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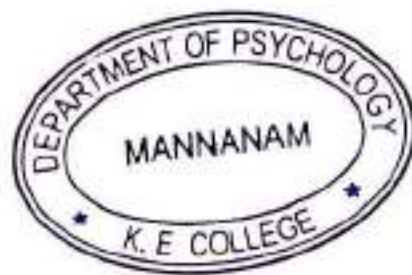
RETROSPECTIVE RESEARCHES



Editors: **Fr. Johnson Joseph CST**
Ms. Chinchu Rani Vincent
Ms. Karthika Elizabeth

-G04-

**ADOLESCENT MENTAL
HEALTH HAZARDS
RETROSPECTIVE RESEARCHES**





Editors:

Fr. Johnson Joseph CST
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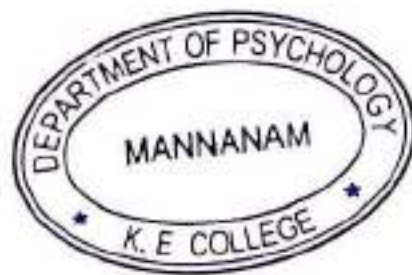
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Emotion regulation and Aggression among College students of Parents with and without Drinking behaviour

Neha Tom¹, Ashly Mariam Punnoose,² Arya Chandran,³ Karthika Elizabeth⁴

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Abstract

Parental control and monitoring are negatively affected by parental alcohol-related problem or heavy alcohol use. (Mares, Vorst, Engels, and Lichtwarck-Aschoff, 2011). Emotion regulation is defined as the process through which people influence the experience and expression of emotions (Gross, 2002). Aggression is a response by an individual that delivers something unpleasant to another person. The aim of the study is to find the relationship between emotional regulation and aggression among college students. Also to find the difference in emotional regulation and aggression with respect to parental drinking behaviour. The sample of the research consists of 118 college students of age 17-25 years from different parts of Kerala. The samples are collected using purposive sampling technique and the research design adopted is descriptive. Emotion regulation questionnaire by Gross and John and The Buss-Perry Aggression Questionnaire (BP-AQ) are the scales administered. The findings of the study shows a negative correlation between Emotion regulation and Aggression which is not statistically significant. The study also draw the inference that there is no significant relationship between emotion regulation and aggression among college students. The study also found that there is no significant difference in emotion regulation and aggression among college students with respect to parental drinking and non drinking behaviour. The mean rank of aggression of students of parents with drinking behaviour was higher compared with students of parents without drinking behaviour. This implies the need to educate parents about how drinking behaviour might have a distal effect on the personality development of their wards.

Keywords: Emotion regulation, Aggression, Parental drinking behaviour and college students.



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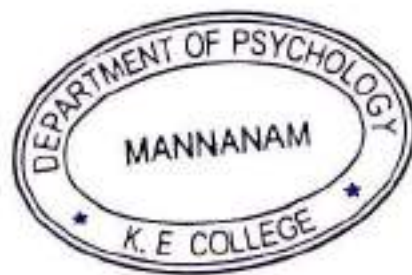
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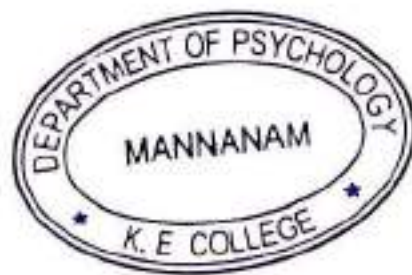
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Test Anxiety, Academic Self Efficacy and Emotional Maturity among Adolescents

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Abstract

The researcher aims to study the relationship between Test Anxiety, Academic Self Efficacy and Emotional maturity among adolescent students and to explore how these variables vary with Gender. For this a total of 100 adolescent students consisting of 53 males and 47 females in Ernakulam city, Kerala between the age groups of 15 and 19 years old were taken as sample using purposive sampling technique. Descriptive research design was adopted for the purpose. In the study, Westside Test Anxiety Scale (Richard Driscoll 2007), Academic Self-Efficacy Scale (Abdul Gafoor K. & P. Muhammed Ashraf-2006) and Emotional Maturity Scale (Bhargava and Singh, 1984) were administered. The Spearman Rho correlation coefficient was used to measure degree of correlation between variables and Mann Whitney U test was used to analyse the significance differences. The results of the study showed that test anxiety and academic self efficacy had significant negative relationship, test anxiety and emotional maturity also had significant negative relationship, academic self efficacy and emotional maturity had significant positive relationship. The study further revealed that there is a significant difference in these variables with respect to their gender. The best way for any individual wishing to achieve success in life is to strengthen his self-efficacy and emotional maturity.

Keywords: Test Anxiety, Academic Self Efficacy, Emotional Maturity, Gender



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Bionanocomposite Films for Active Packaging of Fruits and Vegetables

Anjaly H.* and Sandhya C.**

(*Research Scholar, Research and Postgraduate Department of Microbiology, Sree Sankara College, Kalady, Kerala, India and Assistant Professor, Department of Food Science & Technology, St. George's College, Aruvithura, Kottayam, Kerala, India)

(**Assistant Professor, Department of Biochemistry, Kuriakose Elias College, Mannanam, Kottayam, Kerala- 686561, India, Email: sandhya@kecollege.ac.in)

Abstract

Effective packaging systems for natural foods ensure that consumers receive high-quality, easily manageable products. However, the current reliance of the food packaging industry on non-biodegradable petroleum-based materials presents a sustainability challenge. In response to this concern, the food packaging sector actively seeks environmentally friendly alternatives, such as biodegradable and sustainable materials. Exciting developments are taking place in food packaging, including exploring nanocomposites and biopolymer films containing bioactive additives. Considering the perishable nature of fruits and vegetables, enhancing the attributes of packaging films, such as shelf life, could be achieved by incorporating metal nanoparticles into biopolymers. Furthermore, researchers are investigating biodegradable, active packaging solutions incorporating agents capable of reducing postharvest spoilage in fruits and vegetables during storage. This review explores the potential of biodegradable food packaging for fruits and vegetables, methodologies for synthesis and its challenges.

Keywords: *Food Packaging, Biopolymers, Nanomaterials, and Fruits & Vegetables.*

Expressions on War

Volume I



Dr. Shubhra Jamwal & Dr. R. S. Regin Silvest

Expressions on War

Volume I

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50. Holding Out Hope After Traumatic War

Together we lived before war
Together we shared everything without putting anything away for later
Together we attended the parties, meetings and even funerals
Alas; now we are looking for shelter, food and companionship.

Together we laughed pouncing on our pals' gaffes
Together we travelled miles and miles with our family members
Together we roamed around our mother earth
Alas; now we are alone on this barren planet.

Together we prayed without caring God's religion
Together we worked hard for a decent living
Together we lived with our pet animals at home
Alas; now we are aimless, homeless and lifeless in this chaotic world.

Together we are dreaming of a world where tranquillity seems standstill
Together we are questioning the innocence of war in the name of survival
and existence

Together we are holding our hands for a re-union and a happier life
Yes, we are mindful, hopeful and thankful.

Together we wish to wake up in the morning without blood and tears
Together we like to leave our machines of hatred and destruction
Together we foresee a world with fraternity and solidarity without any
disparity
Yes, we are proud of being a brother and a sister to our own mankind.

- Fr Joby Joseph

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Celebrating Womanhood in Verse



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She Wore a Whore up Her Sleeves!!

Indu Peter

Kuriakose Elias College, Mannanam, Kottayam, Kerala

Dancing abreast the limbs of night,
amidst the snares and the stares,
SHE- a tart of art, a simple pansy-
Lost in flights of fancy,
flailed her wings of poesy.
Her lays crippled -

the
ways
of
the
world.

Robed in passion,
bejewelled with dreams, and-
sheathed in a disarming smile,
She traversed the untrodden.

'Eyes on the floor!' breathed the mob.
Beware your Body and Beauty.
Cast the gaze off your curves.
Body is sin and Beauty a curse you see;
Yet, with the bang of a beatific laughter,
She looked and touched and felt.

'Blah! Did I see you fly the other day!', scoffed-
the world.

'Beware the Fall'
Trust your legs and not your wings

Embracing the Feminine

Slow and steady wins the maze,
'Lady Icaruses end up kissing their asses Lassie'
Natheless, She soared, braced to Rise with every fall.

She probed the ends,
Aroused the aurora, and-
Bewitched the twilight, with—
 Her motley colours.
She, who unfurls the portals of midnight.
In whom, dawn and dusk are one.

Shaken, the sly masses piped up:
"She Wore a Whore up her Sleeve!"
Mask off, amid a swarm of guile,
With brazen laughter and fire in her eyes
She turned, burnt a hole on-
 the phantom masks, and-
Docile No More,
Roared: **I DO!!!**



INNOVATIONS IN POSTHARVEST TECHNOLOGY SERIES



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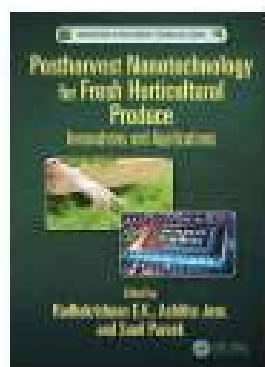
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Book:

Postharvest Nanotechnology for Fresh Horticultural Produce

Innovations and Applications

Edited By Radhakrishnan E.K., Ashitha Jose, Sunil Pareek

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ABSTRACT

Food scarcity and insecurity is an alarming issue throughout the world. Postharvest loss due to both mechanical damage and microbial spoilage significantly influences the shelf life and hence the availability of agricultural produce. Once initiated, the microbial spoilage can make bulk quantity of a given agricultural product unacceptable for human consumption, and several methods have already been used to try to manage this. Considering the limited success of the available methods, there is increasing interest in exploring nanotechnological methods. These methods are being considered for both the development of various platforms for antimicrobial/barrier packaging applications that minimize the contact of agricultural produce with the external environment, and also for design sensors to ensure food safety and quality.

The impact of various nano-systems developed through material engineering on the shelf-life enhancement and storage of fresh horticultural produce will have revolutionary effects on post-harvest management in the coming years. Hence, ***Postharvest Nanotechnology for Fresh Horticultural Produce*** has been edited to advance understanding of material development, intelligent selection of nanomaterials to ensure the nontoxic nature, and future perspectives of nanotechnology on postharvest produce. This includes various types of nanoparticles exploited for the postharvest management, their mechanism of action, varied applications and material engineering, along with natural products including essential oils and plant bioactives, modelling of various tailor-made materials to meet the required properties of the packed food, advancements in the nanotechnological applications for the minimally processed food, and the toxicity concerns.

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ഡോ. ജോയിസ്കുട്ടി ജോസഫ്

ഒക്ട്ര കോളേജ് മാനാഗർ

എവറസ്റ്റ് ബേസ്കാമ്പ് യാത്ര -4 ഗോരകേഷ്വ - കാലാപത്തർ - എവറസ്റ്റ്

ഏപ്രിൽ 28 ന്യൂസ്

ഇന്നലെ രാത്രി ഉറക്കം നല്ലതുപോലെ കിട്ടിയില്ല. ലോഡ്ജിന്റെ മേൽക്കൂരയിൽ മഞ്ഞുവീഴുന്നതിന്റെ താളത്തിൽ ലയിച്ച് വെള്ളപ്പിനെ വരെ വെറുതെ കിടക്കുകയായിരുന്നു. പൂലർച്ചെ നോക്കുമ്പോൾ ലോഡ്ജിംഗ് പരിസരങ്ങളും മഞ്ഞ് പുതച്ച് കിടക്കുകയാണ്. തലവേദന പൂർണ്ണമായി മാറിയിരിക്കുന്നതിലും ചുരുക്കം സാധാരണ നന്നായി തന്നെ ഇടരുന്നുണ്ട്.

ഇന്ന് ലുമ്പോച്ചേ വഴി ഗോരകേഷ്വിലേയ്ക്കാണ് ഉദ്ദേശിക്കുന്നത്. ലുമ്പോച്ചേയിൽ ഒരുദിവസം താമസിക്കാനായിരുന്നു ഞങ്ങളുടെ ഏർപ്പാടുകളിലും ചുറ്റുമുറയിൽ ഉടുതലായെടുത്ത ഒരു ദിവസം ലാഭിക്കാനാണ് ഇങ്ങനെ മാറ്റിയത്. സാധാരണ പരമ്പരാഗത വഴിയേ സഞ്ചരിക്കുന്നവരുടെ രണ്ടാം അക്സെസ്സുകൾ ലുമ്പോച്ചേയിലാണ് നടക്കുന്നത്. ഞങ്ങൾ ഇതുവരെ ആകെ 3 ദിവസങ്ങൾ അക്സെസ്സുകൾ നടത്തിയിരിക്കുന്നതി

നാൽ ഇന്ന് നേരെ ഗോരകേഷ്വിലേക്ക് പോകുന്നതിൽ തെറ്റില്ലെന്നാണ് പസാഞ്ച് പറയുന്നത്. എന്നു മാത്രമല്ല ഗോകുട്രയും ചോലാപാസും കടന്നു വരുന്നതിനാൽ ഇനി എ. എം. എസ് സാധ്യതകൾ ഇല്ല താനും.

രാവിലെ എട്ടരയ്ക്ക് നടപ്പ് തുടങ്ങി. വലിയ കയറ്റിറക്കങ്ങൾ ഇല്ല ചിലയിടത്ത് മലമ്പള്ളികളിലൂടെയാണ് വഴി. അവിടങ്ങളിൽ വളരെ ശ്രദ്ധിക്കണം. മലമുകളിൽ തിന്ന് കല്ലു ഉരുണ്ട് ചാടാനുള്ള സാധ്യതകൾ ഉണ്ട്. മല ചെന്ന് അവസാനിക്കുന്നത് ശ്ലേഷിയറ്റുകളിലാണ്. മൂന്ന് മണിക്കൂർ ഇങ്ങനെ നടക്കുമ്പോൾ പരമ്പരാഗത വഴികാണാം. അവിടെ ഒന്നു രണ്ട് ചെറിയ ഗ്രാമങ്ങൾ. അതിൽ ഒരു ഗ്രാമമായ 6 ക്കൂറിലാണ്. മുമ്പ് ഞാൻ പറഞ്ഞ മലയാളി പയ്യൻ കഴിഞ്ഞ വർഷം മരിച്ചത്. എഫിംഎസ് ബാധിച്ച് തന്നിച്ചായിപ്പോയതാണ് മരണകാരണം. കൂടെ ആരെങ്കിലും ഉണ്ടായിരുന്നെങ്കിൽ മരണം ഒഴിവാക്കാൻ മിക്കവാറും കഴിഞ്ഞേനെ

എന്നാണ് പസാഞ്ച് പറയുന്നത്. പരമ്പരാഗത വഴിയിലൂടെ ഇ.ബി.സി പോകുന്നവർ ഗോരകേഷ്വയിലേക്ക് എത്തിച്ചേർന്നു. പക്ഷേ അവർ തന്നെ പോകാതിരിക്കുകയാണ് നല്ലത്.

പരമ്പരാഗത വഴിയിൽ സഞ്ചരിക്കുന്ന പോർട്ടർമാരും യാക്കുകൾക്കും യാത്രാമുഖ്യം. കെട്ടിട നിർമ്മാണത്തിനുള്ള ഓപ്പറേറ്റിംഗ് സാമഗ്രികളുമായി കറോയെറ ചുട്ടുകാർ മലകയറിപ്പോവുന്നുണ്ട്. മറ്റു നായകന്മാർ ആത്മാണ്കളും ഇപ്പോൾ വളരെ അടുത്തായി കാണാം. ലുമ്പോച്ചേയിൽ ഉച്ചഭക്ഷണം പതിവുപോലെ ഭാരമേടു ചിക്കർ കറിയും.

ഗോരകേഷ്വിലുള്ള വഴി അതികാലമാണ്. ഇളകിക്കിടക്കുന്ന ഉരുളൻ കല്ലുകളാണ് വഴിയിലെമ്പാടും ചിലയിടത്ത് ഈ കല്ലുകൾ കയറിയിറങ്ങണം. കല്ലുകൾ വഴികൾ പൂർണ്ണമായും അവസാനിച്ചിരിക്കുന്നു. എന്താനും ചില മലകൾ കയറി ഇറങ്ങി നമ്മൾ ഗോരകേഷ്വിലേക്ക് അടുത്തടുത്തു പോകുന്നതുമാണ്. അങ്ങനെ കാറ്റ് ചുറ്റും കാണുന്നുണ്ട്



ലും മഞ്ഞ് മലകൾ. നമ്മൾ നടക്കുന്ന വഴി മിക്കവാറും ശേഷിയിന് മുകളിലുള്ള കൽ-മൺ കമ്പരങ്ങളിലൂടെയാണ്. പല അടുക്കു വസ്തുക്കളാൽ മറച്ചിരിക്കുന്നതിലും തണുപ്പ് ശരീരത്തെ ശരിക്കും നോവിക്കുന്നുണ്ട്. ഇന്നലെത്തെ ചോലാപാസ് കയറ്റം മൂലമാവാം ഇന്ന് നല്ല ക്ഷീണമുണ്ട്. ആകാശത്തെ മേഘങ്ങൾ മറച്ചിരിക്കുന്നു. മഞ്ഞ് വീഴ്ചയും ആരംഭിച്ചിട്ടുണ്ട്. പുറന്നത്ര വേഗതയിൽ നടന്നു. ഏഴ് മണിത്തുറന്നെ നടപ്പിനവസാനം 13 കിലോമീറ്റർ പിന്നിട്ട് എവറസ്റ്റ് ബേസ് ക്യാമ്പിന് അടുത്തുള്ള ക്യാമ്പായ ഗോരക്ഷെപ്പിൽ എത്തിച്ചേർന്നിരിക്കുന്നു.

ഏപ്രിൽ 29 വെള്ളിയാഴ്ച

എവറസ്റ്റ് യാത്രയിലെ ഏറ്റവും പ്രധാനപ്പെട്ട ദിവസമാണിത്. കലാപത്തിൽ എത്തി എവറസ്റ്റിനെ അടിച്ചി നോക്കിക്കണ്ട് അടിച്ചുലം നടത്തുന്നത് ഇന്നാണ്. കറിക്കൊലമായി എന്റെ മനസിനെ അപഹരിച്ചു. എവറസ്റ്റ് കൊടുമുടിയുടെ തൊട്ട് ചുവടായ ബേസ്കാമ്പിൽ എത്തുന്നതും ഇന്നാണ്.

എവറസ്റ്റ് മുടിയെ സൂര്യൻ അലങ്കരിക്കുന്ന മൂപ്പർത്തത്തിന് കലാപത്തിൽ ചെന്ന് സാക്ഷ്യം വഹിക്കലാണ് ആദ്യ ലക്ഷ്യം. നന്നായി ഉറക്കം കിട്ടാതിരുന്ന രാത്രിയായതിനാൽ വെളുപ്പിനെ

നാലു മണിക്കൂർ ഉണരാൻ ഒരു മൂലമിട്ടും ഉണ്ടായില്ല. തണുപ്പിനെ പ്രതിരോധിക്കാൻ കൈവശമുള്ള എല്ലാ വസ്തുക്കളും എടുത്തണിഞ്ഞു 5 മണിക്കൂർ തന്നെ കലാപത്തിനരികിലുള്ള നടപ്പ് തുടങ്ങി. നല്ല പ്രകാശം വീണിരുന്നതിനാൽ ഹെഡ്ലൈറ്റ് തെളിക്കേണ്ടി വന്നില്ല. ലോഡ്ജിന്റെ ഒരുവശത്ത് ചെറിയ മൈതാനം പോലുള്ള ഭാഗം കടന്നാൽ കലാപത്തർ എന്ന കുറുത്ത മലയായി. കുത്തനെയുള്ള മലകയറ്റം. കണ്ണൊഴികെയുള്ള ശരീരമേന്മയെല്ലാം നന്നായി മറച്ചിട്ടുണ്ടെങ്കിലും കാലും കയ്യുമെല്ലാം തണുക്കുന്നുണ്ട്. മൈനസ് 10 ആണ് താപനിലയെങ്കിലും കാറ്റുമൂലം തണുപ്പും അതിലും വളരെ തീവ്രമായി അനുഭവപ്പെടുന്നു. കൺപീലികൾ മാത്രമല്ല കണ്ണിന്റെ നാനൂറു ശതമാനം കട്ടപിടിക്കാൻ തുടങ്ങിയിരിക്കുന്നു. ഞങ്ങൾക്ക് വളരെ മുമ്പെ മലകയറിയ ചിലർ, തണുപ്പിന്റെ ആധിക്യം മൂലമാവാം ഉദയം കാണാതെ തിരിച്ചിറങ്ങുന്നുണ്ട്.

കലാപത്തിന് മുകളിലെത്തുന്നതിന് മുമ്പുതന്നെ ഹിമ മൂടിക്കൊണ്ടിരുന്നതിൽ ദർശനം തരുന്നില്ല. തൂങ്ങിയുടയ്ക്കും ലോഡ്ജസഭയുടെയും ചുമലിൽ കയ്യിട്ട് തല മാത്രം ഉയർത്തി ചിരിച്ചു നിൽക്കുന്ന എവറസ്റ്റ്. ഒരു ഗ്ലൂപ്പ് ഹോട്ടോയിലെത്തുന്നതു പോലെ ഇവരുടെ ഇരുവശവും 8000 മീറ്റർ കൂമ്പിലെ പർവ്വത സൃഷ്ടിയെപ്പോലെ. ഇട്ടത്തിൽ നിന്ന് അല്പം തെക്കോട്ട് മാറി കെടുത്തിട്ട് നിൽക്കുന്നതു പോലെ ആരാധനാബീജം. അതിമനോഹരമാണ് ഈ കാഴ്ചകൾ. കലാപത്തിന്റെ മുകളിലെത്തിയാൽ മുന്നോട്ട് അടുപ്പം ധരിച്ചിയിൽ കറച്ചി ചോലയിൽ ഈ മുടികളെ കാണാം. എന്നാൽ അല്പം പോലും അതിന് സമ്മതിക്കാതെ കാറ്റ്. ഞങ്ങൾ ഇത്രയും കയറിയ ഇരുന്നെങ്കിലും ഇല്ല എന്ന ഭാവത്തിൽ ഒരു ദയയുണ്ടില്ലാത്ത ദിമുകയാണ്. കയ്യും കാലുമുതൽക്കു മറച്ചിട്ട് തുടങ്ങുന്നു. മൈനസ് 10 ഡിഗ്രി വരെ താണുവെന്ന് കമ്പനി അവകാശപ്പെടുന്ന അക്കറ്റിനെപ്പോലെ അടിയിലുള്ള തെരുവുകൾക്കുമേൽ വകവയ്ക്കാതെ വേണിപ്പിക്കുകയും



അല്ലാ പോലും മറന്നില്ലാതെ. ഇങ്ങനെ തെളിഞ്ഞ് എവറസ്റ്റ് കടന്നുകടന്നുപോകുന്നതല്ലെന്ന് പന്ത്രണ്ട് പേരാണ്. വസന്തകാലമോരതിനാലാവാം ഇങ്ങനെ കടന്നുപോകുന്നത്. എവറസ്റ്റ് ബേസ് ക്യാമ്പ് യാത്രയ്ക്കും എവറസ്റ്റ് ആരോഹണത്തിനും ഏറ്റവും പറ്റിയ കാലവും ഇതുതന്നെ. ഞങ്ങൾ നടക്കുന്ന മലയ്ക്കും എവറസ്റ്റിനടിയിൽ ലോകത്തിലെ ഏറ്റവും പ്രധാനപ്പെട്ട കാഴ്ച ശ്രേഷ്ഠമാണ്. മിക്കവാറും മണ്ണ് മുടിയ നിലയിലാണ് ഇപ്പോൾ ഈ ശ്രേഷ്ഠൻ. മൂന്ന് ഇതും ഒരു കണ്ണുമല ആയിത്തന്നെ. കലാപസ്ഥാ വ്യതിയാനം മൂലം മണ്ണുമല അലയടിയും സമീപ മലകളിലെ മണ്ണ് വന്ന് മൂടുകയുമാണ് ഉണ്ടായത്. പത്തു മുപ്പതു വർഷം കൊണ്ട് കാഴ്ച ശ്രേഷ്ഠൻ പൂർണ്ണമായും ഇല്ലാതായും എന്നാണ് ചില പഠനങ്ങൾ പറയുന്നത്. നടന്ന നടന്ന് മല

ങ്ങളുടെ അറ്റമെന്റുമോൾ താഴെ എവറസ്റ്റ് ബേസ് ക്യാമ്പായി. സമ്മിറ്റിന്റെ പല നിറങ്ങളിലുള്ള മടന്റുകളാണ് ആദ്യത്തെ ബേസ് ക്യാമ്പ് കാഴ്ച. സാമാന്യം വലിയൊരു ശ്രേഷ്ഠൻ തടാകത്തിന്റെ കരയിൽ എവറസ്റ്റ് ബേസ് ക്യാമ്പ് 5364 മീറ്റർ എന്നെഴുതിയ വലിയൊരു കല്ലാണ് എവറസ്റ്റ് ബേസ് ക്യാമ്പിന്റെ ലോകപ്രശസ്തമായ ലാൻഡ്മാർക്ക്. കല്ലാ കല്ലിന്റെ മുമ്പിലെ കണ്ണൻ തടാകവും വളരെ അടുത്ത് എത്തുമ്പോഴേ നമ്മൾ കാണും. എത്രയോ കാലമായി സ്വപ്നം കണ്ടിരുന്ന കല്ലാണിത്. അവസാനം ആ കല്ലിന്റെ മുമ്പിൽ എത്തിയിരിക്കണം. ദേശീയപതാകയുമായി അചാരപരമായി പടം പിടിക്കണം. നമ്മൾ മാത്രമല്ല മിക്കവാറും എല്ലാവരും പതാകകളായാണ് എത്തിയിരിക്കുന്നത്. ഹോട്ടോ

എടുപ്പിന് ശേഷം ചിലരെല്ലാം പതാകകൾ സമീപത്ത് തന്നെ കത്തി നിറുത്തിയിട്ടുണ്ട്. തൊട്ടുപുറത്ത് എവറസ്റ്റ് നമ്മുടെ മേൽ 'കട്ടകളി' കണ്ട് പുഞ്ചിരിച്ച് നിൽക്കുന്നുണ്ട്. സാധാരണ ബേസ് ക്യാമ്പിൽ നിന്ന് എവറസ്റ്റ് ദൃശ്യമാവേണ്ടതല്ല. ഇവിടെ യാതൊരു മറയുമില്ലാതെ എവറസ്റ്റിന്റെ മുകൾ തിളങ്ങി നിൽക്കണം. എവറസ്റ്റ് ആരോഹകരുടെ പേടിസ്വപ്നമായ കാഴ്ച ഐസ്റ്റാൾ എവറസ്റ്റിൽ നിന്ന് താഴേക്ക് കാഴ്ച ശ്രേഷ്ഠൻ വരെ ഒഴുകി പരന്ന് കിടക്കണം. കാഴ്ച ഐസ്റ്റാളിലൂടെ പർവ്വതാരോഹകർ കയറി പോകുന്ന വഴികളും ഐസ്റ്റാളിലെ ചില വിള്ളലുകളും വ്യക്തമായി കാണാം. ഈ യാത്ര ആരാദിച്ചിട്ടു ഇന്ന് 16 ദിവസങ്ങൾ ആയിരിക്കണം. അതിൽ 13 ദിവസങ്ങളാണ് മേൽ ചെയ്തത്. ആകെ നടന്ന ദൂരം 129 കിലോമീറ്റർ. അതിൽ 10 ദിവസ

അൾ കഴിഞ്ഞതും നൂറ്റിലേറെ കലയാർക്കീറ്റർ നടന്നതും ഹൈമാൾ റ്റുപുഡിലാണ്. അതിന്റേതായ ചില പ്രശ്നങ്ങൾ ഒഴിച്ചു നിറുത്തിയാൽ കാര്യമായ വേറൊന്നും തന്നെയില്ല. അതിശക്തമായ കാറ്റിന് എൽക്കമ്പോഴുള്ള തലവേദന അല്പം കഴിയുമ്പോൾ മാറുന്നുണ്ട്. ഉഷ്ണമേന്മയും മലകയറ്റക്കാരരുടെ പുരുമാണ് ഇപ്പോഴും അവശേഷിപ്പണ പ്രശ്നങ്ങൾ.

ആകാശദേവത എന്നർത്ഥമുള്ള സാൾഭാത എന്ന് നേപ്പാളിലും ഖൊമാലും (Chomolungma) എന്ന് ടിബറ്റിലും ഗൗരീശങ്കര എന്ന് സംസ്കൃതത്തിലും വിളിക്കപ്പെടുന്ന എവറസ്റ്റിന്റെ ആദ്യ പേര് പീക്കി5 എന്നായിരുന്നു. 1852-ൽ മലകത്തിലെ ഏറ്റവും ഉയരം കൂടിയ കൊടുമുടിയായി എവറസ്റ്റ് തിരിച്ചറിയപ്പെട്ടതുകൊണ്ട് അതിൽ കയറാനുള്ള ശ്രമങ്ങൾ ആരംഭിച്ചു. 1953 മെയ് 29 ന് ടെൻസിങ്ങിന്റെയും ഹിലാറിയുടെയും ശ്രമമാണ് ഫലം കണ്ടത്. ടിബറ്റിലൂടെയാണ് കൂടുതൽ ആൾക്കാർ എവറസ്റ്റ് കയറുന്നതെങ്കിലും നേപ്പാളിലൂടെയുള്ള ഈ വഴിയാണ് ക്ലാസിക്കൽ വഴിയായി അറിയപ്പെടുന്നത്. ഒരു ചെറിയ ടൈംഗിംഗ് ടേബിളിന്റെ വലിപ്പമാണ് എവറസ്റ്റിന്റെ മുകളിലുള്ളതെന്ന് ടെൻസിങ്ങും ഹിലാറിയും പറഞ്ഞപ്പോൾ കൊടുമുടി തുഞ്ചത്ത് രണ്ടു പേർക്ക് പേർന്ന് നിൽക്കാനുള്ള ഇടമേ ഉള്ളൂ എന്നാണ് ആദ്യമായി മുകളിലെത്തിയ ഇന്ത്യൻ വനിത ബാപേന്ദ്രിപാൽ വിശദീകരിക്കുന്നത്. ലോകത്തിലെ പ്രധാനപ്പെട്ട മിക്കവാറും എല്ലാ രാജ്യങ്ങളിലെയും മനുഷ്യർ എവറസ്റ്റിന് മുകളിലെത്തിയിട്ടുണ്ട്. 2017 മെയ് 19 ന് 2019 പേരാണ് എവറസ്റ്റിന് മുകളിലെത്തിയത്. മണലൂ മൂന്ന് ഈ ഏപ്രിൽ 7ന് ഇരുപത്തി ആറാമത്തെ പ്രാവശ്യം എവറസ്റ്റിന് മുകളിലെത്തിയ കമിനിത്ത ഷെർപ്പയും 21 പ്രാവശ്യം കയറിയ അപഷെർപ്പയുമാണ് കൂടുതൽ പ്രാവശ്യം എവറസ്റ്റ് കയറിയവർ.

എന്ന സംശയം പലർക്കും ഉണ്ടാകാറുണ്ട്. മലകളിൽ ദൂരത്തിന് വലിയ കാര്യമില്ലെന്ന് മൂന്ന് പന്ത്രെങ്കിലും ഏകദേശം 20 കിലോമീറ്റർ എന്നാണ് ഫൊതുവെ പറയാൻ. 5364 മീറ്ററിലെ (17598 അടി) ബേസ് ക്യാമ്പ് കഴിഞ്ഞാൽ 6100 മീറ്ററിൽ (20,000 അടി) ക്യാമ്പ് 1 ഉം 6400 (21000) മീറ്ററിൽ ക്യാമ്പ് 2ഉം 6800 (22300) മീറ്ററിൽ ക്യാമ്പ് 3 ഉം 8000 (26000 അടി) മീറ്ററിൽ ക്യാമ്പ് 4 ഉം ഉണ്ട്. സാധാരണ 3-4 ദിവസങ്ങളാണ് ഇവിടെ നിന്ന് മുകളിലെത്താൻ എടുക്കുന്നതെങ്കിലും 2004 മെയ് 21ന് അപഷെർപ്പ 8 മണിക്കൂറും 10 മിനിറ്റും കൊണ്ട് മുകളിലെത്തി നിക്കാർഡ് സ്ഥാപിച്ചിട്ടുണ്ട്. എന്നാൽ 40

മുതൽ 60 ദിവസം വരെ എടുക്കുന്ന വലിയൊരു പ്രോസസാണ് എവറസ്റ്റിനോടൊപ്പം. ആദ്യ ഒന്നൊന്നും ആഴ്ചകൾ കൊണ്ട് തങ്ങൾ നടന്നുവഴിയേ നടന്ന് ബേസ് ക്യാമ്പിലേത്തും. പിന്നീട് മൂന്നാലാഴ്ചകൾ ബേസ് ക്യാമ്പിൽ അക്ലൈമറേഷൻ വേണ്ടി തങ്ങും. ഈ ദിവസങ്ങൾ ചിലതിൽ ക്യാമ്പ് ഒന്നിലോ രണ്ടിലോ മൂന്നിലോമൊക്കെയെത്തി തിരിച്ച് വരും. ചില ദിവസങ്ങൾ ഓരോ ക്യാമ്പിലുമായി താമസിക്കും. ക്യാമ്പ് ഒന്നിലേക്കുള്ള വഴിയിൽ ഇപ്പോൾ നമ്മൾ കാണുന്ന 'ആത്മഹത്യവഴി' എന്നറിയപ്പെടുന്ന കട്ട ചെറുസാൾ വഴികളിലാണ് ഏറ്റവും കൂടുതൽ പരിശീലനം ആവശ്യമുള്ളത്. ഈ വഴികളിൽ



ബേസ് ക്യാമ്പിൽ നിന്ന് എത്ര ദൂരമാണ് കൊടുമുടി തുഞ്ചത്തേക്ക്



പലയിടത്തും കോവിലിനിക്കളം റോഡുകളും ഉറപ്പിക്കാൻ ടിമിന്റെ കപ്പലും മേടം. കോമ്പാൺസുമായി രണ്ടിലും കോവിലിയിലും നടക്കാനുള്ള പരിശീലനം വളരെ പ്രധാനപ്പെട്ടതാണ്. ഇടയ്ക്ക് നാലുപേരുടെ സഹായം നേടുന്നതിൽ ഞങ്ങൾ അടങ്ങിയിട്ടുണ്ട്. നാലുപേരുടെ സഹായം നേടാൻ കോവിലിയിലേക്കും ഇങ്ങനെ കരാർ വിവരം കഴിഞ്ഞ് ശാരീരികവും മാനസികവുമായി

എല്ലാവരും സജ്ജരെന്നു കണ്ടാൽ, ഒന്നാം ദിവസം കാളി ക്ലൈബിംഗും ഒന്നാം ക്യാമ്പും കടന്ന് രണ്ടാം ക്യാമ്പിലെത്തി രാത്രി തങ്ങും. രണ്ടാം ദിവസം ക്യാമ്പ് 3ലെത്തി അവിടെ തങ്ങും. അടുത്ത ദിവസം ഉച്ചയോടെ ക്യാമ്പ് നാലിൽ എത്തി വിശ്രമിക്കും. സൗത്ത് കോളിലെ ക്യാമ്പ് നാലിൽ രാത്രി തങ്ങൽ പതിവില്ല. രാത്രി 11 മണിയോടെ ക്യാമ്പ് നാലിൽ നിന്ന്

പർവ്വത മുകുളിലേക്ക് തിരികൊ. ബാൽക്കണി എന്നറിയപ്പെടുന്ന പ്രദേശം കടന്ന്, സൗത്ത് സജിറ്റ് എന്ന തെക്കേമുടി കയറി, ഹിലാറി സ്റ്റേറ്റ് എന്ന കരന്തനെയുള്ള പാറക്കെട്ടിലെ ഇടുങ്ങിയ വഴികൾ കടന്ന് എവറസ്റ്റിന് മുകുളിൽ പ്രദേശത്തിലെത്തും. ക്യാമ്പ് 4 -ൽ നിന്ന് മുകുളിലെത്താൻ പരമാവധി 10 മണിക്കൂറാണ് എടുക്കുക. അവിടെ ഏതാനും സമയം ചിലവഴിച്ച് തിരിച്ചിറങ്ങി ഉച്ചകഴിയുമ്പോൾ ക്യാമ്പ് 3 ൽ എത്തി അവിടെ രാത്രി തങ്ങും. അവിടെ നിന്ന് നാലാം ദിവസം ബേസ് ക്യാമ്പിൽ തിരിച്ചെത്തും.

മാർച്ച് പകുതി മുതൽ ജൂൺ ആദ്യത്തെ ആഴ്ച വരെയുള്ള സമയമാണ് എവറസ്റ്റ് ആരോഹണത്തിന് ഏറ്റവും നല്ലത്. ബേസ് ക്യാമ്പിലേക്ക് ഹെലികോപ്റ്ററിൽ വരുന്ന എവറസ്റ്റ് ആരോഹകർ ഇപ്പോൾ ഉണ്ടത്രേ. സമീപകാലത്ത് ക്യാമ്പ് ഒന്നിലേക്ക് പരീക്ഷണാടിസ്ഥാനത്തിൽ ഹെലികോപ്റ്ററുകൾ പോകുന്നുണ്ടെന്നും അത് കളക്ട്രെസ് ഫാൾ എന്ന അത്യപകടകരമായ വഴിയെ ഒഴിവാക്കാൻ നല്ലതാണെന്നും പറയപ്പെടുന്നു. എവറസ്റ്റിന് മുകുളിൽ നിന്ന് താഴേക്ക് സിറിയയിലേക്ക് പാരാഗ്ലൈഡിംഗ് ചെയ്യവരുമുണ്ട്. എവറസ്റ്റ് എന്ന വിശ്വപ്രസിദ്ധമായ സിനിമ ചിത്രീകരിക്കാനായി ഒരു ടീം മുഴുവനായി എവറസ്റ്റ് കയറിയത്രേ.

നേപ്പാളിൽ ഏറ്റവും കൂടുതൽ പർവ്വത സഞ്ചാരികളെത്തുന്ന 'എവറസ്റ്റ് ബേസ് ക്യാമ്പിന്റെ ബേസ്കാമ്പാണ്' ഗോരക്ഷെപ്പ്. ജീവനിലാത്ത കടുത്ത പക്ഷി എന്നാണ് ഈ സ്ഥലപേരിന്റെ അർത്ഥമെന്നറിയുന്നു. ഇവിടെയെത്തുന്ന മനുഷ്യരും അവർക്കു വേണ്ടി ചുമടടടുത്തുള്ള യാക്കുകളും അല്ലാതെ ജീവന്റെ അടയാളങ്ങളൊന്നും ഇവിടെില്ല. കടുത്ത പാറകളും കല്ലുകളും പൂഴിയും മണിവിടെ ആകമാനം. സഞ്ചാരികളെ മാത്രം ആശ്രയിച്ചാണ് ഇവിടുത്തെ ജീവിതം. തണുപ്പുകാലത്തും മഴക്കാലത്തും ഇവിടെ മിക്കവാറും വിജനമായിരിക്കും. ടൂറിസ്റ്റുകൾക്കു വേണ്ടി കറേയെറെ ലോഡ്ജുകൾ

വെട്ടുണ്ട്.

മാന്ദ്യം ഉൾ എന്ന ലോഡ്ജി
 ഞ്ഞാട് കഴിഞ്ഞത്.
 ഉള്ളിത്തൂണു ഇവിടെ കണ്ട ഒരു
 പുഴയുടെ ഇവിടുത്തെ മുറികൾ
 അല്ല വെട്ടും റെസ്റ്റോറന്റ് ചെ
 യ്ക്കാണ്. റെസ്റ്റോറന്റിൽ ചില
 സമയത്ത് കടന്നിരിക്കാൻ പോലും
 സാധിക്കാറില്ല. ഇതു വരെ കണ്ട
 തിരി കണ്ടതിന് ഏറ്റവും
 ചാർജ്ജ് ഉള്ളതും ഇവിടാണ്.
 സാധാരണ ചാർജ്ജിന് പോലും
 950 രൂപയാണിവിടെ. പുഴങ്ങിയ
 450 രൂപയും ഓലറ്റിന് 650
 രൂപയും കൊടുക്കണം. വെള്ളത്തി
 നാണ് ഇവിടെ ഏറ്റവും വില. ഒരു
 ലിറ്റർ ബോട്ടിലിന് 400 രൂപയും
 ഒരു ചെറിയ ഗ്ലാസ് പൂട്ടുവെള്ളത്തി
 ന് 120 രൂപയുമാകും. മൊബൈൽ
 ഒരു മണിക്കൂർ ചാർജ് ചെയ്യാൻ
 750 രൂപയും വല്ലപ്പോഴും കിട്ടുന്ന
 ഇന്റർനെറ്റിന് ദിവസത്തേക്ക്
 2000 രൂപയുമാവും. സാധനങ്ങൾ
 ഇവിടെത്തിരിക്കാനുള്ള വൈഷമ്യം
 ഓർത്താൽ വാങ്ങുന്നത് ഒട്ടും
 കൂടുതലായി തോന്നില്ല. മൂളിന്റെ
 പുറത്തും താക്കിന്റെ പുറത്തുമായി
 ആരോഴ് ദിവസമെങ്കിലും സവാരി
 ചെയ്തിട്ടാണ് ഒരു ഗ്യാസുകുറ്റി ഇവി
 ടെത്തുന്നത്. വല്ലപ്പോഴും കിട്ടുന്ന
 ഇത്തിരി സൂര്യപ്രകാശം കൊണ്ടു
 വേണം വിളക്ക് കത്തിക്കാൻ.

ഏപ്രിൽ 30 ശനിയാഴ്ച

ഇന്നലെ രാത്രിയും ഉറക്കം പിണ
 കും നടച്ച് മാനി നിൽക്കുകയായി
 ആ. നല്ലതുപോലെ ഉറങ്ങിയിട്ട്
 ഉറപ്പാൾ മൂന്നാൽ ദിവസങ്ങളായി.
 അടിയും കെല്ലിയും എന്റെ ഇരത
 അവസ്ഥയിൽ തന്നെ. എനിക്ക്
 അത് കൂടാതെ സാമാന്യം നല്ല ചുമ
 യുണ്ട്. തിരിച്ച് ലൂക്കു വരെ നടന്ന്
 ഇറങ്ങാനെങ്കിൽ 3 ദിവസമെങ്കി
 ഴു വേണം. ഹെലികോപ്റ്ററിൽ
 പോയാലോ എന്നായി ചിന്ത. മുമ്പ്
 ഹെസ്പെഗ്രാസിൽ വെച്ച് നടത്തിയ
 ഒരു ഹെലികോപ്റ്റർ യാത്രയുടെ
 മധുരാനുഭവമുണ്ട്. ഇവിടെ ഹിമാല
 യൻ മലനിരകൾക്കിടയിലൂടെയുള്ള
 യാത്ര അത്യപൂർവ്വ അനുഭവമാകും.
 മൂന്നു പേർ പോയാൽ ആകെ
 90000 ഇന്ത്യൻ രൂപയാകും.

കെല്ലിയും അടിയും ഞാനും ഹെ
 ലികോപ്റ്ററിന് പോകാനുള്ള
 ആരെങ്കിലും ഹെലികോപ്റ്ററിന്
 പോകുന്നത് പസാങ്ങിന് ഇഷ്ടമാ
 ണ്. കാരണം അത് അമ്പാർക്ക്
 ലാഭകരമാണ്. ഹെലികോപ്റ്റർ
 ഇങ്ങോട്ട് വരുമ്പോൾ ഇഷ്ടം
 പോലെ ചരക്കുമാത്രമാണ് വരുന്നത്.
 അതിന്റെ കമ്മീഷനും ഞങ്ങൾ
 കൊടുക്കുന്നതിന്റെ കമ്മീഷനും
 കിട്ടും. അത് മാത്രമല്ല പോർട്ടർമാർ
 ക്ക് ഞങ്ങളുടെ ബാഗുകൾ ഇനി
 ചുമക്കേണ്ട കാര്യമില്ല. അതിന്റെ
 ചാർജ് മുൻകൂട്ടി ഞങ്ങൾ കൊടുത്തു
 കഴിഞ്ഞു.

ഞങ്ങൾ മാനിയത്തോടെ സൗഖ്യ
 ത്തിൽ ആദിൽ ഉൾപ്പെടെ നല്ല
 പേർ മാത്രമായി. അവർ മാവിലെ
 തിരിച്ച് നടത്തം തുടങ്ങുകയാണ്.
 ഞങ്ങൾ ഇനി കാമണ്ടുവിൽ
 വെച്ച് മാത്രമേ തമ്മിൽ കാണൂ.
 ഞങ്ങളുടെ എല്ലാവരുടെയും ഇന്ത്യ
 യിലേക്കുള്ള വിമാനം മെയ് 3 ന്
 ആണ്. നാംചെയ്തിൽ മുമ്പ് ഞങ്ങൾ
 താമസിച്ച ലോഡ്ജിൽ ചില സാ
 ധനങ്ങൾ വെച്ചിട്ടാണ് പോകുന്നത്.
 അത് എടുക്കുവാൻ അവരെ ഏർ
 പ്പാടാക്കി. പസാങ്ങ് ഞങ്ങളെ കയ
 റ്റി വിട്ടിട്ട് അവരോടൊപ്പം ചേരും.

ഹെലികോപ്റ്ററിൽ കാത്തു നിൽക്കു
 ന്നവർ നിരവധിയുണ്ട്. ബെസ്റ്റോറന്റ്
 കഴിഞ്ഞ് പലരും ഹെലികോപ്റ്റ
 റിലാണ് മടങ്ങാറുള്ളതെന്ന് പസാ
 ങ്ക് പറഞ്ഞു. ഞങ്ങൾക്ക് അധിക
 നേരം കാത്തു നിൽക്കേണ്ടി വന്നി
 ല്ല. ഒരു കുറുത്ത ഹെലികോപ്റ്റർ
 താണിറങ്ങി. ഞങ്ങളുമായി ഉയർ
 ന്ന. നടപ്പുവഴിക്ക് ഏകദേശം സമീ
 തരമായാണ് പറക്കൽ. മലകൾക്ക്
 ഒയിലൂടെ, നദികൾക്ക് മുക്കളിലൂടെ.
 തഴെ പെരിച്ചെ എന്ന ഗ്രാമത്തിൽ
 നിന്ന് ഓരോളംകൂടി കയറ്റി. ദി
 ഷിബോചെയ്യയും തെങ്ങിബോചെയ്യയും
 നാം ചേരും പിന്നാട്ട് 20 മിനിറ്റിന്
 ശേഷം ലൂക്കുയിലെത്തി. ഇവിടെ
 വിമാനത്താവളത്തിന്റെ ഒരു വശ
 ത്തു തന്നെയാണ് ഹെലികോപ്റ്റർ.

പസാങ്ങിന്റെ അടുത്ത് ഇവിടെ
 ഞങ്ങളെ കാത്തുനിൽക്കുകയായി
 ആന. ഇന്ന് പസാങ്ങിന്റെ വീട്ടിൽ
 താമസിച്ചു നാളെ വിമാനത്തിൽ

കാമണ്ടുവിൽ പോകാനാണ്
 പ്റ്റർ. പസാങ്ങ്ങ് ഇവിടെ അത്
 എന്ന പേരിൽ ഒരു ഗോഡൗൺ
 ഉണ്ട്. മുക്തയിലെ ദിക്യു അമ്പാർ
 കളിൽ പസാങ്ങിന് മുക്തയിൽ
 വിരമനാശയാത്രയ്ക്ക് പസാങ്ങ്ങ്
 സെക്കണ്ടറി വിദ്യാർത്ഥികളുടെ
 വലിയൊരു സംഖ്യയെ അവിടെ
 താമസിപ്പിക്കുന്നത് ഞങ്ങൾക്കും
 ഗവൺമെന്റിനും മുൻകൂട്ടി
 സാധകമായിട്ടു. ബെസ്റ്റോറന്റ് കടക്ക്
 പൂർത്തിയാക്കിയതിന്റെ ശേഷം
 ഓരോരുത്തരും ഇവിടെ ബെസ്റ്റോറന്റ്
 എന്ന് തിരഞ്ഞുപിടിച്ചു.

വലിയൊരു കെട്ടിടം ഗ്രാമമാണ്
 മുക്. 2083 അടി ഉയരത്തിലാണ്
 ഈ ഗ്രാമം. വേലകത്തിലെ ഏറ്റവും
 അപകടം പിടിച്ചതെന്ന് കരുത
 ൈപ്പെടുന്ന റെക്കോർഡ് - ഹിലാർ
 എയർപോർട്ടാണ്. മുക്തയുടെ കേന്ദ്ര
 ബിന്ദു വിരമനാശയാത്രയുടെ നട
 ന്നം അല്ലെങ്കിൽ റെസ്റ്റോറന്റ്
 ഇവിടെ എത്താനായില്ല. എഴുന്നേ
 ള്ലുകൾക്കു നിലവിലുള്ള സാധനങ്ങ
 ളിലേക്കുള്ള യാത്രയുടെ തുടക്കം
 ഇവിടെ നിന്നാണ്. വിരമനാശയാ
 ത്രത്തിൽ നിന്ന് ആരംഭിക്കുന്ന
 നാൽപ്പതോളം കല്ലുകൾ വഴിയു
 ടെ ഇരുവശത്തുമാണ് ഈ ഗ്രാ
 മത്തിലെ വീടുകളും കടകളും മറ്റും
 ഹെലികോപ്റ്റർക്കും കോപി കെട്ടിടുക
 ളും ടെക്കിംഗ് സാധനങ്ങളും മറ്റും
 പതിവ്കളും വിൽക്കുന്ന കടകളും
 ആണ്. പ്രധാനമായും ഇവിടുള്ളത്

യാക്ക് മെഡിസിൻ വെച്ച് പരിച
 രപ്പെട്ട ഒരു കെട്ടിടം മാത്രമാണ് മുക്
 കാണാൻ ഞങ്ങൾ ഓരോവയാ
 ക്കുകയുണ്ടായി. പസാങ്ങ് എന്ന രണ്ടാ
 മാണ് ഇവർക്കിടയിൽ പേര്. അത്
 തന്നെ കൂടാതെ പരിക്കുന്ന അവർ
 സാമാന്യം നന്നായ് ഇഷ്ടിക്
 സഹായിക്കും എന്ന മാത്രമല്ല ഒരു
 വിധം നല്ല മോക് വിരമനാശയാ
 ത്രവിടുത്തെ ബുദ്ധമതം. അതുപ
 ത്തി. ഞങ്ങൾക്ക് മൂന്ന് പേർ മാത്രമാണ്.
 അവർ പരിക്കുന്ന സമർ നല്ല ബുദ്ധ
 മതത്തിൽ കൊടുക്കും. അവർക്ക് ഞ
 ഞ്ഞു കൂടുതൽ വീടുകൾ ഉണ്ട
 ഞ്ഞു പലയിടത്തും സമയം അതി
 ത്തിൽ പസാങ്ങിനെയും കൂടാതെ
 മുക്തയിൽ നിന്ന് അദ്ദേഹത്തെ
 നടപ്പ് ഉടഞ്ഞിരിക്കുന്നു. അവന്റെ



ഗുഹകളിലൂടെ കടന്നുപോകുന്ന നദി വഴിയ്ക്ക് അങ്ങനെയൊരു പാതയുണ്ടാകുന്നു.

അല്ലെങ്കിൽ ഉപയോഗം കേന്ദ്രമാണ്. ഇത്രയും നീണ്ടുപോകുന്ന പ്രദേശം ഒരു കെട്ടിടം സൃഷ്ടിക്കേണ്ടതുമാണെന്ന്. അല്ലെങ്കിൽ അതിനുള്ളിലുള്ള പാതകൾ ഉണ്ടാക്കുന്ന ഒരു മുൻപോട്ടുള്ള ഉദ്ദേശം പൂർണ്ണമായും നിരോധിക്കേണ്ടതുമാണ്. ഉദ്ദേശം ഉണ്ടാക്കുന്നതിനുള്ള പാതകൾ നിർമ്മിക്കുന്നത്. അല്ലെങ്കിൽ അതിനുള്ളിലുള്ള പാതകൾ ഉണ്ടാക്കുന്നതിനുള്ള പാതകൾ നിർമ്മിക്കുന്നത്. അല്ലെങ്കിൽ അതിനുള്ളിലുള്ള പാതകൾ ഉണ്ടാക്കുന്നതിനുള്ള പാതകൾ നിർമ്മിക്കുന്നത്.

പാത്രമായി എത്തുന്ന സഞ്ചാരികളുടെ, ഉദ്ദേശം നിന്ന് നടന്നു കടന്നുപോകുന്നവർക്കായി പൊതുവായും അതിനുള്ളിലുള്ള പാതകൾ ഉണ്ടാക്കേണ്ടതുമാണ്. അതിനുള്ളിലുള്ള പാതകൾ ഉണ്ടാക്കേണ്ടതുമാണ്. അതിനുള്ളിലുള്ള പാതകൾ ഉണ്ടാക്കേണ്ടതുമാണ്.

അഥ് 1 ബോധം

പുണ്യ പരിവേഷം പേർക്കിടയ്ക്കു നീ പൊതു വിമാനങ്ങൾ മാത്രമാണ് ഉള്ളതിൽ നിന്ന് കാർഷ്യവിത്തുണ്ട്. സിന്ധു പുഴയിന്റെ വിമാനത്തിലാണ് അങ്ങനെയൊരു പാതകൾ ഉണ്ടാക്കേണ്ടതുമാണ്.

പുണ്യകൃതികളാണ്. ഇവയിലുള്ള ഒരു പ്രത്യേകത, നമ്മൾ തമ്മിൽ ചെയ്യേണ്ടത് തിരുത്തിയ്ക്കു നമിത പ്രവൃത്തികളെ എന്നാണ്. നമ്മൾ എങ്ങനെയാണിത് നമ്മുടെ വിമാനം ചെയ്യേണ്ടത് വിമാനം നമ്മൾക്ക് അനുഭവിക്കേണ്ടതുമാണ്. പാതകൾ, കടന്നുപോകുന്ന പാതകളുടെയും, അങ്ങനെയൊരു പാതകളുടെയും വിമാനത്തിന് വിമാനം കിട്ടി. ബോധിയിൽ പാതകളാണ്. അല്ലെങ്കിൽ ഒരു പാതയിൽ ചെയ്യേണ്ടത് കടന്നുപോകുന്നതിന്, അങ്ങനെയൊരു വിമാനം കിട്ടിയിട്ടു വിമാനം കിട്ടാത്ത ഒരു പാതയിൽ കടന്നുപോകേണ്ടതുമാണ്. ഉള്ള കടന്നുപോകേണ്ടതിനുള്ള പാതകളാണ്. അങ്ങനെയൊരു പാതകളാണ്. അങ്ങനെയൊരു പാതകളാണ്.

ഒരു അറിഞ്ഞു കാരണങ്ങളാലാണ് അങ്ങനെയൊരു വിമാനത്തിൽ. നമ്മൾ പാതകൾ മാത്രമാണ് വിമാനത്തിൽ നിന്നുപോകുന്നത്. അങ്ങനെയൊരു വിമാനത്തിൽ നിന്നുപോകുന്നത്. അങ്ങനെയൊരു വിമാനത്തിൽ നിന്നുപോകുന്നത്. അങ്ങനെയൊരു വിമാനത്തിൽ നിന്നുപോകുന്നത്.

ഇവിടെ വിമാനം ഒരേ പാത ചെയ്യുന്നത് ഉള്ളിൽ നിന്ന് താഴെ കാരണമാണ്. പാതകൾ. ഒരു വിമാനത്തിൽ നിന്ന് പാതകളായിരിക്കേണ്ടതുമാണ്. അങ്ങനെയൊരു പാതകളായിരിക്കേണ്ടതുമാണ്. അങ്ങനെയൊരു പാതകളായിരിക്കേണ്ടതുമാണ്. അങ്ങനെയൊരു പാതകളായിരിക്കേണ്ടതുമാണ്.

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NATIONAL SKILLS QUALIFICATION FRAMEWORK COURSES FOR ENTREPRENEURSHIP DEVELOPMENT IN HIGHER EDUCATION INSTITUTIONS

Neethu Jose

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Abstract

“Unlock human capital to trigger a productivity dividend and bring aspirational employment and entrepreneurship pathways to all”, (Vision 2025 of Ministry of Skill Development and Entrepreneurship). The graduate and post graduate courses of various Universities of Kerala are undergoing drastic transformation to incorporate the recommendations of NEP which increases the importance of skill development courses in the higher education system.

Keywords: *NSQF, National Education Policy*

Introduction

The vision 2025 of Ministry of Skill Development and Entrepreneurship aims at transforming India to a high skills equilibrium and to help creating positive outcome for individuals, enterprises and the economy. This vision aims at achieving the following outcomes:

- a) To equip individuals with economic gains and social mobility;

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YOUTH ENTREPRENEURSHIP IN KERALA

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Abstract

Increasing level of unemployment and lack of infrastructure deploy the need for developing entrepreneurial culture among youth in Kerala. The educated youth in our state are still reluctant to set up innovative enterprises and startups of their own. Lack of finance, lack of awareness, difficulty in completing procedures, negative attitude of society and lack of effective government schemes have been the notable challenges identified by youngsters with regard to entrepreneurship. Youth entrepreneurship can be fostered through Government initiatives and community support. Entrepreneurship training, support and Innovative skill development in Higher Education Institutions will definitely help youngsters to develop new business ideas and get self-employed with the support of government and concerned agencies. Kerala state machinery has been striving to generate a vibrant ecosystem for sustainable startups that work on new technologies, developing solutions to problems of the society. The Kerala Startup Mission (KSUM) was founded in 2006 with a vision was to promote technology-based entrepreneurship activities, by providing the appropriate ecosystem, support and infrastructure.



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A STUDY ON THE ROLE OF IEDC AMONG STUDENTS IN HEI's

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Abstract

Innovation and Entrepreneurship have huge values in developing the future. Innovation and Entrepreneurship Development Centre (IEDC) is an initiative of Kerala Startup Mission. IEDC promotes innovation and entrepreneurship among the students and academic professionals in different educational institutions all over the State of Kerala. This study comprises about the IEDCs and the role and need of them in Higher Education Institutions for building a great future. This study includes the importance of innovation and entrepreneurship for building a better tomorrow. Furthermore, IEDC provides different skill development for students. This study also analyses the relationship between curiosity and creativity in developing an idea (solution) to a problem.

Keywords: *Innovation, Entrepreneurship, IEDC, Skills, Curiosity, Creativity.*



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ENTREPRENEURIAL INTENTION AMONG COLLEGE STUDENTS WITH SPECIAL REFERENCE TO DEVA MATHA COLLEGE, KURAVILANGAD

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Abstract

Graduating students are considered as prospective entrepreneurs, and as entrepreneurial activities and incubation have grown in popularity in recent years, more and more people are concentrating on studying entrepreneurship. One of the biggest issues graduates in our nation experience is the lack of employment opportunities in the formal sector. Due to this shortage, entrepreneurship was highly regarded and supported in many countries. An entrepreneur is a person who organizes and operates a business concern for the purpose of making profit. He is a talented person having the qualities of skill, initiative and an insight of innovation to achieve high goals. He looks for opportunities, identifies and seizes them for making economic gains. The study proposes to analyse the entrepreneurial intention among college students and the perception of



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EFFECT OF COVID 19 ON ASHA WORKER'S WORK LIFE BALANCE SPECIAL REFERENCE TO ERNAKULAM DISTRICT, KERALA

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ABSTRACT

Work-life balance is a notion which identifies and prioritizes an employee's time for family, career, health, society, etc. and maintaining a balance between all. This study analyses the work-life balance of Asha workers at Ernakulam district and relates its impacts on the work environment, individual issues, workload, and personal life. The obligation of Asha staff has increased massively as the pandemic goes out of hand. Asha workers are deployed to perform door calls, keep an eye on migrant employees, touch tracing, etc. The pandemic has meant more working hours and personal risk. As a consequence, Asha suffers from high levels of tension, anxiety, and an unpleasant, unbalanced, harmonious family life.

Keywords:-Covid-19, Pandemic, Asha, Work-Life Balance, Work Environment, Individual Issues, Workload, Personal Life

INTRODUCTION

ASHA (Accredited Social Health Activist) a primary healthcare figurehead acknowledged in 2005 by Indian Ministry of Health and Welfare, which creates knowledge and capacity for local health and promotes the use of existing health services and their accountability. Through a robust selection process involving different community heads, officers at District, Block and village levels Asha are selected. There are 859,331 ASHAs in 32 states and union territories. By July 2009 in Kerala, 30909 ASHAs were selected and 27904 ASHAs were trained and deployed in the field. Asha workers are more in field work reaching nook and corner of each ward in a village for periodic check-ups and scheduling immunisation for babies, TB patients, pregnant ladies, prevention and control of communicable and non-communicable diseases, palliative and Mental Health care units. Asha finds it hard to balance her job and personal life over the strain of work and inadequate transport.

Work- Life Balance is a concept that indicates all working practises that present and assist workers' interests in striking a balance among family and job requirements. It also strikes a balance between work and personal life and how employees prioritise time and commitment in and out of work. In all aspects of life, the aim is to build equilibrium, which in turn improves career and self-fulfilment and helps avoid self-injury induced by excessive tension or stress. For some time, women have advanced dramatically in each area of employment and made significant progress in all the fields involved. But the position of the housekeeper has not changed significantly. Women also do household work in most households, cook, take care of family members, and maintain the property. The work-life balance of female workers is at risk, with increasing demands at work and home. The obligation of Asha staff has increased exponentially as the pandemic goes out of control. Asha staffs are also a vital part of the medical supply chain, especially for pregnant mothers, and have been given the task of taking medications from the clinic and dropping them off at the doorsteps of patients if necessary. It confirms the fact that Asha employees feel burdened and stressed because of the nature of their job, which has increased in the current circumstances in many ways. Whatever Kerala has accomplished in its struggle against Covid 19 it is mainly due to its health workers in the health system.

REVIEW OF LITERATURE

The earliest view of the job-home relationship was that they are segmented and autonomous and do not influence each other. This notion was extended to blue-collar workers by **Blood and Wolfe (1960)**. They asserted that the division of work and home is a rational process for workers in unsatisfactory or uninvolved jobs. Work and family exist as separate entities in the principle of segmentation; there is no connection between job life and family life. The principle of segmentation perceives work and family to be different entities and perceptions in one will not impact or influence experiences in the



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കൃഷി
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**പാരസ്പത്യവും
പാശ്ചാത്യവും**

എഡി. ഡോ. ജോൺ കെ. ഓനൂവൽ



ഫെമിനിസം

ചോ. സുജാതാണി മാത്യു

അന്ധനും പുരുഷിക്കൊപ്പം വെട്ടിക്കൊന്നിടുന്ന ആശയോചനയെ നോക്കിയാണ് ഫെമിനിസം ഫെമിനിസം എന്ന ആശയം പ്രാഥമികമായി ഉണ്ടായത്. സ്ത്രീകളുടെ സമാന്തരതയ്ക്കും സ്വയം പ്രകാശനത്തിനും സമാനതയ്ക്കും സഹായകമായിട്ടും വേണ്ടിയുള്ള വസ്തുതകളാണ് പുരുഷന്മാർക്കുവേണ്ടിയുള്ള സഹായത്തിലും നിരവധി വ്യവസ്ഥയിലും സഹായകമായിട്ടും സ്ത്രീകളുടെ തുല്യതയെപ്പറ്റി പ്രതിപാദിക്കുന്ന ആശയങ്ങൾ ബഹുസംഭാവമാണുള്ളത്. അത്തരം ആശയങ്ങൾ സഹിഷ്ണുതയും സഹായതയും പ്രതിരോധം സഹായം സഹായം തുടങ്ങിയവയുടെ അടിസ്ഥാനത്തിൽ ആശയോചനയ്ക്കും സ്ത്രീകളുടെ പ്രയോജനത്തിനും സഹായകമാണ്. വിശാലമായ അടിസ്ഥാനത്തിൽ അറിയപ്പെടുന്ന സ്ത്രീകളുടെ/സ്ത്രീ സമൂഹങ്ങളുടെ ഉടമസ്ഥതയോടുകൂടിയുള്ള കാഹളത്തെ അഥവാ പ്രവർത്തനങ്ങളെ സഹായമായി ഫെമിനിസമെന്ന് നിർണയിക്കാം.

സ്ത്രീകളുടെ അടിസ്ഥാനത്തിൽ ശബ്ദമായ ഫെമിനിസത്തിന് ഇംഗ്ലീഷ് ഭാഷയിൽ നിന്നാണ് തൽക്കിയിരിക്കുന്നത്. അർത്ഥം, 'A person or group supporting women's rights on the ground of the sex' എന്നാണ്. ലിംഗവിവേചനമില്ലാത്ത ഒരു സമൂഹം രൂപപ്പെടുമ്പോൾ സ്ത്രീകളോടും ആരുമില്ലാത്തതും പ്രതിരോധത്തോടും കൂടി ഫെമിനിസം നിലനിൽക്കുകയെന്ന ചൊല്ലാണ്. സ്ത്രീവിമോചനം സംബന്ധിച്ച പഠനത്തെ അക്കാദമിക് രംഗത്ത് ഉൾക്കൊള്ളാൻ സഹായകമായിട്ടും പ്രായമായ പല ഫെമിനിസ്റ്റ് സിദ്ധാന്തങ്ങളും ഉണ്ടായി. അതിൽ അനുബന്ധിച്ച് നിരവധി പഠനങ്ങളും ഉണ്ടായി. Culture, politics, art, history എന്നിവയുടെയും ഉള്ള അടിസ്ഥാനത്തിലും പ്രയോജനപ്പെടുത്തിയുള്ള പദമായി വർദ്ധിക്കുകയാണ് ഫെമിനിസം മാറിക്കൊണ്ടിരുന്നത്.

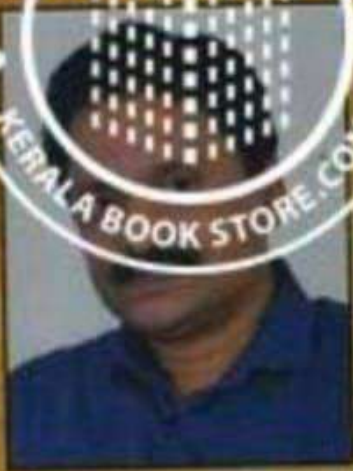
സ്ത്രീവിമോചനം വൈകാരികമായവയോടും ബന്ധപ്പെട്ടു വിടുകയോ സാഹചര്യങ്ങൾ വേണ്ടത്ര ഓരോ കാലത്തിന്റെയും സഹായത്തിലും പരിസ്ഥിതിയിൽ നിർണയവിധിയായാ ഹർമ്മിയർ സമാഹരിക്കുമ്പോൾ വൈവിധ്യമുള്ള പദങ്ങൾ രൂപപ്പെടുത്തപ്പെടുന്നു. ഈ പദങ്ങൾ പലതും ബഹുസംഭാവ ഉത്പാദിപ്പിക്കുന്ന ആശയങ്ങളായി സമീകരിക്കപ്പെടുന്നു.

ഫെമിനിസത്തിന്റെ വ്യവസ്ഥ

സ്ത്രീ വിമോചനത്തിന്റെ നിലയിൽനിന്നും, പ്രസ്ഥാനത്തെ നിലയിൽ, സാഹിത്യത്തെ നിലയിൽ, സിദ്ധാന്തത്തെ നിലയിൽ, പ്രയോജനപ്പെടുത്തുന്ന നിലയിൽ സൗകര്യപ്പെടുന്ന നിലയിൽ, സ്ത്രീകളുടെ കൈമാറ്റം ഫെമിനിസം വളർന്നുകൊണ്ടിരിക്കുന്നു. സാഹചര്യം, രാഷ്ട്രീയം, പരിസ്ഥിതി, കല തുടങ്ങിയുള്ള ആർത്ഥിക സഹായം, ഫെമിനിസത്തിന്റെ രാഷ്ട്രീയം, ചരിത്രവും ഫെമിനിസവും, ഫെമിനിസ്റ്റ് കലകൾ എന്നെല്ലാം വ്യവഹരിച്ചു തുടങ്ങിയപ്പോൾ ഫെമിനിസത്തിന്റെ അടിസ്ഥാനപരമായ അടിസ്ഥാനപരമായ വളർച്ചയായിരുന്നു. രാഷ്ട്രങ്ങൾ അവയുടെ നിരവധി വ്യവസ്ഥയിൽ സ്ത്രീകൾക്ക് സഹായകമായിട്ടുണ്ടെന്നും സമാന്തരം ക്രമത്തിൽ നൽകിയെടുത്തിരുന്നതിനാൽ ഇവിടെയെല്ലാം ലിംഗപരമായ അധികാരവും അടിസ്ഥാനപരമായ പുരുഷന്മാരോടുള്ള ഒരു അടിസ്ഥാനപരമായ സാന്നിധ്യത്തിലൂടെയും അധികാരത്തിലൂടെയും സംഭവിച്ചുകൊണ്ടിരുന്നു.

സ്ത്രീകൾ മാത്രമല്ല പുരുഷന്മാരും ഫെമിനിസ്റ്റ് പഠനത്തിന്റെയും ചിന്തയുടെയും ഭാവനയിൽ കേന്ദ്രമായ സാന്നിധ്യം ചെല്ലപ്പെട്ടപ്പോൾ ഉത്തരായനികര്യത്തിലെ സ്വയംപ്രകാശനത്തിന്റെ നിർവ്വചനപരമായ കലകൾ പലപ്പോഴും ഈ പഠനരംഗത്ത് ഇണങ്ങുന്നതായി കാണാം. കൂടുതൽ അറിയുവാൻ അല്ലെങ്കിൽ നിർവ്വചിക്കാൻ ശ്രമിക്കുന്നതോടും അതിനൊന്നും പിടി തൽക്കാലം പുതുവർഷങ്ങളിലൂടെയുള്ള ഫെമിനിസത്തിന്റെ പ്രയോജനം ശ്രദ്ധേയമാണ്.

നിലവിലുള്ള ഏതെങ്കിലും സഹായം ബന്ധപ്പെടുത്തി ഫെമിനിസത്തെ പഠിക്കാനുള്ള ശ്രമവും അതിനായി രൂപീകരിച്ചെടുക്കുന്ന തീർത്ഥാടനവും ശ്രദ്ധേയമാണ്. ഓഷ്ട്രിയത്തിലാണ് ബന്ധപ്പെടുത്തി അറിയപ്പെടുന്ന ഫെമിനിസം, ആഫ്രിക്കൻ ഫെമിനിസം, അറബ് ഫെമിനിസം, യൂറോപ്യൻ ഫെമിനിസം എന്നെല്ലാം വ്യവഹരിക്കുന്നവർ സഹായകരമായ രാഷ്ട്രസംഭാവവും സഹായകരമാണ് സമീകരിക്കുന്നത്. ഓഷ്ട്രിയൻ അടിസ്ഥാനത്തിലും അതിന്റെ വിവിധരംഗങ്ങളിൽനിന്നും വർദ്ധിച്ചുവന്നിട്ടുള്ള അടിസ്ഥാനത്തിൽ ഇപ്പോൾ ഫെമിനിസം, വൈറ്റ് ഫെമിനിസം എന്നു പറയുമ്പോഴും അവസരങ്ങൾ തുടങ്ങിക്കൊണ്ടിരിക്കുന്നവയുണ്ട്. സ്ത്രീകൾ നിർവ്വഹിക്കുന്ന തുടർച്ചയ്ക്ക് അടിസ്ഥാനത്തിലും അവരുടെ സാമ്പത്തികരംഗത്തിന്റെ അടിസ്ഥാനത്തിലും തുടങ്ങിയതോടെ ഫെമിനിസത്തെ വിശദീകരിക്കുന്ന വിധിയായാണിത്. ക്രിസ്ത്യാനിറ്റിയും ഫെമിനിസവും ഇന്നുവരെയും ഫെമിനിസവും ആധിസ്യവും ഫെമിനിസവുമെന്നെല്ലാമുള്ള പഠനങ്ങൾ ഈ മേഖലയുടെ സഹായവിശേഷങ്ങൾക്കുള്ളിലേക്ക് ഫെമിനിസത്തെ പ്രവേശിപ്പിക്കുന്നു.



സാമൂഹിക സിദ്ധാന്തങ്ങൾ

പൗരസ്ത്യവും പാശ്ചാത്യവും

എഡി. ഡോ. ജോസ് കെ. മാനുവൽ

സാഹിത്യസിദ്ധാന്തങ്ങളെ ലളിതവും ആധികാരികവുമായി പ്രതിപാദിക്കുന്ന പഠനഗ്രന്ഥം. പൗരസ്ത്യവും പാശ്ചാത്യവുമായ കാവ്യതത്വങ്ങളെ ഇതിൽ ആഴത്തിൽ നിർദ്ധാരണം ചെയ്യുന്നു. വിവിധ സർവകലാശാലകളിലെയും കലാലയങ്ങളിലെയും പ്രഗത്ഭരായ അധ്യാപകർ തയ്യാറാക്കിയ മികച്ച പ്രബന്ധങ്ങൾ ഈ ഗ്രന്ഥത്തെ ഈടുറ്റതാക്കുന്നു. അധ്യാപകർക്കും വിദ്യാർത്ഥികൾക്കും ഗവേഷകർക്കും സിദ്ധാന്തപരിചരങ്ങൾക്കും ഈ പുസ്തകം ഏറെ പ്രയോജനപ്രദമാണ്.

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Life Satisfaction and Perceived Stress between Migrant and Non-Migrant Indian Students

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Abstract

The present study on life satisfaction and perceived stress among the migrant and non-migrant Indian Students is conducted from a psycho social background where the migration to other countries in seek of better education is in steady rise and the students are found to be experiencing high psycho social distress. On this basis, this research aims to analyse the life satisfaction and perceived stress among the migrant and non-migrant Indian Students. The sample of the research consisted of 50 Migrant Indian Students and 50 Non-Migrant Indian Students. Purposive sampling technique was used for the study. The Perceived Stress Scale (PSS-10) and Satisfaction with Life Scale (SWLS) were used to assess the life satisfaction and perceived stress. The data collection was carried using Google forms. Mann Whitney U test was used to find the significant difference between the life satisfaction and perceived stress and the relationship between these variables was examined using Spearman's rank correlation. The study found that life satisfaction and perceived stress are negatively correlated. Also, no significant difference in life satisfaction and perceived stress were found between Migrant and Non-Migrant Indian student s. However, the mean rank of life satisfaction was higher among migrant students whereas, the mean rank of perceived stress was higher among non-migrant Indian students.

Key words: Life Satisfaction, Perceived Stress, Migrant Indian Students and Non-migrant Indian Students.

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Synthesis and Characterization of Iron Oxide Nanoparticles Using Co-Precipitation Technique

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Abstract

Iron oxide nanoparticles synthesized by co-precipitation technique were structurally, optically and morphologically analyzed using XRD, UV, FTIR and SEM techniques. From the X-ray Diffraction (XRD) analysis, we found that the prepared sample 1 contains crystalline Fe_3O_4 (Magnetite) nanoparticles of particle size 23nm having cubic symmetry and face centered lattice. But the decrease in drying temperature during the synthesis process of sample 3 shows that it contains nanoparticles of crystalline $\beta-Fe_2O_3$ phase. The particles in this sample have cubic symmetry and body centered lattice. The particle size is found to be 12.907 nm. The optical characterization of the Iron oxide nanoparticles was done by UV analysis and Fourier Transform Infrared (FTIR) spectroscopy. By UV analysis, the band gap energy of each sample is calculated. The values of both direct and indirect energy band gap of the Magnetite sample are classified sample 1 and sample 2 as a semiconductor. The FTIR analysis is helped for the identification of atomic arrangement, chemical bonds and modes of vibration of these bonds in the three samples. The morphological characteristics of Iron oxide nanoparticles were studied using Scanning Electron Microscopy (SEM).

Keywords: Iron oxide, XRD, FTIR

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Structural and optical characterization of schiff base incorporated nano-TiO₂

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Abstract

In this study, the structural and optical characterization of schiff base incorporated nano titanium dioxide was conducted. A novel schiff base was synthesised by reacting salicyladehyde and ortho dianisidine. The synthesised schiff base was then incorporated with nano TiO₂ synthesized via hydrothermal method to form TiO₂/schiff base nanocomposite. The formation of schiff base and TiO₂/schiff base nanocomposite were structurally confirmed through fourier transform infrared spectroscopy (FT-IR). The optical properties of the synthesized TiO₂/schiff base composite were studied using UV-visible diffuse reflectance spectroscopy (UV-DRS) and photoluminescence spectroscopy (PL). The incorporation of Schiff base onto TiO₂ improved the visible light absorption and reduced the band gap of TiO₂.

Keywords: Schiff base, TiO₂, hydrothermal method, band gap

1. Introduction

In recent years, Schiff base complexes have ranked among the most extensively investigated coordination compounds due to their growing significance as biochemical, analytical, and antibacterial reagents [1]. Schiff bases are molecules that resemble aldehydes or

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Parental Pressure on Achievement Motivation Among Higher Secondary Students

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Abstract

Everyone in the world may have different perspectives, wishes and needs. What happens if it is denied by the parents? The researcher aims to study the role of parental pressure on achievement motivation among higher students in Kannur district. For this a total of 10 higher secondary students of age 16 to 17 years consisting of 8 males and 2 females are taken as sample using convenience sampling method and telephonic interview. Qualitative research design was adopted for the purpose. In this research parental pressure was assessed by the semi structured interview using open ended questions. The open ended questions were prepared based on academic excellence, skill development, career exploration and on parental relationship. Data was analysed through thematic analysis technique of qualitative research. The main findings of the study was that less parental pressure enhances an individual's academic excellence, skill development, career exploration and thus results in a good parental relationship. The study showed that individuals who experience less parental pressure are likely to have more achievement motivation.

Keywords: Parental pressure, achievement motivation, higher secondary students.

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Sleep Quality, Happiness and Mental Well-Being among Emerging Adults

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Abstract

The quality of our sleep has a significant impact on our psychological well-being as well as our happiness. The purpose of the study was to find the relationship between sleep quality, happiness, and psychological well-being among emerging adults, and to determine the gender with respect to sleep quality, happiness, and mental well-being. A total sample of 150 emerging adults including 75 males and 75 females were selected using the purposive sampling from the state of Punjab. Sleep quality was assessed using the Sleep Quality Scale (SQS), happiness was assessed using the Oxford Happiness Questionnaire (OHQ developed by Michael Argyle and Peter Hills in 2002, and psychological well-being was assessed using The WHO-5 well-being index developed in 1998 by Psychiatric Research Unit. The correlation was examined using Pearson's correlation coefficient and the significant difference was determined using the t-test. The results show that there is a significant correlation between sleep quality, happiness, and psychological wellbeing among emerging adults, and there is no significant difference in gender on sleep quality, happiness, and psychological wellbeing among emerging adults. The findings imply that further study should be conducted on other demographic aspects of emerging adults using variables other than used in the current research

Keywords: Sleep quality, happiness, Psychological wellbeing, emerging adults.

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Self-consciousness, Self-Attributed Need For Uniqueness And Regulatory Focus Among Tattooed And Non- Tattooed Individuals

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Abstract

The aim of the study was to find the relationship and significant difference in self-consciousness, self-attributed need for uniqueness and regulatory focus with respect to tattooing behaviour. A total number of 115 participants, consisting of 57 males and 58 females were selected through purposive sampling from the various districts in Kerala. The scales used for this present study are the Uniqueness questionnaire by Lynn and Harris, Self-consciousness Scale by Feingstein, Scheier & Buss and regulatory focus scale by Higgins. The data collected were analysed using SPSS, Spearman rho correlation coefficient was used to measure degree of correlation between variables and Mann Whitney U test was used to analyse the significance differences. The results shows that there was a significant relationship among self-consciousness, self-attributed need for uniqueness and regulatory focus within tattooed and non-tattooed adults. The study further revealed that Gender as a socio-demographic factor was not significant in affecting the tattooing and non-tattooing behaviour among individual.

Keywords: Self-attributed need for uniqueness, self-consciousness, regulatory focus, tattooing.

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Materialism and Social Anxiety among Early Adults

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Abstract

Research on social anxiety has moved from rudimentary awareness that it is not merely shyness to a much more sophisticated appreciation which includes certain enquiries into its connection with other psychological peculiarities. The current study aimed to focus on the relationship between social anxiety (e.g.: fear of social interaction or negative judgement by others) and materialistic behavior (e.g.: worldly possessions or acquisition of material objects) in early adults. The sample for the present study consisted of 144 participants (88 females and 56 males) in the age group of 18 to 40 years, completed questionnaires to measure the materialistic level and social anxiety level. The sample was administered a measure of material value scale (Richins and Dawson's, 2004) along with social interaction anxiety scale (Mattick and Clark, 1998). Results revealed that both social anxiety and materialistic behavior are significantly related. It was also found that there is a significant difference among male and female for the variable materialism.

Keywords: Social anxiety, Materialism, Early adulthood, Gender

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Psychological Well-Being among Covid 19 Recovery Patients

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Abstract

The COVID-19 virus, which is caused by the SARS-CoV-2 virus, is a severe, life-threatening illness that makes it more difficult to manage a rare disease. The psychological health of people was impacted by ongoing uncertainty, being alone, and being unable to receive therapy and medical attention. Researcher's objective was to study the psychological well-being among the recovery covid-19 patients. For this, a sample of 30 patients, 21 men and 9 women are collected using the Convenience sampling method. For this, a descriptive study strategy was chosen. The Ryff psychological well-being scales (PWB), a 42-item version, were used to measure psychological well-being in this study. To test hypothesis one way ANOVA and t test were used. The findings of the study reveals that there is no significant difference regarding age, gender and socioeconomic status with respect to psychological well being. The findings suggest a need for additional study in this area, elaborating on the line of present study by selecting more independent variables and replicating this by using state wide samples.

Key words: Psychological well being, recovery COVID-19 patients,

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Mobile Agents in Software Agents

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Abstract

Since the arrival of the World-Wide Web, and the explosive growth of information on the Web, researchers in the field of Software Agents got interested in information agents (also known as Internet agents). However, for the past couple of years, agent technology has been a hot topic, and most likely, this is mainly due to the popularity of the Java programming language, which represents an ideal language for implementing software agents as it is the “Write Once Run Anywhere” language. This is an important feature for software agents as it allows them to run on all platforms of the Internet. The word “agent” however, has been misused. People involved in agent research have a variety of definitions for that word. This paper presents a brief overview of software agents, with emphasis on mobile agents. We classify agents in different types along several primary characteristics that agents should exhibit.

1 Introduction

Based on the above discussion, an agent can be defined, along with its characteristics as follow:

“An agent is an entity that:

- acts on behalf of others in an autonomous fashion

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A study on the financial literacy level and investment behaviour of employed youth in Kottayam municipality

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Abstract

In present scenario, the integrated global financial market as well as the changing financial objectives has enhanced the individual's responsibility in managing their own finances. Financial literacy provides necessary knowledge, skills and tools for individuals to make informed financial decisions with confidence, to manage personal wealth with efficiency and to increase financial competence. This topic is mainly selected to analyse the financial literacy level and investment behavior of employed youth in Kottayam municipality and to identify whether it leads to the economic development of the country. It also aims at identifying whether the financial literacy level of employed youth helps them to make a proper investment. This study aims at educating the consumers regarding financial investment plans at various stages of life and how financial education programmes can be designed to best address their needs.

Key words: Financial literacy, investment behaviour

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A study on the financial literacy level and investment behaviour of employed youth in Kottayam municipality

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Abstract

In present scenario, the integrated global financial market as well as the changing financial objectives has enhanced the individual's responsibility in managing their own finances. Financial literacy provides necessary knowledge, skills and tools for individuals to make informed financial decisions with confidence, to manage personal wealth with efficiency and to increase financial competence. This topic is mainly selected to analyse the financial literacy level and investment behavior of employed youth in Kottayam municipality and to identify whether it leads to the economic development of the country. It also aims at identifying whether the financial literacy level of employed youth helps them to make a proper investment. This study aims at educating the consumers regarding financial investment plans at various stages of life and how financial education programmes can be designed to best address their needs.

Key words: Financial literacy, investment behaviour

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മാന്നാനം സെന്റ് ജോസഫ്സ് പ്രസിന്റെ ഒന്നേമുക്കാൽ നൂറ്റാണ്ട്

സംഗ്രഹം

കേരളത്തിലെ ആദ്യ അച്ചടിശാലകളിൽ ഒന്നാണ് മാന്നാനം സെന്റ് ജോസഫ്സ് പ്രസ്. കേരളത്തിലെ ആദ്യ കത്തോലിക്കാ അച്ചടിശാലയും ഇതാണ്. ചാവറ കുര്യാക്കോസ് ഏലിയാസ് അച്ചൻ ഒരു ബഹുമുഖ പദ്ധതിയുടെ ഭാഗമായി സ്ഥാപിച്ചതാണ് അച്ചടിശാല തദ്ദേശീയസഭ, ആശ്രമം, ആശ്രമദേവാലയം, വിദ്യാലയം, അച്ചടിശാല എന്നിവയായിരുന്നു അദ്ദേഹത്തിന്റെ പദ്ധതിയിൽ ഉൾപ്പെട്ടിരുന്ന സംഗതികൾ. 175 വർഷമായി പ്രവർത്തിക്കുന്ന മാന്നാനം സെന്റ് ജോസഫ്സ് പ്രസ് കേരളത്തിനും മലയാള ഭാഷാസാഹിത്യങ്ങൾക്കും, വിശിഷ്ട കത്തോലിക്കാസഭയ്ക്ക്, അമൂല്യമായ സംഭാവനകൾ നൽകിയിട്ടുണ്ട്. കേരളത്തിലെ ആദ്യത്തെ വർത്തമാനപത്രമായ 'ദീപിക', മലയാളത്തിലെ ആദ്യകാല മാസികകളിലൊന്നായ 'കർമ്മലകൃഷ്ണമാ' എന്നിവ ഈ അച്ചടിശാലയുടെ സംഭാവനകളാണ്. മതപരവും മതേതരവുമായ

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നൂറുകണക്കിനു മുദ്രണസാമഗ്രികൾ ഇവിടെനിന്ന് പ്രസിദ്ധപ്പെടുത്തി. സെന്റ് ജോസഫ്സ് പ്രസിന്റെ ചരിത്രം രേഖപ്പെടുത്തുന്നതിനും ആ അച്ചടിശാല നൽകിയ സാംസ്കാരിക സംഭാവനകളെക്കുറിച്ച് ഒരു വിഹഗവീക്ഷണം നടത്തുന്നതിനുമുള്ള ശ്രമമാണ് ഈ പഠനം.

താക്കോൽവാക്കുകൾ

'ദീപിക' വർത്തമാനപത്രം, 'കർമ്മലകുസുമം' മാസിക, ചതുര വടിവ് അക്ഷരങ്ങൾ, ജ്ഞാനപീയൂഷം, അച്യുനിർമാണശാല, കോൺ ഗ്രിഗേഷൻ ഓഫ് മേരി ഇമ്മാക്യുലേറ്റ് (CMI)

**175 years of the Mannanam St. Joseph's Press
Abstract**

The Mannanam St. Joseph's Press is one of the first Printing Offices in Kerala. It is also the first Catholic Printing Unit. This was established by Chavara Kuriakose Elia's as part of a multifaceted design which included the native church, a monastery, a chapel for the monastery, a school and a printing press. The Mannanam St. Joseph's Press has made invaluable contributions to Kerala, the Malayalam Language and Literature and especially to the Catholic Church during its 175 years of existence. The first Newspaper of Kerala, the 'Deepika', 'Karmela Kusumam'-one of the first magazines in Malayalam-are contributions of this Press. Hundreds of printed materials, both religious and secular publications, were produced in this Press. This study is an attempt to record the history of the St. Joseph's Press and also to get a bird's eye view of the contributions made by it.

Keywords

'Deepika' Newspaper, 'Carmelakusumam' magazine, squire types, Njanapeeyusham, type foundary, Congregation of Mary Immaculate (CMI)

ബാബു ചെറിയാൻ,
എം. സേവ്യർ സി.എസ്.
മാനന്തം സെന്റ്
ജോസഫ്സ് പ്രസിദ്ധൻ്റെ...

മലയാളം നിഘണ്ടു് രണ്ടാമത്
വാല്യം 15 ഭാഗം 3
സെപ്റ്റം-വർഗ്ഗം 2022

കൊളോണിയൽ ആധുനികതയുടെ ഭാഗമായി ഈ ദേശത്തു നടപ്പിലായ രണ്ടു സംഗതികളാണ്, കേരളത്തെ ആധുനികതയിലേക്കും നവോത്ഥാനത്തിലേക്കും നയിച്ചത്: അതിലൊന്ന് ആധുനിക വിദ്യാഭ്യാസം എന്ന 'സാമൂഹികപ്രക്രിയ'യും മറ്റൊന്ന് അച്ചടി എന്ന 'സാങ്കേതികവിദ്യ'യുമായിരുന്നു. ആധുനികമാകുന്നതിനു കേരളസമൂഹത്തെ ആശയപരമായി സജ്ജമാക്കിയതും നവോത്ഥാനത്തിന് (നവ/പുതിയ, ഉത്ഥാനത്തിന്/ഉയിർപ്പിന്) സമൂഹത്തെ ശക്തമാക്കിയതും ഇവ രണ്ടുമാണ്. കേരളം കണ്ട എല്ലാ സാമൂഹിക-സാമൂദായിക പരിഷ്കർത്താക്കളുടെയും ചിന്തയ്ക്ക് ഊർജവും ദിശാബോധവും നൽകിയത് ആധുനികതയും നവോത്ഥാനവും മുന്നോട്ടുവെച്ച നവീനാശയങ്ങളായിരുന്നു. ഏകദേശം ഒരായിരത്തോണ്ടോളം 'കേരള'ത്തിൽ 'നാടുവാണി' അടിമത്ത-നാടുവാഴിത്ത-ജാത്യധിഷ്ഠിത മൂല്യങ്ങളോട് കലഹിച്ച്, പുരോഗമിക്കുന്നതിനുള്ള ശക്തി പൊതുസമൂഹത്തിനു നൽകിയതും ആധുനികതയും സവോത്ഥാനവുമാണ്. ഒരിടത്ത് ഒരു സാമൂഹികമാറ്റം ഉണ്ടാകണമെങ്കിൽ ആ മാറ്റത്തെ സഹായിക്കുകയും പ്രോത്സാഹിപ്പിക്കുകയും ചെയ്യുന്ന ആശയങ്ങൾ മാറ്റത്തിനു മുമ്പേ രൂപപ്പെട്ടു പ്രചരിക്കണം. പിൽക്കാല സാമൂഹിക മാറ്റങ്ങൾക്കും സാമൂഹിക പുരോഗതിക്കും സഹായകമായിത്തീർന്ന നവീനാശയങ്ങളും പുതിയ അറിവുകളും കേരളസമൂഹത്തിനു പരിചയപ്പെടുത്തിയത് ആധുനിക വിദ്യാഭ്യാസവും അച്ചടിയുമാണ്.

ആധുനിക വിദ്യാഭ്യാസത്തിന്റെ പ്രചാരണത്തിലും അത് ജനകീയവും സർവ്വത്രികവുമാകുന്നതിലും അച്ചടിസാങ്കേതികവിദ്യ വഹിച്ച പങ്ക് പ്രധാനപ്പെട്ടതാണ്. വിദ്യാഭ്യാസം ജനകീയമാകുന്നതിലെ മുഖ്യഘടകമായ പാഠ-പാഠ്യപുസ്തകങ്ങളുടെ ലഭ്യത ഉറപ്പാക്കുന്നത് അച്ചടിയാണ്. ഔദ്യോഗിക വിദ്യാഭ്യാസത്തിനൊപ്പം വ്യക്തികളുടെയും സമൂഹത്തിന്റെയും ചിന്താശീലങ്ങൾക്കു മാറ്റം വരുത്തി, സാമൂഹിക പുരോഗതിക്കു കാരണമായിത്തീരുന്ന അനൗപചാരിക വിദ്യാഭ്യാസത്തിന്റെ പ്രബല ഉപാധികളാവട്ടെ, അച്ചടിയുടെ രണ്ടു ധാരകളായ പുസ്തകപ്രസാധനവും ആനുകാലികപ്രസാധനവുമാണ്. ചുരുക്കത്തിൽ, അറിവും ആശയങ്ങളും വിനിമയം ചെയ്യുന്ന സാങ്കേതികവിദ്യ എന്ന നിലയിൽ അച്ചടിസാമൂഹികപെരുമാറ്റങ്ങളിലും സമൂഹപുനഃസൃഷ്ടിയിലും വഹിച്ചിട്ടുള്ള പങ്ക് നിർണായകമാണ്.

പഴയ തിരുവിതാംകൂർ രാജ്യത്ത് ആദ്യകാലത്തുണ്ടായിരുന്ന അച്ചടി ശാലകൾ ഇനി പറയുന്നവയാണ്: ബെഞ്ചമിൻ ബെയിലിയുടെ സി.എം. എസ്. പ്രസ് (കോട്ടയം, 1821), ചാൾസ് മീഡിന്റെ എൽ.എം.എസ്. പ്രസ് (നാഗർകോവിൽ, 1821; ഇവിടെ ആദ്യം മലയാളം അച്ചടി ഉണ്ടായിരുന്നില്ല), ജെ.സി. തോംസൺ എൽ.എം.എസ്. പ്രസിന്റെ ശാഖയായി കൊല്ലത്തു സ്ഥാപിച്ച എൽ.എം.എസ്. പ്രസ് (കൊല്ലം, 1831; ഇവിടെ, പക്ഷേ, പല കാരണങ്ങളാൽ 1838-ൽ മാത്രമാണ് അച്ചടി തുടങ്ങുന്നത്), തിരുവിതാംകൂർ രാജകീയ സർക്കാരിന്റെ അച്ചുകൂടം (തിരുവനന്തപുരം,

28. പല കാരണങ്ങളാൽ തിരുവിതാംകൂറുകാർക്കു പൊതുവെ കത്തോലിക്കാസഭാംഗങ്ങൾക്കു പ്രത്യേകിച്ചും തമിഴ്ഭാഷയോട് അടുത്ത ബന്ധമുണ്ടായിരുന്നു. പത്തൊമ്പതാം നൂറ്റാണ്ടിന്റെ അവസാന വരെ രാജ്യത്തെ 'രാജകീയ ഭാഷ' തമിഴായിരുന്നു. തിരുവിതാംകൂറിലെ ഔദ്യോഗികഭാഷയും അതുതന്നെ ആയിരുന്നു. ജോർജ് മാത്തൻ "നാഥാർഗ്ഗോപദേശം" എന്ന ലേഖനത്തിൽ എഴുതുന്നു: "... ഈ നൂറ്റാണ്ടിന്റെ മഹാരാജാവിന്റെ സ്വന്തഭാഷ മലയാഴ്മയാകുന്നു എന്നു വരികിലും ഈ ഭാഷയുടെ ഗുണീകരണത്തിനായിട്ടു ഇപ്രകാരമുള്ള ചട്ടംകെട്ടി ഈ ഒന്നുമില്ലാതിരിക്കുന്നതു അതിശയം തന്നെ... മണ്ടവത്തിൽ വാണിജ്യമുതൽ ഹജൂർവരെയും മൂന്നിശിപ്പു കോടതി മുതൽ ചതുർക്കോട്ടിനെയും വരെയുള്ള എഴുത്തു വേലകൾ ഒക്കെയും ഇന്നേവരെയും മണ്ടവത്തിൽ ആകുന്നു നടക്കുന്നതു. ആകയാൽ അധാരമൊ കുറിയോ ആകട്ടെ പതിവോ പറ്റുചീട്ടോ ആകട്ടെ സമനോ വിധിപ്പേർപ്പോ ആകട്ടെ തമിഴക്ഷരത്തിൽ അല്ലാതെ മലയാളം ഭാഷയ്ക്കു വിഹിതമായിരിക്കുന്ന ഗ്രന്ഥാക്ഷരത്തിൽ യാതൊന്നും 'കാണുന്നില്ല' എന്നല്ല വല്ലവണ്ണം തന്നെയും മൊഴിയോ ആവലാധിയോ ഗ്രന്ഥത്തിൽ എഴുതിക്കൊണ്ടു കോടതിയിലോ കോടതിലോട്ടു ചെന്നാൽ പിള്ളമാർ ആയതിനെ അംഗീകരിക്കാതെ തമിഴിൽ എഴുതിക്കൊണ്ടു വരുവാൻ പാവപ്പെട്ട കൂടിയായാണിരിക്കുന്നിർബന്ധിക്കയും ചെയ്യുന്നു. എന്നതുകൊണ്ടു ഗ്രന്ഥത്തിനോടു കോയ്മയെക്കു വിരോധമാകുന്നു എന്നു ഒരു വിചാരം ബഹു. ജനങ്ങളുടെ മനസ്സിൽ സാധാരണമായിട്ടു കയറിയിരിക്കുന്നു" (1854: 32). ജോർജ് മാത്തൻ ഈ ലേഖനം എഴുതുന്ന 1864-ൽ തിരുവിതാംകൂറിലെ ഭാഷാ സാഹചര്യം ഇതായിരുന്നു. കോട്ടയത്തും തിരുവനന്തപുരത്തും കോല്ലത്തും മാനാനത്തും മാതൃഭാഷയായ മലയാളത്തിൽ പുസ്തകങ്ങൾ അച്ചടിച്ചു പ്രസിദ്ധപ്പെടുത്തുന്ന അച്ചടിശാലികൾ ആരംഭിച്ച വാർഷികങ്ങൾ കഴിഞ്ഞപ്പോഴുള്ള അവസ്ഥയാണിതെന്നോർക്കണം!

തമിഴ്ഭാഷയ്ക്ക് കത്തോലിക്കാ മിഷനറി സംഘങ്ങൾ വളരെയേറെയെന്ന പ്രവർത്തിച്ചു തുടങ്ങുകയും അവരുടെ തമിഴ് പുസ്തകങ്ങൾ പ്രചാരത്തിലാവുകയും ചെയ്തിരുന്നതിനാൽ കത്തോലിക്കാ "മൽപ്പുന്മാർ"ക്കു തമിഴും തമിഴ്ഗ്രന്ഥങ്ങളും പരിചിതമായിരുന്നു. മാതൃഭൂമി തിരുവിതാംകൂറിലെ പല കുടുംബങ്ങളിലും തമിഴ്ഭാഷയിലുള്ള മലയാള സ്മൃത ഗ്രന്ഥങ്ങൾ വാങ്ങി സൂക്ഷിക്കുകയും ചെയ്തിരുന്നു. ലാഹൂർ സ്കൂളുകാരുടെ ഭാഷയാണു ഇംഗ്ലീഷ് എന്നതിനാൽ അതിനോട് അടുപ്പമുണ്ടാകുക സാഭാവികവുമായിരുന്നു. 1880-1886 കാലത്ത് അതു വാലുങ്ങളുള്ള തമിഴ്കൃതി പുർണമായും മാനാനത്ത് അച്ചടിച്ചു എന്ന കാര്യവും ഇതിനോടു ചേർത്തു വായിക്കാം (ലിപി തമിഴ്തന്നെ ആയിരുന്നോ അഥവാ മലയാളലിപിയിൽ തമിഴ് ഭാഷ അച്ചടിക്കുകയായിരുന്നോ എന്നതു നിശ്ചയമില്ല).

29. കേരളത്തിൽ മലയാളം അച്ചടിക്കു തുടങ്ങാകുറിച്ചു കോട്ടയം സി.എം.എസ്. പ്രസിൾ ആദ്യമായി അച്ചടിച്ച രണ്ടു കൃതികളിൽ (ലാ)

ഒരേണ്ണം സ്കൂൾ, കോളജ് ക്ലാസുകളിലേക്കുള്ള പാഠപുസ്തകമായി
 രുന്നു: ചെറുചെലവുകൾക്ക് ഉപകാരാർത്ഥം ഇംക്ലീപ്പിൽ നിന്ന പരിഭാ
 ഷപ്പെടുത്തിയ കഥകൾ "ഇതുപോലെ എത്രയോ സ്കൂൾ, കോളജ്
 പാഠപുസ്തകങ്ങൾ സി.എം.എസ്. പ്രസിൽ അച്ചടിച്ചിട്ടുണ്ട്. വിദ്യാർത്ഥ
 ഷൾ, മൃഗചരിതം എന്നിങ്ങനെയുള്ള ശാസ്ത്രകൃതികളും അവയിലു
 ബാതിരുന്നു. ഭാഷയിലെ ആദ്യകാലനിലങ്ങളെയും വ്യാകരണങ്ങളും
 പ്രസിദ്ധപ്പെടുത്തുന്നതിൽ മുഖ്യപങ്കു വഹിച്ചത് സി.എം.എസ്. പ്രസ്
 ആയിരുന്നു. സർക്കാർ അച്ചുകൂടം സ്ഥാപിക്കുന്നതുവരെ ഗവൺമെന്റ്
 ഗസറ്റ് അച്ചടിച്ചിരുന്നതു സി.എം.എസ്. പ്രസിലാണ്. കോട്ടയത്ത് ആദ്യം
 അച്ചടിക്കാനുദ്ദേശിച്ചിരുന്ന കൃതികളിലൊന്ന്, രേഖകൾ പ്രകാരം, തിരു
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Studies on the Photoluminescence of Lanthanide doped Bismuth Oxide based Materials: A Short ReviewAji Joseph^a, Ambili K.S.^b, Jesty Thomas^c^a Assistant Professor, Department of Chemistry, Bishop Kurialacherry College for women Amalagiri, Kottayam, Kerala 686561, Mob: 9061494763; Email: srajiboseph@bkcollege.ac.in^b Guest Lecturer, St. Teresa's College (Autonomous), Ernakulam, Kochi, Kerala 682018, Mob: 8547113981; Email: ambili.kalho@gmail.com^c Corresponding Author, Asst. Professor, Research Department of Chemistry, Kuriakose Elias College, Mannanam, Kottayam, Kerala 686561, India Tel: 9447779496; Email: jestyk@kecollege.ac.in

Abstract: Light emitting materials have a big impact in our daily life, promoting an ongoing search for luminescent materials with new and ever more efficient optical properties. Lanthanides are well known for their luminescence properties due to high colorimetric purity of emitted light. Hence, lanthanide ions are widely used to functionalize inorganic compounds for phosphor application in modern high technology devices. Bismuth oxide is a promising semiconductor and explored during the last decades due to its multifarious application and unique properties. However, reliable synthesis of nano sized bismuth oxide remains an ongoing challenge for materials researchers. This manuscript gives a concise overview of research conducted regarding the synthesis of bismuth oxide nanoparticles and analyses how lanthanide ion doping impacts the luminescence properties and making them active in the visible to near-infrared regions.

Keywords: Photoluminescence, Bismuth oxide, Lanthanide doped, phosphor

Introduction

Today, nanotechnology has attracted a great attention in different fields. The nanoparticles have nanoscale dimensions in a range of 1–100 nm with unique properties due to small size and high surface area. Metal oxide nanoparticles have received a research attention in many areas with unique and wide-ranging physicochemical properties (M.Kazemi, Nagar, 2020). Bismuth oxide (Bi_2O_3) is an interesting material and very important in modern solid-state technology. It is fascinating to scientists owing to its unique structures and physical properties, such as a large energy band gap, high refractive index, dielectric permittivity and high oxygen ion conductivity, as well as marked photoconductivity and photoluminescence (PL) (Mehring, M.2007).

Bismuth oxide nanoparticle is a good candidate of metal oxide for various applications in preparation of nanostructures (Fan, H. T., Pan et al.2006), photocatalyst (Li, R., Chen, W., & Ma, C. 2010), solid oxide fuel cell (Gong, Y., Ji, W.2011), gas sensor catalyst for oxidation of hydrocarbons, catalytic performance for reduction, water purification (Schlesinger, M., Weber et al. 2013), photovoltaic, biomedical, antibacterial effect (Salman, J. A.,2015) and Photoluminescence (Nedilko, S., Chornii et al., 2013). Various polymorphs of bismuth oxide have included α - Bi_2O_3 , β - Bi_2O_3 , γ - Bi_2O_3 , δ - Bi_2O_3 , ϵ - Bi_2O_3 , and θ - Bi_2O_3 based on temperature. The stable polymorph is monoclinic α - Bi_2O_3 in low temperature and cubic δ - Bi_2O_3 in high temperature.

The main purpose of this review is to summarize the synthesis of Bismuth oxide based Photoluminescent materials and their modification strategies for efficient luminescent applications. The review begins with the well-known Bismuth oxide and their synthesis methods at this stage, along with discussing the some key challenges of process paths, such as environmental safety and economic implications. Then the efforts to enhance the luminescence performance of Bismuth oxide will be discussed in special emphasis on doping very specially rare earth doping.

Bismuth Oxide

The Bi_2O_3 -based system presents an abundance of polymorph phases. These abundant phases and structural properties are represented by the monoclinic α - Bi_2O_3 , tetragonal β - Bi_2O_3 , cubic-bcc γ - Bi_2O_3 , cubic-fcc δ - Bi_2O_3 , tetragonal ϵ - Bi_2O_3 , and triclinic θ - Bi_2O_3 phases (Cornei, N., Tancret et al. 2006). Pure Bi_2O_3 is stable in



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¹³C NMR spectra validates the existence of the type-I cellulose phase in the prepared CNFs. The prepared CNFs had a maximum degradation temperature (T_{max}) that was 31 C greater than raw millet husk (RMH). The outcome of the study implies that the nanofibers are prominent alternatives for synthetic fibers for assorted potential applications, especially in manufacturing green composites.

Keywords : cellulose nanofibers; crystallinity index; steam explosion; thermal stability; millet husk

SOLAR LIGHT DRIVEN DEGRADATION OF DYE USING LANTHANIDE INCORPORATED NANOTIO 2

Anju John, Mekha Susan Rajan, Jesty Thomas*

Postgraduate and Research Department of Chemistry, Kuriakose Elias College, Mannanam, Kottayam, Kerala, 686561, India.

ABSTRACT : Thermally stable nanocrystalline Samarium doped TiO₂ with enhanced solar photocatalytic activity was synthesized via low temperature hydrothermal route. Their structural and optical properties were characterized by X-ray diffraction (XRD), diffuse reflectance spectra (DRS), photoluminescence spectra (PL), scanning electron microscopy (SEM) and transmission electron microscopy (TEM). The separation efficiency of the electrons and holes was obtained from PL spectral studies. The photocatalytic activity of the synthesized samples was assessed by the photocatalytic degradation of methylene blue (MB) under sunlight. The photocatalytic activity of TiO₂ under solar irradiation has significantly increased by samarium doping and showed more efficiency than the commercial photocatalyst, Degussa P-25. It was observed that samarium 4f level plays a vital role in the elimination of electron– hole recombination which would be beneficial for the high photocatalytic activity.

Keywords : Nanocrystalline Samarium doped TiO₂; Electron– hole recombination; photocatalytic degradation of methylene blue; high photocatalytic activity

Wounded Wings

CULTURAL POLITICS OF DISABILITY IN LITERATURE AND CINEMA



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CHAPTER - 12

WOUNDED WINGS: A PSYCHOLOGICAL READING OF THE FORGOTTEN CHILDREN IN WAR

Dr Sujarani Mathew and Mereena Eappen

Life writing, a genre designation applied initially in feminist and gender studies, is an inclusive term that encompasses many forms of narrative and calls into question and blends boundaries between history, fiction, documentary, and including autobiography, oral testimony, diaries, letters, and journals. This inclusive term also covers personally inflected storytelling and fictional texts such as the autobiographical novel or auto-fiction, some forms of the *Bildungsroman*, and many other textual forms and genres including non-professional and non-literary ones. The mass market distribution of popular forms of life writing has in recent decades proliferated due to non-fiction in general being much more published and read today than fiction, as well as due to the rapid commodification and consumption of popular trauma culture through confessional life writing, a narrative form that is the fastest genre of today's published literature.

Anne Rothe in *Popular Trauma Culture: Selling the Pain of Others* claims that misery and fake misery memoirs, which she dubs trauma kitsch and trauma camp, are built on paradigms provided by clichéd and melodramatic victim of Holocaust discourse. The most important subgenre of life writing consists of works which can be grouped under the rubric of transnational life writing, including im-/emigrant, expatriate, refugee, migrant, exile, as well as of second-generation ethnic life writing. Armed conflicts have changed in complexity and nature over the past few decades magnifying emotional and physical challenges for children. Every conflict forces children to live through some terrible experiences. Indeed, millions of children have been present at events far beyond the worst nightmares of more adults. Conflicts impact children's mental health in many ways especially rape has been a prevalent component of armed conflict in Civil

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**A STUDY ON IMPACT OF COVID-19
PANDEMIC ON FARM TOURISM WITH
SPECIAL REFERENCE TO
DEVIKULAM TALUK**

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ABSTRACT

As we all know the Covid 19 pandemic affected the all walks of life irrespective of business men, salaried people, daily labourers and self employed. Some of them changed their area of operations while some of them stick on to the same old field and struggled a lot. Like any other sector tourism is one of the main sector which was badly affected by this pandemic. Kerala being God's own country tourism was one of the major source income for a large group of people. Among these farm tourism was an area which was highly booming recently. This paper is an humble attempt to have a look over the impact of this pandemic on farm tourism business.

INTRODUCTION

The tourism industry was one of the world's greatest income generating area until the world met this pandemic in the year 2020. This study aims to present the impact of Covid-19 in farm tourism in Idukki district with special reference to Devikulam

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Family Businesses (FBs) and Non Family businesses (NFBs): A Conceptual Comparison

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Abstract

Although researchers devoted much academic attention on the question as to whether family businesses are significantly different from non-family businesses, studies focused on this topic produced contradictory results. Although it has been long asserted that family businesses hold advantages over non-family businesses, to date, there have been very few studies conducted as to exactly what and why family businesses different from nonfamily businesses. This article tries to understand the basic differences and unique dynamics attributed to family businesses that determine differences in their growth and performance based on a literature survey. Based on the available literatures, this study introduces a new concept, the family point of view, and provides theoretical arguments resulting in the following hypotheses: Specifically, this article suggests that family businesses with high levels of family capital possibly do hold a sustained competitive advantage over family businesses with low levels of family capital and/or nonfamily businesses. The study not only highlights the importance of moral infrastructure in family firms but also helps clarify components of family social capital.

Keywords: Family Business, Non-Family Business

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Impact of Inflation Rate and Exchange Rate on Money Supply in India

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Abstract

Money supply is a significant factor determining the economic growth of the country. It is the total stock of money circulating in the economy. There are different macro-economic variables which create fluctuations on the money supply. This paper makes an attempt to investigate the impact of CPI inflation rate and USD/INR exchange rate on money supply(M3) in Indian economy. This study considers the monthly average of CPI Inflation rate, USD/INR exchange rate and M3 measure of money supply for the past 10 years starting from 2009 to 2019. This study examines both short run and long run relationship. For testing the relationship between the variables, various econometric techniques applied such as: OLS, Johanson Cointegration test, Granger Causality test. Johanson cointegration test result shows that there is cointegration between variables under study and causality test reveals that there is a unidirectional relationship between money supply and inflation rate.

Key Words: CPI Inflation rate, Money supply(M3), USD/INR Exchange rate.

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Family Businesses (FBs) and Non Family businesses (NFBs): A Conceptual Comparison

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Abstract

Although researchers devoted much academic attention on the question as to whether family businesses are significantly different from non-family businesses, studies focused on this topic produced contradictory results. Although it has been long asserted that family businesses hold advantages over non-family businesses, to date, there have been very few studies conducted as to exactly what and why family businesses different from nonfamily businesses. This article tries to understand the basic differences and unique dynamics attributed to family businesses that determine differences in their growth and performance based on a literature survey. Based on the available literatures, this study introduces a new concept, the family point of view, and provides theoretical arguments resulting in the following hypotheses: Specifically, this article suggests that family businesses with high levels of family capital possibly do hold a sustained competitive advantage over family businesses with low levels of family capital and/or nonfamily businesses. The study not only highlights the importance of moral infrastructure in family firms but also helps clarify components of family social capital.

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Occupational Stress & Its Management among Nursing Staffs Working in Various Hospitals in Kottayam Municipality

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Abstract

The modern world is said to be a world of achievements and also a world of stress. The present Era is called the 'Age of anxiety and Stress'. Nurses are one of the foremost health care professionals. Hence, inherently, nursing is a stressful profession. Direct patient care makes this profession extremely stressful. Feeling helpless while watching a patient dying, multiple roles of home and job, unpredictable staffing and scheduling, lack of support from the management and colleagues were some of major stressors among nurses and the present study explored the level of occupational stress & its management among nursing staffs.

Keywords- Occupational stress, Stress management

Introduction

From birth till death, an individual encounters many stressful situations. Stress has been acknowledged as a vexing problem in the healthcare system. Nurses are one of the foremost health care

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Co-mingling of the Traditions in Christianity: A Study of the *Acts of Judas Thomas* and *Mārgamkalipāṭṭu*

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Abstract

The paper discusses about the co-mingling of various traditions related with the history of early Christianity. These traditions can be used as the major sources to reconstruct the history of pre-modern Christianity in Kerala. One of the important Christian traditions in Kerala is Margamkalipattu. More or less, this tradition is the local adaptation of the Acts of the Judas Thomas, which is a popular romance written in Syriac language. It is significant to analyse the way how this adaptation happened, what are the similarities and differences of this co-mingling, how this adaptations strengthen the cultural heritage and community feeling of the Syrian Christians in Kerala.

Key words: Christianity, Malabar, *Margamkalipattu*, *Acts of the Judas Thomas*, tradition

Introduction

The history of Christianity in Kerala is entwined with traditions. The Christian traditions were not only developed from their own cultural and historical background but also drew upon the regional, religious and social contexts of other traditions which existed in different historical periods. So, the more or less adaptation of different traditions

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A Retrospective Study on the Importance of Order Statistics in Information Theoretic Measures

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Abstract

In the literature of information theory, Shannon entropy, Renyi entropy, Kullback-Leibler divergence measure, Kerridge's inaccuracy measure and Tsallis entropy plays an important role and in the context of reliability theory, order statistics and record values which were used for statistical modelling. We primarily consider a compact review of the existing works in information theory in the frame of reference of order statistics.

Key Words: Shannon's entropy, Renyi entropy, Kullback-Leibler divergence measure, Kerridge's inaccuracy measure, Tsallis entropy, Order Statistics

1 Introduction

In the last few decades, the theory of information has exponentially intensified in all subsidiary fields of science and technology. The history of quantitative measure of information in communication systems has established in 1920s. The basis for the advancement of information theory has originated by the works of Nyquist [13]. Later,

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On Rees Matrix Semigroups

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Abstract

A semigroup is a pair (S, \cdot) consisting of a set S and an associative binary operation \cdot on S . The collection of all rectangular matrices of a given order $m \times n$ ($m \neq n$) will never form a semigroup under usual matrix multiplication. But by defining a sandwich operation, it can be developed into a semigroup. For that we define a binary operation $*$ on the set of all $m \times n$ matrices over the field F by $X * Y = XAY$ for all $m \times n$ matrices X and Y where A is a fixed $n \times m$ matrix. Rees matrix semigroups is an important class of such semigroups. This paper introduces Rees matrix semigroups and some related ideas.

1 Preliminaries

Definition 1.1. A semigroup S is a pair (S, \cdot) consisting of a set S and an associative binary operation \cdot on S .

That is,

S is closed under \cdot and satisfies

$$(x \cdot y) \cdot z = x \cdot (y \cdot z) \quad \forall x, y, z \in S.$$

Definition 1.2. An element z in a semigroup S is called a left/right zero of a subset $A \subseteq S$ if

$$z \cdot a = z \quad \forall a \in A \quad [a \cdot z = z \quad \forall a \in A].$$

If z is both a left as well as a right zero of A , then it is called a [two-sided] zero of A . If the above condition holds for $A = S$, then z is a left/right/two-sided zero of S in the case may be. The zero of S , if it exists, is unique and will be denoted by 0 .

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Image Forgery Detection System (IFDS) using Jpeg Image Analysis

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Abstract

Digital image, like any other technological advancement, supplements and supports study and is nowadays a great medium for communication. Often, image forgery imparts a negative impact instead of producing useful materials for the further enhancement of our branch of study. Powerful image editing tools are very common these days. Digital images can be easily tampered with editing tools. Therefore, the detection of tampering operations is of great importance. Modification of images is very common mostly for the purpose of forgery. A part of an image is copied and pasted in another image. The focus of this paper is to detect a selected image is forged or not and to identify the forged region in case of detected forgery. Image, texture and pixel value based features are extracted and analysed from the image. The process consists of three phases: Image pre-processing, Edge Detection and Localization of the tampered part. This approach is effective for the detection of forgery on the given image and locating the tampered region.

Keywords- V-Channel image, Horizontal and Vertical Projection image, Image convolution.

I Introduction

Digital image processing is the utilizing of computer algorithms to perform image processing on digital images. These days, a large

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Azimuthal anisotropy of charmed mesons in Au+Au collisions at 200 GeV in STAR Experiment at RHIC

Dr. Jaiby Joseph for STAR Collaboration

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Abstract

Heavy quarks are produced during the initial hard scattering process of the relativistic heavy ion collisions and they traverse the hot and dense medium created in these collisions – the Quark-Gluon Plasma (QGP). In non-central heavy ion collisions, the spatial anisotropy gives rise to anisotropy in momentum. A measurement of this anisotropic flow, can be an indicator of multiparticle correlations and collective phenomena in heavy ion collisions. Anisotropic flow corresponding to the second harmonic, called the elliptic flow (v_2) is sensitive to the early dynamics in QGP. Charm quark v_2 can tell the extent of thermalization in the medium created. Initial results after running a fine-tuned microvertexing code, for measurement of charmed mesons in Au+Au data at $\sqrt{s_{NN}} = 200$ GeV in RHIC collisions using the STAR-HFT data is presented here. Further, the preliminary results of anisotropic flow measurement of charmed mesons from STAR will also be presented.

Keywords: Quark Gluon Plasma, charm quarks, elliptic flow, thermalization, Heavy Flavor Tracker, RHIC, STAR.

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Low Temperature NIR Reflective Nano Pigments for Cool Roof Applications

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Abstract

The energy used to heat or cool buildings leads to the consumption of primary energy by 40% in most of the countries. The main concern of the researchers is to formulate exterior building paints as smart coatings with high IR-reflectance to decrease the use of energy for cooling buildings. A benefit of this approach is that it expands the palette of colours that the urban aesthetic needs requests to the dark ones, replacing the present white-cool solutions. Temperature is one of the main factors that contribute to coating ageing, and lowering temperatures has indirect benefits that include reducing binder degradation as well as cyclic thermal expansion of structures, encouraging overlaid coatings with high resistance, increasing the longevity of their properties, and lowering maintenance requirements and costs. This review focus on non-toxic, cheaper and easily synthesizable, high NIR Reflective cool nano pigments that help in energy savings.

Keywords: NIR reflectance, Cool nano pigments, Low temperature

Introduction

Solar energy comprises of 5% of ultraviolet, 46% visible and about 49% of Near-infrared (NIR) radiation (wavelength ranging 750-2500

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Synthesis of Visible-Light Active Bismuth Oxide Nanoparticles

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Abstract

Metal oxide semiconductors with a bandgap between 2-4 eV are an important class of compounds in the electronics industry and for photocatalysis. With the demand for these materials expanding rapidly, especially in the field of photocatalysis, the fabrication of nanoscale metal oxide particles, which increases the surface-to-volume ratio and thereby reduces the materials costs, is an emphasis of current research. For the purpose of photocatalysis, another important quality is the ability to absorb light efficiently. The reliable synthesis of nanosized particles of metal to oxides remains an ongoing challenge for materials researchers. This manuscript is intended provide a brief overview of different existing methods of Bismuth oxide nanoparticles synthesis.

Key words: Bismuth Oxide, Photocatalyst, Hydrothermal, Green synthesis.

A TEXTBOOK OF
COORDINATION AND
ORGANOMETALLIC CHEMISTRY



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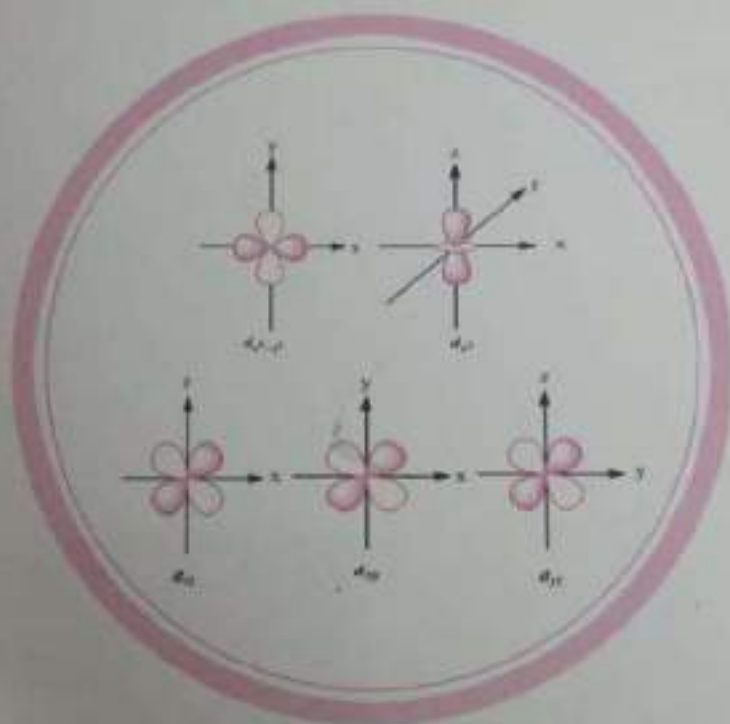


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1,2,4-Thiadiazol-3-Ylthioureas as Synthons for 1,3,5,- Triazinethiones

M. Jollyamma^{1*}

DOI: 10.9734/bpi/cacb/v5/B159D

ABSTRACT

Reduction of 1-aryl-3-(4-aryl-5-arylimino-Δ²-1,2,4-thiadiazol-3-yl) thiourea with ammoniacal hydrogen sulphide yielded 1,3,5-triazine-2-thiones by intramolecular eliminative cyclisation

Keywords: Isothiocyanate; thiadiazolines; thiadiazol-3-ylthioureas.

1. INTRODUCTION

1,3,5-triazinethiones are a class of compounds having varied applications in the field of dyes [1], pharmaceuticals [2-5], pesticides [6,7], and herbicides [8]. Condensation of 1- (substituted amidino) [9] and 1-amidino- 3-substitued [10] thioureas with isothiocyanates has been reported to give 1,3,5 – triazine derivatives. This has been attributed to the formation of a labile extended urea – like chain of more than six atoms with alternate carbon and nitrogen atoms and its spontaneous eliminative cyclisation [11-12]. Similar reaction of 1,3 disubstitued amidinothiourea with isothiocyanate did not appear feasible as the amidinothiourea as such was found to be very unstable in neutral and basic conditions.

It was thought that building up of an extended urea like chain of this type could be achieved by the reductive ring cleavage of suitable derivatives of 3-amino-4-substitued -5-substitued imino- ²1,2,4 – thiadiazolines¹³. The reduction of the product obtained after condensation of isothiocyanate with the above mentioned thiadiazolines, could give such an extended urea like chain intermediate and hence 1,3,5 triazines. The reduction of several such 1,2,4-thiadiazol-3-yl thiourea has therefore been examined in the present study.

2. EXPERIMENTAL

The IR (KBr) spectra were run on a perkin-Elmer 397 infrared spectrophotometer, UV spectra in methanol on a Hitachi UV-220A spectrophotometer and ¹H NMR in CDCl₃ on R-24-B Hitachi 300 MHz high resolution NMR spectrometer with TMS as an internal standard. The mass spectra were taken on a HEW LETT PACKARD HP-5995 mass spectrometer. Melting points were determined on a Thomas-Hoover immersion type melting point apparatus and are uncorrected and the purity of the products were confirmed by T.L.C.

The required thiadiazolyl thioureas (1) were prepared by condensation of 3-amino-4-aryl-5-arylimino-²-1,2,4- thiadiazolines with isothiocyanates in the presence of alkali in non-aqueous medium [13]. The required 1,2,4-thiadiazolines with isothiocyanates is the presence of alkali in non-aqueous medicine [13]. The required 1,2,4- thiadiazoline derivatives in turn were prepared by the oxidation of mixtures of thioureas [14].

Reduction of 1-aryl-3-(4-aryl-5-aryl imino -²- 1, 2, 4- thiadiazol -3 - yl)thioureas: Formation of 1-aryl-3-aryl-4-arylimino-hexahydro-6- imino-1,3,5,-triazine -2 -thiones and 1-aryl-3-(N-arylamidino) thioureas

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STUDIES ON ANTIBACTERIAL EFFICACY OF SUBSTITUTED THIOUREAS

Jollyamma Mathew* and Linta Maria Jose

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Abstract

The aim of this study was to evaluate the possible antibacterial potential of certain disubstituted thioureas against bacterial pathogens. For this purpose, clinical isolates of two gram positive (*Staphylococcus aureus* and *Enterococcus faecalis*) and two grams negative (*Escherichia coli* and *Pseudomonas aeruginosa*) were tested. Antibacterial potency of the compounds was evaluated by standard growth inhibitory assay methods. All the tested compounds showed varying degrees of strain specific antibacterial potential against the tested strains, of which C4 showed superior activity against *E. faecalis* and *P. aeruginosa*. C1 exhibited the least antibacterial activity against *S. aureus*. These promising findings suggest the antibacterial efficacy of the bioactive compounds against multi-drug resistant bacterial pathogens and serving them as an alternative antimicrobial agent against diseases caused by these organisms.

Keywords: disubstituted thiourea, *staphylococcus aureus*, *enterococcus faecalis*, *escherichia coli*, *pseudomonas aeruginosa*, antibacterial agent

1. Introduction

In recent years, multiple drug resistance has been developed due to indiscriminate use of existing antimicrobial drugs in the treatment of infectious diseases (Westh et al., 2004). This resistance problem needs a re-newed effort, resulting in researching effective antibacterial agents against pathogenic microorganisms resistant to current antibiotics (Soulsby, 2005). Besides, though conventional antibiotics are strong medicine and save lives, they cause more harmful effects than good ones when they are not used in right way (Neu, 1992).

Several thiourea derivatives have been reported to have marked antibacterial, antifungal, antitubercular, and antitumour properties. Also, these compounds find wide applications in pharmacology. The most widely used method for the synthesis of disubstituted thioureas is the condensation of a compound having an amino function with isothiocyanate. Aromatic and aliphatic amines can be added to aryl/alkyl isothiocyanates to give these derivatives. This is an excellent N-alkyl-N'-(4-alkylphenyl) thiourea method for the synthesis of 1, 3- disubstituted thioureas. The present work aims at the synthesis and antimicrobial studies of certain 1,3-disubstituted thioureas.

2. Materials and Methods**2.1. Materials**

Ammonia, carbon disulphide, aniline, lead nitrate, ethyl amine, methyl amine and all the solvents were purchased from HiMedia Laboratories Pvt. Ltd., Mumbai, India. Muller Hinton Agar, Agar Agar, and sterile discs for antibacterial studies were obtained from Nice Chemicals Pvt. Ltd., India.

2.2. Preparation of phenyl isothiocyanate

Ammonia (100 ml) and carbon disulphide (50 ml) were mixed together in a long-necked round bottom flask. To this mixture, aniline (60 ml) was added slowly with constant shaking. The reaction is exothermic so it was cooled in ice bath before each addition. After complete addition of aniline, boiling solution of lead nitrate (200g in 400 ml water) was added

Synthesis of 1,3,5, - Triazine – 2,4, -dithiones using 1,2,4-Thiadiazol-3-ylthioureas**M. Jollyamma^{1*}**¹Department of chemistry, K.E. College, Mannanam, Kerala, India.**ABSTRACT**

Reduction of 1-alkyl-3-(4-aryl-5-benzylimino- Δ^2 -1,2,4-thiadiazol-3-yl) thiourea with ammonical hydrogen sulphide yielded 1,3,5-triazine-2,4, - dithiones

Keywords: Isothiocyanate; thiadiazolines; thiadiazol-3-ylthioureas, triazinethiones

1. INTRODUCTION

One among the oldest known heterocyclic compounds is 1,3,5-triazine derivatives which is said to have a wide variety of applications in the field of dyes ¹, pharmaceuticals ²⁻⁵ pesticides ^{6,7} and herbicides ⁸. Condensation of thiadiazolines with isothiocyanates has been reported to give thiadiazol-3-ylthiourea derivatives^{9,10} which on reduction yielded is 1,3,5-triazine derivatives. This has been attributed to the formation of a labile extended urea – like chain of more than six atoms with alternate carbon and nitrogen atoms and its spontaneous eliminative cyclisation ¹¹⁻¹².

1,2,4-thiadiazoline is a heterocyclic system containing two nitrogen and one sulphur atoms and is known to be a pi excessive heteroaromatic system¹³. The interaction of 1,2,4-thiadiazolines with isothiocyanates is a widely used method for the synthesis of substituted thioureas¹⁴. The nucleophilic addition of an isothiocyanate to a heterocyclic ring compound bearing an exocyclic as well as endocyclic amine function has been the subject of active investigation ¹⁵⁻²⁰. The addition occurred by the attack of only one of the nitrogen ¹⁸⁻²⁰ in some cases, while in others, the attack took place simultaneously on both the endocyclic and exocyclic nitrogens ^{15,20}. The preferential attack is influenced by electronic as well as steric factors of the amine function. In the present study the thiadiazolyl thioureas were prepared by the reaction of thiadiazolines with isothiocyanates in presence of powdered sodium hydroxide

It was thought that building up of an extended urea like chain of this type could be achieved by the reductive ring cleavage of suitable derivatives of 3-amino-4-substituted -5-substituted imino- ²¹1,2,4 – thiadiazolines²⁷. The reduction of the product obtained after condensation of isothiocyanate with the above mentioned thiadiazolines, could give such an extended urea like chain intermediate and hence 1,3,5 triazines. The reduction of several such 1,2,4-thiadiazol-3-yl thioureas with different alkyl/aryl substituents has therefore been examined in the present study.

2. EXPERIMENTAL

The IR (KBr) spectra were run on a perkin-Elmer 397 infrared spectrophotometer, UV spectra in methanol on a Hitachi UV-220A spectrophotometer and ¹H NMR in CDCl₃ on R-24-B Hitachi 300 MHz high resolution NMR spectrometer with TMS as an internal standard. The mass spectra were taken on a HEW LETT PACKARD HP-5995 mass spectrometer. Melting points were determined on a Thomas-Hoover immersion type melting point apparatus and are uncorrected and the purity of the products were confirmed by T.L.C.

The required thiadiazolyl thioureas (1) were prepared by condensation of 3-amino-4-aryl-5-benzylimino- Δ^2 -1,2,4- thiadiazolines with isothiocyanates in the presence of alkali in non-aqueous medium ²⁷. The required 1,2,4- thiadiazoline derivatives in turn were prepared by the oxidation of mixtures of thioureas ²⁸.

Reduction of 1-alkyl-3-(4-aryl-5-benzylimino- Δ^2 -1,2,4-thiadiazol-3-yl)thioureas: Formation of 1-aryl-3-benzyl-hexahydro-6- imino-1,3,5,-traizine -2,4, - dithiones .

(i) With ammoniacal hydrogen sulphide

In a typical experiment hydrogen sulphide gas was passed through an ethanolic ammoniacal solution of 1-phenyl-3-(4-phenyl-5(2,6-xylyl) imino-²-1,2,4-thiadiazol-3-yl)-thiourea (4.31g, 0.01 mol) for 15 minutes. The reaction mixture was then heated on a boiling water bath, when a precipitate was found to separate. The solution was kept warmed and hydrogen sulphide was passed till the precipitation was complete. Excess hydrogen sulphide was then boiled off. After cooling, the precipitate was collected, washed with ethanol and dried (2.4g, 55%) The product was crystallized from ethanol when white needle shaped crystals of hexahydro-6-imino-1-phenyl-4-phenylimino-3-(2,6-xylyl)-1,3,5-triazine-2-thione (3), m.p.254^o were obtained. T.L.C analysis of the product showed it to be a single compound. It did not undergo dehydrosulphurisation with sodium plumbite solution. Analysis found: C=69.1, H=5.0, N= 17.4, S=8. 1% required for C₂₃H₂₁N₅S, C= 69.2, H=5.3, N=17.5, S=8.0%

(ii) With triethylamine

To a solution of 1a in ethanol (4.3g, 0.01 mol), triethylamine (~10ml) was added and the mixture refluxed on a water bath for about 2hr. When the evolution of H₂S had ceased. The precipitated product, obtained on cooling the reaction mixture, was collected, washed with ethanol and dried. (2.1g,54%) it was found to be identified (m.p. and m.m.p) with the product obtained by reduction of 1a with ammoniacal hydrogen sulphide.

Reduction of other 1-aryl-3-(4-aryl-5-arylimino-²-1,2,4-thiadiazol-3-yl)thiureas (1b-k) under both the above conditions yielded similar results. The characterization data of these triazines (1b-k), then obtained, are given in table 1.

3. RESULTS AND DISCUSSION

In a typical reduction reaction, when H₂S was passed through a solution of 1-phenyl-3-(4-phenyl-5-(2,6-xylyl) imino-²-1,2,4-thiadiazol-3-yl)thiourea (1a) in ammoniacal ethanol, a product was obtained whose elemental analysis corresponded to C₂₃H₂₁N₅S. TLC examination confirmed it to be homogeneous. It did not undergo dehydrosulphurisation with sodium plumbite solution indicating the absence of an -NH-C(=S)-NH or 2HN-C(=S)-NH₂ grouping in its structure.

When 1a was heated with triethyl amine for 2hr, a similar reaction was found to occur. A product with elemental composition C₂₃H₂₁N₅S₂ was found to separate on cooling the reaction mixture. It was found to be identified (m.p and m.m.p) with that obtained by heating 1a with alcoholic ammoniacal hydrogen sulphide.

Since a 1,2,4-thiadiazole ring system undergoes ring opening with H₂S, it was expected that 1a on reduction would yield a labile extended area like intermediate (2a) (Scheme1) which could cyclise to a 1,3,5-triazine derivative with the elimination of an amine or H₂S. Elimination of a molecule of H₂S would result in a triazine -2-thione with structure (3a) or (4a). 1,3,5-Triazine-2,4-dithione derivative (5a) or (6a) could be formed by the elimination of a molecule Ar¹NH₂ or Ar²NH₂ respectively.

Structures (5) and (6) were ruled out because the elemental composition did not agree with one obtained experimentally Structure (4) was also ruled out since the product obtained was not soluble in even in ethanolic alkali. From these evidences, structure (3a) appeared to be the most plausible one and was confirmed by spectral data.

The PMR spectrum of (3a) in CDCl₃ showed signals at 2.1 (s, 6H, 2xCH₃ of xylyl), 6.7-7.6 (m, 14H, 13Ar-H+=NH), 10.4 (s,H, endoNH); IR (KBr, cm⁻¹) 3400 (s) & 3275 (s, N-H), 3025 (s) 1380 (S, ring stretching vib. of 1,3,5-triazines).

Other 1-aryl-3-(4-aryl-5-arylimino-²-1,2,4-thiadiazol-3-yl) thioureas (1b-k), when reduced in a similar way afforded the corresponding 1,3,5 triazine -2- thione derivatives (3b-k) (Scheme 1) whose analytical and spectral data (Table 1) were in complete agreement with the assigned structures.

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Oxidation of Mixtures of Thioureas: Part XII¹ – Oxidation of Mixtures of 1,3-diaryl Thioureas and Thiourea Forming 1,2,4,-thiadiazolines

Jollyamma Mathew^{1*}

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ABSTRACT

Oxidation of binary mixtures of 1,3-diaryl thioureas and thiourea in acidic alcoholic solution yields 3-amino-4-aryl-5-arylimino- Δ^2 -1,2,4,-thiadiazolines. The rearrangement of the bis(formamidino)sulphide to amidinothiourea derivative has been found to be governed by the steric effect. Oxidation of binary mixtures of 1-aryl-3-(2',6'-xylyl)thiourea and thiourea in acidic alcoholic solution yields 3-amino-4-aryl-5-(2',6'-xylyl)imino- Δ^2 -1,2,4,-thiadiazoline. 1-aryl-(2',5'-xylyl)thiourea, and 1-aryl-3-(2',5'-(diisopropyl phenyl)thioureas are also included in the study.

Keywords: Thioureas; thiadiazolines; amidinothiourea.

1. INTRODUCTION

Rapid developments in the field of heterocyclic chemistry during the last few decades is viewed, world over, with awe. A survey of the chemical literature reveals that nearly one-third of the publications inorganic chemistry is in the field of heterocyclic chemistry. A wide variety of these heterocyclic derivatives have been used as fungicides, bactericides, insecticides, herbicides, dyes, lubricant additives, and vulcanization accelerators [1]. In this context it is not surprising to find that there is still a lot of interest in synthesizing new derivatives of known heterocycles and also devising newer and easier routes to their synthesis. 1,2,4,-thiadiazolines is a heterocyclic system containing two nitrogen and one sulphur atoms and is known to be a π -excessive heteroaromatic system [2]. 1,2,4-Thiadiazoles have recently attained a therapeutic and economic importance that they did not possess a few years ago. The review provides a report on developments in the synthesis of 1,2,4-thiadiazole-based compounds during the last decade. Thiadiazoles are among the privileged pharmacological building blocks due to their unique chemical properties for diverse biological and clinical applications [3,4].

Among the many methods reported for the synthesis of 1,2,4-thiadiazoline derivatives, oxidation of binary mixtures of thioureas have been used as a general method [5-18]. In these oxidations one molecule each of the thioureas is involved in the building up of the thiadiazoline. The structure of the final product formed is found to depend on the substitution pattern of the amidinothiourea intermediate which is formed by the isomerisation of the bis(amidino)sulphide salt. During the isomerisation of the bis(amidino)sulphide salt, of the two amidino groups, an unsubstituted [6-12] or alkyl substituted [9] amidino group is found to migrate to the aryl substituted nitrogen of the other amidino group. It has also been observed that if the aryl substituents on an amidino group are different, the amidino group which migrates preferentially goes to the nitrogen which bears the more electron releasing aryl group [10,12]. The mode of isomerisation is not altered even though one of ortho positions of aryl group is substituted by a methyl group [8]. Two products (6 and 7) were isolated, when both the ortho positions

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were substituted by methyl groups [15]. The yield of the product **6** was found to decrease in the order of decreasing steric hindrance. The above observations prompted us to study the electronic and steric influence during the oxidation of 1-aryl-3-arylthioureas and thiourea using (Aryl-*p*-tolyl, *p*-anisyl, *p*-phenetyl & *o*-phenetyl). and Aryl'-2,6-xylyl, 2,5-xylyl, 2,6-diisopropyl phenyl).

2. EXPERIMENTAL

The IR (KBr) spectra were run on a perkin-Elmer 397 infrared spectro photometer, UV spectra in methanol on a Hitachi UV-220A spectrophotometer and ¹H NMR in CDCl₃ on R-24-B Hitachi 300 MHz high resolution NMR spectrometer with TMS as an internal standard. The mass spectra were taken on a HEW-LETT PACKARD HP-5995 mass spectrometer. Melting points were determined by capillary method and are uncorrected and the purity of the products were confirmed by TLC.

Table 1. Oxidation products of 1,3-diaryl Thioureas and Thiourea

Compo und	Ar	Ar'	Molecular formula	Analysis found / (reqd.)				m.p (°C)	Yield (%)
				C	H	N	S		
6a	Phenyl	2',6'-xylyl	C ₁₆ H ₁₆ N ₄ S	64.8 (64.9)	5.4 (5.4)	18.8 (18.9)	10.6 (10.8)	168	89
6b	<i>p</i> -tolyl	"	C ₁₇ H ₁₈ N ₄ S	65.7 (65.8)	5.7 (5.8)	17.9 (18.0)	10.3 (10.3)	161	77
6c	<i>p</i> -anisyl	"	C ₁₇ H ₁₈ N ₄ OS	62.3 (62.5)	5.3 (5.5)	17.1 (17.1)	9.9 (9.8)	141	75
6d	<i>p</i> -phenetyl	"	C ₁₈ H ₂₀ N ₄ OS	63.8 (63.6)	5.9 (5.9)	16.5 (16.6)	9.4 (9.3)	83	72
6e	<i>o</i> -phenetyl	"	C ₁₈ H ₂₀ N ₄ OS	63.7 (63.9)	5.7 (5.9)	16.5 (16.6)	9.4 (9.3)	146	70
6f	Phenyl	2',5'-xylyl	C ₁₆ H ₁₆ N ₄ S	64.7 (64.9)	5.4 (5.4)	18.8 (18.9)	10.6 (10.6)	100	83
6g	<i>p</i> -tolyl	2',5'-xylyl	C ₁₇ H ₁₈ N ₄ S	65.7 (65.8)	5.7 (5.8)	17.9 (18.0)	10.3 (10.3)	123	78
6h	Pheny	2,6-(diisopropyl) Phenyl	C ₂₀ H ₂₄ N ₄ S	68.1 (68.2)	6.8 (6.9)	15.8 (15.9)	9.2 (9.0)	181	72
6i	<i>p</i> -toyl	2,6-(diisopropyl)	C ₂₀ H ₂₄ N ₄ S	68.5 (68.6)	7.1 (7.1)	15.1 (15.3)	8.9 (8.7)	138	70

2.1 Oxidation of Binary Mixtures of 1-aryl-3-(2',6'-xylyl) Thioureas and Thiourea

In a typical experiment, a mixtures of 1-phenyl-3-(2',6'-xylyl)thiourea (6.05g, .025 mole) and thiourea (1.9g, .025 mole) in 1:1 ethanol-water mixture (200ml) containing con.HCl (6ml, 32%, .025mole) and oxidized with hydrogen peroxide (6 ml, 30%, .05 mole). Colloidal sulphur started separating as evidenced by a pale yellow turbidity. During the addition of H₂O₂, the reaction mixture was warmed on a waterbath. When the oxidation was complete the reaction mixture was cooled and filtered. The filtrate on basification yielded a white precipitate derived from the mixed oxidation. It was then collected, dried and crystallized from benzene-petroleum ether mixture when shining plates of the base were obtained (M.p.168°C, 6.6g, 89%). T.L.C examination of this product showed the presence of only one compound and it was identified as 3-amino-4-phenyl-5-(2',6'-xylyl)imino-Δ²-1,2,4-thiadiazoline **6**. Analysis found : C=64.8%, H = 5.4%, N = 18.8%, S = 10.6% required for C₁₆H₁₆N₄S, C = 64.9%, H = 5.4%, N = 18.9%, S = 10.8%; UV (MeOH) λ_{max} 220, 250, 260 nm; I.R (KBr) ν_{max} (cm⁻¹), 3450 & 3220 (s,N=H), 2970 (s), 2870 (m, C-H) 1640 (w, C=N), 1620 (s,NH₂),1025 (m) & 810 (ring skeletal vibrations of 1,2,4-thiadiazoline); N.M.R (CDCl₃) δ: -2.1 (s,6H, 2xCH₃ of xylyl), 4.9 (s, 2H, NH₂), 7-7.7 (non-resolved multiplet; 8H, Ar-H); Mass m/z (%) 296, (M⁺, 93.3), 254 (25.2), 222 (44.3), 204 (10.1), 16.3 (1.5), 91 (30.4), 91 (30.4), 79 (17.9).

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The purpose of this text book is to give post graduate commerce students good understanding about the Indian Financial Markets and Derivatives trading. This book is written according to the syllabus prescribed for the FOURTH SEMESTER students of CSE M.Com (Finance & Taxation Stream) Programme of M.G. University, Kottayam. This book will familiarize students with the intricacies in trading and pricing of various types of derivatives like forwards, futures, options and swaps with their associated pros and cons in a simple and lucid manner. Illustrations and examples are given to ensure better understanding of the concepts explained.

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ENCHANTING MUSINGS



Contemplative Corona Poems



EDITORS
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Ms. DIVYA JOSEPH
FR. JOBY JOSEPH CMI



KURIAKOSE ELIAS COLLEGE, MANNANAM



English Language

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CONFIGURING LITERATURE AND SOCIETY



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POSTHUMANISM AND VIRTUAL REALITY: THE POSTMODERN TECHNOCULTURE

Dr. Sujarani Mathew

The 21st century modernity is characterised by a cyberculture that has brought about cataclysmic changes in perception and transaction between individuals. Reality and illusion have crossed borders and the age calls for post truth, hyper reality and even posthumanism. It is the need of the hour to interrogate the aspects of theory, media and consumerist/capitalist culture as well as civilian technoculture that have encompassed modern existence. The paradigm shift from Western liberal humanism to posthumanism was one that questioned stale subjectivities into fluidity in being and consciousness; body to unbodied essence and real to hyperreal. Posthumanism brought on an age of virtual reality with its own liberating logic that envisions a utopia biologically, psychologically and scientifically. This optimistic outlook is enshrined in sci-fi, movies/narratives as well as products that engross the new gen consumerist. The posthuman condition which is creating new spaces of virtuality is the product of the present cyberculture.

The search into the transcendent planes of reality and human perception of consciousness has been food for thought and analysis in both Eastern and of late Western critical enquiry. Maya illusion as well as multiple consciousness or virtual reality have been two ends of the spectrum. This is exemplified in the philosophy of the East before the Christ Era and in the postmodern West with the intervention of Information Technology (amply verified by modes of entertainment of the new era like the American movie *Avatar* Cameron (2009), and Russo movies *Jurassic World* (2018) and *Endgame* (2019). In his book *Robot: More Machine to Transcendent Mind* (1998), Artificial intelligence researcher Hans Moravec considers a future in less than 50 years where machines overtake human intelligence. The present is the age of postmodern cyborgs which also bring forth the conflict between the biological and the technological: real and post truth; human and the posthuman.

Cyberculture

Cyber culture there is fast embroiling the 21st century humanity is the end product of a new world order: an order that was established by a hybrid of human/ non-human form devised as an afterthought of Western liberal Humanities as per the critic Katherine Hayles. This was investigated by the growing interface between Information Technologies and the techies leading to the surfacing of new contraptions that enabled 'virtual reality' which brought on the concretisation of Baudrillard's 'simulacrum' and cyberspace into a postmodern (virtual) reality.

Here one enters the world inhabited by the hyperreal- variously called as "posthuman, transhuman or human+" in order to indicate an advanced humanity-- cognitively, physiologically and neurologically superior to the human in its current state" (Bishop refractory). This posthuman world was envisioned in diverse modes by many. Identity assumes new dimensions with unbodied virtuality without the constraints of material substratum and this emergent spatiality becomes the site for multiple selves and umpteen

possibilities. According to K.A. Franck, identity will "no longer be tied to the physical attributes of age, gender, race, science or even to the human species. Attributes of human or other animate and in animate objects will be chosen and mixed at will (244). Here the postmodern world enshrined a technoculture wherein the posthuman has arrived. Such a technologizing of the human body to usher in the evolution of a fitter humanity is conceptualized, where the body becomes obsolete and the human becomes a 'disembodied subjectivity'. This projects a posthumanity living in a virtual cyberspace in the near future with a biomedically advanced race rising as a phoenix over the Identity/ subjecthood of EuroWestern episteme. The species will move over to a technospace of cognitive advancement, dismantling the humanism based on age old Cartesian Ego.

Cyberliterature

This identity subversion offered by cyberspace has been taken up assiduously by feminists. Cyberpunk which has been the volatile ground for gender switching and performances which answer to the call for a re-structuring of accepted male-centred transcendent subject. Works like Gibson's *Neuromancer* and Kathy Acker's *Empire of the Senseless*, movies like *Surrogates*, *The Matrix*, etc envision a gender-neutral utopia. In cyberpunk the identity changes occur in cyberspace where the human body is rejected as defunct 'wetware' which do not matter in the digital matrix and the mind or 'self' enters into a world of simulations. Losing the consciousness of the 'real' body the virtual bodies inhabit a spatial architecture. Hans Moravec says in his *Mind Children: The Future of Robot and Human Intelligence*, that "the future is a pace in which organic bodies have been discarded completely and minds are downloaded directly into networks of digital information" (qtd Bishop). Such formations called cyborgs (hybrids of human and machine) were envisioned by Donna Haraway in her *Simians, Cyborgs and Women* where a post-gender world was created. A new ontology of hybridity joined hands with feminist epistemologies free of the phallogocentric wor(l)d order. It

has been noted that the virtual space "was represented in both image and language as a pregnant womb-like space, a site both desired and feared" (Plant 12). This change is applauded by Haraway as a mutation in body in her *Cyborg Manifesto*.

Basically, posthuman existence can be said to be envisaged into two entities of the 'cyborg' and 'virtual reality'. Though machines, robots and the like can be considered as an extension of posthumanity (arising from artificial intelligence), it is only the cyborgs and virtual consciousness which emerge from human organics that fall under posthumanity. Here "the cyborg is a being which typically has an organic platform integrated with a complex technological superstructure; virtual consciousness is the transference of being into digitized form so that it may exist in immersive informational landscapes" (Posthuman Development 1). In other words, a cyborgian being is a hybrid of the organic and inorganic wherein the self of the human form is composed of multiple figurations with fluid social as well as somatic environments. Here technology and biology co-relate the human and the machine bringing on an ontology of the posthuman.

The term virtual reality was coined by the VPL computer company in 1969 to describe modern technology which allows the user an interface with virtual environments. Early simulations or virtual worlds of entertainment included the senses being transported to another place(space) without moving the actual body into that space. This leads to the question whether the virtual presence in one place while the physical presence is in another place make the virtual any less real. Here electronic media creates a parallel world with the power to transport and transform the real.

Cybernetics

This was the beginning of cybernetics with the close conglomeration of the biological and computing system. Here the traditional Western concepts of identity are corroded by the onslaught of Artificial Intelligence experts bringing on unsettling effects on modern intellectual

scenario. This trend got a facelift with Katherine Hayles' influential book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. Positioning Katherine Hayles as critiquing postmodernity, one can collate the significant stories she unearths in her work:

The first centres on *how* has information lost its body i.e., how it came to be conceptualised as an entity separate from the material forms in which it is thought to be embedded. The second story concerns how *the cyborg was created as a technological artefact and cultural icon* in the years following World War II. The third... how a historically specific construction called *the human is giving way to a different construction called the posthuman*. (2)

Hayles considers embodiment in a biological substrate as an accident in history and that consciousness (considered the seat of human identity in Cartesian Western tradition) as an evolutionary upstart. Hence the body is just an original prosthesis which can be replaced by other prosthesis and as a corollary, human beings can unconditionally articulate with intelligent machines. According to Hayles, "[I]n the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulations- cybernetics mechanism and biological organism, robot teleology and human goals." (3)

Posthumanism and Entertainment Industry

Her seminal work also focuses on literary texts which have given wider currency to these cultural theories among the public. Some of the works she focuses on are Bernard Wolfe's *Limbo*, the novels of Philip K. Dick and Gibson's *Neuromancer*. Her readings bring out the reality of how culture circulates through science just as science is circulated through culture. At the heart of this cycle are the 'narratives' that are embedded in culture and science. Here Hayles considers the role of the narrative in 'articulating the posthuman as a technical-cultural concept'. In the 21st century, this has also been taken up in the science fiction

movies which present the notion of the posthuman. Films like *The Matrix* (1999), *Avatar* (2009), *Interstellar* (2014), *Avengers - The Infinity War* (2018) etc exemplifies representations of the human in multimodal material artefacts of postmodern technology.

These films set in the future where the human has evolved into the posthuman bring on an idealised setting. The film *Surrogates* by Mostow in 2009 projects a world (America in 2154) in which people interact with each other through idealised surrogates of themselves. James Cameron's *Avatar* set in 2154 is about multimodal embodiment where subjects switch between human and non-human forms of life. *The Matrix* by Wachowski in 1999 depict cyborg machines that destroy their makers in the liminal world between real and virtual perception. The film deals with mediated virtuality and hyperreality, where the self can be transformed into digital information in the realm of simulation, with the body/wetware left behind. Here the film is a visual entertainment that forms the link between 20th century postmodern discourse and 21st century posthuman cyberculture. Media critics have pointed out that:

the *Surrogates* and *Avatar* hybridity has given way to convergence, cyborgian chaos to posthuman emergence, the virtual to the multidimensional.... In both these films, the resolution of the narrative rests on a return to the state of singularity, where multipresence is ultimately rejected in favour of a stable state of being. (Bishop)

Here the posthuman narratives of the 21st century movies too posit that the multidimensional possibilities evoke human predicaments- a conflict between 'lived embodiment and cybersubjectivity' similar to 20th century cyborg narratives as in *The Matrix*.

In the *Avengers* series particularly *The Infinity War* (2018) and *Endgame* (2019) by Russo Brothers, an array of all superheroes wage miraculous war with the evil powers (symbolised with the character Thanos) that intend to exterminate life in the universe. In the film, the *Avengers* and

the *Guardians of the Galaxy* attempt to stop Thanos from amassing the all-powerful Infinity Stones. The six Infinity stones are the Mind, Power, Reality, Soul, Space, and Time Gems. The two movies are composed of the 'no stones unturned' warfare between the two factions of evil vs good for the custody of the six gems that confer supreme power over the universe. The six Infinity Stones deserve mention in a study of the postmodern since it is the very aspects that the posthuman simulacrum attempts to embody. The power over Space, Time and Reality is the supreme control aimed at by the modern human mind/soul. It is also diverting to notice that in spite of the hectic warfare, with the place of action ranging from various corners of the galaxy, the superheroes more or less land back on solid earth and care for human relationships and emotions. While the *Infinity War* ended with the victory for Evil, it was with the promise of a sequel, *Endgame* which proved that Goodness will prevail. The movies which crossed records in terms of budget bring on an astonishing world of hyperreality and technical possibilities in the near future.

Virtual Reality

It is also imperative to study the impact of posthuman consciousness in the common man's lived experience as different from cinematic narrative mode. To understand the pragmatic aspect of the posthuman condition of the modern world, one should objectively evaluate the extent to which AI Robotics have emerged as well as the application of VR (Virtual Reality) in the commercial and domestic environment.

In the commercial or corporate field, the politics behind 'virtual business' becomes yet another matter of contention. Virtual Realty, according to experts, do not find favour with the co-orporates of the modern world who have control with their capitalist hegemony. Applications of Virtual Reality have been cited in some business outlets in Japan which allow the customer to have a virtual vision of their desired product in their actual domestic context, so as to ensure utility. But the 'liberating logic' of VR ("which offer

emergent choice and devalue centralized economic control") do not enthrall these capitalists, who on the other hand invest capital in the World Wide Web, since the producer of the page controls the whole process of rendering, which also brings in the cashflow. In the pancapitalists world economies and corporate leaders the cyborg systems flourish.

Another aspect of virtual reality is in the medical biological substrate of the human. The body of the human which requires technological assistance ranging from a contact lens in the eyes to gender re-assignment has been variously been called cyborg interventions. But it should be understood that such recombinations which require "little or no engineered interface between the technological and the organic" cannot be called to fall within posthuman discourse. They just allow the body to conform to accepted standards or the norm.

The 'Mufti' Cyborg

On the other hand, there are certain multitudes who do their jobs or are employed in conditions that could enable them being called 'civilian cyborgs' - also called information cyborg. The techies who are always seen with their laptop attached, on-duty 24 hours a day, who are 'on call' even in their leisure hours. The corporate 'powers that be' convince these technocrats that they prefer being cyborgs offered all they need - information, knowledge, convenience, entertainment and communication- which ultimately cajoles them to work more and accomplish the set goals, thereby setting high targets for the efficient worker. The actuality of such pan-capitalism is that the corporate agencies of production render a panoptic surveillance power over the individual and society. The only retriminating factor that keep the corporates from converting these civilian cyborgs into complete machines is their bodily manifestations and psychological needs. Like the embodiment in science fiction and movies rallying on for fixity and stable subjectivities, the civilian or the public citizen too has a biological substrate that requires to be reckoned with. As Katherine

Hayles notes,

Humans may enter into symbiotic relationships with intelligent machines (already the case, for example, in computer assisted surgery), they may be displaced by intelligent machines (already in effect, for example, at Japanese and American assembly plants that use robotic arms for labour), but there is a limit to how seamlessly humans can be articulated with intelligent machines, which remain distinctively different from humans in their embodiments. (284)

Conclusion

To the best of beliefs, *posthuman* does not mean the end of humanity- only to a certain conception of the human based on liberal humanism. The posthuman offers instead the resources for articulation of humans with intelligent machines. It is not to imperil human survival but to enhance it with flexible adaptive structures. Used in the positive sense, posthumanism is the method by which our environment can be co-ordinated in such a way as to make the entire world one system. Hayles concludes, "[I]t will ensure the long-range survival of humans and of other life-forms, biological and artificial with whom we share the planet and ourselves" (291).

The implications of the posthuman for the present and future are immeasurable. From Donna Haraway's 'Cyborg Manifesto' to Katherine Hayles' *How We Became Posthuman*, theorizing on the scope for technology to transform not only society, but the possibilities of each human and his/her subjectivity, becomes paramount. Communications and social structure transcend human limitations and bring on a discourse of postmodern consciousness that defy temporal matter and circumscribed paradigms of spatiality.

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Into the Nuances of Culture

Essays on Culture Studies

G. Baskaran • Blais Johny


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Cyberfeminism and the 'Brave New Girls' of Technology

Sujarani Mathew

Traditional streams of feminism dealt with the material practices connected with women, based on various indices like race, class and age. But its entry into cyberspace has recourse to the technoscience and information technology. The latest trends in cyberfeminist discourse has spread over—the new age transformations of women in the cyberworld; visibility and representations in the digital arena; women as 'avatars and databodies'; cybersex; hybrids and cyborgs, etc. Cyberfeminism is a later development of postmodern feminism in that it details the similar outlook on women and machines of the patriarchal society. Cyberfeminism subverts the existing status quo by aligning women's sexuality as the approach road for the cyberspace. The precursor of cyberfeminism was Donna Haraway's 'Cyborg Manifesto,' which envisions a cyborg (a (wo)man-machine construct that creates an identity beyond gender and politics. With the 21st century, cyberfeminism has also been taken up in New Media studies.

Generally, feminism is a term that envisages multiple streams of thinking and activism. Similar to concepts like culture, politics, history and art, feminism too involves various dimensions in its wake. As a revolutionary concept that envisages changes in the

lot of women and their innate experiences, feminism is looked at by many with scepticism and fear. The patriarchal system followed almost all over the world had marginalized female sensibility and subjectivity. The age-old subjugation of women led to a point where the thinking women of the world got together to speak up for their rights which led to the origin of feminism. Feminism began to spread itself upon its linkage with various concepts like culture, politics, history and art. The politics in feminism, history of feminism and feminist art began to take place in the leaves of scholarship. In course of time, feminist movement became successful in empowering women all around the world. From their initial stage of object subjugation to the male sex, a sea change has occurred in the status of women now.

feminism as a theory delved into the status quo of the women's experiences. From the beginning, it was a platform where not only women, but also men fought for the rights of women. The feminist scholarship today has taken up the presence of feminism in contemporary issues like art and media. Today feminism is deliberated not only in fiction and poetry, but also in cyber literature—media, blogs, cyberpunk are the diverse fields in which feminism has spread its influence.

Feminism: Changing Aspects

As it took shape as a movement as well as theory, the collaborations with various movements of the time led to feminism taking on many hues and names:

Cyberfeminism as a concept evolved out of the 1990s with the accessibility of the internet. The world wide web became open to the masses on April 30, 1993 and the later decade witnessed its uses being percolated to the technologists and the young generation even in the non-Western world. The various streams of feminism have flown over the first wave that concentrated on women's suffrage in the late 19th and early 20th century; the second wave that worked for the equal rights of women in the 1970s and the third wave feminism that spoke for the difference in race and class divides in the mid 90's. It surfaced in the modern era towards the 21st century in cyberfeminism. As the momentum of the period got reflected in the feminist activism of each era, cyberfeminism of 1990s was a critique of feminist interaction with the

cyberspace and new media technologies. If the first wave feminism began the mounding of women's role in society and the need to voice 'her' concerns, second wave feminism such as those espoused by Shulamith Firestone in the 1970s was on the need to utilize technology for women's convenience. They also critiqued how existing technological expertise was capitalist and promoting patriarchal status quo. Feminism's intersection with gender and technology thus began even from the second wave of the movement. The crosscurrents with cybernetics was to be heard in the discourses by feminists like Mary Daly who authored *Gyn/ Ecology*.

Cybernetics

Cybernetics is the science of control and communication in animal and machine systems. It conceptualizes human, animals and machines as cybernetic systems. Here the human body is a well-organized machine controlled by feedback mechanism that enables self-organization and performance following processing of data. Cybernetics, of late made its presence felt in robotics, anthropology, media studies etc and is significant in its impact on the present digital culture.

The western patriarchal society worshiped the epitomes of the 'woman and the machine,' and cyberfeminism emerged as a subversion of this hegemonic discourse. Cyberfeminists like Sadie Plant stated that women and internet are similar in nature, since both are "non-linear, self-replicating systems concerned with making connections" (Consalio). According to her, the modern world that is taking on a digitalizing nature is in fact a process of feminization and the new entry of intelligent machines is in fact paving the way to female emancipation.

Cyberfeminism: The Concept

The Toronto based media technologist Nancy Paterson (one of the people considered to have coined the term-another being Sadie Plant) in her 1992 essay, "Cyberfeminism" introduces the movement as focusing on "cultural diversity, transgender politics and recognition of the ubiquity of technology" (qtd. Paasonen). According to Sadie Plant, the empowerment of women can be realized in cyberspace as it eradicates sex differences and becomes a site where they could experiment with identity, paving way to avenues of power and authority for the female. Cyberfeminism is

a challenge to male authority in the digital space of mutable gender roles.

The term cyberfeminism was coined in 1991 (according to the most popularly quoted case) by a group of four female artists—Virginia Barratt, Julianna Pierce, Francesca de Rimini and Josephine Starr—in Adelaide, Australia who called themselves the VNS Matrix (pronounced Venus Matrix) to describe the philosophy of feminists interested in cyberspace, internet and technology and art. These early cyberfeminists aimed at a radical re-vamping of the site of cyberspace by a provocative self-representation in order to challenge existing hierarchies. VNS Matrix published a "Cyberfeminist Manifesto for the 21st Century," in homage to Donna Haraway's popular 'A Manifesto for Cyborgs' (1985), wherein they questioned the 'big daddy mainframes' that controlled the then cyberspace. Their slogan *the clitoris is a direct line to the matrix*, according to the critic Volkart, suggests that female genitalia is the entrance to the new digital communication systems. In cyberfeminist readings the cybernetic spaces are inhabited by images of human bodies as evidenced in the manifesto by VNS Matrix and instances like Sadie Plant's description of disks being "sucked into the dark recess of welcoming vagina slits"—here the cyberfeminists conspicuously sexualizes cyberspace and digital technology (Volkart 2001). In fact cyberfeminism is a reaction against the assumption of masculine monopoly of techno-science. These 'brave new girls'—the VNS Matrix—led the fight to end sexism and racism and took recourse to the software and hardware of the internet in order to do so. This relationship of women and technology subverts, by a play of language and media art, the discourse of male domination in cyberspace.

Origin of Cyberfeminism

Donna Haraway's essay, 'A Manifesto for Cyborgs' originally published in *Socialist Review* in 1985, can be considered the 'ur-text' of cyberfeminism. Though she has not spoken of this concept per se, her work has been the pointer for the 'Cyberfeminist Manifesto' of VNS Matrix. According to her, humans are cyborgs, i.e., a hybrid of machine and organism (Haraway 149). This essay questions the existing feminist theories on grounds of the

divisions between nature and culture and brings to fore the need for a relation between technology and natural sciences. As such, Haraway's *Manifesto* is a critique of modernism. Haraway's statement is "I would rather be a cyborg than a Goddess" (181). She argued for a feminist cyborg that challenged the controlling powers over women and other marginalized groups. Haraway exhorted women to engage with the informatics of domination and that women should appropriate technology and become politically aware users of cybersystems. Here Donna Haraway aspired for a gender-free utopia of technology.

VNS Matrix took up the call of Haraway by a playful appropriation of feminist theory and futuristic cyberpunk imageries. "Their version of cyberfeminism was a matter of cyberpunk fiction, the virtual spaces of MUDs and MOOs (multiuser domains and dungeons), game cultures and creative writing and obviously that of media art" (Paseman 116). At the same time, Sadie Plant used the term cyberfeminism to define the feminizing influence of technology in western society and its inhabitants.

'Cyberfeminism' is an umbrella term open to diverse definition. Broadly speaking, it is the feminism discussed or pursued via cyberspace. It is the free usage of technology for feminist outlook. Cyberfeminism reconstituted the social identity, individual space and even sexuality in cyberspace. In short, it is the intersection of gender and technology, partaking in the shape of the internet as a mass-medium/media. Cyberfeminism gains momentum at the practical and theoretical level as information and computer technology is utilized in academics, art and networking.

Cyberfeminist Activism

Apart from theoreticians like Plant, Paterson, Judy Wajsbom and Braidotti, activists also surfaced in cyberfeminism. As the Cyber-Femin Club in St. Petersburg, Russia, Germany also became a hub with the activities of Old Boys Network (OBN), Cybernetic Internationalists were another platform to discuss and explore digital technologies. Listserves such as women only FACES (1997), OBN (1997) provided networked forums for cyberfeminist discourse.

The concept of sisterhood was also a part of cyberfeminism as connectivity became the catchword with unlimited scope

through the internet. Activism was promoted through mass emails, and listserves sent information to thousands of subscribers. Of late, social networking sites have joined in.

Another interesting move was the formation of the Grrls movement in virtual space, (in the early nineties) made up of feminist groups such as Riot Grrls, Guerilla J, in order to ascertain representation. These women only sites were formed to empower themselves unlike being marginalized in the past. They took up women's issues, in order to strengthen their positions and not just as an agony column. Grrls, enjoy being females and exult in the fact. These grrls of the third wave feminism were an empowered group who categorized themselves as subjects and not just as objectified victims of patriarchy. It found the appropriation of once derogatory terms like 'bitch' and 'cunt' and morphed them to the cyborg lineage, in order to subvert the existing equations of gender and digital culture. At the same time, as cyberfeminists take advantage of the gender neutral world of cyberspace and in fact even promote bisexuality, the notion of gender itself is destabilized. Altogether, Grrls feminism is "global and multicultural and it shuns simple answers or artificial categories of identity, gender and sexuality" (Rampton).

Social issues are also taken up by the women's sites and various blogs by ardent activists. The interactive arena provided by Facebook, Twitter and the like in Web 2.0 era has led to the liberation of women from their gendered identity as 'second sex'. The cyberspace and cyberculture is very much relevant today as every social issue in the real world is making its waves in the virtual world too. Internet usage has grown multifold in late decades and today discussion posts, blogs, social networking sites, images are very much part of daily life, particularly that of the young generation. The mobile internet applications are fast converting the online/offline status of one person as a liminal point. You Tube, Facebook, Flickr, Whats App are applications wherein the young publish their images, texts, videos, etc. Grrls have cyberzines like the erstwhile *Geek Girl* which has reformed itself into a blog.

To summarise, Cyberfeminism can be categorized under three heads:

- It is the feminist analysis of human-machine relations as well as gender and agency in a culture saturated with technology.
- It is a feminist position for interrogating and intervening in specific technological forms and practices-viz., reproductive technologies, genetics, organ-traffic, etc.
- It is the feminist studies of the new media, i.e., the digital media and its emancipatory uses. (Paasonan 345)

Conclusion

Cyberspace and technology is used for promoting feminism or equality of gender by challenging gender stereotypes. By means of utilizing the collaboration of humans and technology women are able to empower themselves. As Radhika Gajjala and Yeou Ju Oh say in *Cyberfeminism 2.0*, cyberfeminism focuses on women's participation online. This could be seen in women's blogging networks, game hubs, social media and even in online mother's groups. The blogs and social media contribute actively to a popular mode of cyberfeminism. The plethora of women's issues and pages opened online about the concerns of women inform the public of a rising population of activists who are arguing for a gender-neutral world.

At the same time, the cyberspace is also a place where women can be cornered for cybersex, as being the medium which gained popularity largely for porn-usage. Even technology is structured within power relations and therefore, women have to be politically aware of their stand in cyberspace while utilizing the opportunities offered by new technology. The positive vibes offered by cyber technology for the liberation of the gendered identity of the female envisage a female utopia. It remains for the future cyberfeminists to move upward beyond utopianism and experimentation to the empowerment of a better humanity.

Cyberfeminism has eschewed the paraphernalia of theoretical diveboard and has been ambiguous about its political stances. Through an attack of sexual subjugation and a celebration of sexuality (evident in the images of superspeed cyborgs) females, cyberfeminism strikes a different path towards liberation. In the present scenario of global capitalism and the monopoly over communication networks, cyberfeminist activism needs a strong

transnational agenda about present socio-economic and politico-cultural issues.

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REJUVENATION OF MEENACHILAR, MEENANTHRAYAR AND KODOORAR – A MODEL FOR SUSTAINABLE DEVELOPMENT

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ABSTRACT

Water is an essential need in our day to day life. At the same time, it is one of the most important inputs for any endeavour for social and economic development of the country. With the mounting demand by the rising population and progress in economic status, the demand on the available resources are increasing and we have to continuously struggle towards widen the same water to gratify larger needs. Consequently, there is a pressure to conserve and utilize the limited availability of water resources in an optimum and efficient way. Being a resource of the community, water needs to be handled and arranged in a just manner with the participation of stakeholders. Healthy ecosystems and environment are needed for the survival of living organisms. The term 'sustainability' ought to be viewed as humanity's target goal of human-ecosystem equilibrium (homeostasis), while 'sustainable development' refers to the holistic approach and temporal processes that lead us to the end point of sustainability. As the society is affected by environmental degradation, climate change, overconsumption, population growth and unlimited economic growth, the matter of sustainability is to be questioned. In this ground, sustainable development is to be analysed in the domains of environment, economic and social and the sub-domains like cultural, technological and political aspects should be considered. Rivers are the cradle of civilization and Kerala is a rich land with many rivers. Most settlements were built along major rivers. Rivers are also important for farming because river valleys and plains provide fertile soils and it is an important energy source. The death of rivers is a serious threat to the survival of living organisms. So, river revival process is an alternate strategy to maintain the homeostasis. The river revival process started in the state since 2017 with the scheme to revive the linked rivers of Meenachil, Meenantharayar and Kodoor in Kottayam district. As an activity oriented programme, it mainly focuses on people's participation. Now it has received appreciation from United Nations as the best sustainable model of river revival. This prompted the authors to do an in-depth analysis of the project 'Rejuvenation of Meenachilar, Meenanthrayar and Kodoorar'.

KEY WORDS: River Rejuvenation, River Revival, Sustainable Development, Ecosystem, Environment.



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6. RECENT ADVANCES IN THE MoS_2 BASED NANO-PHOTOCATALYSTS FOR THE DEGRADATION OF PHARMACEUTICAL POLLUTANTS IN WATER

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of Chemistry, Kuriakose Elias College, Mannanam, Kottayam, Kerala

Abstract

Water pollution triggered by pharmaceutical waste materials is increasing in an alarming rate and is a serious issue that needs to be addressed. Traditional water purification methods including activated carbon adsorption, microbial degradation, membrane filtration and biodegradation are inefficient for the complete removal of pharmaceuticals from aquatic sources. Semiconductor based photocatalysis is an alternative as well as efficient method for the eradication of these pollutants from environment. Visible light active nano-photocatalyst, molybdenum disulfide (MoS_2) (2D material) is widely explored as co-photocatalyst in the field of heterogeneous photocatalysis owing its unique chemical, electric properties, superior adsorption capacity and tunable band structure. This article presents the recent advances in the application of MoS_2 and related heterostructures in the photocatalytic degradation of pharmaceutical compounds and gives an understanding on the degradation mechanism of these pollutants.



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1. STUDIES ON THE PHOTOLUMINESCENCE OF LANTHANIDE DOPED BISMUTH OXIDE BASED MATERIALS: A SHORT REVIEW

Aji Joseph, Assistant Professor, Department of Chemistry, Bishop Kurialacherry College for women Amalagiri, Kottayam, Kerala

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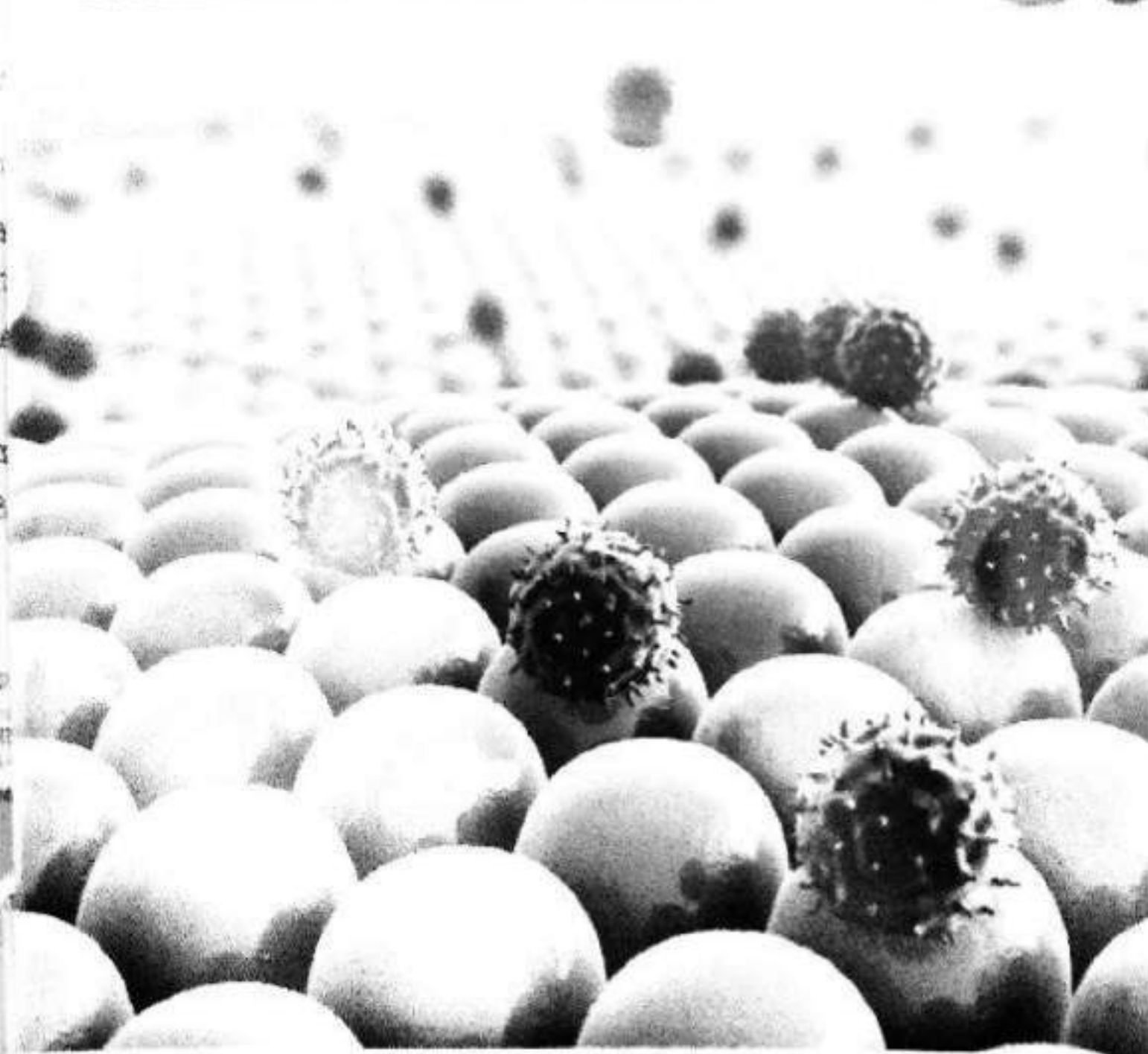
Jesty Thomas, Corresponding Author, Asst. Professor, Research Department of Chemistry, Kuriakose Elias College, Mannanam, Kottayam, Kerala

Abstract

Light emitting materials have a big impact in our daily life, promoting an ongoing search for luminescent materials with new and ever more efficient optical properties. Lanthanides are well known for their luminescence properties due to high colorimetric purity of emitted light. Hence, lanthanide ions are widely used to functionalize inorganic compounds for phosphor application in modern high technology devices. Bismuth oxide is a promising semiconductor and explored during the last decades due to its multifarious application and unique properties. However, reliable synthesis of nano sized bismuth oxide remains an ongoing challenge for materials researchers. This manuscript gives a concise overview of research conducted regarding the synthesis of bismuth oxide nanoparticles and analyses how lanthanide ion doping impacts the luminescence properties and making them active in the visible to near-infrared regions.

Keywords: Photoluminescence, Bismuth Oxide, Lanthanide Doped, Phosphor

ENZYMOMOLOGY AND METABOLISM



Dr. Sandhya C.

Dr. Vibin M.

Ms. Athira Raj


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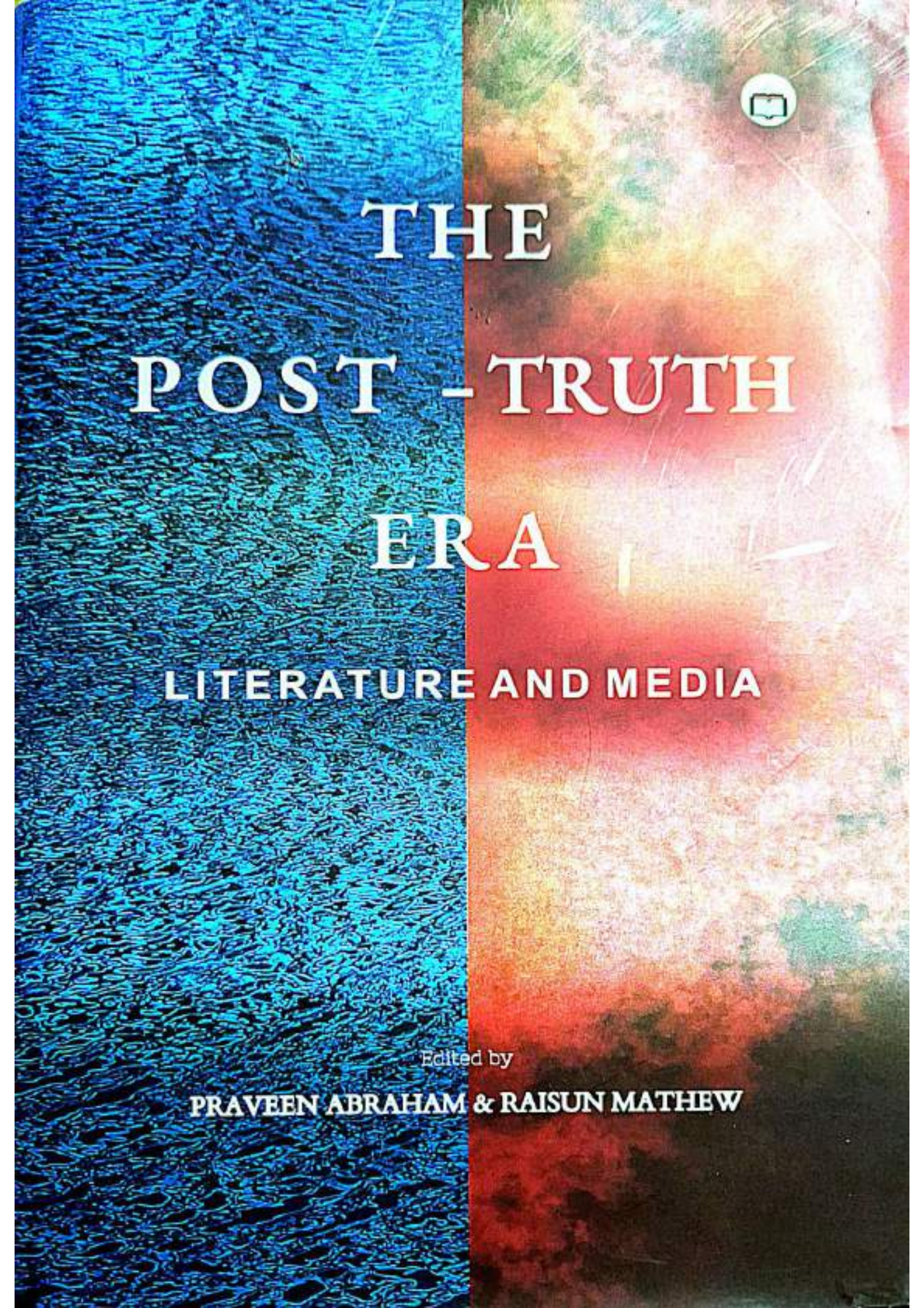
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Ms. Athira Raj



**THE
POST-TRUTH
ERA**

LITERATURE AND MEDIA

Edited by

PRAVEEN ABRAHAM & RAISUN MATHEW

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CHAPTER 6

The Descent of Dissent: Displaced Public Spheres of Fifth Estate in the Post-Truth Era

Indu Peter

“In times of universal deceit, telling the truth will be a revolutionary act”

George Orwell

Postmodern Conundrum

The Postmodern condition is rendered by and large as “incredulity towards metanarratives”. It is a metaphor for a deterritorialised space, which is marked by an ambiguous plurality and a process of ‘constant becoming’. Deterritorialisation refers to the dissipation of arborescent and hierarchical structures which circumscribe the world within singular and monolithic meanings and urges one to turn towards the rhizomatic and liberated existence governed by multiplicities and dispersed identities.

Yet, as we ply across the contemporary times, we realise that the once destratified spaces which eschewed essentialisation and monolithic universals are yet again being territorialised and demarcated by contiguity and bifurcation. The authoritative regime narrows down the world into a single vantage point that suits their interests, thereby turning a blind eye to the actual truth and many-sidedness of a matter. Subsequently, the parologies are supplanted with homologies. The subaltern voices, suspicions and suspense are often thwarted by the hegemonic noises of the ones in power. Recently, this is effected by the use of post-truth.

Post-truth often enrobes itself in varied guises like deception, half-truth, conspiracy theory, outright lie, denial, propaganda, etc. In the present day, as truth becomes a thing of the past, reason takes a backseat and emotions and imagination occupies the forefront. Facts and fiction are often intertwined, populaces persuaded, numbers exaggerated, new history and truths invented and adversaries silenced to gain political and social supremacy over the others. Consequently, the democratic ideals are swamped and liberal human sentiments are shoved down the drain in the post-truth world.

Traditional Media vs. Social Media

Ideally, media being the fourth pillar of democracy ought to rise above the oddities of post-truth. However, as we scrutinise the modern media arena, we tend to realise that the media, which is supposed to be the watchdog that unravels the flaws in society, has ended up being flawed thus impairing the very framework of democracy. Mass media and traditional media in particular have become pawns in the hands of the ones in power and to our dismay purvey the narratives of the official propaganda.

Even as traditional media grapples under the siege of post-truth, we find that the disembodied space of social media becomes performative and acts as an alternate public sphere in contemporary times. This is especially true in the case of trolls and memes which elicit laughter upon the follies of society. It offers a space to articulate our protest and contest the dominant discourses which reign control with the free play of lies and half-truths. Whilst the authoritative regimes thwart dissent and attempt to homogenise the heterogeneity of language games, the fifth estate refuses to be fixed owing to its fluidity as well as subversive nature and thereby gives rise to an anti-regime that proffer an alternate public sphere.

The *public sphere* as posited by Habermas consists of private people gathered together as a public articulating the needs of society with the state. It is a social space that generates, challenges and combats the state dynamics and affects policymaking. Thus in a world awash with deceit and false claims, the fifth estate rises above the doctrines of prejudice and hate-mongering, and strives to fashion a public sphere to question the odds and subvert the fascist discourses. Accordingly, while the entire world rallies after homogenising meta-narratives of power, social media becomes a tapestry of little narratives resisting the same.

Fifth Estate – An Avatar of Power or an Arbiter of Truth

Yet, whether the Fifth estate is an Avatar of Power or an Arbiter of Truth is a very slippery ground to dwell on. It would be mere wishful thinking if we assume that in the post-truth era when the truth is eclipsed and lies are spread in wanton, social media remains completely impervious to these changing climes. Whereas it has in itself the ability to espouse, counteract and re-appropriate the significations entrenched in popular culture and media, it is also true that lately, a rather bleak side of social media has emerged which alter intellectual uprightness, whet polarisations and bombard one with fake news.

The lack of accountability in the online space has resulted in the creation of many an alternate reality, which cater to different propagandas and reeks of misinformation. The unverified and free transmission of fake news, filter bubbles, half-truths, the proliferation of seemingly authentic accounts and political extremism tend to threaten the liberal democratic order of the times.

The emblematic expression of the online users delineated in the forms of hashtags, memes, likes, dislikes, shares, comments etc. propounds a sense of visual activism and political engagement. Though on one side it garners a political subordination of reality as a means of asserting dominance, on the other hand, it also offers the users an inclusive platform to counter, dissent and defies these disinformation campaigns. Levitin (2017) voices:

The Internet promises that it is a great democratising force, allowing everyone to express their opinions, and everyone to have immediate access to all the world's information...you have a virtual world of information and misinformation cohabiting side by side, staring back at you like identical twins, one who will help you and the other who will hurt you.

(p. 202)

In other words, the alternate discursive arena in social media thus subsumes not just a unified singular entity rather a multitude of variegated publics both dominant as well as subordinate, true as well as false. Hence, one has to employ his critical faculty to reap its true benefits. It seems like a double-edged sword which though on one hand endangers the facts and truths and jeopardises the liberal order, however also provides one with the tool to resist the befuddlement of facts. Thus though slightly displaced, there is a Counter-Narrative on the move which makes it possible to put the displaced public sphere of the fifth estate in place.

Counter Narrative on the Move

In the post-truth era of “the obfuscation of facts, abandonment of evidential standards in reasoning, and outright lying” (McIntyre, 2018, p. 19), we shall peruse three domains namely – nation, gender and health as it finds expression in cyberspace, wherein we find ourselves whipsawed between dominant public discourses and egalitarian counter publics. Although on one hand, the dominant discourses mar these domains with charades of lies, we shall see social media mercilessly deconstructing these fraudulent claims on the other, to keep alive the democratised equitable space

Narrativising Nation

In a world of nation-states, where national security and interest transpire as pivotal tropes, we see the onslaught of dissent and the onset of blatant attempts to silence any disaccord. As the democratisation of space often becomes a myth, the various forms of representation attempt to totalise rather than provide fluid and fractured multiplicities. The xenophobic, pseudo nationalist politicians rebuff facts and repudiate truth to devise their propaganda and aver their political supremacy. In any authoritarian state, truth thus becomes the first casualty. They colour, choose and characterise everything in a political milieu such that their version of truth gets paraded as the one absolute truth.

Of late, the Centrists in India uphold a pseudo-religious nationalism that is rooted in Hinduism and the Hindi language. Amidst the Centre’s attempts to endorse saffronisation, endeavours were made to make Hindi the national language of India. It was argued that there should be one language for the entire nation and that language had to be Hindi. Consequently, Twitter and Facebook abounded with *#StopHindiImposition* hashtags. Diverse Indians rallied together for the cause of the promotion of linguistic equality across social media. The celebrated journalist Faye Dsouza tweeted, “Mother tongue: Konkani, State Language: Kannada, Mother-in-law’s tongue: Marathi, Learnt from friends in B’lore: Tamil, Malayalam and some Telugu, Learnt from Doordarshan: Hindi. We Don’t have one language”, thereby upholding India’s unity in diversity. Eventually Centre had to call off this propagandist move owing to the ubiquitous protests against Hindi imperialism that raged in the social media. The counter-narrative questions the actions of state machinery such that social media becomes a more democratic space.

Another instance of Bharatiya Janata Party-led Central Government kicking fake news into gear happened when Prime Minister Narendra Modi made fraudulent claims of India defeating Coronavirus, as the first wave of COVID-19 slanted in the middle of January, even though the scientists had cautioned of a dire second wave. He gave a false sense of hope and security to Indians, opened the country to market. Medical practitioners and scientists across the country had turned on to social media during that time trying to forewarn the people of the impending second wave. Subsequently, it became clear that the State's unbridled optimism was heavily misplaced as the number of COVID-19 positive cases started skyrocketing. Despite exporting millions of free doses of COVID-19 vaccines to other countries as part of Vaccine diplomacy, when India faced a shortage of COVID-19 vaccines the State claimed that free vaccinations to Indians are an impossibility due to the economic liability it posed. Social media was once again bombarded with memes and tweets, one troll created a montage of the news article of State's claims that it requires a hefty 3000 crores to increase the COVID-19 vaccine production with the news of the purchase of the VVIP Air India 1 Jet for the Prime Minister which costs a gargantuan 8458 Crore Rupees thus revealing the hypocrisy of the State. Such memes save the masses from being kept in the dark.

There are numerous instances wherein we see the masses resisting the State's tyrannical narratives in many a creative way with the aid of the fifth estate. One such instance from recent times is how 'Mallubroiders', a Malayali Embroidery Artists Collective started *#SaveLakshadweep*, an embroidery campaign against the fascist policies which were forcefully implemented on the archipelago by the new Administration. Around 35 Embroidery hoops featuring the beauty of Lakshadweep were made and the campaign was very well received all over the globe. The netizens swore their solidarity with the people of Lakshadweep, who were in turmoil following the authoritarian and saffronised promulgations put in place to disrupt the culture and tradition of the Union Territory.

As Sim (2019) rightly points out: "When post-truth is backed up by totalitarian political power, then it can become a very formidable opponent, a very real threat to the democratic ideal" (p. 36). Social media offers one the scope to counter such a fearsome foe and uphold the liberal humanist ideals of the society.

Reimagining Gender

Patriarchy has always distorted the idea of gender from time immemorial. Even in the postmodern era, it strives to silence the feminine and ostracise those who dare to voice against the inequalities of life. Popular media has played a significant role in normalising violence against women and asserting gender roles in society. The misogyny at work tends to celebrate feminine frailties, exhort womanly beauty and chastise a woman. The politics of caste and creed creep into the fold. Many male chauvinists also take to social media to contend their dominance over woman, but the beauty of social media lies in its potential to counteract such fascist discourses in its way.

Conversely, women have fashioned a discourse of protest against the inadvertent advances of misogyny and patriarchy thereby subverting the very essence of sexism on social media. Although on one hand, patriarchy tries to normalise the violence on women and silencing of women, on the other hand, men and women join hands and become the voice of the voiceless. The *#MeToo* campaigns which ran across the globe gained their momentum solely because of the reach social media provided to it. In the form of comments, likes and shares these stories spread like a wildfire and it kindled the hearts of many women who were sexually abused at one point or the other to muster the courage to speak out. When some misogynistic men try to point fingers at the victims, social media combats them effectively. The *#MeToo* movement led to the persecution of many perpetrators who were walking scot-free till then, as in the case of the Hollywood producer Harvey Weinstein who is facing criminal charges for sexual harassment.

Women are also constantly objectified, idealised and idolised by society to chop their wings off. She is either dehumanised as a mere thing of beauty or is presented as a goddess to impede her import and voice. The patriarchal society deifies the mother as someone who wilfully sacrifices her whole life for the sake of her family. But Department of Women and Child Development, Government of Kerala posted an online flyer on 09 May 2021 (Mother's Day) in the guise of a dictionary entry redefining a Mother. It went like this, "Mother (Noun): An embodiment of unconditional love, an ever-patient superwoman; An ordinary person with love, sadness, anger and tiredness just like anybody else". This poster which was celebrated far and wide on social media urged one to accept a mother for what she truly is instead of weighing her down with over expectations. The mass outrage

against the image of a mother in oxygen support cooking food with the caption "Unconditional Love= *Mother* She is Never Off Duty" is another example of how social media resists the assertion of gender roles and toxic glorification of motherhood. Social media thus enables one to bid goodbye to regressive ideological machineries and helps women embrace a liberated existence. Social media serves as a welcome space not only for women, but also for queer, lesbian, gay and bisexual individuals too. It empathises with their problems, gives them a voice and questions the homophobia which is wantonly spread in society.

In addition to repudiating toxic masculinity, moral policing, misogyny, body shaming and social evils like dowry, the fifth estate throws light on varied progressive narratives of gender and also subverts the cloud of lies which surround them. It also puts equal parenting, menstruation hygiene, masturbation, post-partum depression, etc. on a normal footing. The alternate subaltern discourse acts as a counter-public in itself which subverts the populist notions of patriarchy.

Health through a Looking Glass

In the arena of health too, a lot of misinformation is spread in the guise of truth in the post-truth era. Social media over and over again finds itself filled with anti-vaccination campaigns, cons of organ donation, a profusion of pseudo-scientific facts and internet hoaxes on health along with the testimonials of quack doctors like Mohanan Vaidyar and Jacob Vadakkancherry. However, social media platforms like Infoclinic and Treat by Alter Doctor contest these dominant narratives, inculcates a scientific temper among people and shatters unscientific superstitions and misconceptions associated with health care.

Most recently Facebook was plagued with a post that claimed that Luc Montagnier, a world-famous virologist and Nobel Prize winner had forewarned that all the people who were vaccinated with COVID -19 vaccines will die within two years. This dire warning terrified people and on fact-checking, it was revealed that this was nothing but fake news and that Montagnier had never said the same. In this information age, fact-checking helps in distinguishing the true from false.

Fraudsters use social media to dupe patients with fake news and alternate medicines. In his book *Post-Truth, Scepticism & Power*, Stuart Sim maintains that:

Alternative medicine is another area that can be accused of making use of post-truth techniques, offering scientifically dubious treatments to a clientele who are, for a variety of reasons, susceptible to the post-truth approach to

health matters. The claims made for the vast majority of the products sold under the heading of alternative medicine are decidedly spurious, rarely standing up to any properly rigorous testing regime. (p. 28)

This reflection sheds light on people's tendency to readily suspend their disbelief and run after the miracle cures in the market. Yoga guru Baba Ramdev falsely claimed that Patanjali's 'Coronil' was approved by the World Health Organisation as medicine for COVID-19, when WHO had not certified any traditional medicine for COVID-19 treatments. After being debunked, Patanjali was forced to clarify that the drug was approved not by WHO but by DCGI, the Government of India. In this post-truth era, it is very important to verify the credibility of the medicines promoted in social media before use.

"The danger of post-truth is not just that we allow our opinions and feelings to play a role in shaping what we think of as facts and truth, but that by doing so we take the risk of being estranged from reality itself." (McIntyre, 2018, p.190) Today when we are standing in a crossroad where belief becomes a symbol of truth, the world tends to in fact take a detour back to the regressive times of the past. Though science is advancing frantically, there seems to be an antipathy towards progressive feats like vaccination, organ donation etc. However, in social media you find this regressive machinery being deterritorialised. The singular denouements of quack doctors are challenged using memes and trolls and other rhizomatic offshoots of polyphonic voices which find celebration owing to the democratic nature of cyberspace. Humour is used as a trope to deconstruct the idea and throw light on the hollowness of their arguments and pseudo-facts. The participatory nature is yet another tool that aids the process.

Conclusion

In the postmodern world where the digital experiences closely assimilate itself with everyday life, unlike the traditional media which has deteriorated into public relations, the fifth estate emerges itself as a public sphere that offers us a space to articulate multiple truths as well as fight the fascistic forces and their discourses of post-truth. Further, a more inclusive discourse that challenges and counterposes itself is in the making in the fifth estate, which attempts to neutralise or repress these hegemonic overtures.

Therefore, in the post-truth era of political subordination of reality when truths are concealed, the fifth estate emerges itself as a public

sphere, though at times it falls victim to the metanarratives of state, patriarchy and power. In times of universal deceit, even though the voices of dissent at times do meet its descent, having been drowned in the programmed noises of the social media and various fetishisations which pervade there, social media offers us the scope for a counter-narrative that combats the distortion of facts and thereby helps to uphold itself as a public sphere, which though might be displaced is never misplaced.

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The Agent of Anomie: Reading Joker as the Birth of a Maverick

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Abstract

Alienation, in social theory signifies a state of estrangement or separation from one's milieu, work, products of work, or self. The idea of alienation remains equivocal and nebulous despite its popularity in contemporary life. The elusive nature of the word is in a way its quintessence. Alienation is also characterised by powerlessness, the feeling that one's destiny is beyond one's control and is determined by external agents, luck or fate. It also signifies meaninglessness, the inability to comprehend certain actions, circumstances or a generalized sense of purposelessness in life. Alienation could, at times, masquerade as anomie or normlessness, the lack of trust in or commitment to established norms and conventions, the naturalised and irrefragable status quo of the society. Alienation, in this sense, may give rise to deviant behaviour and immoderate competition. Alienation is also a kind of social isolation or a kind of self-imposed estrangement, perhaps the most ineffable and impenetrable of its myriad facets.

Keywords: Alienation, Anomie, Joker, Nihilism, Durkheim, Altruism

Application of Bismuth oxyhalide photocatalysts for the deterioration of pharmaceutical pollutants

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Abstract

The uncontrolled existence of pharmaceutical compounds in the aqueous environment demands for more efficient water treatment technologies. Bismuth oxyhalides, BiOX (X = F, Cl, Br and I) appears as an innovative class of photocatalysts for waste water decontamination. The photocatalytic degradation performance of BiOX have been widely explored by many researchers either in pure or improved forms. These composites are capable of degrading pharmaceutical pollutants under UV or visible light. Modification of bismuth-related photocatalysts with metals/non-metals, carbonaceous materials and biopolymers and the use of heterostructures/mixed metal oxides is testified to promote it with remarkably high visible light response and competent photocatalytic performances. This review focus on different BiOX photocatalysts for the degradation of pharmaceutically active compounds.

Keywords: bismuth oxyhalide, photocatalysts, degradation, pharmaceutically active compounds.

Role of Nanotechnology in Preventing Covid-19 Outbreak; Short Review

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Abstract

The emergence of COVID-19 is becoming a serious threat to human life worldwide. Nanoparticles have drawn significant interest in the control of COVID-19 outbreak due to their unique properties. This review helps in understanding the possible link between the current pandemic of SARS-COV-2 and nanoparticles.

Keywords: coronavirus, COVID-19, diagnosis, nanotechnology

Since December 2019, the world has faced infectious novel coronavirus disease-2019 (COVID-19) outbreaks due to the viral particles of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2) [1]. Corona virus is an enveloped, positive-sence and single stranded RNA virus which causes emerging respiratory disease outbreaks and a variety of diseases [2]. It had a substantial global impact and influenced over 223 countries, areas or territories. Corona virus disease affected 11,92,120,681 peoples around the world out of

Biosynthesis of Nanogold using Honey and its Surface Plasmon Absorption Studies

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Abstract

Biosynthesis of nanoparticles is of interest to biologists, chemists and material scientists especially in light of efforts to find greener methods of inorganic material synthesis. Nanobiotechnology combines biological principles with physical & chemical procedures to generate nano- sized particles with specific functions. In the biosynthesis using natural products as reducing agent, nanoparticles of desired size can produce at room temperature. In the present study, gold nanoparticles were synthesised using varying concentrations of honey as the reductant. UV- Vis measurements showed characteristic pattern of variation with respect to concentration. The colour as well as absorption values are indicative of the nano nature of gold particles.

Keywords: gold nanoparticles, biosynthesis, honey, reducing agent

1. Introduction

Biosynthesis of gold nanoparticles has been carried out by several groups of scientists using plants, fungi and bacteria. Many microorganisms produce inorganic nanomaterial either intra or extracellularly. Synthesis of gold nanoparticles using the bacteria *Pseudomonas aeruginosa* was reported by Husseiny *et al.* in 2007 [1].



**ORIENTALISM EMBEDDED IN
JOSEPH CONRAD'S HEART OF DARKNESS**

FR. JOBY JOSEPH MUKALEL CMI

ORIENTALISM EMBEDDED IN JOSEPH CONRAD'S HEART OF DARKNESS

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An Evaluation on Microbial Consortia Present in Mosquitoes and their influence on the Vector Competence

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Abstract

The disease-transmitting mosquitoes can be categorized mainly into three genera, Anopheles, Aedes, and Culex. The significant mosquito-microbiota interactions include symbiotic relationships, where mosquito factors can shape the composition and proliferation of the microbiota. However, the microbiota contributes to the mosquito's food digestion, nutrition, growth, fertility, and immunity. At the same time, the bacteria could modify the gut environment and inhibit the development of parasites either by inducing reactive oxygen species (ROS) or modulating the expression of mosquito immune genes. This review focuses on the bacterial species present in mosquitos and their influence on vector competence. The bacterial transmission strategies are of great importance since mosquito microbiota has shown great potential for cutting down the transmission of mosquito-borne pathogens. Vector control is one of the most effective strategies to reduce mosquito-borne diseases. The engineered symbiotic bacteria producing antipathogen effector molecules can be an effective tool for reducing the transmission of mosquito-borne pathogens.

Key words: Mosquitoes, Microbial Consortia, Vector Competence

The Role of Financial Socialization in Promoting Financial Self Efficacy among Young Adults

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Abstract

Financial socialization is the key factors which influence the financial well-being and financial inclusion of the people. Many studies show that most of the financial problems such as an increased burden of debt, bankruptcy, and low savings among people in general is due to the lack of financial knowledge and negative financial behavior among the people. Financial inclusion, financial knowledge, and financial behavior of an individual can be widely attributed to financial socialization. When you take into consideration the Indian society in where the financial inclusion among the people is in its primitive stage financial socialization among the general public is something to be discussed about. The paper highlights financial socialization impact on young adults and how it has influenced the financial self-efficacy of the people.

Key Words: Financial socialization, Financial inclusion

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Key Words: Financial socialization, Financial inclusion

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27. Post-Modern Voice in the Select Novels of Amitav Ghosh

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Abstract

Literature as a rule and literary studies specifically has gone through an ocean change in the vast sphere not many decades with post-modernism, What had before been thought to be

society as it targets speaking to a total image of society unbiasedly. The practical or realistic fiction depicts the ideal world of steady, cement, and final portrayal of society and the world. The pragmatist writers, for example, Charles Dickens, George Eliot, George Meredith, William Makepeace Thackeray, Thomas Hardy, and Anthony Trollope, depicted social, political, and financial states of society. The metanarrative of practical or realistic fiction thinks about language as a steady and reliable instrument to portray thoughts and real factors. In the modernist fiction, the writers, with the soul of experimentalism, question the absolutism and the chance of objective realism by offering an option in subjectivism. Despite dismissing the authenticity and its goal asserts, the modernists find new solidarities and certainties as abstract styles of narration. The procedure of continuous flow permits the innovators to depict the more profound degrees of internal identity. They don't acknowledge the target cases of the real world and truth, however their quest for universal facts/more profound degrees of reality proceeds. The structuralist wing of modernism places the chance of a stable idea meant that could offer a steady view of reality. The modernists, for example, James Joyce, Virginia Woolf, D. H. Lawrence, and Thomas Mann, look for the solidarities and reality in their fictions. According to the same authors:

In short, modernism was in most countries an extraordinary compound of the futuristic and the nihilistic, the revolutionary and the conservative, the naturalistic and the symbolistic, the romantic and the classical. It was a celebration of a technological age and a condemnation of it, and excited acceptance of the belief that the old regimes of culture were over, and deep despairing in the face of that fear; a mixture of convictions that the new forms were escapes from historicism and the pressures of the time with beliefs that they were precisely the living expressions of these things and in most of these countries the fermenting decade was the eighteen nineties. (Bradbury and McFarlane 46)

Post-modernism, with its pluralism and variety, permits the writers to make fictions with numerous narrative strategies. With the end goal of deconstructing the current fixities and conclusions in the fiction, the post-modern scholars make different post-modern narrative styles. In fictions, the writers mock the solidarities and make various potential methods of portraying the narratives. History, in post-modern fiction, turns into a subject of post-modern thematic thought. Post-modernism acknowledges the history and recognizes its reality and importance in the current setting; however, it questions the metanarrative of its incomparability, credibility, and objectivity. In fictions, writers like Fowles, Marquez, and numerous others narrativize history and reduce the qualification among certainty and fiction, or history and fiction. They address and sabotage the objectivity and straightforwardness in historical portrayals. Actually, they undermine the very distinction between verifiable or historic writings and fictions by thinking about them as demonstrations of story, and subsequently, the guidelines of account similarly apply to both historic reports and fiction. John Donne had summed up the Post-modern situation in "An Anatomy of the World" (1611). We read in the Poem:

The New Philosophy calls all in doubt...
They seek so many new; they see that this
Is crumbled out again to his atomies.
'Tis all in pieces, all coherence gone,
All just supply and all relation

Prince, subject, father, son, are things forgot,
For every man alone thinks he hath got
To be a phoenix, and that then can be
None of that kind, of which he is, but he.

This is the world's condition now, and now... (105, 111-119)

We see that modernism tried to capture reality through individual consciousness which was equivalent to life itself. For Virginia Woolf, it is a "semi-transparent envelope". It is also seen that modernism cultivated austerity, whereas post-modernism is interested in pleasure. M.K. Roy, in his article 'Two Faces of Modernism' stresses 'Unknowability' as one of the significant aspects of post-modernism. This unknowability is distinguishable in Amitav Ghosh's novels.

Post-Modern Voice in Amitav Ghosh's Novels

Amitav Ghosh as a writer of post-modernism centers totally around the colonialism's impecunious, and typically non-white, casualties. They are given the key position, not the white experts. Amitav Ghosh took almost three and a half years to compose the second book of his Ibis Trilogy. In *The Glass Palace*, Amitav Ghosh depicts the destruction brought about by Japanese assault in Burma and its result on the Army officials and individuals. He makes a knowledge of misery that manages so much human disaster, wars, deaths, annihilation and disarticulation. Ghosh wrote the narrative of relinquish in *The Shadow Lines*. The set free of May from Muslim hordes in the aggregate mobs of 1963-64 in Dhaka is positively an incredible given up. Amitav Ghosh explained a creating mindfulness of the aspiration, and disappointment of the colonized network. In *The Hungry Tide*, Ghosh courses the purposeful on eco-condition and advancing issues through the interference of the West into East. The demolition of conventional country network life in *The Circle of Reason* is an anecdote about the modernizing intrusion of western culture and the weighty dislodgment of non-European people groups by government. Amitav Ghosh is one among the postmodernists and is tremendously preferential by the political and social milieu of post independent India. Being a social anthropologist and having the event of visiting new lands, he remarks on the current situation the world is going through in his novels. Social deterioration, colonial and neo-provincial force structures, social degeneration, the materialistic offshoots of modern civilization, biting the dust of human connections, blend of realities and dream, look for perfect identity and security, diasporas, and so forth., are the significant concerns in the works of Amitav Ghosh. Amitav Ghosh's tale *The Shadow Lines* is likely the most significant anecdotal work to have showed up in South Asia literature in the most recent decade. It summarizes and fictionalizes all the significant issues of postcolonial literature like the quest for character, the requirement for autonomy or independence, the troublesome relationship with colonial culture, the reworking of colonial past, and endeavour at making another dialect and another narrative structure and the utilization of individual memory to comprehend shared past. In *The Circle of Reason*, Amitav Ghosh addresses the experience of postcolonial relocation, distance and rootlessness, and dives deep into the mind of individuals got up to speed in the vortex of segment. The epic is partitioned into three distinct segments called Satva: Reason, Rajas: Passion and Tamas: Death. The problematic life that the migrants live in the inlet or gulf nations, the brevity of

opportunity and material flourishing in modern life are front grounded in this novel. In many of his novels especially In *The Glass Palace*, Amitav Ghosh portrays the destruction brought about by Japanese intrusion in Burma and its impact on the military officials and individuals. He creates a feeling of downfall that manages so much human misfortune, wars, deaths, destruction and separation. There are options of multiple interpretations in his novels. Sometimes words are used to subvert the meaning by means of nonsense. Amitav Ghosh's writings can be categorized both as postmodern and post-colonial as he believes in taking a path away from the beaten one. In doing so, the revelations present him 'unmasking authority' of every kind.

Conclusion

Both modern and postmodern writings speak to a break from nineteenth century realism. Yet, essentially Post - modernism is a response against modernism. It offers voice to insecurities, disorientation and discontinuity. In character advancement, both modern and postmodern literature investigate subjectivism, abandoning outer reality to look at inward states of consciousness and so on. In Amitav Ghosh's novels, there is a bright exhibit of sailors, convicts and workers cruising forward in the expectation of transforming their lives. Obviously, it appears to be that the characters are his target groups.

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13. Changes, Techniques and New Styles: A Re-Reading of Post Covid Online Education Scenario

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Abstract

All areas around the world, including higher education, have been crushed by the effects of COVID-19 pandemic. As we approach the new normalcy in the post-COVID-19 period, there is a need to consider knowledge once again in the light of developing chances and difficulties. Nowadays, Online classes are led through a devoted Web website. Here classes might be educated continuously, with the two groups like teachers and students signing on to their PCs all the while, or course substance might be given in modules or exercises that students mark audit at their convenience. Even students are offered access to the course schedule and modules, a task list, the educator's contact data, arrangements of assets, evaluations, and conversation gatherings. Anyway, there is learning takes place. Learning is a term of growth or change in a person, which is manifested as new modes or patterns of behavior. It is a tacit experience. Teaching is also a unique endeavor. We regularly consider each to be as a work in progress, expanding on past triumphs, facing new thoughts, and adjusting the content and structure to each group of students. This paper endeavored to reexamine education and training in the new typical post COVID-19 time from the viewpoint of educational plan considerations. The COVID-19 pandemic influences political, financial, social, and mental measurements. These measurements consistently ought to be additionally inspected to all the more likely to equip education frameworks or systems in the new period in mankind's history.

Keywords: Online Learning, Post Covid Era, Substance, World Health Organization, Internet, New Normalcy, Learning, Classroom Learning

Changes, Techniques and New Styles

Online learning incorporates correspondence among students or instructors commonly happens through e-mail, a conversation board on the class Web webpage, or filed video transfers containing taped exercises or conversations that can be spared and gotten to later. Teachers request the students to complete their total activities within a specified period; these may incorporate composed tasks, online tests and oral tests, and audio and video recordings, thereby students are showing their patient history-taking strategy. We should attempt to rethink education in the new standard post-COVID-19 era through the perspectives of curriculum studies and active mode of teaching styles. Institutions are offering on the web courses regularly to give innovative direction or instructional exercise meetings. These meetings may provide a prologue to the Internet just as data about the institution's course management program. An assortment of projects, (for example, Blackboard) are utilized to run online classes, and, fundamentally, students have the option to explore these projects to discover the course prospectus and tasks. The remarkable effects

of the COVID-19 worldwide episode are without a doubt guiding instructive frameworks to another typical period in mankind's history.

Challenges, Struggles and Opportunities

It is advisable to plan to go to a meeting or if nothing else see an instructional exercise on the PC framework your institution uses. On your rundown of activities, this ought to be at the top. COVID-19 was first knowledgeable about Wuhan, China, in late December 2019 (Shereen et al., 2020). A feature of COVID-19 course of events shows that on January 13, 2020, the first coronavirus contamination outside China was accounted for; February 02, 2020, the early coronavirus mortality outside China was notified; March 11, 2020, the World Health Organization declared the episode a pandemic spreading to various mainlands; April 10, 2020, the worldwide loss of life outperformed a hundred thousand; May 11, 2020, nations like Spain, New Zealand, Thailand, and Iran started to facilitate their isolation limitations after a small decline. Now mortality rate is hiking in India day by day. Online courses permit you greater adaptability regarding schedule and syllabus; however, it requires a significant period, self-restraint, self-direction, association, and inspiration to finish tasks, courses, and program prerequisites. It might be useful to compose assignment due dates in an organized way or as a schedule and designate a particular measure of time every day or during the week (somewhere around each a few days) to give to course prerequisites. The Online learning has to be a valuable learning experience. The new normal post-COVID-19 period opens an open door for reevaluating the objectives of training. One of the goals to make the educational plan meaningful, suitable, and responsive is the advancement of readiness amid debacles, sicknesses, and crises. There are existing educational program objectives that address a lot of readiness skills in various fields of study. Nonetheless, the focal point of these objectives is explicitly on cataclysmic event readiness. Considering the coming new normal post-COVID-19 period, there is a longing for a more focused aim around readiness or preparedness as far as worldwide illness flare-ups. The COVID-19 pandemic found educational frameworks and students napping. This circumstance uncovered holes in the educational program. One of the means to deliver this hole is to build up a lot of readiness skills shaping an objective of the educational program. With the limitations brought by COVID-19, another typical educational program may likewise receive the combination of matter and material. This methodology makes it conceivable to decrease the number of hours spent on all the subjects yet at the same time tending to all the educational plan desires. This technique will empower the osmosis of educational plan content desires from different topics in planning guidance or instruction. Web-based learning is growing, particularly for general training necessities. For example, basic history review courses. Our challenge is to keep testing, to pose troublesome inquiries about what does and doesn't work, and to envision additional opportunities.

Online Learning and Classroom Learning-A Comparative Study

Students think about web-based learning (online learning) and study-hall learning (Classroom Learning) by expressing that web-based learning is an efficient program. Students also additionally focused on the point that they don't have to get up early morning and go to their classes and be a member of the class. They can effectively enter the Internet and do their course learning through the Internet, which spares time. Now and again in the study hall, the beneficial thing is, on the off chance that they have an inquiry, they will inquire. Yet, while on the web, they are nearly all alone. Even though they can get to the

instructor or teacher by messaging or e-mailing, however, they feel that there is a bit of leeway by being in the ordinary homeroom setting. Students concurred that utilizing the English language in online courses and having distinctive social and cultural backgrounds make difficulties to encounter on the web course in an effective manner. Students try to communicate difficulties in internet learning from multiple points of view. The fundamental issue is language, which can be the factor that limits normal comprehension. There are issues in conveying on the web on account of social and cultural contrasts in like manner understandings. Web page configuration may be a factor to limit the uniqueness of comprehension. Research discoveries show that the progress from the homeroom to the online condition influences our understanding. Online courses expect students to act naturally capable, self-roused, and ready to speak with teachers and different students through the Internet with the help of communication technology. The capacity to perform well in this setting is influenced by both individual characteristics and social and cultural background.

Conclusion

As teachers, we predict the difficulties in higher education for making the students meaningful and cautious who are generally pointless and thoughtless as unemployable by the realm of vulnerabilities or uncertainties in post-COVID time. The online system of instruction will decay the guidelines which are attractive for the economies of the world, including India. As educators, we have firm confidence that online education can't be a substitute for offline instruction in institutional setup. Both can exist together yet can't endure long in confinement.

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The Projection of Society in Turmoil and Discordant Sentiments: Significance of the Vision and Mission of José Saramago in the Postmodern Era

Abstract

The Portuguese writer, José Saramago, employs metaphorical language, creative writing styles, and innovative strategies to suit his themes. His writing attracts a wide range of readers all over the world, including Portuguese spectators. More than a creative writer, he is depicted as a pure human being with a genuine heart and an original insight. He presents an insightful vision into Portuguese society, and his ideological missionary task is to enlighten and illuminate the world with humanistic and revolutionary thoughts. However, there is a philosophical and epistemological conscientization in his novels like *The Cave*, *Blindness*, *The Stone Raft*, and *The Double*. Moreover, his mission is portrayed as sophisticated, intuitive, and acute. His visionary motif seems to represent his perspicacious and intelligent attitude to transform society. This paper intends to present José Saramago as an authentic and compassionate human being who had a far-sighted vision and a humanitarian approach all through his career.

Keywords: Compassion, Egalitarianism, Existential crisis, Revolutionary idea, Transcendental Humanism, Visionary

Visioned Mission in the Literary Works of José Saramago

The revolutionary missions so envisioned in the works of José Saramago are manifold because he was a literary figure having futuristic visions and missions fair and square. Through his works, he is trying to spread a sensibility which is unique, constructive, novel and forthright in composition. His writing style incorporates sonority of words and phrases that represent the freedom and audacity of a society. Through his narrative voice, he represents society and the plurality of voices in general. This plurality stands for the authenticity and the genuineness of a

humanitarian group. The characters of his novel vacillated between reality and imagination at the initial phases of their existence. Still, in the end, they took decisive decisions to reach that domain of righteousness which transcends above the barriers, boundaries, established frameworks, tested formula, so-called well-contrived notions and seemingly structured ways of this world. The main visions of José Saramago are listed below after a critical evaluation of his major novels.

(1) An Egalitarian World is envisaged

In the novel titled *Blindness*, the idea of a world of equality is dealt with inspiring. The imprisonment in a dilapidated building can be termed as illegal detention or confinement. Still, when such a life situation is imposed upon this group of people only, they realize to what extent what extent, they have the propensity to traverse to meet the challenges of a chaotic world. Although this isolated or alienated house is a place of exploitation and discrimination and there are people who otherwise never think about building bridges to follow human creatures in a healthy human society, do so with ease; thereby they bring forth the egalitarian principles which should have been so synonymous with their life earlier.

(2) The New Level of Humanism

The works of José Saramago concentrate upon the propagation of a new dimension of humanism which is unbiased, unblemished and non-discriminatory in its very composition and make-up. The characteristics of humanism that are synonymous with the novels of Saramago are the collective consciousness, the cooperative venture on a typical plain, the ability to reassert the humanity amidst the intractable problems swirling around, the lifting of humanism above the pale of religion, caste, communities, creeds, and ideologies. We also notice the importance attached to humane ways and means, the exploration of historical notions by the application of the rational way of looking at it to live in general. It is also found that the challenges erected against the heavy-handed approaches resorted to by the established frameworks and the reformulation of the preset notions of the texts by adducing them with the bright idea of ennobled humanism. He also tries to articulate the personality traits so highlighted to add ample emphasis upon the clean bill of health associated with the essentiality of living a down-to-earth form of life on the firm foundation of humility and humanity. So, the concept of humanism is centered on the belief that everything is confined to the idea of living a life of moralistic and ethical nature in this world without religious underpinnings.

(3) Transcendental Dimension of Humanism

As per the vision of José Saramago, humanism is not ripped apart from the reality of life; rather, it does have an inextricably intertwined relationship

with it one way or the other. It is imperative to give a global dimension to humanism so that its very implementation and lack of it around the world can be measured and gauged. Today the scope for the dissemination of humanistic principles grows and flourishes but its application on the ground shrinks and fails to make an impact. This can be understood from the very fact that today the migrants from developing countries who try to reach the shores of industrialized countries are prevented from doing such a thing. This kind of inhuman treatment of the other is clearly expressed and delineated in the novels *Blindness*, and *The Double* wherein physical deformity and imitation become the reasons behind the confinement of innocent people and their subsequent brutalization. The phenomenal increase in atrocities is a clear indication of the inhumane stance or direction in which this world is turning. The novels of José Saramago pave the way for the reassertion or reiteration of true humanism in a world which is caught up in the violence today.

The Sociological Dimensions in the Novels of Saramago

The existing social order is reset, and the state of society in churning is delineated in the novels of José Saramago such as *Blindness* and *Seeing*. The social realities are entirely different compared to the seemingly calm waters prevalent on the surface. In the novel *Blindness*, the social framework is manipulated to implement goals and structures which are exploitative. A society of injustice within a power-hungry society takes center stage one way or the other. The deformed physicality is used as a penalizing element of discrimination here. The social hierarchies do get disintegrated in the light of sustainable attacks upon human dignities by established stakeholders of the society. For example, in the novel *Blindness*, the people belonging to various backgrounds are clubbed together under one consolidated abusive framework due to the common denominator called physical deformity of the people as a whole. This idea is akin to the untouchability factor here in the Indian society wherein the economic status of an individual doesn't erase his caste background; instead, that factor still does have a significant impact upon the individual's social life. In the novel *Seeing*, a social system of revolution and consistent defiance does have significant traction wherein the people consciously or wantonly pay back in the same coin through which they have been put into overplays by unscrupulous politicians. Amidst this dubious game plan of the political masters, everything goes on contrary to social will arising out of a society of democratic credentials. We live in an era of severe and increasing alienation of humankind from themselves, and the natural world. In our journey through life, we face a variety of experiences, attachments, and even aversions. Sometimes, we undergo a kind of mental torture or emotional crisis. Certain things cling to our minds, and we deliberately avoid certain things and interests. As Eliot comments, everything

in this world is subject to change and decay. Modern man in this world is deadened by mental abstraction and emotional crisis. There is no spiritual connectivity and wisdom of the heart. According to him, the perpetual struggle for good and evil does not change. The self-identity of modern man is continuously tested and shaken by the invasion of commercial culture and globalization. In the *Stone Raft*, Pedro Orce comments: "I don't want to stay here, with the earth-shaking under my feet all the time, and people telling me that I only imagine things..." (72). It is also written in the novel *Stone Raft*: "Business flourishes...Some men are now with other women and some women with other men and their children are thrown together. This is the inevitable outcome of all great wars and migrations" (244).

Saramago reiterates and connects instances like this in many situations and those meaningful deliberations stand as a prophecy before the readers as well. Those deliberations represent the existing postmodern situations. Saramago clearly articulates the idea that there is a perennial search for freedom and authenticity and man is not at all comfortable and satisfied by the needs and means. He is looking for self-actualization and searches for perfection. *The Double* also represents the thought as mentioned above and spiritual vision. It is seen that Saramago's novels end on a pessimistic note, and that shows the society is in a turmoil and discordant background.

Saramago's Revolutionary Resetting of the Existing State of the World through his Novels

José Saramago's novels such as *Blindness*, *Seeing*, *The Double* and *The Gospel According to Jesus Christ* are renowned for their path-breaking and thought-provoking ideas such as disoriented self through the disoriented world, the hopelessness within a seemingly well-structured police state, the invisibility through visibility, the illusionary aspects of life couched in realities, etc. The elements of tragedies are ironically or paradoxically presented in the novels. The presentation of a world of consistently inconsistent nature and post humanism as a counterweight to humanism is the revolutionary thought of Saramago. He addresses the social problems based on these innovative ideas. There is an identity crisis refined through the act of belonging and the manipulation of justice is present to suit the interests of vested henchmen in society. There are other revolutionary ideas also running throughout the novels. The reformulation of the social framework to understand the positive vibrations in community is addressed very clearly in his novels. The depiction of society as a transparent entity is the pillar stone of his novels. And structured restructuring transforms society. Social realities through the format of original content and preconceived notions lead the society with ups and downs. The introduction of a new narrative of deep-rooted believability changes the narrative pattern of Saramago's novels.

Conclusion

The connection between sociology and literature has been put into a realm of contention over the years, but there is an underlying link between the two subject areas, one way or the other. A literary work must be evaluated dwelling upon the literary elements innate in it, but an in-depth analysis of a work stressing upon the multiple thematic and subjective aspects of it is essential to get an overall view of a text. The sociological interpretation of a text is resorted to locate its social specifications which would enable the readers to have a better understanding of it. When a literary text is perused from a sociological point of view, the following advantages are derived out of that, and they are the inherent social movements that have shaped a text, the social trends that have influenced in the formation of a text, the turbulence in society that has brought about the composition of the plot of a text, the characterization that has been formulated owing to certain social occurrences and the text is an offshoot of the apt description about the society as a whole. When José Saramago's literary works are looked into from a sociological perspective, they attain a level of perfection that can be termed as literature couched in the domain of sociology. This research paper attempts to carry out the sociological interpretation of Saramago's literary texts.

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25. Ethical Ramifications in O'Connor's "Parker's back" and "Good Country People"

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Abstract

As all religion proclaim the virtue of love-love of God and neighbour-it is essential to be in love for a communion with God, or become a mystic. Christian morality can be seen as a morality of obedience derived from Christian faith in Scripture. As human beings are composed of body and soul, the complete well-being of the individual is the sole aim of Christian ethics and it lies in the communion of God and of conviviality with man. Flannery O'Connor presents her characters as mystics who attain this union with God and friendship with the fellow beings by the practice of biblical virtues. The need for moral judgement of right and wrong in a general sense has led to the emergence of ethical studies which deals with the right and wrong of a particular action. O'Connor gives supreme importance to religious ethics and as a Christian O'Connor's ethics is based on Christian virtues and the Scripture—the Bible. When her characters are viewed in the light of Christian ethics, it can be noticed that there is a constant struggle between good and evil or between the body and the soul. Like Christ who found the poor suitable for his friendship, she remarked of her characters in her stories: "when I look at the stories I have written, I find they are for most the part about people who are poor, who are afflicted in both mind and body, who have little—or at best distorted—sense of spiritual purpose, and whose actions apparently do not give the reader a great assurance of the joy of life" (*Mystery and Manners* 161). Though some of them fail in their conflict with evil, most of them gain victory. This paper is a study of struggle between good and evil in O'Connor's "Parker's Back" and "Good Country People".

Keywords: Christian Ethics, Good and Evil, Body and Soul, Spirit and Matter, Spiritual Illumination, Blindness.

Good and Evil conflict is a common theme in Christian religion and ethics. The attitudes, words and deeds which are against the will of God are considered as evil in Christian perspective. Anything apart from God's will is regarded as evil and the actions, words and attitudes in accordance to the will of God are considered as good since God is the ultimate good. There is good and evil conflict in the story of Adam and Eve in Old Testament—evil in the form of serpent tempts them to act against the will of God. The first man follows the wrong message of Satan and denies good though they know the truth. Like that on some occasions man fails to select the right choice though quite aware of it (Paproki). In the Christian view there is a struggle within human beings between good and evil. It can be a conflict between body and soul as our sinful flesh does not allow us to follow our conscience to do the good. "For I know that nothing good dwells within me, that is in my flesh. I can will what is right, but I cannot do it" (Rom. 7.18).

In "Parker's Back" we see there is a state of sacramental unity of body and soul. The main characters, O.E. Parker and Sarah Ruth Cates, represent the deprivation in self when a human being becomes obsessed with either spirit or matter. Parker has numerous tattoos on his body. "For Sarah Ruth, the attraction to Parker seems to be her rebellion against her own self since she frowns upon material glorification of spirit" (Peede 50). Though Parker is concerned with the outer manifestation of self, as the daughter of a Straight Gospel preacher, Sarah Ruth is concerned with her inner spirit. Sarah Ruth views the tattoos in Parker's body as material and denoting negative aspects of human existence such as war, death and sin.

Though Parker does not deny Christ publicly, he tries to escape from the strictures of religion communicated to him by his mother.

The tattoos make his life worthwhile and Parker finds a remedy to his dissatisfaction by filling up the empty space on the front of his body with more tattoos. It is true that when Parker is obsessed with the desire to be tattooed, each tattoo gives him satisfaction only until the novelty wears off. The tattoos cannot fulfil the undefined demands of his spirit. In a way his body seems to reflect his soul and he is not able to please his wife with such material joy. In a religious experience God comes to him in a burning tree ignited by the fuel from his overturned tractor. He feels mysteriously compelled to have the face of God tattooed on his back. When he decides to have a religious picture put on his back, his plan is to please his wife. It is an evidence of incompleteness in his being and his hunger for self-fulfilment. After the tractor crash incident he decides to have an image of God tattooed upon his back. While he was looking through the book of pictures of Christ in the tattoo parlour, he heard a voice, "GO BACK. Parker turned to the picture—the haloed head of a flat stern Byzantine Christ—with all-demanding eyes. He sat there trembling; his heart began slowly to beat again as if it were being brought to life by a subtle power" (*Everything that Rises* 667). This reveals that there is a longing for completeness in Parker which attracts him to such an image. Though he tries to sleep in the night, the image of the burning tree haunts him and the repetition of such imagery denotes purgatorial cleansing of the soul.

When his wife sees the new tattoo, she repudiates it as idolatry and beats on the face of the Byzantine Christ. She screamed, "Idolatry! Enflaming yourself with idols under every green tree! I can put up with lies and vanity but I don't want no idolator in this house!" (674). She does not realise that the image on her husband's back represents a moral imperative to him. Though Sarah Ruth rejects the incarnated God, Parker's religious experience leads him to spiritual illumination and his soul achieves a colourful harmony of being. It is an indication of his elevated soul as he begins to accept grace.

O'Connor accepts the view of St Thomas Aquinas that human beings are made up of a physical body and a rational soul. In O'Connor's opinion, the first step of actualizing total good is the recognition of total evil. This story is really an indication of the conflict between body and soul.

In "Good Country People" Mrs Hopewell and Hulga, the mother and daughter, are blind to the real world and fail to see the world as a mixture of good and evil. They believe that there is nothing behind the surface world. Though Mrs Freeman reveals the clear picture of the world to Hulga, she concentrates only on the grotesque aspects of life. She accepts Manley Pointer at face value and considers herself released from spiritual or ethical norms as she inhabits an intellectual world.

Though Mrs Hopewell adheres to an all-accepting Catholic compassion, she considers her daughter as an indifferent person and she cannot reconcile with her. "She was brilliant but she didn't have a grain of sense" (*Good Man* 184). When Hulga wears inappropriate clothes like a child and changes her name from Joy to Hulga without her mother's permission, Mrs Hopewell considers Hulga's rebellious actions as pranks of an immature mind. Hulga has lost her leg in an accident when she was ten and the doctor's opinion is that she will not live past forty because of a weak heart. In Mrs Hopewell's view she has been deprived of normal good time. She knows that her daughter has never enjoyed so many of the activities that adult life has to offer. As she is ashamed of her daughter's behaviour, she is attracted towards Mrs Freeman's two daughters and praises them as 'fine girls'. She blindly believes in the goodness of Mrs Freeman, but in reality she is a shrewd woman.

As Hopewell failed to understand Hulga, she has no meaningful relationship with her mother. Hulga does not believe in God and life after death. To her, man is all, it can be discerned that she unconsciously believes that there is a power over her. She deeply desires to surrender herself to a power above her and this happens when Manley Pointer makes advances to her. Though she is blind about her own desires, the comment of Pointer that it is her leg that makes her different from others is a happy news for her. She thinks that it is the first time in her life that she is facing real affection and surrenders herself to him completely. "It was like losing her own life and finding it again, miraculously, in his" (*Good Man* 202).

Here we can see a biblical parallel of "Those who find their life will lose it and those who lose their life for my sake will find it" (Mt. 10.39). While surrendering herself to Pointer, Hulga feels that she is completely dependent on him.

In O'Connor's view "the evil has no being and that evil appears as good to the one who commits it" (Desmond 129). Like her mother Joy-Hulga believes Manley to be an uneducated country bumpkin and she loses her life to Pointer. She gets nothing in return except humiliation, blindness, and a reminder of her own helplessness. Wood says, "Pointer is, in fact, Hopewell's unintentional saviour, having stolen not so much her wooden leg as her false faith" (*Good Man* 208-209). Joy-Hulga is offered grace through the theft of her leg, as Manley Pointer places it in his suitcase. She has physically lost her leg and her life through her interaction with Manley Pointer. Pointer betrays Hulga's faith in him and his betrayal becomes the moment of grace in Hulga's life. He removes Hulga's leg and sets it out of her reach and when she tries to reach her wooden leg, he pushes her down and thus he defeats her physically. She ridicules him, "You're a fine Christian! You're just like them all—say one thing and do another. You're a perfect Christian, you're..." (204). But Pointer leaves her with her wooden leg and a glass eye and a number of interesting things. Before leaving her he tells her that she is not so smart and at that moment Hulga is stripped of her intellectual superiority. As a Ph.D. holder, she considered herself intellectually superior to all those around her and relied upon worldly knowledge. She thinks that the worldly wisdom will guide her all in her life and forgets the biblical warning, "See to it that no one takes you captive through philosophy and empty deceit, according to human tradition, according to the elemental spirits of the universe, and not according to Christ" (Col. 2.8). His betrayal of Hulga destroys her intellectual pretensions as she loses her faith in the power of her intellect.

Hulga is presented as having icy blue eyes and they represent someone who has blinded her own eyes out of sheer will power and intends to keep them that way (Kirk 72). Her turning away from God and withdrawal from other people has blinded her to the goodness in the world. When Pointer leaves her, "she turned her churning face toward the opening, she saw his blue figure struggling successfully over the green speckled lake" (*Good Man* 205). Here O'Connor's use of colour imagery is significant. Blue colour reminds us of heaven and heavenly love and the green colour is the representative of the regeneration of the soul. When Pointer leaves, he is presented as walking on the water to indicate him as an instrument of God to bring grace to Hulga. At the end of the story Hulga is stripped of her hardness, her nihilism and pride.

It can be seen that Mrs Hopewell's empathy for Manley rises when she realizes the parallel between Pointer and her own daughter, Joy-Hulga. To her, Manley represents everything that Joy-Hulga is not. When Hulga undergoes mortification, her mother Mrs Hopewell faces a revelation. When Mrs Hopewell thinks Manley Pointer must have been selling Bibles to the blacks, Mrs Freeman comments, "Some can't be that simple ... I know I never could" (205). This last sentence in the story gives a final impression to the reader that Mrs Hopewell lost her confidence in her ability to control and use Mrs Freeman. O'Connor succeeds in making her characters, Hopewell and Hulga discard their superiority and they humble themselves before the benevolence of God at the end of the story.

There is a constant battle against our spiritual enemies like world, flesh and the devil. Friendship with this world induces greed, selfishness and pleasures of this world, thereby side-lining spiritual values (Jn. 2.16-17). As the value system and the principles of this world are different from those of the eternal world, heaven, Christianity calls us to dissociate ourselves from friendship with this world. A spiritual enemy is the flesh and it is human nature to commit sin. Another enemy is the devil who is a great adversary that has the power to hinder virtuous life. O'Connor tries to dramatize a real world of good and evil in her stories and novels.

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POSITION OF MEMES IN TROLLS: A LINGUISTIC ANALYSIS OF INTERNET TROLLS IN THE CONTEXT OF SCRIPT BASED SEMANTIC THEORY OF HUMOUR

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Abstract- Internet trolls are the most innovative yet hilarious side of the virtual world where tech savvies tryout their creativity. Society has reached the point where there exists no boundaries between humanworld and virtual reality. This lack of distinction between the two worlds has enabled technology to intrude even in the language of homo sapiens. In addition to the oral and written form of language they have invented a new sign system to communicate in a morerelaxed manner likethe lingos of internet,emojis,stickers and memes. Though it has been invented for entertainment purpose, the acceptance of internet trolls even in the official sectors inspires man to exert much energy in creating, sharing and understanding memes. Since Internet trolls have grown large enough to deal with serious matters like politics and other social discourses, they reduce the space for alphabets and that space has been accorded to memes. But the presence of meme enabled trolls to present their ideas in more precise, effective and also in a hilarious way. This paper is an attempt to analyse the structure and nature of internet trolls in the context of humour. Using the Script Based Semantic theory, put forwarded by VictorRaskin, the nature and functions of words and memes in a troll text and different types of communication it contributesis analysed and studied.

SSTH is perhaps one of the few theories to analyze the linguistic behaviour of humour texts. By delineating the various criteria put forwarded by the linguist for a humour text, each element in the internet troll can be identified,compared and contrasted with otherones in the same text. This paper also gives a short introduction to the origin and growth of the 'meme' and how it expressesits linguistic natureas different from the status of a single short image,within a troll text, is also manifested here.

Key words: Memes, Internet trolls, SSTH, script, text, script oppositions, overlapping, semantic triggers, ambiguity, contradictory trigger.

I. INTRODUCTION

The alpha generation being confused with the boundary of virtual and real-world mishmash their language, community of real friends (with those in virtual world), and reality with imagination. The phenomenon called internet trolls has become part and parcel of their life and memes become the meaningful unit of their language. Internet trolls were born as verbal abuse and sarcastic comments, but realizing its potential the virtual world started adding more components to increase the effect of the action called trolling. Memes are one of these components in trolls.Though the word *meme* is borrowed from Richard Dawkin's book *The Selfsh Gene* it was Mike Godwin who put forwarded the idea of 'internet meme' in 1993. From the short video clips that appeared in You Tube, meme continued its journey as GIFs in Twitter, Facebook and later as precise static images. Being one of the indispensible components of internet trolls, memes have acquired the status of a significant element in virtual language.

A meme carries bits of cultural information along with its entertaining and communication capability. Similar to a word in a language, memes communicate ideas and emotions. Memes are becoming a constant part of communication through sharing. "In this new era, the two meanings of the term in the pre digital age-sharing as distribution and sharing as communication-converge" (Shifman 19). Hence the people who participate in the virtual world communication finds a meme as something that can have a good life span, productivity and at the same time, is mimetic too.

A meme is precise like a word that can be learned and reproduced and convey meaning as letters do in a language. A meme has a perfect locus in the structure of trolls. It is indeed like a slang in a language. Only those who understand the connotative meaning can enjoy the entire partof the troll.

A meme becomes viral when a group of people share and enjoy it as they have the same cultural consciousness. People have the basic knowledge about the trolls existing in social media and the way it to

be used as every human has the langue part in their linguistic capacity. On the other hand, like parole make use of the language, an expert can repack it/ remix it with different context in different forms as their creativity permits them to do it . A wrong choice of word can destroy the structure of a sentence and spoil the fun and meaning. Likewise a meme should be carefully placed, to be read and enjoyed in the language of a troll.

Being a digital version of human communication, the structure of troll should be analysed order to comprehend the mechanism of troll for being humorous. Since people read the memes and enjoys its presence in the structure of a troll it is important to understand the linguistic behaviour of an internet meme. Here, some celebrated trolls are analysed using the linguistic theory of humour.

Script Based Semantic Theory of Humour

As the scientific nature of human language has been divulged by the studies of linguistics a grave scrutiny of humour is prepared considering the rules of linguistic as a model by Victor Raskin, a living legend and the prodigy in linguistics. By trailblazing thoughts in his *Semantic Mechanism of Humour* (1985) Victor Raskin brought forth a new theory -the Script Based Semantic Theory- in the field of humour studies. He embraces the validations of linguistics and scrutinize the secrets that makes a text funny.

The term 'text' is used in the linguistic analysis to denote both 'lettering' as well as the 'spoken form' of a discourse. The linguistic theories, in general tries to define an object by breaking it into many units. Each parts of the object, then is categorized into already labelled groups - like subject, object, targets- according to their characteristics and they are elucidated further with the assistance of the rules of language within the constraints of already framed procedures. The native speaker of a specific language has a 'linguistic intuition' which is identified by Noam Chomsky as 'competence and performance'. Raskin brings forth a parallel concept to this is 'the competence and performance in humour' by which he meant that everyone in the universe has a 'sense' of humour. A native speaker can identify the grammatical correctness of a sentence. Similarly he can recognize if a text in his language is funny or not. The humorous text of any language can be said grammatically correct if it is meaningful, bona fide, comprehensive and appropriate to the context. Usually such texts will give some hints about the context also. Raskin believes that the linguistic competence of a native speaker includes the speaker's ability to comment on the funniness of a text in his language.

To analyze a humorous text, an analyzer uses the 'linguistic rules' which is designated as 'the source field' and 'the target field' will be the study of humour. Nonetheless the aim of the linguistic analysis of humour is not to define what humour is but to understand the making of humour. Corresponding to all the linguistic theories, the linguistic theory of humour can give all the comprehensive analysis of the given data and it states how the absence/ presence of certain details makes a text humorous. The procedures and methods of various linguistic theories enable the comparison of different scripts and predict the best of it. The linguistic theories clarify the norms that a text should have for being humorous. Script based theory, in particular deals with verbal humour.

Raskin says that the most important factors in a humour act is the speaker/ writer and the hearer/reader. To him the presence of the hearer is inevitable since "it is the perceiver's presence, of course, which makes the act a humour act, simply because it is the perceiver who laughs (Raskin 3). A discourse becomes humorous when an action assumes a new meaning with respect to its context. Something that arouses humour in a situation is named after as 'stimulus'. Both the characters and the humour act are set in some physical, social, psychological environment that is called the 'situation of the humour'.Any humour act or speech could not provide same amount of pleasure if it is repeated. Raskin has contributed a formulae to analyse the funniness of the text as follows: If X is taken as a text,

$HU(S, H, ST, E, P, SI, SO) = X$ where $X=F$ or $X=U$ (Raskin 5)

Where HU stands for humour, S for speaker, H for hearer,ST for stimulus, E for experience, P for psychology , SI for situation, SO for society.

The semantic theory of humour is built upon two significant elements in linguistics - 'the lexicon' and 'the combinatorial rules'. Every text is made up of a number of lexicons that act like a storehouse of meaning from which the hearer chooses a familiar implication. The combinatorial rules enable the perceiver to identify the potential meaning of the lexicons in a sentence and select the appropriate

meaning that can contribute to the humour of the text. In short it can be said that the semantic theory of humour helps to find out the possible meanings of a text and to test the semantic competence and performance of the people who speak / listen to a joke. A verbal utterance or the written word that contributes to a humorous situation is called 'script'. The term owes its birth to the field of psychology and gained currency in linguistics in the late 1970s and early 1980s. "A script which is otherwise known as schema/frame/daemon can be defined as " a cognitive structure internalized by the speaker which provides the speaker with information on how a given entity is structured, what are its past and components, or how an activity is done , relationship organized, and so on, to cover all possible relations between entities[including their constituents]" (Attardo 2).

A script can be a single word that educes same or different semantic information in different contexts. "It represents the native speaker's knowledge of a small part of the world" [Raskin, Semantic Mechanism B1]. For instance, the lexicon 'drive' can be interpreted as a trip, desire, will power, a tournament, part of computer and so on. It is the other lexicons attached to the word 'drive' in the sentence would decide which of these scripts should be more suitable.

Raskin has pointed out two necessary linguistic conditions for a text to be humorous. He says that

A text can be characterized as a single- joke carrying text if ... (i) The text is compatible, fully or in part, with two different scripts (ii) the two scripts with which the text is compatible are said to overlap fully or in part on this text' (99).

Using this principle some of the well enjoyed trolls are analysed here.

Anatomy of Trolls. Troll 1-similarity in shape of man and animal

Trolls is a conversation mode assuming somebody is eagerly listening to the characters with much enthusiasm . The best part of a troll is that it can introduce the context of the particular situation either through images or with limited words as it makes use the human sense of eyesight. Xavier trolls are one of



Xavier

(Figure 1)

the well enjoyed trolls of recent origin which have the structure almost similar to punch line jokes. The text of the troll has two parts. The first part of the narrative gives the idea that a man is in a dangerous situation and that his life is at risk. And the hearer replies that he does not want to interfere in the matter as it is a fight between siblings. This reply evokes the script that being in a dangerous situation a man seeks the help of another. And the hearer agrees that by saying that he has no role in rivalry between brothers/ siblings. On the other hand the meme evokes another script of a helpless man being attacked by an animal (where both have no reason for the enmity) and he runs away from the witless creature. Here the reader once again refers back to the meme to resolve the ambiguity around the word 'sibling'. This meme that clarifies the overlapping of the scripts (the fight between animals over fight between man) where the script opposition man vs. animal can be seen. For the humorous effect the reader chooses to select the script of fight between two animals and one assumes the shapes of a man.

In this troll (2)the conversation takes place in a classroom which is denoted by a blackboard and ruler in the hand. The teacher is obviously a language (English teacher) teacher who teaches the student the rudiments of English grammar. Here she is teaching future tense to a child who doesn't know grammar. But the reply 'future impossible tense' brings out the script of a veracious intelligent

situation and that his life is at risk. And the hearer replies that he does not want to interfere in the matter as it is a fight between siblings. This reply evokes the script that being in a dangerous situation a man seeks the help of another. And the hearer agrees that by saying that he has no role in rivalry between brothers/ siblings. On the other hand the meme evokes another script of a helpless man being attacked by an animal (where both have no reason for the enmity) and he runs away from the witless creature. Here the reader once again refers back to the meme to resolve the ambiguity around the word 'sibling'. This meme that clarifies the overlapping of the



(English Class)

(Figure 2)

student. The image of an intelligent veracious man stands against the script of an ignorant/naughty student which brings about the humour in it.

In troll (3) the role of the combinatorial rule can be explained in a better way to realize the vital point of humour. When the man asks why they call it a dark age, the word darkness displays an array of meaning such as 'unlighted', 'dark colour', 'ignorance', a nick name of a historical age and so on. Similarly the punch



(Figure 3) ("Why They Call it a Dark Age")

line of the text contains another content word 'Knight' meaning a noble man destined to fight and that homonyms with the word 'night' [that can be understood as the 'a part of a day, lack of knowledge]. It evokes many scripts as follows:

- (a) Why they call it age without light?
- (b) why they call it black coloured age?
- (c) Why they call it a period of ignorance?
- (d) Why they call it a dark age in history? The answer can be
 - i) because nights appear more than once in a day.
 - ii) Because number of nights are more than days.
 - iii) Because the people lived in those are ignorant.
 - iv) Because there are knights - a feature of middle age.

Which creates the script - opposition of reason vs. imagination/ knowledge in history Vs. knowledge in language.

The text contains the script of dejected lover and a happy independent person who realises his worth. Her words to him can be interpreted that she is not worth for him. "you deserve a better one" is the conventional part of a break up that can be recalled with tears which shows the wishes, hopes, and the intense love that one had for their former partner. Though he



(Figure 4)

knows it a truth the word 'only' contradicts her sentiments and raises the script opposition of a dishonest lover.



(Figure 5)

Unlike all the above trolls the troll (5) deals with much more serious, yet real time situation which can be categorized as political troll. The situation described here deserves all respect as the third citizen of the nation expresses his respect and admiration to a great football player. But for the sake of humour, his travels for external affairs of the nation is mocked at here. The word 'welcome' as in the troll (3) has been the source of different script~ the reciprocal expression for one's gratitude and the greeting at the reception of a guest. His desire to travel overlaps the script of his kind words to the player.

In all these trolls one can see that the meme has contributed something more than giving information about the context or entertain one with funny expressions or faces. In troll(1) the word 'sibling' becomes quite ambiguous and that compels one to refer back to the meme in the text. The meme in the first troll evokes another script opposition that Possible vs. Impossible that an animal can never be the real sibling of a man but what makes the hearer considers them as sibling is the similarity in their physique. It is from here the person who enjoy/ read

the troll understand the opposition that the man is the sibling of the hippopotamus. Such incongruity is the key of laughter here. Xavier is very familiar person in the world of internet trolls and his presence indicates that he is going to perceive the speaker's utterance in a humorous manner and it would end up as a non-bona-fide communication. Similarly, the meme (made up of two films taken from *Captain America: the Winter soldiers* and the *Avatar: End game*) in troll 3 also foretells that it would be a non-bona-fide communication as the hearer in the conversation will discard the seriousness of the speaker. This enables the reader to evoke various scripts and choose the most contradictory one to enjoy it.

'The impossible future' in the punch line of the second troll can be ignored as the slip of the tongue of the student or/ the cleverness of the scholar in the class. But it attains the status of stark reality when the reader understands that it is said by the 'bro meme' a man known for his guileless speech. The blood shot eyes, the weed on the lips and the black beard gives him the status of a grown up man who knows his society in a more realistic way. And analysing from a grown up person the sentence (that one day our country will become corrupt free) can be uttered by politician or a patriot as the lady holds a stick/ ruler which is symbol of power and authority. But the man with his rough and careless looks assumed the status of a common man in the democratic country or a keen observer of the society. It is from this juncture the truth starts pricking the conscious of the rulers and the people start to mock at them through uncontrollable laughter. The bro meme is always known for his veraciousness, blunt statement of facts and it would be a **bona-fide** communication.

The speaker in the troll 4 can be disappointed for two reasons: his lover is now not with him, and she was disloyal to him. But the meme evokes (the happy face of DeCaprio) the ironic script that she is not worthy of him and that he realized the truth with happiness. The last meme in troll (5) are real people who appear in trolls. The first part of the conversation between them is bona-fide as both were engaged in truthful serious talking but the final part changes the nature of it as Mr. Modi perceives it in wrong way. He is celebrated for his foreign trips which for many is a topic for discussion. A meme could communicate with readers without using large narratives and instances. It is not his perception of the word welcome that makes one laugh but his action itself in the meme.

Analyzing many trolls in the same way one could find that memes are not mere intruding images in the structure of troll language but they are the semantic script-triggers. According to Raskin "Many jokes contain an element which triggers the switch from the one script evoked by the text of the joke to the opposed script, the switch which makes up the joke. This element is called semantic switch trigger" (114). This trigger can be of two types ambiguity and contradictory. The ambiguity can be again divided into three as the syntactic ambiguity as in troll (4) situational ambiguity (troll 1), Quasi ambiguity (troll 3 and 4). Dichotomizing trigger comes under the contradictory trigger and troll 2 serves as an example of it.

II. CONCLUSION

Raskin has enumerated that "any text which is capable of creating a humorous effect is, therefore, a legitimate object of investigation here. What is excluded is the non-verbal humour, i.e a humorous situation which is not created expressed by a text." (46). But memes have content words having both connoted and denoted meaning, container of significance, gives ample scope for intonation and have particular space for the grammar of trolls. It is like a slang that can be understood by sharing certain cultural roots. By analyzing the verbal structure of troll one can understand that memes define the nature of communication whether it is bona-fide or non-bona-fide. More over in a troll, the meme evokes different script and urges the reader to find the different combinations to contradict the evoked script in the text. It is assumed that with the advent of technology and the interest of man in trolls, memes will make it an undeniable presence in the string of human communication which in turn would acquire the status of new scripts in human language.

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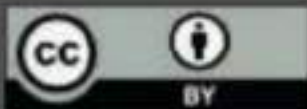
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മലയാളവിഭാഗം

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ANTIMICROBIAL RESISTANCE: CRISIS AND MANAGEMENT

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ABSTRACT

The invention of antimicrobial agents was one of the milestones in the treatment of microbial diseases in modern medicine. Antimicrobial resistance (AMR) is an increasing catastrophe of infectious diseases affecting the life on earth, thus treatment options become incorrigible with existing antimicrobial agent. Drug-resistant bacteria are rapidly increasing and existing in the globe more than that were a decade ago. The vast and multiplying human population indicates that growing amount of untreatable infections may have increasingly detrimental effect on them. The expanding feebleness of once-reliable drugs enforce to look into substitute for them thereby command a giant price of economy. AMR surveillance is a key factor to apprise global strategies regarding monitoring the effectiveness of public health interventions. Surveying and measuring the breadth of antimicrobial resistance in community and healthcare-associated infections are vital to determine the radius of spreading. Tractable inspection by electronic collation of routine susceptibility results will give an insight on the broadest view of phenotypic changes, and targetable inspection by anticipated examinations of specific pathogens of interest will give an outlook of newly emerging resistance mechanisms and strains. Awareness among the public as well as medical, veterinary and public health sectors is an essential factor to achieve perceptive formulation and usage of antimicrobials. Application of good infection prevention and control (IPC) measures across human health, animal health and agriculture also helps to prevent infections and limit the use of antibiotics.

Keywords: Antimicrobial Resistance, Antimicrobial resistance crisis, Future Strategies

P-04

Recent Trends in Photocatalytic Applications of Graphene Modified Graphitic Carbon NitrideAnju John, Mekha Susan Rajan, **Jesty Thomas****Research Department of Chemistry, Kuriakose Elias College, Mannanam, Kottayam, Kerala 686561, India*

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Semiconductor based photocatalysis has great potential to crack energy dilemma and environmental issues, Graphitic carbon nitride is a fascinating conjugated polymer semiconductor that has received tremendous attention in the current period due to its lower band gap and higher visible light absorption ability. However, its photocatalytic efficiency is limited because of the high recombination rate of photogenerated electron-hole pairs. One of the promising ways to enhance the photocatalytic activity of the carbon nitride is the modification with graphene and its derivatives. This method is an inspiring route to achieve an improved charge separation in the electron transfer process. This paper presents significant advancements in graphene supported carbon nitride nanocomposites, including their common preparation methods, development mechanisms and their current applications such as pollutant degradation, H₂ evolution and CO₂ reduction. This study will encourage new progresses in designing carbon nitride based photocatalysts for applications in environmental problems.

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Graphene Derivatives Modified Graphitic Carbon Nitride: A Short Review

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Abstract

Photocatalysis refers to the acceleration of the rate of oxidation/reduction reactions on semiconductor surfaces, with the utilization of ultraviolet or visible light radiation and being widely practiced for the eradication of organic pollutants. Graphene derivatives modified g-C₃N₄ based photocatalysts has attracted much interest during the last years due to their structures with unique features such as large specific surface area, thermal and chemical stability and enhanced visible light utilization. This review attempts to showcase the recent progress in the rational design and fabrication of graphene modified g-C₃N₄ photocatalyst for pollutant degradation.

Key words: photocatalysis, g-C₃N₄, graphene, pollutant degradation.

Introduction

Semiconductor based photocatalysis have great potential to crack energy dilemma and environmental issues. Graphitic carbon nitride is a fascinating conjugated polymer semiconductor that has received tremendous attention in the current period due to its lower band gap and higher visible light absorption ability [1]. However, its photocatalytic efficiency is limited because of the high recombination

PERYLENE NANOPARTICLE INCORPORATED GRAPHITIC CARBON NITRIDE FOR THE DEGRADATION OF WATER POLLUTANTS

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ABSTRACT

A fascinating conjugated polymer, metal free inorganic semiconductor, graphitic carbon nitride (CN), with tuneable band gap (2.7eV) has been the hotspot in the materials as its surface can be modified by incorporating various organic and inorganic guest species. In this study, a new guest species quasi spherical perylene nanoparticles (PeNPs) were prepared by chemical reduction of perylene-3, 4, 9, 10-tetracarboxylic dianhydride using D-glucosamine hydrochloride, and they were incorporated into CN to form the PeNPs-coupled CN (PeNPs-CN). The PeNPs-CN exhibited higher photocatalytic degradation towards pollutants than Degussa P25 (TiO₂) and CN under visible light. Analysis of the UV-vis diffuse reflectance and photoluminescence spectra of PeNPs-CN and CN supported that the better solar photocatalytic efficiency of PeNPs-CN is ascribed to both enhancement of visible light absorption and reduction of the charge recombination rates through sensitization by PeNPs.

Key words: Graphitic carbon nitride, perylene nanoparticles, pollutant degradation.

INTRODUCTION

In this century, water contamination and pollution is the one of the most worrisome problem, which should be combated by formidable and practical solutions. Synthetic dyes released in effluents from textile industries are highly persistent in the aquatic environment and they are considered potentially mutagenic and carcinogenic compounds [1]. Photocatalysis involving TiO₂ shows great importance over last few years due to its ability to destroy a wide range of organic and inorganic pollutants at ambient temperature and pressure, without the generation of harmful by products. However, practical applications of TiO₂ are significantly negotiated by its wide band gap with limited visible absorption [2]. Therefore, the development of new semiconductor material as

ZnO NANORODS COUPLED WITH PHOTSENSITIVE MOLECULES AS EFFICIENT SOLAR PHOTOCATALYST FOR THE DEGRADATION OF ORGANIC POLLUTANTS

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ABSTRACT

Zinc oxide photocatalyst with unique qualities such as strong oxidation ability, chemical stability, biocompatibility, non-toxicity, high photosensitivity is a leading successor in the field of photocatalysis for the effective degradation of persistent organic pollutants in water. But inherited with certain limitations such as wide band gap and fast recombination rate of charge carriers hinder its practical applications in visible light. In this study the photocatalytic performance of ZnO nanorods was enhanced by incorporating different photosensitive molecules like heteropoly phosphotungstic acid(HPA), fluorescein, perylene-3,4,9,10-tetracarboxylic dianhydride (PTCDA) and porphyrin. They exhibit efficient photocatalytic activity under sunlight towards the degradation of common textile waste water pollutants like methylene blue (MB), rhodamine B (RhB), eosin yellow (EY) and also for the degradation of endocrine disruptors like resorcinol. Among the different ZnO photocatalysts, PTCDA sensitized ZnO nanorods exhibited highest photocatalytic activity specifying that PTCDA-ZnO would be very useful for cleaning polluted surface water by solar light driven photocatalysis.

Keywords: ZnO, photocatalysis, HPA, fluorescein, PTCDA, protoporphyrin

INTRODUCTION

Environmental pollution is becoming a serious threat to the longterm progress of human society. One of the main environmental hazards is the un-neutralized dye stuff, a group of organic compounds, discharged from industries. These are toxic and carcinogenic to human life even in trace concentration [1]. Therefore; environmental friendly technique has to be developed to treat the water pollutant which does not produce further adverse effect to the environment. In this perspective, solar energy based water treatment has gained much attention as is renewable, pollutant-free and abundance in nature [2]. Semiconductor based photocatalysis has appeared as economic, environmental benign technology because of its potential to crack

ANTIMICROBIAL RESISTANCE: CRISIS AND MANAGEMENT

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ABSTRACT

The invention of antimicrobial agents was one of the milestones in the treatment of microbial diseases in modern medicine. Antimicrobial resistance (AMR) is an increasing catastrophe of infectious diseases affecting the life on earth, thus treatment options become incorrigible with existing antimicrobial agent. Drug-resistant bacteria are rapidly increasing and existing in the globe more than that were a decade ago. The vast and multiplying human population indicates that growing amount of untreatable infections may have increasingly detrimental effect on them. The expanding feebleness of once-reliable drugs enforce to look into substitute for them thereby command a giant price of economy. AMR surveillance is a key factor to apprise global strategies regarding monitoring the effectiveness of public health interventions. Surveying and measuring the breadth of antimicrobial resistance in community and healthcare-associated infections are vital to determine the radius of spreading. Tractable inspection by electronic collation of routine susceptibility results will give an insight on the broadest view of phenotypic changes, and targetable inspection by anticipated examinations of specific pathogens of interest will give an outlook of newly emerging resistance mechanisms and strains. Awareness among the public as well as medical, veterinary and public health sectors is an essential factor to achieve perceptive formulation and usage of antimicrobials. Application of good infection prevention and control (IPC) measures across human health, animal health and agriculture also helps to prevent infections and limit the use of antibiotics.

Keywords: Antimicrobial Resistance, Antimicrobial resistance crisis, Future Strategies

THERAPEUTICAL POTENTIAL OF *SYZYGIUM* SPECIES – A REVIEW

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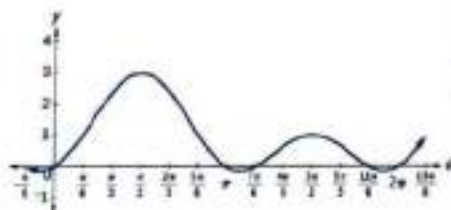
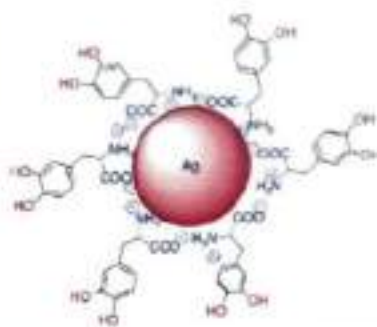
ABSTRACT

Modern natural product research focuses on isolation and characterization of phytochemicals and production of an analogue with increased bioactivity/bioavailability. Podophyllotoxin analogues are antitumor drugs based on plants. The genus Syzygium belonging to the family Myrtaceae comprises about 1200 – 1800 species. Native range of distribution extends from Africa and Madagascar through Southern East Asia and the Pacific. The highest diversity occurs in Australia and South East Asia. Many of this species have a history of use in traditional system of medicine in India, Africa and Australia. The most documented species in India, used for the treatment in Ayurvedic system of medicine is Syzygium cumini and Syzygium aromaticum. Most commonly used African species is Syzygium cordatum. Based on literature review 41 documented species of syzygium were selected for the present study. Among this 48% of the species exhibited good antimicrobial activity, 29% showed antioxidant activity, 9% possessed antiinflammatory and antidiabetic activity, 5% showed anticancer activity. The major phytochemicals responsible for the biological activities of syzygium species were Terpenoids, Ascorbic acid, Gallic acid, Chlorogenic acid, Catechin, Tannins, Flavanoids etc. Significant antioxidant activity reported in S. australe, S. leuhmannii, S.aromaticum and S.cumini. Highly documented species for antimicrobial, anticancer, antiinflammatory and antidiabetic activities were S.aromaticum and S.cumini. Only few of the Syzygium species explored for its therapeutical potential. Some species is endemic to India and critically endangered. More attention is required for the complete understanding of the biological activity and phytochemical constituents of other species in this genus with traditional background. Such studies will definitely lead to the development of neutraceuticals and pharmaceuticals.

Key words: Syzygium species, Therapeutical potential, Phytochemicals

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Antimicrobial Resistance in Aquatic Ecosystem: Prevalence and Mechanisms

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Abstract

Antimicrobial resistant (AMR) microorganisms are one of the great concerns globally as it affects millions of lives in various ecosystems. The introduction and overuse of antimicrobials in farm animals and plants, along with the unsystematic sewage and contaminated water discharge into aquatic environments, increased the amount of antibiotic resistant bacteria in aquatic ecosystems. Significant amounts of antimicrobial agents for a longer period of time in the aquatic systems offers major selective pressure for antimicrobial resistance in bacteria. The high level of antimicrobial resistant bacteria isolated from marine environments indicates a serious threat for aquatic organisms and human health. The emergence of this phenomenon has revealed multiple and complex mechanisms by which antibiotic resistance arises and spreads among bacteria of the same species or even among different species. The prevalence of these impurities in the environment indicates the necessity for better source control as well as adhering to environmental quality standards. In order to counteract the possible threats, systematic strategies are required for integrated activities of professionals and scientists from various fields of science and industry.

Key words: Antimicrobial resistance, Aquatic ecosystem, Prevalence, Consequences

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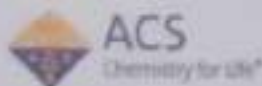


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Preparation and Characterization of Dioscorea-bulbifera Starch Based bio Films as Edible Food Wraps

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In this study, the use of Dioscorea-bulbifera (air potato) for the production of biogel and bioplastic is explored. An eco-friendly alternative to conventional petro-plastic polymer with a futuristic application as edible food wraps was intended as the outcome. Bio films were prepared by casting method as a replacement for the traditional petroleum based plastic. It widened the use of air potato starch based film in food packaging film. Starch was gelatinized in the presence of water and varying amount of glycerol at 90 °C temperature. Physicochemical properties such as density, water absorption capacity, hardness, solubility in water and mechanical properties were investigated. Results revealed that by increasing plasticizer the crystalline of starch in the films decreases. The results showed that air potato based biofilms have potential applications in the food packaging, medical and pharmaceutical industries.

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വിനിയമത്തിന്റെ സൂക്ഷ്മരാഷ്ട്രീയം

എഡിറ്റോഴ്സ്

ഡോ. തോമസ് സ്കറിയ

ഡോ. പ്രിൻസ് മോൻ ജോസ്

Malayalam Language
വിനിയത്തിന്റെ സൂക്ഷ്മരചന
VINIMAYATHINTE SOOKSHMARAASHTRIEYAM

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പാണ്ഡവപുരത്തെ കുന്നിൻമുകളിലെ ദേവി ഫാന്റസിക്കളിലെ ഫാന്റസി രൂപം

ഡോ. സേവ്യർ സി. എസ്.

ഫാന്റസിയും യാഥാർത്ഥ്യവും ഇടകലർന്ന അസാധാരണ ലഭ്യമായതാണ് സേതുവിന്റെ കൃതികൾ. മലയാള നോവൽ രചന സാഹിത്യരംഗത്ത് സേതു രചന നിർവ്വഹിക്കാൻ തുടങ്ങിയ കലാപരമായ ഇന്ന് വരെയുള്ള കൃതികൾ പരിശോധിച്ചാൽ ഫാന്റസിയെ സാഹിത്യ പ്രയോഗിക്കുന്നതിൽ അദ്ദേഹത്തിന്റെ രചനകൾക്ക് സാധിച്ച എന്ന് കരുതപ്പെടുന്ന കൃതികളുടെ കലരാതെ ജീവിതത്തെ അതിന്റെ സൂക്ഷ്മതലത്തിൽ അന്വേഷിക്കുന്നതിന് സേതുവിന് ഏറ്റവും സാഹിത്യപരമായ രചനാസങ്കേതമാണ് സി. ഭാരതീയ ദർശനങ്ങളിലും പുരാണേതിഹാസങ്ങളിലും നിലനിൽക്കുന്ന സാഹിത്യസൃഷ്ടി നടത്താൻ അദ്ദേഹം ഇഷ്ടപ്പെടുന്നു. കേരളീയനായ ഗ്രാമീണജീവിതം, കുടുംബജീവിതചിത്രീകരണം, ദേവതാസങ്കല്പങ്ങൾ അടങ്ങിയവയെല്ലാം കൃതികൾക്ക് പശ്ചാത്തലമായിത്തീരുന്നു. യുദ്ധകല, വസ്തുതകൾപോലും സങ്കീർണ്ണതകളില്ലാതെ ലളിതമായി സേതു അവതരിപ്പിച്ചു. മാറുന്ന സാമൂഹിക സാംസ്കാരിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഭാഷ, കല്പന, ശൈലി എന്നിവയിലൊക്കെ സേതുവിന്റെ കൃതികളിൽ അകത്തുയരുന്ന ഏറ്റക്കുറച്ചിലുകൾ കണ്ടെത്താം. സമൂഹമധ്യത്തിൽ എപ്പോഴും വിധിക്കപ്പെടുന്ന സ്ത്രീപുരുഷസത്തയുടെ വൈകാരിക വൈചിത്ര്യങ്ങളെ പകർത്താൻ സഹായിക്കുന്ന ആഖ്യാനതന്ത്രമാണ് സേതുവിന്റെ ഫാന്റസി.

നഗവേൽകരണത്തിനും വാണിജ്യവൽക്കരണത്തിനും മുന്നോട്ട് വിധേയമായിക്കൊണ്ടിരിക്കുന്ന ഒരു കാലത്തെ സൂക്ഷ്മമായി നിരീക്ഷിക്കുന്നു

മനുഷ്യമനസ്സുകളിൽ അവ സൃഷ്ടിക്കുന്ന ഉണർവ്വുകളെയും ഉൽക്കണ്ഠകളെയും കുറിച്ച് സേതു നിരന്തരം എഴുതുന്നു. പുരുഷന്മാരേക്കാൾ കൂടുതൽ മാനസിക ലോകത്തിന്റെ കരുത്തിൽ വിശ്വസിക്കുന്ന സ്ത്രീകളെയാണ് സേതു പ്രധാനമായും തന്റെ രചനകളിൽ ആവിഷ്കരിച്ചിട്ടുള്ളത്. സ്ത്രീകളുടെ പതിതാവസ്ഥയെക്കുറിച്ചും അവരെ അപ്രകാരം രൂപപ്പെടുത്തുന്ന സാമൂഹികസാഹചര്യങ്ങളെക്കുറിച്ചും അവരുടെ ആന്തരിക ലോകങ്ങളെക്കുറിച്ചും ഏറെ എഴുതിയിട്ടുണ്ട് സേതു. തങ്ങളുടെ ചിത്തത്തെ പിടിച്ചുപറ്റി കടന്നുപോകുന്ന ജീവിതപ്രതിസന്ധികളുമായി ഏറ്റുമുട്ടി ആണധികാരത്തിന്റെ ഇരിപ്പിടങ്ങളെ തട്ടിമറിച്ച് സ്വന്തം നിലനില്പിനായി പോരാടുന്നവരാണവർ. സ്ത്രീയുടെ വീക്ഷണത്തിലൂടെയുള്ള അവരുടെ ജീവിതത്തിന്റെ ഭിന്നമുഖങ്ങളുടെ ആവിഷ്കാരത്തോടൊപ്പം നമ്മുടെ സാമൂഹികസാംസ്കാരിക പരിണാമത്തിന്റെ വ്യത്യസ്ത മുഖങ്ങളും കൂടിയാണ് അവിടെ അനാവരണം ചെയ്യപ്പെടുന്നത്. നിലനിൽക്കുന്ന ചില ക്രമങ്ങളിലെ അക്രമങ്ങളെ വെല്ലുവിളിച്ച് അതിനെ പൊളിച്ചെഴുതി പുതിയ ക്രമങ്ങൾ സൃഷ്ടിക്കാനും അതിൽ കാലുറപ്പിച്ച് നിൽക്കാനും ശ്രമിക്കുന്ന സ്ത്രീ കഥാപാത്രങ്ങളെ ചില രചനകളിൽ സേതു ആവിഷ്കരിച്ചിട്ടുണ്ട്. പാണ്ഡവപുരം എന്ന നോവലിലെ ദേവി ഇത്തരമൊരു സ്ത്രീ കഥാപാത്രമാണ്. ഈ പശ്ചാത്തലത്തിൽ ഫാന്റസി എന്ന ആഖ്യാനതന്ത്രത്തിലൂടെ പാണ്ഡവപുരം എന്ന നോവലിൽ കേന്ദ്രകഥാപാത്രമായി സേതു അവതരിപ്പിച്ച സ്ത്രീസ്വത്വത്തിലേക്കുള്ള ഒരന്വേഷണത്തിനാണിവിടെ ശ്രമിക്കുന്നത്.

അടിച്ചമർത്തപ്പെട്ട അഭിലാഷങ്ങൾ ആവിഷ്കരിക്കാനായി വ്യക്തിയുടെ ഉപബോധ-അബോധമനസ്സുകൾ കണ്ടെത്തുന്ന ഉപായമാണ് സ്വപ്നം. "സ്വപ്നം മനസ്സിന്റെ യാഥാർത്ഥ്യമാണ്. മനുഷ്യജീവിതത്തെ അത് കൂടുതൽ പൂർണ്ണവും സാർത്ഥകവുമാക്കുന്നു. സ്വപ്നത്തിന്റെ ഈ യാഥാർത്ഥ്യത്തെ അകത്തുനിന്ന് നിരീക്ഷിച്ച് ആവിഷ്കരിച്ചാൽ അത് ഫാന്റസിയാകും. ബാഹ്യനിയമങ്ങളുടെ പരിവൃത്തങ്ങളിലൊതുങ്ങാത്ത ഒരു വിചിത്രലോകം അത് അവതരിപ്പിക്കുന്നു. കാലവും സ്ഥലവുമെല്ലാം സ്വപ്നത്തിൽ വിചിത്രക്രമം കൈക്കൊണ്ടിരിക്കും. അനേകമണിക്കൂറുകളിലെ സംഭവങ്ങൾ ഏതാനും നിമിഷംകൊണ്ട് മനസ്സിൽ സംഭവിച്ചുതീരും." (വത്സലൻ വാതുശ്ശേരി, 2004:28-29) ഇപ്രകാരം ദേവിയുടെ മനസ്സിലെ തിമിറനഗരമായ പാണ്ഡവപുരത്തെ അതിനുള്ളിൽനിന്ന് നിരീക്ഷിച്ച് ആവിഷ്കരിച്ചിരിക്കുന്ന ഒരു ഫാന്റസി രചനയാണ് സേതുവിന്റെ പാണ്ഡവപുരം എന്ന നോവൽ. അവിടത്തെ സ്ഥലകാലങ്ങൾക്കും ആളുകളുടെ പെരുമാറ്റത്തിനുമെല്ലാം ഉള്ളത് വിചിത്രമായ ക്രമങ്ങളാണ്.

പാണ്ഡവപുരം എന്ന നഗരം പൂർണ്ണമായും നിർമ്മിക്കപ്പെട്ടിരിക്കുന്നത് ദേവിയുടെ മനസ്സിലാണ്. നോവലിന്റെ തുടക്കത്തിൽതന്നെ താൻ പാണ്ഡവപുരം മെനഞ്ഞുണ്ടാക്കുകയാണ് എന്ന് ദേവി പറയുന്നുണ്ട്.

പാണ്ഡവപുരം എന്നൊരു സാങ്കല്പിക നഗരം ഭാവന ചെയ്ത് ഞാനെഴുതുകയും ചെയ്തു. അവിടെയൊക്കെ മനസ്സിലും ചിന്തകൾക്ക് പൂർണ്ണവിരാമം വരുത്തുകയും ചെയ്യാം. "വേദനയോടെ വീണ്ടും വീണ്ടും ഓർമ്മയെഴുതുകയും ചെയ്യാം. എത്രയോ അകലെയാണ്?" (സേതു. 2011.10) പാണ്ഡവപുരം അകലെയെന്നത് ദേവി പറയുമ്പോൾ അത് കേവലം കഥാകൃത്തിന്റെ ഭാവനയല്ല സൂചിപ്പിക്കുന്നത്, മറിച്ച് പാണ്ഡവപുരം എന്നൊരു സ്ഥലം ഉണ്ടായിട്ടുണ്ടെന്നും മനസ്സിലും ചിന്തകളിലും കെട്ടിപ്പടുത്തുവെക്കുന്നതിനാണ് എത്ര അകലെയെന്ന് എന്ന ചിന്തയാണത്. നോവലിന്റെ മുഖമുദ്ര ദേവി റെയിൽവേസ്റ്റേഷനിൽ കാത്തിരിക്കുമ്പോൾ ആണ് ഈ ചിന്തകൾ ഉണ്ടായത്. അതുകൊണ്ടുതന്നെ, പാണ്ഡവപുരത്തിന്റെ നിർമ്മാണം തന്നെ ദേവി റെയിൽവേസ്റ്റേഷനിൽ തനിച്ചിരിക്കുന്ന ദേവിയുടെ അനുഭവമായ മനസ്സിലാണ്. അയാൾക്കിടയിലും ഫാക്ടറിയും കോളേജും ഓരോന്നും കുന്നിൻമുകളിലെ ക്ഷേത്രവും സൂക്ഷ്മമായി മനസ്സിലെ ചോദ്യങ്ങൾക്കുള്ള ഉത്തരം തേടി അലയാൻ തുടങ്ങിയപ്പോൾ ദേവിയുടെ ആ വഴികളിലെ ചിന്തകൾ മുറിയുമ്പോൾ സാങ്കല്പികമായ പാണ്ഡവപുരത്തിന് സങ്കല്പം മാത്രമായൊരാൾ തന്നെ ഉണ്ടായിരുന്നുവെന്നായി ഭാവന ചെയ്ത് അതിൽ ആശ്വാസം കണ്ടെത്താൻ സന്നദ്ധനായിട്ടുണ്ടാകാൻ കൊതിക്കുന്നവരുടെ, സ്നേഹം നടിയിരിക്കുന്നവരുടെ, കൈമാറുന്നവരുടെ, മരിക്കാൻ വെമ്പുന്നവരുടെ, ആശ്വാസം നേടുന്നവരുടെ പാണ്ഡവപുരം അങ്ങനെ ദേവിയിൽ യാഥാർത്ഥ്യമായിത്തീർന്നു.

ദേവിയുടെ മനസ്സിൽ രൂപപ്പെടുന്ന പാണ്ഡവപുരം എന്ന ഈ സ്ഥലം ദേവിയിൽ യാഥാർത്ഥ്യമായിത്തീർന്നത് തങ്ങളുടെ വിരമങ്ങൾക്കും, കൃഷിക്കാരുടെയും അനന്തമായിത്തീർന്ന സന്തോഷങ്ങളെപ്പറ്റി, അങ്ങനെ തങ്ങളുടെ തിരിച്ചറിയലിനെപ്പറ്റി എല്ലാം എനിക്കറിയാം' എന്ന ജാതന്റെ വെളിച്ചം അലിനുശേഷമാണ്. ദേവി ഞെട്ടലോടെ ആണ് ഈ വാക്കുകളെ ശ്രദ്ധിക്കുന്നത്. ദേവിയുടെ ബോധമനസ്സ് ഈ സംഭവത്തിനുശേഷം പൂർണ്ണമായി നിശ്ചലമായി കയ്യും അബോധ മനസ്സിൽ പാണ്ഡവപുരം തിരിച്ചറിയലിന് തുടർന്നിടമാണെന്നും ആരംഭിക്കുകയും ചെയ്യുന്നു. അങ്ങനെ എട്ടാമത്തെ വാക്കിന്റെ അന്ത്യമാവുമ്പോഴേക്കും പാണ്ഡവപുരം ഒരു സങ്കല്പമല്ല സത്യമാണ് എന്ന പ്രമേയം ദേവി സായം കീഴടങ്ങുന്നു. പാണ്ഡവപുരത്തെ അവിടെനിന്ന് വന്നത്തിയ വിരുന്നുകാരനെയും ചൊല്ലി മനസ്സിൽ സംഭവം മുണ്ടാവുമ്പോൾ പതിമൂന്നാമദ്ധ്യായത്തിൽ ദേവി വീണ്ടും പറയുന്നു 'പാണ്ഡവപുരം...' ദേവി പുണ്ടത് വിരൽവെച്ചുകൊണ്ട് പറഞ്ഞു: 'അയാൾ അങ്ങനെയേ' എന്ന് പറയുമ്പോൾ, ജാതൻ 'അകത്ത്' ഉണ്ട് അഥവാ ദേവിയുടെ മനസ്സിലാണ് ജാതൻ എന്ന വൃത്തി ഉള്ളത് എന്നും കൂടിയാണ് അതിന്റെ പാണ്ഡവപുരത്തെക്കുറിച്ച് ജാതൻ പറഞ്ഞവയെല്ലാം കെട്ടുകഥകളാണെന്നും

പാഞ്ഞ ദേവിതന്നെ പതിനാലാമദ്ധ്യായത്തിൽ പാണ്ഡവപുരത്തുപറ്റി കെട്ടി കഥകൾ മനയുന്നു. പതിനഞ്ചാം അധ്യായത്തിൽ "ഇപ്പോഴത് പ്രതികരം പോലുമില്ലാതായിത്തീർന്നിരിക്കുന്നു. അതിനെല്ലാം മുക്തിലായി, കൈവിട്ടു പോയ എന്തോ ഒന്ന് തോണ്ടിയെടുക്കാൻ ബദ്ധപ്പെടുമ്പോൾ പല മുഖങ്ങൾ മനഞ്ഞെടുത്ത്, ഒന്നിനെ തലോടി, ഒന്നിനെ തല്ലിപ്പറഞ്ഞി, ഒന്നിനെ വെറുപ്പോടെ നോക്കുക മാത്രം ചെയ്ത്, ഒന്നിനെ കടിച്ചു മുറിച്ച്, പോരേയാലിട്ടിച്ച് എന്തെല്ലാം വിഡ്ഢിത്തങ്ങൾ!" (സേതു, 2017:92) എന്നുകൂടി വായിക്കുമ്പോൾ, പാണ്ഡവപുരം ഒരു ഭ്രമമാണോ യാഥാർത്ഥ്യമാണോ എന്ന സന്ദിഗ്ധാവസ്ഥയിലേക്ക് ഓരോ വായനക്കാരനും പൂർണ്ണമായും എത്തിപ്പെടുന്നു. ഒടുവിൽ, 'ഇങ്ങനെയൊരു ജാതന്യമായി എനിക്ക് അടുത്ത ബന്ധമുണ്ടായിരുന്നുവെന്ന് അറിഞ്ഞിരുന്നുവെങ്കിൽ തീർച്ചയായും കൃഷ്ണമൃഗം എന്ന ഉപേക്ഷിക്കുമായിരുന്നു.' എന്ന യുക്തിയിൽ ദേവിയുടെ മനസ്സ് പാണ്ഡവപുരത്തിന്റെ നിർമ്മിതി പൂർത്തിയാക്കുമ്പോൾ അന്ത്യം ആശ്വാസത്തിന്റെ നഗരിയായിത്തീരുകയും ചെയ്യുന്നു.

പാണ്ഡവപുരം അസാധ്യമായതോ യഥാർത്ഥമല്ലാത്തതോ ആയ കാര്യങ്ങളെ അവതരിപ്പിക്കുന്ന ഒരു ഫാന്റസി രചനയാണ്. എന്നാൽ അതിനെ സാധ്യമെന്നപോലെ, യഥാർത്ഥമെന്നപോലെ അവതരിപ്പിക്കാൻ പാണ്ഡവപുരത്തിൽനിന്നുതന്നെ ഒരു വ്യക്തിയെ കൊണ്ടുവന്ന് സംസാരിപ്പിച്ച്, ജീവിപ്പിച്ച്, അവസാനം അപ്രത്യക്ഷമാക്കുന്ന ആഖ്യാനരീതിയുടെ സേതുവിന് കഴിഞ്ഞിട്ടുണ്ട്. "അസാധ്യമായ കാര്യങ്ങൾ സാധ്യമെന്നപോലെ അവതരിപ്പിക്കുന്നതിലൂടെയാണ് രചനാനിഷ്ഠഫാന്റസി പ്രവർത്തിക്കുന്നത്." (വത്സലൻ വാതുശ്ശേരി, 2004:33) അങ്ങനെ 'പാണ്ഡവപുരം' രചനാനിഷ്ഠഭ്രമകല്പനയ്ക്ക് ഉത്തമഉദാഹരണമായി ചൂണ്ടിക്കാട്ടാവുന്ന രചനയായിത്തീരുന്നു. "മാനസികാനുഭൂതികളും അസാധ്യങ്ങളും അതിനൊത്ത രൂപം സ്വയം ആർജ്ജിക്കുമ്പോഴാണ് ഈ വിധത്തിലുള്ള ഫാന്റസി രൂപംകൊള്ളുന്നത്. മനസ്സിൽ തന്നെയായി രൂപനിർമ്മിതി പൂർണ്ണമായും നടക്കുന്നത്. മാനസികവ്യക്തിത്വത്തെ, അവസ്ഥയെ അതേമാനത്തിൽ പുന:സൃഷ്ടിക്കുമ്പോൾ ജനിക്കുന്നതായതുകൊണ്ട് ഇതിൽ വൈയക്തികമായ വികാരതീവ്രത മൂന്നിട്ടുനിൽക്കും." (വത്സലൻ വാതുശ്ശേരി, 2004:35) പാണ്ഡവപുരത്തെ മുൻനിർത്തി ചിന്തിച്ചാൽ ഈ വൈയക്തികമായ വികാരങ്ങൾ ദേവിയുടെതന്നെ എന്ന് കാണാം. ഭ്രമങ്ങൾ ദേവിയുടെ മനസ്സിനെ സ്വന്തമാക്കാതെ ഭരിക്കുമ്പോഴും ജാതന്യം എവിടെയോ പോയി മറയുന്നു. അതുപക്ഷേ, ഒരു സാധാരണ വരാനിരിക്കുന്ന അസംഖ്യം ജാതന്മാരിൽ ഒരാളെ മാത്രമാണ് പാണ്ഡവപുരം എന്ന നേരവൽ വിവരിക്കുന്നത്. പാണ്ഡവപുരം എന്ന ദേവിയുടെ മാനസനഗരിയിൽ, ഏതെങ്കിലും ജാതന്മാർ ഇനിയും അവശേഷിക്കുന്നു. സ്നേഹവും കാമവും പകയും പ്രതികാരവുമെല്ലാം ഉള്ളിൽ ആവാഹിച്ച് അവൾ കാത്തിരിപ്പുണ്ട്. അതേ

റെയിൽവേ സ്റ്റേഷനിൽ ഇന്നല്ലെങ്കിൽ നാളെ അല്ലെങ്കിൽ മറ്റൊരു സ്ഥലത്ത്
രിക്കുന്ന രണ്ടാമനെയും കാത്ത്.

പാണ്ഡവപുരത്തെ ഉള്ളിൽകൊണ്ട് നടക്കുന്ന ദേവി തന്റെ മറ്റൊരു ദേവിയെ പോകുന്നുണ്ട്. പാണ്ഡവപുരത്തെ കുന്നിൻപുരത്തേക്ക് ക്ഷേത്രത്തിൽ ഇരിപ്പിറപ്പിച്ചിരിക്കുന്ന ഒരു ദേവിയായാണ്. വൃക്കിന് മുമ്പായി അനേക വൃക്കികളാണ്. ചിലരിൽ ബാഹ്യവൃക്കിത്വത്തിനുപുറമെ ഉണ്ടാകുന്നവർ വൃക്കിയെയാകെ നിയന്ത്രിച്ചെന്നിരിക്കും. 'പാണ്ഡവപുരയിൽ ദേവിപ്പുരുടെ മനസ്സിനുള്ളിൽ രൂപപ്പെടുന്ന ഭ്രമസ്ഥലം' എന്നാണ് അന്തർവൃക്കിത്വമായി ദേവിയിൽ പ്രവർത്തിക്കുന്നത്. പാണ്ഡവപുരത്തെ ഈ ദേവിയും പാണ്ഡവപുരിയെപ്പോലെതന്നെ മറ്റൊരു ഭ്രമസ്വഷ്ടിയായെന്നാണ് പാണ്ഡവപുരം എന്ന നോവലിന്റെ സ്മാരകം. അങ്ങനെ ഫാന്റസിക്കുള്ളിലെ ഫാന്റസി വൃക്കിത്വം 'കുന്നിൻപുരത്തെ ദേവി' നോവലിൽ നിലകൊള്ളുന്നു. "കുന്നിൻപുരത്തെ കരിങ്കൽച്ചുവരുകൾക്ക് നടുവിലുള്ള ശ്രീകോവിലിൽ, ചുവന്ന ഉയരത്തിൽ നിന്നു കിട്ടിയ സിന്ദൂരമണിഞ്ഞ് ദേവി ചന്ദ്രം പടഞ്ഞിരുന്ന സമയം അങ്ങനെയായിരുന്നു. അവിടെ മുഖം പൊടുന്നനെ ജ്വലിച്ചു. സമയം പൊഴിഞ്ഞു വീണു. മുഖമാകെ ചുവന്നു. ആ തീയിൽ പാണ്ഡവപുരത്തെ ജാരന്മാർ ഓരോരുത്തരായി ഈയലുകൾപോലെ വന്നുവീണ് കിടന്നു. (സേതു, 2017:10) നോവലിൽ പാണ്ഡവപുരത്തെ ദേവിയെക്കുറിച്ച് ആദ്യവിവരണം ഇങ്ങനെയാണ്. പക്ഷേ കുന്നിൻപുരത്തെ ഈ ദേവിപ്പുരി വൃക്കിത്വമായൊരു ചിത്രം വായനക്കാർക്ക് ലഭിക്കുന്നത് പുനഃപരിശോധനയ്ക്കായിട്ടാണ്. പഞ്ചപാണ്ഡവന്മാരുടെയും പാണ്ഡവന്മാരുടെയും കഥയോടു ചേർന്ന് നിൽക്കുന്ന പാണ്ഡവപുരത്തെ ദേവിയുടെ കഥ പറയുന്നത് അവിടെ ജാരനാണ്. ആ ജാരന്മാരുടെ ദേവിയുടെ സ്മൃതിയെ ഭ്രമസ്വഷ്ടിയും, പെണ്ണിനെച്ചൊല്ലി പരസ്പരം കലഹിക്കുന്ന രണ്ടു പെണ്ണിന്മാരുടെയും താൻ അവരെ അഞ്ച്പേരെയും ഒരുപേരെ വിട്ടുപോകാതെ, ഉച്ഛിഷ്ടത്തെപ്പോലെ വെറുക്കുന്നു എന്ന് പറഞ്ഞ് തന്റെ മുമ്പിൽ ക്ഷേത്രത്തിൽ കുന്നിൻപുരത്തെ ദേവിവിഗ്രഹമായിത്തീർന്ന പാണ്ഡവപുരത്തെ ദേവിയുടെ കഥയാണ്. ആ ദേവി ക്രമേണ പാണ്ഡവപുരത്തെ കന്യകകളുടെയും സുമംഗലികളുടെയും കക്ഷകയായിത്തീർന്നു.

സേതുവിന്റെ അഞ്ചു അടികൾ എന്ന നോവലിലും സേതുവിന്റെ കഥയെക്കുറിച്ച് ദേവിവിഗ്രഹമായിത്തീർന്നൊരു പെണ്ണിന്റെ കഥ പറയുന്നുണ്ട്. ദർശനാവിനാൽ വഞ്ചിതയായിത്തീർന്നു എഴുതപ്പെട്ട പാണ്ഡവപുരത്തെ കഥയെക്കുറിച്ച് ഇരിപ്പിറപ്പിക്കുന്ന അവൾ ഒരു വിഗ്രഹമായിത്തീർന്നുകയും ചെയ്തു.

തലമുറകളോളം ആ കൂട്ടംബത്തിലെ പുരുഷന്മാരെ അടിമകളാക്കി നിയ
ന്ത്രിക്കുകയും ഭരിക്കുകയും ചെയ്യുന്ന കഥയാണ്. ഞങ്ങൾ അടിമകളിലെ
ഏഴാമെടത്തെയും പാണ്ഡവപുരത്തെ ദേവിയെയും ചേർത്തുവായിക്കാനാ
വൂ. ഞങ്ങൾ അടിമകളിലെ ഏഴാമെടത്തിന്റെ അതേ രൂപത്തിൽ വഞ്ചിക്ക
പ്പെട്ട് തപസ്സുചെയ്യാൻ ആരംഭിക്കുന്നവളാണ് പാണ്ഡവപുരത്തെ അഞ്ചു
പേരുടെയും ഭാര്യയായിരുന്നവൾ. പാണ്ഡവപുരയിലെ പുരുഷന്മാരുടെ
ഭാര്യ ഏഴാമെടത്തിന്റെ വികസിത രൂപമാണ്. കൃഷ്ണിക്കുട്ടന്റെ ഭാര്യയായ
മേവിടീച്ചറിലേക്ക് ഈ ദേവി പരകായപ്രവേശം ചെയ്യുന്നു. തന്റെ ജീവിത
നാശത്തിനു വഴിയൊരുക്കിയ അഞ്ച് ഭർത്താക്കന്മാരോടുള്ള പകയാണ്
ദേവിയെ പാണ്ഡവപുരത്തെ ജാരന്മാർക്ക് ഒരു പേടിസ്വപ്നമാക്കി മാറ്റുന്ന
ത്. ദേവിടീച്ചറെ സംബന്ധിച്ചിടത്തോളം അവളുടെ പക ഭർത്താവായിരുന്ന
കൃഷ്ണിക്കുട്ടനോടാണ്.

ദേവിടീച്ചറുടെയും പാണ്ഡവപുരത്തെ ദേവിയുടെയും രൂപഭാവ
സാദൃശ്യങ്ങൾക്ക് ഉദാഹരണങ്ങൾ നോവലിൽ ധാരാളമുണ്ട്. ജാരൻ ദേവി
യോട് പറയുന്നു: “ചുവന്ന സാരി, ചുവന്ന പുളളുവാർ, നെറ്റിയിൽ കൂങ്ക
മപ്പൊട്ട്, നെറുകയിൽ സിന്ദൂരം. നിങ്ങളൊരു തീജ്ജാലയായിരുന്നു. അതിൽ
കഴിഞ്ഞുവീണത് ഞാൻ മാത്രമല്ല. ആരാധകരായി, ഒരുപക്ഷേ, നിങ്ങൾക്ക
റിഞ്ഞുകൂടാത്ത, ഒരുപാട് ചെറുപ്പക്കാർ പാണ്ഡവപുരത്തുണ്ടായിരുന്നു.
(സേതു. 2017:25) ഒന്നാം അദ്ധ്യായത്തിൽ നാം കാണുന്ന ദേവികും സമാ
നമായ വർണ്ണങ്ങളാണ്. ഇരുചിത്രങ്ങളിലും, ചുവപ്പിന്റെ ഒരാവരണം കണ്ടെ
ത്താൻ കഴിയും - പകയുടെ, പ്രതികാരത്തിന്റെ, കീതിയുടെ ചുവപ്പ്. ജാരനും
ദേവിയും തമ്മിലുള്ള ഓരോ സംഭാഷണത്തിലും പാണ്ഡവപുരത്തെ ദേവി
യുടെ ചിത്രത്തെ അനുസ്മരിപ്പിക്കുന്ന തരത്തിൽ ചുവപ്പ് കടന്നുവരുന്നു.
“അവളുടെ കണ്ണുകളിൽ തീനാമ്പുകൾ പുള്ളുന്നുണ്ടായിരുന്നു. അയാളുടെ
കൺമുന്നിൽ ആ ചുവന്ന ജ്വാല ഉലഞ്ഞു. വിറച്ചു. നെറുകയിലെ സിന്ദൂരം
പടർന്ന് മുഖമാകെ ചുവന്നു.” (സേതു. 2017:91). അങ്ങനെ ദേവിടീച്ചറെന്ന
കഥാപാത്രത്തിൽതന്നെ പാണ്ഡവപുരത്തെ ദേവിയുടെ പ്രതീതിയുളവാ
ക്കാൻ സേതുവിന് കഴിഞ്ഞിട്ടുണ്ട്. പക്ഷേ, പാണ്ഡവപുരത്തെ ദേവിയും
ദേവിടീച്ചറും തമ്മിൽ പ്രകടമായ ബന്ധങ്ങളൊന്നുമുണ്ടാവേണ്ട കാര്യമൊ
ന്നുമില്ലാതെ. “ആധുനികമായ പ്രതീതിനിഷ്ഠ ഫാന്റസികൾ പ്രവർത്തി
ക്കുന്നത് കാരണമില്ലാത്ത കാര്യങ്ങൾ അവതരിപ്പിച്ചുകൊണ്ടാണ്. കാരണം
അജ്ഞാതമായതുകൊണ്ട് മനുഷ്യാവസ്ഥകൾക്ക് ഭ്രാന്തകരമായ മുഖം ലഭി
ക്കുന്നു. കാരണമില്ലായ്മയാണ് ഭ്രാന്തകരമായ പ്രതീതിയുളവാക്കുന്ന പ്രധാന
ഘടകം.” (വത്സലൻ വാതുശ്ശേരി. 2004:31). ഈ കാരണമില്ലായ്മയാണ്
പാണ്ഡവപുരത്തെ അഞ്ച് പുരുഷന്മാരുടെ ഭാര്യയായിരുന്ന സ്ത്രീരൂപത്തെ
ദേവിടീച്ചറുടെ മനസ്സിലുള്ളിലെ പാണ്ഡവപുരത്തെ ദേവി എന്ന പ്രതീതി
നിഷ്ഠ ഫാന്റസിയായി മാറ്റുന്നത്.

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മലയാളവിഭാഗം,

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മലയാള സാഹിത്യരംഗത്ത് ഇന്ന് ഏറെ സജീവമായി നില നിൽക്കുന്ന ആഖ്യാന രീതികളിലൊന്നാണ് പെണ്ണെഴുത്ത്. ഫെമിനിസം, പെണ്ണെഴുത്ത് എന്നിവ ഒട്ടേറെ നിർവ്വചങ്ങളും വകഭേദങ്ങളുമുള്ള പരികല്പനകളാണ്. സ്ത്രീസത്തയുടെ മനോഹാരിത പെണ്ണെഴുത്തിൽ സുവ്യക്തമാണിന്ന്. പെണ്ണെഴുത്തിനെ പ്രധാനമായും രണ്ട് വിഭാഗങ്ങളായി തിരിക്കാം. വ്യക്തമായി സ്ത്രീവാദ നിലപാടുകൾ വീക്ഷണതലത്തിൽ പ്രകടിപ്പിക്കാത്ത രചനകളും വിമോചനത്തിന്റെ സമരവൈവിധ്യങ്ങളടങ്ങിയ രചനകളും ഇതിൽ രണ്ടാമത്തേതാണ് ഇന്നത്തെ അർത്ഥത്തിലുള്ള പെണ്ണെഴുത്ത് (സുഷമകുമാരി, കെ.എസ്. 2022). നമ്മുടെ വ്യവഹാരമണ്ഡലങ്ങളിൽ ഒരു വീണ്ടുവിചാരത്തിന് പ്രേരിപ്പിക്കുന്ന ആശയങ്ങളാണ് ഇവ മുന്നോട്ട് വയ്ക്കുന്നത്. ഏത് സമൂഹത്തിന്റെയും ചരിത്രത്തെയും സാംസ്കാരിക വ്യവഹാരങ്ങളെയും പരിശോധിച്ചാൽ അവയ്ക്കു പിന്നിലെ നിയമക ശക്തി എന്ന നിലയിൽ സ്ത്രീയുടെ സാന്നിധ്യം പ്രകടമാണ്. എന്നാൽ സ്ത്രീയുടെ ശാബ്ദികമായ അന്തരംകൊണ്ട് അവൾ പലപ്പോഴും പലയിടങ്ങളിലും സമൂഹത്തിന്റെ മുഖ്യധാരയിൽനിന്ന് പിന്നിലേയ്ക്ക് തള്ളപ്പെടുകയും തള്ളപ്പെട്ടുകൊണ്ടിരിക്കുകയും ചെയ്യുന്നു. ഇത്തരത്തിൽ സാമൂഹിക സാംസ്കാരിക രാഷ്ട്രീയ വ്യവഹാരങ്ങളിൽ തന്നെ തരംതാഴ്ന്നിട്ടു വെച്ചിട്ടുള്ള മുഖ്യവ്യവസ്ഥയെയും, അന്യയാക്കുന്ന പുരുഷ വ്യവസ്ഥയെയും ഒഴിവാക്കുന്ന ശരീരവ്യവസ്ഥയെയും സ്ത്രീ തിരിച്ചറിയുക വഴി

തന്റെ വ്യക്തിത്വം പുരുഷനൊപ്പം തന്നെ എന്ന് സമാപിച്ചുകൊണ്ട് അവർ രൂപപ്പെടുത്തിയ ആശയമാണ് ഫെമിനിസം. ഈ പ്രത്യയശാസ്ത്രത്തിൽ ചുവടുറപ്പിച്ച് നിലനില്ക്കുന്ന സ്ത്രീവിരുദ്ധ വ്യവസ്ഥയ്ക്കെതിരെ ശബ്ദമുയർത്താനും നഷ്ടപ്പെടുന്നതിനെ തിരികെ പിടിക്കാനും അവർ യത്നിക്കുന്നു. ഫെമിനിസ്റ്റ് പ്രത്യയശാസ്ത്രത്തിന് പിൽക്കാലത്ത് പല വർഗ്ഗീകരണങ്ങളുണ്ടായി. റാഡിക്കൽ ഫെമിനിസം, സോഷ്യലിസ്റ്റ് ഫെമിനിസം, മാർക്സിസ്റ്റ് ഫെമിനിസം, ലിബറൽ ഫെമിനിസം, എക്കോ ഫെമിനിസം, സൈക്കോ അനാലിറ്റിക് ഫെമിനിസം, പോസ്റ്റ് മോഡേൺ ഫെമിനിസം, ആഗോള ഫെമിനിസം തുടങ്ങിയ വകഭേദങ്ങൾ സ്ത്രീ സമൂഹത്തെയും സാഹിത്യത്തെയും അപഗ്രഥന വിധേയമാക്കുവാൻ സഹായിക്കുന്നു.

പെണ്ണിന്റെ എഴുത്തും പെണ്ണിനുവേണ്ടിയുള്ള എഴുത്തും ഫെമിനിസത്തിൽ ഉൾപ്പെടുന്നു. എഴുപതുകളിൽ ഫ്രഞ്ച് സാഹിത്യത്തിൽ ചർച്ച ചെയ്യപ്പെടുകയും പിന്നീട് പാശ്ചാത്യരാജ്യങ്ങളിൽ അനേകം വാദപ്രതിവാദങ്ങൾക്ക് കാരണമായിത്തീരുകയും ചെയ്ത ആശയമാണ് 'എക്രിച്ചർ ഫെമിനിൻ' അഥവാ 'ഫെമിനിൻ റെറ്റിംഗ്'. പുരുഷ ഭാഷയോടും സംവാദങ്ങളോടും വിരോധിക്കുന്നതും വ്യത്യസ്തവുമായ സവിശേഷ ശൈലി, ഭാഷ, സ്വരം, വികാരം എന്നിവയുള്ള എഴുത്തിനെയാണ് ഇതുകൊണ്ട് ഉദ്ദേശിക്കുന്നത് (Cixous, Helne 1976:879) എന്ന് 'ദ ലാഫ് ഓഫ് മെഡ്യൂസ്' എന്ന പ്രസിദ്ധമായ ലേഖനത്തിൽ ഫ്രഞ്ച് ഫെമിനിസ്റ്റ് എഴുത്തുകാരിയായ ഹെലേന സിക്സസ് വ്യക്തമാക്കിയിട്ടുണ്ട്. സമാന ചിന്താഗതിക്കാരാണ് ഫ്രഞ്ച് ഫെമിനിസ്റ്റ് പ്രസ്ഥാനത്തിന്റെ ഉപജ്ഞാതാക്കളായ ലൂസി ഇറിഗാരും, ജൂലിയ ക്രിസ്തേവയും. 'സ്ത്രീക്ക് സ്വന്തമായ ഒരു ഭാഷ വേണമെന്ന്' എലൈൻ ഷോവാൾട്ടർ, സാന്ദ്രാ ഗിൽബർട്ട്, സൂസൻ ഗുബാർ മുതലായ സ്ത്രീവാദ എഴുത്തുകാർ അഭിപ്രായപ്പെടുമ്പോൾ 'പുരുഷ ഭിന്ന എഴുത്ത് വേണം ഭാഷ വേണ്ട' എന്ന വാദമാണ് ജൂലിയ ക്രിസ്തേവ, വെർജീനിയവുൾഫ്, ഡൊറോത്തി റിച്ചാഡ്സൺ, ഷന്താൾ ഷവാഫ്, മേരി യാക്കോബ്സ്, കരോളിൻ ജി. ബർക്ക്, അഡ്രിയൻ റിച്ച് തുടങ്ങിയ ഫെമിനിസ്റ്റ് എഴുത്തുകാർ മുന്നോട്ടുവയ്ക്കുന്നത്. ഇത്തരം ചിന്തകൾ ജീവശാസ്ത്രപരമായ വേർതിരിവ് കാണിക്കുന്നില്ല എന്നും സ്ത്രീകൾ പുരുഷ സംവാദങ്ങളിൽ എഴുതുകയും പുരുഷന് സ്ത്രീപക്ഷരീതിയിൽ എഴുതുകയും ചെയ്യാം (Ibid, P.881) എന്നും തന്റെ ലേഖനത്തിൽ ഹെലേന സിക്സസ് തുടർന്ന് വ്യക്തമാക്കുന്നുണ്ട്. ഇങ്ങനെ തങ്ങളുടെ ശരീരത്തിനും മനസ്സിനും ബുദ്ധിക്ക് മേലുള്ള അധികാര നിർണ്ണയനം തങ്ങൾ തന്നെ നിർവഹിച്ചുകൊള്ളാമെന്ന് വാദിച്ചുകൊണ്ട് സ്ത്രീസ്വാതന്ത്ര്യചിന്തയുടെയും സ്വത്വനിർമ്മിതിയുടെയും ആശയധാരകൾ എഴുത്തിന്റെ തലത്തിലേക്ക് സംക്രമിപ്പിക്കലാണ് പെണ്ണെഴുത്തുകൊണ്ട് ഉദ്ദേശിക്കുന്നത്.

ആഖ്യാനതന്ത്രത്തിന്റെ വ്യത്യസ്തതയിലൂടെ മലയാളം സാഹിത്യത്തിൽ എഴുത്തിന്റെ നവീനമായൊരിടം നിർമ്മിക്കാൻ ശ്രമിച്ചിട്ടുള്ള എഴുത്തുകാരനാണ് സേതു. ദിനംപ്രതി നഗരവത്കരണത്തിനും വാണിജ്യവൽക്കരണത്തിനും വിധേയമായിക്കൊണ്ടിരിക്കുന്ന ഒരു കാലത്തെ സൂക്ഷ്മമായി നിരീക്ഷിച്ച് മനുഷ്യമനസ്സുകളിൽ അവ സൃഷ്ടിക്കുന്ന ഉണർവുകളെയും ഉൽക്കണ്ഠകളെയും കുറിച്ച് സേതു നിരന്തരം എഴുതുന്നു. പുരുഷന്മാരേക്കാൾ കൂടുതൽ മാനസിക ലോകത്തിന്റെ കരുത്തിൽ വിശ്വസിക്കുന്ന സ്ത്രീകളെയാണ് സേതു പ്രധാനമായും തന്റെ രചനകളിൽ ആവിഷ്കരിച്ചിട്ടുള്ളത്. തങ്ങളുടെ ചിത്തത്തെ പിടിച്ചുലച്ച് കടന്നുപോകുന്ന ജീവിതപ്രതിസന്ധികളുമായി ഏറ്റുമുട്ടി ആണധികാരത്തിന്റെ ഇരിപ്പിടങ്ങളെ തട്ടിമറിച്ച് സ്വന്തം നിലനില്പിനായി പോരാടുന്നവരാണ്. ഈ പശ്ചാത്തലത്തിൽ പാണ്ഡവപുരം എന്ന നോവലിൽ കേന്ദ്രകഥാപാത്രമായി സേതു അവതരിപ്പിച്ച സ്ത്രീ സ്വത്വത്തിലൂടെ വർത്തമാനകാല സ്ത്രീ ജീവിതങ്ങളുടെ സാമൂഹിക, സാംസ്കാരിക, രാഷ്ട്രീയാവസ്ഥകളിലേക്കുള്ള ഒരന്വേഷണത്തിനാണിവിടെ ശ്രമിക്കുന്നത്.

സ്ത്രീകളുടെ പതിതാവസ്ഥയെക്കുറിച്ചും അവരെ അപ്രകാരം രൂപപ്പെടുത്തുന്ന സാമൂഹികസാഹചര്യങ്ങളെക്കുറിച്ചും അവരുടെ ആന്തരിക ലോകങ്ങളെക്കുറിച്ചും ഏറെ എഴുതിയിട്ടുണ്ട് സേതു. സ്ത്രീയുടെ വീക്ഷണത്തിലൂടെയുള്ള അവരുടെ ജീവിതത്തിന്റെ ദിനമുഖങ്ങളുടെ ആവിഷ്കാരത്തോടൊപ്പം നമ്മുടെ സാമൂഹിക സാംസ്കാരിക പരിണാമത്തിന്റെ വ്യത്യസ്ത മുഖങ്ങളും കൂടിയാണ് അവിടെ അനാവരണം ചെയ്യപ്പെടുന്നത്. നിലനിൽക്കുന്ന ചില ക്രമങ്ങളിലെ അക്രമങ്ങളെ വെല്ലുവിളിച്ച് അതിനെ പൊളിച്ചെഴുതി പുതിയ ക്രമങ്ങൾ സൃഷ്ടിക്കാനും അതിൽ കാലുറപ്പിച്ച് നിൽക്കാനും ശ്രമിക്കുന്ന സ്ത്രീ കഥാപാത്രങ്ങളെ ചില രചനകളിൽ സേതു ആവിഷ്കരിച്ചിട്ടുണ്ട്. പാണ്ഡവപുരം എന്ന നോവലിലെ ദേവി ഇത്തരമൊരു സ്ത്രീ കഥാപാത്രമാണ്.

കൈയ്യിൽ കിട്ടുന്ന ഓരോ കല്ലും കുപ്പിച്ചില്ലും ഓരോ കടന്ന വായുവും മോഹങ്ങളും പിന്നെ വേർതിരിച്ചറിയാവുന്ന ഗന്ധങ്ങളും ശബ്ദങ്ങളും നൽകുന്ന അറിവും ഒക്കെ ചേർത്തുവെച്ച് പണിപ്പെട്ട് മെനഞ്ഞുണ്ടാക്കിയ (സേതു, 2017:7) ഒരിടം ഒടുവിൽ ദേവി എന്ന സ്ത്രീയിൽ സത്യമായിത്തീരുന്നതിന്റെ ആഖ്യാനമാണ് പാണ്ഡവപുരം. കുപ്പിച്ചില്ലുപോലൊരു ലോകമാണ് വാസ്തവത്തിൽ പാണ്ഡവപുരം. മുറിവേല്പിക്കും വിധം അപകടകരമെങ്കിലും ജീവിതത്തോട് അത്രമേൽ ചേർത്തുവെച്ചുപെട്ടതിനാൽ ദേവിക്കോ ദേവിയോടൊപ്പം യാത്ര ചെയ്യുന്നവർക്കോ തള്ളിക്കളയാനാവാത്തൊരു പുത്തൻപുരം. ആസ്വാദക ബോധത്തെ നിരന്തരം മുറിവേല്പിച്ചുകൊണ്ട് മനസ്സിൽ എവിടെയൊ കയറിക്കൂടി പതുങ്ങിയിരിക്കുന്ന മായികലോകം.

യാഥാർത്ഥ്യബോധത്തിന്റെ നേർമ്മയിൽനിന്നുകന്ന് കരുക്കുകൾക്കുള്ളിലെ കരുക്കുകൾകൊണ്ട് ബന്ധിക്കപ്പെട്ട് ഒരിക്കലും അതഴിക്കാൻ കഴിയാത്ത മനസ്സിന്റെ തലങ്ങളിലൂടെയാണ് ദേവി സഞ്ചരിക്കുന്നതെങ്കിലും ആ മായികലോകത്ത് അവർ എപ്പോഴും ജാരനെ കാത്തിരിക്കുന്നു. ജാരനെക്കുറിച്ചുള്ള സങ്കല്പങ്ങളിൽ ജീവിക്കുന്നു. മരണത്തെടുക്കുന്ന സങ്കല്പങ്ങൾ നിർമ്മിതിപോലെ മായുന്നു, മറയുന്നു. അവ വീണ്ടും ജനിക്കുന്നു. ഇങ്ങനെ പുത്തൻലോകത്തിന്റെയും അതിനെക്കുറിച്ചുള്ള ഭ്രമചിന്തകളുടെയും മോഹപ്രപഞ്ചത്തിൽ ദേവി പാണ്ഡവപുരത്തോടൊത്തും അവിടെ നിന്നുമെത്തുമെന്ന് പ്രതീക്ഷിക്കുന്ന ജാരനോടൊത്തും യാത്ര തുടരുന്നു.

പാണ്ഡവപുരം എന്ന സങ്കല്പഭൂമി യഥാർത്ഥത്തിൽ ദേവിയുടെ സ്ത്രീമനസിലെ ഭൂതകാല താല്പര്യങ്ങളുടെ വർത്തമാനമാണ്. പൂർണ്ണമല്ലാത്ത, ഒരിക്കലും സഫലീകരിക്കപ്പെടാത്ത, സഫലീകരിക്കപ്പെടാൻ സാധ്യതയില്ലാത്ത സ്വപ്നങ്ങളെ പൂരിപ്പിക്കാൻ ഒരാൾ വരുമെന്ന് പ്രതീക്ഷിക്കുന്നിടം. ബാഹ്യവും ആന്തരികവുമായ ഉയിരടയാളങ്ങൾ ഇരുണ്ടുമുടി പ്രതീക്ഷകൾ തകർന്നുപോകുമ്പോൾ സൃഷ്ടിക്കപ്പെടുന്ന അസ്വസ്ഥകളിൽനിന്ന് ഉയിർകൊള്ളുന്ന വൈരത്തിന്റെയും കരുത്തിന്റെയും പിൻബലത്തിലൂടെ ജാരൻ എന്ന പുരുഷന്റെ അഹന്തയെ അമർച്ച ചെയ്യാൻ തീക്ഷ്ണമായി ആഗ്രഹിക്കുന്ന ഒരു സ്വപ്നസ്ഥലി. സമൂഹവും സംസ്കാരവും നിർമ്മിച്ച വിലക്കുകളെ അതിജീവിക്കാൻ വിലക്കപ്പെടുന്ന മറ്റൊരു പ്രതീകത്തെ തന്നെ സ്വാംശീകരിക്കുന്നത് പകയുടെ ഒരു തന്ത്രമാണ്. അത്തരമൊരു പ്രതീകമാണ് ജാരൻ. (ഒലീന, എ.ജി. 2009:41) വിലക്ക് ഒരു അക്രമമാകുമ്പോൾ അവിടെ ക്രമം സൃഷ്ടിക്കാനുള്ള ശ്രമം കൂടിയാണിത്. ഒരു ബദൽ ക്രമം സാധ്യമാണെന്ന് തുറന്നു കാട്ടാനുള്ള ഒറ്റയാൾ പോരാട്ടം. പാണ്ഡവപുരം എന്ന സങ്കല്പസൃഷ്ടിപോലെ ജാരനും ദേവിയുടെ സങ്കല്പപുരുഷനാണ്. ഒരർത്ഥത്തിൽ ദേവിയുടെ മനസ്സിലെ കണ്ണുട്ടേട്ടൻ എന്ന പുരുഷന്റെ മറ്റൊരു രൂപം. നീരുവറ്റിയ ചണ്ടിയെ ഉപയോഗം കഴിഞ്ഞ് നിരത്തിൽ വലിച്ചെറിയുംപോലെ തന്നെ ഉപയോഗം കഴിഞ്ഞ് ഉപേക്ഷിച്ച് ഓടിപ്പോയ പുരുഷൻ സമ്മാനിച്ച ആഴത്തിലുള്ള മുറിവുകൾ ദേവി ശരീരത്തിലും മനസ്സിലും പേറുന്നുണ്ട്. അതിനാൽ താൻ ഉപേക്ഷിക്കപ്പെട്ടതിനുള്ള ഉത്തരമെന്നോണം ദേവിയുടെ മനസ്സിന്റെ യുക്തിപൂർണ്ണമായ ഗതകാലത്തിന്റെ ഭാഗമായിത്തീരുന്നു ജാരൻ. ഇങ്ങനെ ഒരു ജാരനുമായി എനിക്ക് അടുത്ത ബന്ധമുണ്ടായിരുന്നുവെന്ന് അറിഞ്ഞിരുന്നുവെങ്കിൽ തീർച്ചയായും കണ്ണുട്ടേട്ടൻ തന്നെ ഉപേക്ഷിക്കുമായിരുന്നു(സേതു, 2017:96) എന്ന് ദേവി പറയുന്നതിന്റെ പൊരുളുതാണ്. പകർന്ന് നല്ലീയ സ്നേഹത്തിന്റെ ചെറിയൊരംശംപോലും തിരികെ ലഭിക്കാത്തതുകൊണ്ടാണ് തന്റെ ആവാഹന ക്രിയകളിലൂടെ പുരുഷനെ തോല്പിക്കാനും, കാൽക്കീഴിലിട്ട് ചവിട്ടി

തെരികൊന്നും, നഗ്നശരീരത്തിൽ ദുർഗ്ഗയെപ്പോലെ നൃത്തമാടാനും
 താൻ ആഗ്രഹിക്കുന്നതെന്ന് ദേവി സൂചിപ്പിക്കുന്നുണ്ട്. നിലനില്പു
 ന്ന ആണധികാരങ്ങൾക്കുമേലുള്ള പുതിയ മുദ്രചാർത്താലാണി
 ആവാഹനം. ഇന്നോളം സ്ത്രീത്വവും കന്യാത്വവും സംരക്ഷിക്കാൻ
 മാട്ടയാടുന്ന പുരുഷനെ ഭയന്ന് ഓടി രക്ഷപ്പെടാൻ ശ്രമിക്കുന്ന
 സ്ത്രീയിൽനിന്നുമുള്ള മോചനത്തിന്റെ അടയാളവും നിയോഗവുമായി
 മാറുകയാണ് ഇവിടെ പാണ്ഡവപുരത്തിലെ ദേവി. ജാരന്മാരെ
 ഓരോരുത്തരായി ആവാഹിച്ച് വരുത്തി അവരുടെ അഹന്തയുടെ
 പത്തി ചവിട്ടി മെതിച്ച് നഗ്നമായ ശരീരത്തിൽ സംഹാരനൃത്തമാടി
 തൊല്ലിക്കണമെന്ന ദേവിയുടെ ചിന്തയിൽ ഒരേ സമയം പ്രകൃതിയുടെ
 യും പുരുഷന്റെയും ഇരട്ടത്താപ്പ് നിറഞ്ഞ നിയമങ്ങളുടെ ലംഘനവും
 പൊളിച്ചെഴുത്തുമാണ്.

ഒരു പുതിയഭൂമിയുടെ രാഷ്ട്രമീമാംസയിലൂടെ സ്ത്രീയെന്ന മോഹ
 ങ്ങളുടെ വൈകാരിക സ്വത്വത്തെ വിശകലനം ചെയ്യാനും സ്ത്രീപുരു
 ഷബന്ധങ്ങളിലെ ബോധാബോധതല പ്രേരണകളെ ഇഴപിരിച്ചു
 കാട്ടാനുമുള്ള എഴുത്തുകാരന്റെ ശ്രമമാണ് പാണ്ഡവപുരവും ദേവിയും
 ജാരന്മാരും. വർത്തമാനകാല സ്ത്രീജീവിതത്തിന്റെ പോരാട്ടഭൂമി
 കയും അവിടത്തെ സ്ത്രീ പ്രതിനിധാനവുമായി അങ്ങനെ യഥാക്രമം
 പാണ്ഡവപുരവും ദേവിയും മാറുന്നു. ശക്തമായ ജീവിതപ്രശ്നങ്ങ
 ളോടും പ്രതിസന്ധികളോടും പോരാടാൻ വിധിക്കപ്പെട്ടവളാണ്
 ദേവി. സമകാല സാമൂഹിക ജീവിതത്തിലെ ആണധികാരത്തിന്റെ
 ധിക്കാരത്തോടും ശരീരത്തിന്റെയും മനസ്സിന്റെയും മേലുള്ള അധിനി
 വേശങ്ങളോടും ആ അധികാരങ്ങളും ധിക്കാരങ്ങളും അധിനിവേശ
 ങ്ങളും പുലർത്തുന്ന അസഹിഷ്ണുതയോടും സ്വന്തം ജീവിതംകൊണ്ട്
 അവൾ പ്രതിഷേധ പ്രതിരോധങ്ങൾ തീർക്കുന്നു. തന്റെ മാനസിക
 ചലനങ്ങളെ മാനിക്കാതെ വെറും ശരീരം മാത്രമായി തന്നെകാണാൻ
 ശ്രമിച്ച പരമ്പരാഗത പുരുഷ സംസ്കാരത്തോട് അതിന്റെ അധി
 കാരങ്ങളോട് വീരോടും വാശിയോടും കൂടെ അവൾ കലഹിക്കുന്നു.
 ജർത്താവ് എന്ന പുരുഷനാൽ അകാരണമായി തിരസ്കരിക്കപ്പെട്ട്
 തിരിച്ചറിയാൻ കഴിയാത്ത വൈകാരികതയുടെ ഉന്മാദങ്ങളിൽ
 ദിശതെറ്റി അലയുന്ന സ്ത്രീ തന്റെ ജീവിതദുഃഖത്തിന്റെ ഏകാന്തത
 കളെ അതിജീവിക്കാൻ ശ്രമിക്കുന്നതിന്റെ സാക്ഷ്യം കൂടിയാണിത്.
 സ്ത്രീയുടെ ചേതനയിലെ അബോധ പ്രേരണയായ 'അമർത്തപ്പെട്ട
 ആഗ്രഹങ്ങളുടെ പുരിപ്പിക്കലിന്റെ' സൂചന തന്നെകൊണ്ട് ജാരനെ
 കാത്തിരിക്കുന്ന പാണ്ഡവപുരത്തെ ദേവിയുടെ അവസ്ഥ സദാചാര
 ബോധത്തിന്റെ സാമൂഹിക ക്രമങ്ങളിൽ സ്ത്രീയുടെ ജന്മവാസനകളും
 മോഹങ്ങളും എപ്രകാരമാണ് തമസ്കരിക്കപ്പെടുകയോ തിരസ്കരി
 ക്കപ്പെടുകയോ ചെയ്യുന്നതെന്ന യഥാർത്ഥ്യത്തെയും അടയാളപ്പെടു
 ത്തുന്നുണ്ട്. ഇത്തരം പാരതന്ത്ര്യങ്ങളിൽനിന്നുള്ള മോചനത്തിന്റെ

സൂചകങ്ങളാണ് ദേവി എന്ന സ്ത്രീയുടെ സാങ്കല്പിക നിർമ്മിതികളായ പാണ്ഡവപുരവും ജാരന്മാരും. അങ്ങനെ നിലവിലെ നഗരവും നരന്മാരും തങ്ങളുടെ സ്വത്വത്തെ അതിന്റെ കരുത്തോടും ബലഹീനതയോടുമൊപ്പം അംഗീകരിക്കാത്തതിനാൽ അസ്വസ്ഥരായ സ്ത്രീ മനസ്സുകളുടെ ആശ്വാസത്തിന് അവരുടെ ഉൾക്കരുത്തുകൊണ്ടുതന്നെയുള്ള പുത്തൻ പുരത്തിന്റെയും പുതിയ പുരുഷന്മാരുടെയും നിർമ്മിതിയായിത്തീരുന്ന സേതുവിന്റെ പാണ്ഡവപുരം.

സ്വത്വനിർമ്മിതിയുടെ പുരണത്തോട് ചേർത്തും വ്യക്തിസത്തകളുടെ ചേർച്ചയോട് ബന്ധപ്പെടുത്തിയും സമഷ്ടിയുടെ ലൈംഗിക, വിചാര, വികാരങ്ങളെ മനുഷ്യന്റെ വംശാവലി ചരിത്രത്തിന്റെ ഭാഗമായി (Foucault, Michel 1979:15) മിഷേൽ ഫൂക്കോ അവതരിപ്പിച്ചിട്ടുണ്ട്. സ്വത്വസംരക്ഷണത്തിൽ ആശ്വാസവും സന്തോഷവും കണ്ടെടുക്കുന്ന ഒരു സാംസ്കാരിക സമൂഹത്തെയാണ് ഫൂക്കോവിന്റെ ദർശനം അപനിർമ്മിക്കാൻ ശ്രമിക്കുന്നത്. പൊതുസമൂഹാധികാരത്തിന്റെ സദാചാരദണ്ഡ് ഏറ്റവും കരുത്തോടെ പതിക്കപ്പെട്ടിട്ടുള്ള ഒരു മേഖലയാണല്ലോ ഒരാളുടെ വൈകാരിക മണ്ഡലം. തന്റെ ആഗ്രഹങ്ങളുടെയും അവകാശങ്ങളുടെയും അധികാരങ്ങളുടെയും ജന്മവാസനകളുടെയും കാരണം കൂടാതെയുള്ള തിരസ്കാരം ഒരു വ്യക്തി എന്ന നിലയിൽ ദേവി നേരിട്ട ഏറ്റവും വലിയ വെല്ലുവിളിയാണ്. ഈ നിതി നിഷേധം അവരുടെ വ്യക്തി, കടുംബ, സമൂഹബന്ധങ്ങളെ കീഴ്മേൽ മറിച്ചു. അങ്ങനെ പൊതുസമൂഹം നിർമ്മിച്ചിരിക്കുന്ന എല്ലാത്തരം നിയമങ്ങളുടെയും കരുക്കുകൾ വ്യക്തി എന്ന നിലയിൽ സ്ത്രീസ്വത്വത്തിന്റെ അനുഭവമേഖലകളെയെല്ലാം ബാധിക്കുന്നുവെന്നുകൂടി സാക്ഷ്യപ്പെടുത്തുന്നുണ്ട് പാണ്ഡവപുരം.

സ്ത്രീ എന്ന നിലയിൽ അവരുടെ വികാരവിചാരമണ്ഡലങ്ങളെയെല്ലാം പുരുഷകേന്ദ്രീകൃതസമൂഹം കാലാകാലങ്ങളിൽ തങ്ങളുടെ യുക്തിക്കനുസരിച്ച് പുനർനിർമ്മിക്കുകയും, നിർവചിക്കുകയും ചെയ്യുമ്പോൾ അതിന് ബദൽമാർഗ്ഗങ്ങൾ കണ്ടെത്തുന്നതിനും സ്വത്വനിർണ്ണയ, നിയമനിർമ്മാണാധികാരത്തെ തന്നിൽത്തന്നെ കേന്ദ്രീകരിക്കുന്നതിനാണ് പുത്തൻനഗരത്തെയും പുതിയ പുരുഷന്മാരെയും ദേവി തേടുന്നത്. വ്യക്തിയുടെയും സമൂഹത്തിന്റെയും ഉള്ളറകളിലേക്ക് കടക്കാനുള്ള വാതിലാണ് അവരുടെ മോഹങ്ങളുടെയും കാമനകളുടെയും അപഗ്രഥനമെങ്കിൽ അവയെ ചരിത്രപരമായ അനുഭവമായിത്തന്നെ നാം വിശകലനവിധേയമാക്കേണ്ടതുണ്ട്. അത്തരത്തിൽ സ്ത്രീസ്വത്വത്തിന്റെ ചരിത്രപരവും, രാഷ്ട്രീയപരവുമായ അന്വേഷണത്തിന്റെ സാധ്യതയും സാമൂഹികവും സാംസ്കാരികവുമായ വീണ്ടെടുപ്പിനുള്ള ആഹ്വാനവുമാണ് ഒരു സ്ത്രീസ്വത്വാവിഷ്കാര രചനയെന്ന നിലയിൽ പാണ്ഡവപുരം മുന്നോട്ടുവയ്ക്കുന്ന പ്രത്യയശാസ്ത്രം.

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complex have been developed and identified as suitable catalyst for coupling reactions.

In our study, we have successfully developed a novel reusable copper and palladium supported polymer catalysts by metal complexation on chemically modified polymer. As heterogeneous catalysts, they exhibit both high activities and excellent recyclability in classical coupling reactions. The results of this investigation involving optimization and generality studies using a series of substrates with various electron demands are described.

Keywords: Polyacrylonitrile; Supported Catalysis; Coupling reaction; Copper; Palladium

03-03

N-RICH ZEOLITE LIKE METAL ORGANIC FRAMEWORK (SOD-ZMOF): REVERSIBLE THERMOCHROMISM AND ANION TRIGGERED METALLOGELATION

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Background: Metal organic frameworks have aroused a flurry of interest in recent years owing to their fascinating architectures and potential applications. To date large number of coordination polymers have been synthesized on the basis of carboxylate, phosphonate, sulfonate and nitrogen heterocyclic ligands. Herein, we employed a new polytopic compartmental ligand, 2,3-butanedione bisisonicotinichydrazone (BDIH) with three remote binding sites for the construction of a novel Cd-MOF.

Method: The ZMOF was synthesized by simple refluxing rather than hydrothermal methods. The single crystals were isolated by recrystallization. The complex was characterized by X-ray diffraction, thermal analysis, UV-Vis and FTIR spectroscopy, SEM and rheology.

Results: Cd(II) in MOF is heptacoordinated and adopts a pentagonal bipyramidal geometry. The framework contains hexagonal channels along crystallographic 'c' direction and resembles SOD topology. The complex exhibit reversible thermochromic behavior over a working temperature ranging from room temperature to about 80 °C. The thermochromism is investigated by variable temperature UVDRS, FTIR and PXRD studies. Coordination driven gelation of Cd-MOF is also demonstrated. It shows a super smart and fully reversible thixotropic property and anion selectivity.

Conclusions: A novel Cd-MOF derived from a polytopic compartmental ligand have been constructed. The unusual thermochromism and gelation property of this MOF opens up new insights into the construction of novel smart MOF materials.

Keywords: sod-ZMOF, Thermochromism, Coordination polymer gel, Rheology

03-04

PHOTOLUMINESCENCE PROPERTIES OF PARA-AMINOBENZOIC ACID COMPLEXES OF EU³⁺ AND Tb³⁺ ENCAPSULATED IN ZEOLITE Y

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Background: Lanthanide organic complexes show advanced luminescence properties and high colorimetric purity of the emitted light but their applications are limited due to low mechanical and thermal stability. In order to overcome this limitation lanthanide based hybrid materials which combine the advantages of inorganic part (high thermal and mechanical stability) with the benefits of organic part (synthetic versatility, luminescence property etc) are synthesized. This study reports stable inorganic organic hybrid material; para amino benzoic acid lanthanide(Eu³⁺ or Tb³⁺) complex encapsulated in zeolite Y.

Methods: Lanthanide exchanged zeolite Y was synthesized by ultrasonication of the lanthanide solution with activated zeolite Y followed by annealing. Para-amino benzoic acid was introduced to the lanthanide exchanged zeolite Y via ultrasonication to form zeolite Y encapsulated Eu³⁺/Tb³⁺ complex.

Results: The synthesized Tb³⁺ based hybrid material showed good luminescence property and increased thermal stability

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‘वतन’ : ऐसे बनते हैं इंसानियत के स्मारक

प्रोफेसर ब्रिजित पॉल

रचना में रचनाकार के व्यक्तित्व और उनकी संचित संस्कृति की छाप अवश्य रहती है। निर्मल कालिया की रचनाओं में उनकी समग्र जीवन-दृष्टि का प्रतिफलन हुआ है जिसके पीछे उनके जीवन के समग्र अनुभव और विशुद्ध मानवतावादी विचार मौजूद हैं। ‘वतन’ देश-प्रेम के विचार से परिपक्व और आध्यात्मिक चिंतन से प्रेरित उपन्यास है। राष्ट्र की रक्षा के लिए सीमा में दिन-रात खड़े फौजियों के बारे में सोचने वाले कितने लोग होंगे हमारे बीच। सीमा की रक्षा हेतु तैनात फौजियों में पंजाब की देन महत्वपूर्ण है। युद्ध की बलिबेदी पर कुरबानियाँ देने वाले राज्यों में पंजाब सबसे आगे है। विश्वयुद्ध हो या कारगिल युद्ध, घायल या मृत सैनिकों के परिवारवालों को ही इसकी विभीषिकाओं को झेलना पड़ता है, क्योंकि युद्ध का आरंभ आम जनता के सुख, चैन, शांति सब छीन लेता है। ‘वतन’ का केंद्रबिंदु नूरमहल नामक गाँव के वतन सिंह उर्फ बल्ली के परिवार और उसके दिली दोस्त दमन की जिंदगी है। उपन्यास की शुरुआत युद्ध में घायल फौजियों की दारुण स्थिति से होती है।

लेखिका उपन्यास के आरंभ में ही युद्ध के कारणों और उसकी निरर्थकता पर जिक्र करते हुए अमर दार्शनिक रवैया ज़ाहिर करती है। “यह लड़ाई की रेखा जो एक छोर पर खड़े होकर हैवानी इंसान खींचता है, उसका दूसरा छोर उसे कभी दिखाई ही नहीं देता, जातीयवाद की लाशों पर चलते हुए उसे कंकन सिंहासन ही दिखाई देता है। किंतु कई बार मन यह सोचने पर बेकाबू हो जाता है कि यह पत्थर का इंसान क्यों किसी का जख्म बनाता है, क्यों वजासन या गारे-हिश बन जाता है, क्यों यह सोच उसकी नहीं बनाता कि जब वो दुनिया में है तो दुनिया भी तो उसमें है।” आतंकवाद और युद्ध हमेशा मानव सभ्यता के खिलाफ हैं। ये दोनों प्रवृत्तियाँ इतनी भयानक और विकृत हैं कि वे मानव को अपने अंदरूनी और बाहरी परिस्थितियों से संघर्ष करने के लिए मजबूर करती हैं। इसलिए व्यक्ति के मनोवैज्ञानिक धरातलों पर भी इसका गहरा प्रभाव पड़ता है।

युद्धभूमि में घायल सैनिक और उनकी सेवा में लगे कम घायल सैनिकों में बल्ली और दमन हैं। पंद्रह दिन से बल्ली बेहोश था। उसे गहरे घाव लगे थे। बेहोशी की हालत में बल्ली की यादें जालंधर के पास के नूरमहल नामक अपने गाँव में चली जाती हैं। पंजाब के इस गाँव की प्रकृति और वहाँ के घरेलू परिवार का चित्रण मन को लुभानेवाला है। बल्ली जैसा गबरू जवान गाँव में कोई नहीं था। माँ ने उसे खिलाया-पिलाया और बड़ा किया। उसी गाँव में चन्नी से उसका प्यार हो गया था। शादी के पहले ही उसके फौजी बनकर देश की सेवा करने का सपना देखा था। चन्नी से उसने कहा था कि मुझे भारत माँ को जीतना

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A Comparative Study on Direct Benefit Transfer Scheme with Conventional Method in Scholarship Distribution

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ABSTRACT

The Government of India has now started the Direct Benefit Transfer scheme (DBTS) as an anti-poverty programme. DBTS aims to transfer subsidies directly to the people. With this scheme the beneficiaries get the amount directly in their bank accounts. The primary aim of DBTS is to bring transparency in distribution of funds sponsored by central Government of India. The programme covers entire nation and is useful for millions. Significance of DBTS system can be identified only on comparing the system with conventional system. The study covers various aspects relating to educational scholarships distributed through Direct Benefit Transfer System (DBTS), benefits and limitations of the system, awareness about the system among students, satisfaction level of beneficiaries and comparison of DBTS with conventional system.

Keywords: DBTS, Conventional method, scholarships, satisfaction

INTRODUCTION

To meet the socio-developmental objectives, such as poverty elimination and inclusive growth, a number of Government sponsored programmes and schemes have been introduced. There are many schemes and programmes of the Government of India under which many benefits are provided to the people such as subsidies, scholarship to students, feeding children, and micro credit to poor women. As a poverty alleviation programme, DBTS was launched on 1st January 2013. The Direct Benefits Transfer (DBT) simply involves transferring the subsidy amount and other benefits (called transfers) directly to the beneficiaries' bank accounts instead of providing it through government offices. The purpose of Direct Benefit Transfer is to ensure that benefits go to individuals bank accounts electronically, minimizing tiers involved in fund flow thereby reducing delay in payment, ensuring accurate targeting of the beneficiary and curbing pilferage and duplication. Several programmes were added into the DBT platform including Scholarships to students and the NREGS wages. A total of 74 schemes and 17 ministries are made under DBT as on March 2016. Linking DBT with Aadhaar information and ID platform is a major achievement. Government has linked the Aadhaar ID of the beneficiary with the DBT and is aiming to make this link applicable for all payments. Efficient targeting, using the Aadhaar-linked data ensures that the right beneficiary receives the money in his account, thereby ensuring transfer to the deserving persons. As on June 2016, around Rs 1.2 lakh crore were disbursed through the DBT platform to nearly 30 crore

beneficiaries. Convenient banking facility must be provided to each and every citizen of the country. Studying the benefits of the DBT system along with its limitations enables the Government to make necessary changes in the system.

STATEMENT OF PROBLEM

DBTS programme is of recent origin. Many of the marginalized and weaker sections are potential beneficiaries of DBTS. Awareness of the schemes, willingness to operate through banks and compliance to procedures are issues to deal with while looking at benefits from DBTS. The Direct Benefit Transfer is the reform that revolutionized the delivery of government's transfers including subsidies to the people. There are numerous transfers from the government to the different sections of the people especially to the weaker sections including: wage payments, fuel subsidies, food grain subsidies, pensions etc. Transfer from the Government to the people especially the poor ones and that involving millions of people as beneficiaries are made through the platform of DBT over the last few years. Here the study propose to analyse the satisfaction of Direct Benefit Transfer System beneficiaries and to compare DBTS with conventional method, the problem is titled as "A comparative study on direct benefit transfer scheme with conventional method in scholarship distribution; with special reference to students of KE College, Mannanam".

REVIEW OF LITERATURE

Jairam Ramesh and Varad Pande, (2013) The Direct benefit transfer program aims that entitlements and benefits to people can be transferred directly to them through biometric based Aadhaar-linked bank accounts, thus reducing several layers of intermediaries and delays in the system. The DBT initiative is not a silver bullet for the malaise that plagues our public delivery system. It is more realistically, a first step in re-engineering its very foundations. We are neither evangelical nor dogmatic about DBT. Instead we believe that rather than having endless ideological discussions "for" or "against" DBT, it is better to be pragmatic and try it out seriously and systematically, albeit in a cautious and phased manner.

Pravakar Sahoo (2013), Direct Benefit transfer is considered as a panacea (solution) to remove poverty from the country and to bring financial equality in India. The scheme includes subsidy distribution on fertilizers, food, solar equipments, water conservation, LPG gas subsidies and scholarship benefits to students at higher and matriculation level etc. It covers the entire country. The scheme has shown great performance in the introduction stage and we need the graph to rise.

Vinayak Kaushal (2018), Direct benefit Transfer (DBT) is an ambitious scheme, launched by the Union Government which aims to eliminate poverty from the country and improve the economic standard of individuals and their families. As per this scheme, money is transferred directly into bank accounts of the beneficiaries in the form of subsidies on LPG and Kerosene, pension payments, scholarships and employment guarantee scheme payments etc. Basic idea behind DBT is to cut down wastage, duplication and leakages and to enhance efficiency.

Maureen A. Pirog, Craig L. Johnson (2008), This article examines how electronic funds transfers and electronic benefit transfers have become integral components of digital government. The greater efficiency and cost savings for the federal and most state governments have not been achieved without encountering and dealing with serious matters related to customer service, contracting, collaboration, management,

and implementation.

Suyash Rai (2013), analyzed that as long as implementation is adequate, the basic direct cash transfer scheme that has started, and the direct non-cash transfer of welfares based on Aadhaar-based verification, are good ideas. An important thing to realize is the interesting interplay between direct cash transfer and financial inclusion. The banking channels, especially in rural areas, could become more viable.

Partha and Mukhopadhyay (2013), studied that the real potential lies in shifting thinking from targeting to traceability and mitigating transactional instrumentalism in market transactions. Direct benefit Transfer trace down the poor sections of the society and convert them into beneficiaries of the scheme.

OBJECTIVES

- 1) To evaluate the satisfaction level of beneficiaries who are under DBTS.
- 2) To understand the basis on which students receive Scholarships under DBTS.
- 3) To compare the scheme with the conventional distribution method.
- 4) To point out the limitations of the DBTS programme.

METHODOLOGY

All the beneficiaries of various schemes of scholarship distributed through Direct Benefit Transfer System in Kuriakose Elias College, Mannanam constitute the universe of the study. 109 students are getting different scholarships from this college under DBTS system. A census study is conducted among all the beneficiaries and data was collected through a structured questionnaire.

HYPOTHESES

1. H_0 – There is no significant difference between satisfactions of Degree and Post Graduate students
 H_1 - There is significant difference between satisfactions of Degree and Post Graduate students.
2. H_0 – There is no significant difference between satisfactions of students under various scholarship schemes.
 H_1 - There is significant difference between satisfactions of students under various scholarship schemes.

ANALYSIS AND INTERPRETATION

Evaluation of satisfaction level of beneficiaries

Satisfaction of beneficiaries on DBTS was evaluated on a Five point Likert scale. Satisfaction was evaluated at five levels i.e., highly satisfied, satisfied, neutral, dissatisfied and highly dissatisfied. The scores assigned are 5 for highly satisfied, 4 for satisfied, 3 for neutral, 2 for dissatisfied and 1 for highly dissatisfied. It is clear from table 4.2.8, that majority of respondents are highly satisfied with the promptness of DBTS with mean score of 4.36. Beneficiaries are highly satisfied with the evaluation method with a mean score of 4.22. Regarding support from college, beneficiaries are highly satisfied with a mean score of 4.29. Beneficiaries are satisfied about the bank's response and mean score is 3.45. For survey results see Table No. 1

Table 1. Satisfaction level of beneficiaries

Satisfaction Level	Highly Satisfied	Weighted value	Satisfied	Weighted value	Neutral	Weighted value	dissatisfied	Weighted value	Highly dissatisfied	Total	Weighted Total	Mean Score
Promptness of DBTS	42	210	64	256	3	0	0	0	0	109	475	4.36
Evaluation method	31	155	73	292	3	9	2	4	0	109	460	4.22
Support from college	48	240	45	180	16	48	0	0	0	109	468	4.29
Bank's response	14	70	32	128	52	156	11	22	0	109	376	3.45

(Source: Primary data)

Basis for Scholarship

Classifications of respondents were made on the basis of which scholarship is granted. Among the 109 respondents 13(11.92%) get scholarship on the basis of their merit in studies, 16(14.68%) get scholarship on the basis of their financial backwardness, and 80 (73.40%) on the basis of both of these. For survey results see Table 2.

Table 2 Basis for Scholarship

Basis for Scholarship	No. of respondents	Percentage
Merit in studies	13	11.92
Financially Backward	16	14.68
Both of these	80	73.40
Total	109	100

(Source: Primary data)

Preference of Conventional system over DBTS

A study was conducted to evaluate the preference of conventional system over Direct Benefit Transfer System. Out of the total of 109 respondents 104(95.42%) prefer DBTS and balance 5(4.58%) prefer conventional system. Survey results are given in Table No. 3

Table 3 Preference of Conventional system over DBTS

Preference of conventional system	No. of respondents	Percentage
Yes	0	0
No	109	100
Total	109	100

(Source: Primary data)

Limitations of DBTS

DBTS is not free from limitations. Limitations of direct Benefit Transfer System were analysed. Among the 109 respondents 38(34.87%) face difficulty in applying, 21(19.26%) face limitation of paying bank charges, 2(1.83%) face delay in getting scholarship, and 48(44.04%) face difficulty in submitting evidence. Survey results are given in Table No. 4

Table 4 Limitations of DBTS

Limitation of DBTS	No. of respondents	Percentage
Difficulty in applying	38	34.87
Bank charges	21	19.26
Opening a bank account	0	0
Delay in getting scholarship	2	1.83
Submission for evidence	48	44.04
Other	0	0
Total	109	100

(Source: Primary data)

TESTING OF HYPOTHESES

Hypothesis I

H_0 – There is no significant difference between satisfactions of Degree and Post Graduate students

H_1 - There is significant difference between satisfactions of Degree and Post Graduate students.

Table 5 Calculation of Ranks based on satisfaction for degree and post graduate students

Satisfaction	Rank	Degree	Total Rank	PG	Total Rank
4.5	1	3	3	0	0
4.25	2	55	110	3	6
4.00	3	16	48	9	27
3.75	4	4	16	17	68
3.50	5	0	0	1	5
3.25	6	0	0	1	6
		$n_1=78$	$R_1=177$	$n_2=$	$R_2=112$

Using Mann - Whitney - Wilcoxon U - test

$$\mu = \frac{n_1+n_2}{2} \quad \mu = \frac{78+31}{2} = \underline{1209}$$

$$U = n_1 + n_2 + \frac{n_1(n_1+1)}{2} - R_1 \quad U = 78 + 31 + \frac{78(78+1)}{2} - 177 \quad U = \underline{5322}$$

$$\text{Standard Error} = \sqrt{\frac{n_1+n_2(n_1+n_2+1)}{12}} = \sqrt{\frac{78+31(78+31+1)}{12}}$$

$$\text{Standard Error} = \sqrt{22165} = 148.88$$

$$\text{Test Statistic} = \frac{\mu - U}{S.E.} = \frac{1209 - 5322}{148.88} = 27.63$$

Level of significance – 5%, Degree of Freedom – infinity

Table value = 1.960

Calculated value of the test statistic is greater than table value. Therefore we reject the hypothesis that there is no significant difference between satisfactions of Degree and Post Graduate students.

Hypothesis II

H_0 – There is no significant difference between satisfactions of students under various scholarship schemes.

H_1 – There is significant difference between satisfactions of students under various scholarship schemes.

Table 6 Calculation of ranks based on satisfaction for various scholarships

Post metric	Total Rank	Central sector	Total Rank	Higher education	Total Rank	Samunnathi	Total Rank	Golden jubilee	Total Rank	Others	Total Rank
0	0	0	0	3	3	0	0	0	0	0	0
19	38	6	12	5	10	10	20	16	32	2	4
11	33	4	12	2	6	6	18	0	0	2	6
7	28	3	12	2	8	9	36	0	0	0	0
1	5	0	0	0	0	0	0	0	0	0	0
1	6	0	0	0	0	0	0	0	0	0	0
$n_1=39$	$R_1=110$	$n_2=13$	$R_1=36$	$n_3=12$	$R_1=27$	$n_4=25$	$R_1=74$	$n_5=16$	$R_1=32$	$n_6=4$	$R_1=10$

Using Kruskal – Wallis or H test

$$\text{Test statistic} = \frac{12}{n(n+1)} + \varepsilon \frac{R_i^2}{n_i} - 3(n+1)$$

$$\text{Test statistic} = \frac{12}{109(109+1)} + \left[\frac{110^2}{39} + \frac{36^2}{13} + \frac{27^2}{12} + \frac{74^2}{25} + \frac{32^2}{16} + \frac{10^2}{4} \right] - 3(109+1)$$

$$\text{Test statistic} = (.001 * 778.75) - 330 = -329.22$$

$$\text{Degree of Freedom} = K-1 = 5$$

Level of significance = 5%

Table value = 11.070

Calculated value of the test statistic is greater than table value and therefore we reject the null hypothesis (H_0). There is significant difference between satisfactions of students under various scholarship schemes.

FINDINGS

1. The beneficiaries of Direct Benefit Transfer System (DBTS) are highly satisfied by the promptness of the system , evaluation method and support they get from the college
2. The response from the part of bank is satisfactory to the beneficiaries.
3. Majority of the students get scholarships through Direct Benefit Transfer System on the basis of both their merit in studies as well as their financial backwardness.
4. None of the respondents prefer conventional method over Direct Benefit Transfer System.
5. Majority of the beneficiaries of Direct Benefit Transfer System find submission of evidence as the main limitation of the system. Difficulty in applying, charging bank charges and delay in getting scholarship are other limitations faced by the beneficiaries.
6. There is significant difference between satisfactions of Degree and Post Graduate students.
7. There is significant difference between satisfactions of students under various students' scholarship schemes.

CONCLUSION

Achieving the objectives of DBT scheme would require it to be supplemented by public provision of essential goods and services. A micro level survey on one DBTS revealed that services were beneficial to the end user however infrastructure support and related services need to be viewed in a broad perspective. We are served better through online transfer as it is effective in terms of time saving, transparency, correctness and fairness. As financial product or service becomes effective only when it serves the larger interest of customers, DBT has no exception. Direct Benefit Transfer scheme proved to be more useful than conventional method and satisfaction level of DBTS scheme is high.

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In Transit MEDIA, CULTURE & NATURE



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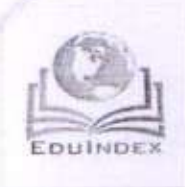
Indian Eco-Poetics: From Tolkappiyam to The God of Small Things

Sujarani Mathew

He says that woman speaks with nature. ...But for him this dialogue is over. He says he is not part of this world that he was set on this world as a stranger. He sets himself apart from woman and nature

— Susan Griffin

Western literary theory considers the concept of Ecocriticism to have formed in the late 1970s with the American writers taking up the topos of celebrating nature and the life force manifested within it. The search into the roots of this "return to nature" focuses on three works—Emerson's *Nature* published in 1982 (though anonymously published in 1836, Fuller's *Summer on the Lake During 1843* (1994) and *Thoreau's Walden* (1999) about his stay there in 1845 (Barry 249-50). Eurocentric studies focusing on observing the topographic representations and the power of the natural world beyond human constructs is cited as a fairly recent field of study. The disillusionment with technology and the enlightenment



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Question Of Life And Death In Rumi's *The Chance Of Humming*

Joby Joseph, Assistant Professor, Dept. of English, K E College, Mannanam -686561
Affiliated to M G University

Abstract

Jalal ad-Din Muhammad Rumi became a thirteenth-century Persian poet whose poems have attained cult status internationally. His *Masnavi* is considered to be a magnum opus in the Persian language. Rumi's poems are at the beginning written normally in Persian, but also on occasion in Turkish, Arabic and Greek. Rumi's poems are also known for their romantic and religious snapshots and motifs, ironical comparisons, rhetorical questions, lighter, but idea-provoking, stories infused into verse, mystical perspectives on existence and after-existence and the subject matters of love, religion and time. *The Chance of Humming* is an inspiring, thrilling and interesting poem that talks about the journey of a person (which is an allegory for the adventure of existence itself) on two wooden logs flowing along a river. The logs may represent two truths- existence and loss of life, body, and soul, past and present journey into destiny- to be wielded in tandem to embrace a jovial existence. If someone travels on logs flowing with the currents downstream, he could be happy. He argues that it is alright while floating with the water for a man. And he is humming and singing without opening his mouth and enjoying his ride. Rumi says that if the log is tied to a camel, it would still be great, however, if all of a sudden the camel recalls something which it has overlooked taking up the journey, then it would determine to journey back, upstream. This can be within the opposite course of the drift of the river (here, a metaphor for existence) and the satisfied path of the vacationer or the traveler could be disrupted.

Key Words: Humming, Symbolism, Optimism, Reason and Passion and Sufism

1. Introduction

Rumi¹ was born either in Wakhsh placed on the banks of the river Vakhsh or within the metropolis of Balkh, in present-day Afghanistan, to Persian-talking dad and mom. His father changed into a top-notch has an impact on him. The Sufism of the Balkh location, a center of Persian culture of the duration, also encouraged him to an incredible quantity for the duration of his childhood. Rumi's family fled westwards while the Mongols invaded Central Asia, and got here to settle in Konya (Present-day Turkey), where his father worked as a teacher. Rumi's writings were inspired by means of Persian poets Attar and Sanai. It is stated that whilst migrating, Rumi, along with his father, had met Attar, one of the well-known Persian mystic poets of the period at Nishapur, an Iranian city. Attar presented him with a book detailing the entanglement of the soul in the material world. The assembly had a long-lasting effect on Rumi and inspired his later poetic ruminations. Rumi wrote spontaneous ghazals (Persian poems, normally on pain or loss). For Rumi, knowledge was like a torchlight helping to search for the first-rate and the best inside the soul. He says in *Masnavi* that if words begin to drift from a supply inside, simplest then can one start flying with one's very own wings. Rumi writes in *The Chance of Humming*:

A Man



**പരിണാമത്തിന്റെ
വിരലടയാളങ്ങൾ**

ഡോ. തോമസ് സ്കറിയ
എഡിറ്റർ

പ്രകടന ശരീരത്തിന്റെ അനുഭൂതി ദർശനങ്ങളും വയനാട്ട് കൃഷ്ണ
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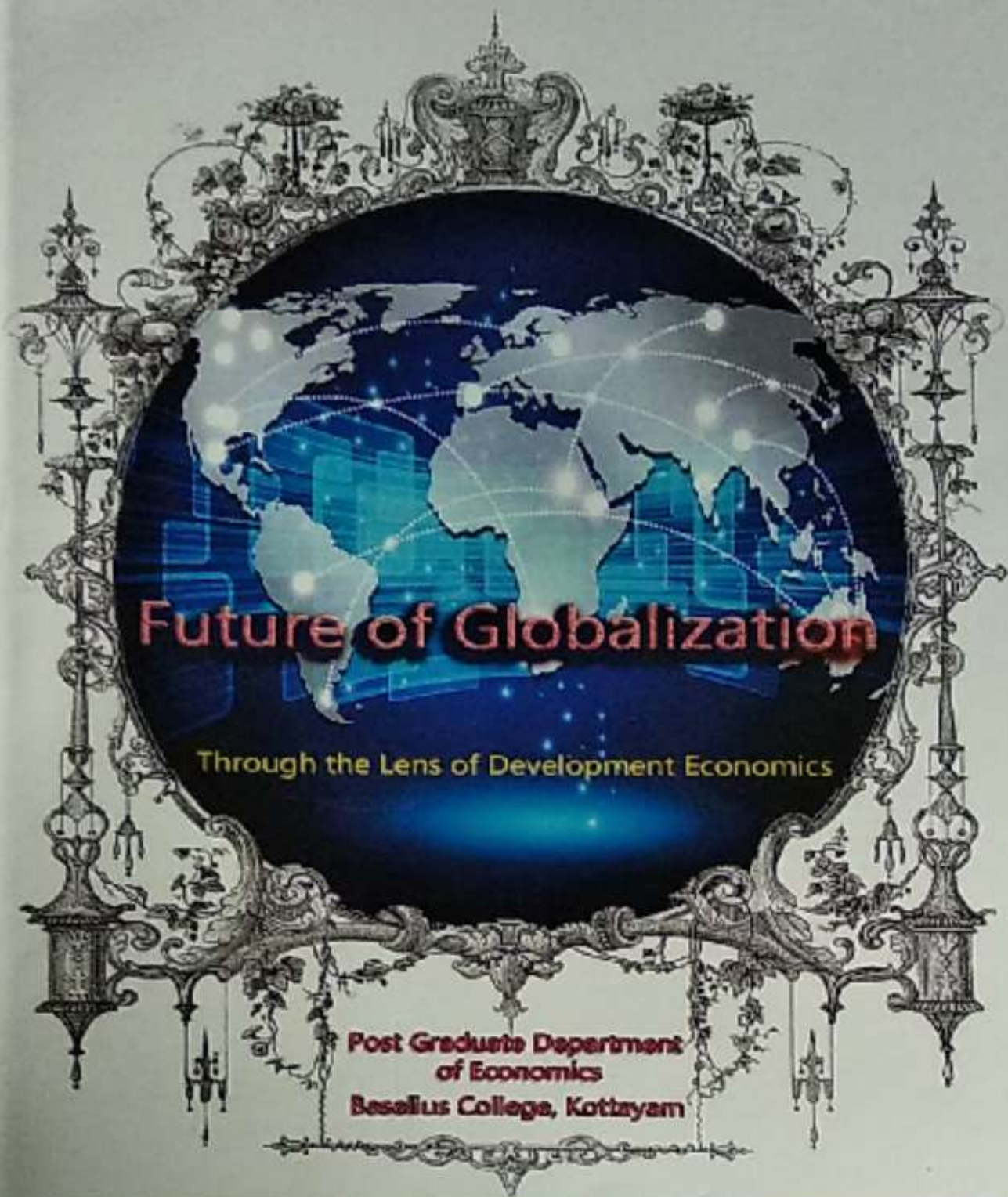
NARRATING NATURE AS VICTOR IN KAMALA MARKANDAYA'S *THE COFFER DAMS*

Chinchu Rose George

Department Of English, K.E.College, Mannanam

Earth described as a self-regulating system, analogous to a living organism, has been known since the discovery of plant photosynthesis; that living organisms produce the atmosphere they need to inhabit. Ecocritics take the argument a stage further asserting that the planet has been so thoroughly altered physically and chemically by living things that the earth itself has to be seen as a kind of super organism. The non-living parts of the planet are so much a part of the whole as the non-living heartwood of a living tree. Concentrating on images from nature and emphasizing the harmony of humanity and nature that once existed; the novel *The Coffe Dams* presents us a picture of essential changelessness, which human activity scarcely disturbs and nature's resistance to the intervention of human activity which in turn leads to the restoration of balance.

The tribals in the novel *The Coffe Dams* address themselves as "the river people" (158) and strongly consider themselves inseparable from nature and her activities. The harmonious relationship that exists between the tribal and nature attains a divine aura, when nature finally rescues them from the disastrous flood. In the name of resource management and development, the tribals are exploited without any consideration by the English. The construction of dam heralds the onset of machine's intervention in the natural habitat of the innocent tribals. It is for the realization of the selfish goals of the British people and this hard-handed intervention is not in harmony with the interests of tribals. On the other hand the British engineers go on relentlessly and cruelly exploiting the tribals under the pretext of development.



Future of Globalization

Through the Lens of Development Economics

Post Graduate Department
of Economics
Basellus College, Kottayam

JEEJAMOL P M

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TRADE LIBERALISATION AND INSTABILITY IN THE EXPORT OF BLACK PEPPER IN INDIA

Abstract

Agricultural sector has a significant role in the Indian economy since it contributes to 14% of GDP and over 58% of the rural households depend on agriculture as their principal means of livelihood. India is the third largest producer of pepper in the world and the export earnings from pepper is Rs. 1, 20, 842.16 lakhs with a corresponding export volume of 28,000 tonnes in 2014-15. The present study analyses the growth and instability in the export performance of black pepper in the post and pre liberalization era. The growth rate in exports and export value of black pepper in India have been examined using secondary data for the period from 1975-76 to 2014-15 and exponential form of growth function has been used for the analysis. The empirical results showed that the growth in export quantity and value were found higher during pre-liberalization period than post-liberalization period. Instability index has been worked for export quantity and export value of black pepper for pre-liberalization and post-liberalization periods using coefficient of variation. The empirical results showed that export quantity showed maximum instability in the post-liberalisation period and export value showed maximum instability in pre-liberalisation period.

Keywords: instability, compounded annual growth rate, trade liberalisation.

Introduction

Agricultural sector has a significant status in the Indian economy since it contributes to 14% of GDP and around 58% of the rural households depend on agriculture as their principal means of livelihood. The share of agricultural products in exports is also substantial, with agriculture accounting for 10% of export earnings. India is known as the 'spice bowl of the world' since it is the largest producer and exporter of spices in the world. Black pepper (*Piper nigrum* Linn), known as the "King of Spices" is the most precious and valuable form of spices in the world. India is the third largest producer of pepper accounting for about 19%

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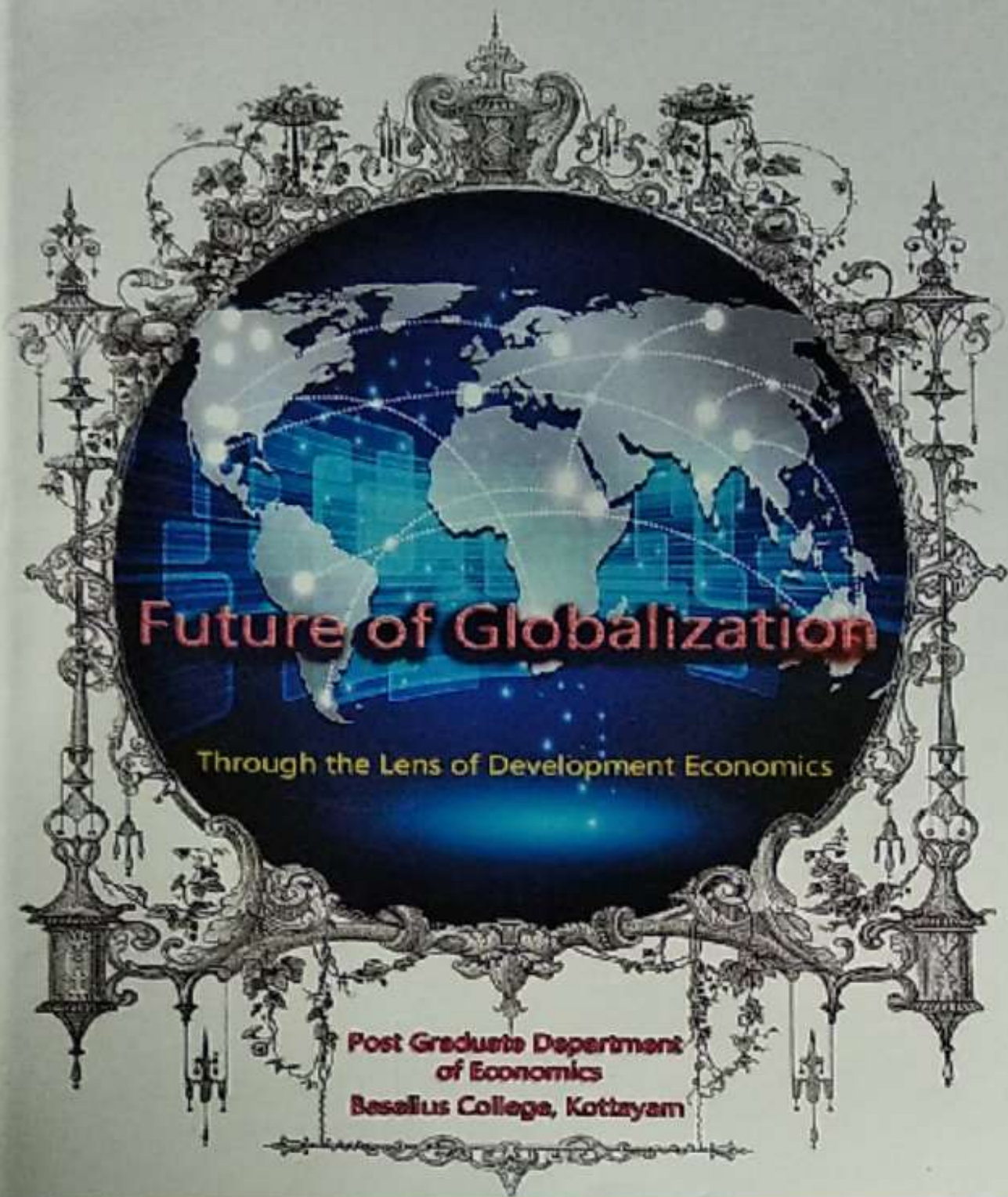


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IMPACT OF GLOBALISATION ON EDUCATION

Abstract

Globalization shows a multidimensional nature. It makes cultural convergence which is accompanied by corresponding economic, political, social technological and educational transformations. In global world, information society is an important concept, it needs creative individuals, and governments should only train in school the individuals to adopt the new values and developing student's ability to acquire, and use knowledge gains importance in the process of globalization. As education has an important place in shaping a society, globalization has to be connected with education and the global activities have a deep impact on it. It creates the opportunities for new partnerships in research and teaching with agencies and institutions across the world. In the modern world the impact of globalisation on education has very much importance. Thus, this study attempts to understand the unique role of education in a market oriented competitive world and to analyze the implication for socio economic development and educational system of countries all over the world.

Introduction

Globalization is a set of processes by which the world is rapidly being integrated into one economic space via increased international trade, internalization of production and financial markets; internalization of a commodity culture promoted by an increasingly networked global tele-communication system (GRAHAM, 1996).

In general sense, the phenomenon of globalization refers to people around the globe being more connected to each other than ever before; to a quantum-like pace of the international flow of communication, knowledge and money; to consumer goods and services produced in one part of the world being increasingly available in all parts of the world and to the explosion of international travel.

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Chapter 8

Solar Light Active Nano-photocatalysts

Jesty Thomas and K. S. Ambili

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Abstract Environmental pollution is becoming a serious threat to the human society, and photocatalysis is recognized as an environmental benign technology to remediate organic pollutants from aqueous environment. Mainstream research related to pollutant remediation and energy production is based on heterogeneous photocatalysis, a modified advanced oxidation process. Being a green technology, it can have further applications if the vast and inexpensive solar light can be utilized in place of harmful ultraviolet rays.

This chapter focuses on some important nano-semiconductor photocatalysts like TiO₂, ZnO and graphitic carbon nitride (g-C₃N₄ or CN) and various strategies adopted for improving their photocatalytic activity under sunlight. Different methods for improving visible light active photocatalysts including metal/non-metal doping, the addition of photosensitive materials, incorporation of other nanoparticles, composite formation with other semiconductors and formation of

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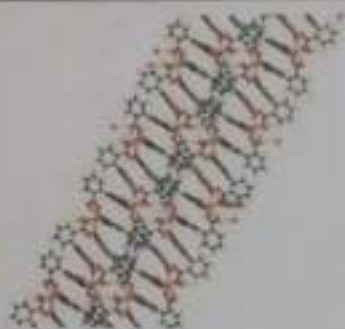
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NEW NUMBERS & LETTERS

$$-\frac{\hbar^2}{2m}\nabla^2\Psi(r) + V(r)\Psi(r) = E\Psi(r)$$



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Photocatalytic Effects of Graphitic Carbon Nitride: Review

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Abstract

Graphitic carbon nitride ($g\text{-C}_3\text{N}_4$) has been the hotspot in the materials science for its unique two-dimensional structure, remarkable chemical stability and tunable electronic structure. With medium band gap as well as thermal and chemical stability in ambient environment, it becomes one of the most promising photocatalytic materials. This review focuses on various method adopted for improvement of photocatalytic efficiency of $g\text{-C}_3\text{N}_4$.

Introduction

The graphitic carbon nitride ($g\text{-C}_3\text{N}_4$) is a metal free organic semiconductor and an emerging photocatalyst with immense potential and wide possibilities. Graphitic carbon nitride consists of 2D sheets of tris-s triazines inter connected via tertiary amines. It is the most stable allotrope of various carbonitrides under ambient conditions. $g\text{-C}_3\text{N}_4$ possesses good physio-chemical stability as well as an appealing electronic structure combined with a medium band gap of 2.7 eV [1]. It can be easily prepared via one step polymerization of cheap feedstock like cyanamide, urea, thiourea, melamine and dicyandiamide [2]. Schematic illustration of the main routes for the synthesis of $g\text{-C}_3\text{N}_4$ is given in Fig. 1.

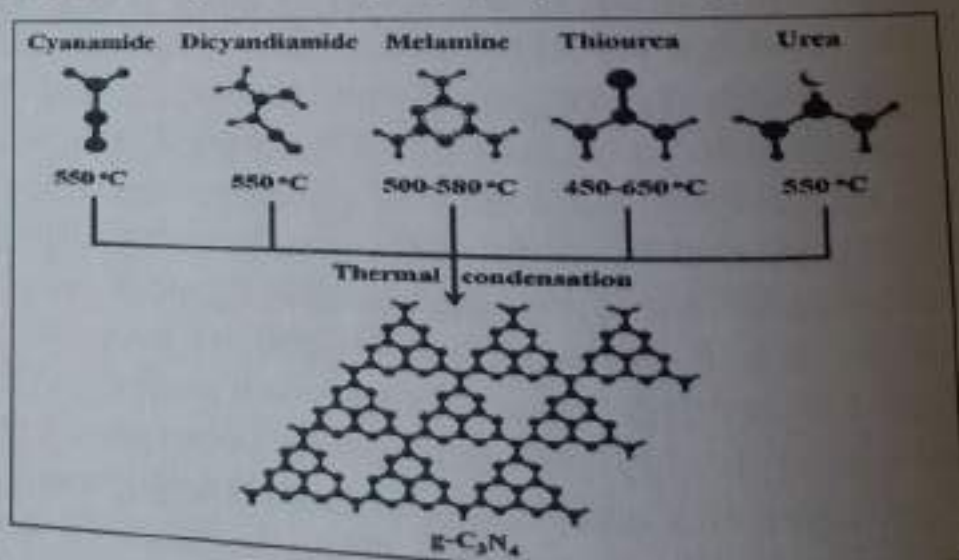
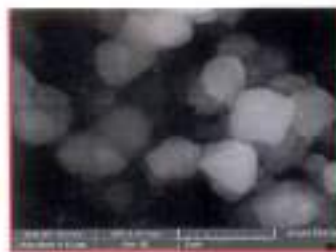


Fig 1. Schematic illustration of the main routes for the synthesis of $g\text{-C}_3\text{N}_4$ [2]

NEW NUMBERS & LETTERS

$$-\frac{\hbar^2}{2m}\nabla^2\psi(r) + V(r)\psi(r) = E\psi(r)$$



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Development of Metal Organic Framework-Ionic Liquid Hybrid Composites for Catalytic Applications

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Abstract

Recently, there is an increased interest in Ionic liquid (IL) supported metal organic frameworks (MOFs) owing to their special properties which enables their applicability in various fields including catalysis, gas storage, adsorption and separation etc. This review addresses the recent advances in syntheses of IL/MOF composites. It also provides a comprehensive overview of their applications in the field of catalysis.

Introduction

Metal organic frameworks (MOFs), the new class of inorganic organic hybrid materials, are being intensively studied due to their interesting structural and physical properties such as large porosity and framework flexibility. MOFs can be used as catalysts in the absence of solvents for several reaction types including cyanosylations, condensations, cycloadditions CO₂ insertions etc. Recently MOF based materials are also using as photocatalysts for various reactions including photocatalytic degradation of organic pollutants, photocatalytic CO₂ reduction, water oxidation etc[4]. Ionic liquids (IL) are known as “green solvents” owing to their environmentally friendly production method. Incorporation of ionic liquids (ILs) in metal-organic frameworks (MOFs) offers a broad potential since they show improved performance of the parent MOF material in various applications including catalysis and gas adsorption. The combination of certain ILs and MOFs results in excellent composite materials due to the change in the micro environment of the active sites which increase the greenness of MOFs as heterogeneous catalysts and have advantages from the environmental point of view [1-5]. Incorporation of ILs into MOFs is also used to obtain adsorbent materials with enhanced gas adsorption property and selectivity.

Synthesis Methods

There are two main synthesis methods reported for ILs incorporated within MOF. They are ionothermal synthesis and post synthesis method [6]. Ionothermal method is a form of solvothermal synthesis in which ILs

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liquid (IL) supported special properties which including catalysis, gas addresses the recent It also provides a field of catalysis.

class of inorganic studied due to their large porosity and in the absence of cyanosilylations, recently MOF based reactions including photocatalytic CO₂ are known as "green production method. frameworks (MOFs) performance of the g catalysis and gas results in excellent environment of the as heterogeneous point of view [1-5]. adsorbent materials

ILs incorporated synthesis method synthesis in which ILs

are used as solvents. The obtained MOFs have negatively charged frameworks and the cations of ILs are strongly bound to the MOFs structure due to host-guest interactions. The frameworks of ionothermally synthesized MOFs are generally negatively charged and the cations of the ILs remain in the structure as counter ions to provide electrical neutrality. Hence the cations are not able to show the same properties as the bulk ILs which is a disadvantage of this method [3, 5, 6]. Post synthesis method mainly includes wet impregnation method, capillary action method and ship in bottle method [3].

In wet impregnation method, ionic liquid dissolved in excess amount of inert solvents like acetone methanol, ethanol etc followed by addition of MOF to the solution. The mixture is the stirred to obtain homogeneous solution. After removal of excess solvent the composite material can be obtained. Capillary action method includes mixing of MOF and IL directly using a mortar and pestle at certain volumetric occupancy ratio. In ship in bottle method, small precursors of ILs are diffused in to the pores of MOF after dissolving in a solvent. When they react within the cages of MOF results in the formation of IL trapped inside the pores [5-7].

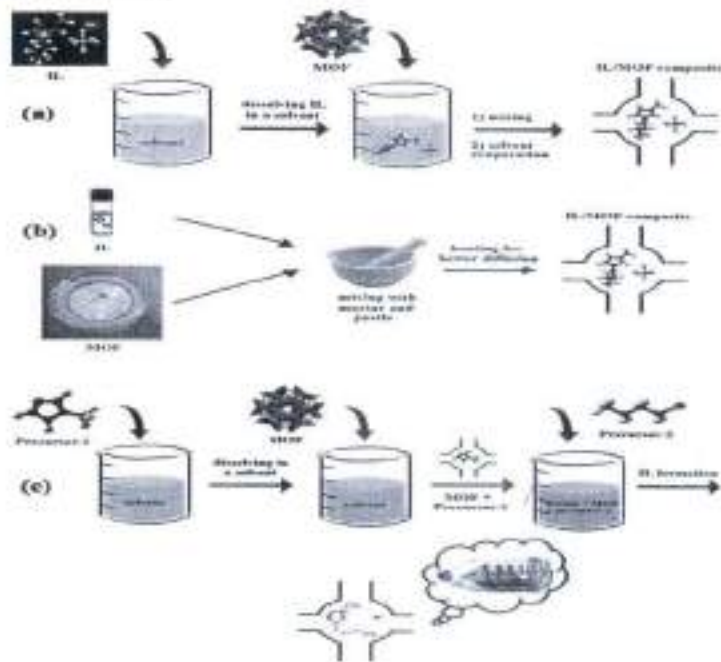


Fig.1. Representation of different post-synthesis impregnation methods for IL/MOF composites: a) wet impregnation method, b) capillary action method, c) ship-in-a-bottle method [3]

Catalytic Applications of IL/MOF Composites

The combination of suitable ILs and MOFs will result in the development of composites having favorable properties of ILs and MOFs. Review of literature shows that the IL incorporated MOFs gives better adsorption property, separation performance and higher conversion and reusability in catalytic application. Recently, an amino-functionalized imidazolium-based ionic liquid is firmly grafted into the porous MOF, MIL-101-SO₃H by the acid-base attraction between positively charged ammonium groups on the IL and negatively charged sulfonate groups from the MOF. It was observed by the authors that the material remains intact while functioning as a recyclable heterogeneous catalyst that can efficiently convert CO₂ and epichlorohydrin into chloropropene carbonate without the addition of a cocatalyst [6]. Recently, Takashima et al. generated a hybrid IL/MOF composite using ion exchange reaction. It showed unique catalytic activity due to the change in ionic state upon immobilization [7]. Hassan et al. carried out the esterification of acetic acid with amyl alcohol for producing amyl acetate using a novel IL-MOF composite which is represented as [NMP][CH₃SO₃] (N-methyl-2-pyrrolidonium methyl sulfonate)/MIL-101(Cr) [8]. It was observed that at the optimum reaction conditions, such as IL content (20 wt%), reaction time (4 h), catalyst amount (10 wt%), and reaction temperature (80 °C) the catalyst could reach up to 80% conversion and it was reused for six times without losing any activity. The catalytic activity of the IL/MOF catalyst in the Friedel-Crafts acylation of anisole with acetic anhydride and observed that the conversion for the IL/MOF catalyst reached 80% as the IL loading increased from 5 wt% to 20 wt%. [8]. Han et al. [9] developed a heterogeneous catalyst by using "impregnation-reaction-encapsulation" process where acidic ILs (AILs) and MIL-100(Fe) were dissolved in methanol and then 1,4-dibromobutane was added. After mixing and centrifugation of the solution, solid catalyst was obtained. The activities and reusability of both MIL-100(Fe)/AILs and MIL-100(Fe)/DAILs catalysts were tested for the esterification of oleic acid with methanol. Although both catalysts showed similar catalytic activities (90.2% conversion for MIL-100(Fe)/AILs and 93.5% conversion for MIL-100(Fe)/DAILs), their reusabilities were different [9]. M. Deng and H-L Jiang incorporated an imidazolium based poly IL into a MOF MIL 101 via *in situ* polymerization of encapsulated monomers and used as catalyst for Cycloaddition of CO₂ and epoxides. Due to the high surface area, porosity and synergistic effect of Lewis acid and Lewis base active sites the synthesized poly IL@MIL101 showed high activity towards CO₂

will results in the of ILs and MOFs. MOFs gives better conversion and functionalized the porous MOF, positively charged sulfonate groups material remains catalyst that can propene carbonate Takashima et al change reaction. It ionic state upon ification of acetic g a novel IL-MOF [N-methyl-2- was observed that 20 wt%), reaction temperature (80 °C) was reused for six y of the IL/MOF acetic anhydride it reached 80% as [8]. Han et al.[9] gnation-reaction- MIL-100(Fe) were was added. After st was obtained. MILs and MIL- ion of oleic acid atalytic activities conversion for [9]. M. Deng and to a MOF MIL ers and used as the high surface Lewis base active ity towards CO₂

cycloaddition with epoxides under mild conditions without using any co-catalyst [10]. This literature summary indicates that IL/MOF composites are promising candidates for catalysis of various organic reactions due to their particular properties like high surface area, porosity and increased thermal stability compared to MOFs.

Conclusion

This review summarizes the studies on investigations of the catalytic performances of IL/MOF composites in different reactions. Results showed that the IL incorporation in to MOFs increase conversion and enhance reusability of pure MOF catalysts. Also by IL incorporation into the MOF structure give better thermal stabilities to the composites compared with the parent MOF catalysts.

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