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ஷேக்ஸ்பியரின் கவிதையில் படிமக் கூறுகள்

பி. லதா [✉]*[✉] தமிழ்த்துறை, தூய மரியன்னை கல்லூரி (தன்னாட்சி), தூத்துக்குடி-628001, தமிழ்நாடு, இந்தியா

Figurative Elements in Shakespeare's Poetry

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ABSTRACT

Starting with Sangam compositions, today's traditional poetry, new poetry, Haiku, Ganyu, Limerick, Limerick Haiku, Sonnet, and Cuckoo, many kinds of experimental efforts are still lively today. To write a poem in prose order, first, grammatical data such as letters, words, objects, syllables, and patterns are necessary. In the modern living environment, there is not enough time for the creator and the reader. Simple forms like new poems, haikus, and poems are blooming and spreading fragrance in many forms. Imagery is significant in poetic techniques. An image is something that a poet experiences and, thus, clears from his mind. The idea that is used by the poet to express itself through comparing and understanding external objects turns into an image. The poet triumphs over the image as an aesthetic expression of his intention. In this way, this article examines the importance of metamorphoses in Shakespeare's poetry.

Keywords: Shakespeare, Traditional Poetry, New Poetry, Haiku

முன்னுரை

மரபுக் கவிதையிலிருந்து புதுக்கவிதை வேறுபடுவதை வெளிப்படையாகக் காட்டுவது புதுக்கவிதையின் யாப்பை மீறிய வடிவமே ஆகும். கவிதை காலத்தோறும் தன்னைப் புதுப்பித்துக் கொண்டதை நமது மரபு எதிர்க்கவில்லை என்பதை நாம் புரிந்துகொள்ள வேண்டும். புதிதாகப் பிறக்கும் இலக்கியத்திற்கும், வேறுவகையடைப்பிற்கும், தொல்காப்பியர் விருத்து என பெயரிட்டு வரவேற்றார்

‘விருத்தே தானும்

புதுவது கிளந்த யாப்பின் மேற்றே’ (Kovindharasu, 2010)

கலை புதிது, பொருள்புதிது, வளம் புதிது, சொல் புதிது, சோதி மிக்க நவகவிதை என்ற பாறியாரின் கூற்றுப்படி எல்லா வகையிலும் புதுமைகளை ஏற்று படைக்க வேண்டும் என்பது புதுக்கவிதையாளர்களின் நோக்கமும் செயல்பாடும் ஆகும். தொழிற்புரட்சி, உலகப் போர்கள், அறிவியலின் வளர்ச்சி, மனித உளவியலின் தோற்றம் இவற்றால் இருபதாம் நூற்றாண்டின் இலக்கியம் பெரும் மாறுதல்களை அடைந்தன. கவிதை இலக்கியம் நிகழ்காலத்தின் எதிரொலியாக இருக்கவேண்டும் என்பதை அனைவரும் ஏற்றுனர். டி. எஸ். எலியட்

தன் காலத்தில் உயிரோடு இருப்பவனே கலைஞன்

கவிதை ஒரு புதிய அனுபவத்தை, பழைய அனுபவத்தின் புதிய புரிதல்களை, சொல்ல தெரியாது இருந்ததைச் சொல்ல வேண்டும் என்கிறார் டேனியல் பிரஸந்த்.





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Cooking Vessels in Ancient Literature

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விவேகானந்தர் - ரூஸோ கல்வித் தத்துவம் ஓர் ஒப்பீடு

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Vivekananda - Rousseau Philosophy of Education A Comparison

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ABSTRACT

Education is the tool that helps to change the behavior of every human being, to bring out the potentials and talents that are hidden in him, to know himself and to bring out the complete nature within him. In order to compare the level of education and teaching methods in European countries and in our country, and what scholars think about them, this article is designed under the title of Vivekananda Rousseau's philosophy of education and a comparison. As the first phase of the study, the books related to this article were selected and read. Indian educationist Vivekananda and European educationist Rousseau's educational philosophies, views on education, objectives of education, educational curriculum, child education, female education, teaching methods, teacher's role and unity and diversity in education system have been collected and compared. Also, the state of the education system of that time and the news about the trends of today's education system are also discussed in detail at the end of this article.

Keywords: Philosophy, Education, Vivekananda, Teaching

முன்னுரை

“பாடும் ஊரே யாவரும் கேளிர்” என்னும் கனியன் பூங்குன்றனாரின் கூற்றுப்படி, உலகில் உள்ள அனைத்து மக்களும் நம்முடைய சகோதர சகோதரிகளே அது போன்று, உலகில் உள்ள அனைத்து ஊர்களும் நமக்கு சொந்தமானதே. எனினும் ஒவ்வொரு நாடும் உணவு, உடை, தொழில், கலாச்சாரம், பண்பாடு, பழக்க வழக்கங்கள் என பல்வேறு வகைகளில் வேறுபட்டு காணப்படுகின்றன.

அவற்றில் கல்வி குறித்து காணும் பொழுது, எண்ணங்களினாலும் செயல்களினாலும் மனிதன் தனித்தன்மை பெற்று இயங்குகிறான். இதற்கு அடிப்படையாக அளமவது அவனுடைய ஆளுமை பண்புகள் ஆகும். இது எல்லையில்லா அறினவையும், ஆய்வுத் தன்மையையும் அடிப்படையாகக் கொண்டது. இவ்வாளுமை முழுமையாக வளர வகை செய்வதே கல்வி. கல்வியானது கற்போருக்கு முதலாவதாகத் தம்மை தாமே அறிய உதவுகிறது. மனிதனுக்குள் இருக்கும் முழுமைத் தன்மையை வெளிக்கொணரும் மற்றும் மலர வைக்கும் செயல்பாடே கல்வியாகும். அத்தகைய கல்வி முறையானது மேலை நாடுகளிலும், நம் நாட்டிலும் எங்ஙனம் இருந்தது, எங்ஙனம் இருக்கிறது, அவற்றிற்கிடையேயான ஒற்றுமை வேற்றுமைகள் குறித்து ஆராய்வதே இக்கட்டுரையின் நோக்கமாக அமைகிறது.

**The Explication of Reality and the Cultural Contiguity in Marilynne Robinson's
Lila in comparison to *Thirukkural* by Thiruvalluvar.**

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Abstract: -Cultural Communication is the contribution of thoughts and ideas through a particular channel that results in the creation and cultivation of wonderful relationships from various cultural backgrounds. It is strongly influenced by the families across the world. The research paper and its conclusions stated in this article is based on the ideas of the American Writer, Marilynne Robinson with reference to her notable work "Lila" which is compared with the concepts of the great tamil poet and philosopher, Thiruvalluvar, in his "Thirukkural". The article applies the literatures in English for Cultural studies. The Explication of reality is highlighted in this research Paper and the language of realistic literature is presented, with the main reference to the American holistic writer, novelist and essayist, Marilynne Robinson, the representative of cultural reality in her novels to break the Classical demands of art to portray the life based on culture.

Keywords: culture, reality, spiritual numinances, thirukkural.

Culture does not instruct who talks what, to whom, how and why, it helps to determine how communication proceeds and messages are encoded to transmit the intended meanings. It's the integrated pattern of human knowledge, belief and behavior that depends upon man's capacity for learning and transmitting knowledge to the future generations. The term culture refers to all the learned and not given by nature characteristics, common to a particular group of people. It is defined as the way of life, device of thoughts, common ways of reacting, intentionally / unintentionally. It almost goes without saying that there can hardly be any learning or transmitting knowledge or intellectual development without language. Culture not only dictates to shape the structure of the society but helps to determine how communication proceeds and how messages transmit the intended meanings.

Language does not exist apart from culture, and the most important symbolic aspect of culture is language – using words to represent objects and ideas. Language pass on culture from one generation to another and the only possibility of learning culture is through shared experience of language. It is both, part of culture as well as the medium by which culture is defined and described. Similarly it's the language that expresses, embodies and symbolizes the cultural reality. Since both language and culture are abstract concepts. The reality in culture is what is seen as good and bad or beautiful and ugly the subjective, depending on the View point of the individual's point shaped by his or her family. Cultural realism is the notion that morality is culture – dependent. It has to do with how an individual can feel the moral truth according to the general moral codes.

As society evolves due to progress and individual enlightenment, American family values undergo various dramatic changes. When equated of their family values, mostly people find it hard to formulate a response. Because these values are largely inheritent, understood on an emotional level, unspoken and passed down through the generations based on personal experience. It's generally known that the word, "Family" means a social Unit – Whether blood – related, marriage related or emotion – related. "Values" typically means a set of beliefs and ideals that provide moral guidance to a family unit, the moral knowledge of the right and wrong, proper moral decision – making skills and well – developed social cores. Most modern American families do include caring, love and support of



Morphological, Phytochemical and Fourier-transform Infrared Spectroscopy (FTIR) Spectroscopic Analysis of Selected Species of Portulacaceae: A Study

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ABSTRACT

Introduction: Morphological characters of plants to assess the differences or similarities in plant taxa and use these characters for plant identification. And also an attempt is made in the present study to analyze the functional group of active compounds present in the leaf and stem extract of selected species of Portulacaceae.

Objective: To study morphological, phytochemical and Fourier-transform infrared spectroscopy (FTIR) spectroscopic analysis of selected species of Portulacaceae.

Methodology: Physical examination and measurement of physiognomic features of fresh floral and vegetative sections of the plants were used to conduct a morphological study on the genus *Portulaca*. Phytochemicals were screened and analyzed with standard methods. 2,2-diphenyl-1-picrylhydrazylquenching assay were selected to investigate antioxidant free radical scavenging activity respectively.

Result: Morphologically they are dissimilar. Leaves are needle in *P. grandiflora* and obovate in *P. umbraticola*. Petals are numerous in *P. grandiflora* and 5 in *P. umbraticola*. The result of preliminary phytochemical screening indicated that leaf and stem of both species. Both plants were free from steroids. Moreover, quantitative estimation of phytochemicals also exhibited that leaf and stem of both species. Secondary metabolites, which are abundant in plants and have fascinating biological activities, are an important source with a variety of structural arrangements and properties. They have a rich source of protein and have high antioxidant scavenging activity.

Conclusion: Both species of Portulacaceae carry rich protein and have high therapeutic values. Therefore further efficacy and safety studies are encouraged on this potential herb with the hope of replacing some less effective ones in clinical practice especially for antidiabetic and anticancer.

Key Words: *Portulaca grandiflora*, *Portulaca umbraticola*, Morphology, FTIR spectroscopy, DPPH, Phytochemicals

INTRODUCTION

Plants are major sources of traditional medicines with a large variety of bioactive constituents, which are effective against different diseases. The dependence of man on plant resources is as old as the various human civilizations. Plant-derived drugs are still a valuable resource in the fight against serious diseases, particularly in developing countries. Since ancient times, higher plants have played a dominant role in the preservation of human health as sources of medicinal compounds.¹

Medicinal plants are used by people all over the world to treat a variety of human and animal diseases. These bioactive

constituents are responsible for the plants' major biological activities. Medicinal plants are rich sources of antibacterial and antifungal agents and are used as sources of potent and beneficial drugs in many countries.²

Some ornamental plants are grown for medicinal purposes because they contain a variety of bioactive compounds such as phenolic compounds, carotenoids, antioxidants, essential oils, and other secondary metabolites.³ Ornamental plants like *Ocimum* sp., *Nicotiana* sp., *Isora*, *Aloe vera*, *Agave*, etc. *Roses*, *nasturtium*, *hibiscus*, *marigold*, *Calendula*, and other ornamental flowers are widely cultivated in homes and have

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Ethnobotanical Survey of Medicinal Plants in Korampallam Village, Thoothukudi District, Tamil Nadu, India

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ABSTRACT

People have been traditionally using medicinal plants from time immemorial for the treatment of various types of disease. An ethnobotanical survey was made in the Korampallam village in Thoothukudi district, Tamil Nadu, during the month of January 2020. Regular visits were conducted to collect and record the plants of that region. The following findings were made clear. A total of 129 plant species belonging to 62 families were recorded for Korampallam village of Thoothukudi district in Tamilnada, India. Among the species, 1 species belongs to Pteridophyta, while the other 128 species belongs to Angiosperms. Analysis of habit forms indicated 73 species of herbs, 36 species of shrubs, 32 species of trees, 9 climbers, creepers and aquatic plants were recorded. The survey indicates that leaves are predominantly used for treating any ailment which was followed by stem with 14%, roots with 13% followed by whole plant and seeds with 9% and 3% respectively. Among 14 major disease categories, dermatological disorders were dominated followed by kidney disease with 451 use-reports, followed by skin disease and hair problem (302 and 242 use-reports, respectively).

Keywords: Demography, disorders, ethnobotany, Korampallam, survey.

INTRODUCTION

The progress of pharmacology, the therapeutic use of plants is very present in some countries, especially developing ones¹. Ethnobotany surveys include interviewing local people, use of the available data in the literature, and the folklore of each region². The goal of ethnobotany is to protect and to pass the valuable and useful traditional knowledge to future generations. Ancient methods of treatment by ethno medicinal value of various types of trees, shrubs, herbs and underground modification such as root, stem, bark, leaves, flowers, fruits and seed³. Now a days, indigenous knowledge about the use of medicinal plants is being lost from one generation to another generation due to modernization and the habitat destruction of the medicinal plants⁴. The present investigation elaborated the plant diversity of Korampallam village, Thoothukudi district, Tamil Nadu, India. The district shows rich diversity of plants having medicinal value and other important economic aspects which are generally used for various aspects by inhabitants of the area. The objective of the present study includes collection of plants from Korampallam village, identification of collected plants and recording the plant available in the selected area.

MATERIALS AND METHODS

Description of the study area

Korampallam village was the area selected for the present analysis. Korampallam is a panchayat village located in Tamil-Nadu state, India, in the Thoothukudi district. The

Korampallam geographical coordinates are latitude 8.77 and longitude 78.1.

Plant collection and identification

During the month of January 2020, Korampallam village was regularly visited and every plant was photographed and collected in plastic bags for identification. With the aid of Flora of the Presidency of Madras, the plants were identified. In addition to data on taxonomic place (family), vernacular name, common name, life form, and folk medicinal uses, the species entries were supplemented. The life type was graded according to the system suggested by Raunkiaer into herbs, shrubs, grasses and trees (annual, biennial or perennial).

Ethnobotanical Survey:

The ethnobotanical study of the village includes the testing of knowledge about the usage of common medicinal plants. Based on the literature review, about 14 categories of common ailments like kidney disease (KD), Skin disease (SD), Hair problem (HP), Stomach problem (SP), Respiratory disease (RD), Cold (C), Cough (CO), Diabetic (D), Tooth ache (TA), Head ache (HA), Fever (F), Body heat (BH), Insect Bite (IB) and Menstrual issues (MI) were selected for the present survey. A questionnaire was prepared using Google forms to collect the ethnobotanical applications of the plants in the village. The link is <https://forms.gle/r4LYYRzmiLJ2gpN8>. The link was then circulated among the residents of the chosen village. Choices were given to each respondent to select

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Ethnobotanical Survey of Medicinal Plants in Korampallam Village, Thoothukudi District, Tamil Nadu, India

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A New Class of Nano Generalized Closed Sets in Nano Topological Spaces

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Subithra P[†]

Abstract

In this paper, we introduce a new class of nano generalized closed sets in nano topological spaces namely nano generalized α^* -closed sets. Then we discuss some of its properties and investigate their relation with many other nano closed sets. Also, we define nano generalized α^* -open set and discuss its relation with other open sets. Finally, we define the properties of nano generalized α^* -interior and nano generalized α^* -closure.

Keywords: Nga^* -closed sets, Nga^* -open sets, Nga^* -int, Nga^* -cl.

2010 AMS subject classification: 54A05[‡]

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More Functions Related to $\check{S}A^*$ - Open Set in Soft Topological Spaces

P. Anbarasi Rodrigo¹
S. Anitha Ruth²

Abstract

In this paper, we introduce some soft functions like \check{S} Strongly α^* - continuous function, \check{S} Perfectly α^* - continuous function, \check{S} Totally α^* - continuous function. We study the connections of these function with other \check{S} function. Also, we establish the relationships in between the above functions and also investigate various aspects of these functions.

Keywords: soft functions, continuous function

2010 AMS subject classification: 54C05³

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Soft Semi* δ -continuity in Soft Topological Spaces

Reena C*
Yaamini K S†

Abstract

In this paper, we introduce the concept of soft semi* δ -continuous functions and soft semi* δ -irresolute functions in soft topological spaces. Also, we investigate its properties and study its relation with other soft continuous functions.

Keywords: soft semi* δ -open, soft semi* δ -closed, soft semi* δ -continuous, soft semi* δ -irresolute.

2010 AMS subject classification: 54C05‡

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Soft Pre^{*}-Generalized Continuous Functions in Soft Topological Spaces

C. Reena¹
M. Karthika²

Abstract

The aim of this paper is to define a new class of generalized continuous functions called soft pre^{*}-generalized continuous functions and soft pre^{*}-generalized irresolute functions in soft topological spaces. We discuss several characterizations of soft pre^{*}-generalized continuous and irresolute functions and also investigate their relationship with other soft continuous functions.

Keywords: soft pre^{*}-generalized continuous functions and soft pre^{*}-generalized irresolute functions.

2010 AMS subject classification: 54A05, 54A10³

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Steiner certified domination in fuzzy middle and splitting graphs

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Abstract

In this article some new results on fuzzy steiner certified domination are established. Bounds on fuzzy steiner certified domination number of fuzzy middle graphs and fuzzy splitting graphs of some standard fuzzy graphs are acquired.

AMS Subject Classification 2010: 05C72, 05C69, 51E10

Key words : fuzzy steiner certified domination, fuzzy steiner certified domination number, fuzzy splitting graphs, fuzzy middle graphs

1. Introduction

In crisp graphs, the study of certified domination has been instigated by M.Dettlaff et.al in 2008 [3]. The concept of steiner domination in crisp graphs was studied from [2],[4],[5] and [7]. Domination in fuzzy graphs has been studied from [1] and the notion of fuzzy graph theory has been studied from [6]. Fuzzy steiner domination number of a fuzzy graph G is the fuzzy cardinality of a minimum steiner certified dominating set of G . For a connected fuzzy graph $G(V, \alpha, \mu)$, a subset of nodes C of $V(G)$ is said to be steiner certified dominating set if it is both steiner set as well as certified dominating set. The fuzzy Steiner interval, $FIS(G)$ of a non empty subset of nodes S is defined as the set of all nodes which lie in same steiner tree of S . If $FIS(S)=V(G)$ then S is called a fuzzy Steiner set of G . A set of nodes C is said to be certified if each node in the set has either zero or two neighbours in $V(G) - C$. A non-empty subset S of V is called a fuzzy Steiner dominating set if S is a fuzzy dominating set and a fuzzy Steiner set of G . The minimum fuzzy cardinality of a minimal steiner certified dominating set is called fuzzy steiner certified dominating number denoted by $\gamma_{scer}^f(G)$ and the corresponding set of nodes is called γ_{scer}^f -set. The maximum fuzzy cardinality of a minimal steiner certified dominating set is called upper fuzzy steiner certified dominating number denoted by $\Gamma_{scer}^f(G)$.

2. Steiner Certified Domination in fuzzy middle graphs**2.1 Definition**

Let $G(V, \alpha, \mu)$ be a fuzzy graph with node set V and arc set E . The fuzzy middle graph of G denoted by $M^f(G)(V', \alpha, \lambda)$ is defined as follows. It has node set $V' = V_1 \cup V_2$ and arc set $E' = E_1 \cup E_2$ where $V_1 = V$ and $V_2 = E$ and

$$E_1 = \{x_1x_2/x_1, x_2 \text{ are adjacent arcs in } G\}$$

$E_2 = \{ux_2/x \in V, x \in E \text{ and } x \text{ is incident with } u\}$. Also ρ and λ are defined as

$$\rho(x) = \begin{cases} \alpha(x) & \text{if } x \in V_1 \\ \mu(x) & \text{if } x \in V_2 \end{cases} \quad \lambda(xy) = \begin{cases} \rho(x) \wedge \rho(y) & \text{if } e = xy \in E_1 \\ \alpha(x) \wedge \mu(y) & \text{if } e = ux \in E_2 \end{cases}$$

2.2 Theorem

For a fuzzy path graph P_n^f , the steiner certified domination number of the fuzzy middle graph is $\gamma_{scer}^f(M^f(P_n^f)) = p$ where p is the order of $M^f(P_n^f)$.

Steiner certified domination in fuzzy middle and splitting graphs

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Abstract

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AMS Subject Classification 2010: 05C72, 05C69, 51E10

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1. Introduction

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2. Steiner Certified Domination in fuzzy middle graphs

2.1 Definition

Let $G(V, \sigma, \mu)$ be a fuzzy graph with node set V and arc set E . The fuzzy middle graph of G denoted by $M^f(G)(V', \rho, \lambda)$ is defined as follows. It has node set $V' = V_1 \cup V_2$ and arc set $E' = E_1 \cup E_2$ where $V_1 = V$ and $V_2 = E$ and

$$E_1 = \{e_1 e_2 / e_1, e_2 \text{ are adjacent arcs in } G\}$$

$E_2 = \{ue / u \in V, e \in E \text{ and } e \text{ is incident with } u\}$. Also ρ and λ are defined as

$$\rho(x) = \begin{cases} \sigma(x) & \text{if } x \in V_1 \\ \mu(x) & \text{if } x \in V_2 \end{cases} \quad \lambda(e) = \begin{cases} \mu(x) \wedge \mu(y) & \text{if } e = xy \in E_1 \\ \sigma(u) \wedge \mu(y) & \text{if } e = uy \in E_2 \end{cases}$$

2.2 Theorem

For a fuzzy path graph P_n^f , the steiner certified domination number of the fuzzy middle graph is $\gamma_{scer}^f(M^f(P_n^f)) = p$ where p is the order of $M^f(P_n^f)$.

A Study on the Impact of Online Mode Education of kids during the pandemic

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Abstract

In the COVID-19 pandemic has affected education worldwide, leading to the new total schools, universities and colleges since March 2020. All the educational institutes have been shut down to break the chain of this novel virus COVID-19. It has significantly disrupted teaching, learning of the school students. All the credit goes to the use of technological enhanced tools or applications in the field of education. A number of Application like WhatsApp, YouTube, zoom, classes, Google meet etc. have been used to teach the students as well as kids at their homes. Teachers staying at home prepare their lessons and share it using technological enhanced application that is WhatsApp, you tube etc. Most of the faculties, students and administrators are

facing many problems because they were adjusted to the traditional classroom method.

In the initial stages of adopting online Methods of teaching, it is very important to provide development programs and training on how to access and adopt the various tools and techniques of online teaching.

Key words: COVID-19 pandemic, Online mode like WhatsApp, YouTube, zoom classes, Google meet.

Introduction: Education plays a vital role in the all-around and inclusive development of students as well as nations. Education provides the individual with knowledge and skill and enables the individual to know the duties and rights. It expands vision and outlook to see the whole world. It enables us to fight against corruption, injustice and many other evils in the society. So, learning of all the learners of all ages and stages must be safeguarded. In the COVID-19 pandemic has affected education worldwide, leading to the new total schools, universities and colleges since March 2020. All the

GADGETS USED BY GEN Z WITH REFERENCE TO THOOTHUKUDI TOWN

DR. P. JAYAMARY

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ABSTRACT

Gen Z is the primary digitally local generation, born at the height of technical innovation. Younger adults are main the manner in expanded mobility, preferring laptops to computer systems and the use of their mobile telephones for a diffusion of functions, along with net, e mail, tune, video games, and video. In the present research primary data were collected by structured questionnaire from 100 respondents in Thoonthukudi Town. The main objectivity of the study was to determine the factors influencing Gen Z preference towards gadgets. The collected data was analysed using simple percentage, Z test and ANOVA. The study concludes that most of the respondents prefer to use devices even as sleeping; they do not have a time restrict in using the gadgets. Over usage of devices at some stage in night time outcomes in mistaken sound asleep, because of unsuitable snoozing their subsequent day work will no longer be carried out successfully. Dependency of using gadgets in night time must be decreased. Students ought to be greater encouraged to spend time on bodily sports and outdoor video games. More research need to be carried out concerning this problem so as to cope with the problem more exactly and strengthen the strategies further for the close to future.

Keywords:Gadgets, Gen Z, time, problem, factors, influencing, future, etc.,

INTRODUCTION

Technology Z (aka Gen Z, iGen, or centennials), refers back to the technology that became born between 1997-2012, following millennials. This era has been raised at the net and social media, with a number of the oldest completing college through 2020 and coming into the body of workers. As the first social era to have grown up with get entry to to the net and portable virtual era from a young age, individuals of era Z were dubbed "virtual natives", even though they are now not necessarily digitally literate.

Gen Z is the primary digitally local generation, born at the height of technical innovation. They're the era who has continually had get admission to a ramification of virtual systems and social media. This permits them to stay related to all varieties of self-expression, which has supposedly contributed to their more and more liberalized viewpoints. This propagation of diversity is regularly additionally reflected of their self-expression, distinguishing them from preceding generations. Born with smartphones, the net, and era proper at their fingertips, era Z is the following up-and-coming generation to watch out for. Many devices have turn out to be popular across generations, with a majority now proudly owning cell phones, laptops and computer computer systems. Younger adults are main the manner in expanded mobility, preferring laptops to computer systems and the use of their mobile telephones for a diffusion of functions, along with net, e mail, tune, video games, and video.

AN EXPLORATORY STUDY ON INSTANT FOOD PURCHASE AND CONSUMING BEHAVIOUR OF WORKING WOMEN

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ABSTRACT

This exploratory research looks at how working women acquire and consume quick meals. There has been a sizable change in women's eating habits as a result of the expanding trend of working women. Understanding the variables that affect working women's purchases and consumption of quick meals is the goal of this study. The study was carried out utilising a mixed-method approach that included both qualitative and quantitative methodologies among a sample of working women in metropolitan locations. The findings suggest that because quick meals are convenient and time-saving, working women prefer them. A further finding of the study was that consumers' purchasing and consuming decisions are significantly influenced by flavour, affordability, and nutritional value. The study's conclusions may be helpful to marketers and policymakers to develop targeted marketing strategies and policies that cater to the needs of working women and promote healthier food habits.

KEY WORDS: working woman, instant food, influencing factor.

INTRODUCTION

A woman who is gainfully working; typically distinguished from a homemaker. Women's labor is critical to the world's economies. An estimated 52% of worldwide working-age women are currently employed, and women's labor-force participation is increasing. Their families benefit from higher family income, and companies benefit from improved productivity. Working women's conflicting roles cause stress in their lives. Women are still seen to be in charge of the bulk of domestic labor and administration, child care, and elder care, and working women work the equivalent of two full-time jobs.

In recent years, the dominant food consumption trend in emerging nations' urban areas has been that more customers are purchasing increasingly more quick food from their homes, with instant food accounting for the majority of the rise in purchasing. The interest in fast food at the national and international levels stems from a lack of time in a competitive, lively, and metropolitan fast life.

Indian homes today accept food with ease of preparation and purchasing. Processed foods and taste preferences are no exception. The food business has done an excellent job of replacing fresh and healthful foods in customers' diets with processed foods. Over the years, processed food has become one of the world's and India's fastest expanding industries. In a developing

**A STUDY ON THE SOCIO ECONOMIC CONDITIONS OF WOMEN DOMESTIC
WORKERS IN PALAYAMKOTAI MUNICIPAL CITY CORPORATION
TIRUNELVELI**

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ABSTRACT

Women workers in the informal economy consist of the most affected working sectors in society. They come from a marginalised population who's legal, economic and political status limit their ability to demand or access their rights. These women include domestic workers whose social and economic contributions to society are invisible to the public, the law and policies of the country. They face challenges because their work is not considered 'real' work so that their rights to minimum standards of decent work are continually violated. As a result, this research attempts to look at these challenges through studies into the profile of domestic workers, their burdens and vulnerabilities in work place, efforts of the government to address the issues and efforts of domestic workers and partner organisations to organise them. This research will cover issues related to minimum standards of decent work, including definition, terms and condition of domestic work, live-in and live-out arrangements, wages, leaves and social security. The unique feature of their workplace, which is the home of their employer, makes them vulnerable to abuses and exploitation. This is because the State would always be reluctant to consider a home a workplace that they can regulate. The lack of capacity, support and unity as an organised sector make the challenges they face doubly difficult.

Key words: Women workers. government, Financial performance, organisations

A MICRO LEVEL STUDY ON THE VULNERABILITY OF WOMEN ENTREPRENEURS IN THE FISH VALUE CHAIN

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Dr.M.Jeyakumari, Associate Professor, PG & Research Department of Commerce, V.O Chidambaram College, Thoothukudi, (Affiliated to Manonmaniam Sundaranar University)

Abstract

The Fishing is the main occupation which increases the importance in our economy .The people of Thoothukudi earns a major share of income from Fishing. They are almost dependant over the occupation. Women participate in the fish trading activities to establish themselves as Entrepreneurs. This research paper is an attempt to study and to discuss about the vulnerabilities they are exposed while progressing as entrepreneurs. A sample of 75 women entrepreneurs were taken for the study .The main object was to study the external threats women face at their initial stage and during the progression .

Keywords

Vulnerability , Seafood, Women Entrepreneurs, Fish Value Chain

Introduction

Thoothukudi projects itself as a leading district both in culture and has emerged as a developing exporter of marine products. The treasure of Thoothukudi lies in its rich diversity of natural habitats such as coral reefs, flats, beaches, continental shelf areas, marsh lands, rocky shores. The coast of thoothukudi is straight and narrow without many indentations. The coast is blessed with number of estuaries, lagoons, deltas, creeks, salt marshes etc. The skill and the courage of fisherman who sail in the terrific seas in a small boat is admirable. Fishing is the only sector that offers cheap and good animal protein to the people. It is considered as the predominant

A MICRO LEVEL STUDY OF WOMEN IN SEAFOOD PROCESSING UNITS IN THOOTHUKUDI

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Dr. M.JEYAKUMARI, Associate Professor
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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

ABSTRACT:

Sea foods processing is a workforce concentrated activity with a perspective of large scale export potential. Sea food processing units, as a result act as a source of employment for the people in thoothukudi. Women employees serve the purpose to its height. A micro level survey was undertaken to understand their social and economical grade and participatory nature of women employed in sea food processing units and to measure their contribution to the overall performance of the units. The research also evaluated the economics of production of the processing units for different scales of operation.

Keywords: *Seafood processing units, Women participation, Status*

INTRODUCTION

The upgradation of the fishing industry has an emerging effect in its productivity and in its efficiency and thereby many seafood processing factories have placed their mark in these industries. Sea foods gets processed and it is exported to other countries and the degree of export has been constantly increasing. Through the mere logistical support, VOC Port has contributed in facilitating seafood exports to other nations. Exports of diverse seafood to a range of abroad destinations through VOC seaport, Thoothukudi took up an increase of 6.72 percent when compared to the preceding year in terms of quantity. Thoothukudi port has handled a cargo of 42, 203 tonnes of seafood during the last year. These industries provides employment opportunities to a huge number of women and the extent of women's participation in seafood processing units enhance the productivity which in turn increases their economic worth. This will enable the planning and optimal consumption of human potential and the stipulation of the necessary facilities. By throwing light to these points, the present study was undertaken to gain weight age in relevance to the participation of women working in seafood processing units.

OBJECTIVES OF THE STUDY

- To know the social profile of the women working in the units.
- To study about the participation of women engaged in seafood processing industries.

METHODOLOGY

The study was carried out in seafood-processing plants situated in and around Thoothukudi. Ten fish processing units were randomly chosen for the data collection. 120 women were selected for the study. A structured questionnaire was prepared for the collection of data. The women were grouped according to their ages as well as their incomes.

FONDNESS OF PASSENGERS TOWARDS SOUTHERN RAILWAYS WITH REFERENCE TO TIRUCHENDUR RAILWAY STATION

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ABSTRACT:

We live in a fast-growing world, where the means of travelling is also developing in a speedy way. In all parts of the world, travel operators are competing with each other for giving better facilities to their passengers. Indian Railway is one of the largest rail networks in the world. It was the world's second largest transport organization under one management. It provides the most convenient and economical mode of transportation to millions of people in the country. Goods transport is the area where railways reap huge amount of income. Operations of Indian Railways have direct impact on passengers as it directly affects the income generation. Madurai division is a passenger-oriented division and earns greater revenue through passenger transit. In order to provide customized services, it is essential to understand the expectations and perceptions of the passengers with regard to quality of services offered by the rail system. Thus, this study takes into account the satisfaction of daily passengers towards the various services offered by the Indian Railway. The primary source includes data collected through structured questionnaire from 120 passengers in Tiruchendur of Madurai division of Southern Railway.

Keywords: Indian Railway, Passenger Satisfaction, Daily Passengers, Services

INTRODUCTION:

Transport is the movement of people, goods, and animals from one location to another. Transport is vital one because it enables trade between persons, which is essential for the development of civilizations. Transport is a key necessity for specialization allowing production and consumption of products to occur at different locations. Economic growth has always been dependent on the increasing capacity and rationality of transport. Commerce requires the transport of people to conduct business, either to allow face-to-face communication for important decisions or to move specialists from their regular place of work to sites where they are needed.

RAILWAY TRANSPORT IN INDIA

There are different modes of transport in the world like land ways, water ways, and airways. Railways and Roadways are the indispensable means of transportation over land. Railways have an advantage over roadways that they can carry many passengers as well as heavy loads to a long distance. Railways are ideally suited for long distance travel and movement of bulk commodities. Indian Railways, a historical legacy, is a vital force in Indian economy. Spanning nearly two centuries Indian Railways has been serving the country with utmost pride. Also, the journey by train is more comfortable and economical. India has a large network of railways throughout the country, and has trains from one corner to another corner of India.

Railways are also important of the country. In case of emergency the railways transport arms, ammunition and men from one part of the country to the other part. In case of famine, floods, epidemics and other disasters, the railways carry food and medicines quickly to the part of the country, where they are needed. Modern railways are a bottle green transport alternative when the trains and infrastructures

Gratification of Passengers Towards Southern Railways - A Special Reference to Tirunelveli Junction

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ABSTRACT

Railway is one of the best public transport modes on land transportation. Railways, as mass public transport modes, have unique characteristics. It has large capacity, high safety level, and free from traffic jam. Those characteristics make railway a primary public transportation. Indian Railways is the largest railway network operated by the Government of India. Where the railway was first introduced in India in 1853. Indian Railways is the biggest Government institution of India which gives more than 17 Lakh people employment. Indian Railways is the biggest railway system of Asia and the second biggest railway system of the world. The objective of this research is to analyze the purpose of travelling in train, choice of comfortability and factors behind the preference of passengers' towards travelling in train. Primary data were collected from 150 passengers in Tirunelveli Railway Junction with the help of questionnaire using purposive random sampling. The data were analysed using Percentage Analysis, Garrett Ranking and mean ranking. Hence this study made an attempt to identify the preference of passengers towards southern railways.

Keywords: Passengers, Preference, Train, Southern Railways, Land Transport

Introduction

Customer is the most important person for any business enterprise. The business revolves around the customer. A customer is a person or group of people who are the buyers of products and/or services generated within a social system. A customer may be a person or group, such as a household. The concept of a customer may vary significantly by context, although a common definition is an individual who buys products or services for personal use and not for manufacture or resale. The customer is the one who pays to buy the goods and services produced. As such, customers play a vital role in the economic system of a nation. In the absence of effective customer demand, producers would lack one of the key motivations to produce to sell to customers. So, while operating as a firm, it is essential for the firm to gain the good understanding of its target market. The more the Customer behaviour is learnt, the more the needs and wants of the customers are fulfilled. The customer fulfillment response determines their level of satisfaction which is the key for successful business. The difference between customer's expectation and experience, ie the perception of actual services, leaves a gap which leads to dissatisfaction.

Objectives of the study

➤ To identify the travel Behaviour of the passengers and factor behind The Preference Towards Railway Service about the services offered by the Indian railways with reference to Tirunelveli junction.

Data collection

The study is based on primary data. Primary data were collected from 150 passengers in Tirunelveli Railway Junction with the help of questionnaire.

Scope of the study

A STUDY ON WORK LIFE BALANCE OF HEALTHCARE EMPLOYEES IN TIRUNELVELI DISTRICT

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Abstract

Family and work are the two domains for any employed individual. Striving to strike a balance between work and family is a burning issue in today's corporate scenario. The private hospital healthcare workforce is posed with a stronger fight compared to their government hospital healthcare counterparts. Medical profession has seen an increase in the private hospital healthcare workforce over the past few years and much has been written as well as researched about the healthcare industry. The main objectives of the study are to analyze work life balance of healthcare professionals in government and private hospitals and enhancers of work life balance of healthcare professionals in the study area. The study mainly based both primary and secondary data. The sample size was fixed at 229 government and 238 private hospital healthcare professionals. The important finding of the study is mean rank of satisfaction on present position in balancing work life of healthcare professionals, receive sufficient respect in personal life and work life and enhancers of work life balance of healthcare professionals in Tirunelveli district, Support from Hospital Management.

Keywords: Work Life Balance, Healthcare and Employees, Hospitals.

INTRODUCTION

Work is the most centric part of everyone's life. Employees today are more likely than ever to be concerned with how to balance their work and family lives. Competing demands, which arise between work and personal roles, often result in conflict for employees. Work facilitates meaning to life and livelihood. But life is not just meant for work alone. Its purpose and functionalities are much wider in scope. The relationship between work and life has acquired a silent place in the modern society where people are ambivalent about their work and life values. These both aspects are like wheels of the same vehicle, any problem in either aspect leads to conflict in the other aspect. Job stress among employees is becoming a common occurrence in the healthcare industry. Personal life and professional life should be given importance as they demand, and should be held distinct from each other. There is a surge in the current phenomenon in order to have a proper blend of work and life. The work life balance remains an issue that requires considerable attention from healthcare professionals.

Indian Healthcare is one of the most significant sectors responsible for citizens' good health and well-being. Healthcare workers like doctors and nurses play the vital role in the healthcare sector. A congenial atmosphere has to be created for them to work with utmost job satisfaction and content. When employees return home, they should not carry organizational stress with them. An individual has two roles to play – personal and professional; each role having different sets of demands. Balancing professional life and personal life is a big task. Work-life balance refers to the level of balance between personal and work activities in an individual's life. When such role demands overlap, multiple problems are faced leading to losses for the healthcare professionals.

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WORKPLACE STRESS AMONG WOMEN ADMINISTRATIVE SUPPORT STAFF IN HEALTH CARE SECTOR

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Abstract

Workplace stress is pervasive issue that poses a risk to occupational health and contributes to far too many aspects of health disparities. Workplace stress might be more challenging for a professional to provide the high-quality care that patients need. The quality of life for a professional's family may also suffer as a result of stress from the workplace. The questionnaires were distributed to menial job workers, technical workers and non-technical workers in the hospitals. In this study, a total of 120 sample respondents were selected for the study. it was found that employees working in health care sectors are having more control on their duties because it dealt with life. There is lack of proper recognition in the work place. Employees found it difficult to express their opinions or feelings about their job conditions to their superiors. Employees working in health care sector are unable to manage their family and work life, their job pressure interfere on personal life. It is noted that health care employees are happy about their job and deadlines. Menial job workers are having high stress in workplace compared to technical and non-technical job workers in the hospital. Next to menial job workers non-technical workers are highly stressed than technical workers.

OCCUPATIONAL STRESS AMONG WOMEN ADMINISTRATIVE SUPPORT STAFF IN HEALTHCARE SECTOR

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Abstract

When employees are given work demands that are not compatible with their knowledge, skills, or talents, it can cause a pattern of reaction that tests their capacity for adjustment. It could result in physiological, psychological and behavioural problems. The administrative support staff's working in private hospitals located in Palayamkottai were selected for the study. The researcher confined to do the research by giving equal weightage to each category of administrative support staff i.e. menial job workers, technical and non-technical workers in private hospitals. The questionnaire was structured with socio-demographic characteristics like age, education, marital status, years of experience, work hours in a day and measure the occupational stress of the administrative support staff by analysing the physiological problems, behavioural problems and psychological problems. Menial job workers are having all the physiological, psychological and behavioural problems. So, the hospital management and outsourcing manpower agencies should give proper orientation to the workers with cope up strategies to manage occupational stress.

Keywords: Occupational Stress, menial job workers, technical, non-technical workers, physiological problems, behavioural problems and psychological problems, healthcare



Hyphenated Existence of British Asians in Meera Syal's *Anita and Me*

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Abstract:

Multiple roles and identities, including those related to family, territory, class, religion, ethnicity, and gender, make up the self. Therefore, identity is viewed as a crucial factor in determining an individual's personality. Meena Kumar, the protagonist of Meera Syal's *Anita and Me* (1996), is also searching for her true identity. Meena, a second generation immigrant, finds ethnic identity perplexing because it is more closely linked to ancestry than to geography. Familial ties, friendship, relationships, life choices and interactions with people around us are some of the factors that contribute to the formation of an individual's identity. These myriad influences shape an individual's identity as they grow up. Finding a real and completely fitting identity seems to be a difficult task because identity construction is a never ending process. This paper is an attempt to analyse how identity is dynamic and continuously alters itself in the course of a life's journey as a result of experiences.

Keywords: British Asian, Cultural Identity, Ethnicity, Family, Racism.

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Identity is a very complicated concept that differs from one individual to another. It cannot be generalised or viewed from a single perspective. A single person can develop more than one identity. Identity is unstable and fluid. Woodward states that "Identity is marked by similarity that is of the people like us and by difference of those who are not" (7). In Meera Syal's *Anita and Me* (1996), Meena finds it more difficult to find her identity within her community as well as among her English friends.

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Her friend's place of birth contributes in certain ways to their identity. But Meena was born and raised in a different milieu. She is uncertain about her ethnic identity. She is trapped between the two entirely distinct worlds of Britain and India. She perceives that she is an outsider to both cultures. She is unable to truly live up to either one's expectations.

In Bhabha's term, the "third space" turns out to be a transitional place where several identities develop. As Bhabha notes in *The*

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Carol Ann Shields Happenstance - An Intuition into Affianced Affiliation

M.G. Thibursius, Dr. S. Sudha Rani

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Abstract

Canadian literature has been resolutely influenced by international immigration, particularly in recent decades. Carol Ann Shields works mainly probe on the existential aspects and individual self. Marriage is just the inception of a perpetual relationship where men and women determine to live together till death. Family is the principal unit of society, whereas man and woman unite to form a family, for the cause of the procreation and the subsistence of human life. The two vital components of marriage are individual and social. The individual element of marriage is for the man and woman to mutually agree with one and other. The

Carol Ann Shields's *The Republic Of Love* as a Thirst for Monochromatic and Other Aspects

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Abstract

Canadian literature has been strongly influenced by international immigration, particularly in recent decades. Before European contact and the confederation of Canada, indigenous people in North America have occupied Canada and have maintained a rich and diverse history of culture, identity, language, art and literature. Carol Ann Shields works mainly focused on the existential aspects and individual self. *The Republic of Love* is no exception. It speaks about the subject of love treated with pure romanticism and mistrust. Shields was very much aware of the fashionably dim view of love taken today. She loved stories that placed lovers in isolation and wanted her pair of lovers firmly in the midst of their community where the networks of family and friends form the real street maps. Shield's perception of love is mythical and self oriented. Its arrival cannot be arranged nor its properties deconstructed. This monochromatic aspect intended to be reflected in the occupations of the characters, Fay's involvement with mermaids accentuates her existence with a mythic quality while Tom's charisma over the air waves and his impact on other people's lives is intended to give a magical dimension. A man should resubmit his individuality as much as he can have particular ideas about himself. It should be elaborated by the logic of self and other aspects. This paper Carol

Feminist Pedagogies in Chimamanda Ngozi Adichie's Americanah

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Abstract

Feminism as a phenomenon has gained widespread recognition in Africa over the course of the recent decades. The perception of women who self-identify as feminists are often characterized as extremist, as their beliefs and actions are seen as contravening against African customs and traditions. This study diligently examines the exploitation and oppression endured by women, effectively illustrating the oppressive condition that leads them to be psychological wrecks. As a result, people become aware of the importance of institutionalising societal reforms in order to improve the status of women in patriarchal society. The finding of this study implicitly encourages the collaboration between men and women as an essential ideology in the current social and political transitions taking place in the African continent. The methodology employed by the central character in the literary work to emancipate herself could conceivably be regarded as revolutionary. The utilization of African Reformist Feminism serves as the theoretical framework for the critical examination of the novel. Indeed, it is an undeniable verity that women endure subjugation, dehumanization, and a multitude of cruelties perpetrated by men. Nevertheless, within the purview of this feminist paradigm, one must also acknowledge certain affirmative facets

Devastated throb of the Stolen Generation in Doris Pilkington's *Rabbit Proof Fence: A Study*

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Abstract

"Kill the Indian and save the man"

(Capt. Richard. H. Pratt)

Culture means people's pattern of life customs, ethics and their social behaviour. Culture is passed on from the ancestors to the next generation. It has a strong influence on who we are. This pattern of life of the Australian Aborigines was disturbed with the advent of the English Convicts and Mariners. Among the colonies of the British, Australia was a different colony. It was initially considered as a penal colony, an open prison. Australia became a distant colonial territory where the English sent the convicts. This created devastating impact on the indigenous population which had developed their culture 60,000 years back. As part of the colonising process several policies were formulated to civilize the aborigines. One among them was the Assimilation Policy. It was a policy that was thirsted on the Aborigines to adapt western culture.

Traversing the Identity in Margaret Laurence's *A Jest of God*

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Margaret Laurence is one of the prolific writers in Canadian Literature. The main theme in her works is the searching for one's own identity. All the protagonists in her stories strive for inner liberation. Laurence's stories centre on a prominent female character in pursuit of her identity, which is ultimately determined through her interactions with others. Unlike the typical male hero, the female does not distance herself from others in order to develop. Rather, she distinguishes herself from others. The sensation of being connected to others, on the other hand, is a world of captivity. All the women protagonists in Margaret Laurence's works wish to leave their little village and their reliance on husbands, fathers, or grandfathers, but they have few financial possibilities because women's choices are even more constrained than men's. Both the desire to flee and the desire to belong are strong in the protagonists of Margaret Laurence's works. Her works are dominated by explorations of the individual's desire for a new sense of personal identity.

A Jest of God is the second book in Margaret Laurence's Manawaka sequence and the third in her chronology of work. Rachel Cameron's suffering over a summer in Manawaka in the 1960s was chronicled in *A Jest of God*, which was written in 1964 and 1965 at Elm Cottage, Margaret Laurence's residence in Buckinghamshire, England, and published in 1966. The novel won the Governor General's Award for Fiction in 1967. Thematically, *A Jest of God* covers a wide range of topics. A search for identity, religious - quest, and the twin-motif are all prevalent among them. In *A Jest of God* Laurence demonstrates how a negative self-concept or poor self-esteem, as established by humanistic psychologists such as Abraham Maslow and Carl Rogers, is incompatible with maintaining healthy human connections.

Rachel, Laurence's protagonist, is a thirty four year old spinster schoolteacher who shares an apartment with her widowed mother May Cameron in Manawaka. Rachel is a middle-class lady who dropped out of university halfway through, after her father died because she couldn't afford to continue her education. She moved to Manawaka fourteen years ago to help and support her mother by working as a grammar teacher. Her mother "an egocentric hypochondriac bound to fears and pills" enjoys the frivolities of high heels, blue-rinsed hair, and bridge parties. She is deceitful and often points to Rachel's weak heart to seek pity and attention, despite the fact that she clings to her as a dependant.

The female protagonist's psychoanalytic signification and narcissistic assertion are shown in the narrative of the novel *A Jest of God*. Rachel lives a dreadful life of estrangement as a result of her inability to fulfil the needs of both her body and her brain. Her desire is to

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Cultural Heritage and Marginalization of Moxans: A Study of Bharti Kirchner's *Shiva Dancing*

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Abstract

Marginalization refers to a process of cornering and alienating a particular sect of people who are socially, politically and economically below the majority group. This inflicts great pain on the physical and psychic nature of these subjugated people. It is a kind of complicated web woven around the lower-class people who are manipulated by the politically and financially sound power structure which exercises its full control upon these people and derive a kind of pleasure. Bharti Kirchner has carved out her debut novel *Shiva Dancing* which effectively brings out the subjugation of Moxans, the tribal people and their transformation of character which makes them adopt terrorist means to attain their ends and establish their identity.

Keywords: marginalization, alienating, power structure, transformation, identity.

Introduction

Bharti Kirchner, a renowned Indian American novelist's observation of the tribal society gets well delineated through her debut novel *Shiva Dancing*. Her concern for the downtrodden and her cognizance of the awareness of journalism which is capable of bringing reformation are explicated through the character of Vishnu Chauhan, a revolutionary journalist in *India News* who has been in service for ten years. On the surface level, the novel seems to throw light on Meena Kumari, a computer analyst's fortune in America and her knowledge of the self, her biculturalism and her discovery of the harsh realities. But the racial discrimination between the Moxans and others and the social injustice thrust upon the Moxans is interwoven in the plotline of the novel. The paper aims to focus on the marginalization of Moxans and bring social awareness in order to eradicate the class differences.

Shiva Dancing

Written for posterity, *Shiva Dancing* is woven with the threads of the social evil of child marriage of Meena and Vishnu at the age of seven uncovers the unhealthy practice of child marriage. Bharti Kirchner's anticipation to reform the society and protect the children from the

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A PALPABLE PEEP INTO THE CHILD MARRIAGES OF INDIA WITH SPECIAL REFERENCE TO TRAVANCORE

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Abstract

Child marriage can be considered as the most important issue children face even now, especially in India. In the past, it was so much that it affected the life of young children, leading the girls to be widows and to early motherhood. The colonial government had introduced various social legislations for the benefit of Indians. They targeted child marriage and introduced various laws to suppress it and one among them was the Sarada Act of 1929, which can be considered as a culmination of all. It had its repercussions in almost all the parts of India including Travancore. Though Travancore, the princely state in the southern most part of India was not notorious for child marriage, there were occurrences. The present paper tries to assess the institution of child marriage in India, its causes and various social legislations to curb it including the Sarada Act of 1929 and the Child Marriage Restraint Act of Travancore of 1941 in detail.

Keywords: Child, Sarada Act, Child Marriage Restraint Act of Travancore

Early marriage of children, especially girl child, is a frequent practise in Asian and African countries and particularly on the Indian subcontinent also. A large number of these countries have signed several international treaties and agreements guaranteeing various rights for children and women, including the requirement of an 18-year-old legal minimum age for marriage. In fact, Cameroon has gone a step further and set a minimum age of 21 years for girls to marry. Despite this, a whopping 62 percent of women are married by the time they reach the age of 18. (1) In a 2013 press release of the UNICEF it was stated that the top ten countries with the highest rates of child marriage are Nigeria, Chad and Central African Republic, Bangladesh, Guinea, Mozambique, Mali, Burkina Faso and South Sudan, and Malawi. The percentage of child marriage in the top ten countries is above 50 percent. Because of the size of its population, India has the most number of child marriages in absolute numbers. More than 44% of Indian girls are married even now before the age of 18.(2)

A 2011 Census of India study by Chowdhury (2016) revealed a dramatic increase in child marriage in India. According to the study of Chowdhury, 78.5 lakh girls (2.3% of all women) were married before attaining the age of 10 and 30.2% were married before the age of 18, the legal age to marry in India under the Prevention of Child Marriage Act (amended)-1978.(3)

Child Marriage deprives a child of the basic right to good health, nutrition and education. Evidence suggests that early marriage puts girls at risk of abuse, violence and exploitation. For both girls and boys, marriage has a powerful physical, psychological, intellectual and

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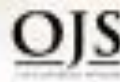


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SHANLAX
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SOME NEW OPEN AND CLOSED MAPS IN INTUITIONISTIC TOPOLOGICAL SPACES

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ABSTRACT

The aim of this paper is to introduce the notion of \mathcal{J} i-open map and \mathcal{J} i-closed map in Intuitionistic Topological Spaces. Further, some of their basic properties and condition for a function to be \mathcal{J} i-open(closed) are investigated. Besides, we also define intuitionistic strongly \mathcal{J} i-continuous and intuitionistic perfectly \mathcal{J} i-continuous in intuitionistic topological space and their properties are discussed..

Keywords: \mathcal{J} i-continuous, \mathcal{J} i-open, \mathcal{J} i-closed, \mathcal{J} s.ic., \mathcal{J} p.ic.

INTRODUCTION

The notion of intuitionistic sets and intuitionistic points was introduced by Coker[1]. Later he developed and introduced the Intuitionistic topological spaces[2] and explained some fundamental properties. Also, he defined intuitionistic continuous functions, intuitionistic connectedness and intuitionistic compactness. Suganya[5] et al introduced and derived some properties of \mathcal{J} i-open sets in Intuitionistic topological spaces. In this paper we explained a new class of functions on Intuitionistic topological space called \mathcal{J} i-open(closed) functions and analyze their characterizations in terms of \mathcal{J} i-closed sets, \mathcal{J} i-closure and \mathcal{J} i-interior. Additionally, we also define intuitionistic strongly \mathcal{J} i-continuous and intuitionistic perfectly \mathcal{J} i-continuous in intuitionistic topological space and their properties are discussed.

Definition 2.1.[2] Let (\mathcal{K}, τ) and (\mathcal{L}, τ_1) be two intuitionistic topological spaces. A mapping $f: (\mathcal{K}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} -continuous function on \mathcal{K} if the inverse image of every \mathcal{J} -open set in \mathcal{L} is \mathcal{J} -open in \mathcal{K} .

Definition 2.2.[7] A function $f: (\mathcal{K}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} -open map if the image of every \mathcal{J} -open set in \mathcal{K} is \mathcal{J} -open in \mathcal{L} .

Definition 2.3.[4] A function $f: (\mathcal{K}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} -closed map if the image of every \mathcal{J} -closed set in \mathcal{K} is \mathcal{J} -closed in \mathcal{L} .

Definition 2.4.[6] A mapping $f: (\mathcal{K}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} i-continuous function if the inverse image of every \mathcal{J} open set in (\mathcal{L}, τ_1) is \mathcal{J} i-open in (\mathcal{K}, τ) .

Definition 2.5.[3] A mapping $f: (\mathcal{K}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} strongly continuous function if the inverse image of every \mathcal{J} open set in (\mathcal{L}, τ_1) is both \mathcal{J} -open and \mathcal{J} -closed in (\mathcal{K}, τ) .

Definition 2.6.[3] A mapping $f: (\mathcal{K}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} perfectly continuous function if the inverse image of every \mathcal{J} open set in (\mathcal{L}, τ_1) is both \mathcal{J} -clopen in (\mathcal{K}, τ) .

Definition 2.7.[6] A function $f: (\mathcal{K}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is said to be \mathcal{J} i-irresolute if $f^{-1}(\mathcal{O})$ is a \mathcal{J} i-open in (\mathcal{K}, τ) for every \mathcal{J} i-open set \mathcal{O} in (\mathcal{L}, τ_1) .

Definition 2.8.[5] Let (\mathcal{X}, τ) be an Intuitionistic topological space and let $\mathcal{H} \subseteq \mathcal{X}$. The intuitionistic



A New Class of Micro Open Set In Micro Topology

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Abstract: In this article, we first establish a new type of open sets in micro topology, namely micro α^* - open sets and analyze the various properties of micro α^* - open sets and compare it with other existing micro open sets.

Keywords: $\mathfrak{M}\alpha^*$ - open, $\mathfrak{M}\alpha^*$ - closed, $\mathfrak{M}\alpha^*$ - interior, $\mathfrak{M}\alpha^*$ - closure.

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I. Introduction:

Nano topology was introduced by Lellis Thivagar[5] in the year 2013. This topology is based on the concept of lower approximation, upper approximation and boundary region. It has maximum five open sets and minimum three open sets including universal & empty set. Every nano topology is micro topology. Micro topology was introduced by sakkraveeranan chandrasekar[2] in 2019. Micro topology was the extension of nano topology. And it has maximum nine open sets and minimum four open sets. In this paper, we introduced micro α^* open set in micro topological space.

II. Preliminaries:

Definition: 2.1[2]

Let U be a nonempty finite set of objects called the universe and R be an equivalence relation on U named as the indiscernibility relation. Then U is divided into disjoint equivalence classes. Elements belonging to the same equivalence class are said to be indiscernible with one another. The pair (U, R) is said to be the approximation space.

Let $X \subseteq U$

1. The lower approximation of X with respect to R is the set of all objects, which can be for certain classified as X with respect to R and it is denoted by $L_R(X)$. That is $L_R(X) = \bigcup_{x \in U} \{R(x) : R(x) \subseteq X\}$ where $R(x)$ denotes the equivalence class determined by $x \in U$.

2. The upper approximation of X with respect to R is the set of all objects, which can be possibly classified as X with respect to R and it is denoted by $U_R(X)$. That is $U_R(X) = \bigcup_{x \in U} \{R(x) : R(x) \cap X \neq \emptyset\}$.

3. The boundary region of X with respect to R is the set of all objects, which can be classified neither as X nor as not- X with respect to R and it is denoted by $B_R(X)$. That is $B_R(X) = U_R(X) - L_R(X)$.

Definition: 2.2[2]

Let U be an universe, R be an equivalence relation on U and $\tau_R(X) = \{U, \emptyset, L_R(X), U_R(X), B_R(X)\}$ where $X \subseteq U$ satisfies the following axioms.

1. $U, \emptyset \in \tau_R(X)$
2. The union of the elements of any sub collection of $\tau_R(X)$ is in $\tau_R(X)$.
3. The intersection of the elements of any finite sub collection of $\tau_R(X)$ is in $\tau_R(X)$. Then $\tau_R(X)$ is called the nano topology on U with respect to X . The space $(U, \tau_R(X))$ is the nano topological space. The elements are called nano open sets.



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EXPLORATION OF HAEMOLYTIC ACTIVITY AND ANTIBIOTIC SENSITIVITY OF BIOLUMINESCENT *VIBRIO* SPECIES FROM THOOTHUKUDI COAST

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Keywords:

Bioluminescence, *Vibrio* sp.,
haemolysis, Antibiotic sensitivity,
Sheep blood agar

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ABSTRACT: Bioluminescence, the phenomenon of light emission by living organisms, is widespread in the marine environment at all the trophic levels from bacteria to fish and is thought to play a crucial role in the general ecology of marine plants and animals. Bacterial bioluminescence is very sensitive to toxic materials and hence, several investigations have tested its application for determining the toxicity of several chemicals. Although bacterial bioluminescence has found applications in various fields, there are certain reports where they have been found to be toxic to marine fishes and shrimps. The bioluminescent *Vibrio* sp. is especially noted to be pathogenic to shrimps causing necrosis and luminosis. Hence, the present study was carried out to determine whether the bioluminescent bacteria belonging to *Vibrio* sp. from Thoothukudi coast can lyse mammalian RBCs by haemolysis test and carry out the antibiotic sensitivity test of the isolated species using six antibiotics. Three different bioluminescent bacteria were isolated and identified as *Vibrio owensii*, *Vibrio hyugensis* and *Vibrio azureus*. *V. owensii* and *V. azureus* were γ -haemolytic and *V. hyugensis* was α -haemolytic which meant that none of them were able to haemolyse the blood completely. 5 μ g and 10 μ g of Amoxicillin, Cefotaxime, Ciprofloxacin, Ofloxacin, Roxithromycin, and Tetracycline were used to carry out the antibiotic sensitivity test. *Vibrio owensii* was most sensitive, *Vibrio hyugensis* was resistant, and *Vibrio azureus* showed intermediate results for the antibiotics used in the experiment. All the bacteria were resistant to Roxithromycin.

INTRODUCTION: Bioluminescence is a widespread phenomenon characterized by light emission produced in luciferase catalyzed oxidation of the substrate luciferin. Though bioluminescent bacteria are widely known for its luxuriant emission of natural light, they are also found to be the causative agents of various shrimp and fish diseases such as necrosis and luminosis.

Bioluminescent *Vibrio* sp. are ubiquitous in seawater and apart from seawater, gravid female shrimps can discharge abundant colonies of luminous bacteria while captivity in hatchery^{1, 2}. The natural habitat of *Vibrio harveyi* appears to be the gut of shrimps and marine sediments as to a free-living environment³.

It has been characterized as an opportunistic pathogen causing disease in marine organisms⁴. Shrimps carrying luminous (51%) and non-luminous (46%) *Vibrio* sp. in the hatcheries of Taiwan were studied and correlated to the shrimps' death with the appearance of luminous *Vibrio* sp.⁵. Luminous bacteria have been found to be the major problem in shrimp hatcheries of most Asian

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RESEARCH ARTICLE

***Vibrio owensii* and *Vibrio hyugaensis*- Potential Bioluminescent Bacteriae as Environmental Biosensors**J. Esther Mereen^{1*} and Jemma Hermelin Jesy Diaz²

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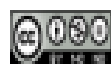
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ABSTRACT

Among the various natural phenomenon exhibited by organisms, bioluminescence is most notable. Bacterial bioluminescence is caused due to the reaction of luciferin molecules with oxygen. The production of living light by bacteria has been widely used as a tool for detection of pollutants. In the present study, *Vibrio owensii* and *Vibrio hyugaensis* isolated from Thoothukudi coast were used to detect inorganic and organic pollutants namely copper, lead, chromium, detergent and pesticide. The various pollutants were exposed to the bacteria and the results were noted for about 150 min. Photographs of the cultures were taken at a time interval of 30 min and transferred to the Batch Macro Measure of ImageJ software that gave the intensity of luminescence in terms of Measured Light Units (MLU). Though the luminescence exhibited by the bacteria reached its peak in 150 min without the addition of pollutants, it was noted that the luminescence decreased drastically on the exposure of pollutants. This proved that bioluminescent bacteria can be used as a biosensor for rapid detection of environmental pollutants.

Keywords: *V. owensii*, *V. hyugaensis*, biosensor, bioluminescence, environmental pollutants.

INTRODUCTION

Bioluminescence is a natural phenomenon of production of light by living organisms that involves chemical reactions. The purpose of producing bioluminescence varies from organism to organism, generally as a defense





Screening and Evaluation of Biodegradability of Polythene by Soil Bacteria

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ABSTRACT

Increase in plastics has resulted in the degradation of environment and other life forms because of its non-degradable property and persistent presence in the soil. The rise in plastics may lead to various changes in the regulation and recycling of waste resources. In order to avoid such problems, plastics are now degraded biologically with the help of microbes. The present study deals with the isolation of such potent bacteria, isolated from various soils that are capable of degrading plastics. Five different strains of bacteria such as *Streptococcus*, *Staphylococcus*, *Clostridium*, *Proteus* and *Pseudomonas* species were isolated from various soil sources and identified based on their morphological characters and biochemical test results. The biodegradability of 10 micron plastics by these bacterial strains were determined for 15 days and it was found that *Pseudomonas* sp. was able to reduce the plastics by 70% whereas *Clostridium* sp. did not degrade the plastics. Biodegradation of plastics by bacteria can be made most efficient by altering the factors that govern the process. It promises a reduction in plastic pollution in the future. Hence it is recommended to perform the enzymatic test of plastic samples, and production of isolated enzyme in large scale for degradation of plastic material.





Marine Elasmobranch Fishery Resources of Therespuram and Keelavaippar, Thoothukudi Coast – a baseline survey

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Abstract

Marine elasmobranchs are one of the listed endangered species in the world; their richness has been found to decrease year by year. Subsequently the study was undertaken to create a record of elasmobranch species landed at Therespuram and Keelavaippar, Thoothukudi coast, from July 2017 to September 2017. During the study period 17 species of elasmobranchs viz; 7 species of sharks, 7 species of rays and 3 species of skates were recorded. Almost all the species were common at both the study sites except for the shark *Galeocerdo cuvier* and a ray *Taeniura lymna* which were recorded only in Therespuram landing centre. Statistical analysis of comparison between Keelavaippar and Therespuram shows more elasmobranch richness at Therespuram. High abundance of species was recorded during the month of July i.e. 175 and 84 at Therespuram and Keelavaippar landing sites respectively. One way analysis of variance shows a p-value of 0.002 which means the result is significant at $p < 0.05$.

Key words: Elasmobranch, Endangered, Richness, Skates, Keelavaippar

Introduction

The Gulf of Mannar, one of the Marine Biosphere Reserves situated along the southeast coast of India is rich both in species and habitat biodiversity. The reserve provides a highly productive area for marine fishery resource. It is rich in Elasmobranch diversity (Sharks, Rays and Skates) that are being habitually exploited in this region (Raje et al., 2007). A total of 110 species of elasmobranchs belonging to 42 genera are distributed in Indian waters (Raje et al., 2007). Sharks and their relatives are collectively termed chondrichthyan or cartilaginous fishes. They represent one of the oldest and most ecologically diverse vertebrate lineages. The group arose at least 420 million years ago and rapidly diversified to occupy the upper tiers of aquatic food webs (Kriwet et al., 2008).

The elasmobranchs are highly diversified in colour, shape, distribution and habitat. In India, sharks and rays are distributed in four habitats such as, pelagic (11 species of sharks and rays), benthopelagic (7 species of shark and rays), demersal (18 species of sharks and 14 species of rays) and reef associated (6 species of sharks and 4 species of rays) (Vivekanandan et al., 2009). In 2003 India occupied the third position in the production of chondrichthyan resources among the Asian countries (Raje et al., 2007). The total marine landing of shark, rays and skates in India during the year 2009 was 29,126 t, 20,980 t and 3,582 t respectively. Their contribution was nearly 6% of the total demersal marine fish production. Most of the elasmobranchs are predaceous and hunt their food in the surface and water column; some of the species are scavengers and filter feeders. Skates and rays are bottom living relatives



A New Class of Sets Weaker Than Nano Regular^{*}-Open Sets.

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Abstract: In this paper we define a new class of sets namely nano semi regular^{*}-open sets in nano topological spaces. Also, we study in detail the properties of nano semi regular^{*}-open sets and its relation with other nano open sets. We also define the nano semi regular^{*}-open -interior of a subset and study some of its basic properties.

Keywords: nano regular^{*}-open, nano semi regular^{*}-open, nano semi regular^{*}-interior

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I. INTRODUCTION

LellisThiragar [8] introduced nano topological space with respect to a subset X of an universe which is defined in terms of lower and upper approximations of X. He also introduced the weak form of nano open sets namely nano α -open sets, nano semi-open sets, nano regular-open sets and nano pre-open sets. In 2014, K.Bharanivassari and K. Mythili Geesapriya [3] introduced Nano Generalised Closed Sets in Nano Topological Space. Quite recently the authors C. Reema, B.Santhakalasheni and S.M.JandPriyadharshini [6] have introduced the concept of nano regular^{*}-open sets and investigated its properties. In this paper we introduce a new class of nano open sets namely nano semi regular^{*}-open sets in nano topological spaces. We further show that the concept of nano semi regular^{*}-open set is weaker than the concept of nano regular^{*}-open sets but stronger than the concept of nano β -open sets. We also define the nano semi regular^{*}-open -interior of a subset and study some of its basic properties.

II. PRELIMINARIES

Throughout this chapter $(U, \tau_X(X))$ is a Nano topological space with respect to X where NGU , R is an equivalence relation on U, U/R denotes the family of equivalence classes of U by R.

Definition 2.1[8]: Let U be a non-empty finite set of objects called the universe and R be an equivalence relation on U named as the indiscernibility relation. Then U is divided into disjoint equivalence classes. Elements belonging to the same equivalence class are said to be discernible with one another. The pair (U, R) is said to be the approximation space. Let NGU

1. The **lower approximation** of X with respect to R is the set of all objects which can be for certain classified as X with respect to R and it is denoted by $L_R(X)$. That is $L_R(X) = \bigcup_{x \in X} [R(x) \cap X]$ where $R(x)$ denotes the equivalence class determined by X.

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A STUDY ON ONLINE SHOPPING EXPERIENCE AND CONSUMER SATISFACTION IN THOOTHUKUDI DISTRICT

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Introduction

In the era of globalization and with the wonderful expansion of the Internet, various businesses have globalized their sales and marketing efforts for their products and services all through the net. Over the decades maximum business organizations have been providing various products like books, hardware, software, toys, household appliances etc. to their customers through online. Online shopping is the process of buying and selling of the goods and services through online. It includes transferring of funds online, supply chain management, marketing over internet. It is the use of technology for better marketing performance. Through online shopping different type of business and organizations has gained a tremendous opportunity to increase their sale and to maintain a direct relationship with its customers.

The increasing use of internet by the young generation in India provides an emerging prospect for online retailers. Unlike traditional marketing, online marketing has many advantages like global reach, availability of wide variety and cheaper products, 24X7 timing etc. If online retailers know the factors affecting Indian consumer's buying behavior they can further develop their marketing strategies to convert potential customers into active ones. Customer satisfaction is the key factor for customer retention and acquisition in online shopping system. Customer satisfaction with respect to online shopping is the extent to which customer's perception of the online experience confirms their expectation.

Keywords:

e-business, online shopping experience, customer satisfaction, Mobile Commerce, Internet.

History of Online Shopping

Electronic shopping was invented by an English inventor called Michael Aldrich. In 1979, he invented the earliest form of e-commerce which allowed online transaction processing between business and customers, as well as between business and business. The invention of the first ever web browser, i.e. the World Wide Web in 1990 is the second major proponent of online shopping. Without an interconnected internet, there would be no online marketplace at all. We owe this marvellous invention called the 'WWW' to Tim Berners Lee. That man is the major reason why millions of people have access to the internet which hosts numerous e-commerce platforms. After the establishment of these two very important platforms, the expansion of online shopping was only imminent. In 1994, Netscape developed an encryption-based internet security protocol called SSL – or Secure Sockets Layer. Just ask any ecommerce owner how important an SSL certificate is for business.

When buying something online, you are required to send sensitive details directly to the online shop. This means that you're sending private information like credit card details routers to servers. SSL ensures your data isn't stored by any crooked servers on transmission. Because of its security, SSL is always required for basically all financial transactions online. At the turn of the 21st century in 2000, Google launched Adwords, an advertising service that allows sellers to place adverts in Google search results related to viewers' search preference. In other words, Google connected sellers to buyers on a greater scale. Another subtle yet huge idea changed the world of online shopping forever. In 2004, Shopify, a prominent online storefront service made it possible for low-capital sellers to set up online stores. Shopify is to online stores

SOCIO- CULTURAL FACTORS INFLUENCING WOMEN PARTICIPATION IN SPORTS ACTIVITIES AT TARUVAI STADIUM IN THOOTHUKUDI DISTRICT

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ABSTRACT

Women participation in sports has been a controversial issue all over the world and Taruvai Stadium is not an exception. This study examined the socio-cultural factors influencing women participation in sports in Taruvai Stadium of Thoothukudi District. Results obtained from this study revealed that physiological markup, Cultural beliefs; Social inclusion, Family background and Religion are factors that significantly influence women participation in sports in Taruvai Stadium of Thoothukudi District. Hence, it recommended that religious institutions and societal organizations should frequently organize conferences, symposium and workshops with a view of promoting the inclusiveness and active participation of women in sports across the study area.

Key words: Women participation, socio-cultural factors, physical activities, female participation, International Olympic Committee (IOC), Socio-Cultural Beliefs, Psychological Barriers,

INTRODUCTION

Women play an important role in society as procreators of the coming generation, as well as producers of goods and services. In the modern economies they are playing an important role in the labour force. However, in many communities, traditional perceptions of women as inferior to men continue to prevail as many people invoke the preservation of African culture to justify the subordination of women. As a result, men usually dominate women in the political, religious, economic, academic and domestic spheres. Women participation in sport has come a long way. Women's participation entails the provision of equal opportunity to women to take part in sports activity. It implies quantitative and qualitative participation of women in sports. Efforts have been and are being made in getting more females to participate in sports. However, a lot more effort is still required to generate greater female participation in the world of sport.

Women's participation in sports is much under the influence of defined gender roles as it has encountered many problems from the beginning. The thing that is important in entrance of men and women in sport is the entrance to a sport which is not traditionally defined with discrimination in favour of one sex. Cultural race and social class are both of important factors in the experiences of men and women discrimination in sport. For women, one of the biggest barriers associated with levels of activity is the perception that physical activity is unfeminine. This is apparent in the gender imbalance evident across the higher levels of the sporting industry, the media portrayal of sporting activity and the formative experiences of many women (WHO, 2010). Thus, today, one of the important and remarkable things in international community is maintaining and observing the rights of women and equality between men and women and gender discrimination.

HISTORY OF WOMEN'S PARTICIPATION IN SPORTS

Women's participation in sport has a long history. It is a history marked by division and discrimination but also one filled with major accomplishments by female athletes and important advances for gender equality and the empowerment of women and girls .Sports has been largely dominated by men in terms of participation and governance. Although here are unyielding evidences to suggest that women benefit immensely economically, socially and physiologically by participating in

THE FLIGHT OF THE WORKING CLASS IN MODERN AMERICAN CONSUMERISTIC CULTURE IN GEORGE SAUNDERS' *PASTORALIA* AND *SEA OAK*

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Abstract:

This research paper aims to investigate George Saunders' short stories *Pastoralia* and *Sea Oak*, rages against the bland cruelty of corporate America and speaks up for the upliftment of the middle class or the working class. George Saunders is truly considered to be one of the most wonderful American writers of the twenty first century, mostly the protagonists in the writings of George Saunders were individuals who were referred as the failures of American history, the downtrodden, the oppressed. His writings might be dark but it still permits his characters a humanity and a relentless in pursuit which gives them a glimmer of hope to move forward and achieve their goals. The main characters in the two short stories depict a clear and vivid picture about the sufferings of the working-class community, they were forced to withhold their jobs, understanding their situation their owners kept their workers as mere slaves and asked them to behave as per their order and did not give them job permanence, the workers were also ready to fulfil the demands of their owners because the job was very important for them to come out of their family's financial crisis. This narrative also portrays the anguish and absurdity of the American service sector, while also honouring the dignity of those who work in it.

Keywords: working-class, sacrifice, humiliation, sufferings, consumeristic culture.

American literature is been formed by the history of the other countries that had an influence over it. The development of science and industry, as well as variations in thought process and feelings brought many modifications among the lives of people living there. All these factors in the development of the United States moulded the literature of that country. Speculative fiction is one of the genres of fiction. It incorporates genres with the basic elements that does not exist in reality or in history, nature and the universe.

Will Kenton defines workers and peasants as "a socioeconomic phrase used to characterise those in a social class marked by employment that generate low income, demand minimal expertise, or physical labour" on the financial website "Investopedia" (1). These persons work in a service-type occupation and do not have a bachelor's degree. Waiters at restaurants, mechanical engineers, building workers, and other service-type workers are among the most common vocations performed by the working class. The major themes and subjects of working-class literature have been defined. "A focus on work, accurate representation of the material and social conditions of working-class life, validation of working-class culture,

PSYCHOLOGICAL GRIEF, LOVING-KINDNESS, AND THE DEHUMANIZING EFFECTS OF RACISM IN GEORGE SAUNDERS' "ISABELLE"

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ABSTRACT

This research paper discusses how George Saunders' short tale "Isabelle" explores the brutalising impacts of racism in modern American culture as well as emotional anguish. The narrative shows Split Lip's love and concern for his daughter Isabelle, who has special needs. It also shows that Split Lip was in severe financial trouble since Isabelle required expensive care. Local businesses struggled to meet demand, which had a negative impact on the stock market and sharply decreased real estate prices, which led to a significant increase in mental illness among the populace. The narrative also depicts the racial rioting and the young adolescent boy's death because of Split Lip and Officer Doyle. Norris Crane, the younger brother, saw his sibling die and was ready to exact revenge on those who had caused his brother's murder. Split Lip passes away, leaving Isabelle by herself; subsequently, she was placed in a care facility. In the epilogue, the narrative also examines how love and devotion endure in modern society, despite its emphasis on corporate culture and consumerism.

KEYWORDS: Psychological trauma, financial crisis, racial riots, revenge.

In America, racism has always been a complicated and widespread problem that is represented in American literature in a variety of ways. An extensive corpus of writing that examines the experiences of many racial and ethnic groups has resulted from writers' struggles with the social, political, and cultural effects of racism throughout the nation's history. African American authors like Frederick Douglass and Harriet Jacobs wrote personal stories that revealed the horrors of slavery in the 19th century. These pieces attempted to mobilise support for the abolitionist movement by highlighting the dehumanising effects of racism. Frederick Douglass in his speech "Our Composite Nation", states,

In regard to creeds and faiths, the condition is no better, and no worse. Differences both as to race and to religion are evidently more likely to increase than to diminish. We stand between the populous shores of two great oceans. Our land is capable of supporting one-fifth of all the globe. Here, labor is abundant and better remunerated than any where else. All moral, social and geographical causes conspire to bring to us the peoples of all other over populated countries. (n.p.)

Native American writers who have explored racism and its effects on Indigenous communities include Sherman Alexie, Leslie Marmon Silko, and Louise Erdrich. African Americans have experienced prejudice and discrimination throughout American history. At

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संस्कृतं नमो विद्वत्सु नमो विद्वत्सु



MADHYA BHARTI
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**ECOLOGICAL CONCERNS AND DESTRUCTION OF THE NATURAL WORLD IN GEORGE
SAUNDERS FOX**

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Eutierriai in Manju Kapur's *A Married Woman*

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Abstract

Living in peace with nature has been an essential part of Indian culture. This reflects in a variety of traditional practices, religious beliefs, rituals, arts and in the daily lives of the Indian people. Many ancient cultures tell us how communities lived in harmony with nature, with a tradition of admiration for the elements that constitute environs, drawing their livelihood from natural resources and at the same time protecting the environment that assists them. Manju Kapur is one of the prominent Indian novelists. In her second novel *A Married Woman*, she portrays the essence of the beauty of the nature with the Indian Environment. She addresses how the protagonist enjoys the sea shore experience in Kanyakumari. The literature has become a mode of expression about environment and it's important in human life and universe.

Key Words: Nature, Sea Shore, Happiness, Travel, Environment

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Introducation

Literature is creative and more imaginary in the sense of poetry, drama, fiction and prose. It deals with the human sentiments and touches the heart of readers universally. Indian English literature basically is the contribution of the work given by the writers from India. Henry William Hudson in his work *An Introduction to the study of Literature* says about Literature as, Literature is the vital record of what men have seen in life, what they have experienced of it, what they have thought and felt about those aspects of it, which have the most immediate and enduring interest for all of us. It is thus fundamentally an expression of life through the medium of language. (10).

A Married Woman is the second novel of Manju Kapur. Astha is the protagonist of this novel. She is an educated woman and an artist. She marries Hemant. Initially, her marriage life is happy.

But later she is disappointed with her marriage life. In this situation Astha meets her friend Pipeelika. In this novel, Kapur explains the incident how the protagonist Astha is united with nature and enjoys the sense of beauty in the sea shore.

Kapur portrays Astha and Pipeelika as political activists. On November twenty sixth Astha calls Pipeelika to accompany her for the Yatra. Pipeelika likes to accompany Astha in this Ekta yatra. She plans to travel from Kanyakumari to Kashmir from tenth of





A Study of Loss and suffering in Yann Martel's *Life of Pi*

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Abstract

Yann Martel, a writer in Canadian Literature, is known for his novel, *Life of Pi*. He was given the Man Booker Prize for the novel. *Life of Pi* was brought out on September 11, 2001. Many concepts, such as perception, emotion, motivation, personality, and behavior, are well depicted by the author. It is the story of a boy, from his childhood. He was called Pi. He was in the ocean for 227 days with wild animals. Pi's family was in Pondicherry, and they owned a zoo. They shifting to Canada due to the political issues there. They travelled in a Japanese cargo with some animals. In the middle of sail, there was a shipwreck, and the only human in the lifeboat was Pi, with a Bengal tiger and some more animals. Grief is divided into many stages in the novel. Anger is a part of grief. Pi's anger is seen from his childhood. He gets angry when his name is misspelled, when he asks to follow one religion, and he gets angry at Richard Parker, the Bengal tiger, while sharing the lifeboat. Bargaining is a part where Pi bargains with God for his life. Pi is filled with depression to feed the tiger and form a territory for the tiger to live in the lifeboat. After the separation of Richard Parker, Pi feels the isolation and denial of the latter. Pi accepts whatever life has to offer and he overcomes all the grief of his survival. Pi enters the grief cycle and reforms himself in such a situation.

Keywords: Grief, anger, bargaining, depression, isolation, and acceptance

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Introduction

In 1963, Yann Martel was born in Spain and his parents, who were Canadian, were part of the diplomatic corps. Through his parents' work, he has experienced and adopted many cultures. This is well seen in his writings. He tried various jobs, but only his writing skills gave him hope. Martel has written many books, including short stories. Martel travels to gain inspiration. While travelling to India in 1999, he was reading Moacyr Scilar's *Mar and Car*, and that inspired him to write the most famous story, *Life of Pi* (2001).

Martel's novel is an adventure story about a boy, Piscine Molitor Patel, also known as Pi. His father is a zoo keeper in Pondicherry. Pi recounts his experience in several unusual situations. The paper is a brief study of grief in Martel's novel, *Life of Pi*. There are five stages of grief, which were created by the Swiss-American psychiatrist, Elisabeth Kubler Ross. She first applied it in her

book on *Death and Dying*. Kubler later realised that the stages were inflexible. She thought that the theory of the stages would be misunderstood.

Kubler-Ross, framed the five stages of grief as: denial, anger, bargaining, depression, and acceptance. Five stages are known by the acronym DABDA. These stages are not only the description of one's own death but also include friends and family. Kubler's model may include any type of personal loss, such as the death of a fetus, the loss of a career or income, major rejection, the end of a relationship or divorce, drug addiction, incarceration, the single set of a disease or impotence diagnosis, and even small losses such as insurance coverage.

The novel *Life of Pi* is viewed through the lens of bereavement. The first stage of grief is denial. Denial is the first of the five stages. In this, the individual finds the most common defence



THE TRAUMA OF DISPLACEMENT: A STUDY OF MEERA SYAL'S *ANITA AND ME*

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Abstract:

Meera Syal is a second-generation immigrant residing in the United Kingdom. In her novels, she highlights the challenges faced by the people after the partition of India and Pakistan. Mass migration took place with the formation of two independent dominions, the 'Republic of India' and the 'Islamic Republic of Pakistan.' Due to the religious conflict many left their homeland and went overseas and settled in far off nations and never chose to return again. In the host land, they face issues of discrimination and unfair treatment due to racial distinctiveness. Through her writings, Syal articulates the personal experience of the refugees and the exploitative tendencies of the Whites. In *Anita and Me* (1996), Syal highlights the problems and issues of intolerance, narrow-minded and chauvinistic behaviour towards the minority group due to their racial and ethnic disparities. This paper is an attempt to examine the psychological challenges faced by the partition survivors in their newly adopted land.

Keywords: Identity crisis, partitioning of minds, psychological damage, racism, trauma and displacement

The partition of India and Pakistan in 1947 ultimately led to one of the world's largest and fastest migrations, which fractured the psyches of millions of immigrants. The migratory flows as a result of this partition were massively greater in the western regions, mainly in the cities on the outskirts. Due to social unrest, there was bloodshed which compelled thousands of individuals to flee their homes. It is the most violent event that happened in the twentieth century. As a result of forced migration, thousands of families had to desert their native land. They had to involuntarily migrate due to the turmoil that was aroused by wars, political conflict, divisions, and religious struggle. It is estimated that around 14.5 million people travelled overseas in search of a secure life and fortune. This research paper examines the challenges faced by these immigrants in their newly adopted land, with a particular emphasis on the psychological damage inflicted on the psyche of the partition survivors.

Meera Syal is a novelist, journalist, actress, filmmaker and social activist. She is Punjabi by origin and has settled in London due to the social unrest that arose in India after the Indo-Pakistan war. As a novelist, she mainly focuses on the dilemmas faced by the South Asian diaspora in Britain. She has published three novels to her credits among which *Anita and Me* (1996) has won the Betty Task Award. It is Syal's semi-autobiographical novel. It mainly focuses on Meena, an Indian immigrant residing in Tollington, and the dilemma encountered by her while being brought up in an English environment which she considers alien. Meena is having trouble identifying herself within British culture and heritage. She is trying to blend in

Identity vs. Role Confusion in Meera Syal's *Anita and Me*

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Abstract:

Meera Syal is a writer, journalist, actor and one of the most celebrated British-Asian writers residing in Britain. Her novel, *Anita and Me* (1996), seeks to depict Meena's journey towards establishing her identity within the context of European culture. This paper consolidates the difficulties Meena faced in her formative years as she is found in Erickson's fifth stage i.e 'Identity vs. Role Confusion'. Meena is confused by the duality of her existence as she has to negotiate between the two distinct worlds that are culturally and racially distinct. Meena's in-between situation drives her to explore her own world beyond the confines of the domestic sphere. Her family members strive hard to imbue the traditional Indian culture in her. Her adolescence years begin after this phase, and psychological transformation begins to take place. This paper attempts to show how Meena comes to have a new understanding of her traditional culture and identity and finally finds a sense of security, comfort and reassurance in it.

Keywords: Bildungsroman, cultural differences, isolation, personal identity, reconciliation

Bildungsroman is a literary genre that focuses on the formative years of the protagonist from youth to adulthood. The plot line centers mainly on the psychological and moral growth of that character. Bildungsroman or 'novel of self-formation' revolves around a youthful, juvenile individual who struggles to fit into the wider framework of his/her society. It has a protagonist who matures socially or psychologically, receives an 'education' in life and comes to a new understanding about self and the world. The character growth begins when he/she is faced with loss or discovery. Generally, there is a clash between what he/she wants and the rules imposed by society. The central character moves from a state of innocence to a state of knowledge; from a state of ingenuousness to a state of understanding; from a state of childishness to a state of making mature responses or decisions. He gives up all the romantic visions of the things surrounding him and comes to have a more genuine view of the world in which he dwells.

Meera Syal's first novel, *Anita and Me* (1996), is based on her own childhood experience growing up in Britain. This novel traces the formative years of the young protagonist, Meena, the daughter of an Indian immigrant residing in Tollington. It is the best bildungsroman novel as it encompasses all the experience undergone by Meena from her

A Study of Grief in Yann Martel's *Life of Pi*

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Yann Martel, a writer in Canadian literature, is known for his novel, *Life of Pi*. He was given the Man Booker Prize for the novel. *The Life of Pi* was brought out on September 11, 2001. Many concepts, such as perceptions, emotions, motivation, personality, and behaviors, are well depicted by the author. It is the story of a boy from his childhood. He was called Pi. He was in the ocean for 227 days with wild animals. Pi's family was in Pondicherry, and they owned a zoo. They shifted to Canada due to the political issues there. They travelled in a Japanese cargo with some animals. In the middle of sailing, there was a shipwreck, and the only human in the lifeboat was Pi, with a Bengal tiger and some more animals. Grief is divided into many stages in the novel. Anger is a part of grief. Pi's anger is seen from his childhood. He gets angry when his name is misspelled, when he asks to follow one religion, and he gets angry at Richard Parker, the Bengal tiger, while sharing the lifeboat. Bargaining is a part where Pi bargains with God for his life. Pi is filled with depression to feed the tiger and form a territory for the tiger to live in the lifeboat. After the separation of Richard Parker, Pi feels the isolation and denial of the latter. Pi accepts whatever life has to offer and he overcomes all the grief of his survival. Pi enters the grief cycle and reforms himself in such a situation.

Keywords: Grief, anger, bargaining, depression, isolation, acceptance

In 1963, Yann Martel was born in Spain and his parents, who were Canadian, were part of the diplomatic corps. Through his parents' work, he has experienced and adopted many cultures. This is well seen in his writings. He tried various jobs, but only his writing skills gave him hope. Martel has written many books, including short stories. Martel travels to gain inspiration. While travelling to India in 1999, he was reading Moacyr Scilar's *Max and Cat*, and that inspired him to write the most famous story, *Life of Pi* (2001).

Martel's *novel* is an adventure story about a boy, Piscine Molitor Patel, also known as Pi. His father is a zoo keeper in Pondicherry. Pi recounts his experience in several unusual situations. The paper is a brief study of grief in Martel's novel, *Life of Pi*. There are five stages of grief, which were created by the Swiss-American psychiatrist, Elisabeth Kubler Ross. She first applied it in her book on *Death and Dying*. Kubler later realised that the stages were inflexible. She thought that the theory of the stages would be misunderstood.

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The novel *Life of Pi* is viewed through the lens of bereavement. The first stage of grief is

Postcolonial Identity in Yann Martel's *Life of Pi*

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Abstract:

Canada is one of the postcolonial countries. Canadian writers explore the characteristics of Canada. They used Canadian writers' historical narratives to reconstruct the colonised history of Canada. In *Life of Pi*, the illustration of a shipwreck testifies postcolonial theories such as otherness, exile, hybridity, and mimicry in a literary postmodern framework exploring human-animal relationships. The novel has philosophical and existentialist insights that lead to postcolonial readings. Even the author, Yann Martel's biography, is valid for this theory because of his travels. *Life of Pi* is a story within a story. It is a story of first person narration. It is the story of an Indian young boy named Piscine. His family owned a zoo in Pondicherry, a French district in India. Pi learns his first lesson about dealing with animals from the zoo. He is exposed to different religions in India. Pi's family was about to give away the zoo animals and move to Canada. The journey started on a Japanese cargo ship. The shipwreck happened in the Pacific Ocean. The story takes place in post-independence India, particularly in Pondicherry, which is the capital of the French Colony in India. Pi's name is an evidence of the coloniser's figure falling in the trap, being a copy of it. The outcome is sometimes a parody of the original. Piscine is named after a French swimming pool, which doesn't fit in the Indian context. Pi arises as a hybridity of religions and cultural background. The use of animals in the text is traced through different phases in colonial literature. It is a belief that animals are lower than humans, which is based on colonialist agents. Yann Martel's *Life of Pi* is a model of postcolonial theory.

Keywords: travel, hybridity, religion, narration, name.

Life of Pi is written by Yann Martel, a Canadian author, born in 1963. He is a winner of the Man Booker Prize. It has been published in more than fifty territories. It has been translated into four languages. Martel's biography is an acceptance of Postcolonial theory, when it comes to his broad travels. He was born in Spain and travelled to Portugal, Alaska, British Columbia, France, and finally Canada, then to Latin America, Turkey, and India.



Empowering the Marginalized: Morag Gunn's Quest for Identity in Margaret Laurence's *The Diviners*

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Abstract

Margaret Laurence a renowned Canadian novelist and short story writer, celebrated for her powerful and evocative portrayals of the human experience, explore themes of identity, oppression, and social injustice, with a particular focus on the experiences of women. In her one of the most acclaimed novels *The Diviners*, Morag Gunn, the protagonist embarks on a profound journey of self-discovery and empowerment, representing the marginalized and oppressed women of her time. Through the narrative of Morag, Laurence explores themes of feminism, identity, and the struggle for self-representation in a patriarchal society. By analyzing Morag's narrative arc, this paper aims to shed light on the complexities of female identity and the enduring struggle for empowerment and fulfilment in a male dominated world. Morag's quest for identity highlights the defiance of societal norms and exploration of subjects such as sexuality and personal agency. Morag Gunn's fight for female identity is revealed in her memoirs in Margaret Laurence's *The Diviners*. Morag also defies convention by writing her work from a woman's point of view. Margaret Laurence's portrayal of the strong yet fragile Morag Gunn illuminates the complexities of feminism.

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Keywords: Marginalized, Empowerment, Feminism, Identity, Social norms.

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Full Paper

Margaret Laurence is celebrated for her profound exploration of the human experience, particularly through the lens of women in Canadian society. Margaret Laurence spent her early years in a Canadian prairie village, and this experience informed the rich details and believable atmosphere of her bestselling novels set in the hamlet of Manawaka. Several of her most famous

novels are included in this set, such as *The Stone Angel* and *The Diviners*. Laurence's keen examination of women's experiences is a defining feature of her work. Her female protagonists are richly textured, typically struggling with conflicting desires, responsibilities, and social norms. The characters of Hagar Shipley in "The Stone Angel" and Morag Gunn in *The Diviners* are excellent instances of her subtle, honest, and



IDEOLOGICAL PERSPECTIVE AND PSYCHOANALYSIS OF STACEY MACAINDRA IN MARGARET LAURENCE'S *THE FIRE DWELLERS*

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Abstract

Margaret Laurence, an influential Canadian writer is known for her Manawaka novels. In most of her novels she deals with the dilemmas of women relating them to their roots and community. Her fictional world deals with various issues related to identity, survival, ethnicity, multiculturalism and awakening of self. Laurence is a spiritual writer who aspires to transform the existing society into a better and worthier place. In the novel, *The Fire-Dwellers*, Stacey MacAindra questions the conventional and traditional ways of establishing identity and tries to create an identity of her own. Whenever she tries to surpass the limit she is haunted by sense of guilt that she is unable to be her real self and finally she finds the survival strategy to balance her dual world. The present paper aims to provide a new discourse in finding the social identity by the applying the ideology of Marxist Feminism through the character Stacey MacAindra and her role in the formation of identity.

Key Words: Self, Identity, Ideology, Marxist Feminism, Survival

Full Paper

Margaret Laurence is renowned for her portrayal of women's struggles in the changing social and cultural landscapes of Canada. *The Fire-Dwellers*, authored by Margaret Laurence, presents a poignant exploration of womanhood during the mid-century, where Laurence's Manawaka series, shapes her current identity, "delving into themes of personal identity and the formidable obstacles women encounter in a swiftly evolving society" (Berry 63). The character Stacey MacAindra, who serves as the central figure in the novel, exemplifies the complexities associated with navigating the roles of wife, mother, and individual within the context of the societal expectations prevalent during the 1960s. Stacey's

Marginalization and Gender Stereotypes in P. Sivakami's *The Grip of Change*

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P. Sivakami's *The Grip of Change* (1989) is the English Translation of *Pazhaiyana Kazhithalum*, the first full-length novel by P. Sivakami, an important Tamil writer and a member of the Indian Administrative Service. Sivakami is also a member of the Dalit Movement. The author gets success in narrating the authentic information in a terrifying way. In this novel, the writer portrays how dalit women are socially, economically and sexually exploited by the so called "upper caste Hindus" and not to overlook the abuse by their own men. The writer exposes the atrocities germinating from discrimination both gender and caste wise.

The present paper aims at analyzing the Double Marginalization of Dalit Women. The form and nature of marginality depends upon the degree of economic, social or cultural impoverishment. Marginality, based upon caste, creed, religion or race is a kind of disability or affliction and its root cause could be injustice or exploitation. The poor and unemployed Dalits are discriminated against and disabled by a society which is caste-ridden and hence is unconcerned about the problems of impairment. The paper also focuses on the marginalization and gender sensitization of Dalit women as reflected in the novel as the communities insult and ill-treat the women of lower castes because of their caste and because they are women in a patriarchal society.

MARGINALIZATION IN P. SIVAKAMI'S *THE GRIP OF CHANGE*

Writings of minorities and the other marginal voices have found a perfect platform in the literary scenario - be it feministic writing, queer theories, displaced writings of Diaspora or Dalit writings. Although Dalit movement started in mid nineteenth century for the uplift of the marginalized communities, the issues of Dalit women are still neglected not only by mainstream feminist literary movement but also by patriarchal Dalit movement. The plight of a Dalit becomes all the more pathetic when a Dalit is a woman. She has to face not only the caste discrimination but the gender inequalities and economic disparities too. A Dalit woman is thrice victimized – by caste-Hindu men, caste-Hindu women and Dalit men, simultaneously. This paper aims at foregrounding the oppression of a Dalit woman with reference to P. Sivakami's novel *The Grip of Change* (2006).

The word 'Dalit' comes from the Sanskrit root 'dal' which means broken, downtrodden, or oppressed. It symbolizes the oppressed, downtrodden and other exploited minorities. Dalits are socially oppressed, culturally neglected and economically exploited. This deplorable status has led them to paucity, exploitation, subjugation and dehumanization, culminating them into cultural silence. The situation becomes all the more poignant when a Dalit is a woman. Thus insurgence of Dalit feminism is the need of the hour and fortunately there are women writers like Bama Faustina, Urmila Pawar, Baby Kamble and P. Sivakami who have become a milestone in the arena of Dalit feminism by projecting Dalit women in their writings.

Palanimuthu Sivakami, a leading Indian novelist-cum-politician is the first Dalit woman to write a full length, semi-autobiographical Tamil novel *Pazhaiyana Kazhithalum* (1989), with which

Postcolonial Identity in Yann Martel's *Life of Pi*

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Abstract:

Canada is one of the postcolonial countries. Canadian writers explore the characteristics of Canada. They used Canadian writers' historical narratives to reconstruct the colonised history of Canada. In *Life of Pi*, the illustration of a shipwreck testifies postcolonial theories such as otherness, exile, hybridity, and mimicry in a literary postmodern framework exploring human-animal relationships. The novel has philosophical and existentialist insights that lead to postcolonial readings. Even the author, Yann Martel's biography, is valid for this theory because of his travels. *Life of Pi* is a story within a story. It is a story of first person narration. It is the story of an Indian young boy named Piscine. His family owned a zoo in Pondicherry, a French district in India. Pi learns his first lesson about dealing with animals from the zoo. He is exposed to different religions in India. Pi's family was about to give away the zoo animals and move to Canada. The journey started on a Japanese cargo ship. The shipwreck happened in the Pacific Ocean. The story takes place in post-independence India, particularly in Pondicherry, which is the capital of the French Colony in India. Pi's name is an evidence of the coloniser's figure falling in the trap, being a copy of it. The outcome is sometimes a parody of the original. Piscine is named after a French swimming pool, which doesn't fit in the Indian context. Pi arises as a hybridity of religions and cultural background. The use of animals in the text is traced through different phases in colonial literature. It is a belief that animals are lower than humans, which is based on colonialist agents. Yann Martel's *Life of Pi* is a model of postcolonial theory.

Keywords: travel, hybridity, religion, narration, name.

Life of Pi is written by Yann Martel, a Canadian author, born in 1963. He is a winner of the Man Booker Prize. It has been published in more than fifty territories. It has been translated into four languages. Martel's biography is an acceptance of Postcolonial theory, when it comes to his broad travels. He was born in Spain and travelled to Portugal, Alaska, British Columbia, France, and finally Canada, then to Latin America, Turkey, and India.

Steiner certified domination in fuzzy middle and splitting graphs

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Abstract

In this article some new results on fuzzy steiner certified domination are established. Bounds on fuzzy steiner certified domination number of fuzzy middle graphs and fuzzy splitting graphs of some standard fuzzy graphs are acquired.

AMS Subject Classification 2010: 05C72, 05C69, 51E10

Key words : fuzzy steiner certified domination, fuzzy steiner certified domination number, fuzzy splitting graphs, fuzzy middle graphs

1. Introduction

In crisp graphs, the study of certified domination has been instigated by M.Dettlaff et.al in 2018 [3]. The concept of steiner domination in crisp graphs was studied from [2],[4],[5] and [7]. Domination in fuzzy graphs has been studied from [1] and the notion of fuzzy graph theory has been studied from [6]. Fuzzy steiner domination number of a fuzzy graph G is the fuzzy cardinality of a minimum steiner certified dominating set of G . For a connected fuzzy graph $G(V, \sigma, \mu)$, a subset of nodes C of $V(G)$ is said to be steiner certified dominating set if it is both steiner set as well as certified dominating set. The fuzzy Steiner interval, $FI(S)$ of a non empty subset of nodes S is defined as the set of all nodes which lie in some steiner tree of S . If $FI(S)=V(G)$ then S is called a fuzzy Steiner set of G . A set of nodes C is said to be certified if each node in the set has either zero or two neighbours in $V(G) - C$. A non-empty subset S of V is called a fuzzy Steiner dominating set if S is a fuzzy dominating set and a fuzzy Steiner set of G . The minimum fuzzy cardinality of a minimal steiner certified dominating set is called fuzzy steiner certified dominating number denoted by $\gamma_{scer}^f(G)$ and the corresponding set of nodes is called γ_{scer}^f -set. The maximum fuzzy cardinality of a minimal steiner certified dominating set is called upper fuzzy steiner certified dominating number denoted by $\Gamma_{scer}^f(G)$.

2. Steiner Certified Domination in fuzzy middle graphs

2.1 Definition

Let $G(V, \sigma, \mu)$ be a fuzzy graph with node set V and arc set E . The fuzzy middle graph of G denoted by $M^f(G)(V', \rho, \lambda)$ is defined as follows. It has node set $V' = V_1 \cup V_2$ and arc set $E' = E_1 \cup E_2$ where $V_1 = V$ and $V_2 = E$ and

$$E_1 = \{e_1 e_2 / e_1, e_2 \text{ are adjacent arcs in } G\}$$

$E_2 = \{ue / u \in V, e \in E \text{ and } e \text{ is incident with } u\}$. Also ρ and λ are defined as

$$\rho(x) = \begin{cases} \sigma(x) & \text{if } x \in V_1 \\ \mu(x) & \text{if } x \in V_2 \end{cases} \quad \lambda(e) = \begin{cases} \mu(x) \wedge \mu(y) & \text{if } e = xy \in E_1 \\ \sigma(u) \wedge \mu(y) & \text{if } e = uy \in E_2 \end{cases}$$

2.2 Theorem

For a fuzzy path graph P_n^f , the steiner certified domination number of the fuzzy middle graph is $\gamma_{scer}^f(M^f(P_n^f)) = p$ where p is the order of $M^f(P_n^f)$.

Steiner certified domination in fuzzy middle and splitting graphs

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பன்முக நோக்கல்
பத்னென் கீழ்க்கனக்கு

முனைவர் க. உமா
முனைவர் பா. ஜெயபிரபாகரன்



மங்கையர் மாண்பு மலர

சகோ. மரிய சாந்தி [✉][✉] தமிழ்த்துறை, தாய் மரியன்னை கல்லூரி, தாத்துக்குடி-628001, தமிழ்நாடு, இந்தியா.

To Make the Women's Dignity Blossom

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ABSTRACT

Sacrifice lamp women, Female pride, excellence, superiority, women's advancement, women's liberation, etc. are featured in this article. Surviving women are responsible for the success of men and their erection. Women are the cradles of civilization! Women are New chapters! Root-like woman. The woman who makes the world better. Knowledge is beauty for women! Women are equal to men. Man and woman must remain in love. Thanthai Periyar used to call women as "The Women Queen". Women need to rise to the occasion about themselves. The rise of woman is life to earth. Thiruvika wishes that "To live world, Live feminine". Beautiful Women's, who makes the world blossom. He also mentioned that sovereignty shines in femininity.

Keywords: Thiru. Vi. Ka, Feminism, Love, Woman Life, Dignity

முன்னுரை

அன்போலும் தியாகத்தினாலும் தெய்வீகம் கடர்ந்தெழு வாழ்ந்து வாழ்க்கைப் பயிளர்ச் செழிக்கச் செய்யவன் பெண். வாழ்வை எவ்வளவு பிரகாசமாக ஒளிர்விக்க முடியுமோ அந்த அளவுக்கு ஒளிரச் செய்வான் பெண். நதி தென்றல். மலர், குத்து விளக்கு. குலவிளக்கு எனப் போற்றப்படுபவள் பெண். தரணியில் தோன்றிய கற்பகத்தரு போன்றவள் பெண் தியாக தீயமாக ஒளிரந்து குடும்ப நலத்தையும் சமூக நலனையும் ஒளிர்விப்பவள் பெண். "மங்கையராய் நிற்பதற்கே நல்ல மனதவம் செப்திட வேண்டும்மா" என்கிறார் கவிமணி மங்கையர் மாண்பு மலர்வதற்கான வழிவகைகளை இக்கட்டுரை எடுத்துவியம்புகிறது.

பெண்ணின் பெருமை

பெண்ணில்லையேல் உலகேது? உயிரேது? அன்பேது? கடவுளேது? எல்லாம் பெண்ணால் எல்லாம் பெண்ணில் என்பது பெண்ணின் மேன்மையை உணர்த்துகிறது. [Kaleeyana Sundaranar, 2006]. பெண்ணை மதிக்கின்ற சமுதாயம் மட்டுமே எல்லாவிதமான வெற்றியையும் அடையும். பெண்ணை மதிக்கின்ற சமுதாயம்தான் சாதனைகள் படைக்கும் என்பது அனைவரும் அறிந்த உண்மை. சமுதாயம் தன்னை மதிக்கின்ற அளவுக்கு அறிவிலும் ஆற்றலிலும் அனைத்துத் திறன்களிலும் மகனார் உயர்ந்து நிற்கின்றார். திரு. வி. க. "பெண்ணின் முதன்மை மறக்கப்பட்ட இடம் நரகக் குழியை ஒத்தது" என்கிறார் [Kaleeyana Sundaranar, 2006].





ஒப்பியல் நோக்கில் ஐரோப்பிய தத்துவங்களும் பாரதியார், பாரதிதாசன் கவிதைகளும்

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European Philosophies and the Poems of Bharathiar and Bharathidasan from a Comparative Point of View

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ABSTRACT

God creates and protects this world. Nature can be called God. Comparing European philosophies such as the philosophy that God can be called nature, the philosophy of nature, which is the cause of everything, the relational theory of kinetic energy in nature, the aesthetic theory that the world is available to us only in the form created, the utilitarian theory, the theory of utilitarianism, and the philosophy that imagination meets the visuals of the realm of phenomena and the conceptions of the realm of knowledge, Bharathiar and Bharathidasan's poems show that experience occupies a more fundamental place than knowledge. In philosophy, everything in nature is in motion. The philosophy that matter has within itself the driving force, the philosophy that belief occupies more place in human behaviour than knowledge, the philosophy of positivism, the philosophy of avoiding suffering and living happily, the philosophy of thinking therefore, the philosophy of being the human essence, the philosophy of labour, and the philosophy of reality are rational. Comparing European philosophies such as the philosophy of knowledge as real, the essential need for peace for man, and liberation with the poems of Bharathiar and Bharathidasan.

Keywords: Bharathiar, Bharathidasan, Poems, Philosophy

முன்னுரை

இறைவன், இயற்கை, இன்பம், அறிவு, அமைதி, அழகு, அனுபவம், கற்பனை, சிந்தனை, நேர்க்காட்சி, நம்பிக்கை, உழைப்பு, விடுதலை, இவற்றை அமையக்கருத்தாகக் கொண்டு பாரதியார் பாரதிதாசன் கவிதைகள் முனைந்துள்ளனர். ஐரோப்பிய தத்துவங்களையும் பாரதியார், பாரதிதாசன் கவிதைகளையும் ஒப்பிட்டு நோக்கி உண்மைகளை எடுத்துரைத்தல் இக்கட்டுரையின் நோக்கமாகும்.

இறைவன் உலகைப் படைத்தார் என்னும் தத்துவம்

தித்ரோ அற்புதமான யிரெஞ்சுப் பொருள் முதல்வாதி ரூஸ்சோவின் நெருங்கிய நண்பர். இறைவன் உலகைப் படைத்தார் "படைக்கப்பட்ட உலகம் அதன்னை கதத்திரமாகத் தனது சொந்த இயக்க விதிகளால் செயல்படுகிறது. கடவுள் அதனுள் தலையிடுவது கிடையாது" என்று தித்ரோ தான் எழுதிய தத்துவச் சிந்தனைகள் என்ற நூலில் குறிப்பிட்டுள்ளார் (Mulla Mohan, 2009).



தமிழர் நில அடிப்படையிலான திணைக் கோட்பாடும் பொருளாதார மாற்றமும்

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Tamils Land-based Thinai Theory and Economic Transformation

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ABSTRACT

Literary theory is a tool for the systematic study of the nature of literature and the ethics of analyzing literature. The Tolukappiam theory of Thinai has been identified by scholars and presented as a worldwide literary theory. It is worth considering here how our forefathers thought and constructed the natural environment, the emotions of the human mind, and time. Although the environment and topography mentioned by Tolukappiyar have changed, the basic feelings of man are always applicable everywhere. One of the theories of Tolukappiam, the Theory of the Thinai, is an excellent approach to study. As far as Tolukappiyam is concerned, the formation of the thinai theory is a tool to bring the subjective life records of group society into the order of grammatical rules. The term "thinai" can be taken to refer to the characteristic interests based on the land. Subject matters can be considered as determining factors in the character of the land. The Thinai distinctions and delimitations show that the Sangam society has become a society that has begun to live forever in one place. There is no doubt that the Sangam age was the period when the ethnic society in which the system of collective life prevailed was followed by feudalism. Thinai's life is based on the respective geographies. The lives of four lands, such as Kurinji, also existed at the same time. They have attained levels of development appropriate to their respective economic bases. The purpose of this article is to study this based on the theory of the Four Thinai lands.

Keywords: Thinai, Tolukappiyam, Four Thinai lands, Economic Transformation

முன்னுரை

தமிழர் வாழ்விடமானது குறிஞ்சி, முல்லை, மருதம், நெய்தல் என நான்கு வகையான நிலப்பகுதிகளை அடிப்படையாகக் கொண்டது. இந்த நால்வகைத் நிலத்தின் அடிப்படையிலேயே மக்களின் வாழ்வியலும் தொழிலும் பொருளாதாரமும் அமைந்தன. தமிழருக்கே உரிய முதன்மையான இலக்கியக் கோட்பாடான திணை இலக்கியக் கோட்பாட்டின் வழி சங்க இலக்கியக் கூறுகள் காணப்பட இருக்கின்றன. சங்ககாலம் உணவு தேடும் வாழ்க்கை முறைகள் மாறி உணவு உற்பத்தியில் மிகுந்த கவனம் செலுத்தப்பட்ட காலம். இதனால் உருவான நிலைத்த குடியிருப்புகளை, வாழ்வியல் நெறிகளைச் சங்கத் திணை சமுதாய வாழ்வு முறைகள் காட்டுகின்றன. நான்கு வகையான திணைச் சமுதாயங்களிலும் நான்கு வேறு வகையான வாழ்க்கை முறைகள் நிலவியுள்ளன. அவைத் தனித்தனிப் பொருளாதார அச்சை அடிப்படையாகக் கொண்டு செயல்பட்டுள்ளன. இந்த நாளிலத்தின் திணை அளித்த வாழ்வியல் கூறுகளை ஆராய்வது இக்கட்டுரையின் நோக்கமாகும்.





தமிழ் இதழ்களில் பெண்கள்

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Women In Tamil Magazines

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ABSTRACT

Even though the printed version of books started to come in the tenth century, still palm leaves were used to compile the literature. Due to the evolution of printing of books, the conventional types of byhearting and remembering slowly started to dilute. However, only limited books were available before the evolution of printed books. Those available books were also meant for educational purposes only. Books related to entertainment and libraries apart from education campuses were not available at that time. At this point in time, the people started to enjoy the benefits of a printing press where a large volume of books was made available to the public. The newly printed books were not only meant for educational purposes but also for entertainment purposes. In the recent Tamil context, there are two major topics that were highly spoken namely Feminism and Dalitism. In the two-thousand-year-long history of Tamil literature, the space for women and their literature was limited. Except for the sangam ilakkiam, the role of women in Tamil literature is scarce. After the Indian independence, many women literates were identified. The flow of literature in the current generation is mostly based on fiction. Due to the domination of the printing press, the volume of books in Tamil was increased in fiction-based books with less importance to grammatical-oriented books. Every script was initiated by men and later it is passed onto women.

Keywords: Feminism, Tamil Magazines, Dalitism, Tamil Women Writers

முன்னுரை

தமிழ்ச் சூழலில் இன்றைய காலகட்டங்களில் பின்புலமாக முன்னெடுக்கப்படுகின்ற இரு பொருளமைகள் பெண்ணியமும் தனித்தியமும் ஆகும். தமிழ் இலக்கியப் பரப்பின் திரண்டாயிரம் ஆண்டுக் கால வரலாற்றில் பெண்களுக்கான இடமும் அவர்களுடைய இலக்கிய வெளிப்பாடும் குறுகியதாகவே இருந்துள்ளது. சங்க இலக்கியம் தவிர்த்து விரல்விட்டு எண்ணக்கூடிய அளவிற்கே பெண்களின் பங்கு தமிழிலக்கியத்தில் பதிவாகியுள்ளது. இந்திய விடுதலையுக்குப் பின்னான காலகட்டத்தில் பெண்கள் பலர் படைப்பாளிகள் என்று அறியப்பட்டுள்ளனர்.

இத்தூறாண்டின் குறிப்பிடத்தக்க இலக்கியக் போக்கு புனைக்கதையைச் சார்ந்தே செலுப்ப்டது என்பதும் அச்சுறுக்கம் உளரதுடை வளர்ச்சி. இதுவழ்களின் பெருக்கம் ஆதியவற்றால் செலுப்ப வடிவம் குறைந்து புனைக்கத வடிவம் தமிழில் மலரத் தொடங்கியது. ஒவ்வொரு வடிவத்தின் முதல் முயற்சியும் ஆண்களால் மேற்கொள்ளப்பட்டுப் பின்னரே பெண்களால் எகக்கொள்ளப்பட்டது. படித்தல் இன்று பரவலாக நியல்பாக இருந்தாலும் இதற்கு ஒரு பின்னணி உண்டு. கல்வியில் எடுத்ததிலின்





திருமூலரின் மெய்யியல் கோட்பாடுகள்

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The Philosophical Principles of Thirumoolar

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ABSTRACT

Thirumanthiram, composed by Thirumoolar, is a philosophical book. This is the first book that attempts to explain the philosophy of the shastras. Philosophy is the acquisition of the right knowledge. The best way to get it is through the senses. Thirumoolar holds that the body, which comprises the senses, is the medium through which knowledge is attained. It tells us how to grow the body and thereby develop life. While Western philosophies are free from myths and create new philosophies, Indian philosophies are adapting to tradition. Thirumoolar's philosophy suggests ways to know and achieve the truth. In this way, Thirumoolar is also prepared to accept or reject the tradition. Moreover, Thirumanthiram explains how to get rid of the shackles of this worldly life and live a great life without death. He explains how to live without desire for anything, to be free from desires, and to live alone. Man is advised to live free from religious restrictions. Thirumoolar emphasizes the philosophy of self-knowledge. Moreover, only one who knows himself fully can understand others, other matters, and the universe. Thirumoolar's philosophic principles tell anyone to examine and know with the strength of his knowledge without forcing anything. Thirumanthiram gives us the way to freedom rather than answering the questions of life.

Keywords: Thirumanthiram, Thirumoolar, Myths, Shastras

முன்னுரை

தமிழரின் தத்துவ மரபுகள் தொல்காப்பியர் காலத்தில் துவங்குகிறது. புறநானூற்றில் அந்நகரம் நடப்புகள் இருக்கின்றன. அநாவது தமிழரின் தத்துவ மரபுகள் மிகவும் பழமைபாணவை சமணம், பௌத்தம், ஆரீவகம் முதலிய கடவுள் மறுப்புத் தத்துவங்கள் வளர்ச்சி அடைபயம் பொழுது தமிழர் தத்துவங்கள் நம்பிக்கை சார்ந்ததாக இருத்தது. இந்த நம்பிக்கை சார்ந்த தத்துவங்களை மெய்யியல் சார்ந்த கொள்கை வடிவமாக முன்னிறுத்தியவர் திருமூலர். ஆவார் முதலில் திருமூலரே தமிழர் மரபுகளை முறைப்படுத்தப்பட்ட மெய்யியல் கோட்பாடாக உருவாக்கி தெரிப்படுத்தியவர். திருமூலரே எசவ சித்தாந்தம் என்ற கொள்கையையும் சொல்வையும் முதலில் பயன்படுத்தியவர். திருமூலர் மெய்யியல் கோட்பாடுகளை அறிவு திசையில் திறு திசைநிறுத்துகிறார். விடுதலை வாழ்வுக்கு அறிவு திசையே சிறுத்தது என்று அறிவுறுத்துகிறார். அவ்வகையில் இந்த ஆய்வுக் கட்டுரையானது கடவுள் சார்ந்த மரபுகளிலிருந்து மாறி மெய்யியலை முன்னவைப்பதாக அமைகிறது.



பக்தி நெறியில் பெண்கள் (இயற்கை நெறிக் காலம் முதல் சமய நெறிக் காலம் வரை)

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Women in Devotion and Religions (From the Natural Moral Period to the Religious Period)

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ABSTRACT

The woman was the foremost in the early maternal society. Goddesses were also seen as primary in worship. The elements of natural energy were praised as feminine. They saw them as forces of prosperity. The goddesses found in the worship of nature later entered the religion. The goddess Kali (Kottraval) later became a part of Shiva. Women have been monks in Buddhism and Jainism since the early days of the religion. The female monks performed excellent religious duties. In Saivism and vaishnavism the religion that originated in this Tamil soil, woman was seen as a Part of the God. Historical references to many female theologians are also found in all religions. Christian nuns have been performing well since the arrival of European missionaries. There is a history of blessed women in Islam as well. Yet in later times that dignity of femininity gradually diminished. Equality for woman was denied in all religions. There was a situation where the woman was considered as a defilement. To this day such a situation is found in all religions.

Keywords: Maternal Society, Goddesses, Female Monks, Theologians, European Missionaries, Dignity of Femininity, Defilement, Religions.

முன்னுரை

“பெண்ணின் பெருத்தக்க யாவுன்” (Kundrakudi Adigal, 2011) என்று திருக்குறள் இல்லறவியலில் - வாழ்க்கைத் துணைநலம் என்ற பகுதியில் பெண்ணையின் சிறப்பு மிக்க மாண்பினைப் போற்றுகிறது. மேலும் இதே பகுதியில்,

“தற்காத்துத் தற்கொண்டாற் பெணித் தகைசான்ற

சொற்காத்துச் சொல்லிலான் பெண்

பெண்ணின் கற்பு வலிமையையும், அவள் ஒரு ஆணைச் சார்ந்து, அவனுடைய பாதுகாப்பில் மட்டுமே வாழ வேண்டியவள் அல்ல என்பதையும் வலியுறுத்தியுள்ளார் (Kundrakudi Adigal, 2011). தற்காத்தல் - “கற்பு உயிரினைச் சார்ந்த ஒழுக்கம். இதனை ஒருவர் தானே காத்துக் கொள்ள வேண்டும். பிறர் காத்தல் அரிது. தற்கொண்டான் பெண்” - காதலின்பம் குறைபடாதவாறு ஒழுக்கி, அதன் வழி தன் கணவனின் கற்புக்குத் துணையாய் அமைதல். “கற்பு நெறியில் தன்னையும் தன் கணவனையும் காத்துக் கொண்டு, தமக்குப் பெருமை சேர்க்கும் புகழையும் காப்பாற்றிக் கொள்வதில் உறுதி குலையாமல்



இந்திய ஐரோப்பிய தத்துவங்களில் சமயக் கோட்பாட்டு தாக்கங்களும் வளர்ச்சி நிலைகளும் (ஆசீவகம் முதல் சைவசித்தாந்தம் வரை)

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Religious Doctrinal Influences and Stages of Development in Indo-European Philosophies (from Asivakam to Saiva Siddhanta)

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ABSTRACT

Created by the sages and siddhas who emerged on Tamil soil, the Asivaka ethic (a place in which an Indian philosophical doctrine is taught through an ascetic life) was a place to impart the multi-disciplinary knowledge required by the people and to provide all kinds of solutions. After the first century A.D., when the divine religion spread and developed in this land, the ideas and symbols of this doctrine were widely distributed among the different religions. After the Vedic system based on the Vedas penetrated this land, many changes were introduced to the doctrines of the ancient Tamils and within the atheistic and theistic religions. There was a great deal of exchange of ideas between European philosophical ideas and Tamil doctrines and religious principles. Science and God-based ideas complemented each other and developed, especially in the thought of the origin of the world. Many utopian arguments and mythologies were introduced into religious thought as well as universal theories due to the influence of orthodoxy. In the end, the incomparable spirituality of the Tamils, which supported the ideas of the philosopher Einstein and combined spirituality with science, developed into Saiva Siddhanta. It served as the focal point between materialism and Idealism.

Keywords: Saiva Siddhanta, European Philosophical Ideas, Asivakam, Idealism

முன்னுரை

"Science without Religion is Lame; Religion without Science is Blind". இது தத்துவ ஞானியும், அறிவியல் அறிஞருமான ஐன்ஸ்டீன் என்பாரின் கூற்று. அதாவது ஆன்மீகம் சேராது அறிவியல் தொண்டி அறிவியலில்லாத ஆன்மீகம் குருகு - என்ற அவரது கூற்றிலிருந்து சமயத்தை அறியாத அறிவியலும், அறிவியலை அறியாத சமயமும் குறைபாடுடையன என்பது புலனாகின்றது. இவ்வாறு சமயமும், அறிவியலும் இணைந்த நிலையே தத்துவமாக வளர்ச்சியுற்று முதலில் கடவுளை அறியாத மற்றும் ஏற்றுக் கொள்ளாத சமயங்களின் மெய்யியல் சிந்தனைக் கோட்பாடுகள், பிற்காலத்தில் கடவுளை அறிந்த, கடவுள் நம்பிக்கையுடைய சமயங்களின் தத்துவச் சிந்தனைகளைக் கலக்கப்பட்டு, மேலும் வளர்ச்சியுற்ற நிலைகளும் காணப்படுகின்றன. தமிழ் மண்ணில் முதலில் காணப்பட்ட ஆசீவக நெறி, அதனையடுத்துத் தோன்றிய சமண, பௌத்த நாததிக சமயங்கள் ஆகியவை தோன்றிய கடவுள் பற்றிய சிந்தனை மனித உள்மனங்களில் எழுச்சி பெற்று பிறகு இந்த சமண, பௌத்த சமயங்களிலிருந்து ஒரு பிரிவு தோன்றி கடவுளை ஏற்றுக் கொண்டன. இதனையடுத்து பிற்காலத்தில் தோன்றிய சைவ, வைணவ சமயங்களிலும், கிறித்தவ மற்றும் இஸ்லாமிய சமயங்களிலும் தத்துவங்களும் இணைந்து





कविकुलगुरु कलिदास संस्कृत विश्वविद्यालय

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शोधसंहिता

New Research Frontiers

THE STATUS OF DALIT WOMEN: TREND AND GROWTH IN INDIA

Dr. Muthu Maha Laxmi

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Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012, Tamil
Nadu, India.

Abstract

When it comes to social mobilisation, Dalit women have a poor level of literacy. They are freed from the shackles of ignorance and superstition by education. In addition to taking care of their households, Dalit women work in agriculture and related fields like livestock raising and food processing, for example. Additionally, they perform construction work, factory work, and other jobs like as poultry and animal husbandry and tailoring. The present article is an try to analyse the trend and growth of state-wise Dalit population in India and commendations for Dalit women problems. The research is based on secondary information. Secondary data is gathered from a variety of sources, including government reports, research reports, journals, libraries, magazines, books, newspapers, and the internet. Percentage analysis, mean, standard deviation, compound growth rate, trend analysis, and coefficient of variation were employed in the study. According to the 2011 census, Punjab, Himachal Pradesh, West Bengal, Uttar Pradesh, and Haryana are the five states with the highest percentage of Dalit population. State-wise participation of male and female Dalit populations in India was determined to have a statistically significant trend coefficient in 2011. On average, the male Dalit population expanded by 3.2% and the female Dalit population by 10.4%. Male and female Dalit population growth rates are 12.11 percent and 10.22 percent, respectively. It is inferred that in Dalit population of India, on an average, male Dalit population during the year 2011 was found to be higher than female Dalit population. The value of co-efficient of variation indicates that the number of male Dalit population are relatively stable during the year 2011 compared to female Dalit population. R² suggests that the differences in the male and female Dalit populations are responsible for most of the variation in the independent variables. The Government has implemented a number of welfare programmes for the socio-economic development of Dalit women with the goal of accelerating the socio-economic development of Dalit women.



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शोधसंहिता

New Research Frontiers

SOCIO-ECONOMIC STUDY OF PUBLIC TOILET CLEANERS IN THOOTHUKUDI DISTRICT OF TAMILNADU STATE

Dr. D.AMUTHA

Associate Professor of Economics, St.Mary's College (Autonomous)
Thoothukudi

Abstract

In a developing country with limited resources, such as India, the majority of cleaning in metropolitan areas is still done by hand. The purpose of this article is to examine public toilet cleaners in the Thoothukudi area of Tamilnadu's awareness of educational changes, as well as their socio-economic profile and issues. This article, which is a part of the Indian Council of Social Science Research – Impactful Policy Research in Social Science (ICSSR – IMPRESS), New Delhi aims to comprehend the above-mentioned fundamentals in order to help the policy makers for better education, rights, power and work opportunities for the impoverished. Secondary data was gathered from published books, e-books, periodicals, newspapers, research articles, research journals, e-journals, and other sources. According to the study, the majority of respondents (70.40%) were employed on a long-term basis. Only 29.60% of the workers were on a temporary basis. The study finds that the link between educational change awareness and socioeconomic characteristics, such as sex, personal income, and kind of job, is significant at the 5% level, with a P-value less than 0.05. The null hypothesis has consequently been discarded for these variables. The null hypothesis has therefore been accepted for these variables. It is clear that the sample respondents prioritised the order of health problems when cleaning the public restroom. Using Garrett's score, it can be deduced that. Respondents placed respiratory disease first, followed by allergy disorders, in terms of priority of health problems. Back discomfort, asthma, and other health issues were placed third and fourth, respectively. Eye illnesses were ranked fourth. Public toilet cleaners suffered some injuries while cleaning toilets was ranked sixth, and communicable disorders was placed fifth. Safety precautions, regular medical camps, eliminating manual scavenging, and increasing public awareness of government programmes can all help to improve the quality of life of public toilet cleaners.

Keywords: public toilet, manual scavengers, occupational hazards, respiratory disease, quality of life.

Economics of Consumption and Consumer Demand for Gold in India

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Original Research Article

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ABSTRACT

Gold has a special place in the economic world as a wealth storage and, for a long time, as a measure of a nation's economic power and the cornerstone of international monetary regimes. The price of gold has risen rapidly in recent years around the world. This paper discloses about the trend and growth of world gold jewellery consumption and consumer demand for gold in India.

The objectives of the present study are:

1. To study the gold jewellery consumption of various countries.
2. To find out consumer demand for gold in India
3. To assess the trend and growth of trend and growth of world gold jewellery consumption and consumer demand for gold in India.

This study follows the empirical research. In order to analyse the trend and growth of world gold jewellery consumption and consumer demand for gold in India, percentage methods, co-efficient of variations, linear trend and compound growth rate have used. The secondary data collected through the internet, books, newspaper, journals records and brochures. The mean consumer demand for gold bars in India for the 17 years was 131.42 tonnes with standard deviation of 67.66 tonnes. The value of the coefficient of variation specifies that the gold bars performance was relatively stable over 17 years compared to the jewelry demand and coins in India. It is seen that the trend coefficients of the two components were found to be statistically significant at 5 percent level and they are positive. It indicates that, on an average, the world gold jewellery consumption and consumer demand for gold in India have increased at the rate of 5.36 percent and 7.34 percent per year respectively. The higher growth rate was observed in consumer demand for gold in India than in world gold jewellery consumption. The compound growth rates are 0.77 percent and 6.53 percent for world gold jewellery consumption and consumer demand for gold in India respectively.

Keywords: Jewellery industry; economic power; foreign exchange; gold consumption; retail investment.

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Modern Trends in Education: Computer and Information Technology in Rural Education System in India

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Abstract

In today's information age, computers play a significant role. Education, in particular, benefits greatly from their efforts, as they have a significant impact on both the quality of instruction and the quality of student learning. Various resources and technology have been used to improve the educational system. The impact of computers on education and the subject area must be considered by both aspiring teachers and instructors currently in the field. Teachers will gain a better understanding of how utilising cutting-edge technology in the classroom can enhance student learning. An effective learning and teaching process can be achieved using a wide range of computer applications, which will be examined in this paper.

There has been a significant shift in the way students are taught, how they learn, and how schools are run. This transformation is made possible by the use of technology. E-learning, virtual classrooms, and other innovative learning paradigms have been introduced thanks to this technology. Access to classrooms and materials from remote networks is now possible thanks to this feature. A major focus of this study is on the integration of computer technology and information into the educational system in rural India.

Nowadays, information technology is critical in virtually every aspect of daily life. Computer and information technologies have unquestionably had a significant impact on our educational system. The teaching and learning process has been improved by the use of various technologies. Our educational system is more engaging and effective because of the use of modern technology. The government can save a significant sum of money on teacher education programmes by including ICT. Furthermore, resource personnel for training can be the greatest in the world, which can lead to significant improvements in quality.

Keywords: Education system; Computer technology; Effective learning; Technological support; Qualitative improvement.

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INTRODUCTION

During the last two decades higher education institutions have invested heavily in Information and Communication Technologies (ICTs). ICT has had a major impact in the improve teaching and learning quality university context, in organization and in teaching and learning methods (Ben Youssef and Dahmani, 2008).

In today's global and competitive environment,

A Study of the Impact of COVID-19 Pandemic and Lock-Down on India's Mental Health

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PDF

Published: Jun 16, 2022

Page: 31-38

Abstract

Unprecedented losses have been inflicted on the global COVID-19 pandemic. Every sector of Indian society is at risk because of its status as an emerging economy. The study aimed to gauge public opinion in India about the coronavirus pandemic and the level of satisfaction with government response efforts during the middle stages of the outbreak. The study's foundation is based on source data. The study was capped at 75 participants. Data was gathered through a well-designed questionnaire and an online survey. July 2021 was the end of the data collection period. Different statistical methods, such as Proportions and averages, and tests of statistical significance were used to analyse the information gleaned from the primary source during the research process. Mentally inactive health is an issue for 5.33 percent of Defendants, while 6.67 percent are unsure of the future, 12.00 percent worry about their family and children's future, and 20.00 percent are concerned about their health. 30.67 percent are exhausted. However, only 5.33 percent of the participants said they were not hungry. 66.33 percent of those polled thought that local, district and state governments were doing an excellent job containing the pandemic. Thirty-

Keywords



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A Study on Consumer Perception and Purchase Intention of Electric Vehicles in India

Importance of Technology in Education for Future Development

D Amutha¹, S. M. Rojapoo²

How to cite this article:

D. Amutha, S. M. Rojapoo/Importance of Technology in Education for Future Development/ J Soc Welfare Manag. 2022;14(3)(Part-I):111-115.

Abstract

The power of democracy rests in the hands of citizens who have access to accurate information. The common man now has access to global information thanks to advancements in information technology (IT). Oral communication, voice in telephony, text in faxes and newspapers, images in video and television broadcasting, and data in computers all fall under the umbrella of "information" in a broader sense. Everything can be digitally transcribed, stored, retrieved, altered, then distributed. There are several new technological trends in the development of electronic communication systems. These include the use of emerging digital techniques, new types of networks, including intelligent networks, high bandwidth communication, and cutting-edge software for network functions and services. Global "information society" is rapidly altering the way people live, learn, work, and interact with one another. The free flow of information and ideas has brought knowledge and its myriad applications to many millions of people, creating new choices and opportunities in some of the most important realms of human endeavours. A strong society is built on the foundation of education. All aspects of the nation are enriched by a well educated populace. Educational institutions cannot function without the use of modern information and communication technologies (ICTs). It has affected a number of aspects of their lives. Educational institutions, administrators and teachers were forced to re-evaluate their roles, teaching methods and long term vision as a result of these changes. Cornea's pandemic has been aided by the use of ICT. This study focuses on the use of information and communication technology (ICT) in education to improve teaching and learning. To empower Indian rural communities to gain access to information, knowledge, and poverty alleviation through the use of ICTs, the paper examines the factors that prevent rural communities from reaping the benefits of these technologies.

Keywords: Global information; Higher education; Educational system; Universal education; Extensive access.

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INTRODUCTION

Information and communication technology (ICT) has a tremendous impact on higher education today, regardless of the country in question. One of these countries is India, and the test aims to determine whether ICT can be used to strengthen the framework for advanced education in this country. This demand for education has skyrocketed in developing countries like India,

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Empowerment of Women through Self-Help Group-Bank Linkage Programme in India

8 Pages • Posted: 15 Dec 2022

D. Amutha
St. Mary's College, Tuticorin

Date Written: December 1, 2022

Abstract

Only with real, committed, and honest efforts from everybody, can women succeed and make satisfactory progress. Additionally, men and women working together can transform India from a developing nation into a fully developed one. The revolution that most significantly alters the position and standard of living of a nation's women is that revolution. Promoting women's emancipation ensures their financial independence. Empowerment of women is an important objective of any wholesome development process of an economy. The empowerment of women in India through a programme that links self-help groups to banks is the main topic of this study. According to the study, SHG accumulation in the online banking sector increased between 2007–2008 and 2019–20. From Rs. 3,785 crores with the accumulation offer accounts of 10.10 lakh SHGs in 2007–2008, the total amount of SHG accumulation increased to Rs. 26,152 crores in 2019–2020 with 102.43 lakh SHGs saving linked with banks. However, from Rs. 7,556 in March 2008 to Rs. 21,791 in March 2020, the bolleplate bulk of accumulation per SHG has increased. From Rs. 3,785 crores with the extensive offer accounts of 10.10 lakh SHGs in 2007–2008, the cumulative bulk of SHGs with the cyber banking area increased to Rs. 26,152 crores with 102.43 lakh SHGs in 2019–20. Rounded rural banks had accumulated a total of Rs. 1,366 crores with extensive accounts for 13.87 lakh SHGs, and Andhra banks had accumulated a total of Rs. 541 crores with extensive offer accounts for 8.12 lakh SHGs. A growth in the number of SHGs that banks have financed over time is indisputably demonstrated. From 545 crores in 2001–2002 to 90729 crores in 2021–2022, the amount of loans sanctioned has also increased substantially over time. The quantity of refinancing that NABARD provides to banks has also increased significantly over time, evidencing a proactive approach to enticing the banks to offer more loans.

Keywords: women empowerment, SHGs, bank linkage, well-being, self-esteem

JEL Classification: A11

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MAXIMAL IDEALS IN SYMMETRIC SEMIGROUPS

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Special Issue

Proceedings of International Virtual Conference on
“Applied Mathematics and Computation– AMC- 2022”

Abstract: In this note, we define CS-group, CS-ring, S-ring isomorphism and S-ring homomorphism also we introduce the notion of Maximal ideals as a generalization of symmetric ideals and symmetric prime ideals of symmetric semigroups and CS-ring. We have come to some conclusions about the above concepts. Also we explain the relation between symmetric maximal and prime ideals.

Keywords and Phrases: Symmetric semigroup, symmetric ideals, symmetric Maximal ideal, symmetric prime ideal, CS-group, CS-ring, S-ring isomorphism, S-ring homomorphism.

2020 Mathematics Subject Classification: 20N12, 20N05, 20N10, 20N12.

1. Introduction

There were discussions on the notions of Symmetric Semirings and Semigroups as well as symmetric semigroup ideals in [8]. Symmetric prime ideals' concept discussed in [10].

2. Preliminaries

Definition 2.1. A symmetric group $S_n, n \geq 3$, with a binary operation of plus circle compo, satisfy the identity and inverse condition and also its satisfy the associative property for some $e +^* p_i \in S_n, i = 1, 2, \dots, n$. Then its called a S-group.



V_4 -Vertex Magic labeling for Bloom Graph

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Abstract

Let V_4 be an abelian group under multiplication. Let $g: E(G) \rightarrow V_4 - \{1\}$. The vertex magic labeling on V_4 is defined as the vertex labeling $g^*: V(G) \rightarrow V_4$ such that $g^*(v) = \prod_u g(uv)$ where the product is taken over all edges uv of G incident at v is a constant. A graph is said to be V_4 -magic if it admits a vertex magic labeling on V_4 . In this paper we investigate the results on Bloom graph and Cylinder graph.

Keyword: $B(m, n), C_{m,n}$

AMS subject classification (2010): 05C78

1. Introduction

Laid foundation by Euler in the 18th Century, Graph Theory grew wider by Sedlack, Kong, Lee and Sun. Sedlack introduced Magic Labeling Bloom and Golomb connected Graph labeling to a wide range of applications such as Coding theory, Communication design, Radar, Circuit design, Astronomy, Network and X-ray crystallography.

Let V_4 be an abelian group under multiplication. Let $g: E(G) \rightarrow V_4 - \{1\}$. The vertex magic labeling on V_4 is defined as the vertex labeling $g^*: V(G) \rightarrow V_4$ such that $g^*(v) = \prod_u g(uv)$ where the product is taken over all edges uv of G incident at v is a constant. A graph is said to be V_4 -magic if it admits a vertex magic labeling on V_4 .

The result is verified for Bloom graph and Cylinder graph.



V_4 -Vertex Magic labeling for Hexagonal Mesh and Honeycomb Graph

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Abstract

Let V_4 be an abelian group under multiplication. Let $g : E(G) \rightarrow V_4 - \{1\}$. The vertex magic labeling on V_4 is defined as the vertex labeling $g^* : V(G) \rightarrow V_4$ such that $g^*(v) = \prod_u g(uv)$ where the product is taken over all edges uv of G incident at v is a constant. A graph is said to be V_4 - magic if it admits a vertex magic labeling on V_4 . In this paper we investigate the results on Torus graph, Hexagonal Mesh and Honeycomb graph.

Keyword: $T_{m,n}$, HX_n , $HC(n)$

AMS subject classification (2010): 05C78

1. Introduction

Laid foundation by Euler in the 18th Century, Graph Theory grew wider by Sedlack, Kong, Lee and Sun. Sedlack introduced Magic Labeling Bloom and Golomb connected Graph labeling to a wide range of applications such as Coding theory, Communication design, Radar, Circuit design, Astronomy, Network and X-ray crystallography.

Hefty V_4 -Vertex Magic labeling for some graphs

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Abstract

Let V_4 be an abelian group under multiplication. Let $g : E(G) \rightarrow V_4 - \{1\}$. The vertex magic labeling on V_4 is defined as the vertex labeling $g^* : V(G) \rightarrow V_4$ such that $g^*(v) = \prod_u g(uv)$, where the product is taken over all edges uv of G incident at v is a constant. If the constant is 1, it becomes a Hefty V_4 -magic labeling. A graph is said to be Hefty V_4 -magic graph if it admits a Hefty V_4 -vertex magic labeling. In this paper we investigate the results on Circulant graph,Benes Network,Butterfly Network and Mesh graph.

Keyword: $C_n(1, 2, \dots, j)$, $BB(n)$, $BF(n)$, $M(r, s)$.

AMS subject classification (2010): 05C78

1 Introduction

Laid Foundation by Euler in the 18th century. Graph theory grew wider by Sedlack,Kong, Lee and Sun. Sedlaxk introduced Maic Labeling, Bloom and Golomb connected graph labeling to wide range of applications such

Hefty V_4 -Vertex Magic labeling for Generalized Wheel graph and Duplication in Generalized Wheel graph

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Abstract

Let V_4 be an abelian group under multiplication. Let $g : E(G) \rightarrow V_4 - \{1\}$. The vertex magic labeling on V_4 is defined as the vertex labeling $g^* : V(G) \rightarrow V_4$ such that $g^*(v) = \prod_u g(uv)$, where the product is taken over all edges uv of G incident at v is a constant. If the constant is 1, it becomes a Hefty V_4 -magic labeling. A graph is said to be Hefty V_4 -magic graph if it admits a Hefty V_4 -vertex magic labeling. In this paper we investigate the results on Generalized wheel graph, Graph obtained by duplication of each of the rim edges in generalized wheel graph by a vertex, Graph obtained by duplication of each of the vertices in a generalized wheel graph by an edge.

Keyword: $W(m, n)$, $Wd(m, n)$.

AMS subject classification (2010): 05C78

V_4 and Hefty V_4 - labeling for Shadow Graphs

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Abstract

In this paper we investigate the results on Shadow graph of Path, Cycle, Comb, Star, Bistar and Bull graph.

Keyword: $D_2(P_n)$, $D_2(P_n \odot K_1)$, $D_2(C_n)$, $D_2(S_n)$, $D_2(B_{n,n})$

AMS subject classification (2010): 05C78

1 Introduction

Laid Foundation by Euler in the 18th century. Graph Theory grew wider by Sedlack, Kong, Lee and Sun. Sedlack introduced Magic labeling, Bloom and Golomb connected graph labeling to a wide range of application such as coding theory, communication design, Radar, circuit design, Astronomy, Network and X-ray crystallography.

Let V_4 be an abelian Group under multiplication. Let $g : E(G) \rightarrow V_4 - \{1\}$. The vertex magic labeling on V_4 is defined as the vertex labeling

V_4 -vertex magic labeling for cycle of graphs

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Abstract

Let V_4 be an abelian Group under multiplication. Let $g : E(G) \rightarrow V_4 - \{1\}$. The vertex magic labeling on V_4 is defined as the vertex labeling $g^* : V(G) \rightarrow V_4$ such that $g^*(v) = \prod_u g(uv)$, where the product taken over all edges uv of G incident at v is a constant.

In this paper we investigate the results on cycles of ladder graphs, cycles of wheel graphs,cycles of closed Helm graphs,cycles of shell graphs,cycle of Petersen graphs.

Keyword: $C(m, L_n), C(n, W_m), C(n, CH_m), C(n, S_m), C(n, P(5, n))$

AMS subject classification (2010): 05C78

1 Introduction

Laid Foundation by Euler in the 18th century. Graph Theory grew wider by Sedlack, Kong, Lee and Sun. Sedlack introduced Magic la-

V_4 and Hefty V_4 -vertex magic Graph Labeling for Ladder Graphs

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Abstract

In this paper we investigate the results on Open Ladder graph, Slanting Ladder graph, Triangular Ladder graph, Open Triangular Ladder graph, Open Diagonal Ladder graph, Mobius Ladder graph and Step Ladder graph.

Keyword: $O(L_n), S(L_n), TL_n, O(TL_n), O(DL_n), (M_n), S(T_n)$

AMS subject classification (2010): 05C78

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**Proximal V_4 -Magic Labeling****S.Kavitha**

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drstellaarputha@gmail.com**Abstract**

For a non-trivial Abelian group V_4 under multiplication a graph G is said to be V_4 -magic graph if there exist a labeling g of the edges of G with non-zero elements of V_4 such that the vertex labeling g^* defined as $g^*(v) = \prod_{uv} g(uv)$ taken over all edges uv incident at v is a constant.

If $g^*(v) = \prod_{uv} g(uv)$ is constant for all vertices except for one or

atmost two vertices $v \in V$, then the labeling is called Proximal V_4 -magic labeling. The graph which admits Proximal V_4 -magic labeling is called as Proximal V_4 -magic graph.

In this paper Proximal V_4 -magic labeling for some special graphs and cycle related graphs are investigated.

Outer independent square free detour number of a graph

K. Christy Rani^{*}
G. Priscilla Pacifica[†]

Abstract

For a connected graph $G = (V, E)$, a set S of vertices is called an outer independent square free detour set if S is a square free detour set of G such that either $V = S^*$ or $V - S^*$ is an independent set. The minimum cardinality of an outer independent square free detour set of G is called an outer independent square free detour number of G and is denoted by $dn_{\square f}^{oi}(G)$. We determine the outer independent square free detour number of some graphs. We characterize the graph which realizes the result that for any pair of integers α and β with $2 \leq \alpha \leq \beta$, there exists a connected graph G of order $\beta + 3$ with square free detour number α and outer independent square free detour number β .

Keywords: square free detour set; outer independent square free detour set; outer independent square free detour number.

2010 subject classification: 05C12, 05C38[‡]

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Steiner certified domination in fuzzy middle and splitting graphs

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Abstract

In this article some new results on fuzzy steiner certified domination are established. Bounds on fuzzy steiner certified domination number of fuzzy middle graphs and fuzzy splitting graphs of some standard fuzzy graphs are acquired.

AMS Subject Classification 2010: 05C72, 05C69, 51E10**Key words :** fuzzy steiner certified domination, fuzzy steiner certified domination number, fuzzy splitting graphs, fuzzy middle graphs

1. Introduction

In crisp graphs, the study of certified domination has been instigated by M.Dettlaff et al in 2018 [3]. The concept of steiner domination in crisp graphs was studied from [2],[4],[5] and [7]. Domination in fuzzy graphs has been studied from [1] and the notion of fuzzy graph theory has been studied from [6]. Fuzzy steiner domination number of a fuzzy graph G is the fuzzy cardinality of a minimum steiner certified dominating set of G . For a connected fuzzy graph $G(V, \sigma, \mu)$, a subset of nodes C of $V(G)$ is said to be steiner certified dominating set if it is both steiner set as well as certified dominating set. The fuzzy Steiner interval, $FI(S)$ of a non empty subset of nodes S is defined as the set of all nodes which lie in some steiner tree of S . If $FI(S)=V(G)$ then S is called a fuzzy Steiner set of G . A set of nodes C is said to be certified if each node in the set has either zero or two neighbours in $V(G) - C$. A non-empty subset S of V is called a fuzzy Steiner dominating set if S is a fuzzy dominating set and a fuzzy Steiner set of G . The minimum fuzzy cardinality of a minimal steiner certified dominating set is called fuzzy steiner certified dominating number denoted by $\gamma_{scer}^f(G)$ and the corresponding set of nodes is called γ_{scer}^f -set. The maximum fuzzy cardinality of a minimal steiner certified dominating set is called upper fuzzy steiner certified dominating number denoted by $\Gamma_{scer}^f(G)$.

2. Steiner Certified Domination in fuzzy middle graphs**2.1 Definition**

Let $G(V, \sigma, \mu)$ be a fuzzy graph with node set V and arc set E . The fuzzy middle graph of G denoted by $M^f(G)(V', \rho, \lambda)$ is defined as follows. It has node set $V' = V_1 \cup V_2$ and arc set $E' = E_1 \cup E_2$ where $V_1 = V$ and $V_2 = E$ and

$$E_1 = \{e_1 e_2 / e_1, e_2 \text{ are adjacent arcs in } G\}$$

$E_2 = \{ue / u \in V, e \in E \text{ and } e \text{ is incident with } u\}$. Also ρ and λ are defined as

$$\rho(z) = \begin{cases} \sigma(z) & \text{if } z \in V_1 \\ \mu(z) & \text{if } z \in V_2 \end{cases} \quad \lambda(e) = \begin{cases} \mu(x) \wedge \mu(y) & \text{if } e = xy \in E_1 \\ \sigma(u) \wedge \mu(y) & \text{if } e = uy \in E_2 \end{cases}$$

2.2 Theorem

For a fuzzy path graph P_n^f , the steiner certified domination number of the fuzzy middle graph is $\gamma_{scer}^f(M^f(P_n^f)) = p$ where p is the order of $M^f(P_n^f)$.

Steiner certified domination in fuzzy middle and splitting graphs

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AMS Subject Classification 2010: 05C72, 05C69, 51E10

Key words : fuzzy steiner certified domination, fuzzy steiner certified domination number, fuzzy splitting graphs, fuzzy middle graphs

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2.2 Theorem

For a fuzzy path graph P_n^f , the steiner certified domination number of the fuzzy middle graph is $\gamma_{scer}^f(M^f(P_n^f)) = p$ where p is the order of $M^f(P_n^f)$.

FUZZY STEINER μ DIMENSION AND EMBEDDING THEOREM

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ABSTRACT

For a connected fuzzy graph G , the Steiner μ -distance of any two nodes of a non-empty set $S \subseteq V(G)$ is defined as the minimum of sum of reciprocals of arc weights of minimum connected fuzzy sub graphs containing S . These fuzzy sub graphs are called fuzzy Steiner trees for S . In this article fuzzy Steiner μ Dimension is introduced and its properties are analysed.

AMS Subject Classification 2010 : 05C72, 05C69, 51E10

Key words : Steiner μ dimension, Steiner μ basis, Steiner μ resolving set, Steiner μ representation

1. INTRODUCTION

Fuzzy graph theory was developed by Rosenfeld in 1975 and has numerous real life applications. The fuzzy analog of several graph theoretic concepts and strong arcs in fuzzy graphs was elucidated by Rosenfeld [2]. Also he defined some metric aspects using the μ -distance in fuzzy graphs [7]. Distance in graphs was analysed by Harary and Buckley [3]. In this article, the Steiner μ basis is defined for a connected fuzzy graph and its fuzzy cardinality is termed as the steiner μ dimension.

2. Preliminaries

The following are the fundamental definitions which are necessary for this article. The fuzzy Steiner tree of a non empty subset of nodes S of a connected fuzzy graph $G(V, \sigma, \mu)$ is defined as the minimal connected fuzzy subgraphs whose node set contains S . The fuzzy Steiner interval, $FI(S)$ of a non empty subset of nodes S is defined by $FI(S) = \{u \in V(G) / u \text{ lies on a fuzzy Steiner tree for } S \text{ in } G\}$. The fuzzy Steiner μ -distance between any two nodes of a non-empty set $S \subseteq V(G)$ is defined as the minimum of sum of reciprocals of arc weights of minimum fuzzy Steiner tree of S . The fuzzy Steiner μ -distance of S is denoted by $d_{\mu G}(S)$ (or) $d_{\mu S}(u, v)$ where u and v are nodes in S . The fuzzy Steiner μ_k -eccentricity $e_{\mu_k G}(u)$ of a node u in $V(G)$ is given by $e_{\mu_k G}(u) = \max \{d_{\mu S}(u, v) / S \subseteq V(G), |S| = k \text{ \& } u, v \in S\}$.

The fuzzy Steiner μ_k radius of any node u in G is given by $r_{\mu_k G}(u) = \min \{e_{\mu_k G}(u) / u \in V(G)\}$. The fuzzy Steiner μ_k diameter of a node u in $V(G)$ is given by $\text{diam}_{\mu_k G}(u) = \max \{e_{\mu_k G}(u) / u \in V(G)\}$. A node u is a fuzzy Steiner μ_k diametral node (or) peripheral node if $e_{\mu_k G}(u) = \text{diam}_{\mu_k G}(G)$. The fuzzy Steiner μ_k centre $C_{\mu_k}(G)$ of a connected fuzzy graph G is the sub graph induced by the nodes u of $V(G)$ with $e_{\mu_k G}(u) = r_{\mu_k G}(G)$. The node u is called fuzzy Steiner μ_k central node (or)

FUZZY STEINER μ DIMENSION AND EMBEDDING THEOREM

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C₄ Free Detour Distance

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Abstract

For every connected graph G , the square free detour distance $SFD(u, v)$ is the length of a longest $u-v$ square free path in G , where u, v are the vertices of G . A $u-v$ square free path of length $SFD(u, v)$ is called the $u-v$ square free detour. It is found that the square free detour distance differs from the distance, monophonic distance and detour distance. The square free detour distance is found for some standard graphs. Their bounds are determined and their sharpness is checked. Certain general properties satisfied by them are studied.

1. Introduction

For basic graph theoretic terminologies the research refers to [2, 7]. For terminology related to distance and detour distance in graphs Chartrand et.al. [2, 5, 7] are referred to. For any two vertices u and v in a connected graph G , the distance $d(u, v)$ is the length of a shortest $u-v$ path in G . A $u-v$ path of length $d(u, v)$ is called a $u-v$ geodesic in G .

For any two vertices u and v in a connected graph G , a $u-v$ path P is a $u-v$ monophonic path if P contains no chords. The monophonic distance $d_m(u, v)$ from u to v is defined as the length of a longest $u-v$ monophonic path in G . A $u-v$ monophonic path of length $d_m(u, v)$ is called a $u-v$ monophonic.

For any two vertices u and v in a connected graph G , the detour distance $D(u, v)$ is the length of a longest $u-v$ path in G . A $u-v$ path of length $D(u, v)$ is called a $u-v$ detour in G . The following theorem is used in the article

Theorem:1.1[3] An edge e of a graph G is a bridge iff e lies on no cycle of G .

2. C₄ Free Detour Distance

Definition:2.1

The Edge-To-Vertex Triangle Free Detour Distance in Graphs

S. Lourdu Elqueen¹
G. Priscilla Pacifica²

Abstract

For every connected graph G , the triangle free detour distance $D_{df}(u, v)$ is the length of a longest u - v triangle free path in G , where u, v are the vertices of G . A u - v triangle free path of length $D_{df}(u, v)$ is called the u - v triangle free detour. In this article, the edge-to-vertex triangle free detour distance is introduced. It is found that the edge-to-vertex triangle free detour distance differs from the edge-to-vertex distance and edge-to-vertex detour distance. The edge-to-vertex triangle free detour distance is found for some standard graphs. Their bounds are determined and their sharpness is checked. Certain general properties satisfied by them are studied.

Keywords: connected graph, edge-to-vertex distance and edge-to-vertex detour distance

2010 AMS subject classification: 05C12, 05C69³

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On Intuitionistic I – Open Sets In Intuitionistic Topological Spaces

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Abstract

The purpose of this paper is to provide the notion of Intuitionistic I -open sets in Intuitionistic topological spaces and study the relation with some existing Intuitionistic open sets. Additionally, we expounded some properties of Intuitionistic I -open sets in Intuitionistic topological spaces.

MSC 2010 : 54A05

Keywords Intuitionistic I -open sets, Intuitionistic I -closed sets, Intuitionistic I -interior, Intuitionistic I -closure, Intuitionistic I -neighborhood

1. Introduction

The idea of intuitionistic fuzzy sets was introduced by Atanasev[1]. Notion of membership and non membership were discovered by Coker [3] in intuitionistic fuzzy topological spaces, subsequently he modified the crisp sets in entire forms. Later, Coker [5] introduced the intuitionistic topological spaces using intuitionistic sets. This paper is an attempt to define the conception of intuitionistic I -open sets in intuitionistic topological spaces and some characterizations of intuitionistic I -open sets are discussed. Besides, we relate intuitionistic I -open sets with other existing intuitionistic open sets in intuitionistic topological spaces.

2. Preliminaries

Definition 2.1 [2]. Let \mathcal{K} be a non-empty set. An intuitionistic set(IS for short) \mathcal{H} is an object having the form $\mathcal{H} = \langle \mathcal{K}, \mathcal{H}_1, \mathcal{H}_2 \rangle$ where $\mathcal{H}_1, \mathcal{H}_2$ are subsets of \mathcal{K} satisfying $\mathcal{H}_1 \cap \mathcal{H}_2 = \emptyset$. The set \mathcal{H}_1 is called the set of members of \mathcal{H} , while \mathcal{H}_2 is called set of non members of \mathcal{H} .

Definition 2.2 [2]: Let \mathcal{K} be a non-empty set and \mathcal{H} and \mathcal{G} are intuitionistic set in the form $\mathcal{H} = \langle \mathcal{K}, \mathcal{H}_1, \mathcal{H}_2 \rangle$, $\mathcal{G} = \langle \mathcal{K}, \mathcal{G}_1, \mathcal{G}_2 \rangle$ respectively. Then

1. $\mathcal{H} \subseteq \mathcal{G}$ iff $\mathcal{H}_1 \subseteq \mathcal{G}_1$ and $\mathcal{H}_2 \supseteq \mathcal{G}_2$
2. $\mathcal{H} = \mathcal{G}$ iff $\mathcal{H} \subseteq \mathcal{G}$ and $\mathcal{G} \subseteq \mathcal{H}$
3. $\mathcal{H}^c = \langle \mathcal{K}, \mathcal{H}_2, \mathcal{H}_1 \rangle$
4. $\bar{\mathcal{H}} = \langle \mathcal{K}, \emptyset, \mathcal{K} \rangle$
5. $\mathcal{H} \cup \mathcal{G} = \langle \mathcal{K}, \mathcal{H}_1 \cup \mathcal{G}_1, \mathcal{H}_2 \cap \mathcal{G}_2 \rangle$
6. $\mathcal{H} \cap \mathcal{G} = \langle \mathcal{K}, \mathcal{H}_1 \cap \mathcal{G}_1, \mathcal{H}_2 \cup \mathcal{G}_2 \rangle$

Furthermore, let $\{A_\alpha \mid \alpha \in I\}$ be an arbitrary family of intuitionistic sets in \mathcal{K} , where $A_\alpha = \langle \mathcal{K}, \mathcal{H}_\alpha^{(1)}, \mathcal{H}_\alpha^{(2)} \rangle$. Then

- (i) $\cap A_\alpha = \langle \mathcal{K}, \cap \mathcal{H}_\alpha^{(1)}, \cup \mathcal{H}_\alpha^{(2)} \rangle \supseteq \mathcal{K}$

JI-CONTINUOUS FUNCTION IN INTUITIONISTIC TOPOLOGICAL SPACES

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Abstract

The intention of this paper is to initiate the concept of Ji -continuous function in Intuitionistic Topological space and derive their characterizations in terms of Ji -closed set, Ji -interior and Ji -closure. Further, we relate Ji -continuous maps with other existing continuous maps.

Keywords Ji -continuous, Ji -closed, Ji -interior, Ji -closure, Ji -irresolute

1. Introduction

Continuous function is one of the main concepts of Topology. The notion of intuitionistic sets and intuitionistic points was introduced by Coker[1]. Later he developed and introduced the Intuitionistic topological spaces[2] and explained some fundamental properties. Also, he defined intuitionistic continuous functions, intuitionistic connectedness and intuitionistic compactness. Suganya[5] et al introduced and derived some properties of Ji -open sets in Intuitionistic topological spaces. In this paper we initiate a new class of functions on Intuitionistic topological space called Ji -continuous functions and explicated their characterizations in terms of Ji -closed sets, Ji -closure and Ji -interior. Besides, we have also define Ji -irresolute and expounded some properties in intuitionistic topological spaces.

2. Preliminaries

Definition 2.1. [1] Let X be a non-empty set. An intuitionistic set (IS for short) \mathcal{H} is an object having the form $\mathcal{H} = \langle X, \mathcal{H}_1, \mathcal{H}_2 \rangle$ where $\mathcal{H}_1, \mathcal{H}_2$ are subsets of X satisfying $\mathcal{H}_1 \cap \mathcal{H}_2 = \emptyset$. The set \mathcal{H}_1 is called the set of members of \mathcal{H} , while \mathcal{H}_2 is called set of non members of \mathcal{H} .

Definition 2.2. [2] An intuitionistic topology is (for short IT) on a non-empty set X is a family τ of intuitionistic sets in X satisfying following axioms.

- 1) $\emptyset, X \in \tau$
- 2) $\mathcal{G}_1 \cap \mathcal{G}_2 \in \tau$, for any $\mathcal{G}_1, \mathcal{G}_2 \in \tau$
- 3) $\cup \mathcal{G}_\alpha \in \tau$ for any arbitrary family $\{\mathcal{G}_\alpha : \mathcal{G}_\alpha / \alpha \in I\}$ where (X, τ) is called an intuitionistic

topological space and any intuitionistic set is called an intuitionistic open set (for short JOS) in X . The complement \mathcal{H}^c of an JOS of \mathcal{H} is called an intuitionistic closed set (for

short JCS) in X .

Definition 2.3. [1] Let \mathcal{K}, \mathcal{L} be two nonempty sets and $f: (\mathcal{K}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ be a function. If $\mathcal{B} = \langle X, \mathcal{B}_1, \mathcal{B}_2 \rangle$ is an intuitionistic set in \mathcal{L} , then the preimage of \mathcal{B}

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SOME NEW OPEN AND CLOSED MAPS IN INTUITIONISTIC TOPOLOGICAL SPACES

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ABSTRACT

The aim of this paper is to introduce the notion of \mathcal{J} i-open map and \mathcal{J} i-closed map in Intuitionistic Topological Spaces. Further, some of their basic properties and condition for a function to be \mathcal{J} i-open(closed) are investigated. Besides, we also define intuitionistic strongly \mathcal{J} -continuous and intuitionistic perfectly \mathcal{J} -continuous in intuitionistic topological space and their properties are discussed..

Keywords: \mathcal{J} i-continuous, \mathcal{J} i-open, \mathcal{J} i-closed, \mathcal{J} s.ic., \mathcal{J} p.ic.

INTRODUCTION

The notion of intuitionistic sets and intuitionistic points was introduced by Coker[1]. Later he developed and introduced the Intuitionistic topological spaces[2] and explained some fundamental properties. Also, he defined intuitionistic continuous functions, intuitionistic connectedness and intuitionistic compactness. Suganya[5] et al introduced and derived some properties of \mathcal{J} i-open sets in Intuitionistic topological spaces. In this paper we explained a new class of functions on Intuitionistic topological space called \mathcal{J} i-open(closed) functions and analyze their characterizations in terms of \mathcal{J} i-closed sets, \mathcal{J} i-closure and \mathcal{J} i-interior. Additionally, we also define intuitionistic strongly \mathcal{J} -continuous and intuitionistic perfectly \mathcal{J} -continuous in intuitionistic topological space and their properties are discussed.

Definition 2.1.[2] Let (\mathcal{X}, τ) and (\mathcal{L}, τ_1) be two intuitionistic topological spaces. A mapping $f: (\mathcal{X}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} -continuous function on \mathcal{X} if the inverse image of every \mathcal{J} -open set in \mathcal{L} is \mathcal{J} -open in \mathcal{X} .

Definition 2.2.[7] A function $f: (\mathcal{X}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} -open map if the image of every \mathcal{J} -open set in \mathcal{X} is \mathcal{J} -open in \mathcal{L} .

Definition 2.3.[4] A function $f: (\mathcal{X}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} -closed map if the image of every \mathcal{J} -closed set in \mathcal{X} is \mathcal{J} -closed in \mathcal{L} .

Definition 2.4.[6] A mapping $f: (\mathcal{X}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} i-continuous function if the inverse image of every \mathcal{J} open set in (\mathcal{L}, τ_1) is \mathcal{J} i-open in (\mathcal{X}, τ) .

Definition 2.5.[3] A mapping $f: (\mathcal{X}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} strongly continuous function if the inverse image of every \mathcal{J} open set in (\mathcal{L}, τ_1) is both \mathcal{J} -open and \mathcal{J} -closed in (\mathcal{X}, τ) .

Definition 2.6.[3] A mapping $f: (\mathcal{X}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is \mathcal{J} perfectly continuous function if the inverse image of every \mathcal{J} open set in (\mathcal{L}, τ_1) is both \mathcal{J} -closed in (\mathcal{X}, τ) .

Definition 2.7.[6] A function $f: (\mathcal{X}, \tau) \rightarrow (\mathcal{L}, \tau_1)$ is said to be \mathcal{J} i-irresolute if $f^{-1}(O)$ is a \mathcal{J} i-open in (\mathcal{X}, τ) for every \mathcal{J} i-open set O in (\mathcal{L}, τ_1) .

Definition 2.8.[5] Let (\mathcal{X}, τ) be an Intuitionistic topological space and let $\mathcal{H} \subseteq \mathcal{X}$. The intuitionistic



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शोधसंहिता

New Research Frontiers

A New Notion of Closed Sets in Intuitionistic Topological Space

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ABSTRACT

In this paper is to introduce a new concept of $I\alpha_g^\wedge$ -closed set in intuitionistic topological spaces and investigate some of their basic properties and give characterizations for these spaces. We also study the relationship between $I\alpha_g^\wedge$ -closed sets and the other intuitionistic closed sets are also discussed.

Keywords: $I\alpha_g^\wedge$ -closed, $I\alpha_g^\wedge$ -open, $I\alpha_g^\wedge$ -closure and $I\alpha_g^\wedge$ -interior.

1 INTRODUCTION

The concept of intuitionistic sets in topological spaces was first introduced by Coker[2] in 1996. He also introduced the concept of intuitionistic points and investigated some fundamental properties of closed sets in intuitionistic topological spaces. In 2009 J.Younis Yaseen and G.Asmat Raouf [5] has given some results in intuitionistic generalized closed sets in intuitionistic topological spaces. K.Meena and V.P.Anuja,[7] was introduced the concept of α^\wedge generalized closed sets in topological spaces. The purpose of this paper is to develop α^\wedge generalized closed sets in intuitionistic topological spaces and discuss some properties related to $I\alpha_g^\wedge$ -closed set in intuitionistic topological spaces.

2 PRELIMINARIES

Definition 2.1 [2]. Let \mathcal{H} be a non-empty set. An intuitionistic set (IS for short) \mathcal{A} is an object having the form $\mathcal{A} = \langle \mathcal{H}, \mathcal{A}_1, \mathcal{A}_2 \rangle$ Where $\mathcal{A}_1, \mathcal{A}_2$ are subsets of \mathcal{H} satisfying $\mathcal{A}_1 \cap \mathcal{A}_2 = \emptyset$. The set \mathcal{A}_1 is called the set of members of \mathcal{A} , while \mathcal{A}_2 is called set of non members of \mathcal{A} .

Definition 2.2 [2]: Let \mathcal{H} be a non-empty set and \mathcal{A} and \mathcal{B} are intuitionistic set in the form $\mathcal{A} = \langle \mathcal{H}, \mathcal{A}_1, \mathcal{A}_2 \rangle$, $\mathcal{B} = \langle \mathcal{H}, \mathcal{B}_1, \mathcal{B}_2 \rangle$ respectively. Then

- $\mathcal{A} \subseteq \mathcal{B}$ iff $\mathcal{A}_1 \subseteq \mathcal{B}_1$ and $\mathcal{A}_2 \supseteq \mathcal{B}_2$
- $\mathcal{A} = \mathcal{B}$ iff $\mathcal{A} \subseteq \mathcal{B}$ and $\mathcal{B} \subseteq \mathcal{A}$
- $\mathcal{A}^c = \langle \mathcal{H}, \mathcal{A}_2, \mathcal{A}_1 \rangle$
- $\mathcal{A} - \mathcal{B} = \mathcal{A} \cap \mathcal{B}^c$
- $\emptyset = \langle \mathcal{H}, \emptyset, \mathcal{H} \rangle, \mathcal{H} = \langle \mathcal{H}, \mathcal{H}, \emptyset \rangle$
- $\mathcal{A} \cup \mathcal{B} = \langle \mathcal{H}, \mathcal{A}_1 \cup \mathcal{B}_1, \mathcal{A}_2 \cap \mathcal{B}_2 \rangle$

$I\alpha_g^\Delta$ -CLOSED MAP AND $I\alpha_g^\Delta$ -HOMEOMORPHISM IN INTUITIONISTIC TOPOLOGICAL SPACES

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ABSTRACT

The concept of intuitionistic sets and intuitionistic points in topological spaces was first introduced by Coker. The purpose of this paper is to we introduce a new class of mapping of $I\alpha_g^\Delta$ -closed(open) map and $I\alpha_g^\Delta$ -homeomorphism in intuitionistic topological spaces and analyze its relations with other existing intuitionistic functions

Keywords: $I\alpha_g^\Delta$ -closed map, $I\alpha_g^\Delta$ -open map and $I\alpha_g^\Delta$ -homeomorphism.

INTRODUCTION

Atanassov [3] introduced the notion of intuitionistic fuzzy sets. Coker [1] introduced the concept of intuitionistic sets and intuitionistic points in 1996. Also in 2000, Coker [1] developed the concept of intuitionistic topological spaces intuitionistic sets and investigated some fundamental properties of continuous functions. [4] J.G.Lee, P.K.Lim, J.H.Kim, K.Hur introduced intuitionistic continuous, closed and open mappings in 2017. The purpose of this paper is to develop $I\alpha_g^\Delta$ -closed(open) map in intuitionistic topological spaces and also study its relations with some of existing intuitionistic relations.

PRELIMINARIES

Definition 2.1 [1]. Let X be a non-empty set. An intuitionistic set (IS for short) A is an object having the form $A = \langle X, A_1, A_2 \rangle$ Where A_1, A_2 are subsets of X satisfying $A_1 \cap A_2 = \emptyset$. The set A_1 is called the set of members of A , while A_2 is called set of non members of A .

Definition 2.2 [1]: Let X be a non-empty set and A and B are intuitionistic set in the form $A = \langle X, A_1, A_2 \rangle$, $B = \langle X, B_1, B_2 \rangle$ respectively. Then

- a) $A \subseteq B$ iff $A_1 \subseteq B_1$ and $A_2 \supseteq B_2$
- b) $A = B$ iff $A \subseteq B$ and $B \subseteq A$
- c) $A^c = \langle X, A_2, A_1 \rangle$
- d) $A - B = A \cap B^c$
- e) $\emptyset = \langle X, \emptyset, X \rangle$, $X = \langle X, X, \emptyset \rangle$
- f) $A \cup B = \langle X, A_1 \cup B_1, A_2 \cap B_2 \rangle$
- g) $A \cap B = \langle X, A_1 \cap B_1, A_2 \cup B_2 \rangle$.

Definition 2.3 [4]: A function $f : (X, \tau) \rightarrow (Y, \sigma)$ is **I -open map** if the image of every I -open set in X is I -open in Y .

Definition 2.4 [4]: A function $f : (X, \tau) \rightarrow (Y, \sigma)$ is **I -closed map** if the image of every I -closed set in X is I -closed in Y .

ON $I\alpha_G^\Delta$ -CONTINUOUS FUNCTION IN INTUITIONISTIC TOPOLOGICAL SPACES

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ABSTRACT

The concept of intuitionistic sets and intuitionistic points in topological spaces was first introduced by Coker. He also introduced the concept of intuitionistic topological spaces and investigated basic fundamental properties of continuous function. The purpose of this paper is to develop $I\alpha_G^\Delta$ -continuous function in intuitionistic topological spaces and analyze its relations with other existing intuitionistic continuous functions.

Keywords: $I\alpha_G^\Delta$ -closed sets, $I\alpha_G^\Delta$ -continuous functions and $I\alpha_G^\Delta$ -irresolute map.

1 INTRODUCTION

Zadeh [5] introduced the concept of fuzzy sets. Coker [1] introduced the concept of intuitionistic sets and intuitionistic points in 1996. Also in 2000, Coker[7] developed the concept of intuitionistic topological spaces intuitionistic sets and investigated some fundamental properties of continuous functions. In 2009 J .Younis Yaseen and G.Asmat Raouf [3] has given some results in intuitionistic generalized closed sets in intuitionistic topological spaces. K.Meena and V.P.Anuja,[2] was introduced the concept of α -generalized closed sets in topological spaces. The purpose of this paper is to develop $I\alpha_G^\Delta$ -continuous function in intuitionistic topological spaces and also study its relations with some of existing intuitionistic continuous functions.

2 PRELIMINARIES

Definition 2.1 [1]. Let \mathcal{H} be a non-empty set. An intuitionistic set (IS for short) \mathcal{A} is an object having the form $\mathcal{A} = \langle \mathcal{H}, \mathcal{A}_1, \mathcal{A}_2 \rangle$ Where $\mathcal{A}_1, \mathcal{A}_2$ are subsets of \mathcal{H} satisfying $\mathcal{A}_1 \cap \mathcal{A}_2 = \emptyset$. The set \mathcal{A}_1 is called the set of members of \mathcal{A} , while \mathcal{A}_2 is called set of non members of \mathcal{A} .

Definition 2.2 [1]: Let X be a non-empty set and \mathcal{A} and \mathcal{B} are intuitionistic set in the form $\mathcal{A} = \langle \mathcal{H}, \mathcal{A}_1, \mathcal{A}_2 \rangle$, $\mathcal{B} = \langle \mathcal{H}, \mathcal{B}_1, \mathcal{B}_2 \rangle$ respectively. Then

- $\mathcal{A} \subseteq \mathcal{B}$ iff $\mathcal{A}_1 \subseteq \mathcal{B}_1$ and $\mathcal{A}_2 \supseteq \mathcal{B}_2$
- $\mathcal{A} = \mathcal{B}$ iff $\mathcal{A} \subseteq \mathcal{B}$ and $\mathcal{B} \subseteq \mathcal{A}$
- $\mathcal{A}^c = \langle \mathcal{H}, \mathcal{A}_2, \mathcal{A}_1 \rangle$
- $\mathcal{A} - \mathcal{B} = \mathcal{A} \cap \mathcal{B}^c$
- $\emptyset = \langle \mathcal{H}, \emptyset, \mathcal{H} \rangle, \mathcal{H} = \langle \mathcal{H}, \mathcal{H}, \emptyset \rangle$
- $\mathcal{A} \cup \mathcal{B} = \langle \mathcal{H}, \mathcal{A}_1 \cup \mathcal{B}_1, \mathcal{A}_2 \cap \mathcal{B}_2 \rangle$
- $\mathcal{A} \cap \mathcal{B} = \langle \mathcal{H}, \mathcal{A}_1 \cap \mathcal{B}_1, \mathcal{A}_2 \cup \mathcal{B}_2 \rangle$.

Definition 2.3 [1]: An intuitionistic topology is (for short IT) on a non-empty set \mathcal{H} is a family $\mathcal{I}\tau$ of IS's in \mathcal{H} satisfying following axioms.

- $\emptyset, \mathcal{H} \in \mathcal{I}\tau$
- $G_1 \cap G_2 \in \mathcal{I}\tau$, for any $G_1, G_2 \in \mathcal{I}\tau$



A New Notion Of Closed Sets In Intuitionistic Topological Spaces

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ABSTRACT

The purpose of this paper is to introduce a new concept of $\mathfrak{I}\hat{\omega}$ - closed sets in intuitionistic topological spaces. We explore the fundamental properties of $\mathfrak{I}\hat{\omega}$ - closed sets and their relationships with other known intuitionistic closed sets, contributing to a deeper understanding of intuitionistic topological spaces.

Keywords: Intuitionistic sets, Intuitionistic topological spaces, $\mathfrak{I}\hat{\omega}$ - closed, $\mathfrak{I}\hat{\omega}$ - open.

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1 INTRODUCTION

The concept of intuitionistic sets in topological spaces was first introduced by Coker[2] in 1996. He also introduced the concept of intuitionistic points and investigated some fundamental properties of closed sets in intuitionistic topological spaces. In 2009, J. Younis Yaseen and G. Asmaa Raouf [5] has given some results in intuitionistic generalized closed sets in intuitionistic topological spaces.

In this paper, we introduce $\mathfrak{I}\hat{\omega}$ -closed sets in intuitionistic topological spaces and discuss some properties related to $\mathfrak{I}\hat{\omega}$ -closed sets in intuitionistic topological spaces.

2 PRELIMINARIES

Definition 2.1 [2]: Let \mathcal{M} be a non-empty set. An intuitionistic set (shortly \mathfrak{IS}) \mathcal{A} is an object having the form $\mathcal{A} = \langle \mathcal{M}, \mathcal{A}_1, \mathcal{A}_2 \rangle$ Where $\mathcal{A}_1, \mathcal{A}_2$ are subsets of \mathcal{M} satisfying $\mathcal{A}_1 \cap \mathcal{A}_2 = \emptyset$. The set \mathcal{A}_1 called the set of members of \mathcal{A} , while \mathcal{A}_2 is called set of nonmembers of \mathcal{A} .

Definition 2.2 [2]: Let \mathcal{M} be a non-empty set. Let \mathcal{A} and \mathcal{B} be intuitionistic set in the form $\mathcal{A} = \langle \mathcal{M}, \mathcal{A}_1, \mathcal{A}_2 \rangle$, $\mathcal{B} = \langle \mathcal{M}, \mathcal{B}_1, \mathcal{B}_2 \rangle$ respectively. Then

- $\mathcal{A} \subseteq \mathcal{B}$ iff $\mathcal{A}_1 \subseteq \mathcal{B}_1$ and $\mathcal{A}_2 \supseteq \mathcal{B}_2$
- $\mathcal{A} = \mathcal{B}$ iff $\mathcal{A} \subseteq \mathcal{B}$ and $\mathcal{B} \subseteq \mathcal{A}$
- $\mathcal{A}^C = \langle \mathcal{M}, \mathcal{A}_2, \mathcal{A}_1 \rangle$
- $\mathcal{A} - \mathcal{B} = \mathcal{A} \cap \mathcal{B}^C$
- $\hat{\phi} = \langle \mathcal{M}, \emptyset, \mathcal{M} \rangle$, $\hat{\mathcal{M}} = \langle \mathcal{M}, \mathcal{M}, \emptyset \rangle$
- $\mathcal{A} \cup \mathcal{B} = \langle \mathcal{M}, \mathcal{A}_1 \cup \mathcal{B}_1, \mathcal{A}_2 \cap \mathcal{B}_2 \rangle$
- $\mathcal{A} \cap \mathcal{B} = \langle \mathcal{M}, \mathcal{A}_1 \cap \mathcal{B}_1, \mathcal{A}_2 \cup \mathcal{B}_2 \rangle$





SOME NEW CONTINUOUS FUNCTIONS IN INTUITIONISTIC TOPOLOGICAL SPACES

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ABSTRACT

The purpose of this article is to introduce and study the concept of intuitionistic \hat{w} -continuous functions in intuitionistic topological spaces. We investigate the fundamental properties of these functions and examine their relationships with other existing types of intuitionistic continuous functions. Our findings provide new insights into the structure and behavior of intuitionistic continuity, contributing to a broader understanding of intuitionistic topological spaces.

Keywords: Intuitionistic sets, $\mathfrak{I}\hat{w}$ - closed, $\mathfrak{I}\hat{w}$ - open, Intuitionistic \hat{w} -continuous.

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