ISSUES AND CHALLENGES

INTERNET BANKING USAGE IN PUBLIC SECTOR BANKS

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Abstract

The major banks in India are increasingly providing services through various e-channels such as ATM, Mobile banking,Tele banking and Internet banking. This paper investigates thecustomer usage level of internet banking services. A sample of 200 was taken using convenience sampling method covering' five public sector banks in Erode city. The study reveals that the customers are using internet banking services offered by the public sector banks at a high level and the most important problem faced by the customer is low speed and delay in transactions. Therefore banks should improve the network connection by constructing adequate towers in rural and semi urban areas.

Keywords: *Internet banking, Public sector banks*

Introduction

Today banks operate in a highly globalised, liberalized, privatized and a competitiveenvironment. Indian banking industry has witnessed a tremendous developments due to sweeping changes that are taking place in information technology. Electronic means of banking includes electronically operated devices such as computers, ATM and in addition internet, telephone and mobile phone. An essential feature of e-banking is that it provides round the clock access to banking operations.Internet banking allows banking from anywhere, anytime and is used fortransactions, payments, etc. over the internet through a bank, a credit union or society'ssecure website. Internet banking, a client has one-to-one interaction with thebank's website, and in such a situation it is essential on the part of bank to provide high quality services over the internet. As compared to traditional banking, Internet bankinginvolves non-human interactions between customers and online bank information system.Hence this paper investigates the customer usage of internet banking services rendered by public sector banks.

Statement of the Problem

Banking is customer oriented service industry and therefore providing better service to customer is the main motive of every bank. Traditional banking operations are limited and allow limited times to customer for banking activities. The technological advancementschanged the banks fully based on computerization; connect to their services not only in the local level but also to the international

level. Internet banking provides new opportunities for banks to expand and provides many benefits to customers and flexibility in operations. The internet banking has made the customer say goodbye to limited time banking and local area operations. Due to the huge benefits, most of the customers use internet banking services

Hence, the study seeks to provide answer to the following:

1. What is the extent to the customers are using public sectorinternet banking services?
2. What are the problems faced by the customers towards the usage of public sector internet banking services?

Objectives of the Study

The specific objectives are as follows

- To study the profile of the respondents
- To examine the level of usage of public sector internet banking services
- To bring out the problem faced by the customers in using internet banking services

Scope of the study

The study is specific with reference to the fivepublic sector banks chosen for investigation viz., included SBI, Baroda, Canara, IOB and Indian bank branches operating in Erode city.

Mehodology

Sample size and sampling technique

Five public sector banks are purposively selected for the study. In these five banks, samples of 200 customers are selected based on convenient sampling.

Sources of data

Both primary and secondary data were employed.

Tools of analysis

The statistical tools suchas Simplepercentage, Chi square and Garrett's ranking technique were used for the purpose of this study.

Results and Discussion

Profile of the respondents

From table 1, it is clear that of the respondents,40% arethe age of below 30 years, 63% are male, 67% are unmarried, 38 % are under graduates, 41% are employed, 38.5% earned monthly income between Rs.20001 to Rs.30000, 64% represent 3 to 5 members in their family and a maximum of 41% are residing at semi urban area.

provides statistics and information on market structure, industry behavior trends.

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CONSUMER BEHAVIOR ON ONLINE SHOPPING

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Abstract

The growing use of Internet in India provides a developing prospect for online shopping. E-commerce has made life simple and innovative of individuals and groups. Consumer Behavior in online shopping is different from the physical market where he has access to see and feel the product. There is a rapid economic growth development in the IT sector, internet explosion, change in the life style and culture, increasing proportion of youth in the population, fast moving life which has led to time-poverty are the few reasons which lay the platform for the growth of online shopping in India.

Online shopping behavior has direct relationship with these five elements such as e-stores, logistics support, product characteristics, websites' technological characteristics, information characteristic and home page presentation. If e-marketers know the factors affecting online Indian behavior, and the relationships between these factors and the type of online buyers, then they can further develop their marketing strategies to convert potential customers into active ones, while retaining existent online customers.

Price, time saving and convenience were identified as important factors which lead to certain buying behavior in online shopping. The www is rebuild around people where social circles influence and lead to online buying. This study deals with investigates the various characteristics of online consumers, consumer behavior over internet,factors influencing online consumer behavior and identified factors affecting online consumer behavior.

Keywords: Consumer behavior, online shopping, E-commerce

Introduction

Internet is changing the way consumers shop and buy goods and services, and has rapidly evolved into a global phenomenon. Many companies have started using the internet with the aim of cutting marketing costs, thereby reducing the price of their products and services in order to stay ahead in highly competitive markets. Companies also use the internet to convey, communicate and disseminate information. Further internet is used by companies to sell the product, to take feedback and to conduct satisfaction surveys with customers. In addition to the

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CONSUMER BEHAVIOR ON ONLINE SHOPPING

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Abstract

The taste and preference of the people differ from each other. No two persons have the same perception towards their shopping. Online shopping process is also no exception to this factor. So, the recent research has shown an interest in investigating consumer motivations that affect the online shopping behavior. It is yet to understand what factors influence online shopping decision process. The objective of this study is to provide an overview of online shopping decision process by comparing the offline and online decision making and identifying the factors that motivate online customers to decide or not to decide to buy online. It is found that marketing communication process differs between offline and online consumer decision. Managerial implications are developed for online stores to improve their website.

Keywords: *Online shopping, online shopper behavior, online shopping decision*

Introduction

In this era of modernization, the need and requirements of the people goes on increasing day by day. To meet out and satisfy the needs and requirements of the consumers, the producers offer varieties of products. Also, the main aim of the consumers is to save their time and money in making purchases. To meet out this challenge, the producers offer products through online. The taste and preference of the people differ from each other. No two persons have the same perception towards their shopping. Online shopping process is also no exception to their factor. Besides, the users of online shopping also do differ in age, gender, educational qualification, occupation, income, marital status, expenditure, etc., Therefore, an insight into the profile of the respondents is necessary before analysing the data collected from them and testing the hypothesis.

Statement of the Problem

Internet provides opportunity to save time and widen the choice of the buyer along with the convenience of shopping sitting in front of a computer. This research is an attempt to analyse the on-line shopping experience and the problems faced while shopping.

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The following are the main aspects of the research:

- What is the procedure for online shopping?
- What is the attitude of on-line shopping?
- Are they satisfied with on-line purchases?
- Are they satisfied with the expected and received value of product?
- What are problems of online shopping?

Objective of the Study

The following are the objectives of the research study.

- To explore the demographic and internet usage of on-line shoppers and the impact of demographics in influencing internet users in consuming different services in on-line.
- To assess the on-line shoppers' buying behaviour.
- To analyse the difficulties involved in on-line shopping.
- To offer suitable findings and suggestions for this study.

Methodology

- The study on consumer satisfaction towards online shopping has been limited to the consumers located in Erode town. The study has been carried out during the month of December 2016.
- The convenience sampling technique was employed in the selection of the sample. Sample of 100 respondents were interviewed to carry out the present study.
- The required data for the study has been collected from both the Primary data and Secondary data. The primary data has been collected through a structured questionnaire and secondary data has been collected from sources like news paper, magazines and websites to make high lights on on-line shopping.
- The raw data collected were classified, edited and tabulated for analysis. Percentage analysis was carried out for analysing the profile of the respondents towards online shopping.
- Simple ranking method using weighted averages was also employed to analysis the problems of on-line shopping.
- Chi- square analysis has also been applied to test the hypothesis set in the study.

The Online Shopping System

Indian retailing has paradigm shifts with urban consumers switching from store based shopping to on-line shopping. This due to competitive pricing, easy payment options like on-line banking, credit card, debit card and recent popular cash-on-delivery option, money and time savings, convenient return and replacement policies the consumer trust has increased in this channel.

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FACTOR 5 RELEVANCE FACTOR	&ease delivered on correct date &time	.712
	customer reviews helps in buying	.576
	wide information coverage	.486
	easy to compare the prices	.421

Suggestions

- Consumers should be provided with the additional feature of comparing the product prices with other sites. Online stores should try to give more variety of products with low price.
- A consumer wants to have physical demonstration of the product at their home before buying a product from online websites.
- As online shopping is considered more convenient for consumer, the higher delivery charge has to be reduced.

Conclusion

The main task of the consumer perception is to identify the factors influencing the consumers' needs, wants, values and personal experience. So the consumer perception will be affected by their actions and buying activities. The study based on clear-cut objectives had been made with proper collection of relevant data and analysed with tables & graphs, the data are also tested with appropriate tools and techniques to arrive at reliable results. The online stores can increase their reputation by effective marketing strategies like giving physical demonstration videos for goods, on time delivery and providing variety of products with lower cost as one stop shopping for consumers to widen their base in future. Since customer retention strategy is the order of the day. Commitment, trust, value, satisfaction and loyalty are the key words to success. It is necessary to build long term loyal relationships as the new economy is becoming more customers centric.

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E-BANKING SERVICES

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Abstract

Today traditional banking services, based on lending and deposit taking operations, are only part of banking activities. Due to the emergence of a knowledge based economy and society as information and communication technology advanced, banking services have undergone profound changes during the past decades. In order to improve the quality of customer service delivery and reduce transaction cost, banks have invested to a great extent in ICT and have adopted ICT networks for delivering a wide range of banking products and services. Banks all over the world have embraced innovative banking technologies and e-banking services in recent years. The internet banking is changing the banking industry, having the major effects on banking relationships. Banking is now no longer confined to the branches were one has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts. In true Internet banking, any inquiry or transaction is processed online without any reference to the branch at any time. Providing internet banking is increasingly becoming a "need to have" than a "nice to have" service. The net banking, thus, now is more of a norm rather than an exception in many developed countries due to the fact that it is the cheapest way of providing banking services. This paper aims to provide an overview of the electronic banking services and highlights the various aspects of e-banking and its increased use by consumers.

Keywords: *e-banking, e-services, ICT, Transaction cost.*

Introduction

Online banking, also known as internet banking, e-banking or virtual banking, is an electronic payment system that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website. The online banking system will typically connect to or be part of the core banking system operated by a bank and is in contrast to branch banking which was the traditional way customers accessed banking services .To access a financial institution's online banking facility, a customer with internet access would need to register with the institution for the service, and set up a password and other credentials for customer verification. The credentials for online banking is normally not the same as for telephone or mobile banking. Financial institutions now routinely allocate customers numbers, whether or not customers have indicated an intention to access their online banking facility.

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CYBERCRIME IN E-BUSINESS

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Abstract

E-commerce has made an incredible journey from the financial industry to the dot.com 'bomb'. History tells us that our experiences with e-business are not new; other technological revolutions – such as E-Banking, E-Payments. Thus we require studying security aspects which are related to it and measure attached E-Risk, types of Cyber Crime. This paper reviews examines the origins of e-commerce, identifies e-risks, describes retail trade on the Internet, defines virtual business, identifies aspects of website design, and describes types of cybercrime that hamper e-commerce.

*In the era of cyber world as the usage of computers became more popular, there was expansion in the growth of technology as well, and the term **'Cyber'** became more familiar to the people. The evolution of Information Technology (IT) gave birth to the cyber space wherein internet provides equal opportunities to all the people to access any information, data storage, analyse etc. with the use of high technology. Due to increase in the number of netizens, misuse of technology in the cyberspace was clutching up which gave birth to cybercrimes at the domestic and international level as well.*

Key Words: *E-Commerce, E-Risk, Cyber Crime.*

Introduction

Though the word Crime carries its general meaning as "a legal wrong that can be followed by criminal proceedings which may result into punishment" whereas **Cybercrime** may be "unlawful acts wherein the computer is either a tool or target or both".

The internet in India is growing rapidly. It has given rise to new opportunities in every field we can think of – be it entertainment, business, sports or education. There are two sides to a coin. Internet also has its own disadvantages. One of the major disadvantages is Cybercrime – illegal activity committed on the internet.

History of cybercrime

The first recorded cybercrime took place in 1820.That is not surprising considering the fact that the abacus, which is thought to be the earliest from of a computer, has been around since 3500 B.C. In India, Japan and China, the era of modern computer, however, began with the analytical engine of Charles Babbage.The first spam email took place in 1976 when it was sent out over the ARPANT. The first virus was installed on an Apple computer in 1982 when a high school student, Rich skrenta, developed the EIK Cloner.

Meaning

Cybercrime is an activity done using computers and internet. We can say that it is an unlawful acts wherein the computer either a tool or target or both.

Cyber crime as —Criminal activity directly related to the use of computers, specifically illegal trespass into the computer system or database of another, manipulation or theft of stored or on-line data, or sabotage of equipment and data[1].

Cybercrimes also includes criminal activities done with the use of computers which further perpetuates crimes i.e. financial crimes, sale of illegal articles, pornography, online gambling, intellectual property crime, e-mail, spoofing, forgery, cyber defamation, cyber stalking, unauthorized access to Computer system, theft of information contained in the electronic form, e-mail bombing, physically damaging the computer system etc.The first recorded cybercrime took place in the year 1820.

Categories of Cyber Crime

Cybercrimes can be basically divided into 3 major categories:

1) Cybercrimes against persons.
2) Cybercrimes against property.
3) Cybercrimes against government.

Cybercrimes Against Persons

Cyber harassment is a distinct Cybercrime. Various kinds of harassment can and do occur in cyberspace, or through the use of cyberspace. Harassment can be sexual, racial, religious, or other.

Cybercrimes Against Property

These crimes include computer vandalism (destruction of others' property), transmission of harmful programs, unauthorized trespassing through cyber space and unauthorized possession of computer information.

Cybercrimes Against Government

Cyber terrorism is one distinct kind of crime in this category. The growth of internet has shown that the medium of Cyberspace is being used by individuals and groups to threaten the international governments as also to terrorize the citizens of a country.

Cybercrime in E-Business

Harassment via E-Mails

It is very common type of harassment through sending letters, attachments of files & folders i.e. via e-mails. At present harassment is common as usage of social sites i.e. Face book, Twitter etc. increasing day by day.

Book Chapter
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RECENT TRENDS IN INDIAN BANKING INDUSTRY

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Abstract

Today, we are having a fairly well developed banking system with different classes of banks – public sector banks, foreign banks, private sector banks – both old and new generation, regional rural banks and co-operative banks with the Reserve Bank of India as the fountain Head of the system. In the banking field, there has been an unprecedented growth and diversification of banking industry has been so stupendous that it has no parallel in the annals of banking anywhere in the world. The banking industry has experienced a series of significant transformations in the last few decades. Among the most important of them is the change in the type of organizations that dominate the landscape. Since the eighties, banks have increased the scope and scale of their activities and several banks have become very large institutions with a presence in multiple regions of the country.' The paper examines the new trends in commercial banking.

Introduction

The Banking sector has been immensely benefited from the implementation of superior technology during the recent past, almost in every nation in the world. Productivity enhancement, innovative products, speedy transactions seamless transfer of funds, real time information system, and efficient risk management are some of the advantage derived through the technology. Information technology has also improved the efficiency and robustness of business processes across banking sector. India's banking sector has made rapid strides in reforming itself to the new competitive business environment. Indian banking industry is the midst of an IT revolution. Technological infrastructure has become an indispensable part of the reforms process in the banking system, with the gradual development of sophisticated instruments and innovations in market practices.

IT in Banking Indian Banking Industry

Today is in the midst of an IT revolution. A combination of regulatory and competitive reasons has led to increasing importance of total banking automation in the Indian Banking Industry. The bank which used the right technology to supply timely information will see productivity increase and thereby gain a competitive edge. To compete in an economy which is opening up, it is imperative for the Indian Banks to observe the latest technology and modify it to suit their environment.

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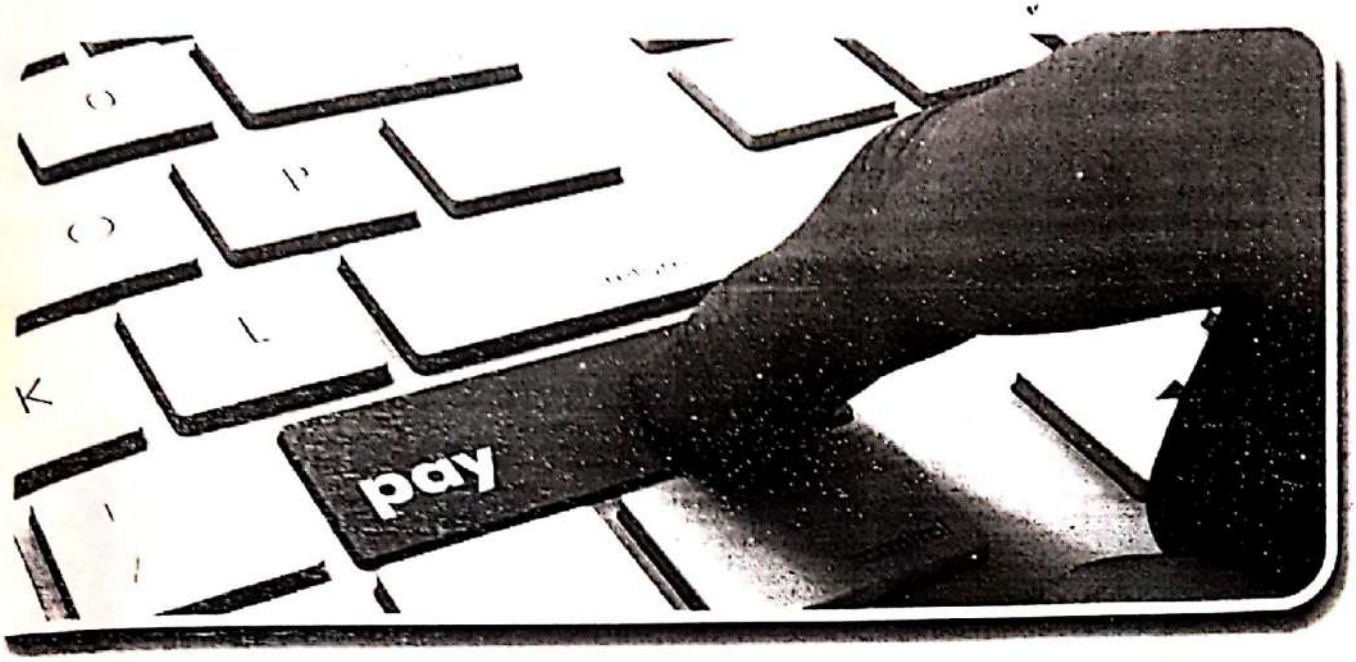
IMPACT OF DEMONETISATION ON ALTERNATE PAYMENT MECHANISM



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Impact of Demonetisation: Cashless Payment System

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ABSTRACT

Cashless payment is nothing but electronic or digital transaction of capital with the help of net banking, credit card, etc. As the banking system evolved, it became easier, safe and even remunerative to keep one's money in a bank account and it became still more easier and safe to use transfer of money in bank accounts for making payments for the economic transactions. This was more so for large value transactions. Actually, it is now used equally for effecting low value transactions also. For effecting this transfer of money in bank accounts, a payment instrument was needed to instruct the bank to effect that transfer. Today we can boast of a strong retail payments framework in the country comparable to that of any advanced country, and perhaps even better than some of them in terms of the variety and efficiency.

Keywords: ***Black money, Cashless Payment, Cashless Economy***

1. INTRODUCTION

The government has implemented a major change in the economic environment by demonetizing the high value currency notes of Rs 500 and Rs 1000 denomination. These ceased to be legal tender from the midnight of 8th of November 2016. The reasons offered for Demonetisation are two-fold: one, to control counterfeit notes that could be contributing to terrorism, in other words a national security concern and second, to undermine or eliminate the "black economy".

India traditionally cash based economy. It's time to go cashless. The purpose of Demonetisation is not only to remove black money but also to encourage cashless payment. Instead of standing in ATM queue adopt a cashless method for the transaction. A cashless method is more transparent as every transaction can be traced easily as it leaves its footprints. Many people have adopted new cashless payment options.

Cashless Payment System

Cashless payment is nothing but electronic or digital transaction of capital with the help of net banking, credit card, etc. As the banking system evolved, it became easier, safe and even remunerative to keep one's money in a bank account and it became still more easier and safe to use transfer of money in bank accounts for making payments for the economic transactions. This was more so for large value transactions. Actually, it is now used equally for effecting low value transactions also. For effecting this transfer of money in bank accounts, a payment instrument was needed to instruct the bank to effect that transfer. Today we can boast of a strong retail payments

Emerging Trends in Business Models and Techniques

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6 E-KYC

N.Vidhya * & E.Thenmozhi *

INTRODUCTION

It is important, in these days of drug smuggling, terrorism, financial fraud, money laundering and arms dealing that banks know whom their customers are. Banks must be comfortable with the bonafides and the integrity of their customers. The need increases as external people like general selling agents introduce a number of customers.Apart from this, in order to develop a long-term relationship, it is imperative that the banker knows as much as possible about their customer. This policy of clear identification of persons with proper introduction, full address, PAN number etc. before entertaining banking transactions with such persons is known as KYC policy. In its physical form, the KYC process is completed by banks in five-seven working days. "Through e-KYC, the time taken would be reduced to three days and this way, a bank can save the time, money and manpower required for the verification process. Adoption of e-KYC is very important for banks and it will be a very cost-effective.

KYC

KYC or "Know Your Customer" is a legal and regulatory practice followed by Banks when opening bank accounts for prospective customers. The process includes collection and verification of identity and residential proofs as well as conducting background checks. While there is no doubt that the process can get a bit tedious at times, it plays a crucial role to help the Banks determine and evaluate the risks involved in a new banking relationship. e-KYC has been developed by Unique Identification Authority of India (UIDAI) to make the whole "Know Your Customer" process paperless. Banks can use e-KYC to electronically verify an applicant's credentials to save time on the documentation. This facility can be beneficial for customers and Banks alike because of the convenience involved. Utilizing e-KYC can not only help streamline new account opening, it also enables easy linking of existing bank accounts to Aadhaar cards. Moreover, the service can be used by multiple service providers in the future to verify the details electronically simply by giving a consent to UIDAI to release the personal information.

Salient Features of the e-KYC service

1. Paperless: The service is fully electronic, and document management can be eliminated.

2. Consent based: The KYC data can only be provided upon authorization by the resident through Aadhaar authentication, thus protecting resident privacy.

3.. Eliminates Document Forgery: Elimination of photocopies of various documents that are currently stored in premises of various stakeholders reduces

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Dr S. Poongodi

RECENT TRENDS IN MANAGEMENT AND COMPUTER APPLICATIONS

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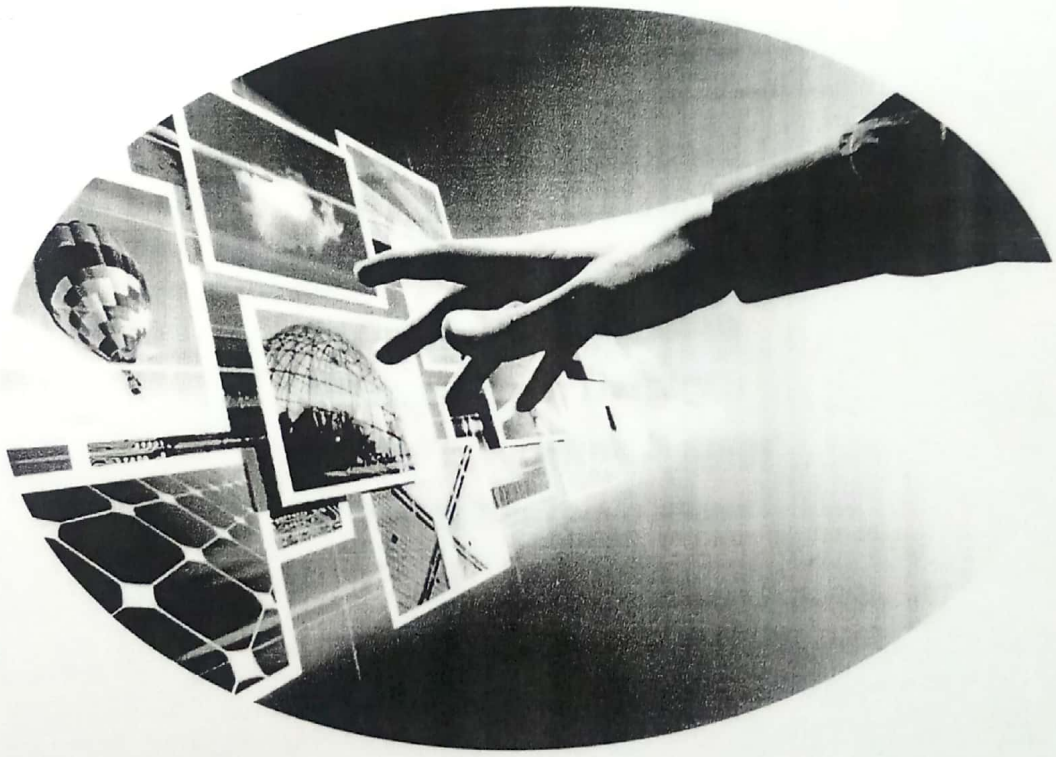

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DIGITAL ECONOMY: PROBLEMS AND PERSPECTIVES IN SMALL SCALE INDUSTRIES

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Absract

Small scale industries play a vital role in the development of economy, mainly in developing countries. If population of India is taken into consideration it can be said that this sector has a wide scope in India. If small scale industrial sector is developed other economy related problems can be dissolved automatically. But these have to face so many problems while competing with other large scale industries. If these problems are solved or efforts are taken to foster these challenges this sector can prove itself as a developing engine.

Keywords: *Medium and Small scale industries, Growth rate, Promotion*

Introduction

Lack of capital, excessive dependence of agriculture and abundant supply of manpower are the characteristic futures of many developing countries in Asia. Happily these economies have been realizing that agriculture is which cannot.meet their local requirements and therefore, that the pressure on land could be substantially reduced through the development of small scale industries. Small scale is the most suitable type of the developing countries. The role of industries is also one of the characteristics and has different types of units functioning in the fold of as economy Therefore, the present study through some light on their problems.

Concept of Small Scale Industries

The concept of 'small scale industry' is not only new to India but also practicing in the age old traditional systems in the ancient period. The definition of small scale industries are changing its central idea and have been shaped in the planning period. Since then it was maintained till the year 2006. These units have been merged with "Micro, small and Medium Enterprises" (MSME). The act clearly dived into two categories of industries; one is enterprises engaged in the manufacturing of production of goods pertaining to any industry, also another is, in the case of enterprises engaged in providing or rendering of services. The MSMEs of manufacturing enterprises have been classified into micro, small and medium enterprises based on the amount of investment in plant and machinery as follows:

Table:1 Manufacturing Enterprises-Investment in Plant and Machinery

Description	Amount
Micro Enterprises	Upto Rs.25,00,000
Small Enterprises	Above Rs.25,00,000 and upto Rs.5,00,00,000
Medium Enterprises	Above Rs.5,00,00,000 and upto Rs. Rs.10,00,00,000

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RECENT TRENDS IN INDIAN BANKING INDUSTRY

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Abstract

Today, we are having a fairly well developed banking system with different classes of banks – public sector banks, foreign banks, private sector banks – both old and new generation, regional rural banks and co-operative banks with the Reserve Bank of India as the fountain Head of the system. In the banking field, there has been an unprecedented growth and diversification of banking industry has been so stupendous that it has no parallel in the annals of banking anywhere in the world. The banking industry has experienced a series of significant transformations in the last few decades. Among the most important of them is the change in the type of organizations that dominate the landscape. Since the eighties, banks have increased the scope and scale of their activities and several banks have become very large institutions with a presence in multiple regions of the country.' The paper examines the new trends in commercial banking.

Introduction

The Banking sector has been immensely benefited from the implementation of superior technology during the recent past, almost in every nation in the world. Productivity enhancement, innovative products, speedy transactions seamless transfer of funds, real time information system, and efficient risk management are some of the advantage derived through the technology. Information technology has also improved the efficiency and robustness of business processes across banking sector. India's banking sector has made rapid strides in reforming itself to the new competitive business environment. Indian banking industry is the midst of an IT revolution. Technological infrastructure has become an indispensable part of the reforms process in the banking system, with the gradual development of sophisticated instruments and innovations in market practices.

IT in Banking Indian Banking Industry

Today is in the midst of an IT revolution. A combination of regulatory and competitive reasons has led to increasing importance of total banking automation in the Indian Banking Industry. The bank which used the right technology to supply timely information will see productivity increase and thereby gain a competitive edge. To compete in an economy which is opening up, it is imperative for the Indian Banks to observe the latest technology and modify it to suit their environment.

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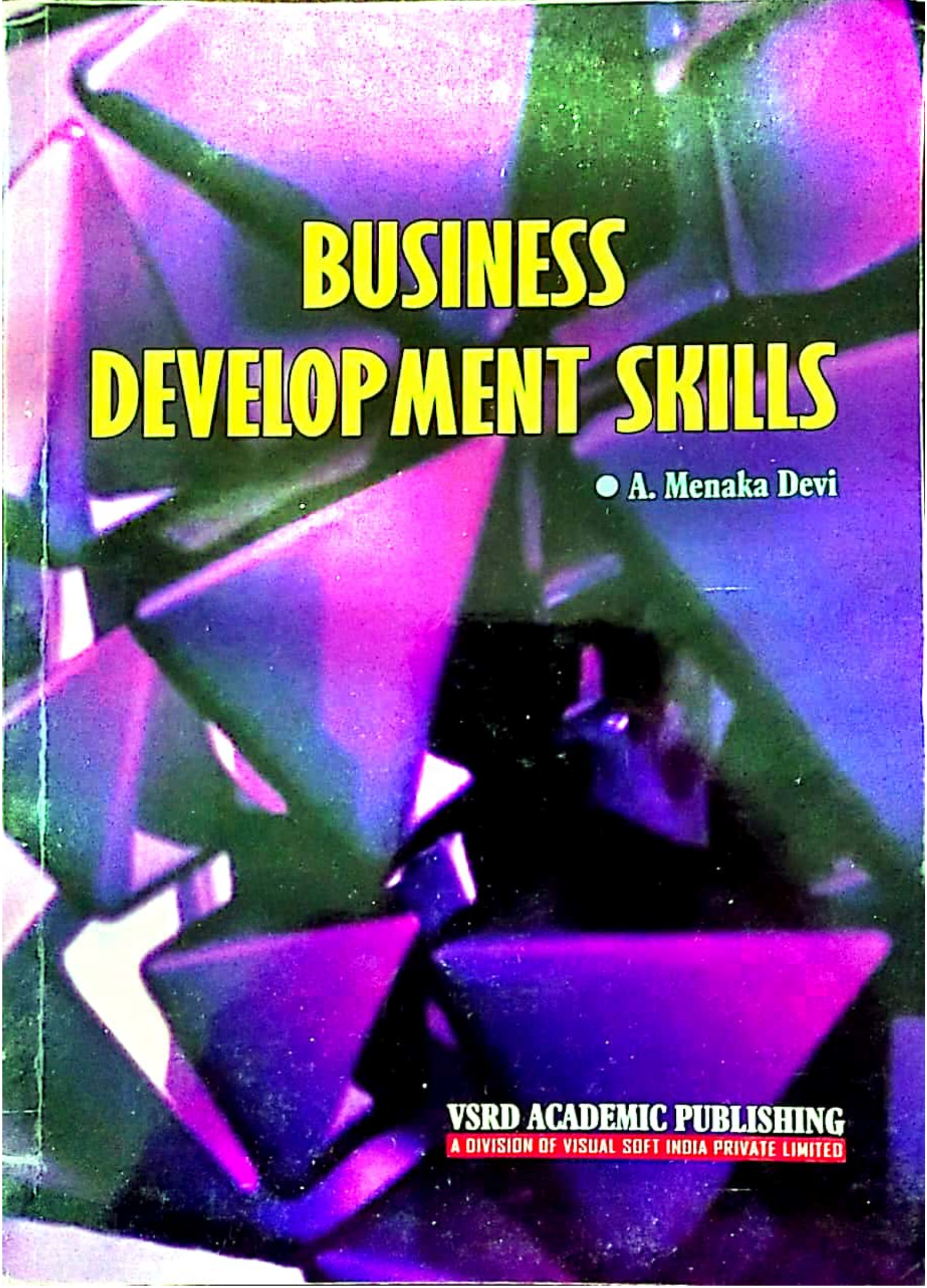

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BUSINESS DEVELOPMENT SKILLS

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BUSINESS DEVELOPMENT SKILLS

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Demonetization: A Game Changer from Black Economy to Digital Economy

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An Empirical Study on the Major Problems Faced Due To Demonetization by the Small Retailers in Erode City

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Abstract: *All currency notes of denominations of Rs.500 and Rs.1000 have lost their legal sanction from the midnight of 8th November, 2016. The objective behind this withdrawal was to curb black money and corruption. Only short span of time was given to get these currency notes exchanged or deposited in banks and post offices, and one is expected to adapt to the new currency system within a reasonable time. Although people with black money obviously stood the most affected, there were several implications that had to be faced by the average middle class person, farmers, banks and the economy as a whole. The businessmen were no exception. An attempt was, therefore, made in this research to analyse the various problems faced due to demonetization by the small retailers in Erode city.*

Keywords: *Demonetisation, Retailers, Net Banking*

I. Introduction

Demonetisation has hit, to a greater extent, the cash-based retail businesses in India, witnessing an estimated sharp fall of 25 per cent since the government banned 500 and 1,000 rupee currency notes. Given the high tendency of Indians to deal in cash, the immediate aftermath of demonetization announcement has caused significant difficulties among retailers and their customers. Small traders and vendors have been affected largely as they are facing a huge fall in sale. Most of these small retailers are not ready enough to make provisions of digital payments for their customers, and for this reason they are sure to go through a lot of hardships. Organized, large retailers and malls too are facing sales reduction and decreasing amount of store footfalls, but in the long run we can expect a normal condition as customers increasingly adapt to making payments digitally.

II. Impact of demonetization on small businesses

There is no doubt that demonetization is a big move for an improved future of Indian economy. It will surely influence many more customers to start using plastic money in the long-term. As the Indian retail industry generates a lot of cash transactions, a reduction in sales is sure to continue in the short-term, i.e. one-two quarters. This impact is felt to a greater extent by small retailers and the unorganised retailing segment widespread on many streets across the country, when compared to the organised retailing and malls. Lower footfalls in malls is a passing phase and is expected to stabilize in a few weeks when more of the newer currency denominations come into circulation, increasing the purchasing power of consumers again. The long-term growth scenario of Indian retail continues to be flexible and growth-oriented.

Objectives of the study

The objective of the study was to identify the major problems faced due to demonetization by the small retailers in Erode city.

III. Research Methodology

Both primary and secondary were used for the purpose of the research. Primary data was collected by circulating well-structured questionnaires among 50 small retailers in Erode city. Convenience sampling method was used. Secondary data was also collected through internet source. Percentage analysis and weighted average ranking method was used to analyse the data.

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IV. Data analysis and Interpretation

Table No. 1 Demographic Variables of the Respondents

S.No.	Variables		No. of Respondents	Percent
1	Gender	Male	23	46
		Female	27	54
2	Age (in years)	18-25	22	44
		25-35	13	26
		35-50	9	18
		>50	6	12
3	Educational Qualification	School Level	15	30
		UG Level	25	50
		PG Level	7	14
		Profession	3	6
4	Annual Profit (in Rupees)	<50000	20	40
		50000-100000	22	44
		100000-200000	6	12
		>200000	2	4
5	Type of Business	Grocery shops	7	14
		Petty Shops	6	12
		Flower Shops	3	6
		Fruit Shops	3	6
		Vegetable Shops	5	10
		Ice Cream Parlours	6	12
		Restaurants	5	10
		Fancy Stores	5	10
		Milk & Diary Products	2	4
		Textiles	2	4
		Medical Shops	4	8
		Books & Stationeries	2	4

Table No. 2 Problems faced by Small Retailers in Erode city

S.No	Problems	Mean Score	Ranks
1	Inconvenience to make small purchases	329	1
2	Limited cash received from bank	280	4
3	Rush at banks	301	3
4	In appropriate denomination to be paid as balance to customers	259	6
5	Waste of time at bank/ATM	317	2
6	Network problem in case of net banking	229	7
7	Decrease in sales	268	5
8	Use of swipe machine	199	8

V. Findings

- It was found that majority (54%) of the respondents is female and 46% of the respondents are male.
- It was found that majority (44%) of the respondents belong to the age group of 18-25 years.
- It was found that majority (50%) of the respondents are UG gradates.
- It was found that majority (44%) of the respondents earn an annual profit that ranges between Rs. 50000 and Rs. 100000
- It was found that majority (14%) of the respondents are in grocery business while the rest are engaged in other businesses such as flowers, fruits, vegetables, milk and diary products, medicines, books and stationeries, ice cream, textiles and so on.
- Among the many problems faced by the small retailers, majority of them have ranked the problem of 'inconvenience to make small purchases' as first, followed by problems such as Waste of time at bank/ATM, Rush at banks, limited cash received from banks, decrease in sales, In appropriate denomination to be paid as balance to customers, Network problem in case of net banking and use of swipe machine.

VI. Conclusion

Thus it is clear from the research that due to demonetization most of the small retailers have faced many difficulties while dealing with banks. However, this is not a permanent condition. The economy is expected to recover soon after the circulation of new currency notes.

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Impact of Demonetization – A Concetual Framework

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Abstract: *Demonetization is a cleansing action for economic prosperity. Government initiate demonetization to eradicate counterfeit currency, fight tax evasion, eliminate black money gotten from money laundering and terrorist financing activities, and promote a cashless economy. Though it is a optimistic move by the government on one side; on the others side there is welfare losses to the poor sections of the society who depends on daily income for their livelihood and those doesn't have the digital transaction culture. Hence the papers put forth two major objectives: to study the positive and negative aspects of demonetization and to assess the sectoral impact of demonetization on the economy.*

Keywords: *Counterfeit currency, Tax evasion, Black money and Terrorist financing*

I. Introduction

Demonetization is an action of clearing a currency unit of its virtue. It is technically termed as liquidity shock; a sudden cessation in terms of currency availability. It is essential whenever there is a change of national currency. The old unit of currency is replaced with new ones. It establishes a situation where lack of currencies blocks consumption, investment, production, employment and so on. Its impact will be felt by each and every citizen of the nation. There are multiple reasons for demonetize their local units of currency. Some reasons include curtailing inflation, corruption, and to discourage a cash system. The process of demonetization involves either to introduce new notes or coins of the same currency or completely replacing the old currency with new currency. The government's aim towards demonetization will be to eradicate counterfeit currency, fight tax evasion, eliminate black money gotten from money laundering and terrorist financing activities, and promote a cashless economy. By making the larger denomination notes worthless, individuals and entities with huge sums of black money gotten from parallel cash systems were forced to convert the money at a bank which is by law required to acquire tax information from the entity. If the entity could not provide proof of making any tax payments on the cash, a tax penalty will be imposed.

Objectives Of The Study

The study put forth two major objectives which include:

1. To study the positive and negative aspects of demonetization
2. To assess the sectoral impact of demonetization on the economy

Positive Aspects Of Demonetization

1. Demonetization will have a huge resultant effect on the Indian economy. The clean-up of illegal cash will help turn around the economy. First, it will bring more borrowings to the exchequer, improve inflation outlook and increase India's gross domestic product (GDP). Second, it will revive investment opportunities and give a fillip to infrastructure and the manufacturing sector. Third, it will help reduce interest rates and lower income tax rate.
2. Black money is nothing but a plunder of the nation. Black money operators run a parallel economy which shakes the very foundation of the Indian economy. The demonetization move, will automatically push all domestic black money into the banks with heavy penalty or be simply destroyed.
3. Note bank politics is pulling out of the old currency notes will help make the election process clean and transparent.
4. Real estate cleansing means real estate is an industry built on black money. The extent of black money floating around in the sector is huge. Demonetization will curtail the flow of black money into the real estate sector. This will help in making the much needed correction in the sector.
5. Demonetization will cripple the hawala rackets. Hawala is a method of transferring money without any actual money movement. Hawala route is used as a means to facilitate money laundering and terror financing. Hawala rackets run again on black money.
6. Counterfeit currency seriously devalues the real worth of Indian currency. Most of the fake currencies will be in higher denominations. Hence demonetization reduces counterfeit notes.

7. Terror financing is sourced through counterfeit currency and hawala transactions. Demonetization reduces terror financing

Negative Aspects Of Demonetization

1. Demonetization gives short term liquidity shock which disturbs economic activities.
2. Population who constitute the 'base of the pyramid' uses currency to meet their transactions. The daily wage earners, other laborers, small traders etc. who reside out of the formal economy uses cash frequently. These sections will lose income in the absence of liquid cash. Cash stringency will compel firms to reduce labor cost and thus reduces income to the poor working class. There will be a trickle up effect of the liquidity chaos to the higher income people with time.
3. When liquidity shortage strikes, it is consumption that is going to be adversely affected first. When consumption curtails it has direct impact on production, employment, growth and tax revenue.
4. A country may risks its position of being the fastest growing economy: reduced consumption, income, investment etc. may reduce India's GDP growth as the liquidity impact itself may last three -four months.
5. Deposit in the short term may rise, but in the long term, its effect will come down. The savings with the banks are actually liquid cash people stored. It is difficult to assume that such ready cash once stored in their hands will be put into savings for a long term. They saved this money into banks just to convert the old notes into new notes. These are not voluntary savings aimed to get interest. It will be converted into active liquidity by the savers when full-fledged new currency supply takes place. This means that new savings with banks is only transitory or short-term deposit. It may be encashed by the savers at the appropriate time. It is not necessary that demonetization will produce big savings in the banking system in the medium term. Most of the savings are obtained by biggie public sector banks like the SBI. They may reduce interest rate in the short/medium term. But they can't follow it in the long term.
6. Only a small portion of black money is actually stored in the form of cash. Usually, black income is kept in the form of physical assets like gold, land, buildings etc. Hence the amount of black money countered by demonetization depends upon the amount of black money held in the form of cash and it will be smaller than expected. But more than anything else, demonetization has a big propaganda effect. People are now much convinced about the need to fight black income. Such a nationwide awareness and urge will encourage government to come out with even strong measures.
7. Reduction in money supply can also have a deflationary effect in the economy. However, whether the impact of the reduced money supply will lead to deflation or contraction in demand or a mix of both will vary from sector to sector depending on the nature of goods & services.

Sectoral Impact Of Demonetization

The impact of demonetization will be felt across sectors with differing intensities and across varied time zones.

1.Banking

Demonetization expects a large amount of cash in circulation to be brought within the purview of the formal banking system by way of deposits. This is structurally positive for banks, as part of this cash gets deposited as current account and savings account (CASA) deposits, reducing banks dependence on higher cost borrowing. Deposit deployment remains a challenge in the short to medium term due to the current tepid demand for credit, subsequently pushing deposit rates lower.

Payment banks and others entities which are part of the transaction ecosystem are likely to be long term beneficiaries, as more and more cash finds its way into the formal banking channels. We believe the cumulative measures taken to reign in black money will improve banking habits, create financial and transactional history of the informal & cash dependent segments and could, over the long term, make them 'bankable'. However, to the extent that households have held on to these funds for emergency purposes, there are expected to be withdrawals at the second stage.

1. Online Transactions and alternative modes of payment

With cash transactions facing a reduction, alternative forms of payment will see a surge in demand. Digital transaction systems, E wallets and apps, online transactions using E banking, usage of Plastic money (Debit and Credit Cards), etc. will definitely see substantial increases in demand. This should eventually lead to strengthening of such systems and the infrastructures required.

2. Financial investments

Investors in the short term will now believe that Cash is not the safest asset and there is little point in hoarding it. This will shift them from physical asset to financial assets where returns are also higher

3. Real Estate

We expect that the real estate demand from end users is unlikely to be impacted, since a majority of them are backed by funding from bank loans. Demand from investors for real estate however may come down since in some cases, investors prefer cash transactions. If the proportion of earlier transactions in the real estate

sector, which were allegedly done through partial cash payment reduces, the registered prices for real estate will go up. We expect the supply of real estate in the secondary market, which is strongly rumoured to have a large cash component involved, to suffer in the short term, which may in turn improve demand for residential real estate in the primary market. In the medium term, the prices in this sector could regain on many fronts as developers rebalance their prices (probably charging more on cheque payment).

4. Sales of used cars

Sales of vehicles in the second hand market for original equipment manufacturers will get impacted, which will cause a ripple effect on New Car sales, as buyers will not be able to dispose of their old vehicles easily.

5. Consumer Durable Goods

Sales of White Goods like TV, Refrigerator & Washing Machine could slump as much as 70% as a good portion of the market is driven by Cash. This may continue for next Six Months till the dust settles down and there is adequate circulation of the new currencies. Prices are expected to fall only marginally, due to moderation in demand, as use of cards and cheques could compensate for some purchases.

6. Gems and Jewellery

We can expect the demand for gems and jewellery to decline in the next two to three quarters. This would result in a weakening in the credit profile of industry players due to the high working capital cycles and high operating leverage. The unorganized segment will be hit particularly hard, given the large proportion of unaccounted inventory and high proportion of cash sales. Over the medium-term the organised industry players will benefit at the cost of the unorganized players. Gold imports through the unofficial channels are likely to reduce. There will be no significant impact on jewellery exporters because it is mostly an organized market and sales are against invoices.

7. Retail Markets

We expect the impact on high end fashion retail and luxury goods to be more pronounced as discretionary demand in this segment will be curtailed. In case of Quick Service Restaurants, although 60%-70% of the transactions are currently in cash, the impact is likely to be moderate due to the low ticket size of purchases and high likelihood of patrons adapting to plastic money. We expect a limited impact to be caused on the food and grocery retail sub-segment, given the non-discretionary nature of purchases in this segment, since the buying cycle for the current month would have been largely influenced.

8. Educational Institutions

Since Private Educational Institutions take huge amounts of donations in Cash which is 40 % to 50%, we expect that this move will impact the Private Education Institutions receipts.

8. Medical Institutions

Again, as Medical Institutions like Hospitals and Colleges take huge amounts of donations in Cash which are more than 100 % of fees, we can keep on expecting that this move will impact not only the admissions but also the receipts.

9. Credit Impact across Sectors

Impact of this policy measure will flow to the economy mainly through the Real Estate sector, which has strong linkages with sectors such as cement and steel and which will turn credit negative in the short-run. A significant impact in the short-run will be on the daily/weekly wage employment in the informal sector. The construction sector has one of the highest employment multipliers. The key segments of the economy where cash transactions play a vital role are real estate, gold and the informal sectors, which may face near term contraction. With more money coming into the banking ambit, deposit growth is likely to improve and positively impact the savings rate. The medium- to long-term gains are likely to outweigh the short-term pains.

10. Dabba Trading

It may kill Dabba Trading. Trades done outside bourses, Satta Bazaar & Illegal Betting market may die a natural death as currency gets a new face. Demonetization was a jolt for Dabba traders, who were thriving in equity markets for many years now.

11. Economic entities

The key segments of the economy where cash transactions play a vital role are real estate / construction, gold and the informal sectors as such. The role of cash transactions in case of real estate and gold is mostly dubious, however in case of the informal sectors it is the lifeline. For example, small and marginal

farmers in the fruits and vegetables category typically require off-loading of their produce in the local Mandi in cash and could see an immediate impact. A sudden demonetization will adversely impact this segment of the economy and it will witness immediate contraction, though this impact will diminish over time.

With cash transactions lowering in the short run, until the new notes are naturalized widely into circulation, certain sections of the society could face short term disruptions in facilitation of their transactions. These sections are:

- Agriculture and related sectors
- Small traders
- SME
- Services Sectors
- Households
- Professionals like doctors, carpenters, utility service providers, etc.
- Retail outlets

The nature, frequency and amounts of the commercial transactions involved within these sections of the economy necessitate cash transactions on a more frequent basis. Thus, these segments are expected to have the most significant impact post this demonetization process and the introduction of new notes in circulation.

II. Conclusion

To conclude, most of the Rural Economy is based on Cash, demonetization will impact the Rural Economy and sectors with a sizeable magnitude of Cash transactions such as Real Estate, Construction, Jewellery, high-end retail, White Goods and travel & tourism are expected to adversely affect. Demonetization will push the economy because of flow of more money into the banking system. In the long term, the economy will benefit from the reduction of the black money, which will lead to higher tax collection, better business environment, less corruption & transparency. It will improve the situation of Fiscal Deficit of the Country and hence reduce the fiscal deficit. Interest rates will decline further because of decrease on Inflation as banks are flushed with huge inflows.

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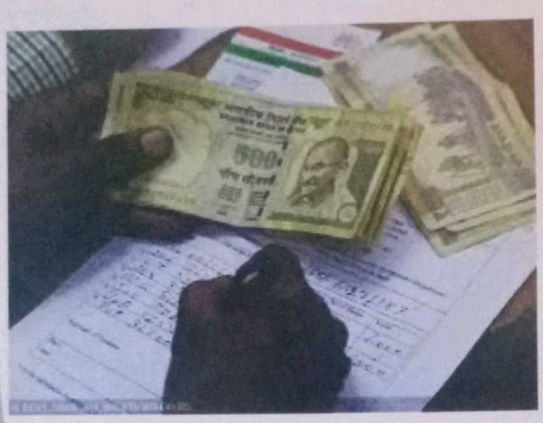

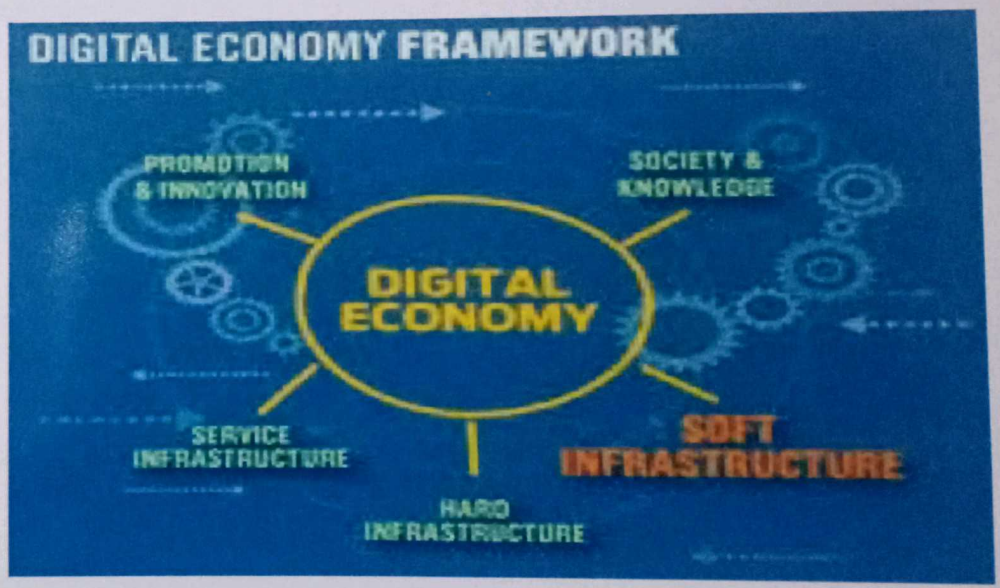

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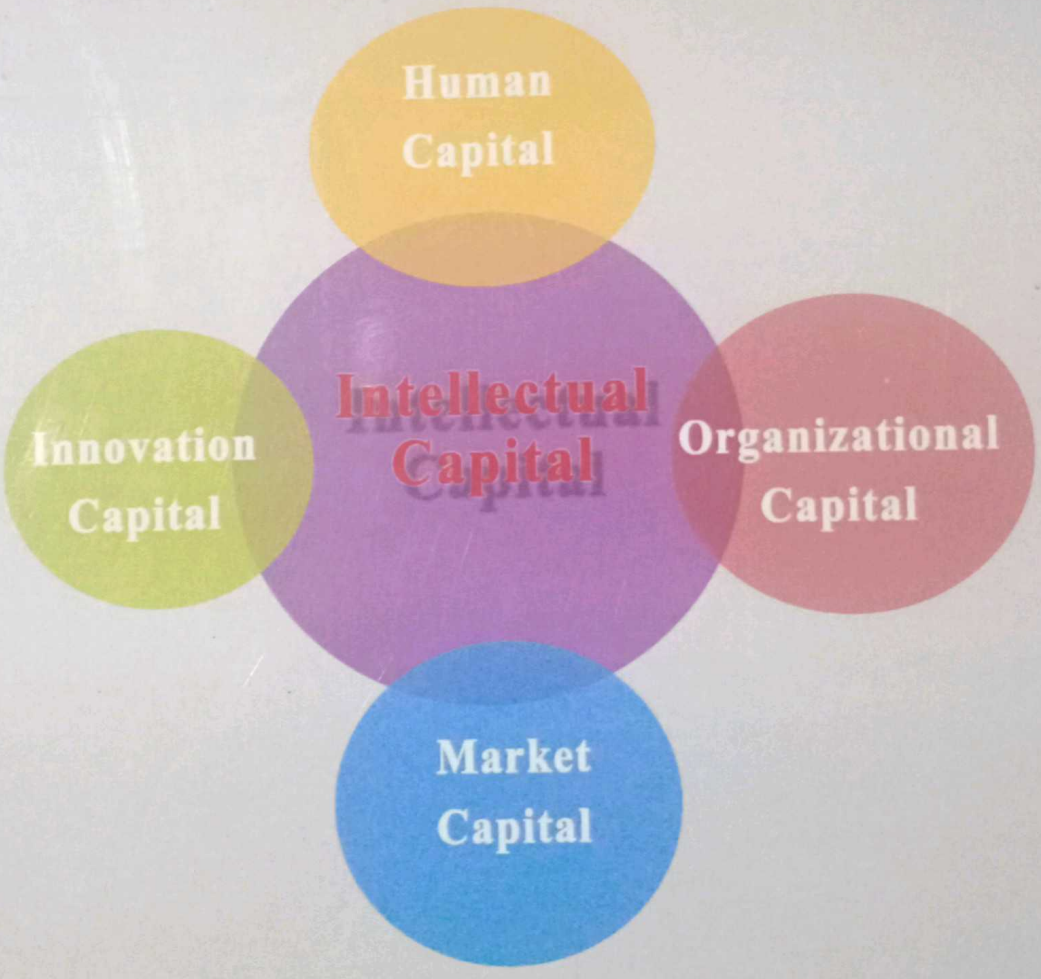

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IMPACT OF MEDITATION ON EMOTIONAL INTELLIGENCE AND INTELLECTUAL CAPITAL WITH SPECIAL REFERENCE TO MEDITATORS IN ERODE DISTRICT

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ABSTRACT

The present study examines the impact of meditation on emotional intelligence and intellectual capital with special reference to meditators in Erode district. The study describes emotional intelligence and intellectual capital of the meditators and so it is descriptive in nature. It has made an extensive use of both primary and secondary data. The sampling method followed was stratified random sampling and sample size is 727 respondents from six taluks in Erode district. The tools used for analysis are percentage analysis, correlation and multiple regressions. It was found from the analysis the study variables are having positive association with the impact of meditation on emotional intelligence and intellectual capital.

Keywords: Meditation, Emotional Intelligence and Intellectual capital

1. Introduction

Meditation has its ancient history from the Shamanic Hunter-Gatherer Culture. Shamans South Indian tribes have been using it for approximately 15,000 years ago to understand the conscious mind, which was considered as the starting point for the history of meditation. But a structural practice of meditation began 5,000 years before in Indian sub-continent. Meditation is a mind body practice which induces a mode of consciousness to realize benefit or an end in itself. It is an internal effort for self-regulation of mind. In our daily life every one of us is brimmed with numerous emotions. It becomes a natural part of every life form. To handle emotions efficiently we require a thorough knowledge of awareness. The awareness based on emotions is emotional intelligence. In 1985 Wayne Leon Payne, a graduate student of USA, wrote a doctoral dissertation where he had included the term 'emotional intelligence' in the title. In 1990 American University Professors, John Mayer and Peter Salovey published a journal article which entitled 'Emotional Intelligence' (EI) and describe it as form of social intelligence that involves the ability to monitor one's own emotions and respect other people's emotions and use this information to guide one's thinking and action. In 1995 New York writer and consultant Daniel Goleman came out with the book Emotional Intelligence- Why it can matter more than IQ. He made further publications on similar theme that reinforce use of the term. He framed five components of emotional intelligence which include: self awareness, self-regulation, motivation, empathy and social skills. Studies have been proved that there is a huge correlation between emotional intelligence and success. It is the single biggest predictor of performance in the workplace and the strongest driver of leadership and personal excellence. To enhance such emotional intelligence meditation plays a vital role. Whereas the intellectual capital is the intangible value of a business, covering its people and the inherent relationships. It can even

be termed as collective knowledge of the individual in the organization and in society which produces wealth, increase output and gain competitive advantage. People in general and businessmen in specific have an added social responsibility to preserve the precious value of existing intellectual capital over the period of service for which meditation plays an important role in creating awareness of their existing and new career by using 'buddhi' which works through the mind and efficiently reinforces the process of learning, creativity and achieving higher self.

2. Literature Review

Showry (2006) explored various quotients of emotional intelligence like self awareness, self management, social awareness and relationship management in significance with managerial excellence. The study enumerated that emotional intelligence ensures managers to make strategic planning with respect to changing situation. Make efficient decision with improved thinking and balanced thoughts. Creates self-awareness in managers to work in a team more efficiently by understanding their own emotional reactions as well as of others in various circumstances and thus create synergy for work success. Enables managers to manage their stress and sustain with enthusiasm to handle challenging task at ease. It can be used by the managers to resolve conflicts in a more cordial manner and to reduce attrition and also to enhance customer relationship for professional success.

Richard Chambers, et. al. (2008) evaluated the impact of an intensive period of mindfulness meditation training on cognition and affective function. A study was conducted among a non-clinical group of 20 novice meditators. It tested before and after participation in a 10-day intensive mindfulness meditation programme. They were evaluated with self-report scales measuring mindfulness, rumination and affect, as well as performance tasks assessing working memory, sustained attention, and attention switching. The results showed that those completed the mindfulness training demonstrated significant improvements in self-reported mindfulness, depressive symptoms, rumination, and performance measures of working memory and sustained attention in comparison with non –meditators.

Melissa A. Tanner, et. al. (2009) investigated the effectiveness of Transcendental meditation on mindfulness. To test the hypothesis a sample of 295 students from universities of Washington, DC was chosen randomly. Participants were measured by Kentucky Inventory of Mindfulness Scale (KIMS) a 39-item self report questionnaire with four subscales: observe, describe, act with awareness and accept without judgment. The data so collected were analyzed using analysis of variance (ANOVA) on treatment condition (immediate TM instruction) and waitlist. It was found from the analysis that all KIMS subscales correlate with meditators at higher level than waitlist group.

Sahrwat, Kiran (2009) studies the role of meditation in the precaution and maintenance of intellectual capital: An empirical study. The major objective of the study was to assess the value of learning and maintaining intellectual capital through meditation. The study was conducted among mobile mortgage managers. It was found from the study there was positive correlation between learning and maintaining intellectual capital through meditation

Peerayuth Charoensukmonkol (2014) examined mindfulness meditation on emotional intelligence, self-efficacy and perceived stress. To test the hypothesis the data was collected among 317 regular practitioners of mindfulness meditation in Thailand. The Wong and Law EQ Scale, General efficacy scale and Perceived stress scale were used to assess the respondents. It was found from the analysis of t-test and regression analysis that regular practitioners of mindfulness meditation tended to be a good predictor of EQ and general perceived stress. They reported higher EQ and lower perceived stress than those who did not. It addition to it also found regular practitioners of mindfulness meditation would allow people to experience less stress perception and higher general self-efficacy indirectly through EQ.

Sergey Afanasyev (2014) studied the role of meditation in the emotional intelligence improvement of Russian- speaking migrants. It adopted both qualitative and quantitative research methods to assess the emotional intelligence. Qualitative method include semi-structured interview with open ended questions on emotional intelligence and quantitative measurement include MSCEIT test (The Mayer-Salovey- Caruso Emotional Intelligence Test), EmIn questionnaire, SREIT (Self Report Emotional Intelligence Test) were used. The study was conducted among 48 from the participants of former Soviet Union. They were divided into two groups: experimental consisting of 32 people and includes two subgroups practicing 20 minutes Transcendental meditation and Mindfulness meditation daily and a control group consisting of 16 people. It was found that there were positive dynamics in the experimental group and they would also strengthen their interpersonal and intrapersonal competencies of emotional intelligence through meditation. And the choice of a specific method of meditation does not significantly affect the dynamics of emotional intelligence.

3. Problem Statement

Emotional intelligence and intellectual capital concepts are gaining importance in the recent decades due to its significance in one's personal and professional life success. The existing studies on emotional intelligence were based on resultant output of emotional intelligence such as influence of emotional intelligence on job satisfaction, team spirit, responsiveness to change, leadership, employee development and performance. And the same time current literature had not provided the effective means to develop emotional intelligence and studies on meditation was based on health, anxiety, depression and psychological well-being or researchers are recording the activities of brain, heart and other biological systems to study the impact of various kind of meditation on the psychological and physiological status of the human entity and arriving at various constructive conclusions for the benefit of the human kind. And very limited study on intellectual capital and meditation. Therefore, an attempt has been made by the researcher is to study the impact of meditation on emotional intelligence and intellectual capital with special reference to meditators in Erode district.

4. Objective of the Study

From the statement of the problem, the following objectives have been framed for the present study.

1. To study the impact of meditation on emotional intelligence and intellectual capital.

2. To study the effectiveness of group meditation on societal well-being.

5. Methodology

This study is systematically and scientifically organized. The validity of any research depends on the systematic method of data collection and analyzing the same in a logical and sequential order. It has made an extensive use of both primary and secondary data. It describes emotional intelligence and intellectual capital of the meditators in Erode District and hence the study is descriptive in nature. Instead of obtaining information from each and every unit of the universe, only a small representative part is studied and the conclusions are drawn on that basis for the entire universe or whole population. Hence, this research uses sampling method for collecting data. For this research stratified random sampling is used for collecting the data. As far as the present study is concerned the population was divided into six stratums on the basis of taluks viz., Anthiyur, Bhavani, Erode, Gobichettipalayam, Perundurai and Satyamangalam. Within this stratum, the researcher selected the respondents by using sampling technique. The sample size was 727 respondents. These samples were carefully selected by the researcher from those who have been meditating for minimum eight weeks. The statistical tools used for the analysis include percentage, chi-square test, correlation analysis and Multiple Regression analysis.

6. Data Analysis and Interpretation

6.1 IMPACT OF MEDITATION ON EMOTIONAL INTELLIGENCE – CORRELATION ANALYSIS

The relationship between the selected independent variables and the dependent variable impact of meditation on emotional intelligence has been found by using correlation analysis. The independent variables viz., age, educational qualification, monthly income, family size, period of aware about meditation, period of practicing meditation, duration of meditation per day, level of increasing emotional intelligence after meditation and effectiveness of group meditation. The goal of the correlation analysis is to observe what extent the selected independent variables predict the dependent variable impact of meditation on emotional intelligence. The result of the correlation between the independent and dependent variables is discussed in the following table.

TABLE NO. 1 - IMPACT OF MEDITATION ON EMOTIONAL INTELLIGENCE

No.	Independent variables	'r' value	'p' value
1.	Age	0.121	0.001*
2.	Educational Qualification	0.169	0.000*
3.	Monthly Income	0.155	0.000*
4.	Family Size	-0.112	0.002*
5.	Period of Aware about Meditation	0.162	0.000*
6.	Period of Practicing Meditation	0.164	0.000*
7.	Duration of Meditation in a Day	0.096	0.010*
8.	Level of Increasing Emotional Intelligence after Meditation	0.231	0.000*
9.	Effectiveness of Group Meditation	0.578	0.000*

Note : * - Significant at 1% level

It is examined from the above table that how the selected independent variables affect the impact of meditation on emotional intelligence. It is observed that all the selected independent factors viz. age, educational qualification, monthly income, family size, period of aware about meditation, period of practicing meditation, level of increasing emotional intelligence after meditation and effectiveness of group meditation are having positive correlation with the impact of meditation on emotional intelligence in the study area. The variable family size is having negative association. It is found that whenever the age, educational qualification, monthly income, period of aware about meditation, period of practicing meditation, duration of meditation per day, level of increasing emotional intelligence after meditation and effectiveness of group meditation **increases their** impact of meditation on emotional intelligence **also positively increases. Further, whenever the family size** increases their impact of meditation on emotional intelligence decreases.

6.2 IMPACT OF MEDITATION ON INTELLECTUAL CAPITAL – CORRELATION ANALYSIS

TABLE NO. 2 - IMPACT OF MEDITATION ON INTELLECTUAL CAPITAL

No.	Independent variables	'r' value	'p' value
1.	Age	0.221	0.000*
2.	Educational Qualification	0.164	0.000*
3.	Monthly Income	0.090	0.015**
4.	Family Size	0.106	0.004*
5.	Period of Aware about Meditation	0.132	0.001*
6.	Period of Practicing Meditation	0.103	0.005*
7.	Duration of Meditation in a Day	0.327	0.000*
8.	Impact of Meditation on Intellectual capital	0.578	0.000*
9.	Level of Increasing Emotional Intelligence after Meditation	0.221	0.000*

Note : * - Significant at 1% level; ** - Significant at 5% level.

It is found from the above table that how the selected independent variables affect the impact of meditation on intellectual capital. It is observed that all the nine selected independent factors viz. age, educational qualification, monthly income, family size, period of aware about meditation, period of practicing meditation, duration of meditation in a day, impact of meditation on emotional intelligence and level of increasing emotional intelligence after meditation are having positive correlation with the impact of meditation on intellectual capital in the study area. It is found that whenever the age, educational qualification, monthly income, family size, period of aware about meditation, period of practicing meditation, duration of meditation in a day, impact of meditation on intellectual capital and level of increasing emotional intelligence after meditation **increases with the** impact of meditation on intellectual capital **also positively increases.**

6.3. OPINION OF THE RESPONDENTS TOWARDS THE EFFECTIVENESS OF GROUP MEDITATION ON SOCIETAL WELL-BEING – PERCENTAGE ANALYSIS

An attempt has been made to know the opinion of the respondents towards the effectiveness of group meditation on societal well-being. For the purpose of this study, it has been classified into twelve categories viz., spreads the love and spiritual energy into the world, group synergetic power gets transferred to the world, helps to transform and evolve the overall consciousness of humanity, brings people together to celebrate love, life and peace, brings world peace to the society, supports in lowering of crime rate, helps to reduce terrorism attacks, decreases accident rate, reduces war and war death rate, trims down the suicide rate, lessens violence and lowers social and political unrest. The details are furnished in the following table.

TABLE NO. 3
OPINION OF THE RESPONDENTS TOWARDS THE EFFECTIVENESS OF GROUP MEDITATION ON SOCIETAL WELL-BEING

S.No.	Statements	SA	A	N	DA	SDA
1	Spreads the love and spiritual energy into the world	436 (60.0%)	203 (27.9%)	45 (6.2%)	24 (3.3%)	19 (2.6%)
2	Group synergetic power gets transferred to the world	366 (50.3%)	213 (29.3%)	88 (12.1%)	31 (4.3%)	29 (4.0%)
3	Helps to transform and evolve the overall consciousness of humanity	437 (60.1%)	212 (29.2%)	31 (4.3%)	25 (3.4%)	22 (3.0%)
4	Brings people together to celebrate love, life and peace	390 (53.6%)	210 (28.9%)	66 (9.1%)	33 (4.5%)	28 (3.9%)
5	Brings world peace to the society	311 (42.8%)	191 (26.3%)	141 (19.4%)	44 (6.1%)	40 (5.5%)
6	Supports in lowering of crime rate	281 (38.7%)	195 (26.8%)	207 (28.5%)	28 (3.9%)	16 (2.2%)
7	Helps to reduce terrorism attacks	271 (37.3%)	219 (30.1%)	201 (27.6%)	21 (2.9%)	15 (2.1%)
8	Decreases accident rate	408 (56.1%)	219 (30.1%)	60 (8.3%)	24 (3.3%)	16 (2.2%)
9	Reduces war and war death rate	386 (53.1%)	207 (28.5%)	79 (10.9%)	30 (4.1%)	25 (3.4%)
10	Trims down the suicide rate	434 (59.7%)	215 (29.6%)	40 (5.5%)	23 (3.2%)	15 (2.1%)
11	Lessens violence	425 (58.5%)	206 (28.3%)	49 (6.7%)	28 (3.9%)	19 (2.6%)
12	Lowers social and political unrest	428 (58.9%)	233 (32.0%)	33 (4.5%)	21 (2.9%)	12 (1.7%)

It is surmised from the above table that the respondents are strongly agreed towards effectiveness of group meditation on societal well-being like 'spreads the love and spiritual energy into the world, group synergetic power gets transferred to the world, helps to transform and evolve the overall consciousness of humanity, brings people together to celebrate love, life and peace, brings world peace to the society, supports in lowering of crime rate, helps to reduce terrorism attacks, decreases accident rate, reduces war and war death rate, trims down the suicide rate, lessens violence and lowers social and political unrest' as 60.0, 50.3, 60.1, 53.6, 42.8, 38.7, 37.3, 56.1, 53.1, 59.7, 58.5 and 58.9 percent respectively. It is found from the analysis that majority (60.1%) of the respondents are strongly agreed towards effectiveness of group meditation on societal well-being as 'helps to transform and evolve the overall consciousness of humanity'.

7. FINDINGS AND SUGGESTIONS

* Majority of the respondents were 30-45 years aged, having graduate degree and got married. They are more prone to work-family conflict. So, the respondents should take necessary steps to manage their emotions through meditation.
* Majority of the repondents are earning below Rs.15000 in a month, having up to 3 members in their family and practicing meditation for 5-10 years. It is pinpointed that low income group respondents have more interest in meditation than the high income group people. Hence, it is suggested to the high income group of the meditators, should take necessary steps to do meditation practice to increase their emotional intelligence and intellectual capital.
* Majority of the respondents have selected the meditation centers that could have more of positive vibrations and have a deepen meditation knowledge. So, it is recommended to the meditations centers should practice meditation regularly and conduct group meditation once in a week or once in fortnight that leads to increase the positive vibrations.

8. CONCLUSION

The study on the impact of meditation on emotional intelligence and intellectual capital among the selected meditators was a relatively new and interesting field. It was essential and very important to study concepts which would help reduce the stress and achieve success both in work and family. Meditation can help a person to face situations in a relaxed state of mind. Meditators possess the ability to appraise self and others' emotions, to use emotions positively and wisely and to regulate emotions in an appropriate way. The study also noticed that meditators are good at the task performance also as they complete their assigned tasks adequately, fulfill their responsibilities and perform tasks that are expected of them.

9. SCOPE FOR FUTURE RESEARCH

* Future study can also look into the possibility of investigating the effect of gender differences on the relationship between impact of emotional intelligence and intellectual capital and its effectiveness.

* A research can successfully be adopted in the field of organizational behavior with regard to emotional intelligence and intellectual capital.
* A research can conduct for examining what extent emotional intelligence and intellectual capital level increases through various meditations among the doctors in various geographical locations in India.

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SALIS 2016

8th & 9th July, 2016

Editors

Dr. A.M. Venkatachalam
K. Karunai Raghavan
Dr. M. Mandhirasalam
Dr. T. Magudeeswaran

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Department of Library

K.S.RANGASAMY COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
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Transforming the Lives through Public Libraries: A Study

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Abstract

The Public library is the prime community access point designed to respond to a multitude of ever-changing information needs. The role of Public Libraries in transforming the lives of people is what discussed in this paper. Connecting people and resources is one of the important services of the public library. This paper describes the level of awareness among the people about Public library and its services and the career prospects gained by users. Also examined how far do the people, especially of poor economic background were benefitted through free access to the public library resources. Questionnaire and interview method was employed by the researcher to analyze the search of knowledge, information and experience of the people to succeed in their lives.
Keywords: *Public library, user, services, people*

Introduction

The public library is rightly called as the "People's University". It is an institution which offers people free access to information. It is a social institution. Also a non-profit oriented exclusively service oriented organization run for the people, of the people, and by the people. Its main functions are dissemination of knowledge, promotion of learning, and advancement of education and research. Public libraries also provide free services such as preschool story times to encourage early literacy, quiet study and work areas for students and professionals, or book clubs to encourage, appreciation of literature in adults, etc. Public libraries typically allow users to take books and other materials off the premises temporarily; they also have non-circulating reference collections and provide computer and internet access to patrons.

Definition

Dr. S.R. Ranganathan, the Father of the Library Science, defines: "Public Library is one which is open to any member of the public and is usually free of any charge paid as so much for so much service. It is usually supported by local rate and grants from the government."

Public Library Services

Public Library as "Educational Centre, Informational Centre and Cultural Centre"

A public library is expected to serve as an active centre for dissemination of knowledge. Public libraries can provide free space, furniture and equipment to conduct classes, and provide reading for competitive examination and informative literature. Talks, panel discussions, seminars, lecture-cum-demonstrations, innovative science exhibitions – all these are likely to attract many potential users of public libraries.

In a multilingual and multicultural society, a sense of respect and regard for other linguistic and cultural groups is essential to strengthen the cultural unity in diversity. Occasions like national

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Designing Content Management System for Select Online Resources using Wordpress

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Abstract

Connecting users and information through its services is one of the important functions of academic libraries. In this google era people, especially the college students highly depend on internet for any information. But do they retrieve the right information from the vast repository through search engines? Whether the information they retrieve is authentic? Are the questions before them? Librarians being the information providers should help its users to reach the right information through some specialized services. Thus, the researcher has made an attempt to design a content management system for selected online resources such as Open access E-books, E-journals, E-theses and dissertations etc., using open sources software WordPress.

Keywords: *WordPress, content management system, open source software, online resources*

Introduction

In the era of Information & Communication Technology (ICT), website has become one of the most powerful tools to accelerate the awareness of users about the activities and services of libraries and information centers. WordPress has emerged as a favorite open source web content management system for the information and library professionals which has almost all the desirable readymade features to meet all their web portal needs, with relative ease of use with no prior knowledge of programming languages, web development or markup language to create and manage web content. Many web publishers use content management systems (CMS) to allow them to instantly and dynamically update web pages and properties as new content becomes available so that every visit to a site is engaging, informative, and meaningful.

Wordpress

WordPress is a free and open source software (FOSS) and known as the most successful Content Management System (CMS) and blogging software written in PHP and based on MySQL database for creating blogs and websites for all kinds of organizations, companies and millions of individuals. The WordPress software is also the origin of the service WordPress.com and is available to download for free under the terms of GNU GPL. WordPress is initially designed as a blogging platform, in the last several years WordPress has changed itself as a useful content management system. One of the main advantages of WordPress is the large number of plug-ins released by independent developers. In fact, every aspect of web site regarding the creation, organization and search engine optimization can be now handled with the use of WordPress plug-

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