GLOBAL RESEARCH JOURNAL

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Director of London
Organisation of Skills
Development

GLOBAL RESEARCH TOPICS COVERED:

Language and Literature, Astronomy, Business

Artificial Intelligence, Astrophysics, Theology and
Religious Studies, Education, Business
Management Organisational Behaviour
Film Studies, Resource Management,
Economics

WELCOME
TO ISSUE 1.

GRJ has a mission to help humanity and spreading knowledge through research with the aim to of creating innovative solutions to contemporary challenges in a wide variety of disciplines.
In this issue of GRJ we are delighted to share with you a multidisciplinary approach to research through which enthusiastic readers can indulge in thought provoking ideas and new knowledge. Along with various research journals enticing you into curiosity, we are pleased to include a section on the Life Foundation that has the sole objective of working with the rural poor and the marginalized, who are more vulnerable to exploitation and oppression. Ever since its inception Life Foundation has been taking up different types of projects covering all sections of stake holders and successfully completed multi-dimensional development projects.
This issue includes an interview with Director of London Organisation of Skills Development Dr Parin Somani and multi-international award winner, who aims to address inequalities in contemporary life. We spoke to her about her vision in helping humanity progress towards a diverse equal world.

It is our hope that you will be enlightened through this issue of Global Research Journal and acquire knowledge that has been compiled especially for you.

Parin Somani

Dr. Parin Somani
Managing Editor

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This Issue sections

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Question Time with Dr. Parin Somani

1. Who is Dr Parin Somani?

Dr Parin Somani is Director of London Organisation of Skills Development, an Independent Academic Scholar, TEDx Speaker, Educator, International Motivational speaker, Author, Writer, Banker, Humanitarian, Philanthropist and Multi-International Award Winner. has achieved Seven Doctorate degrees and has been recognised Five times in the World Book of Records, Twice in the India Book of Records, Asia Book of Records, Karnataka Book of Records and also in the Golden Book of World Records. With the aim to help global societies in the field of Education, Women Empowerment and Youth Development Dr. Parin Somani has travelled to more than 107 countries around the world. Dr Parin Somani has published 41+ educational papers, newspaper/magazine articles, 19 books and featured in 100+ videos, 177+ newspapers/ books for her amazing societal contribution. Dr. Parin Somani has travelled to more than 107 countries. During the COVID-19 pandemic she has helped to educate 100,000+ people globally through her Humanitarian work hence, invited to deliver her research at Harvard University and invited by Governors of different Indian States to discuss challenging issues to help global societies.

2. Why did you decide to invest in the Global Research Journal?

I believe knowledge acquisition is fundamental in contemporary society. In a world where there is immense information and continuous developments; Research, education and lifelong learning in my view are key towards societal sustainable development. When a society is well educated, we can work together to make informed and educated decisions to facilitate societies globally. Hence, when the opportunity to invest in GRJ was presented, I felt that it was exactly what is required in the knowledge society and technological world of today. The values of GRJ have aligned with my personal values:

- Free Global Knowledge Acquisition
- Complex Language Made Simple
- Attractive Visuals
- Global outreach and representation

The GRJ has tremendous potential and is a magnificent platform for global researchers to collaborate and share novel ideologies, that can be implemented in the future.

3. What's unique about this journal?

GRJ provides a platform for global researchers to share their research papers and articles with global audiences. It ensures scientific rigour while combining colour and visuals appealing to the senses. This makes knowledge acquisition more relatable to a diverse range of readers and researchers.

In addition, GRJ provides the opportunity for all interested individuals to participate in listening to the GRJ podcast. This facility enables readers to select an article of their choice and listen to professionally narrated research articles that gives research more character, bringing it to life through another sense.

4. Why do you think researchers should publish with GRJ?

From experience, individuals who aim to publish their research, put immense time, effort, and energy into writing their research paper or articles. They want to ensure that the journal that they are submitting to is trustworthy, ethical and they value research making sure that it is shared with interested readers that are going to benefit from it. Therefore, publishing with GRJ is an easy process and a great opportunity for individuals to share their research and be recognised on a global platform. GRJ is not only aesthetically appealing, but there is also no compromise in the scientific robustness of the research. All research papers and articles undergo a peer reviewed process where strict guidelines are followed, ensuring all elements are met prior to publication.

GRJ have also invested within a large social media outreach which enables a diverse population of individuals to gain access to and publish with GRJ. There is also an opportunity for individuals to publish perspective papers which are perceived to researchers as “challenging to publish”. This is largely due to their ‘biasness’ towards original research and ‘weak’ in nature. GRJ is all inclusive, providing every individual the opportunity to share their research on this platform.

5. Where do you see GRJ going?

I envisage GRJ reaching great heights and expanding, due to the endless opportunities available. Multi-disciplinary knowledge acquisition is an integral component of societal growth and GRJ is a platform through which this knowledge can be shared. Through GRJ, individuals can present new findings and build upon existing research to find answers to complex questions that are brewing in the minds of numerous individuals in society. I can also see GRJ reaching global destinations and collaborating with international academic institutions in the future.

On behalf of GRJ I encourage every individual to submit their research, share their knowledge and be recognised for their hard work, contributing towards societal betterment and making history.

Prof. Sheelu Singh Bhatia

Jewish Mysticism in the Writings of Isaac Beshevis Singer

Abstract

Isaac Bashev is Singer cherished the short story because, in his opinion, it provided a considerably greater opportunity for perfection than the novel did. His stories, however, rarely exhibit the meticulous craftsmanship of a conscious craftsman; instead, they flow effortlessly, often mindlessly, without any sense of manipulation. Indeed, Singer's work derives from a rich oral storytelling tradition that has been thriving for generations throughout Eastern Europe. As the de facto historian of the Jewish experience in the twentieth century, Singer opts to ignore the Holocaust and the six million European Jews who were killed by Adolf Hitler's Third Reich. Since he doesn't think a simple storyteller could ever convey a tale this awful and unintelligible, he instead evokes it by describing the civilization it wiped out in detail and the scattered melancholy it left behind. Singer's protagonists, like the Jewish people as a whole, face unfathomable atrocities and fight with their identity in a changing world. They must decide whether to give up or endure. The person in their family, neighborhood, and world is eventually the person in their universe, frequently by themselves with the supernatural forces that rule it. Singer uses a variety of Jewish mysticism and demonology to embellish and draw from to personify these forces and their impact on the human condition. In this research paper, I tried to anlyze the element of this Jewish mysticism in some of his popular works.

Isaac Bashevis Singer was a Polish-born American Jewish author who first authored and published in Yiddish before translating himself into English with the assistance of editors and collaborators.

Singer authored a minimum of 18 works of fiction, 14 children's stories, memoirs, essays, and articles. He is best known for his short stories, which have appeared in over a dozen collections. Gimpel the Fool, Singer's first collection of short stories in English, was published in 1957. Saul Bellow translated the title story, which was published in the

Partisan Review in May 1953. Selections from Singer's Daily Forward "Varshavsky-stories" were later published in anthologies such as My Father's Court (1966). Later collections include A Crown of Feathers (1973), with notable masterpieces like The Spinoza of Market Street (1961) and A Friend of Kafka (1961) in between (1970).

His stories and novels are inspired by his upbringing in the world of East European Jewry. After many years in America, his stories depicted the world of immigrants and their pursuit of an elusive American dream that always seemed out of reach. Prior to Singer's Nobel Prize, English translations of dozens of his stories were published in popular literary magazines such as Playboy and Esquire. Singer continued to write about personal morality throughout the 1960s. Because of the contentious aspects of his plots, he received harsh criticism from a variety of sources, some for not being "moral" enough, others for writing stories that no one wanted to hear.

Singer was influenced by a wide range of authors. He grew up hearing Jewish folktales and worldly Yiddish detective-stories about "Max Spitzkopf" and his assistant "Fuchs" in addition to the religious texts he studied. At the age of fourteen, he began reading Russian, including Dostoyevsky's Crime and Punishment. In his memoirs, he emphasized the significance of Yiddish translations donated in book-crates from America, which he studied as a teenager in Bilgoraj: "I read everything: short stories, novels, plays, essays, and so on. Rajsen, Strindberg, Don Kaplanowitsch, Turgenev, Tolstoy, Maupassant, and Chekhov were among the authors I read." He studied Spinoza, Arthur Schopenhauer, and Otto Weininger, among others. Singer regarded his elder brother as his greatest artistic example among his Yiddish contemporaries. He was also a lifelong friend and admirer of Aaron Zeitlin, the author and poet.

Anton Chekhov and Guy de Maupassant influenced his short stories, which some critics believe are his most lasting contributions. Singer inherited Maupassant's finely honed sense of drama. Singer's stories, like those of the French master, can pack a lot of visceral excitement into a few pages. Singer learned from Chekhov how to draw characters with enormous complexity and dignity in the shortest of spaces. He describes the two writers as the greatest masters of the short story form in the foreword to his personally selected volume of his finest short stories.

Among his non-Yiddish contemporaries, he was strongly influenced by Knut Hamsun's writings, many of which he later translated, while he was more critical of Thomas Mann, whose approach to writing he considered opposed to his own. Unlike Hamsun, Singer shaped his world not only through the egos of his characters, but also through Jewish moral tradition as embodied by his father in the stories about Singer's childhood. There was a schism between the lives of his heroes and the lives they felt they should lead, which gave his art a modernity that his predecessors did not. His themes of witchcraft, mystery, and legend are based on traditional sources, but they are juxtaposed with a modern and ironic sensibility. They are also interested in the strange and grotesque.

Singer has an unusual and convoluted relationship with Judaism. Though he felt a connection to his Orthodox background, he self-identified as a skeptic and a recluse. In the end, he came up with a philosophy and religious perspective that he dubbed "private mysticism." He stated it this way: "God could be imbued with whatever attributes one wanted to hang onto Him since He was entirely unknown and forever silent."

Singer was brought up as an Orthodox Jew and learnt all the Jewish prayers as well as Torah and Talmud. He also studied Hebrew. In his autobiographical short story "In My Father's Court," he described how, in his early twenties, he broke away from his parents. He started hanging out with non-religious Bohemian artists in Warsaw after being influenced by his older brother, who had already done so. Singer stopped going to Jewish religious services of any type, even on the High Holy Days, even though he believed in a God, much like Orthodox Judaism. He battled the idea that a loving and merciful God would never tolerate the immense suffering he witnessed all around him, particularly the Holocaust deaths of so many of the Polish Jews from his youth. He stated, "I am angry at God because of what happened to my brothers," in an interview with the photographer Richard Kaplan. Singer's younger brother perished in Soviet Russia about 1945 after being sent with his mother and wife to Southern Kazakhstan as part of Stalin's purges. Singer's older brother passed away unexpectedly in February 1944 in New York from a thrombosis.

Singer spent his entire life in the Jewish community, despite the complexity of his religious beliefs. He didn't appear to feel at ease unless he was surrounded by Jews, especially those who were European natives. Although he was fluent in Hebrew, English, and Polish, he always thought of Yiddish as his native speech. He was the last well-known American novelist to write in Yiddish and he did it exclusively. Singer and his wife started spending time in Miami during the winters with its Jewish community, many of whom were New Yorkers when Singer became successful as a writer in New York. They eventually relocated to Miami as retirees. They had a strong sense of belonging to the Ashkenazi Jewish society. Singer was laid to rest in a Jewish cemetery in

Paramus, New Jersey, following his passing, following a customary Jewish ceremony, once in an interview with The Times, he said,

"I think that the question of whether the world is nothing but a physical accident, or whether there is a plan—this is the main question of every human being," he declared. "Because the only answer to our suffering would be that there is purpose in it, that there is a spirit

behind it. these would not exist, our life would be a hopeless business. It is my conviction that telepathy, clairvoyance, and premonitions do exist and do have a value. And the more I hear about them, the more comfort I get, because this means that life is just not some soap bubble which today flies around and tomorrow, in a second, it bursts."

Singer made a connection between his parapsychology interest and his religious beliefs. A former Warsaw rabbinical student and the son and grandson of rabbis, he considers himself to be religious but is dubious of dogma and structured religion.

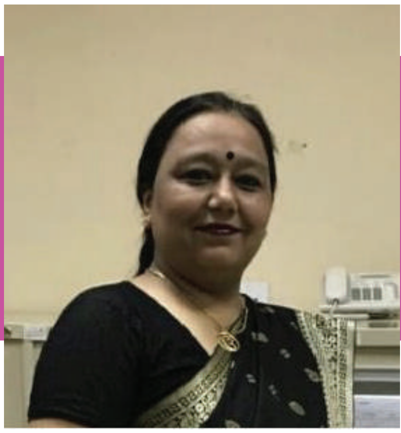
The lightheartedness with which Singer approaches death, demons, and betrayal is seen in one of his early pieces. *Two Corpses Go Dancing* is recounted from the perspective of the 'Evil One,' a technique Singer also uses in stories like '*The Destruction of Kreshev*' and '*The Unseen*,' which were initially published in The Jewish Daily Forward in 1943. The Evil One amuses himself in "*Two Corpses Go Dancing*" by reviving the corpse of Itche-Godl, a forgotten beggar who "had been a corpse even when living." When Itche-Godl gets back home, he discovers that his widow has remarried to a bigger man. Even though Itche-Godl, who believes he is still alive, is terrified by his two appearances at her door, he is baffled by her actions. Singer rejects any pretension of realism in *"Two Corpses Go Dancing"* and instead creates a surreal world in which no presumptions are true. The material and heavenly worlds are entangled: Corpses have superhuman abilities but are really helpless; they are visible to the outside world but lack self-knowledge; they have desire but are ultimately unable to fulfill it.

"Taibele and Her Demon" is a story that equally straddles the line between the material and spiritual worlds without ultimately sacrificing physical credibility. The irony of Taibele's obsession with the monster Hurmizah is what gives this tale its power. Here, the strange world only exists in the thoughts of the protagonists since demons are real enough as long as people believe in them. Singer is making a point about the hidden connections that might form between people when the imagination is allowed to run wild. However, the resulting affection does not come without a cost. That price is premature death for Alchonon, and the burden of sin, mystery, and wilderness for Taibele.

Another of Singer's most well-known and frequently reprinted stories is *"The Spinoza of Market Street"*. It tells the tale of Dr. Nahum Fischelson, a renowned philosopher, teacher, and librarian who has spent his life to researching the theories of Baruch Spinoza, a Dutch Jew who lived in the seventeenth century. Fischelson aspires to adhere to the rigid rational philosophy that Spinoza's Ethics demands. In contrast to the world below, where the unthinking rabble stands in for reason, he thinks about the stars and the mysteries of astronomy.

Singer again concentrates on an erratic relationship and the depth of human love and devotion in *"Zeitl and Rickel,"* but this time she more firmly places it in the context of social attitudes. The amazing story the narrator is about to tell proves that one level, this is a tale of two women's intense love and the mysterious and ultimately disastrous forms it takes (with the possibility of lesbianism, though it is never stated explicitly). On another plane, it concerns how the neighborhood is seen. The story, as related by one of Rickel's former students, is a collection of rumors elevated to the status of spiritual mystery. The story implies a perspective on the role of women in shtetl culture as daughters and wives, as well as the unconventionality of two women developing a spiritual bond and dedicating their lives to one another. Despite never having been accused of feminism, Singer occasionally feels awestruck by the complexity and influence of the female psyche.

Going through the works of Singer, we can analyze that Singer uses a variety of Jewish mysticism and demonology to embellish and draw from in order to personify these forces and their impact on the human condition. The outcome can be obviously mythological at times or it can explore the limits of what is possible under very real conditions. Whatever the format, Singer never holds back from delving deeply into the broad, literal concepts of life and death, sin and atonement, good and evil, and heaven and hell. He places a high value on inventiveness, and nothing is ever beyond bounds. Most of his works are characterized by a startling contrast between the breathtakingly cosmic and the absurdly simple, the apocalyptic and the everyday, and the macabre and the romantic.



Behind the Research

Prof. Sheelu Singh Bhatia

Starex University, India

Research Objective:

Detailed description of Isaac Beshevis Singer Jewish Mysticism work

Bio:

Prof. Sheelu Singh Bhatia is a Professor of English in one of the leading Universities of India. She has more than twenty years of teaching and research experience. She specialises in Diaspora Literature. She also studied language and linguistics. Her articles have appeared in various International Journals.

Keywords:

Isaac Beshevis Singer, Jewish Literature, Analysis, themes, Mysticism, Jewish mysticism, Jewish Religion, Two Corpses Go Dancing, Zeitl and Rickel, The Spinoza of Market Street, Taibele and Her Demon

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Title: Machine Learning in Automobiles

Abstract

Maximum manufacturing operations in automotive industries are none the less largely dependent on experience-based human choices. The emergence of huge information, alongside gadget learning in automotive organizations, has paved a manner this is assisting covey operational and commercial enterprise variations, thereby leading to an increased degree of accuracy in choice making and advanced overall performance.

The car industry keeps facing a dynamic set of demanding situations. Transferring market conditions, extended competition, globalization, price stress and vitality are main to an alternate in the marketplace landscape. Self-driving motors and changing usage fashions have heightened client expectations. It is pointless to mention that the automotive industry is getting ready to a revolution. One vicinity that has demonstrated an opportunity to supply substantial aggressive benefit is analytics. The car is getting transformed by means of technologies. AI and system learning algorithms have found a growing degree of applicability in this industry. The collaboration of big information analytics and device gaining knowledge of has boosted potential to system massive volumes of facts, thereby accelerating growth of AI structures. Gadget studying in automobile industry has an amazing capability to carry out hidden relationships among facts units and make predictions.

Introduction

One of the most thrilling era breakthroughs inside the previous few years has been the upward push of deep studying. Ultra-modern deep mastering models are being widely deployed in academia and enterprise, across a spread of areas, from photo evaluation to herbal language processing. These models have grown from Fledgling research topics to mature strategies in real-global use.

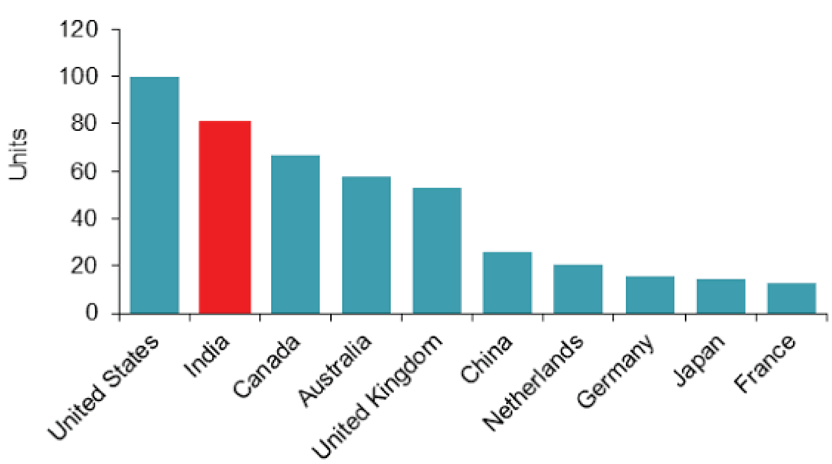
The growing scale of records, computational Strength and the associated algorithmic improvements are the main drivers for the development we see in this field. Those traits actually have a huge potential for the automobile industry and therefore the hobby in deep Mastering-based technology is growing. Lots of the product improvements, inclusive of self-using motors, parking and Lane-alternate assist or protection functions, which includes autonomous emergency braking, are powered by deep studying Algorithms. Deep mastering is poised to provide profits in overall performance and functionality for maximum ADAS (advanced driver assistance machine) solutions. Virtual sensing for automobile dynamics software, vehicle Inspection/heath tracking, automatic riding and records-driven product development are key regions which might be anticipated to get the most attention. This text gives an overview of the recent advances and some related challenges in deep learning techniques in the context of automobile packages.

Statement of the problem

Autonomous vehicle test and development

A self-driving automobile, additionally known as an self-sufficient automobile (AV), related and autonomous car (CAV), driverless vehicle, robo-vehicle, or robotic automobile, is a car this is capable of sensing its surroundings and moving effectively with little or no human enter. Self-using cars combine a selection of sensors to perceive their environment, such as radar, lidar, sonar, GPS, odometry and inertial measurement gadgets. Advanced control systems interpret sensory data to identify suitable navigation paths, as well as limitations and applicable signage. Long-distance trucking is visible as being at the leading edge of adopting and enforcing the generation.

Exhibit 2 - Country-wise interest in 'autonomous car' & 'driverless car'



Data source: https://www.google.co.in/trends, KPMG analysis

Purpose

Deep learning in Automobiles

From voice assistants to self-riding automobiles, deep studying (DL) Is redefining the manner we engage with machines. DL has been Capable of reap breakthroughs in historically hard areas Of machine gaining knowledge of along with textual content-to-speech conversion, Image category, and speech reputation. DL commonly Refers to a category of models and algorithms primarily based on deep Artificial neural networks (ANN). Perceptron, the building Block of an ANN was first presented within the Fifties. ANNs had been a chief area of research in each neuroscience and laptop science till the late 1960s and the approach Then enjoyed a resurgence in the mid-1980s. At Bell Labs, Yann Le-Cun developed several DL algorithms within the Past due Eighties, together with the convolutional neural network (CNN). Pioneering deep neural networks via Yann Le-Cun ought to classify handwritten digits with properly speed and Accuracy and have been extensively deployed to read over 10% of all the cheques inside the U.S. inside the late 1990s and early 2000s. Even though the primary theories associated with ANN have existed because Nineteen Fifties, the field of DL has matured loads in the ultimate Decade and changed loads in the previous few years. The “deep” in Deep studying is not a connection with any kind of deeper Information accomplished through the approach; as a substitute, it stands for the many layers inside the neural community that contribute to a Version of the records.

There are 4 key factors that are riding the development and uptake of DL.

1. Extra Compute energy: e.g., Photographs processing unit (GPUs), tensor processing unit (TPUs) and so on.
2. Prepared large Datasets: e.g., Image Net and so forth.
3. Higher Algorithms: e.g., Activation features like RELU, optimization schemes and so forth.
4. Software & Infrastructure: e.g. Git, robot operating System (ROS) , Tensor Flow [9], karas and so on.

Significance of the study

Perception systems for object detection

The belief system of a self-reliant car is answerable for mapping sensor observations into a semantic Description of the automobile's surroundings. 3D item detects a common feature inside this gadget and outputs a listing of 3-D bounding boxes around gadgets of interest. Diverse

3-D Object detection techniques have depended on fusion of different Sensor modalities to conquer barriers of person sensors. However, occlusion, limited subject-of-view and low-factor density of the sensor facts cannot be reliably and value-correctly addressed

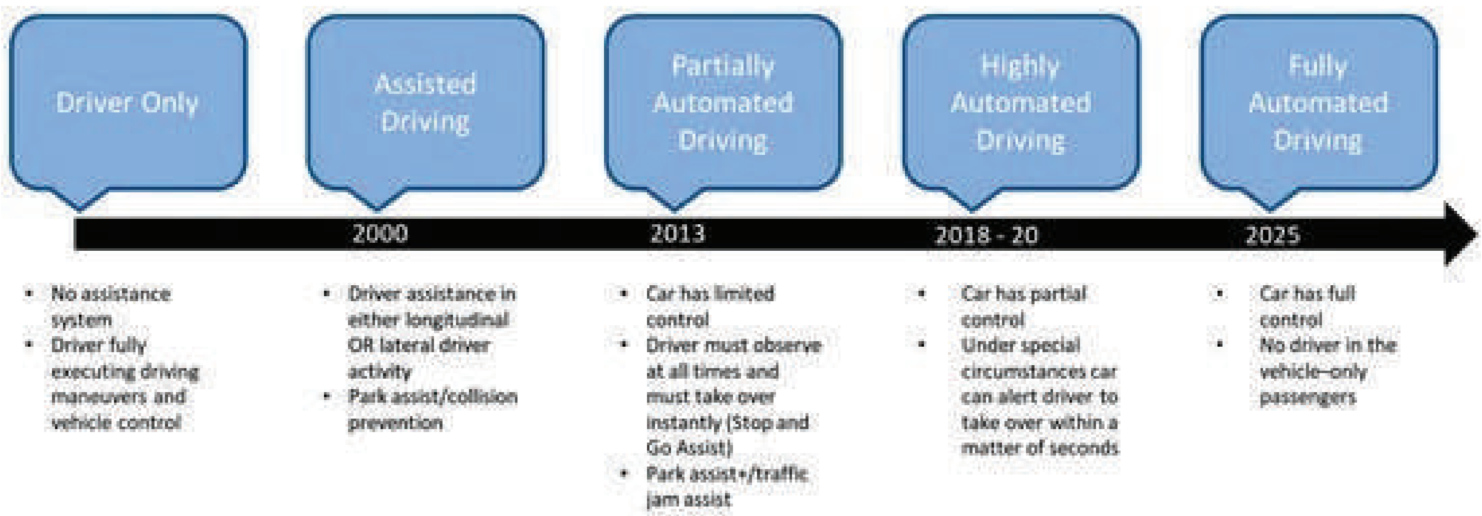


Figure 1

through multi-modal sensing from a single factor of view. Alternatively, Cooperative belief carries information from spatially various sensors distributed across the surroundings as a manner to mitigate those obstacles. This paper proposes two schemes for cooperative three-D item detection. The early fusion scheme combines point clouds from a couple of spatially diverse sensing factors of view before detection.

In assessment, the late fusion scheme fuses the independently envisioned bounding boxes from more than one spatially diverse sensors. We evaluate the performance of each schemes using an artificial cooperative dataset created in two complicated using scenarios, a T-junction and a roundabout. The evaluation show that the early fusion approach outperforms overdue fusion via a good-sizedmargin at the fee of better

communication bandwidth. The outcomes demonstrate that cooperative belief can consider greater than ninety-five% of the items as antagonistic to 30% for unmarried-point sensing within the maximum challenging scenario to offer practical insights into the deployment of such device, we document how the variety of sensors and their configuration impact the detection overall performance of the device.

Motion planning system

ARIA is an item-oriented automobile control utility that has a programming library (SDK) for C++ programmers who need to access their P3-DX platform and add-ons. However, the automobile firmware does no longer carry out any high-level robotic responsibilities. As an alternative, it's miles the activity of an clever purchaser walking on a connected pc to carry out this utility-level robotic control techniques and obligations, such as impediment detection and avoidance, localization, mapping, clever navigation and digicam manipulate. Indoor movement making plans of mobile robot deals with the troubles of localization, route making plans and the movement manage hows the motion making plans system used in this observe. Localization is the willpower of the positions of mobile robotic, boundaries and the target. Normally positions are given via a user or recognized by way of a digital camera. In the case of actual-time and dynamic working, consisting of moving obstacles or goals are used inside the environment, localization via a digital camera ought to be favored.

Because actual-time and dynamic packages are made in this study, a digital camera and photo processing techniques are used for localization. The digital camera is installed on the ceiling and it sends the actual-time pix of the surroundings to a pc. Each item is labeled with a extraordinary coloration on it; inexperienced for the boundaries, blue for the goal and yellow for the mobile robotic. So as to decide the heading angle of the mobile robotic, it's also categorized with a purple color. Course of the road that connects the centers of yellow and purple colored circles at the robotic equals to the heading attitude of it.

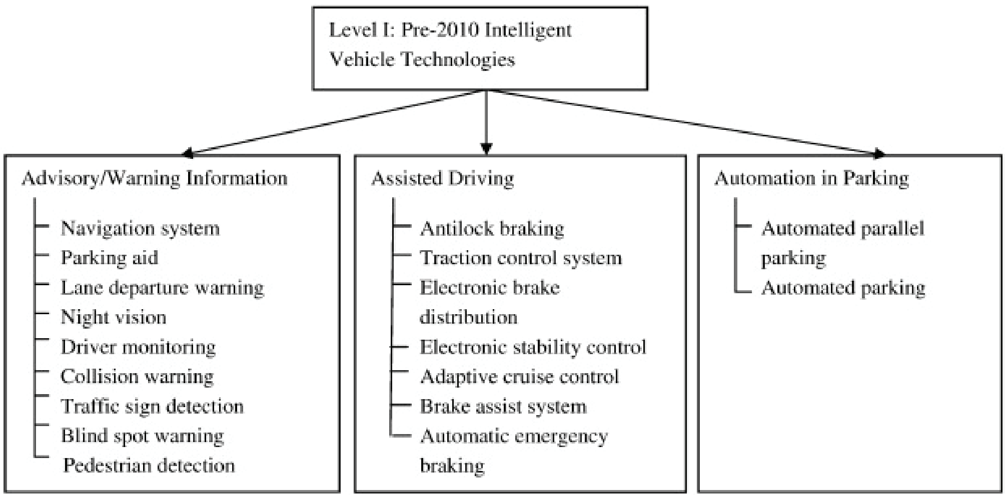


Figure 2

Photograph processing program going for walks on the pc, which is written in MATLAB, takes the immediately pix from the digicam. The program determines the coordinates of each item which has a coloration extraordinary from the bottom color, as proven within the higher proper photograph of the figure. Coordinate willpower is a complex hassle, due to the fact the real environment and its picture do not overlap because of the path of the digital camera. Therefore, coordinate transformation must be done with the aid of the usage of corner coordinates of the real surroundings and the photo. At the closing, photo processing software suits the coordinates of colours with a grid based totally map, as proven at the lower proper picture. On this way, localization is found out and the map is produced. The second one step of the motion making plans device is to send the map to the path planning technique. On this have a look at, genetic set of rules is used to decide the route which mobile robotic goes via it. Course planning with the genetic set of rules is explained in detail inside the following phase. Within the last step, with the intention to manipulate

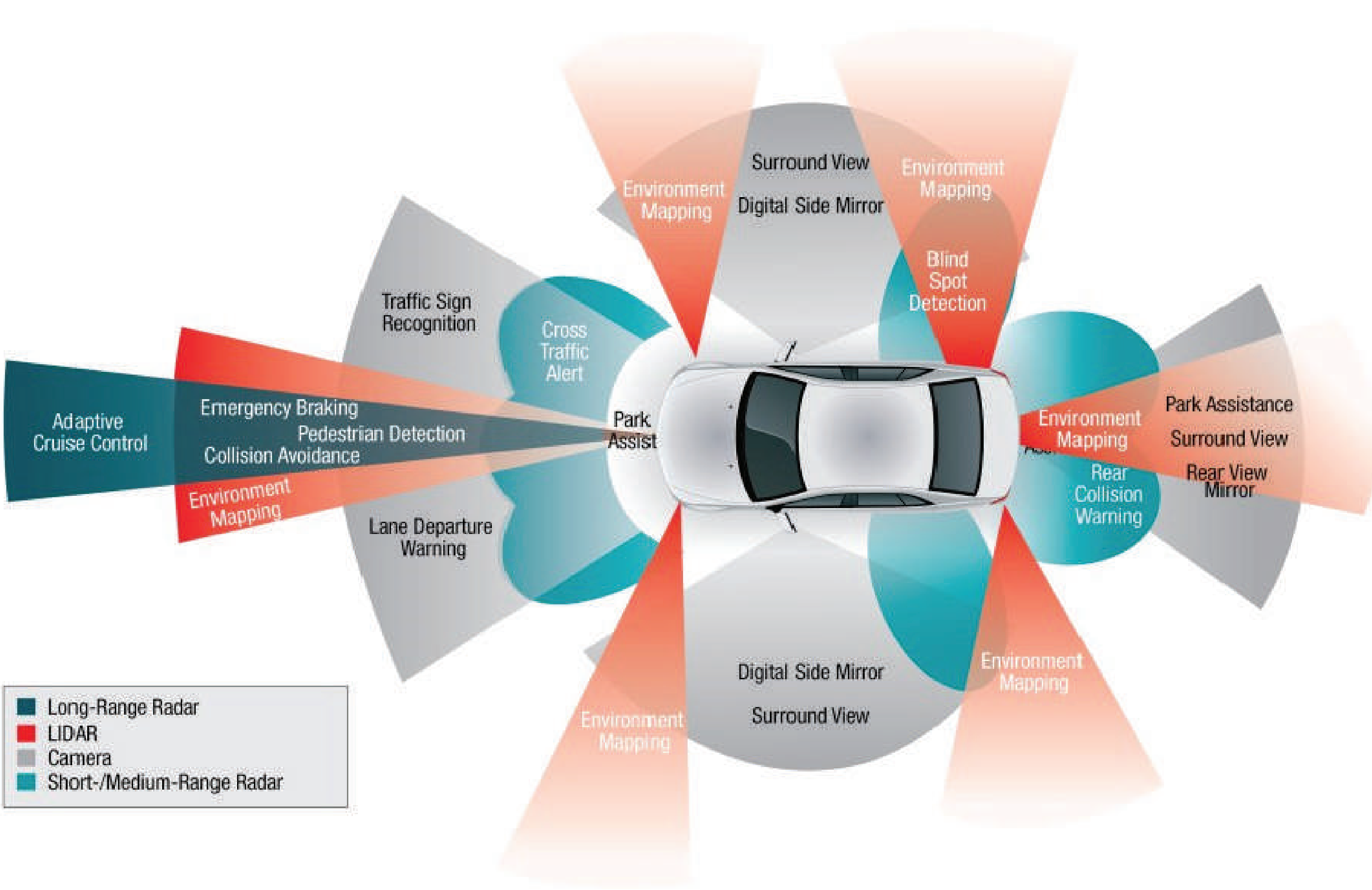


Figure 3

the robot platform, a patron software, which is written in MATLAB, sends command packets thru the robotic connection. This may be finished the use of direct instructions. Direct commands encompass -byte packet header, one-byte byte count, one-byte command wide variety, one-byte argument type, n-byte argument and two-byte checksum, as described by way of the robotics' running machine ARCOS. The direct command technique lets in sending any unusual or unique command immediately to the robot platform, without any intervening processing.

Path planning and optimization

Path making plans is a totally important task for the self -sustaining cell robotic. It is desired to discover a collision-loose motion in an obstacle inclined environment that allows you to navigate properly from the begin configuration to the aim configuration.

In lots of static and dynamic environments, cellular robots are more and more being hired. Typically, there are numerous possible paths for a robot to attain the goal from the begin region, however in situation, the first-rate feasible route is decided on in line with some guiding principle such as shortest distance, smoothness of the route, minimum energy consumption and many others. Or the most followed standards are the shortest distance with the minimal possible time.

The path planning may be categorized into folds:

1. Neighborhood direction making plans and,
2. Worldwide direction making plans.

In neighborhood route making plans strategy, the robot has a restrained know-how (both in part-recognized or unknown) approximately the navigational environment. But, in worldwide course planning, the robotic has entire understanding approximately the navigational environment and thereby robotic can attain the goal by using following a predefined direction. However, worldwide direction planning techniques display constrained applications due to much less robustness in terrain uncertainty whereas, nearby route making plans techniques show greater flexibilities in partially known/ unknown environments and presents an optimized course. It could be in addition categorized as classical technique and heuristic method (synthetic Intelligence method). The uses of cell robotic path making plans/arranging are included into restorative and surgical makes use of, person assist, safety, stockroom and movement packages, and moreover ocean and area investigation, robotized guided vehicles for shifting products in a plant, unmanned bomb switch robots, and planet investigation robots.

Addressing the Policy Issues Associated with Automated Driving Systems (ADS)

The convergence of records and communication technology (ICT) with automotive technology has already led to automation features in road vehicles and this fashion is expected to continue within the destiny owing to client call for, losing costs of additives, and stepped forward reliability. Even as the automation capabilities that have taken place thus far are specially in the form of data and driver warning technologies (labeled as level I pre-2010), destiny trends within the medium time period (level II 2010–2025)are anticipated to exhibit connected cognitive car features and embody increasing degree of automation inside the shape of advanced driving force assistance systems. Although autonomous automobiles were developed for research functions and are being tested in managed riding missions, the independent using case is most effective a long term (degree III 2025 +) state of affairs. It's on technological forecasts regarding automation, coverage challenges for each level of era improvement and alertness context, and the important device of fee-effectiveness for coverage analysis which enables policy choices at the automation systems to be assessed in a regular and balanced way. The fee of a machine in keeping with car is considered against its effectiveness in meeting policy objectives of enhancing safety, performance, mobility, convenience and lowering environmental results. Instance programs are supplied that illustrate the contribution of the technique in supplying facts for helping coverage selections. Given the uncertainties in device costs in addition to effectiveness, the device for assessing policies for destiny generation features probabilistic and utility-theoretic analysis capability. The coverage problems described and the evaluation framework permit the decision of policy challenges while allowing worth revolutionary automation in driving to enhance future road transportation.

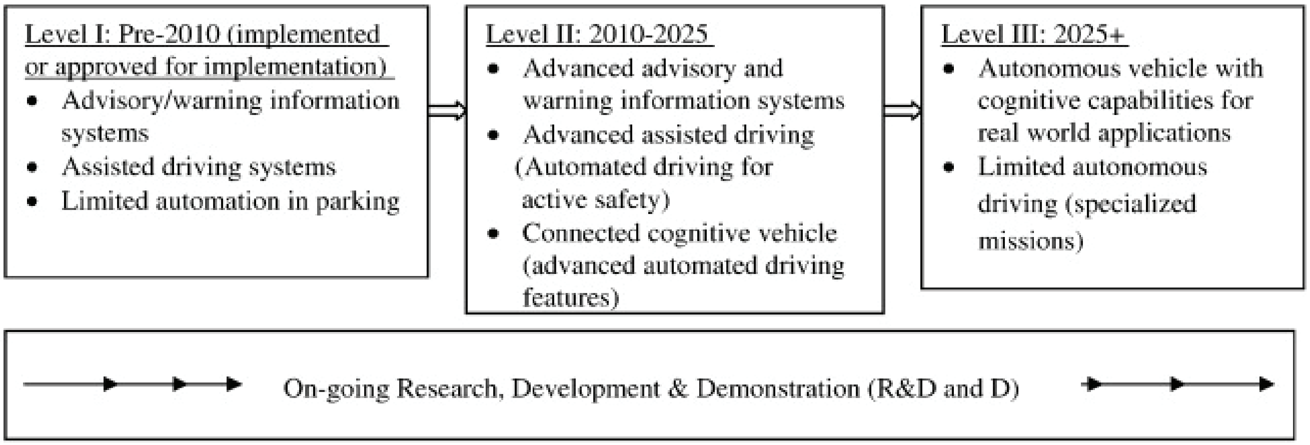


Figure 4

In recent years, fast trends in automobile technology have positioned public coverage in the capture-up mode. Advances in records and verbal exchange generation (ICT) have enabled the profession to go beyond the unique motive of the smart automobile and toll road machine (IVHS) initiative of many a long time ago and now we're within the technology of developing era for related cognitive cars. Further, experimental independent vehicle era has these days been tested efficaciously. The development and the scenario of huge-unfold applications of more and more automated vehicles in public street networks pose coverage demanding situations. Despite the fact that an economically possible self-sustaining vehicle is not possibly to be within the marketplace for decades, self-sufficient using as a public coverage problem has already emerged.

Legal issues surrounding cyber security and privacy

Cyber security and facts safety are buzzwords in the meanwhile and for top motive. Banks and different financial establishments face constantly evolving cyber threats. The nature of the threat and the means through which cyber attacks are perpetrated are developing ever more sophisticated and the capacity fallout from a main cyber protection breach may be big.

The branch for business and skills' 2015 statistics protection Breaches survey observed that ninety percent of large firms had suffered a safety breach in the previous 12 months. The average price of the worst unmarried breach suffered by way of a big agency changed into a watch-watering £1.46m to £three.14m. Statistics protection breaches bring about loss of patron agree with, that can have an immediate impact on sales. However, the fees of a security breach will even include enterprise disruption costs, compensation bills and regulatory fines.

The survey also observed that the character of cyber attacks experienced by using establishments has shifted, with a decreased number of denial of service assaults and a growth in attacks regarding malicious software. Possibly especially with the developing awareness of cyber security risks, inadvertent human error turned into mentioned because the principal cause of the worst security breaches, up to 50 percentage from 31 percentage in the preceding year.

Felony requirements with regards to cyber protection in the U.K rise up commonly from the statistics safety Act 1998, which requires organizations to take "appropriate technical and organizational measures" to guard non-public facts from unauthorized get admission to, damage, loss or disclosure. Such measures need to ensure a degree of protection that is suitable, considering the harm that may be precipitated to people in the event of a facts security breach and the character of the information. While determining which safety features to install area, the Act in addition specifies that companies ought to keep in mind the kingdom of technological improvement and the fees of enforcing the measures.

Human factors of automated driving systems

Automated riding can essentially exchange road transportation and improve nice of existence. However, at gift, the function of humans in automated automobiles (AVs) isn't always honestly established. Interviews had been conducted in April and might 2015 with twelve professional researchers inside the discipline of Human elements (HF) of computerized using to identify commonalities and exclusive views regarding HF challenges within the improvement of AVs. The experts indicated that an AV as much as SAE degree four have to tell its driver about the AV's abilities and operational repute and ensure safety whilst converting between automated and manual modes. HF research should mainly address interactions between AVs, human drivers, and susceptible road users. Moreover, motive force education packages may additionally need to be modified to make sure that human beings are capable of the use of AVs. Subsequently, a mirrored image on the interviews is furnished, showing discordance among the interviewees' statements—which seem like consistent with an extended records of work on human factors studies, and the speedy improvement of automation era. We count on our angle to be instrumental for stakeholders worried in AV improvement and instructive to other parties. Automated using should essentially change road transportation and improve first-rate of lifestyles. But, the position of the human driver inside the computerized automobile isn't always yet without a doubt established. This work affords the results of an interview examine among 12 HF scientists worried in automated driving studies. A consensus become revealed many of the researchers regarding the HF demanding situations that need to be resolved previous to the deployment of AVs on public roads. Such demanding situations consist of the synergy among the human driving force and automation, capacity changes in driving behaviour due to automation, and the form of records that the human drivers will be receiving from the automatic riding device. Alternatively, a disparity was recognized between the researchers' concerns regarding the AVs improvement and deployment and the AVs technological advances: even though the researchers expressed that AVs should no longer be delivered except proven secure, reality indicates that enterprise is now near the advent of level three and stage 4 AVs on public roads.

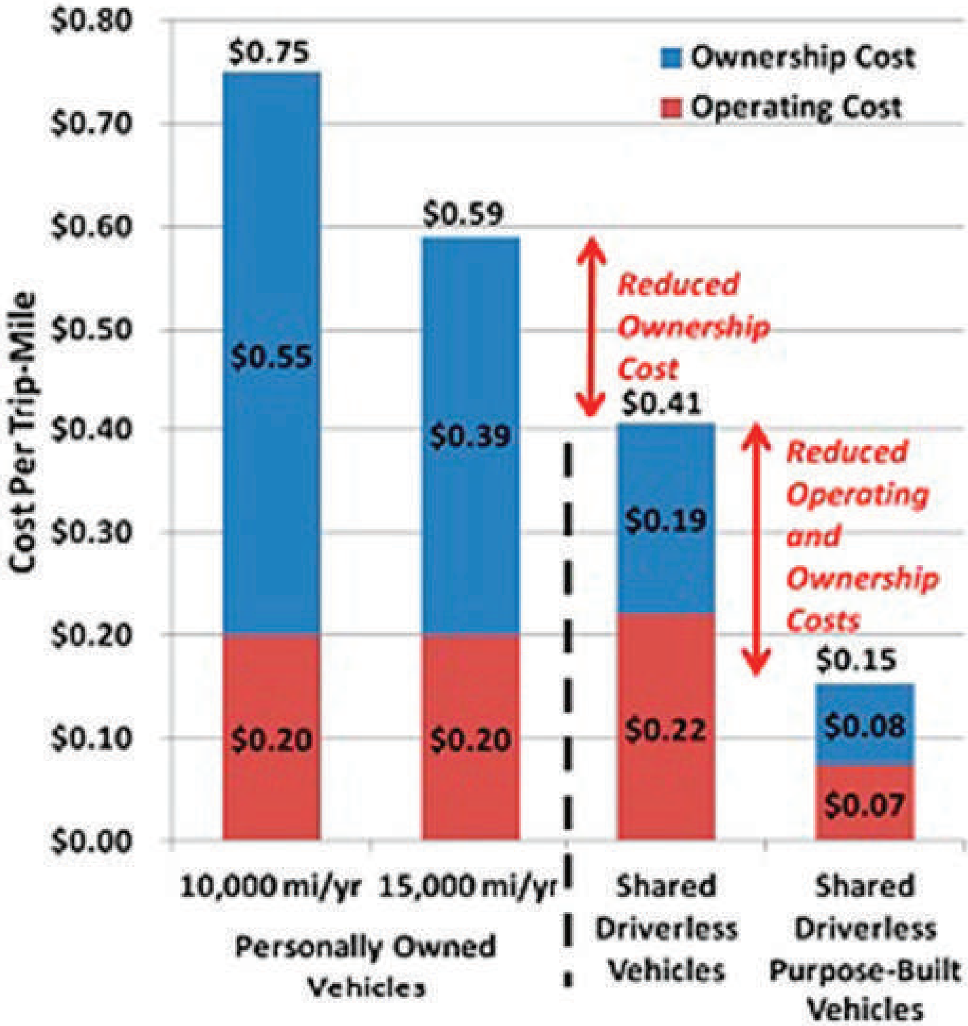


Figure 5

Autonomous Vehicle Applications

Automatic cars are an increasing number of present in modern-day society. Already, prototype motors had been automatic and judged dependable enough to force autonomously under widespread using situations. Beyond motors, there is a range of motors suitable for automation and throughout vehicle type there are not unusual hints recognized to standardize the procedure of making an autonomous car. In this text we overview what the commonplace elements are and illustrate with a few examples of automated floor vehicles developed with Freelance Robotics Pty Ltd.

Automatic motors

The DARPA urban project did provide an incentive in the quest towards a totally computerized vehicle. DARPA has been at once related to a success development of independent motors via many studies college groups in addition to private sector. Industrial availability of a completely automat zed car seems to be just around the corner. The remaining hurdles to business cognizance may be the important updates to road safety laws and, possibly greater tough to define, the overcoming of individual and network fears to accept as true with inside the wheels of an automated device on our roads. However, checks on present automated vehicles are proving their reliability, with looking at outcomes higher than human judgments made on the road. Inside the cutting-edge marketplace, hooked up car agencies upload autonomous parts while they comply with the regulation. Commonplace examples of this emergence of automation in industrial cars encompass automated parking, computerized correction of the automobile's trajectory if the driving force crosses a continuous line, and alerts sounding to warn while other vehicles get too close.

Car automation in different fields

The enterprise of vehicle automation is a whole lot broader than business vehicle automation. Freelance Robotics has worked on automation throughout many types of motors. As an example, we've evolved automation components for farming cars together with irrigators, tractors, and buggies, mining automobiles inclusive of drilling rigs, and also industrial vehicles like forklifts and car crash checking out automobiles. Civil engineering is an extra place of utility, with a success robots having been evolved for pipes inspection. Within the wider context of the automatic marketplace, those applications are only a few examples. Given the ability range and utility of applications, automatic vehicles include a clear increase marketplace.

Landmark help in nearby positioning structures

Any other tool for automated car localization is the usage of landmarks. Landmarks can be natural or artificially delivered to the automobile's environment.Whilst herbal, the vehicle identifies shapes which might be purported to be there, along with bushes, limitations, posts, et cetera normally herbal landmarks can be complicated to pick out, reducing machine reliability. For example, a tree can alternate form, or boundaries appear exceptional from distinctive angles. In evaluation, artificial landmarks provide a clean, steady way for the automated vehicle to become aware of its function. Examples of appropriate artificial landmarks encompass reflectors, RF IDS, bar codes, traces on the floor, panels with geometric shapes and colors, lighting, Wi-Fi, or IR beacons. When the automobile has correctly recognized positioning thru landmarks, it is able to update and music its position over time. In this way, dependable correction of positioning on its map turns into possible when the vehicle is a) in motion or b) moved in regarded surroundings.

Conclusion

New era cars have severe tendencies and car brands are in opposition. Due to this opposition, sensible motive force assistance systems are playing a key role at the same time as automobile enterprise is being more automated. Research shows that finding a solution to parallel parking is one of the maximum wanted enhancements for drivers. Because parking is a very difficult subject matter for novice drivers. In crowded cities this problem is getting larger due to the fact number of the automobile is increasing every day. [1] The purpose of the park assistant system is to assist the drivers have more fun and more efficient riding stories. Additionally, some other intention is decreasing damages for the duration of the parking operation. Parking damages have very horrific effect on international's economic system. Due to the fact international locations and coverage organizations can pay cash for easy parking damages and proprietors of the cars' sell their motors below its value due to harm records. Systems need ultrasonic sensors that placed on the corners of the automobile. These sensors wanted now not only for doing parking moves, however additionally scanning the park area. There are a few problems about ultrasonic sensors. For instance, thin objects are now not seen through these sensors and some environmental adjustments as temperature, pressure, humidity, air turbulence, airborne particles and so on. Effect on ultrasonic reaction. Despite those risks ultrasonic sensors are the most suitable sensor for these systems.

In this paper, we have discussed about machine learning in automobiles. This paper discussed about autonomous vehicle test and development, deep learning in Automobiles. In this paper we discussed about legal issues surrounding cyber security and privacy and autonomous Vehicle Applications also.

Behind the Research

Dr. Manju Gupta

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Research Objectives:

- Innovation in current practices in automobile sector

- How machine learning can enhance the applicability of the automobile sector

Bio

Academician, mentor, trainer and entrepreneur, MD porteight, Director strategic management, Mangalmay group of institutions, having strong credentials in rolling out innovative teaching methodologies, working for automation of logistics by enabling technology based things.

Keywords:

Autonomous Vehicle, Artificial Intelligence, Machine Learning, Deep Learning

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A Study of Employee Job Satisfaction in the section (OFS Company)

ABSTRACT

This exploration intends to explain about "A Study On Employee Job Satisfaction In IT Sector. Job is the larger part of every human being so job satisfaction has some effect on the life of humans. Employment satisfaction refers to how content a person or employee is with their job. Three different paths explain job satisfaction of the employee: they are team work and its recognition, team lead support and employee work life balance. If the employee is satisfied with their job it leads to minimal error of their work and also it will in turn increase the quality of the product output thereby loyalty of the customers increases. Job satisfaction is not only based on the perks and benefits of the company, it is also about the appreciation for the work done by the employee. The study's goal is to determine whether the workers are content with their jobs. Data was collected from a sample of 60 workers from an assiduity and the result is presented in the paper. In this article descriptive methodology has been used.

INTRODUCTION

Leadership is a technique through which a manager may lead, guide, and influence the efforts and activities of others toward completion of certain goals in a particular circumstance. The capacity to inspire subordinates to work with vigor and confidence is what is known as leadership. The purpose of this composition is to enable you to move to an advanced platform that will impact effectiveness and growth. But, when we come to a virtual team where the employees are working from different locations in this scenario, the companies manage to maintain a leadership to get the effectiveness of work from the employees.

Decision Making is a very big problem for the companies during the work you may successfully complete numerous phases of the decision-making process by using excellent decision-making approaches. Information is the very important thing to make a decision. In work from home sharing information about a work process is a little issue. To solve this problem, now they are using e-mail, calls, and daily standup calls to collect the information from the employees. The working culture of the employees gets different from working from office and working from home, in working from office the employees can communication with the co-workers are high in office there can have a some funs with the co-workers. But at work from home, the communication between the workers is less. Some employees are getting stressed and depressed because of being alone at home. Work life Balance of employee is the leading concern in the public due to the increase in responsibility and commitments. It is a state of equilibrium in which the person's job and the personal life are the same. In another word it is a push and pull between work and family commitments. It needs to be achieved by reducing the conflict among the balancing between multiple roles and tasks. It also includes employees who are not parents but have a desire for other activities like sports, study, etc. The intention of the learning is to spot the factors influencing employee job satisfaction.

REVIEW OF LITERATURE

Timothy A (2014), judge and two others have prepared an review paper on job satisfaction and they have discussed the history of job satisfaction and how the construct has been explicated and refined over time and they also described the various paradigms and approaches to the measurement of job satisfaction, at last they have suggested the practitioners to closely on the determinants on job satisfaction. Jitendra Kumar Singh (2013) has outlined the broad contours of various available that are responsible for employee satisfaction, and he also suggested the various ways to enhance and maximize the employee satisfaction. Muhammad Mahamuda Parvin (2011), has provided a thorough analysis of the pharma-ceutical industry's work satisfaction indexes and the factors that causes the dissatisfaction and je also suggested few ways to improve them. M M. Nurul Kabir (2013), in his article have extended the role of gender using the gender theory on job satisfaction by portraying traditional values and he also assessed the structure of work and a nation's dominant gender ideology by combining the shape of women and men's job satisfaction and work experience in a transitional context. Ashok Panigrahi (2015), has conducted a survey to identify what is most Important to the employees and identify where the com-pany is lacking in building a healthy relationship with its employees. Neeraj Kumari (2008), has conducted a survey to measure the satisfaction level of the employee. He found that overall job satisfaction showed people were satisfied with their current job. He concluded that still some effective measures should be taken to improve the satisfaction level further. Dr.R.Perumal (2013), in his paper he intends to identify the different factors that affect job satisfaction in pharmaceutical companies. And he concluded that the Job satisfaction is related to different socio-economic and personal factors, such as: Age, sex Incentives, Working Environment, Education, duration of work etc. R.Satyavathi (2017), has found from his research that a company's employee's motivation plays a critical part in determining job satisfaction by inspiring them to work hard to achieve the aims and objectives of the firm. According to D.Subhashini's (2016) findings, there is a favorable association between job satisfaction characteristics and employee performance at both the supervisory and worker levels employed in the automobile sector. According to Abdul Raziq (2015), this paper may help people improve personally and serve society by motivating them to give more to their work. In order to accomplish the business's goals and objectives, it is crucial for an organisation to inspire its workforce to work hard. JAMES P. CAMBELL (1983). The findings imply that the global evaluation of overall job satisfaction on a scale of 1 to 5 may be a more comprehensive indicator of overall job satisfaction than the total of numerous aspect replies. According to Daniel S. Hamermesh (1999), job satisfaction is particularly responsive to unexpected increases in the returns to observable skills, less so to unexpected increases in the returns to unobservable skills, and the effects of unexpected increases in earnings on job satisfaction fade over time.

RESEARCH METHODOLOGY

Descriptive research design was used for this research. A structured questionnaire with 10 questions was circulated among the IT company employees and was asked to answer in 5 point Likert's scale. Around 60 responses were recorded and the data were put to various tests such as frequency analysis, mean analysis and ANOVA.

DATA ANALYSIS AND INTERPRETATION:

Demographic profile		PERCENTAGE	FREQUENCY
Age	21-30	95%	57
	Above 60 years	5%	3
Gender	Male	34.40%	21
	Female	63.90%	39
Educational Qualification	UG	67.20%	41
	PG	29.50%	18
	PhD	1.60%	1
Experience	0-2	78.70%	48
	4-Feb	6.60%	4
	6-Apr	3.30%	2
	More than 6 years	9.80%	6
Marital Status	Single	75.40%	46
	Married	23.00%	14
Designation	Trainee	34.40%	21
	Team lead	19.70%	12
	Manager	3.30%	2
	other	41.00%	25
Place of living	Rural	54.10%	33
	Urban	44.30%	27

Table no.1: Demographic Profile of Employee's

It is inferred from the above table from 60 respondents, were the age group of 21-30years (95%) and above 60 years (5%). Gender statuses of respondents are Male (34.4%) and Female (63.9%). Considering the educational qualification are UG (67.2%), PG (29.5%)and PhD (1.6%).Experience of 0-2years (78.7%), 2-4 years (66.7%) 4-6 years (3.3%) and more than 6 years(9.8%). Based on the marital status for single it is observed that percentage rate (75.4%) and for married employees it is about (23.0%).From the designation of trainee (34.4%), team lead (19.7%), manager (3.3%) and other (41%) are observed. Finally, based on the place of living, rural (54.1%) and urban (44.3%) are observed.

Serial No	**Question**	**Mean**	**Rank**
1	Management is transparent (Management)	2.4	1
2	Supervisors communicate news effectively (Communication)	2.17	2
3	Managers value my feedback (Feedback)	2.12	3
4	Company offers promotion and career development (Promotion)	2.1	4
5	Work is distributed across my work (Work distribution)	2.05	5
6	Happy about my work (Happiness)	2	6
7	Connected to my co-worker (Connection)	1.97	7
8	Feel valued for my contributions (Value)	1.9	8
9	Find my work is meaningful (Meaningful work)	1.9	9
10	Comfortable with work culture (Comfortable)	1.87	10

Table no.2: Effect of Employees Job Satisfaction in IT sector

From the table 2, it is inferred that the highest score includes Management of 2.40 followed by Communication (2.17), Feedback (2.12), Promotion (2.10), Work distribution (2.05), Happiness (2.00), Connection (1.97), Value (1.90), Meaningful work (1.90), Comfortable (1.87). All the mean scores lie between 1 to 2. It concludes the respondents are agreeing towards all the mentioned factors.

Demographic Profile	**Weighted Average of Likert's Scale Profile**	**F**	**Sig.**
Gender of the employee	Between Groups Within Groups	0.787	0.72
Experience of the employee	Between Groups Within Groups	1.893	0.042
Age of the employee	Between Groups Within Groups	1.673	0.081

Table no.3: Oneway Anova

From the above table it is inferred that, there is a significance difference among the experience, age of the employee and weighted average of Likert's Scale profile because its significance value is less than 0.05. Also that Since its significance value is more than 0.05, there is no statistically significant difference between the employee's gender and the weighted average of their Likert scale profile.

Conclusion

The survey's results and recommendations are based on them, and action should be made to further these recommendations for further growth. I get the conclusion that the job offers both the chance to use skill in the workplace and the satisfaction of a job well done from the study above. There are many employees who agree that there is occasionally a lot of freedom in coordinating with work and who are satisfied with the current regulations.

Behind the Research

Dr. L. Anitha

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Research Objectives:

Primary Objective

• To study the role of material purchasing and supply chain manage ment in Meythoma international company.

Secondary Objectives

• To study the role of material purchasing techniques followed.
• To measure the effectiveness of handling multiple suppliers for materials.
• To understand the importance of material quality while purchasing.
• To evaluate the best supplier by value analysis.

Bio

Dr,L.Anitha M.A,M.H.R.M, MBA, Ph.d, Asst. Professor Saveetha School of Management NSS Coordinator saveetha university city campus, 15 years experience, SIMATS

Keywords:

Leadership, Decision Making, Employees working Culture, Employee work life balance.

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 Dr. Asha Rani

National Strategy for Financial Education in India

Abstract

The concept of implementing National Strategy for Financial Education has been gradually building. Most of the nations globally take initiative for implementing sound National Strategy for Financial Education. Whereas some developed countries already have their unified and coordinated national strategy for financial education. India is having second largest population in the world. There is an urgent need to develop a sound and stable financial system. it is more necessary to quickly formulate and implement a national strategy. Financial Literacy and Financial Education play important role in financial inclusion, inclusive growth and sustainable prosperity. Financial Literacy develops confidence, knowledge and skills to manage financial products and services enabling them to have more control of their present & future circumstqnces.59 countries worldwide are implementing National Strategy using guidance from the OECD/INFE high level principles on National Strategy for Financial Education. Several empirical studies have found that financial literacy level amongst Indians low by global standards. The need of the hour is to boost up financial education initiatives and comprehensive research should be done on national strategy for financial education. The present study aims at finding the role and relevance of financial education in India.

1.Introduction

According to OECD Financial Education is a combination of financial awareness, skills, attitude and behaviour essential to make better financial decision in order to achieve individual financial wellbeing. Any individual can achieve financial literacy through the process of financial education. When it comes to creating an efficient economy, financial stability and financial literacy are the two sides of the same coin. In this context the Government of India and Reserve Bank of India have begun to include both financial literacy and financial education in their development agenda. On 20 August2020, the RBI released revised National Strategy for Financial Education (NSFE) for 2020-2025,the second one after the 2013-18 (NSFE) RBI released 5-core strategy that is content, capacity, community, communication, and collaboration for promoting financial education in country strategic include skilling on financial education, encouraging savings behaviour, developing credit discipline, improved usage of digital financial services and creating awareness on avenues for grievance redressal. Financial literacy rate in India has consistently decline compared to other nations of the world. According to a 2014 global survey by Standard & Poor's nearly76% young population in India does not understand even the basic financial concepts. According to the India Spend report 75% of the country's population does not have any form of life insurance and only 8% Indians protect their family from financial shock in case of the death of an earning member. Financial illiteracy creates a burden on the nation as it needs to spend more on creating financial security for citizens.

2.Literature Review

Financial literacy and Education influence individual to understand the finance concepts and they able to take rational financial decision (Huston 2010). As per the OECD, the designed framework of National Strategy for Financial Education promotes a smooth and sustainable co-operation between finance regulators and stakeholders, to avoid duplication of resources and allows development of articulated and tailored way with measurable and realistic objectives depend on dedicated national assessments. Some Nations like Australia, Spain, United Kingdom, Czech Republic, Netherlands and New Zealand have already implemented policy to set up a National Strategy for Financial Education. Where as many other nations are in the stage of forming and implementing a government policy for setting up a unified and coordinated National Strategy for Financial Education in these countries. The OECD International Network on Financial Education pilot study conducted by Atkinson and Messy (2012) on financial literacy in 14 countries focusing particularly on levels of financial knowledge, financial behaviours and attitudes. The study highlight that there is a lacking of financial awareness, knowledge skills among a sizeable proportion of the population in each of the countries surveyed and it appears that the level of financial awareness in women is less than man from the countries surveyed. Hung et.al.(2012) undertook a review of existing literature on gender differences around the world regarding financial literacy and find that women's knowledge about financial concepts is less than the men they not able to take sound financial decision. The above studies clearly states that the impact of financial education for an individual and also for financial growth of a country.

3.Methodology

The design of research study is exploratory. The data used is secondary which is from journals, research papers, newspapers. Some websites are also used to studied and for collecting the required data.

4.Importance of Financial Education in India

Today, India is one of the biggest markets for the business enterprises. Its large number of population is seen as an asset by the various Multinational companies. There has been a steady increase in foreign investments and many Indian companies have expanded their business operations to globally. Now India is emerging as one of the fastest-growing economic country in the world. However, many small producers, companies and Indian firms aren't able to succeed. We have developed ourselves in technology and to some extent in production field, but most of us fail because of financial mismanagement. According to the census conducted in 2011 large portion of population, i.e., 74.04% of the total population is not aware about the basic financial concepts, only a few can understand the basic fundamentals of finance. According to the report conducted by the Global Financial Literacy Excellence Centre (GFLEC), only 24% of the Indians of adult population is financially literate. In comparison to other emerging economies, the financial literacy rate of India is the lowest. Whereas other emerging economies have better financial literacy rates, there's still scope for more improvement (Fig 1 and 2).

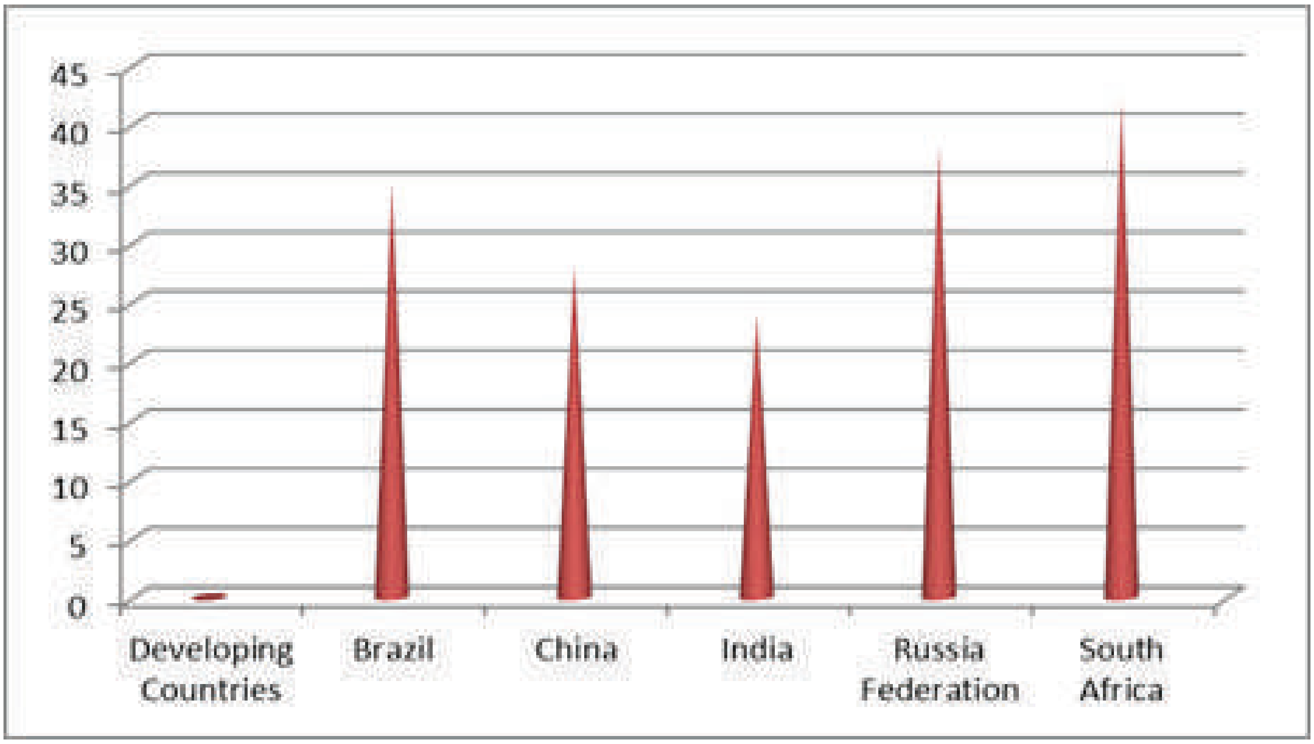

Figure 1: *Rate of Financial Literacy in Developing Countries (Source: Standard & Poor Global Fin Lit Survey by GFLEC)*

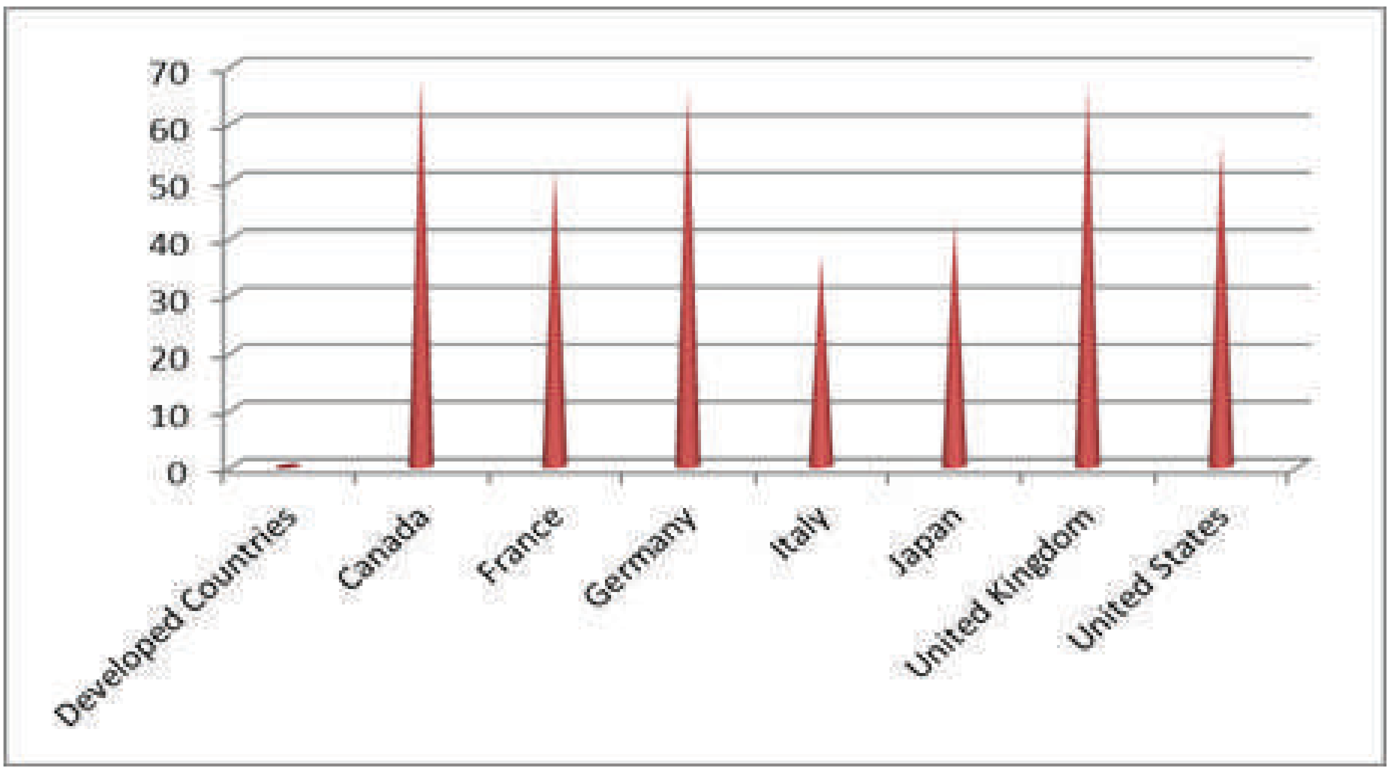

Figure 2: *Rate of Financial Literacy in Developed Countries (Source: Standard & Poor Global Fin Lit Survey by GFLEC)*

As we compare the literacy rate of different states we observe that state like Gujarat, Goa and Kerala have financial literacy rates 83%, 50%and 36% respectively which show that there general literacy rate also comparatively with other state is high (Table 1).

Table 1: State wise level of Financial Literacy in India (2015)

Name of state	General Literacy (%)	Financial Literacy (%)
Andhra Pradesh	60	23
Arunachal Pradesh	55	10
Assam	61	20
Bihar	50	8
Chhattisgarh	60	4
Goa	80	50
Gujrat	68	83
Haryana	65	21
Himachal Pradesh	73	16
Jharkhand	56	15
Katnataka	67	25
Kerala	84	36
Madhya Pradesh	59	23
Maharashtra	73	17
Manipur	69	36
Meghalaya	60	24
Mizoram	77	6
Nagaland	68	8
Orissa	64	9
Punjab	67	13
Rajasthan	56	20
Sikkim	73	8
Tamilnadu	72	22
Tripura	67	21
Uttar Pradesh	57	10
Uttarakhand	68	23
West Bengal	67	21

That means education influence the rate of financial literacy. Whereas state like Maharashtra, Rajasthan and Uttar Pradesh have financial literacy rate 17%, 20% and10% respectively show low financial literacy rate because of this the general literacy rate also low.

Union-Territories wise levels of Financial Literacy in India is presented in Table 2 which showed highest general literacy in Lakshdweep (87.95 %) and highest financial literacy in Chandigarh (38 %). There is an urgent need for the government to set up national strategy for financial education that improve financial literacy of a nation.

Table 2: Union territories wise Level of Finance Literacy in 2015

Name of UT	**General Literacy (%)**	**Financial Literacy (%)**
Andaman and Nicobar Islands	82.43	14
Chandigarh	81.19	38
Daman and Diu	79.55	29
Dadra and Nagar Haveli	64.32	31
Delhi	80.76	32
Puducherry	80.67	21
Lakshdweep	87.95	22

5.Efforts made so far by the regulating authority in the field of Financial Education

RBI's initiatives on Financial Education:

Reserve Bank of India has undertaken the various project to disseminate information regarding the general banking aspects to various target groups, including school students, college students, women, senior citizen, defence personnel through the project titled i.e., "Project Financial Literacy". There vision is to disseminated to the target audience with the help of banks, local authorities, schools and colleges through presentations, pamphlets, brochures, seminars, films and also through their websites. The initiates which are undertaken by the RBI's at their initial stage which results can be seen in coming years.

SEBI's Initiatives on Financial Education:

Securities Exchange Board of India organised a nationwide campaign for the wide spread of financial education to empower the nation. SEBI undertake financial education to various target segment i.e., school students, college students employers, employees as well. Some education programmes also conducted by the SEBI to imparting financial awareness among the investors . SEBI also publishes study material in English and other regional languages. SEBI efforts to uplifting the financial education help the nation for making a healthy environment for prospectiveinvestor.

6.Concluding Remark

Given the emphasis on education in India, it should be possible to enhance the financial literacy among Indians. The financial education can be improved through inclusion of relevant material on financial literacy in the general education program of schools and colleges. The initiative by the government for improving financial education for well-being of individuals in India should be focusing the young investors. In India, various regulating authority such as RBI, SEBI, IRDA, PFRDA are doing a commendable job to attain the goal of financial literacy and education. At present there are very few studies so far conducted in the area of financial literacy and education of the nation. Today's need is to strengthen financial education initiatives in India and comprehensive research should be done on National Strategy for Financial Education in India.

Behind the Research

Dr. Asha Rani

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Research Objectives:

Understand the need of financial education.Importance of Regulatory Authorities towards uplift the financial education in India.

Objectives of research

1. To understand the need of financial education.
2. Importance of Regulatory Authorities towards uplift the financial education in India.
3. What is the relevance of National Strategy for financial education in nation building.

Keywords:

Financial Education, National Strategies, Financial Literacy, Grievance Redressal, India

Bio:

Dr. Asha Rani is a person of versatile expertise. Dr. Asha Rani is currently working as Independence researcher. She is a highly interactive trainer and Consultant whose work is mainly based on research work.

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 Dr. Pratibha Mishra

Impact of Metaverse on Pedagogy & Educational Regimes

Abstract

The rise of the new t echnological frontier, the Metaverse, has raised questions about how digital interactions will change. Especially, in the field of education. This research explores the impact that Metaverse can have on educational systems and pedagogy. Its goal is to investigate and understand the makeup of the Metaverse in addition to its implications and future. In that context, the study follows the key concepts and features of the Metaverse and finds significant benefits for the educational sector. Furthermore, it also notes the risks and impacts the technology can have on the users and the institutions. The research further looks into educational levels and fields of study that are currently inclined toward the Metaverse. Unsurprisingly, the STEM fields and Higher Education sector currently lead the research and develoment of the Metaverse for education in tandem with corporations alike. Ultimately, the paper evaluates the impact of the metaverse and advocates for a safe, secure, and sustainable digital infrastructure for education.

Introduction

The word 'Metaverse' has been in the headlines across industries for a variety of reasons in 2022 (Economic Times, 2022). The rise of the new technological frontier has also raised questions about how digital interactions will change. This paper explores the known and potential impacts of the Metaverse on teaching methodologies and their effect on educational regimes. Something as significant as the Metaverse, especially given high corporate investment, is bound to affect the digital aspects of various industries (Udin, 2022). With the EdTech revolution during the pandemic, the way schools operate even after reopening has drastically changed (Shanbaug, 2021). It appears to be a natural extension that EdTech companies and educational institutions will adopt the Metaverse. This paper explores the possibilities of education within the Metaverse along with the leading opinions of experts and an analysis of market data. The research also seeks to explore if Metaverse-led education would become a part of mainstream educational practices.

Methodology

This paper follows an exploratory style of study into the impact that Metaverse can have on educational systems. Its goal is only to investigate the key questions and not to provide definitive and conclusive solutions to current problems. This research seeks to increase the understanding of the issue rather than offering conclusive evidence of a market trend or impact of technology.

The research takes a qualitative, open-ended approach to understanding the impact of futuristic technology. To explore the aforementioned topics, the study relies on the viewpoints of experts and literary works from various sources. The research focuses on three key questions –

1. What are the key features and risks of the Metaverse that could impact the learning of the students?
2. What kind of changes in learning/teaching styles can be expected?
3. Who will be most impacted by a potential change and how?

Banking on the aforementioned questions, a series of themes, literature types, sub-questions, and experts were brought in. Given its open-ended and flexible nature, the research was an interpretive one and the results are as detailed in the next section.

Results and Discussion

The first part of the research focused on understanding the Metaverse itself and what it contains such that it can be of impact on the educational system. The Metaverse is the internet equivalent of 3D virtual worlds. Similar to how the internet is an aggregation of websites, the Metaverse is the aggregation of 3D virtual worlds that aim to mimic the physical world using digital technologies (Laukkonen, 2022). However, in popular culture, the Metaverse refers to an individual virtual world or a virtual space with 3d/digital objects (Cosdec Alpha Ltd, 2022). If it were to be understood in a simpler sense – the Metaverse provides a virtual space where various digital objects and human-represented avatars can interact (Laukkonen, 2022). The Metaverse, therefore, is comprised of a variety of elements and uses as summarized by the table below (Gupta, 2022).

Elements & Uses of A Metaverse	
Digital Currency	Concerts, Social, & Entertainment Events
Marketplace/Digital Commerce	Online Shopping
NFTs	Workplace
Infrastructure	Social Media
Device Independence	Digital Humans
Gaming	Education & Knowledge Delivery
Digital Assets	Natural Language Processing

Table 1 - Elements & Use Cases of the Metaverse *Source: Gartner, Inc.* 2022.

Furthermore, the Metaverse also presents a variety of other features that can be used in the context of learning practices. The key features are as follows:

Immersive

One of the major attractions of the Metaverse is its immersive attribute. The ability to experience spaces in 3D and with a frame of reference inside the space opens doors for various pedagogical innovations (Kumar, 2022).

Digital Human Avatars

The Metaverse allows users to create their human-like digital avatars within a specific virtual space. This not only enables users to mimic human movements but also interact with other digitized humans creating collaboration opportunities (XpertVR, 2022).

Visualization

Given that the Metaverse is three-dimensional and immersive in nature, it presents a substantial opportunity for visual supremacy. Educational institutions can leverage these fundamentals to provide an unprecedented visual aid in addition to knowledge content. Especially, in fields like healthcare that require complex procedures, the Metaverse can help provide highly visual and immersive training (Miller, 2022). Such a feature not only opens doors in complex fields but also for the younger population who respond well to visual learning.

Physical Security

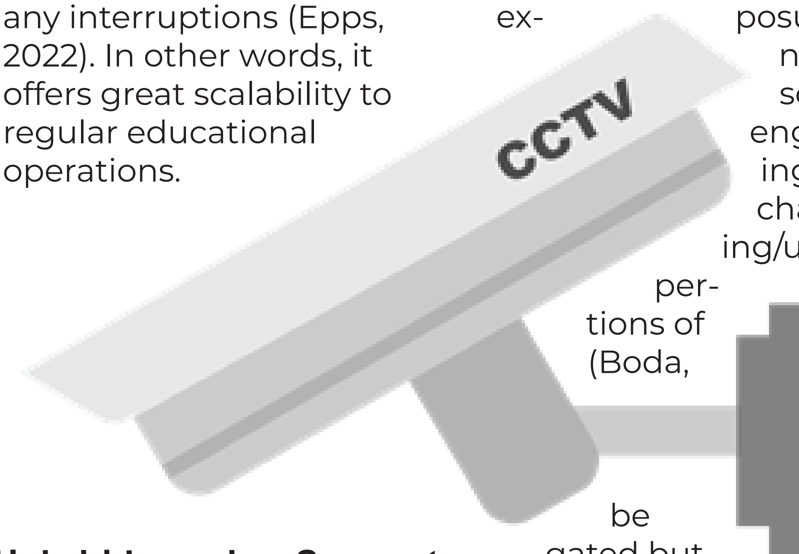
Often a concern for parents is the physical security of students – while in school and travelling (Brenan, 2019). Metaverse being a completely digital platform ensures that children are safe and within a recognized, secure perimeter. It not only reassures worried parents but also promotes healthier emotional states in students.

Privacy

The Metaverse, at the current time, is mostly built on the blockchain – a decentralized, immutable ledger of information. Blockchain brings a high degree of transparency and privacy to the users of virtual worlds that constitute the Metaverse (Scientific Web Solutions, 2022). Users can not only control their data but also manage their identities effectively.

Scalability

Educational infrastructure has been constrained by the capacity of the physical space it occupies. Whereas, in the Metaverse, a million students can occupy the same space and consume the same content without any interruptions (Epps, 2022). In other words, it offers great scalability to regular educational operations.



Hybrid Learning Support

The Covid-19 pandemic forced educational institutions to opt for virtual learning systems and as lockdowns were lifted, the transition to hybrid learning was made (Shanbaug,2021). To date, a lot of institutions are leveraging the hybrid model and the Metaverse sets up the stage to facilitate such interactions. It can ensure that the students in the physical and digital infrastructure can learn together and achieve similar educational outcomes.

Moreover, as the Metaverse promises improved educational outcomes, it also possesses certain risks to those who impart & consumer knowledge. Some of the challenges of the Metaverse include harassment and cyberbullying of staff and students, theft of identity /data, cyber attacks on infrastructure and connected devices, higher risk of exposure to negative social engineering, or changing/unreal perceptions of reality (Boda, 2022). These risks can be mitigated but institutions need to take advanced, pre-emptive measures to ensure the safety of their patrons. Moving on, an area of significant focus remains the change in existing paradigms of learning and interaction.

Educational Regimes across the world have started to build on the Metaverse and there are certain realized and certain projected impacts. The virtual recreation of the real world has been presenting new opportunities to teach and learn (Tripathi, 2022). The most significant impacts of the Metaverse are as follows:

Learning & Collaboration

The Metaverse allows for learning and collaboration at a mass scale within a virtual campus that mimics a large educational institution (Jagannathan, 2022). It provides new areas for students to explore and connect over as well as fosters innovation.

Without Spatial Barriers

Metaverse also removes spatial barriers. No matter where you are as a learner, you can tap into the immersive world for any learning purpose. Most of the time, students and teachers around the world can control and navigate the same content and elements without spoiling it for others. Meaning when they came back the next day and find that the elements are intact (Ragav, Noen, Lindahl, & Dohler, 2022).

Improved Accessibility

Devoid of physical requirements, the Metaverse allows people with disabilities and special needs to access the same content as the rest of their peers (Jagannathan, 2022). It not only helps them thrive in the same environment as others but also allows for educational institutions to instil sound diversity and inclusion practices.

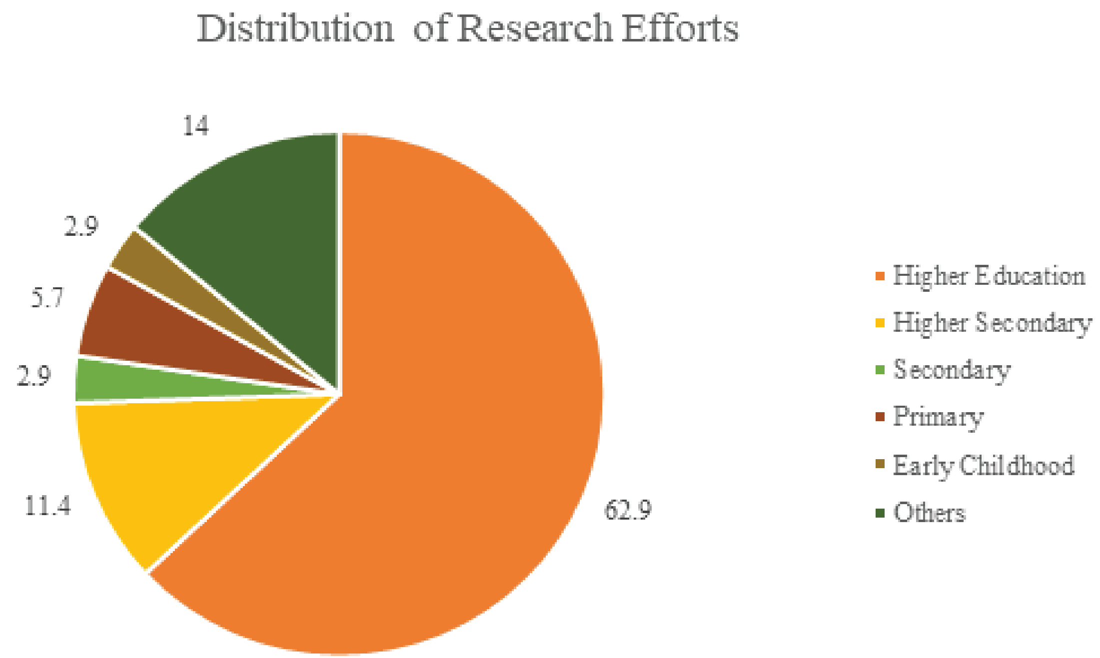
Increase Performance

Given its digital nature, the Metaverse can aid in capturing richer and higher learning data (Jagannathan, 2022). This data, coupled with other intelligence technologies like AI, can prove significant in analysing student performance and generating insights. Continuous insights and feedback can increase student performance.

In addition, the Metaverse can also influence impacts in other areas of educational practices and pedagogy. It can aid in better interpersonal skill building, conflict management, cross-cultural knowledge, and experiential learning. While these impact areas paint a positive picture, the most significant stakeholders of impact remain to be identified.

It is highly complex and debatable to identify the stakeholders who will be impacted the most by the Metaverse but trends are starting to shape. A key determinant of the impact of the Metaverse is the investment in understanding and developing such technologies. Data suggests that there is a significant investment by higher education institutions in exploring the Metaverse. As visible from the graphic below, higher education research accounted for about 63% of the overall research inclination (Tlili, et al., 2022). It was followed by Higher Secondary (11.4%) and Primary Education (5.9%). As it appears, there is a low research inclination towards early childhood education or special education. These areas are vital in the research approach going forward and critical to the development and wide-spread adoption of the technology.

Figure 1 - Distribution of Research Efforts by Educational Level



Source: Tlili, et al., 2022.

Further data suggest that the educational field with the potential to be impacted the most by the Metaverse is the STEM field. Research efforts have peaked in the field of Natural Sciences, Mathematics and Engineering – accounting for 53% of the total. It is then followed by General Education (15%), Arts & Humanities (11%), Business & Law (9%), Social Science (6%) and Aircraft Maintenance (6%) (Tlili, et al., 2022).

Overall, the research and trends suggest that the STEM fields at the Higher Education level will stand to gain the most from the implementation of the Metaverse and have already begun researchefforts to develop sustainable advantages using futuristic technologies.

Conclusion

A study of information reveals the emergence of the Metaverse as a new frontier for educational innovation and knowledge deployment. The Metaverse as a whole has variable virtual spaces, each with different characteristics. Therefore, it is highly abstruse to conclude which end of the ethical and righteousness spectrum the Metaverse sits on. However, one can effectively look at the individual use case of virtual worlds, in education or otherwise, and understand its impact as well as the future.

Furthermore, on the domain level, Metaverse does provide discernible benefits to education regimes and pedagogies. Leveraging its core features, institutions can create great impact while also pioneering long-due changes in the status quo. However, it is also vital to note that the Metaverse poses security, physical, and psychological risks for its users. It needs to be dealt with utmost attention to detail and integrity – something that is expected of future developments and innovation.

With STEM fields and the Higher Education sector leading the research and innovation of Metaverse for Education, it can be expected that the development of technology itself will be rapid. Despite technological growth and hype, other sectors of the education field appear to be lacking in awareness and exposure to the Metaverse. Therefore, it can be expected that the widespread adoption of technology in education is still a distant reality.

Ultimately, as with all technologies, the Metaverse also brings pros and cons with itself subject to its usage and awareness of the user. The path forward would require that research and experimentations continue in the context of Metaverse for Education. Overall, the need is to build a safe, secure, and sustainable digital infrastructure for students and teachers to thrive in. Perhaps, that is what the future holds for the Metaverse.

Behind the Research

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Research Objective:

The research aims to explore the impact of Metaverse technology in the context of pedagogy and educational institutions. Additionally, identify and understand areas of impact within the education sector.

Bio:

Pratibha Mishra is an education strategist currently serving as the Principal of Panbai International School, Mumbai, and a consultant to various educational organizations. She is on a mission to empower those who impart and consume knowledge. In her career spanning over 20 years, she has been associated with many institutional reforms, especially in adopting new educational paradigms.

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A Study On Grading System Followed on Measuring the Employee Performance In Zcodia Technologies

ABSTRACT

Globally the success of any organization is increasingly depending upon the sustained results it can deliver on continuous basis. Human Resources Management is driving all resources towards achieving this effort and to satisfy all stake holders of the organizations. Performance management is seen as a strategic approach in delivering sustained organizational success by managing and improving the individual employee and team performance. Globalization has brought in pierce competition on the quality of products /services the companies have to deliver. Developing economies like Brazil, Russia, India and China (BRIC countries) are creating opportunities galore in the growth of new business sectors. The fast pace of development during the last decade has lead to dearth of employable people, more so in Banking, Insurance, IT and ITES sectors. The crucial challenge for the organizations is how to manage employee current performance and also to improve their future performance.

1.INTRODUCTION

PERFORMANCE APPRAISAL

The importance of Human Resource Management (HRM) and Human Resource Development (HRD) is increasingly being appreciated across the world. The objective of performance appraisal is to evaluate an employee's performance of a job. Knowledge, skill and ability by themselves cannot guarantee performance. Hence, performance evaluation plays a pivotal role in measuring actual deliverables. Performance appraisal has gained momentum and critical importance in assessing employee’s actual work delivery. India, being a developing economy, with rapid expansion of industry, performance management and appraisal are critical factors in managing effective employee’s performance. Organizations are designing and implementing the right method of performance appraisals to achieve organizational objectives successfully.

The Oxford English Dictionary defines performance as the 'accomplishment, execution, carrying out and working out of anything ordered or undertaken'. Hence, it is said that performance is the way the organizations, teams and individuals get their work done.

Campbell (1990) defines performance as behaviour. It is something done by the employee. This concept differentiates performance from out-comes. Outcomes are the result of an individual's performance, but they are also the result of other influences. In other words, there are more factors which determine outcomes than just an employee's behaviours and actions. Armstrong and Baron (1998) defined it as a “strategic and integrated approach to increasing the effectiveness of companies by improving the performance of the people who work in them and by developing the capabilities of teams and individual contributors." Brumbrach (1998) defines 'performance means both behaviours and results. Behaviours emanate from the performer and transform performance from abstraction to action. The product of mental and physical effort applied to tasks and can be judged apart from results.' Aubrey Daniels (2004) says that performance is a blend of two necessary critical elements, behaviour and results.

The Chartered Institute of Personnel and Development (CIPD) facts sheet defines that Talentconsists of those individuals who can make a difference to organizational performance, either through their immediate contribution or in the longer run by demonstrating the highest levels of potential. Talent management is the systematic attraction, identification, development, engagement/retention and deployment of those individuals with high potential who are of particular value to an organization.

Performance management

The Society for Human Resource Management (SHRM) defines that "performance management is the organized method of monitoring results of work activities, collecting and evaluating performance to determine achievement of goals and using performance information to make decisions, allocate resources and communicate whether objectives are met."

Institute of Personnel Management (1992)defines performance management as 'A strategy which relates to every activity of the organization set in the context of its human resources policies, culture and style and communications systems. The nature of the strategy depends on the organizational context and can vary from organization to organization.' According to Lockett (1992), 'the essence of performance management is the development of individuals with competence and commitment, working towards the achievement of shared meaningful objectives within an organization which supports and encourages their achievement.'

American Compensation Association (1996) defines Performance Management as 'an effective performance management system that aligns individual performance with the organization's mission, vision and objectives.'

Bill Kennedy, DJ Ellison and Will Artley (2001) in the performance based management handbook defines that 'Performance-based management is a systematic approach for performance improvement through an ongoing process of establishing strategic performance objectives; measuring performance; collecting, analysing, reviewing, and reporting performance data; and using that data to drive performance improvement.' Susan M Heathfield (2005) defines that performance management is the process of creating a work environment or setting in which people are enabled to perform to the best of their abilities. 'Performance management is a whole work system that begins when a job is defined as needed and it ends when an employee leaves the organization.' Briscoe and Claus (2008) say 'Performance management is the system through which organizations set work goals, determine performance standards, assign and evaluate work, provide performance feedback, determine training and development needs and distribute rewards.'

Performance Management Features

McMaster (1994) and Williams (2002) amongst others, suggest that the key sequences of performance management are as follow:

- Identification of strategic objectives
- Setting of departmental/team goals
- Activities identified/per formance plan developed
- Outputs agreed
- Monitor/review of performance through appraisal
- Determine development needs
- Allocate reward

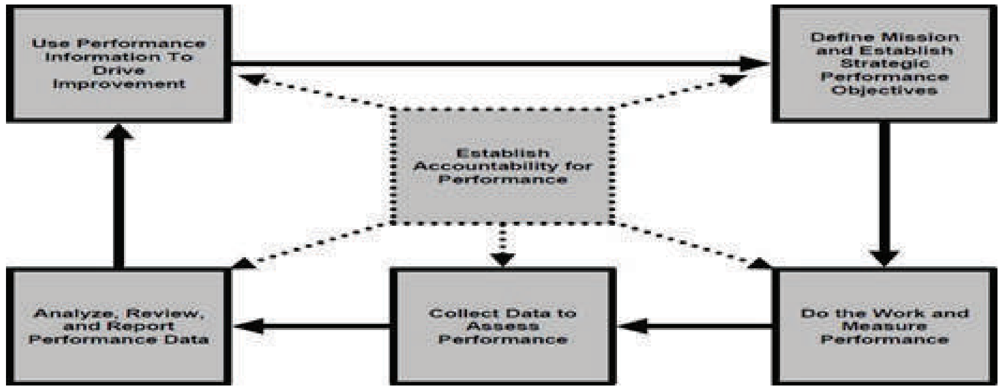

Figure 1: Model of Performance based management framework

Source: the performance-based management hand book, Vol(I) pp.3

Performance rating scales

The most difficult part of the performance appraisal process is to accurately and objectively evaluate the employee performance. Five point rating scales are commonly used.

- Significantly exceeds the requirements (5)
- Exceeds requirements (4)
- Meets requirements (3)
- Does not consistently meet requirements (2)
- Below requirements (1)

Performance Management Process Model

Performance management becomes a primary tool for managing the business in shaping individual behaviour and ensuring these are directed towards achieving the strategic goals of the organization. As Mohrman and Mohrman (1995) emphasized, 'performance management is managing the businesses through accomplishment of goals; in other words, it is what managers do all the time. A typical performance management model is exhibited below.

As shown in the above figure, perfomance-based management follows the Plan-Do- Check-Act (Continuous Improvement) Cycle developed by Shewhart Walter (1930) of Bell Labs. The first step is to define the organization's mission and to establish its strategic performance objectives (also known as the strategic planning phase). The next step is to establish performance measures based on and linked to the outcomes of the strategic planning phase. Following that, the next steps are to do the work and then collect performance data (measurements) and to analyze, review and report the data. The last step is for management to use the reported data to drive performance improvement, i.e. make changes and corrections for "fine tune" organizational operations. Once the necessary changes, corrections or fine tuning are determined, the cycle starts over again. Accountability for performance is well established at all steps in the framework.

PERFORMANCE APPRAISAL MEASUREMENT METHODS

It is immensely important to understand traditional methods, modern methods and latest global trends.

Traditional Appraisal methods

1.Essay appraisal method:

This traditional form of appraisal, also known as "Free Form method", involves a description of the performance of an employee by his superior.

The description is an evaluation of the performance of the employee basing on the facts and often includes examples and evidence to support the information. Bureau of National Affairs Inc (1975) survey of 139 firms, 47 per cent firms used essay appraisal method due to simplicity of use.

2.Straight ranking method: This is one of the oldest and simplest techniques of performance appraisal. In this method, the appraiser ranks the employees from the best to the poorest on the basis of their overall performance. It is quite useful for a comparative evaluation (Muchinsky, 2012).

3.Paired comparison: It is a better technique of comparison than the straight ranking method, this method compares each employee with all others in the group, one at a time. Personnel are compared to key persons instead of 'whole people to whole people,' this system of measurement is good for measuring jobs rather than measuring people. After all the comparisons on the basis of the overall comparisons, the employees are given the final rankings, Muchinsky, (2012).

4.Critical incident method: In this method of Performance appraisal, the evaluator rates the employee on the basis of critical events and how the employee behaved during those incidents. It includes both negative and positive points. The drawback of this method is that the supervisor has to note down the critical incidents and the employee behaviour as and when they occur.

5.Field review method: In this method, a senior member of the HR department or a training officer and the supervisors to evaluate and rate their respective subordinates. A major drawback of this method is that it is a very time consuming method. But this method helps to reduce the superiors' personal bias.

6.Checklist method: The rate is given a checklist of the descriptions of the job behaviour of the employees. The checklist contains a list of statements on the basis of which the rater assesses the employees on the job performance (Schuler, 1995).

7.Graphic rating method:

In this method, an employee's quality and quantity of work is assessed in a graphic scale indicating different degrees of a particular trait. Alan et al mentions in one of the surveys of 216 organizations, 57 % used graphic rating scales. The factors taken into consideration include both the personal characteristics and characteristics related to the on the job performance of the employees(Landy& Farr, 1983)

8.Forced distribution: To avoid potential negative consequences of rater biases, some organizations have adopted so-called forced distribution. Supervisors have to follow a predetermined distribution of ratings. At General Electric for example, the former CEO Jack Welch promoted what he called a .vitality curve. According to which each supervisor had to identify the top 20 percent and the bottom 10 percent of his team each year. As per estimates, a quarter of the Fortune 500 companies (e.g. Cisco, Intel, Hewlett Packard, Microsoft etc.) link parts of individual benefits to a relative performance evaluation (Boyle, 2001)

OBJECTIVES OF THE STUDY

PRIMARY OBJECTIVE

To study the grading system followed by measuring employee performance.

SECONDARY OBJECTIVES

- To identify the employee knowledge over appraisal systems.
- To assess the grading system followed for appraisal.
- To find out the techniques followed in the grading system to face challenges in appraisal.
- o evaluate the benefits out of the grading system of performance appraisal.

● To suggest the methods to be followed to improvise the grading system.

NEED FOR THE STUDY

● The degree is usually measured on a scale that is excellent, very good, good, average, poor. Then the actual performance of each employee is compared with these grades, and the person is allocated to the grade which best describes his performance. In this method, certain categories of worth are established in advance and carefully defined. Performance scale from which the level of achievement may be calculated for any given level of actual performance for such performance measure. This study will reveal the assessment of performance of employees over grading system, employee's knowledge on this system, challenges involved in it & the benefits out of this grading system.

LIMITATIONS

● Cost factor is the major constraint.

● This study is limited to Chennai location alone

2. REVIEW OF LITERATURE

Harrison and Goulding (2020), Boice and Kleiner (2019) suggest the overall purpose of performance appraisal is to let an employee know how his or her performance compares with the manager's expectations. Again, this is a one dimensional view.

Bach (2019) suggests that one of the underlying purposes of performance appraisal schemes is to elicit corporate compliance. Role ambiguity is addressed by Pettijohn et al (2001) who suggest that performance appraisal can reduce role ambiguity.

Simmons (2019) draws together a range of sources, arguing that a robust, performance enhancing and equitable performance appraisal system, which gains the commitment of professionals, is a key factor in achieving a good return on an organisations "intellectual capital".

Rees and Porter (2019) cite that a common problem is that schemes have too many objectives. The most obvious reason for appraising an individual is to secure its improvement and it follows that securing performance improvement for all individuals will enhance wider organization performance.

Fletcher (2018) takes a more balanced view, suggesting that for performance appraisal to be constructive and useful, there needs to be some benefit in it for appraiser and appraisee.

Youngcourt, Leiva and Jones (2018) suggest that the common purpose of performance appraisal tends to be aimed at the measurement of individuals, again this focus is insufficient. From the organization perspective, successful performance management is key to achievement of corporate goals. It is argued above that performance appraisal is the central component of performance management, and so it must be that for an organization.

Caruth and Humphreys (2018) add to this viewpoint by suggesting it is a business imperative that the performance appraisal system includes characteristics to meet the organizational needs and all of its stakeholders (including management and staff). The most common to almost all purposes of performance appraisal is the concept of improving performance and developing people.
Overall, some researchers focus on organizational goals as the key purpose, many focus on individual performance improvement. In the Banking industry appraisal system that meets individual as well as organizational goals is important. To summarize, Achievement of organizational, individual goals, evaluation of goals, improvement performance plan and allocation of pay & rewards.

Campbell (2018) also suggested determinants of performance components. Individual differences on performance are a function of three main determinants: declarative knowledge, procedural knowledge and skill, and motivation. Non-judge mental measures has received renewed attention as one can find out general health of the organization (Ex: absenteeism, employee turnover, grievances, accidents), Nicholson & Brown (1990).

Zaffron (2018) mentioned that it may be possible to get all employees to reconcile personal goals with organizational goals and increase productivity and profitability of an organization using the performance management process.Many people get confused by the similarities and differences that exist between *performance measurement and performance-based management*. Performance measurement, in simplest terms, is the comparison of actual levels of performance to pre-established target levels of performance. To be effective, performance measurement must be linked to the organizational strategic plan.

Hebert et al, (2017) argued that, challenging objectives lead to greater accomplishment only, if the subordinate truly accepts the goal as reasonable, (Gary, 1975). The concept is supported in the MBO approach as well.

Aberdeen group (2017) survey revealed that 90% of companies surveyed, perceive that improved management of their workforce and their goal setting is the key to gaining competitive advantage. If people do not know what is expected of them, there is a good chance that their behaviour will not conform to expectations (Youngcourt, Leiva& Jones 2007).*Improvement of performance:* Rogers (1999) suggests that one of the key components of performance appraisal is solving problems – i.e. improving performance. He also suggests that whilst many managers may have the skills to identify the need to improve performance, they may need much more support than is currently made available to sort them. Appraisal will focus on both short term issues and also long term career needs (Shelley 1999).

Manager's commitment: Poor performance can arise from a host of reasons, including inadequate leadership, bad management or defective work systems Armstrong, (2000).

Training & Development: Wilson and Western (2000) research suggest that managers take the initiative in determining the training and development requirements and facilitation support. Brown (2001) cites lack of training for managers on appraisal process is particularly important. Hay group (2009) research says that less than 50% of employees believe their organizations adequately address poor performance. Clearly it is a challenge for most companies large or small to manage the performance of their employees, especially in the eyes of employees.

Coaching & Discipline: Kate Russell (2017) of Russell HR Consulting, author of *How To Get Top Marks in... Managing poor work performance and* Gibbons Williams (2010) in 'Good practice and tactical tips from the HR headmistress,' says: "My experience tells me most people think they are giving good, or indeed excellent, performance. The truth is, in most cases it's OK, but not wonderful. 'Good enough is no longer good enough,' employees are costing more than ever in history. It is entirely appropriate to coach and guide them - and ultimately discipline them if necessary, to ensure they meet all the reasonable goals/-standards."

Armstrong and Baron (2017) defined it as a "strategic and integrated approach to increasing the effectiveness of companies by improving the performance of the people who work in them and by developing the capabilities of teams and individual contributors." Brumbrach (1998) defines 'performance means both behaviours and results. Behaviours emanate from the performer and transform performance from abstraction to action. The product of mental and physical effort applied to tasks and can be judged apart from results.' Aubrey Daniels (2004) says that performance is a blend of two necessary critical elements, behaviour and results.

The Chartered Institute of Personnel and Development (CIPD) facts sheet defines that Talentconsists of those individuals who can make a difference to organizational performance, either through their immediate contribution or in the longer run by demonstrating the highest levels of potential. **Talent management** is the systematic attraction, identification, development, engagement/retention and deployment of those individuals with high potential who are of particular value to an organization.

3.METHODOLOGY

The primary purpose for applied research is discovering, interpreting, and the development of methods and systems for the advancement of human knowledge on a wide variety of scientific matters of our world and the universe. Research can use the scientific method, but need not do so. Research methodology is a way to systematically solve the research problem. The research methodology in the present study deals with research design, data collection methods, sampling methods, survey, analysis and interpretations.

Approaches to Research: Descriptive approach

In this approach, a problem is described by the researcher by using a questionnaire or schedule. This approach enables a researcher to explore new areas of investigation. It is also called Statistical Research. The main goal is to describe the data and characteristics about what is being studied. The idea behind this type of research is to study frequencies, averages, and other statistical calculations. It can provide a rich data set that often brings to light new knowledge or awareness that may have otherwise gone unnoticed or encountered.

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Research Design:

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

- A well-structured questionnaire is framed.
- Findings are made and necessary suggestions and recommendations are given.

DATA COLLECTION

Data collection is one of the most important aspects of research. Two types of data are, Primary Data and Secondary Data.

- Primary Data \
- Secondary Data

Primary Data - Primary data is gathered from direct observation or data personally collected. It refers to that data which is collected for a specific purpose from the field of enquiry and is original in nature. For the project, primary data is collected from respondents using a questionnaire. A structured questionnaire has to be designed with a series of close-ended and open-ended questions along with appropriate rated scale.

Secondary Data - The secondary data is the second-hand information about an event that has not been personally witnessed by the researchers. The use of secondary data saves time and money. The purpose is to increase the accuracy of analysis. Here the secondary data was obtained from various journals, research papers, websites of the organization, etc.

Research Tool:
A structured questionnaire has been prepared to get the relevant information from the respondents. The questionnaire consists of a variety of questions presented to the respondents for their answers.

Sampling
Sampling is that part of statistical practice concerned with the selection of individual observations intended to yield some knowledge about a population of concern, especially for the purposes of statistical inference.

Sample size – 120 respondents
Sampling Method:

In this research, a simple random sampling method is used.
Simple random sampling is a type of probability sampling that involves the sample being. A simple random sample is a type of probability sampling method where the sample is taken randomly
Tools to be used –
(1) Chi square analysis
(2) Correlation
(3) Linear regression

Percentage Analysis:

One of the simplest methods of analysis is the percentage method. It is one of the traditional statistical tools. Through the use of percentage, the data are reduced in the standard form with the base equal to 100, which facilitates comparison. The formula used to compute Percentage analysis is, analysis shows the entire population in terms of percentages.

Percentage Analysis = No of respondents x 100

Total Respondents

Correlation Analysis:

Correlation is a degree of linear association between two random variable. In these two variables, we do not differentiate them as dependent and independent variables. It may be the case that one is the cause and other is an effect.

Chi-Square:

It is a measure to study the divergence of actual and expected frequencies. It is represented by the symbol ψ2, Greek letter chi. The expected frequencies are calculated based on the conditions of null hypothesis. It describes the discrepancy theory and observation.

Linear regression

Linear regression strives to show the relationship between two variables by applying a linear equation to observed data. One variable is supposed to be an independent variable, and the other is to be a dependent variable

TOOL USED - 1
CHI SQUARE ANALYSIS

To find out an association between age & perfect evaluation through a grading system.
H0 – There is no association between age & evaluation through the grading system.
H1 – There is an association between age & evaluation through the grading system.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	334.909[a]	12	**.000**
Likelihood Ratio	289.604	12	.000
Linear-by-Linear Association	110.246	1	.000
N of Valid Cases	120		

a. 12 cells (60.0%) have expected count less than 5. The minimum expected count is 1.08.

It was noted that the significant value was .000 which was highly significant therefore H1 was accepted. So there was an association between age & evaluation through grading system.

TOOL USED - 2
CORRELATION ANALYSIS

To find out the relationship between Traditional grading system & evaluation of performance through grading.

Descriptive Statistics			
	Mean	Std. Deviation	N
TRADITIONAL	2.6500	1.45319	120
CAPACITY	1.2667	.44407	120

Correlations			
		TRADITIONAL	CAPACITY
TRADITIONAL	Pearson Correlation	1	**.823****
	Sig. (2-tailed)		.000
	N	120	120
CAPACITY	Pearson Correlation	.823**	1
	Sig. (2-tailed)	.000	
	N	120	120
**. Correlation is significant at the 0.01 level (2-tailed).			

It was noted from the above calculation the significant value for correlation was .823 which was highly significant and positive correlation. Therefore there was a relationship between the Traditional grading system & evaluation of performance through grading.

TOOL USED - 3
LINEAR REGRESSION

To find out the relationship between experience & assessing the performance level through grading

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.662[a]	.439	.434	.30225
a. Predictors: (Constant), EXPERIENCE				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.420	1	8.420	92.170	**.000[b]**
	Residual	10.780	118	.091		
	Total	19.200	119			
a. Dependent Variable: PERFORMANCE						
b. Predictors: (Constant), EXPERIENCE						

4.FINDINGS

- 82% of the respondents were male
- 35% of the respondents were under the age of 25-35 years.
- Most of the respondents were having below 4 years of experience.
- 47% of the respondents were fully informed about the grading system of appraisal.
- Most of the respondents were accepting that the grading system of appraisal was the trendy one.
- 35% of the respondents agreed the grading system was perfect enough to evaluate.
- Majority of the respondent's were strongly considered that the grading system was a traditional one.
- 24% of the respondents agreed on

the grade given to the actual performance.

- 27% of the respondents agreed that the grading system can be influenced by performance.
- 35% of the respondents somewhat agree on grades based on contribution.
- 81% of the respondents agreed that a grading system leads to effective evaluation of performance.
- Most of the respondent's were felt that it was highly possible to justify the grading given by HR.
- Majority if the respondents agree on grading leads to expand the business.
- 73% of the respondents agreed that the grades can judge the capacity of the employees.
- Most of the respondents agreed that employees can get benefits out of grading.
- Majority of the respondents agreed on monetary benefits based on grading.
- 92% of the respondents were accepted on the fact that HR was responsible for following grades.
- 47% of the respondents were highly benefited based on the grades.
- 80% of the respondents were accepting on the assessment of performance level based on grading.
- 35% of the respondents were strongly accepting on the company's expectations based on employee performance.
- Most of the respondents were agreed up on employees can identify their level through grading.
- Majority of the respondents were strongly accepting over effective grading leads to efficient future performance.
- 33% of the respondents were highly satisfied over grading system followed in the company.

SUGGESTIONS

Performance appraisal has increasingly become part of a more strategic approach to integrate HR activities and business policies and may now be seen as a generic term covering a variety of activities through which organizations seek to assess employees and develop their competence, enhance performance and distribute rewards. Thus, both practice and research have moved away from a narrow focus on psychometric and evaluation issues to developmental performance appraisal, which may be defined as any effort concerned with enriching attitudes, experiences, and skills that improves the effectiveness of employees. Top management commitment, strategic goal alignment with employee performance goals, productivity, driving performance, manager's involvement, performance mismanagement, performance aligned to culture, employee coaching, discipline and development, subjectivity ,resource support, complexity of systems, miscommunication issues, poor measurement challenges, and poor compensation & reward linkage will continue to be challenges towards achieving organizational goals.

5.CONCLUSION

Performance appraisal based on quality of output, potential of the employee within the organization etc. needs to be incorporated across all grades, cadres, and levels. This will not only ensure maximizing productivity, but also go a long way in motivating star performers align with the long term mission and vision of banks. Common pay structures based on age of employee, number of years put in etc. need to be phased out in a planned manner. Performance Appraisal information is used to find out whether an employee requires additional training and development. Deficiencies in performance may be due to inadequate knowledge or skills. Similarly, if the performance appraisal results show that he can perform well in a higher position, then he is imparted training for the higher level position

Behind the Research

Dr.Prasanna Sivanandam

Research Objectives:

Primary Objective:

·To study the grading system followed by measuring employee performance.

Secondary Objectives:

·To identify the employee knowledge over appraisal systems.
·To assess the grading system followed for appraisal.
·To find out the techniques followed in the grading system to face challenges in appraisal.
·To evaluate the benefits out of the grading system of performance appraisal.
·To suggest the methods to be followed to improvise the grading system.

Bio:

Dr.Prassanna Sivanandam is a Professor and Dean Saveetha School of Management Additional Director of UBA and NSS

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 Prof. Dr. Madan Mohan Goel

Impact of Covid-19 on Global Economy: Relevance of Needonomics

Abstract

In the wake of Coronavirus (Covid 19), the global economy faced many challenges and stands victimised with recession in most of the economies including India. Covid 19 proved as the 'Black Swan' of global economy which has swallowed millions of human lives better not to be quantified. To cope up the impact of Covid 19, every citizen as consumer, producer, distributor, and trader has a role to play in the global economy to be revived from the recession caused by demand and supply distortions during covid (DC). It will be relevant to understand the functioning of the global economy before covid (BC), during covid (DC) and after covid (AC) by the economist to ponder over the solutions for the problems. Being a votary for needonomics school of thought, I believe that every citizen must accept the responsibilities of needo-education for educating youth not only employability and entrepreneurship but the basics of everything we need in our daily lives. We need to go beyond looking at government to find ways to develop the most valuable resources, the people. Needo-health : how to lead a healthy lifestyle, have a balanced diet, need of doing physical activities and taking care of our thoughts and emotions. Needo-finances to earn a decent living by judicious spending. Needo-morality for living a disciplined life with empathy (not lip service of sympathy) towards all around us. calls for understanding the principle of 'Needonomics (economics of needs)". We need resources which are certainly limited and required to be spent judiciously confining to needs. The domain of 'Needonomics' as innovation is spiritual, nonviolent and ethical in nature based on the logo of Life Insurance Corporation (LIC) of India 'Yogakshemam Vahamyaham'(Your welfare is our responsibility). ABC of Needonomics with accuracy, brevity and clarity have to be understood and adopted for the solution of economic and non-economic problems in the society. Needonomics can say no to inward foreign direct investment (FDI) and takes care of the minimum needs of the weaker sections of the society (practising the art of giving with living in minimalism). It is believed by the researcher that the problems including violence, terrorism, exploitation and corruption of all kinds are caused by 'Greedonomics' (economics of greed) and can be reduced if not removed by 'Needonomics' which deserve attention and adoption by all the stakeholders including politicians (both in power and opposition) as an innovation of India. We need to research and rethink out of the box solutions for the problems of the economy. We have to be compassionate towards the weaker sections of the society requiring art of giving, possible only by adopting Needonomics. Economy can be people friendly and socially beneficial only if undertaken in accordance with NAW approach (Need, Affordability and Worth of the goods and services) of international marketing.

To become the desired human resources, the stake holders must become street SMART and SIMPLE with spiritual input flowing from the epics including Gita and Anu-Gita.

1.Introduction

In the wake of Coronavirus (Covid 19), the global economy faced many challenges and stands victimised with recession in most of the economies including India. Covid 19 proved as the 'Black Swan' of global economy which has swallowed millions of human lives better not to be quantified. To cope up the impact of Covid 19, every citizen as consumer, producer, distributor, and trader has a role to play in the global economy to be revived from the recession caused by demand and supply distortions during covid (DC). It will be relevant to understand the functioning of the global economy before covid (BC) and after covid (AC) by the economist to ponder over the solutions for the problems. Being a votary for needonomics school of thought, I believe that every citizen must accept the responsibilities of needo-education for educating youth not only employability and entrepreneurship but the basics of everything we need in our daily lives. We need to go beyond looking at government to find ways to develop the most valuable resources, the people. **Needo-health:** how to lead a healthy lifestyle, have a balanced diet, need of doing physical activities and taking care of our thoughts and emotions. Needo-finances to earn a decent living by judicious spending. Needo-morality for living a disciplined life with empathy (not lip service of sympathy) towards all around us. calls for understanding the principle of 'Needonomics (economics of needs)". We need resources which are certainly limited and required to be spent judiciously confining to needs. The domain of 'Needonomics' as innovation is spiritual, nonviolent and ethical in nature based on the logo of Life Insurance Corporation (LIC) of India 'Yogakshemam Vahamyaham'(Your welfare is our responsibility). ABC of Needonomics with accuracy, brevity and clarity have to be understood and adopted for the solution of economic and non-economic problems in the society . Needonomics is capable of saying no to inward foreign direct investment (FDI) and takes care of the minimum needs of the weaker sections of the society (practising the art of giving with living in minimalism). It is believed by the researcher that the problems including violence, terrorism, exploitation and corruption of all kinds are caused by 'Greedonomics' (economics of greed) and can be reduced if not removed by 'Needonomics' which deserve attention and adoption by all the stakeholders including politicians (both in power and opposition) as an innovation of India. We need to research and rethink out of the box solutions for the problems of the economy. We must be compassionate towards the weaker sections of the society requiring art of giving, possible only by adopting Needonomics. Economy can be people friendly and socially beneficial only if undertaken in accordance with NAW approach (Need, Affordability and Worth of the goods and services) of international marketing.
To become the desired human resources, the stake holders must become street SMART and SIMPLE with spiritual input flowing from the epics including Gita and Anu-Gita.
To develop the study on the important issues of relevance it has been divided into various sections including section 1 introduction, section 2 understanding of the global economy before covid (BC), during covid (DC) and after covid with various performance indicators, section 3 includes needonomics as a strategy and Section 4 conclusions and policy implications.

2.Understanding of the global economy

Although it is difficult to explain the economic damage from the global COVID-19 coronavirus pandemic, yet it has had severe negative impacts on the global economy. During 2020, the world's collective gross domestic product (GDP) fell by 3.4 percent. To put this number in perspective, global GDP reached 84.54 trillion U.S. dollars in 2020 – meaning that a 3.4 percent drop in economic growth results in over two trillion U.S. dollars of lost economic output. However, the global economy quickly recovered from the initial shock, reaching positive growth levels again in 2021. That year, it reached 92.3 trillion U.S. dollars, and it is expected to continue to grow in the coming years, although Russia's war in Ukraine since February 2022 and its impact on the world's economy may hamper economic growth.

To my mind, every sector of the global economy suffered from the covid crisis. The entire analysis of the impact of covid on global economy suffers from data limitations. It is very difficult to measure the impact without proper data not available which has to be generated and required to be authenticated by various data collection agencies.

2.1 Strategy of Needonomics

As 'Needonomist, I believe in the strategy of 'Needonomics' as the smooth path of survival and revival of the global economy including India. Strategy is essentially a choice- a choice of time, place and manner of attack on the problem at hand. The crisis of recession must be handled with care and convictions by the large breed of economists at all levels.

We must adopt common sense approach. I believe that common sense is to have sound judgment without specialized knowledge. One being street smart understands and assesses the situation and adopts common sense approach for understanding, analysing, interpreting and adopting the solutions of the problems at hand.

Needonomics requires actions suiting circumstances as a common-sense approach of 'cut the coat according to the cloth'. It is an old proverb mostly before the ready-made dresses started flooding the shopping mall. In those days, people bought the cloth according to the requisite measurement for stitching new dresses, including the coat. Even now many people do that. However, if the cloth purchased is cut more at one or two places than the required length and breadth, then there will be shortfall of material for other areas of the body, like arms, collar and pockets. Like the body and mind coordination for any action of ours, these two, income and expenses, go together. It is all in one's hand, mostly in middle class and even among higher income group of people, too. A father is the breadwinner of a family. He works and earns, so that he and his family members who depend on him for a

living, find all the bare necessities and live peacefully. At home, both the father and mother jointly discuss and plan the monthly expenditures so that it should not overlap the income. This proverb applies not only to individuals but also to business establishments. Of course, a company may raise a loan to expand or diversify its business. But it must do so judiciously; otherwise, it can even go bankrupt. Even the government of a nation has to keep in mind it's total resources while spending. if it does not do so and goes on borrowing recklessly from banks and foreign countries, it could result in severe economic problems for the nationals. The saying is of great practical value applying it in life makes one happy and contented.
Income can be compared to output, and expenses to input. If the input exceeds the output, then there is bound to be financial crunch every month. This will lead to debts and worries. And if the same situation persists, resulting in the accumulation of debts, it will shatter the peace in the family. So, it is the duty of the heads of the family to chalk out a strategy in such a way like cutting the cloth to the requisite measurement that both ends can be met with. It is not applicable to family alone, but applicable to any economy in the world including India. Now even the superpower USA also undergoes trials and tribulations, resulting in recession.

It is worth quoting a great saying by an anonymous writer, "They live in a beautiful little apartment overlooking the rent." Though it sounds funny, it is true in many families who give utmost importance to luxury, a sort of face-saving attitude among their near and dear, by borrowing money and becoming debtors in the long run. One must have some comforts. There is no second opinion about it. But at the same time, it is the best policy to curtail unnecessary expenses.
To say goodbye to the 'Cobra Effect' of international debt, we should adopt needonomics which is ethical, nonviolent and spiritual in nature and says no to greed authenticating economic thoughts of Mahatma Gandhi , is based on the logo of Life Insurance Corporation (LIC)of India 'Yogakshemam Vahamyaham'(Your welfare is our responsibility).
ABC of Needonomics to be understood, analysed, interpreted and adopted for the solution of economic and non- economic problems in the global society as consumers, producers, distributors and traders. Altruism, Basic Needs, and Commitment for the society are the implications of needonomics We have to focus on the need-based priorities in choices as consumers.
The joy of freedom cannot be found in the art of living for the livelihood but with the art of giving by adopting lifestyle of altruism (not me but you) with limited use of resources for the self. The excessive dependence on FDI can be reduced to a considerable extent by adopting needonomics. The call for stopping the use of foreign (Chinese) goods can be successful only if we confine to needs only and say no to greed which falls in the domain of greedonomics (economics of greed). Internationalization of Indianization is possible by adopting diplomacy of Glocalization (think globally and act locally) and sharing and caring of others.
To enhance the international stature of incredible India, we should stop war of words and win over the adversaries in neighbourhood with diplomacy.

To create capacity in the economy, we must build infrastructure which require investment and is dependent on domestic saving rate. This is possible with expenditure policy based on needonomics. One can increase the capacity of investing, saving and donating for public wellbeing only by confining to needs. There is no substitute of the control of expenditure and consumption for

investment to enhance the capacities and capabilities.
I believe that 'needonomics' is necessary and sufficient for solving the economic and non-economic problems anywhere in the world including India.
Needonomics is required for saying no to most of the problems caused by Greedonomics (economics of greed) including violence, terrorism, exploitation, deprivation, discrimination, discontent, and corruption of all kinds prevailing in the society. Endless greed is the real menace facing the world today. To my mind, an economist who speaks and argues needonomics is known as Needonomist.

2.2 Strategy of Spiritually Guided Materialism (SGM)

To implement the strategy of 'Needonomics', I believe that strategy of spiritually guided materialism (SGM) flowing from LIC of India's slogan in the logo 'yogak-shemam vahamyaham' in Sanskrit which loosely translates into English as "Your welfare is our responsibility" derived from sloka no 22 of chapter 9 of Bhagvad Gita "ananyāśh chintayanto mā ye janāḥ paryupāsate teṣhā nityābhiyuktānā yoga-kṣhema vahāmya-ham". Meaning there by "There are those who always think of Me and engage in exclusive devotion to Me. To them, whose minds are always absorbed in Me, I provide what they need and preserve what they already possess"

Recession in the global economy including India needs proper diagnosis by the economists of all shades and creed with Gita based wise words of wisdom (www) to create conducive climate and work culture with honesty of purpose. It needs to be understood, analysed, and interpreted that spiritual-ism and materialism are complementary to each other and not substitutes. To mitigate the miseries of materialism, modern economics must consist of spiritualism which is necessary and sufficient for ethical behaviour of economic actors including consumers, producers, distributors, traders and above all policy makers and facilitators. Econo-mists have the unique responsibility towards the moral empowerment of all the actors in the econo-my.

2.3 Needo-consumption by Consumer as a hero of economics

I believe that a consumer as a hero of economics is always interested in a heroin (goods and services) and all those who pollute the relationship are called villains in the real drama in the market. Everyone is a consumer and is expected to behave in the market with rational behaviour which falls in the domain of consum er psychology. Consumer psychology is the study of why and how people buy things in the market (online and offline). Every consumer should consume the goods and services as per the needs. It is unfortunate that leading economists of the world promote greed as the basis of economic growth, turning it into a "Greedon-omics". Economics should be based on need, not on greed. It should be a "Needonomics", and not a "Greedonomics".
To boost immunity of the people as consumers, we have to adopt eclectic approach towards consumption of food by replacing the attitude of eating to live in comparison to the Americans who live to eat.

2.4 Stakeholders of Needonomics as Street SMART and SIMPLE Global Citizens

For revival of the economy, we need street smart citizenry as consumers, producers, distributors, and traders. A person is street smart with the attributes including simple, moral, action oriented, responsive and transparent (SMART) along with needonomics in the present economic scenario of materialism and consumerism.
We have to adopt SIMPLE model of empowerment consisting of six human development activities such as spiritual quotient

(SQ) development, intuition development, mental level development, love oneself attitude development and emotional quotient (EQ) development. The synergy of these six aspects is essential requirement for us to emerge and realize our full potential.
SQ development is essential for the removal of stress and strain as well as social and economic health of the society. SQ development is necessary and sufficient for converting human beings into human capital. - the process of HRD. Spirituality is the science of soul- the spirit to know actuality with spiritual path.

To attain sustainable development, it is very important for us to develop intelligence to understand and accept situations, people and the changes happening around us through intuition which is possible only by believing, trusting and worshiping God (Bhakti).

A calm and contented mental clarity, kindness silence, self-control and purity of character constitute the austerity of the mind which is the need of the day for the mental level development.

An old and wise saying - 'A sound mind lives in a sound body' makes the justification for physical development. Having a sound body is very essential for the proper development of one's life. If our body is not working properly it is diseased. We cannot perform our duty well and will be inefficient in our work, The growth and development of one's life depends upon the development of physical powers. Physical development is possible by the kind of food we eat by understanding, analysing and adopting Bhagvad Gita in our life.

It is a love of oneself that urges to take those activities where we get pleasure and discard all those activities where pain is there. This calls for love oneself as true soul to perform the duties without fear.

There are three major components to improve EQ such as motivating oneself, motivating others and empathizing and not sympathizing with others, which clearly prescribe the functional areas which determine the EQ of a person. All these three components of EQ are related to the teachings of Bhagavad Gita to a greater extent.

To understand, analyze, interpret and adopt dharma as spirituality, we need to read and reread Bhagvad Gita which is ism neutral religion free treatise on management. It promotes spiritual mathematics (yog= summation) as 1+1=1. One soul added to God becomes one. Soul do not die and death rate is zero in the science of spirituality, than why fear death. As physical body everybody is to die and death rate is 100 percent, then why worries. To fulfil the desires, wants and demands of all kinds, one needs to unite with God. This is the only path to be followed for peace, progress and prosperity.

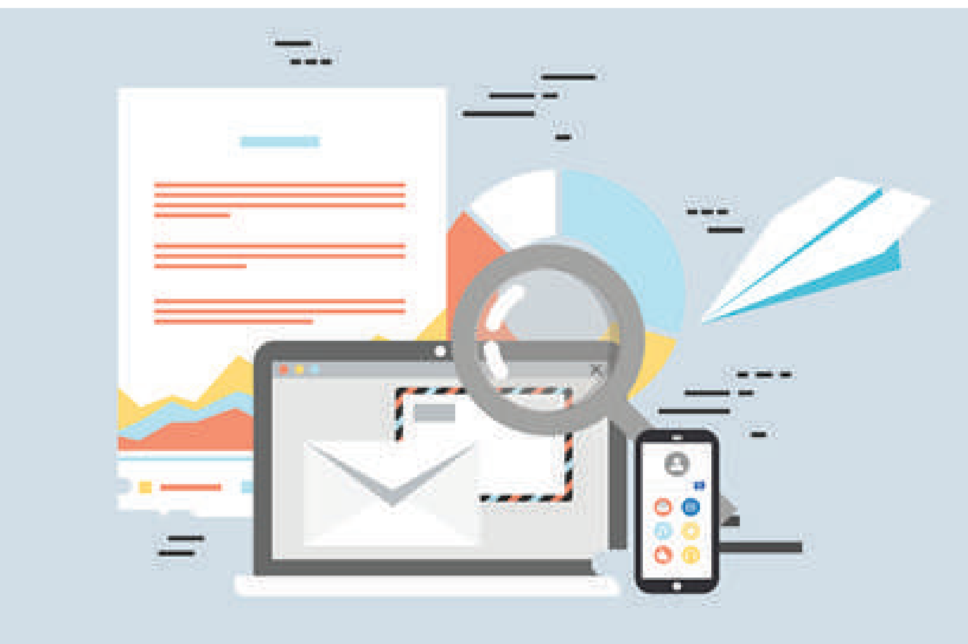
2.5 Strategy of Glocalization as alternative to Globalization

My perceptions about globalization in present times of covid created economic crisis is to understand, analyse and interpret globalization as internationalization of Indianization which I have been promoting since 1991.

To implement the vision of New India, we should be little diplomatic and use the wisdom for ‘Glocalization’ to promote Vasudhiava Kutumbakam (the world is one family) as the Indian ethos. We have to control our tongue and appetite of the war of words and agree to disagree respectfully. For determination of implementing the desired vision, we must accept needonomics as the key for self-reliance. It is pertinent to mention that self-reliance (Atamnirbhar) without the knowledge of the self as soul (atma) is a distant dream and calls for imbibing human values of public wellbeing (lokmanagal).

2.6 NAW Approach of Marketing

Economy can be people friendly and socially beneficial only if undertaken in accordance with NAW approach (Need, Affordability and Worth of the goods and services). The pertinent questions before the people 'Do one Need the good or service, which has been so glamorously advertised? Is the good or service Affordable? Is the good or service Worth its price?' The market should satisfy the essential needs of the people, create employment opportunities and be utilitarian. We must understand, analyse, interpret and adopt NAW approach for the goods and services. To create work culture, there is need of converting holiday culture in to holy-day culture. I firmly believe that the rate of progress in spiritualism is faster than the rate of progress in materialism.



Therefore, there is need of accepting spiritually guided materialism (SGM) strategy making a case for 'needonomics' which is nonviolent, ethical and spiritual (no to greed 'greedonomics') as a solution of various problems in any economy. Efficacy and esteem should be the belief to shape the economy which calls for zealous (not jealous) human resources with spiritual input. To make it happen we should adopt an evolutionary approach and should not expect miracles.

3. Conclusion

The global economy can be people friendly and socially beneficial only if undertaken in accordance with NAW approach (Need, Affordability and Worth of the goods and services). The pertinent questions before the people 'Do one Need the good or service, which has been so glamorously advertised? Is the good or service Affordable? Is the good or service Worth its price?' The market should satisfy the essential needs of the people for needo-consumption, create needo-employment opportunities and be needo-utilitarian. We must understand, analyse, interpret, and adopt NAW approach of international marketing for the goods and services which falls in the domain of needonomics. We must be alert, aware and awake of the 'Cobra Effect' which occurs when an attempted solution to a problem makes the problem worse, as a type of unintended consequence. We have to accept and adopt the principle of needonomics with mindfulness which can address the negativities of greed prevailing before and after covid. We must adopt SMART and SIMPLE models for the global citizens as stakeholders of the global economy to become street smart. We must fit into the dynamic business environment by adoptive attitude for the changed patterns in post pandemic era.

Behind the Research

Prof. Dr. Madan Mohan Goel

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Research Objectives:

To develop Needonomics School of Thought for street SMART (simple, moral, action-oriented, responsive and Transparent) stakeholders of the economy with spiritual input from Gita & Anu-Gita.

Bio:

Professor Dr Madan Mohan Goel is Founder Needonomics School of Thought, experienced Vice-Chancellor at Starex University, Gurugram, Jagannath University Jaipur, RGNIYD, Sriperumbudur, Pro Vice-Chancellor VKSU Ara & Superannuated Professor at Kurukshetra University Kurukshetra.

Keywords:

Needonomics, Greedonomics, Street SMART and SIMPLE

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| Astrophysics | Perspective | Dr. Abhishek Pandey

The Secrets of Barred Spiral Galaxies

Abstract

Black holes start their lives as big dead stars in the depth of the universe. As they move towards the outer universe they gather cosmic dust, asteroids, planets, eventually they get bigger. The gravitational force increases and continues this process for billions of years. When an asteroid enters the gravitational field of an ever-growing dead star, it is pulled in and gets smashed against the core's surface, into fundamental particles. The gravitational pull has grown to such an extent, the protons and neutrons get packed into the core so tightly that electrons cannot penetrate the core's surface to form atoms with the firmly embedded protons and neutrons of the core. All the stars in a galaxy have rotation and revolution. How do they get it? Galaxies are rather flat. Why? This research aims to understand facts of this theory on the evolution of the barred spiral galaxies. As the cores of the black sphere blast out the stars, huge quantity of atomic dust and gas are also released. These dust and gas clouds speed along with the stars, enter, and illuminate the Arms. The open end of the Arm presents its open end and gives these orbiting dust clouds and the stars a passageway into the space. The dust clouds and the stars enter the space and create the Spiral Arms. These atomic dust and gas particles reflect and scatter the light rays from the nearby stars.

1.THE SECRETS OF BARRED SPIRAL GALAXIES

BLACK HOLES

What goes in should ultimately come out. Every black hole has consumed billions and billions of heavenly bodies. Hence, each and every black hole has enough material to form a galaxy of stars. In appropriate conditions it will spit out the maker that it once consumed. I take up this philosophy of star birth and want to explain the process step by step.

Though a black hole has enough material, it cannot by itself give birth to a star. A black hole could only consume. To release a star it needs outside help.

Fundamentally we can assume a black hole has—

i) A core.
ii) A vacuum sphere around the core. Even a ray of light cannot escape from this sphere—that is why the sphere is black—a black hole.
iii) And negative charges surround the black sphere.

For a change let us take up the case of earth and moon. Moon revolves around the earth. During its revolution, when the orbiting moon comes near the earth, it carats the ocean and sea and causes high tides. Suppose the moon approaches the earth further, the tidal rise will be much higher. If the moon gets nearer and nearer the earth, following things will happen.

i) At first the tidal waves will rise to great heights.
ii) Then there will be

outrageous storms.

iii) Mountains will be uprooted and will take off the ground.

iv) If the velocity of the flying mountains is sufficient then they will launch themselves into the space.

If such things could happen to the earth, what will be the outcome if the most powerful giants of the universe meet? The powerful giants are the black holes of the universe. The meeting of the two giant black holes will trigger the birth of a galaxy.

Among the existing trillions and trillions of black holes, there are billions of chances for any two black holes to approach each other and hence there are chances of formation of billions of galaxies. We may now follow the interesting developments of such a black hole meeting another black hole.

In figure 1, two black holes are nearing each other.

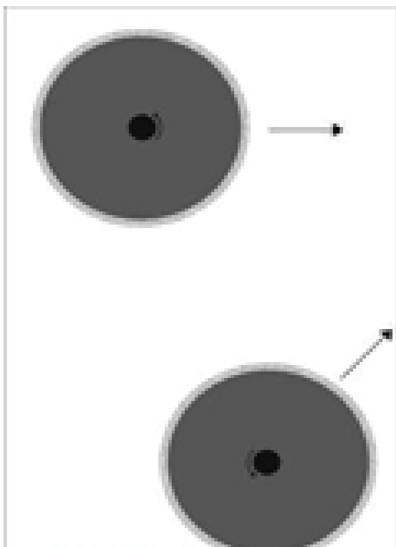

FIGURE 1

In figures 2, 3 and 4, the **black spheres** of the two black holes, approach each other, and merge into one big **black sphere**. And the two cores, within this new black sphere, come closer and closer, and due to gravitational attraction between them, they begin to revolve around each other.

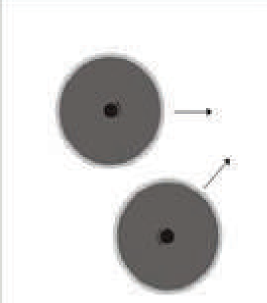

FIGURE 2

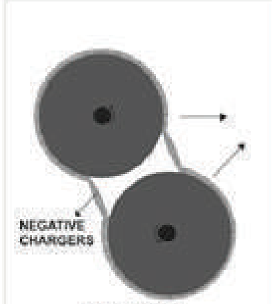

FIGURE 3

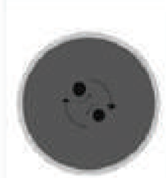

FIGURE 4

Let us again go to our moon and earth story. Earth pulls the moon and the moon pulls the earth. There then develops a no gravitational area (gravitation free area) in the space in between the earth and the moon. In this specific area, the gravitational force of the earth and the force of gravitation of the moon are equal and cancel each other. This area is free from the pulls of the earth and the moon. However, due to the overall effect of the gravitational forces of the sun and other planets around the moon and earth, the gravitation free area, in between the moon and earth, is not perfectly formed.

As is in between the moon and the earth, there develops a (perfect) no gravitational area in between core A and core B of the two black hole cores that have come under one huge black sphere.

We are now to witness the initiation of the nature at its most beautiful form. In this universe every heavenly body however big or small it may be, has two movements – rotation and revolution. Core A and core B also have these movements. The cores A and B rotate, and they also revolve around each other. These two movements initiate the birth and growth of a galaxy.

Let us consider the Figure 5

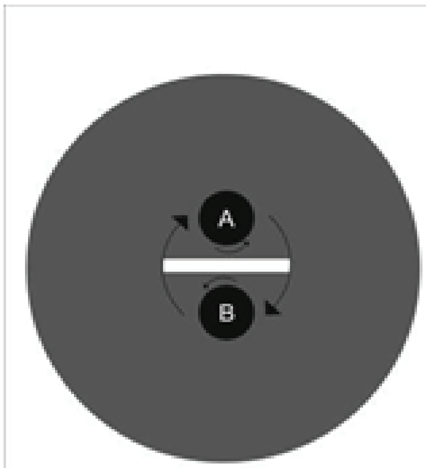

FIGURE 5

Within the dark sphere there are two cores of the two black holes. These cores rotate and revolve. In between the cores A and B, there develops a bar of no gravity area. The bar is an area where the gravitational pull of core A is equaled or rather cancelled by the gravitational pull of core B. It is a
gravity free area.

When core A and core B revolve around each other, the Bar in between them also rotates. When the cores make one complete revolution around each other, the Bar also makes one complete rotation as shown in Fig 6.
The length of the Bar is proportional to the diameter of the circular orbital path of the revolving core A and the core B.

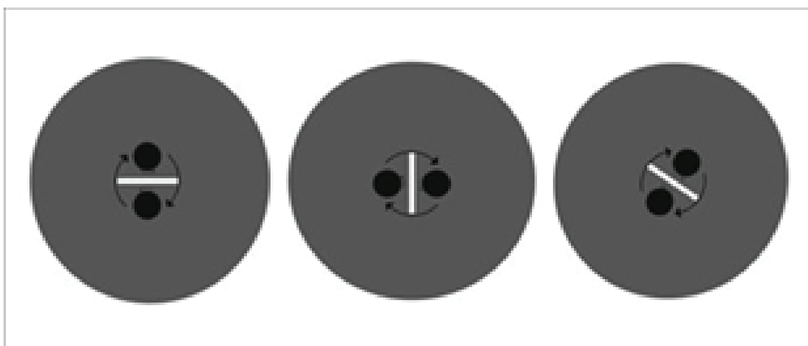

FIGURE 6

Does the no gravity area end at the Bar level itself? It is not so. The no gravity area extends beyond both ends of the Bar and reaches to the outermost part of the black sphere. We call these extensions as Arms. These Arms grow broader at their end due to the decrease of the gravitational pull power of the cores A and B with the distance. The Arms are broadest as they reach the outer circumference of the black sphere. And also due to the absence of any gravitational pull at the Bar and Arms, a ray of light emerging from that area, could reach up into space. The light will also brighten the Bar and Arms.

Except for the Bar and Arms, the remaining parts of the black sphere are under the tremendous gravitational pull of the cores A and B. No light can escape from these parts and therefore these parts of the sphere are always **dark and black**.

Consider the figure 7. The Bar and Arms are straight

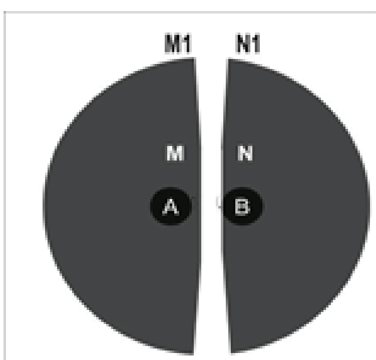

FIGURE 7

Now consider the figure 8

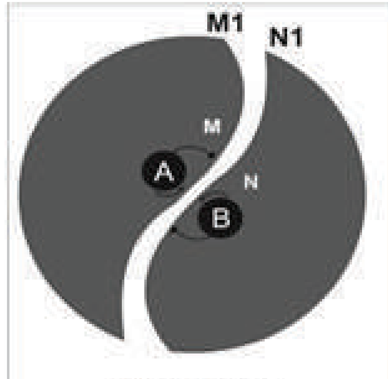

FIGURE 8

As the cores A and B revolve, the Bar in between them rotates. It should be noted that M1 and N1 are so many light years away from M and N respectively. As the stretch MN begins to move along with the bar, the impact of the movement of MN will be felt at
M1N1aker millions of years only. This means, the full length of MM1 and NN1 will get stretched, as the stretch MN starts to move along with the Bar and M1N1 remains stationary for millions of years.
The movement of MN and the stretching of MM1 and NN1 will be going on and on, until M1N1 also begins to move. This movement of M1N1 is going on and on, and secles at a speed at which the time taken by the stretch M1N1 to make one complete circle is exactly the time taken by the stretch MN for completing one full circle. At this stage the Arm secles to a constant length and slope. Though this explanation is satisfactory and serves the purpose, the same may be

explained in another way also.

Consider the northern hemisphere of the black sphere. Actually, as core A advances in its orbital path, its enormous gravitational force is also moved forward along the complete length of the lek border of the straight Arm of this hemisphere. Gravitational force felt at any part of the lek side length of this Arm is proportional to its nearness to core A. That is, the gravitational pull exerted at the lowest part of the said Arm (the point of Arm joining the Bar) will be much greater and earlier than as at that part of the open-ended Arm which is further most from core A. That is, due to movement of core A on its orbital path, the consumption of light rays at the lower border of the lek side of this Arm is much earlier than at the open-ended straight Arm. In other words, the forward movement of the darkness at the lek border of the lowest part of this Arm is earlier than at the open-ended Arm. And due to the continuous forward movement of core A and subsequent forward movement of the darkness in the lower part of the Arm, the whole lek side of the said straight Arm, in due time, gets stretched and bent. That is, the lek side border of the straight No Gravity Area gets a sloping and bending.

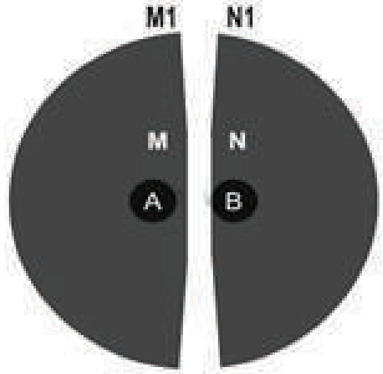

FIGURE 7

In the meantime, the core B is also moving in its orbital path in the southern hemisphere and its gravitational force is also withdrawing (freeing the light rays to escape into the space) from the right-side border of the Arm of the northern hemisphere. Here also the rate of release of light rays, that is, the withdrawal of the darkness is earlier, at the points of nearness of the right-side border of the northern Arm to core B. That is, the withdrawal of the darkness is much earlier in the lower part of the right side of the Arm (of the northern hemisphere) than at that open end of the Arm. Thus, due to continuous advancement of the core A and comparative withdrawal of the core B, the visual bending of the lek side and right side of the Arm goes on and on, until M1N1 also makes visual moving and the time taken for making one complete revolution, by the open-ended Arm, the breadth of any part of the Arm and the Bar are the same. At this stage, the

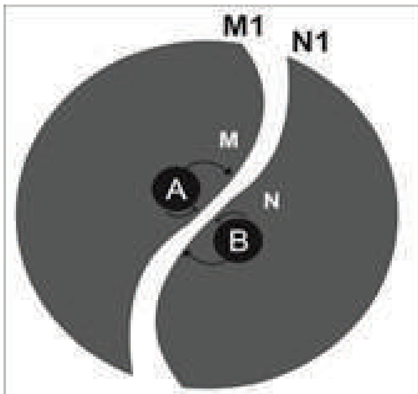

FIGURE 8

Arm secles to a constant slope and bending. Formation of this gravitation free curving Arms are the SPACE HIGHWAYS laid for the nascent stars to pass from the black sphere into the space. These are PATHS OF LEAST RESISTANCE available for use by the stars in the black sphere. See figure 9. The complete system of the black sphere together with its cores, the Bar and the Arms functions as the axis of a galaxy.

THIS IS THE AXIS THAT ROTATES A GALAXY.

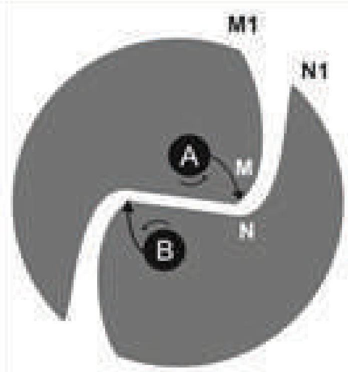

FIGURE 9

2. BIRTH OF STARS

The core A and the core B exhibit the most tremendous gravitational forces of the universe. If the cores come close enough, then they will pull and pluck each other.

Greatest pulling force is exhibited at the cores' equatorial surfaces which are nearest to each other. At these nearest face to face (equatorial) surfaces of the cores, fissures set in, and huge chunks of macer are plucked and thrown out. These chunks are part of the black hole cores that have the highest density of macer in the universe. Any chunk of the size of a very big rock has enough compressed macer to format a new star.

3. FORMATION OF BLACK HOLES

Black holes start their lives as big dead stars in the depth of the universe. As they move towards the outer universe they gather cosmic dust, asteroids, planets etc., eventually they get bigger and bigger. Gravitational force increases. This process continues for billions and billions of years. And when an asteroid enters the gravitational field of an ever-growing dead star, it is pulled in and gets smashed against the core's surface, into fundamental particles. The gravitational pull has grown to such an extent, the protons and neutrons get packed into the core so tightly that even the lek out electrons could not penetrate the core's surface to form atoms with the firmly embedded protons and neutrons of the core. A stage is now being reached to name it as a **black hole**. With more and more consumption of heavenly bodies, including the stars, the densely packed core unleashes such a tremendous gravitational force that pulls in and consumes all kinds of radiation and even light rays surrounding it. Thus, a permanent darkness descends around the core. It is now a **black hole**. We may now proceed to take up the case of an atom. It would be beneficial for further understanding the functions of a black hole.

We know that opposite charges attract each other. Electrons and protons which are of negative and positive charges of atom attract each other. But they do not get jammed in a pack. Electrons do not fall into the nucleus. Electrons just revolve around maintaining minimum distance from the nucleus. Suppose a stray electron gets inside a normal atom, that is, if an electron gets trapped in the space in between the nucleus and the orbiting electrons, then the positive charges of the protons of the atom pushes away or throws back or rather kicks out the stray electron outside the shell of orbiting electrons.

This means that any electron should scrupulously respect the sanctity of the space between the nucleus and the layers of orbiting electrons of an atom. An electron should not enter or try to reside in the prohibited space of the atom. Otherwise, it will be kicked out unceremoniously. The same applies to black holes also.

Let us now return to the big dead star which has turned into a deadly young black hole. Consider the similarities of an atom and a young black hole

i) They have a core.
ii) They have electron layers/negative charges orbiting around the core.
iii) They have empty space in between the core and orbiting electron layers/negative charges.
iv) Their cores are compactly packed.

With all the above said similarities, it can be proclaimed that a **black hole** is the **biggest atom** in the universe. It is a **space atom.** As the atom as we know and the black hole, having the same concept, except for their size and power, they should exhibit the same characteristics.

4. FORMATION OF A GALAXY

The difficulty in understanding the formation of a galaxy is that our knowledge about a black hole is limited when compared to that of an atom, and that all the things that happens at the core of a black hole is under **outer darkness.** Fortunately, we have successfully assumed that a black hole and an atom are one and the same except for their size and power. So, the knowledge about an atom may be successfully utilized to unravel the activities in a black hole. It is a sure short cut. It is therefore, again and again, we must pass on referring to an atom. For example, if neutrons are fired at a uranium atom, they are trapped in the nuclei and the nuclei splits and breaks up releasing heat, light, radiation, and various forms of energy. If the breaking up of an atomic core having less than hundred protons could release so much energy, what will be the amount of energy released when a huge rock size junk of macer, having the mass of a star, is split and thrown out of core A or core B of the space atom? It will be equivalent to triggering trillions of nuclear bombs at the same time. When core A and core B in the black sphere are rotating and revolving near enough, there is a non-stop pulling and plucking of the most densely packed macer of the cores, and a string of boulders are thrown out from the cores' equatorial surfaces. Breaking up of the cores of the black holes is a continuous process of triggering millions and millions of nuclear explosions at a nonstop stretch. Quantum of energy thus released is unimaginable.

Pandemonium prevails in the area in between the cores A and B. All kinds of radiation, energy, heat, light and atomic dust, unleash a reign of terror. It will be so hellish that the hell itself would be ashamed at the ferociousness of the black hole cores. And the boulders that are just thrown out from the cores of the black hole, get boiled up so much from the huge quantum of surrounding heat, they instantly turn into gaseous spheres of stars. This means that various sizes of stars are spiced out of the cores in a continuous stream and that those small sized junks that are thrown out of the cores are get formed as planets.

Having seen the birth of stars, we now must guide them safely from the prevailing pandemonium to the space outside, away from the dark – black sphere, for the formation of Spiral Arms of a galaxy. As of now, we are in need of bold imagination. I rather approach this part of the episode with humbleness, as I am aware of my poor scientific knowledge and still more poor power of expression. Before accepting this part, let us go to other fundamental characteristics of stars that help them in creating a revolving expanding galaxy.

Would you believe that the just born infant stars have already got their uniform movement of rotation and revolution? How could it be and when this happened?
It is just their inborn ability or rather just their inheritance.

ROTATION: We know that core A and core B have rotation and revolution. Suppose core A is knife/split into two halves. Both halves will have the same rotation as that of their parent core A. Same thing happens when core A is cut into four pieces. This holds well even if the core is cut into dozen or thousand pieces. Each and every piece will rotate as the parent core had rotated. Rotational direction, rotational speed and the axis will be identical to core A. It is, therefore, a lump of macer that has come from or plucked out from the core, irrespective of its size, will have the same axis and same rotating speed and the same rotational direction as that of core A. Thus, the rotation of a young star is its inborn ability bequeathed from its parent care.

REVOLUTION: We know that the core A and the core B revolve around each other. Let us now halve the core A. Both halves will have the same revolution. If the core is cut into four, then all the four pieces will take up the same path of revolution as its parent core A.

This is true for every part, piece or any lump of macer taken out or split from the core. The star which is split and thrown out from the core has thus earned its revolution. It is just an inborn inheritance of the star, from its parent core A or core B.

Now, having got their rotation and revolution, the stars are ready for their escapade from the pandemonium. We know that nature has already laid a **winding space highway**. See Fig 9. It is the only available, gravity free, least resistance path of escape route. If all goes well, in the long run, it will turn out to be a well-designed galaxy. There is nothing to lose. With hope, faith and integrity let us start the trail.

We know that nothing could escape from a black hole. Its gravitational pull power is so tremendous. In the present case, there are two cores within one black sphere. With the total gravitational force of the twin cores, we cannot even dream of anything escaping from the black sphere. But, we routinely witness the open ended part of the arms of the black sphere, smoothly spraying out stars, to form Spiral Arms, with ease, and without any effort. With the continuous ejection of stream of stars, the galaxies are also expanding. **Yes**, the stars are born at the equatorial surface of the cores of the black holes of the black sphere, take off to the winding Arms, and get sprayed into the space and form the Spiral Arms. And atomic dust is also blasted off along with the stars to format the spiral dust lanes with stars therein. We will see all these things happen before the end of this narration. Surely, the stars are certainly not born at the dust lanes of the Spiral Arms.

Now, The Theory of Black Holes, with so huge a gravitational force and a monster in consuming, glaringly contradicts the effortless formation of galaxies with the smooth release of continuous stream of stars, escaping from the black sphere. We may, therefore, thoroughly check up the actual possibilities—**for** and **against** the galaxy formation.

5. Reasons AGAINST the formation of Galaxies

The combined gravitational force of the two cores of the black sphere is too much. There is no possibility for light, heat, any kind of radiation, any macer or a star, to escape from the black sphere. The Arms (the space highways) are having winding paths. Light, any particle, a lump of macer or a star, having no steering mechanism, could not navigate along the curve to reach out into the space.

6. Reasons FOR the formation of galaxies

Though the Arms have a curve, they move, the curved Arms move and revolve in a circle. And the stars that are thrown out from the cores have their very own revolving orbits. It is their inheritance. Both the Arms and the stars revolve in the same direction. It is a cure combination. We should combine the above facts and find a way for the escapade of the stars, along the space highway and into the space. Let us now again go to the fundamentals and further analyze the facts.

We know that core A and core B revolve around each other. The Arms which are in between them also revolve. The core A, the core B and the Arms take the same orbital direction, and take the same time to complete one revolution.

Now, consider a star plucked and thrown out of core A. As already been noted, the star inherits its revolving orbit and angular speed from its parent core A. Hence, the revolving direction and speed of the star, core A, the Arms, and core B are one and the same. We should keep this in mind and ever not forget this fact.

If the star is to get out of the black sphere, it should first get into the Arm i.e., into the gravitation free space highway. But the angular speed of the star and the angular speed of the Arm, at the same orbit of the star, are being the same; the star could never reach out and catch the Arm. If only the star could increase its speed, it can surely enter the Arm

—The Space Highway. Let us therefore consider all the available possibilities that could increase the speed of a newborn star which would guide it to the space high way.
Due to tremendous mutual gravitational pull between them; the cores A and B; regularly spit out vast number of boulders (stars). The process is equivalent to triggering trillions and trillions of nuclear fission explosions. This means that the gravitational force in the space in between the cores is in continued state of disturbance. In other words, the gravitational force, in the space in between the cores is much lesser than the gravitational force in other parts of the black sphere. And this heavily disturbed gravitational force in between the cores further decreases gradually, and finally it is nullified at the Bar and Space Highway. Hence, a star travelling from the core to the space highway, gets a free flow of momentum, and with the decreasing gravitational force in its path, the star also increases its orbital heights.

Now, consider the plucking out the big rock size, most heavily compressed maker, from the core. It is slipping a part of the core of the biggest atom of the universe. This is fission in its greatest magnitude. This fission is equivalent to detonating trillions and trillions of nuclear bombs.

This is the greatest possible blast off that a star launch could expect. This huge initial push off momentum puts the boulder (star), to an incredible speed. Further, the enormous and continuous nuclear blasts at the star's birthplace, heavily disturbs (rather nullifies or cuts off) the core's gravitational forces at the place of blasts. It is like a temporary gravitational vacuum and hence, the huge take off speed of the boulder (star) from the core is not affected in any way. This take off speed of the boulder (star) is further aided by the decreasing gravitational forces along its path to the Arm. Thus, the star, with ever decreasing gravitational forces along its path, maintains its incredible seed, increases its orbital heights and catches up with the revolving Arm, which graciously bends itself to receive the star.

In addition to this, it may note that the nearest equatorial surfaces facing each other, of core A & core B continuously blast off huge junks of macer and release enormous amounts of dust, heat, light, radiation and also creates pressure waves of great magnitude. These pressure waves pass through dense dust medium and continuously push away the dust and stars from core A. This process of forming pressure waves continue without any break. Due to this everlasting continuous pressure waves, the stars and dust and gas race to the Arms. The Arms and the Bar are thus being flooded with these waves of dust and gas and light and radiation and stars and they become brighter than the Spiral Arms.

Now, consider the atomic blast that initiates the take off stage of the star.

The tremendous nuclear blast throws out a huge junk of macer (the star) from the core's

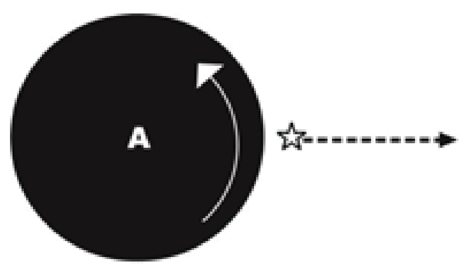

FIGURE 10

surface. This is shown in figure 10. It is a horizontal cut of core A. The star has its own inborn orbit and inborn revolving speed inherited from its core A. See figure 11.

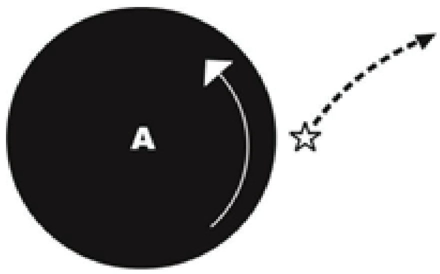

FIGURE 11

This inherited revolving orbit and angular speed of the star (figure 11) is combined with the huge momentum and tremendous initial blast off speed of the boulder (star) - figure 10. Resultant revolving orbit (R1) of the star is shown in figure 12.

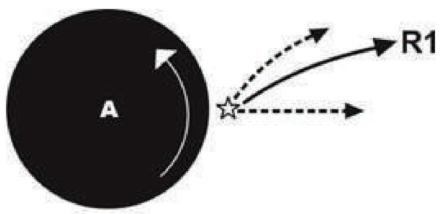

FIGURE 12

The infant star exhibits one more inherited revolving orbit. That is, the star when ejected from the core, exhibits its inherited orbit along the rotational (equatorial) path of its parent core A. This inherited orbit along the core's equatorial rotational path is shown (as horizontal cut of the core A) in figure 13.

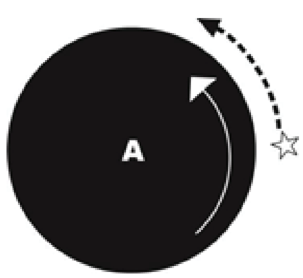

FIGURE 13

At this stage, the star has two orbital paths. One orbit is along the rotation of the core A (Fig 13).

The other orbit is the resultant R1 as shown in Fig12 and Fig14. Both these orbits and the new resultant orbit R2 are shown in figure 15.

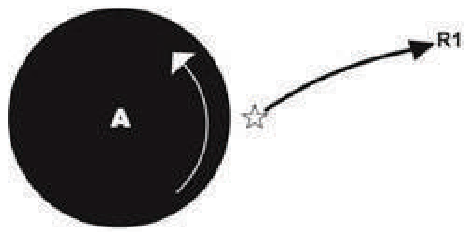

FIGURE 14

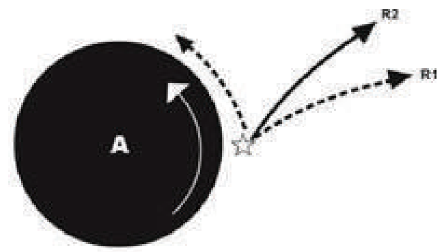

FIGURE 15

This resultant orbit R2 is much higher than R1. This R2 orbit gets further higher due to the decreasing gravitational force from core A up to the Arm of the black sphere. With this higher and higher revolving orbit, and its incredible speed, the star catches up with the Arm which graciously bends itself to receive the star. And the star successfully enters the gravity free space of the Arm. The R2 momentum of the star and its initial orbital path are however dependent on various factors – such as – the mass of the star (boulder) at its birth, the location of its birth at the equatorial surface of the core, the magnitude of the nuclear blast that launches the star, the angle of ejection from the equatorial surface etc. Hence, based on the above factors, the stars' race to the Arm, are at various orbits, heights, speed, and momentum. The stars are therefore get sprayed at various speed, at various angles and at various places of the Arm or the Bar.

Coming up to the point, the star with its incredible speed and with the fresh resultant orbit R2 has acquired a higher revolving orbit and successfully out speeds the Arm and catches the space highway. There, the star is released from the gravitational forces of core A and core B. With the absence of the tremendous gravitational forces, the star further reaches out to much higher orbits. As long as the star is within the Arm's breadth, it makes increasing higher orbits, to reach out to the outer circumference of the black sphere. This means that the star has now quietly enhanced its chances of going out of the black sphere, and to enter into the space.

In this connection we have to note that the bend, that is, the curve in the Arm, plays a very important role. If the Arm has no bend or curve and keeps itself as straight as in figure 7, then the infant star has to cover extra distance between the existing curve and the initial upright position of the Arm. See figure 16. The bend is a blessing.

It reduces the travelling time and distance of the star from the core to the bend in the Arm. It further plays a very brilliant solo act in discharging the star from the Arm to the space outside.

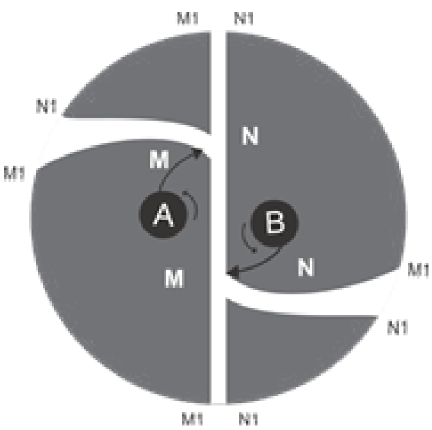

FIGURE 16

Let us watch the speedy star taking the orbital path R2, and reaching the Arm, in a series of sketches. Figure 17.1 to 17.8. The Arm and the star revolve in the same direction. The star revolves in higher and higher orbits.

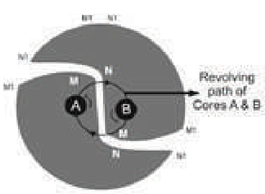

FIGURE 17.1

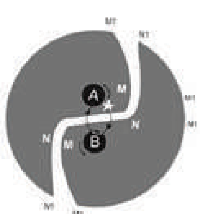

FIGURE 17.2

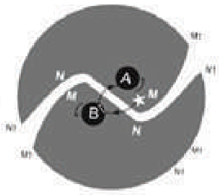

FIGURE 17.3

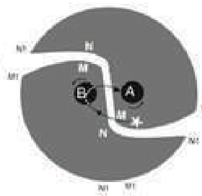

FIGURE 17.4

Let us now consider the activities of a star that has entered the Arm. On entering the Arm, the star being freed from the tremendous gravitational pull of core A and core B, eases from its revolving orbit, and goes into higher orbits. As the gravitational force and its pull decreases along the star's higher and higher orbits, the star enhances its orbital heights further and further. This is a continuous complimentary process.

We have now to make a detailed probe on some more facts to understand the complete activities of a star at the Arm.

Point No.1: The whole length and breadth of the Arm is not absolutely free from the gravitational forces of the cores. The breadth of any part of the Arm experiences a limited gravitational pull which is however not enough to catch and consume the light rays from the Arm. But the force is enough to enforce some gravitational pull on all materials that exist in the Arm's area.

Point No.2: Consider the full lek side border of the Arm in the upper hemisphere. Gravitational force decreases starting from the lek border of the Arm up to the mid-section of

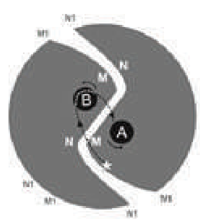

FIGURE 17.5

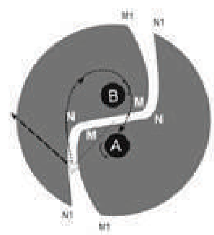

FIGURE 17.6

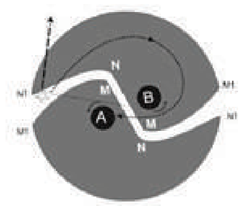

FIGURE 17.7

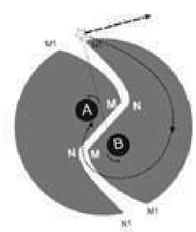

FIGURE 17.8

the Arm where the gravity is nil. A star orbiting from the lek border of the Arm to the middle of the Arm experiences steep decrease in the gravitational pull from the cores and hence the star gradually and continuously increases its orbital heights. See Fig 18.1 to 18.3. Watch the orbiting star increasing its orbital heights in the Arm and reach to the outer border of the black sphere.

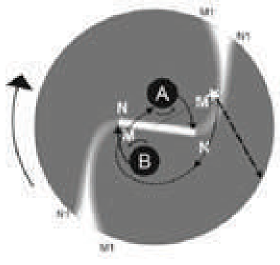

FIGURE 18.1

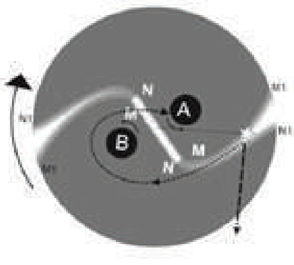

FIGURE 18.2

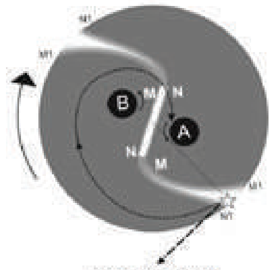

FIGURE 18.3

We have now come to the most important and most complicated final part of this episode. We have to approach this part with much elaboration.

Consider the case of the revolving Bar and Arm. The Bar revolves around the center of the black sphere. The angular speed of the Bar near the center of the black sphere is minimal. Now, at any height of its revolving path, the Bar or the Arm at that part, has to increase its speed, so that, that part of the Bar or the Arm at that orbital height, could be able to complete one full revolution, at the same period of time, along with any other part of the Bar or the Arm. Hence, at any given point or place in the Bar or the Arm, the angular speed at that point or place, is proportional to its distance from the center of the black sphere. That is, the angular speed of any part of the Arm increases in proportion to its distance away from the center of the black sphere.

Whereas, we had already seen that the stars are blasted out from the core with various angles and with various incredible individual speeds. Hence, any given star, irrespective of its placement anywhere, or at any orbit or at any height of the Arm, maintains its own constant incredible speed. The star needs not to keep up any appointment with that of the varying angular speed or the revolution of any part of the Arm. The star and the Arm have their own separate speedy ways. Hence, orbital positions of a star (in the Arm) will not affect its own constant incredible speed with that of the varying angular speeds of the Arm, at its different heights.

This difference between the star and the Arm, in their nature of their speed, at various heights of the Arm plays an important role in upping and pushing the star from the Arm to the space.

Let us now witness the wonderful journey of the stars starting from the inside of the Arm to the space outside the black sphere. We know that the stars with their incredible speed overtake the angular speed of the Arm and catch the Arm.

From there on, the stars enter a region of lesser and lesser gravity and hence steadily increase their orbital heights.
We may now consider the sequence of activities of the stars inside the Arm that enables them to get into the space:

1. The star in the lesser gravity area of the Arm shoots out to higher orbits.

2. As the star shoots to higher orbits and rushes in its path, the Arm also revolves in its circular path. This means; as the star rushes in its orbital path, the Arm also revolves in the same direction, ever presenting and spreading out a part of its revolving space highway at the path of the star's journey. It enables the star to continuously reach further and further heights.

3. As the star races towards the middle (no gravity area) of the Arm, the star's orbital radius increases further and further and the orbital position gets closer and closer to the outer circumference of the black sphere. See figures 18.1, 18.2 & 18.3.

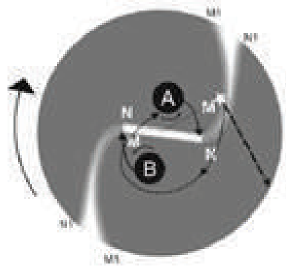

FIGURE 18.1

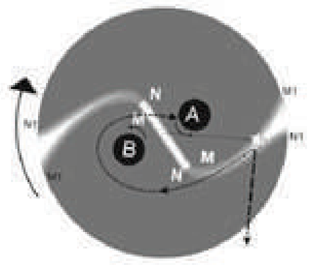

FIGURE 18.2

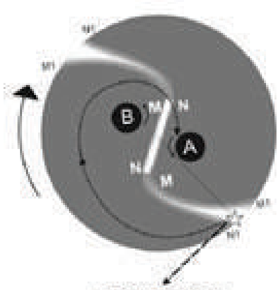

FIGURE 18.3

4. That is, the star's position in the rotating Arm gets away and away from the center of the black sphere and gets nearer and nearer to the outer circumference of the black sphere.

5. That means, at those higher and higher positions of the star, the angular speed of the Arm at those higher positions, steadily increases.

6. The continued enhancement of the angular speed of the Arm at those increasing higher position enables that part/arc of the Arm to approach the constant speed of the star. And the Arm's angular speed, near and above the open end of the Arm, gets greater than the constant speed of the star.

7. And the star in the Arm ever continues its upward drive without relenting its constant speed.

8. The incredible speed of the star will be of no use if the Arm does not have a bend or curve. If the Arm is as straight as in figure 7, then the open-ended part of the straight Arm with its high revolving angular speed will simply rotate away, leaving out the orbiting star at its orbital track in the Arm. The speeding – orbiting star will thus not have enough time to increase its full orbital heights and to complete its orbital race to reach the open-ended part of the Arm. However, the blessed bend of the Arm, makes a studied delay in presenting its open ended part, to the orbiting star, so that, the star gets enough flying space and time (with in the Arm) to complete its orbital race and breast the winning post of the open ended border of the Arm of the black sphere.

9. As the star races in its orbit and increases its orbital position and approaches the border, the open-ended Arm presents its open end to the orbiting star. The orbiting star contacts and crosses the border of the open-ended Arm and establishes its orbital position at the space outside the black sphere.

10. At that height, the constant speed of the star is not enough to keep up its position outside the black sphere and so the open-ended Arm rotates away from the space borne star/stars.

11. The star continues its race in its enhanced orbit in the space outside the black sphere and further increases its orbital heights due to lesser and lesser gravity in these enhanced heights.

12. As more and more stars are delivered continuously, a garland of stars—a space necklace is formed outside the black sphere. The string of stars with their individual constant speeds, maintain their ever-increasing orbital heights and display their orbital spirals inwards, pointing inwards spiraling into the black sphere and into its center – where they were born and had started their orbital journeys.

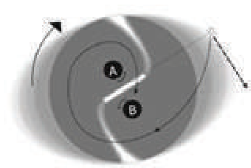

FIGURE 21.4

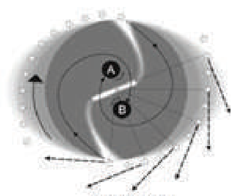

FIGURE 21.5

13. Stars that are blasted out; and that those of the stars having lesser speed; would take more millions of years to catch the Arm; to float in the Arm; to approach the open ended Arm; and to get to the space; than the stars that are blasted out with higher speeds which would overtake the slower elder stars; and will hence reach their destination in the Spiral Arm much earlier than their slow trailing seniors. There will

therefore be old as well as young stars mixed in the Spiral Arm.

14. If at any point, the varying angular speeds at different heights of the revolving Arm could not cope up with the incredible speed of the star in the Arm, then the speedy star would cross the right-side border of the Arm and enter into the darkness of the black sphere.

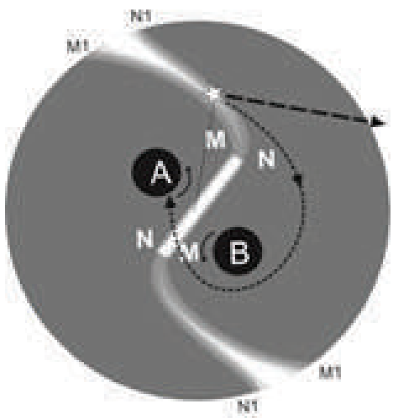

FIGURE 19.1

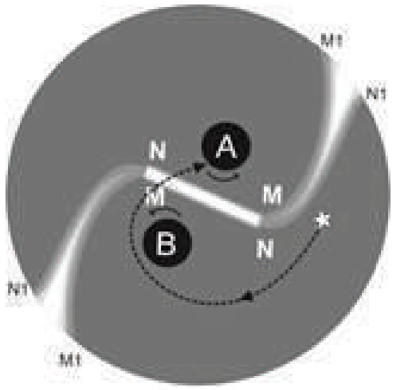

FIGURE 19.2

15. If at any time, the constant speed of a star in its higher orbits could not cope up with the increasing angular speeds of the Arm at those higher orbitsof the star, then that star will lose its orbital race in the Arm and will vanish into the advancing darkness from the lek side.

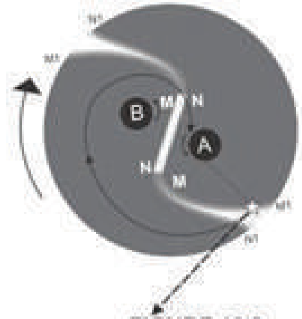

FIGURE 19.3

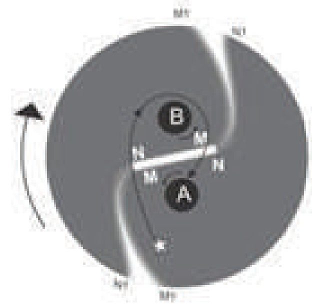

FIGURE 19.4

16. Thus, all the stars that are blasted out from the cores of the black sphere are not destined to enter into the space to make out the star-necklace.The black sphere with its black hole cores has thus effectively conceals its wonders in its blackness and in its total complexity. There will be much more awesome activities and wonders buried in its depth that have yet to be unraveled.

DIAGRAMS ON THE EJECTION OF STARS FROM THE ARM TO THE SPACE OUTSIDE THEBLACK SPHERE

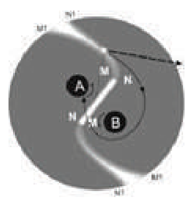

FIGURE 20.1

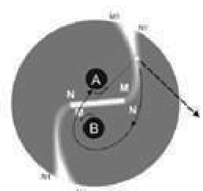

FIGURE 20.2

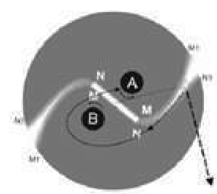

FIGURE 20.3

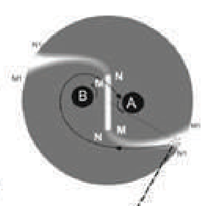

FIGURE 20.4

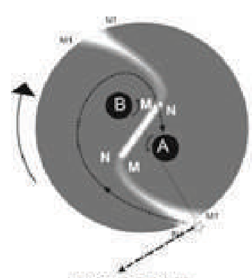

FIGURE 20.5

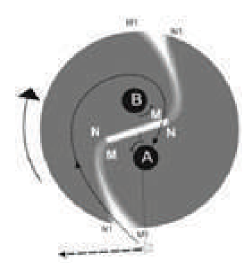

FIGURE 20.6

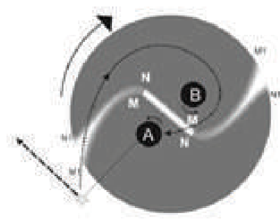

FIGURE 20.7

This is only an elementary description on the galaxy formation with simple diagrams – and needs further development – certainly not be me – my limitation safely ends here – and this is a case for further studies by Astrophysicists.

As the orbits of the stars get higher and higher, the REVOLVING EXPANDING GALAXY is born. The stars with their various angular momentums and with their varying individual speeds move in various angular directions with various speeds. In other words, the stars in the Spiral Arm speed away from each other. All the thanks go to the ARM for bending its body to receive the stars from the cores of the black sphere and nudging them to the border of the open-ended Arm and spraying them into the space. Thus, every nook and corner of the revolving Arm is perfectly functional in the formation of a galaxy. THIS IS A MOST AWESOME FUNCTIONAL WONDER THAT THE NATURE COULD PRIDE ITSELF. The stars now trail in the space, leaving their birthplace – the black sphere with a cheering good bye to start a new life outside its parent black sphere.

7. FULL-UNDILUTED-UNCONDITIONAL CREDIT GOES TO THE ARM – THE SPACE HIGHWAY – THE PATH OF LEASTRESISTANCE.

We have seen the activities at one Arm only. The activities at the other Arm of the black sphere are an exact mirror image of the Arm one. So, both the Arms spray out

continuous stream of stars on both sides of the black sphere and a spiral galaxy with two Arms is born. Further, if the two cores of the black sphere exhibit clockwise and anti clockwise rotations, then the black sphere will spray out stars in one direction only, that is, the galaxy will have only one Spiral Arm.

As the cores of the black sphere blast out the stars, huge quantity of atomic dust and gas are also released. These dust and gas clouds speed along with the stars, enter and illuminate the Arms, experience the higher and higher orbital positions in the Arms and get to the very border of the open-ended Arm. The open end of the Arm presents its open end andgives these orbiting dust clouds and the stars a passageway into the space. The dust clouds and the stars enter the space and create the Spiral Arms. These atomic dust and gas particles reflect and scatter the light rays from the nearby stars. And the trailing arms, that is, the lanes of dust get illuminated and are seen as Spiral Arms from the space.

Behind the Research

Dr. Abhishek Pandey

Email: dr.abhishekpandey123@gmail.com

Research Objectives:

All the stars in a galaxy have rotation and revolution. How do they get it? Galaxies are rather flat. Why? This research aims to understand facts of this theory on the evolution of the barred spiral galaxies.

Bio:

Dr Abhishek Pandey has a MSc, Ph.D. (Education) honoris causa from Ballsbridge University, Dominica. Dr Abhishek Pandey is presently working on his dream project being founder President of Charles Walter's Society for Innovation & Research managed by Charles Walter's Council of Innovation & Research registered under the Company Act 2013, Section-8. Dr. Pandey is also appreciated by more than 100 universities across the globe and he's more than 1000 awards from national and international benchmarks.

Keywords:

Galaxies, Stars, Black hole

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Towards Transnational Corporate Accountability for Human Rights Abuses in Africa: Analysis of Conceptual and Institutional Hurdles

ABSTRACT

Corporate conduct is diverse; its character is often dependent on the sector in which any given investment can be placed. The effects of corporate conduct on human rights could be positive or negative if assessed from the standpoint of the responsibility arising from international law for 'all organs of society' to protect, respect and fulfill the human rights of individuals and communities. The paper analyses the impact of foreign multinational corporations (MNCs) on human rights in developing countries and assesses the capacity of international law to regulate MNCs. The paper focuses on relations between MNCs and public institutions exercising regulatory functions over the MNCs. The empirical point of departure for the paper is whether history records MNCs and developing countries have been partners in mutually beneficial relationships. It investigates the causes of developing countries' long-established unenviable position in the international economy by examining critically the role of foreign MNCs.

INTRODUCTION

1. Background of the Study

Between 1970 and 1993, various United Nations bodies undertook a range of initiatives to formulate a code of conduct for multinational corporations (MNCs). Developing countries were the main engine of attempts to generate a code of conduct for multinationals at the UN level, with the support of socialist countries. The key opponents of those efforts comprise the international business sector and developed countries led by the US (home States to the majority of multinational corporations). In the paper, the term 'international business community/ sector' refers to the business community of the OECD countries.

Corporate conduct is diverse; its character is often dependent on the sector in which any given investment can be placed. The logging of tropical forests, large-scale plantations and the extraction of natural resources such as coal or oil results in destruction of the ecological environment, contributing to climate change. Corporate conduct affects civil and political rights, environmental rights, workers' rights and economic and social rights not only in the extractive sector, but also in industry/manufacturing and the service sector.[3]

The paper analyzes the impact of foreign multinational/transnational corporations on human rights in developing countries and assesses the capacity of international law to regulate them. The empirical point of departure for the paper is whether history records MNCs and developing countries to have been partners in mutually beneficial relationships. It investigates the causes of developing countries' long-established unenviable position in the international economy, by examining critically the role of foreign MNCs.

The paper focuses on relations between MNCs and public institutions in developing countries exercising regulatory functions over MNCs.

Investment treaties and tribunals recognise investor rights as a primary purpose and more often in practice as the overriding goal; yet, the idea to include duties for investors in a multilateral treaty still is resisted by MNCs and their home States.

The human rights dimension of foreign investment refers to benefits that flow to communities and individuals living where the investment is located; particularly, the protection of civil, political, economic, social, cultural and environmental rights in the host

[1] DP Forsythe *Human Rights in International Relations* (2006) at 218.
[2] D Tladi *Sustainable Development in International Law* (2007).
[3] E Wiles 'Aspirational Principles or Enforceable Rights? The Future for Socio-Economic Rights in National Law' (2006) *22 American University Internationall Law Review at 35*.

communities.[4] MNCs activities have direct or indirect effects on the natural environment and on human well-being.[5] This is particularly the case for African countries where public regulatory institutions are weak and, in some cases, complicit alongside MNCs in violating the rights of their own citizens.[6]

Sections 1.1. and **1.2** compare claims by mainstream economists that foreign direct investment (FDI) is an indispensable component of economic growth to counter-arguments from a strand of neo-Marxist writing associated with Paul Baran, A G Frank, and Samir Amin. **Section 1.3** analyses South Africa as a test-case for FDI coming into Africa from a political economy perspective. It examines the socio-economic and political consequences of South Africa's reception of foreign investment following the discovery of diamonds in 1867 and gold in 1886. **Section 2** revisits the unsuccessful attempts by various United Nations bodies to develop a binding code of conduct for MNCs between the 1970s and 1993. The concluding **section 3** analyses the institutional weaknesses of African public institutions historically.

1.1 Foreign direct investment (FDI) in Africa: the historical, economic, and social implications

Some scholars claim that globalisation has resulted in impressive poverty reduction in major emerging markets countries and overall welfare in industrialised countries. It is also true that globalisation entails costs on individuals and communities including corporate-related human rights abuses in developing countries; particularly, countries endowed with natural resources.[7] For instance, Angola, the Democratic Republic of Congo, Equatorial Guinea and Nigeria hold significant natural resource endowments and have witnessed political instability and recurrent conflict.[8] Zambia, Ivory Coast and Kenya supply the world market with significant amounts of copper, cocoa and tea respectively. The latter countries are not characterized by recurrent conflict unlike the former group, although Kenya and the Ivory Coast were the scene of post-election violence in 2007-9.[9] However,

[4] D Collier and C Moitui 'Africa's Regulatory Approach to Biotechnology in Agriculture: An Opportunity to Seize Socio-Economic Concerns' (2009) 17 *African Journal of International and Comparative Law* at 33.
[5] ST Ebobrah 'Litigating Human Rights Before Sub-Regional Courts in Africa: Prospects and Challenges' (2009) 17 *African Journal of International and Comparative Law* at 100.
[6] V Gamba and R Cornwell "Arms. Elites and Resources in the Angolan Civil War" in M Berdal and DM Malone (eds) *Greed and Grievance: Economic Agendas in Civil Wars* (2000) at 97.
[7] K Franko *Globalization and Crime* (2020).
[8] M Meredith *The State of Africa–A History of Fifty Years of Independence* (2006).
[9] K Kanyinga and D Okello *Tensions and Reversals in Democratic Transitions – Kenya's 2007 General Elections* (2010).

economic transformation from being suppliers to the world market of one or two agricultural or mineral products to become viable industrialized countries, as envisaged in the 1960s and '70's has proven elusive for all six countries listed above and for the majority of African countries.

African countries are highly reliant on foreign investment and look to their "traditional markets" in the former colonizing countries which act as the primary markets for external trade, tourism, loans and foreign aid.[10] African economies tend to have few forward or backward linkages between the dominant commodity-exports sector and other sectors of the economy. Globalisation has not meant greater market access for African products apart from the traditional exports, even as developed countries continue to subsidise their agricultural sector.[11] The European Union (EU) is the largest importing market for African agricultural products and imposes a tariff (tax) for processed agricultural products such as chocolate or processed fruit juice from Africa. A commodity such as chocolate which Ghana or the Ivory Coast could export to the EU market attracts a non-zero preferential tariff, as opposed to export of raw and semi-processed cocoa whose preferential duty rate is zero in the same market.[12] The foregoing tariff structure by the EU has the effect of reducing the ability of exports of processed agricultural goods from African countries to compete with domestic EU producers, as it rewards African exports of agricultural goods in raw and semi-processed form.

A typical MNC according to the United Nations definition has branches in not less than two countries. The MNC is distinguishable from an ordinary firm in that it represents the attainment of high levels of capital expenditure, economies of scale, technological sophistication and managerial skills.[13]

A host country refers to a country on whose territory a multinational corporation has established a subsidiary or branch. Host countries bear obligations towards investors under the applicable investment treaty and also under customary international law.[14] However, no well-established obligations are imposed on investors according to both the traditional and the presently-existing frameworks of international law.

Moyo notes that foreign direct investment (FDI) has tended to favour MNCs as the means of entry into the continent and has not enhanced the welfare of Africans. Without demarcating sharply as in this paper, Moyo draws a distinction between two types of FDI, as follows:

(i) FDI that enhances national welfare;
(ii) FDI that contributes to corporate profits but does not improve the national welfare.

[10] P Kinyua 'The Theory of Competition and the Developmental State in Africa: A Case-Study of Kenya and South Africa' https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2768411 (accessed 10 April 2022)

[11] TA Oyejide and D Njinkeu (eds) *African Imperatives in the New World Trade Order* (2008).

[12] AD Oduro and GTM Kwadzo 'A Case Study of Ghana and the Agreement on Agriculture' in TA Oyejide and D Njinkeu (eds) *African Imperatives in the New World Trade Order* (2008) at 79.

[13] United Nations Centre on Transnational Corporations *The United Nations Code of Conduct on Transnational Corporations* (1986) Series A. No. E.86.II.A.15 (ST/CTC/SER.A/4) Annex I at 28-45.

[14] A Kaushal 'Revisiting History: How the Past Matters for the Present Backlash Against the International Investment Regime' *50 Harvard International Law Journal* 1 at 491-534.

She stresses that most of the ‘transnational capital coming into Africa’ has tended to benefit from “long-tax holidays, subsidies and benefits of repatriation of dividends and profits.”[15] She stresses that most of foreign capital invested in Africa has tended to benefit from several special conditions such as the repatriation of profits, tax holidays and subsidies. Summarising the historical record, she concludes that Africa has been a victim of exploitation by multinational corporations operating in the continent. In response to the claim that MNCs carry positive outcome for host economies in Africa because MNCs transfer new technology, Moyo insists that MNCs are main beneficiaries of such technology transfers. She argues that foreign capital entering Africa tends to favour plantation agriculture and mining, both of which occasion ecological destruction.[16]

Tandon understands FDI to be a separate phenomenon from both capital and money; and criticizes some of the “experts and policy makers” who, it is claimed, tend to conflate the three items. FDI is understood as follows: “FDIs are a package of capital, technological know-how, management specific to a particular type of production of goods or services, market knowledge and access, and contacts”.[17] Domestic capital is preferable to Tandon than FDI. He offers a negative verdict of TNCs operating in Africa and differentiates between ‘self-reliance’ by African countries and ‘FDI reliance’. He claims that if resource rich African countries such as Nigeria did not “externalise” a big part of the national savings “through legal or illegal means”, FDI would be unnecessary. In reply to the question: “What will foreign capital do that it has not been doing for all these decades [in Africa]?” Tandon’s response is that the question is not whether Africa needs capital; rather, what should matter is the origin, purpose and conditions attached to any form of capital seeking to enter Africa. He concludes that “there are no good or bad FDIs outside of national policy, and in terms of hard negotiations with the owners of capital”.[18] Tandon cautions African countries which are potential recipients of FDI to “unbundle the FDI package,” and where this is not possible, “to monitor and control its use carefully.”[19]

[15] T Moyo ‘The resource mobilization strategy (RMS) of the *New Partnership for Africa’s Development (NEPAD): A critical appraisal’ in PA Nyong’o and others (eds) New Partnership for Africa’s Development (NEPAD) – A New Path*? (2002) at 185.
[16] Moyo (n 15) at 187.
[17] Y Tandon ‘NEPAD and Foreign Direct Investment: Symmetries and Contradictions’ in PA Nyong’o and others (eds) *New Partnership for Africa’s Development (NEPAD) – A New Path*? (2002) at 121.

1.2. Benefits of foreign investment: a comparison between mainstream economic theory and neo-Marxist theories

Mainstream development theorists such as R.F. Harrod claim that capital formation is the driving force of development.[20] They argue that the lack of development in developing countries results from a shortage of capital which is a necessary condition for economic growth.[21] The savings of developing countries are viewed by mainstream economists as insufficient for investing in a manner that would generate self-perpetuating growth in the developing country, hence need for foreign capital and foreign aid. The Harrod-Domar growth model postulates a direct relationship between a country’s rate of savings, s, and its rate of output growth, g, via the equation $g=s/k$ where k is the national capital/output ratio.[22] Mainstream economic theory views the State as a perennial ‘loser’ in ‘every war against poverty’ and designates ‘the market’ as the only viable solution to problems of mass poverty and underdevelopment.[23] David

Ricardo's classical theory of international trade claimed that trade would ensure that resources flow to those countries where they would derive the highest return. Ricardian theory also claimed that 'diminishing returns' would accompany capital that was invested abroad rather than in the country where the profits were generated. Ricardian trade theory assumed that the rate of return to capital would be higher in the capital poor countries because of conditions of scarcity of capital in such countries. Similarly, the Hecksher-Ohlin version of factor-price equalisation argues that the higher returns to capital in capital poor countries would induce a flow of capital from the capital rich to the capital poor until "such returns of factor are equalised".[24] It is so close to Ricardo's original formulation that it merits the description of being 'neo-classical'. The factor-price equalisation theory, according to some critics, is another name for "the Heckser-Ohlin based belief in foreign financing of development."[25]

Other economists contend that the principal barrier to development in the poor countries is not traceable to a lack of capital itself, but lies in the absence of creative entrepreneurs who would launch the country on path of self- sustaining economic growth[26] This argument draws its roots from the early-twentieth century writings of Max Weber who claimed that the protestant ethic was instrumental in forging the spirit of capitalism which he found to characterise western European society.[27]

Unlike mainstream development economists, dependency theorists view foreign investment as harmful

[18]Tandon (n 17) at 122.
[19]Tandon at 123.
[20]HJ Bruton 'International Aspects of the Role of Government in Economic Development' in L Putterman & D Rueschemeyer (eds) *State and Market in Development - Synergy or Rivalry*? (1992) at 102.
[21]WW Rostow *The Stages of Economic Growth: A Non-Communist Manifesto* (1961).
[22]MP Todaro *Economic Development in The Third World* (1981).
[23]PP Streeten 'Against Minimalism' in L Putterman & D Rueschemeyer (eds) *State and Market in Development - Synergy or Rivalry*? (1992) at 17.
[24]Todaro (n 22).

rather than beneficial to host countries for several reasons.[28] Firstly, multinational capital insists on the 'freedom to repatriate profits' generated in the host State from the host State to a destination of choice such as the headquarters of the MNC or a tax haven, instead of investing those profits in the same host country that needs and also seeks investment capital.

Viewing the international economy as a single system composed of centre and periphery, Amin notes some qualitative differences in the set-up of the economic system of peripheral countries on the one hand, and central countries on the other. It is claimed that "unequal exchange" characterises economic interactions between centre and periphery on the world system.[29] "Unequal exchange", in this view, refers to "a constant transfer of value toward the center of the capitalist system due to a greater productivity per unit-wage cost-and hence greater rate of exploitation which… precludes the growth of an internal market" in the peripheral State.[30]

Baran insists that re-investment of profits by MNCs, as opposed to repatriation, could as well be damaging to the domestic economy of the host country because multinational capital with its international production and marketing system tends to make most of its purchases abroad.[31] Furthermore, foreign investment is ill-advised as it creates disarticulated economies in host countries; "the railways, bridges, ports and power stations" have little linkages with the internal structure of the host country, such infrastructure having been constructed for the benefit of raw material exporters.[32] Another demerit of foreign investment is that it promotes the growing of cash crops for export, placing the economies of the concerned host countries in a position of almost perpetual dependency.[33] In contrast to Baran's view that peripheral countries could become viable industrialized countries despite great challenges involved in the process, Amin concludes that 'the Japanese road' to industrialization was closed to other late-industrializing countries at the beginning of the twentieth century. When metropolitan capitalism reached the monopoly stage at the beginning of the twentieth century, Amin argues, it would not allow new capitalist centres to develop in the periphery of the world's economic system.[34] In summary, a strand of the dependency/-neo-Marxist school argues that foreign capital engages in both direct and indirect exploitation in the underdeveloped countries.

Warren represents a strand of Marxist thought known as paleo-Marxism which disagrees with the preceding neo-Marxist positions and whose main contention is similar to that of main-stream economists; namely, that peripheral capitalism ensures both productivity growth and economic progress.[35]

1.3. South Africa: a case-study of FDI in Africa

The section places South Africa's socio-economic trajectory in historical perspective and concludes with a review of the main issues discussed in the literature on the impact of multinational capital on host countries. The mining industry has been at the centre of south Africa's economy for more than a century. The industry

[25] T Mkandawire 'Financing of the *New Partnership for Africa's Development (NEPAD)' in PA Nyong'o and others (eds) New Partnership for Africa's Development (NEPAD) – A New Path*? (2002) at 110.
[26] JB Foster *The Theory of Monopoly Capitalism* (2014) at 160-92.
[27] A Giddens *Capitalism and Modern Social Theory- An Analysis of the Works of Marx, Durkheim and Max Weber* (1973) at 130.
[28] P Baran and P Sweezy *Monopoly Capital* (1970) at 107-8.
[29] S Amin *Imperialism and Unequal Development* (1977) at 229-33.
[30] Amin (n 29) at 218.
[31] P Baran *The Political Economy of Growth* (1957) at 174.

provides a good example of the effects FDI on developing countries over an extended period of time. South Africa could serve as a good test-case for FDI on the continent based on post-apartheid experience of deepening economic inequality with clear-cut racial divisions, reminiscent of both apartheid and British colonialism. South Africa was ranked as 'the most unequal country in the world' in year 2022.[36] The conditions for racial capitalism being no longer inescapable for South Africa since 1996, there is need to clarify patterns of outdated racial capitalism that appear to be self-perpetuating. The paper points out that the basic pattern of South Africa's economy for a full century preceding 1996, is connected to the 'coincidence' between 'race' and 'poverty' in that country during the period of majority rule.

From the 1880s, South Africa's mining industry reserved skilled and semi-skilled jobs for European immigrant workers while consigning blacks to unskilled labour. The establishment of South Africa's mining sector is traced to the huge influx of British capital entering that country towards the end of the nineteenth century.[37] South African mining industry is "highly centralised" in character because of "two central needs" on the part of mining companies: the first is the need for "a hefty flow of capital to establish and run mines," the other is the need for "a reliable and cheap labour supply to keep the profit margin attractive".[38] That arrangement in the mining sector, is taken to have laid out "the basis for political alliance between the 'capitalist class' in mining and 'white labour'" (Marais, 2001). The alliance endured until the end of apartheid. To be sure, the unequal, race-based labour and wage system remained a key feature of South Africa's mining industry from the 1880s, "until the 1970s" (Marais, 2001).[39]

South Africa's mines were run on a labor policy with an employment system that adhered to racial categories with both economic and social consequences. Racial discrimination in terms of job skills and wages in mining was approved by law and was policy-driven. Pass laws, vagrancy laws, influx -control legislation, zoning of South Africa's territory into 'tribal reserves' and 'European areas' are some of the methods used by the British colonial administration right from the 1880s to control the supply of cheap African labor. The main point is that the flow of British FDI to South Africa, particularly in mining, provided the example and template for future racial segmentation

[32]Baran (n 31) at 197.
[33]Foster (n 26) at 182-3.
[34]Amin (n 29) at 230.
[35]B Warren 'The Post-War Economic Experience of the Third World' in Toward a *New Strategy for Development, A Rothko Chapel Colloquium* (1979) at 144.
[36]V Sulla and others 'Inequality in Southern Africa: An assessment of the Southern African Customs Union' (2022) http://documents.worldbank.org/curated/en/099125303072236903/P1649270c02a1f06b0a3ae02e57eadd7a82 (accessed 10 April 2022).

in that country's economy and polity. Mamdani views apartheid as deriving from a basically British colonial policy of the 1920s as developed by the Stallard Commission of 1922. In this view, apartheid as a "late" form of colonialism, rather than as a unique economic and social formulation.[40]

2. United Nations efforts to regulate Multinational Corporations

Developing countries began to pursue foreign investment mostly in competition with each other from the 1980s. Inter-developing country competition for investments through the offer of various special concessions to foreign owners of capital is described in the literature as a "race to the bottom".[41] Following the serious economic and social crises witnessed throughout the 1980s, African countries were compelled to compete for foreign investment throughout the 1990s which seemed to be the only capital available to drive national economic and social development. The result of the struggle over foreign investment by developing countries was a relaxation of rules to govern the entry, operations and exit of foreign capital on their territory. The 1990s are considered the hey-day of "Washington Consensus" economic policy doctrine and entailed the espousal of free market economics by the International Monetary Fund (IMF) and the World Bank and western countries, resulting in significant pressure being exerted on developing countries to liberalise their political and economic policy framework and, more pointedly, to embrace foreign investment with minimal or no conditions.

The relaxation of the legal framework for foreign investment was achieved through the signing of new trade agreements with a decidedly free-market aspect such as the World Trade Organization (WTO) constitutive Agreements which took effect from January 1995, the signing of numerous bilateral investment treaties, domestic liberalisation of the economy and privatization of State-owned enterprises many of which had been established during the 1960s and '70s.

Between 1970 and 1990, several United Nations bodies undertook a range of initiatives to formulate a code of conduct for multinational corporations. At the UN level, developing countries took the initiative to develop a code of conduct to control the operations of multinationals. Key opponents of those efforts were comprised of the international business sector and developed countries under the leadership of the United States (home States to the majority of multinational corporations). Between 1977 and 1990, the United Nations Commission on Transnational Corporations (UNCTC) was engaged in deliberations on a legally-binding code of conduct for MNCs which, it was hoped, would be acceptable to both developed and developing countries, without much success.

Failure to agree on a code of conduct for MNCs is attributed to fears expressed by western countries of nationalization of investor property by developing countries. Western countries were also concerned that new rules would be created on the basis of which host countries could vary the acquired rights of MNCs.[42] Developing countries, for their part, were suspicious about the capacity of multinational corporations to affect or influence both their domestic policies and relations with other countries.

[37] P Gutkind and I Wallerstein (eds) *The Political Economy of Contemporary Africa* (1976).
[38] H Marais *South Africa Limits to Change* (2001).
[39] Marais (n 39) at 11.
[40] M Mamdani *Citizen and Subject* (1996).

[41] M Sornarajah *The International Law on Foreign Investment* (2010).

Having regard to the power of MNCs and their capacity to affect human rights globally, the closure of the UNCTC in 1993 came as a surprise to many observers.[43] Ironically, in the same year 1993, United Nations member countries assembled for an important conference on human rights in Vienna, Austria where the universality and interdependence of human rights was affirmed by State officials present, representatives of international organizations, scholars and civil society from around the world.

There is remarkable contrast between the inter-developing country competition for capital from abroad throughout the 1980s and 1990s and during the present-day period and the solidarity of developing countries during the 1970s. The latter crystallized in three major achievements by developing countries: (i) United Nations General Assembly New International Economic Order (NIEO) resolutions; (ii) the Charter of Economic Rights; and, (iii) recognition by large number of countries of the international law principle of 'permanent sovereignty over natural resources.'[44]

A decade following the demise of the UNCTC, particularly during the two years preceding July 2005, an official UN document known as: *(The) Draft Norms on the Human Rights Responsibilities of Transnational Corporations and Other Business Enterprises (UN Norms)* was facing fierce resistance from the international business sector and the home States of leading MNCs, just like the draft code of conduct for MNCs generated by the UNCTC in the 1980s.

The UN Norms were formulated by the UN Sub-Commission for the Promotion and Protection of Human Rights and were further buttressed by a resolution passed by the UN Commission on Human Rights in August 2003. The perspective of the UN Norms was that, in the scheme of international law, transnational corporations were responsible for 'promoting and securing' the human rights set forth in the Universal Declaration and other instruments. According to the UN Norms, although the main responsibility to secure, respect and protect human rights was imposed on States; MNCs were not free from certain responsibilities in respect to human rights.

The UN Secretary General's Special Representative on human rights and business Professor John G. Ruggie took office in mid-2005. The role was created for very first time at the UN largely in response to rising cases of grave abuses of human rights by MNCs, sometimes acting in alliance with dictators and armed groups such as the case of Shell oil corporation in Ogoniland, Nigeria.[45]

In 2008, the UN Special Representative presented his own work on the subject of corporate responsibility for human rights under international law; whereby, he took a decidedly different approach in comparison to the UN Norms. He proposed "differentiated and complementary responsibilities of States and corporations", arguing that as the basic minimum, private business had a responsibility to respect human rights. He referred to it as the "do no harm" principle, to govern corporate conduct across all countries.

The Special Representative's proposal also highlighted the need for victims of violations of human rights by both State and non-State actors to gain more effective access to

[42] N Schrijver *Sovereignty over Natural Resources: Balancing Rights and Duties* (1997).
[43] R Muradian 'NEPAD and the environment: envisaging the ecological consequences of outward-oriented development in Africa' in PA Nyong'o and others (eds) *New Partnership for Africa's Development (NEPAD) – A New Path?* (2002) at 234.
[44] G Corea *Need for Change Towards the New International Economic Order* (1980).

legal remedies. He also noted the issue of "policy misalignment" in investment treaties and other instruments. "Policy misalignment", it was claimed, limited the host State's sovereignty in favour of protecting investor property; thus, making it difficult for the State to discharge its obligation, under international law and domestic law, to protect human rights.[46]

3. Regulating foreign multinationals in Africa: challenges of a political and institutional nature

Several other challenges with respect to corporate accountability for abuses of human rights in Africa are of a more practical nature. Foremost among them, is the diminished capacity of State institutions in many developing countries since the early 1980s. From the mid-1970s, many developing countries in sub-Saharan Africa began to register uninspiring figures and statistics related to human welfare.[47] Throughout the 1980s and 1990s, many African countries recorded high levels of poverty and inequality, high debt to gross domestic product (GDP) ratios, recorded unimpressive scores on the human development index (HDI) and performed dismally according to other indicators of human well-being

[45] Forsythe (n 1) at 224-6.
[46] JG Ruggie 'Business and Human Rights: The Evolving International Agenda' John F. Kennedy School of Government - Harvard University - Faculty Research Working Paper Series, Working paper No. 38.
[47] P Gibbon (ed) *Social Change an Economic Reform in Africa* (1993) at 11-27.

such as infant mortality rates per 1000 live births, maternal death rates and life expectancy rates.[48]

Recent studies of globalisation underline "the growth of illegal and illicit operations" in the international economy and note that boundaries between public institutions and crime have become difficult to discern as corruption and organised crime become enmeshed with public authority, and today constitute key features of the way contemporary societies are organised.[49] For some of African countries, such as the Democratic Republic of Congo, Equatorial Guinea and Nigeria, the challenge of corruption is so widespread as to threaten macro-economic stability and even the viability of the nation-state.[50]

Per capita growth rates in GDP for developing countries experienced a decline from an average per annum of 3.4 percent in the period between 1965 and 1980, to 2.3 percent between 1980 and 1989 (Grindle, 1996). The average decline in per capita GDP recorded by the sub-Saharan African region was -2.2% for the years between 1980 and 1989. This dismal performance led to claims by some observers that the 1980s were a "lost decade" in terms of the economic growth of sub-Sharan African countries.[51]

In the opening decades of the twenty-first century, many African countries are faced with the twin challenge of large youthful populations and high unemployment rates. Governments in developing countries have formulated policies to reduce poverty and inequality through job-creation particularly, in the Small and Medium Enterprise (SME) sector; such policies, however, are confronted with the challenge of existing poverty and inequality that have become entrenched. Institutional incapacity and proneness to corruption are acclaimed features of many African State bureaucracies and public bodies.[52] Accountability to the citizenry for welfare was not an acclaimed feature of the State in Africa during colonial rule between the 1880s-1960s; in southern Africa, minority rule came to an end in the mid-1970s in Mozambique and Angola, in 1980 in Zimbabwe and in 1996 in South Africa. Sociologists have noted that “the historical legacy of many Africans countries … left them with implanted institutions more designed for control than development”. To exercise control over subject ‘native’ populations was the raison d’etre of the public administration system under colonial rule, rather than the economic or social development of the so-called natives. In this sense, it has been claimed that the African State represents the Africanisation of despotic regimes of colonial governance including the typical the predatory actors that characterised colonial rule including the provincial administration, police, chiefs and the public service system.[54]

The paper views such institutional weaknesses as mostly the result of neo-liberal economic reforms in the shape of structural adjustment programs (SAPs) adopted-by capital-importing countries in the early 1980s and which endure in the contemporary period, at the instigation of the International Monetary Fund (IMF), the World Bank (IBRD) and western countries. During the 1980s, African countries adopted SAPs, whose collective effect was to force Africa to de-industrialise. However, attempts by African countries led by Algeria, Nigeria, Senegal and South Africa at the turn of the twenty-first century to formulate their own development strategy pivoted on a neo-liberal framework, echoing the damaging, western-derived SAPs.

[48] PA Nyong’o and others (eds) *New Partnership for Africa’s Development (NEPAD) – A New Path*? (2002).
[49] Franko (n 8) at 27.
[50] E Duruigbo ‘Multinational Corporations and Compliance with Regulations relating to the Petroleum Industry’ 7 *Annual Survey of International and Comparative Law* at 101-137.
[51] Gibbon (n 48) at 14.
[52] I Husain and R Faruqee *Adjustment in Africa Lessons from Country Case Studies* (1994) at 427-6.

Behind the Research

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Research Objectives

1. To investigate the causes of developing countries long established unenviable position in the international economy by examining critically the role of foreign multinational companies.

2. Establish the relationship between multinational companies and public institutions exercising regulatory functions over the MNC's.

Keywords:

Developing countries, Foreign Investment, Development, Human Rights, Environment, Capital Accumulation, Institutions, International Trade, Investment Law, Stabilization Clauses, Host Country, Multinational Corporation.
JEL Classification: F63, F53, F23, F21, F11, F02.

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The Importance of English Language in Contemporary Life

Abstract

The English language is the most common universal language spoken globally. Therefore, the importance of practicing the English language in daily life, despite an individual's nation or mother tongue is imperative. This research paper aims to highlight the importance of English language learning within contemporary life. A review of published literature sources is used within this study. The following factors are included within the study: English within education, communication, and economic progression. This study has revealed that the English language is imperative to progress within higher educational institutions as it is the most common medium of instruction given to students globally. International communication to ensure societal progression and sustainable development is achieved through the medium of English language. However, colloquialism can sometimes cause confusion including language used by Gen Z. In addition, economic progression is achieved through unified communication with national and international governing bodies, who's common language is English. It is possible for every individual to learn the English language, particularly when there is access to technological platforms in contemporary life. However, challenges are faced by individuals if appropriate hardware and software to English language acquisition is not available, in addition to a lack of or unstable internet connectivity. Recommendations are made to help English learning acquisition in contemporary life.

1. Introduction

The English language is the most common universal language spoken globally. It is the largest global language including native and non-native speakers (Eberhard, Simons, & Fennig, 2021). According to Somani 2021 there are "approximately 7,139 international spoken languages, there is a continuous fluctuation in this number, as new discoveries on languages and dialects are being made daily. 40% of languages are deemed to be endangered while 23 languages are spoken by half of the global population." (Somani, Motivating students to practice the English language, 2021). Therefore, the importance of practicing the English language in daily life, despite an individual's nation or mother tongue is imperative. The English language is deemed as the "language of the world" (Salsabilla, 2021). According to a global survey, in 2022 approximately 1.5 billion people worldwide spoke the English language, combining native language and English as a second language. This figure was higher than Mandarin Chinese speakers which reached 1.1 billion people in 2022. Figure 1 illustrates the number of the most spoken worldwide languages in 2022 in millions (Statista, 2022).

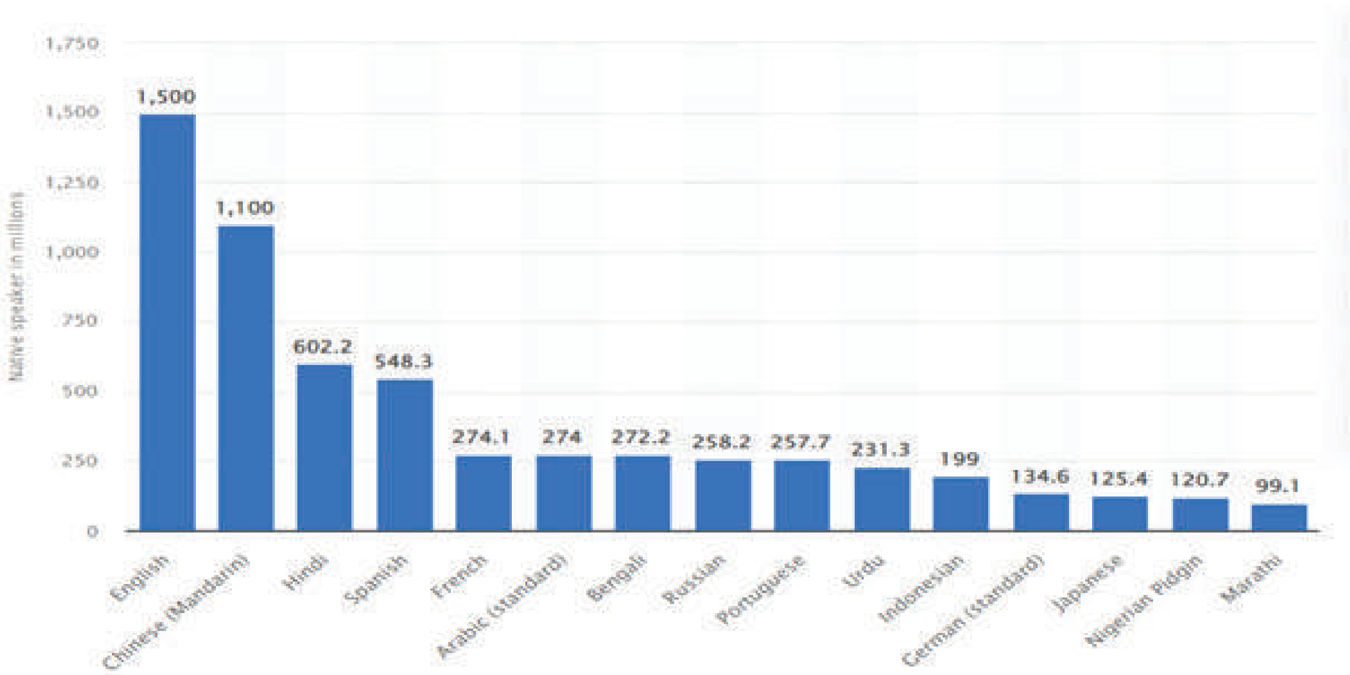

Figure 1 (Statista, 2022)

Therefore, it is evident that the English language is very important and has an impact upon many aspects of societal d evelopment.

Objectives
This research paper aims to highlight the importance of English language learning within contemporary life. A review of published literature sources is used within this study.

2. Results and Discussion

The following factors are included within the study: English within education, communication, and economic progression.

2.1 English within education

This study has revealed that the English language is imperative to progress within higher educational institutions as it is the most common medium of instruction given to students globally. Within India for many students, it is a second language after their mother tongue and a medium through which higher education occurs in numerous institutions (Somani, Motivating students to practice the English language, 2021). Although individuals may be familiar with the English language, fluency is important because poor English language skills can reduce the effectiveness of communication, consequently resulting in misinterpretations and the generation of barriers leading to frustration (Kapur, 2018). Similarly, if educators are unable to communicate with their students effectively in the English language, or students interpret educator instructions students resorted to online learning platforms where live lectures in the English language took place, examinations and assignment submissions occurred. It is imperative for students to understand the English language so that they can achieve their desired qualifications and create a better quality of life and sustainable future for themselves (Somani, Post Covid-19 Effects on the Future of Students in Higher Education, 2021). Numerous top-ranking universities speak the English language due to the fact English is the dominant language of the sciences and international research studies (Naved, 2022). This is to ensure research is available to all students who would like to acquire knowledge and build upon previous research findings.

2.2 Communication

Learning the English language is a medium through which individuals can communicate effectively with people globally. It reduces challenges when travelling and enables learning about different cultures more enjoyable due to ease of communication. In addition, English is deemed as the "language of science, mathematics, technology, tourism and countless other areas" (Gallery, 2022). The English language is a common medium through which countless professionals can communicate to present challenges and find solutions to problems. International communication is vital to ensure societal progression and sustainable development is achieved through the medium of English language. Communication has become easier due to the international use of the English language. It has facilitated global businesses, healthcare and medicinal supplies, technological advancements, international trade etc. All these elements are vital for economic progression within a nation. Without communication through a common language international collaboration between industries would be extremely challenging.

The English language dialect and accents can vary between regions within the United Kingdom. Therefore, the standardised English language used to communicate is following the 'Queen' or 'King's' English. With the progression of time and emergence of Generation Z also known as Gen Z, who are "the generation of people born in the late 1990s and early 2000s." (Merriam-Webster, 2022) colloquialism can sometimes cause confusion providing words with different meanings. Therefore, it is important for educational institutions to ensure English language is being taught properly, providing students with reading material and other sources through which they can learn the English language. The influence of social media and digital entertainment have impacted upon the language acquisition of Gen Z individuals. For example, YouTube, TikTok, streaming services like Netflix, Amazon Prime and Disney to name a few (Pinilih, 2020). It is important for students to be subjected to the formal English language as unified communication is vital for personal and societal development.

2.3 Economic progression

Economic progression is achieved through unified communication with national and international governing bodies, who's common language is English. The English language has provided a foundation for international trade agreements and communication to occur for economic progression within nations. Formal communication including telephone calls, emails, formal presentations, online 'chat' all require unmistakable information transfer to ensure utmost clarity. This will ensure economic decisions can be made without hesitation due to poor communication. In addition, the proper use of the English language entails sentences that are formed through the utilisation of correct grammar and sentences. The use of English language in terms of economic progression is vital for good interpersonal skills that is required for negotiation and convincing other individuals. Research has indicated that there is a direct correlation between "the English skills of a population and the economic performance of the country" (WEF, 2017). There is an increase in indicators like GDP and Gross national income. Out of sixty countries within the English Proficiency Index there was a growth in capita income when the individuals within the countries and territories had better English skills. In addition, Human Resources managers and recruiters reported that individuals with excellent English language skills earned between thirty to fifty percent higher salaries than other individuals within the same country (WEF, 2017). There is a link between English proficiency and the gross national income per capita. When individuals possess good English language skills, there are s ubjected to increased salaries, this then gives rise to individuals and governments are motivated to invest within English language training. However, on a personal level, the English language skills that individuals have acquired by individuals has facilitated individuals to apply for employment opportunities which will provide an improved quality of life.

3. Conclusion

This research paper has highlighted the importance of learning the English language in contemporary life. It is important within educational institutions as English is global medium through which knowledge acquisition occurs. The English language is vital element of communication within personal and professional context as it provides a common language to find solutions to forthcoing challenges. In addition, economic progression is dependent upon international understanding and ease of communication in one common language. Agreements can be made, and it eliminates any miscommunication between individuals. The English language also can break down barriers and establish new relationships with global nations due to effective communication strategies and true understanding.

It is possible for every individual to learn the English language, particularly when there is access to technological platforms in contemporary life. However, challenges are faced by individuals if appropriate hardware and software to English language acquisition is not available, in addition to a lack of or unstable internet connectivity.

2.3 Economic progression

It is recommended that every individual should have access to learning the English language in contemporary life. This can be achieved through online mediums, local English language learning groups, additional classes within educational institutions. Entertainment industries should also be mindful to use a ppropriate English language and individuals should limit the amount of exposure to social media platforms with Gen Z language. Instead, attention should be diverted to the formal English language that will help shape the future of individuals.

Behind the Research

Dr. Anjula Murmu

Email: anjulamurmu@gmail.com

Research Objectives:

To highlight the importance of English language learning within contemporary life.

Bio:

Dr Anjula Murmu is an academician, social worker, writer, singer, and an anchor in the domain of Dumka district in Jharkhand, India. Mentoring the students of PG Dept. of English at Sido Kanhu Murmu University, she too serves as an OSD (Academic) in the same University. She has penned down couple of Hindi poetries in two books: 'Ardhashat par Purn Satya' and 'Darpan ko Arpan'. She has edited a collection of poetries, 'Udte Parindon ka Asmaan'. Her works of art has been published in many magazines, souvenirs, books and newspapers. She is multilingual and has passion in bringing up the tribal women by shaping up their future through the words of knowledge and creativity. In India she has been awarded for such activities by different organizations.

Keywords:

English language, Education, Communication, Economic progression

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The Impact of Films on Society

Abstract

Films have become a dominant part of the entertainment industry over the years, as motion pictures was used to bring stories to life on the big screen. An array of stories developed through the change experienced by individuals within the world. It became a medium to disseminate news and ideas into societies. Although the covid-19 pandemic forced cinemas to close because of social distancing, over the top media services (OTT) became the dominant platform for watching films. This study aims to understand the impact that films have on societies and if it can change attitudes of people watching the film.

Results have identified that films are a powerful tool through which attitudes of individuals in societies can be altered. There is a relationship between the attitudes of people within societies and mass media image of reality. Positive and negative impacts on individuals are discussed within this research paper. Films are a multipurpose tool used within societies in contemporary life. Although film is a form of escapism, they have influenced societies through politics, law, culture, and have the power to change the path of contemporary life and create history. Films shape the way the youth perceive the world; they provide a foundation for the seeds of hope or doubt flourish, through which they can contribute to the future of an individual. Therefore, steps must be taken to restrict misinformation within films that can have a negative societal impact and ruin lives of individuals in the future.

Introduction

The primary goal of the cinematic art form is to send a message and create an impact. Technology has been advancing within contemporary life and it has been adopted to its optimum by the film industry. 2D, 3D and 4D cinema uses technology to its optimum, inviting viewers to lose themselves within another world. However, within history numerous leaders have utilised the platform of films to reach their goals. This can stem back to world war I when political leaders of the time for example Adolf Hitler and Stalin successfully utilised films as a form of propaganda (Boy, 2017).

Films have become a dominant part of the entertainment industry over the years, as motion pictures was used to bring stories to life on the big screen. An array of stories developed through the change experienced by individuals within the world. It became a medium to disseminate news and ideas into societies. Although the covid-19 pandemic forced cinemas to close because of social distancing, over the top media services (OTT) became the dominant platform for watching films. Within March 2022 it was revealed by Motion Picture Association (MPA), that people within America were most likely to watch movies within their homes via online subscription services opposed to Pay TV. Figure 1 illustrates the number of US adults watching films by home or mobile distribution channels published by motion pictures association (MPA, 2022).

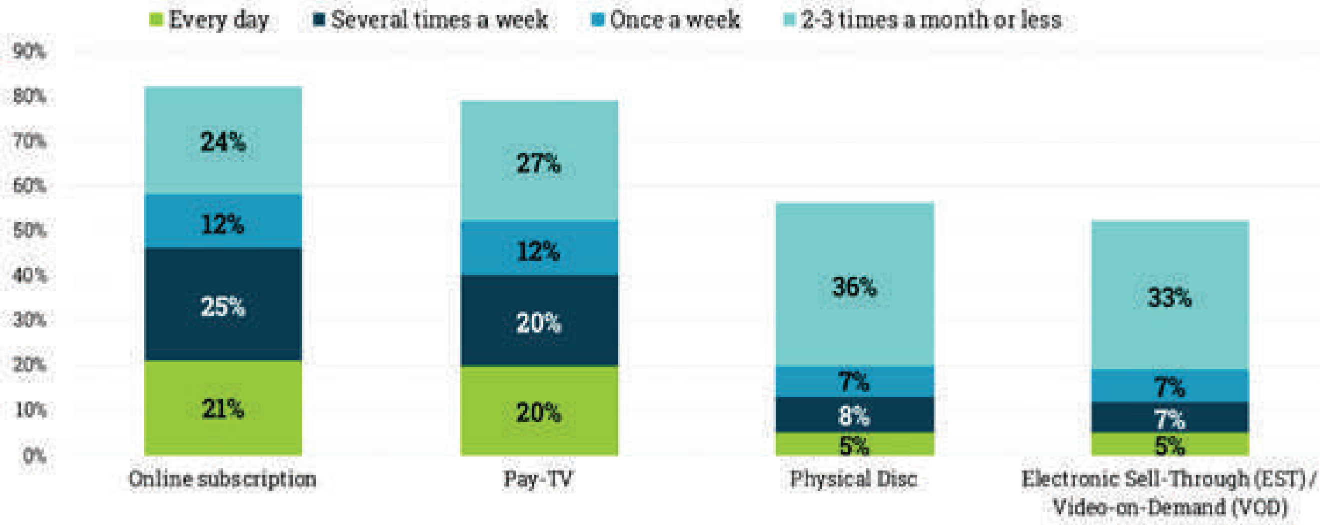

Figure 1 (MPA, 2022)

Although individuals have been conditioned to watching films at home due to closures during the pandemic, according to figure 2 published by digital cinema media, cinema attendance is expected to continue rising to reach 80% of the record breaking 2019 admission rates.

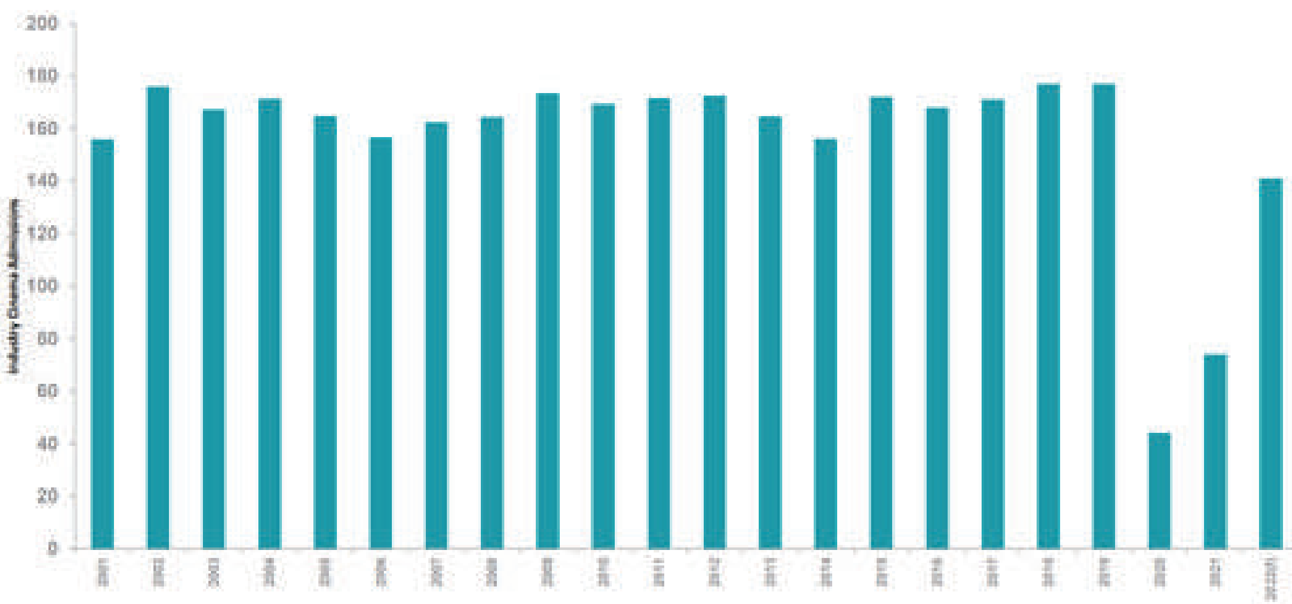

Figure 2 (Bowler, 2022)

Objectives

This study aims to understand the impact that films have on societies and if it can change attitudes of people watching the film. A review of literature has conducted within this study.

Results and Discussion

Results have identified that films are a powerful tool through which attitudes of individuals in societies can be altered. Positive and negative impacts on individuals are discussed within this research paper. Films are a multipurpose tool used within societies in contemporary life. The freedom of expression has resulted in diverse films being made through which direct and indirect messages are shared to either positively or negatively influence global societies.

Negative influences

According to a meta-analysis of studies, it has been revealed that there is a relationship between the attitudes of people within societies and mass media image of reality (Morgan & Shanahan, 1997). It is challenging to identify single mechanisms of mass media that have an impact upon human behaviour and related thinking (Latynov, 2013).

The series on the OOT platform 'Netflix' called 'The Crown' is based on the life of Queen Elizabeth the British Monarch who reigned until 2022. Although the primary material is factual as viewers learn about history, politics within the UK during 1960-1970, there are elements of the series that is fictional, because it is not a documentary. It is a work of fiction based on real live events (Hallemann, 2022). However, if audiences do not have factual knowledge about events that happened within the Royal family, it is difficult to gage what is true. The misinformation formed within the minds of viewers can portray some individuals in a negative light and contribute towards individuals in global societies forming negative perceptions and tarnishing images of certain individuals. In addition, other films that were released in the cinema after global tragic events like the 9/11 terrorist attack, enticed viewers to watch potential conspiracies acted out on the big screen. Despite the reality of truths, negative perceptions of different religions and communities around the world can be formed. Such cinema can lead to racism and hostile behaviour towards innocent members of societies.

Films create images of different countries to either generate interest or deter individuals from visiting there, having the ability to increase or decrease revenue attached to economic growth through tourism. Hence, film can shape ideas in the minds of young viewers that have never visited particular countries or had exposure to various cultures (Kubrak, 2020). Thus, films and series watched for casual viewing has the power to influence mindsets, particularly if individuals are younger and more impressionable and do not have the motivation to find out the truth about such events. When films identify with the emotions of the individual watching the film despite if the film was violent, happy, or scary, viewers tend to be engrossed within the story. This leaves a favourable impression of the places featured within the film (Yang & Bergh, 2017).

Positive influences

Movies can evoke different emotions, through dialogue, music and picture. They can promote knowledge and present ideas to individuals through dramatic or humorous scenes that connect with audiences. Films are largely watched for entertainment purposes, where individuals choose to escape from the reality of their world and enter in a fantasy world that they do not have any connection to. They are on-lookers and in a very relaxed state of mind which allows them to absorb the content of what is being shown. It has been proven within studies that individuals are able to retain more information when they are in a relaxed mind state (Kelland, 2010). Therefore, well written dialogues and delivery within the film can create an impact upon audiences. It can provide them with thought provoking ideas that can be implemented within contemporary life. For example, when a film is dramatic it can teach the adolescence about social interaction with adults and the opposite sex (Valkenburg & Cantor, 2001). In addition, films can change the mood of individuals and change the world. Although it is a form of escapism, films have influenced societies through politics, law, culture, they have the power to change the path of contemporary life and create history. Film is a form of art which can create an emotional attachment and reveal individual vulnerabilities silently. It can also change individual opinions and life perceptions. Research has revealed that films can influence people's opinions, stereotypes, beliefs, and attitudes, in addition to ethic and gender stereotypes (Behm-Morawitz & Mastro, 2008). Thus, it has the power to change attitudes towards various groups of people and can create new opinions that can be adopted by individuals watching the film.

Films can have a positive impact upon individual's self-concept (Sobkin & S, 2010). While it has also been proven to help individuals understand other people and improve ethnic tolerance rates (Andreeva & Bogdanova, 2017). The amount it impacts a person is dependent upon the individual and the film itself. When an individual watches a film, they are affected at some point and in some way. Due to the large societal interest in films, it can impact and influence global societies in positive and negative ways.

Conclusion

Films are very powerful mediums through which individuals can be influenced, in negative and positive ways. How effective the impact is on the individual, is determined by what direction it is travelling in, for example, changing the human behaviour is more difficult than influencing individual opinions and attitudes (Harris, 2002). They can facilitate societal growth economically, socially and to a certain extent politically. When films possess accurate information, it can expand an individual's knowledge base and view the situations, cultures, and different scenarios through another perspective. In contrast, films can also promote bad habits, violence and send negative messages to the public. Therefore, this study has established a dual impact upon societies. Films shape the way the youth perceive the world; they provide a foundation for seeds of hope or doubt that can be flourished, potentially contributing to the future of an individual. Therefore, steps must be taken to restrict misinformation within films that can have a negative societal impact and ruin lives of individuals

It is recommended that film production companies should be mindful of the content included within films prior to release, with considerations made to the overall impact on viewers. In addition, individuals should be cautious about the films or OTT content that they decide to view. The messages taken from films should be taken with the view of researching the subject further prior to deciding or acting in a specific manor and altering a personality. Remember films are the product of individual thoughts and perspectives, thus, the content within films should not influence the personality of an individual. Films do have the power to shape modern societies around the world and if they provide positive content, they can help viewers with their personal growth and impact positive societal progression. Critical thinking skills can play big part of understanding a film; therefore, this can have a multi-dimensional impact on individuals who should be mindful not to let it change them as individuals completely.

Behind the Research

Junmoni Gogoi

Research Objectives:

- To understand the impact that films have on societies.
- Can films change attitudes of people watching it.

Bio:

Junmoni Gogoi is a Film and Media Researcher. She is also a Professional Model, Mrs India SG 2021 & Winner of Dada Saheb Phalke Fashion and Lifestyle Award 2021.

Keywords:

Film, Cinema, Movies, Society

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