

## APPLICATION OF AI IN CULTURAL AND SOCIAL ANALYTICS (WITH SPECIAL REFERENCE TO ARUNDHATI ROY AND TONI MORRISON)

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### **Abstract**

*Artificial intelligence is the capability of machines to perform tasks that typically require human intelligence. Arundhati Roy's Narrative technique is the method and device used by writers to narrate stories. It works upon specific uses of phrases, punctuations or exaggerations of description. Although every storyteller uses few foundational techniques but a part of writer is visible in its employment of his own way of narrating the story. African Americans have experienced oppression throughout history as a result of the color of their skin. This was brought on by the idea that white people were better or more intelligent only by means of being white. As a result, black people have had a particularly difficult time adjusting to life after slavery was abolished. AI and literature can work together for better results in the human life.*

**Keywords :** *intelligence, processing, optimizing, human creativity, reasoning, learning, culture, societal, caste, race, oppression, slavery*

### **Introduction**

Artificial intelligence (AI) is the capability of machines to perform tasks that typically require human intelligence, such as reasoning, learning, understanding language, and making decisions. It involves using technologies that enable computers to process data, recognize patterns, and learn from experience to solve problems, make predictions, and complete complex tasks. Key functions of AI include natural language processing, computer vision, and autonomous decision-making, forming the basis of innovations from virtual assistants to self-driving cars.

AI is used in many aspects of modern life, often without people realizing it. It powers personalized recommendations in online shopping, helps with language translation, improves search engine results, and is increasingly used in smart homes and transportation. AI also plays a significant role in business, from automating tasks like customer service to analyzing data for fraud detection and optimizing manufacturing processes.

Disadvantages of AI include job displacement from automation, high implementation costs, risks to data privacy and security, bias and fairness issues in algorithms, potential for over-dependence and human skill loss, the lack of human creativity, emotional intelligence, and potential societal impacts like inequality and the misuse of AI. Human & Societal Impacts

#### **Job Displacement:**

AI can automate repetitive tasks, leading to job losses in some sectors and requiring workers to acquire new skills.

#### **Human Laziness & Skill Loss:**

Over-reliance on AI can diminish human critical thinking, problem-solving abilities, and other

valuable skills.

#### **Lack of Creativity and Empathy:**

AI systems lack the creativity, empathy, and emotional intelligence that are fundamental to human interaction and decision-making.

#### **Bias and Discrimination:**

AI can perpetuate and amplify biases present in the training data, leading to unfair or discriminatory outcomes in applications like hiring or lending.

#### **Privacy and Security Risks:**

AI systems require large amounts of data, raising concerns about the collection, storage, and potential misuse of personal information, as well as vulnerabilities to cyberattacks.

#### **Economic & Operational Challenges**

#### **High Implementation Costs:**

The research, development, and ongoing maintenance of AI systems involve significant financial investments.

#### **Dependence and Reliability:**

A system failure or error in an AI system could have serious consequences, especially if placed in critical sectors like healthcare or finance.

#### **Algorithmic Transparency:**

Understanding how complex AI systems arrive at their decisions can be difficult, making it hard to ensure fairness and accountability.

#### **Ethical and Societal Concerns**

#### **Misuse and Control:**

AI could be misused by authoritarian regimes or used to create harmful content like deepfakes, posing a risk to societal well-being.

#### **Uneven Distribution of Benefits:**

The advantages of AI may not be distributed equally across society, potentially leading to increased inequality.

#### **Environmental Impact:**

The significant energy requirements for training

and running AI models raise questions about sustainability and environmental impact.

AI responses may include mistakes. Learn more Artificial intelligence (AI) is the capability of computational systems to perform tasks typically associated with human intelligence, such as learning, reasoning, problem-solving, perception, and decision-making. It is a field of research in computer science that develops and studies methods and software that enable machines to perceive their environment and use learning and intelligence to take actions that maximize their chances of achieving defined goals.[1]

High-profile applications of AI include advanced web search engines (e.g., Google Search); recommendation systems (used by YouTube, Amazon, and Netflix); virtual assistants (e.g., Google Assistant, Siri, and Alexa); autonomous vehicles (e.g., Waymo); generative and creative tools (e.g., language models and AI art); and superhuman play and analysis in strategy games (e.g., chess and Go). However, many AI applications are not perceived as AI: "A lot of cutting edge AI has filtered into general applications, often without being called AI because once something becomes useful enough and common enough it's not labeled AI anymore." [2][3] Various subfields of AI research are centered around particular goals and the use of particular tools. The traditional goals of AI research include learning, reasoning, knowledge representation, planning, natural language processing, perception, and support for robotics.[a] To reach these goals, AI researchers have adapted and integrated a wide range of techniques, including search and mathematical optimization, formal logic, artificial neural networks, and methods based on statistics, operations research, and economics.[b] AI also draws upon psychology, linguistics, philosophy, neuroscience, and other fields.[4] Some companies, such as OpenAI, Google DeepMind and Meta,[5] aim to create artificial general intelligence (AGI)—AI that can complete virtually any cognitive task at least as well as a human.

Social and cultural issues encompass a wide array of challenges that arise from the complex interplay of societal structures, cultural norms, and individual behaviors. These issues can manifest in various forms, impacting different aspects of life, from social interactions and community well-being to economic opportunities and individual rights. Some prominent examples of social and cultural issues include:

#### 1. Social Inequality:

##### Caste System:

In some societies, the caste system continues to influence social dynamics, creating barriers to

social mobility and access to resources for certain groups.

##### Gender Inequality:

Discrimination based on gender, including disparities in education, employment, and political representation, remains a persistent challenge.

##### Poverty:

Poverty, both absolute and relative, can lead to various social problems, including lack of access to basic necessities, limited educational opportunities, and increased vulnerability to crime and exploitation.

##### Racial Discrimination:

Prejudice and discrimination based on race or ethnicity can create social divisions, limit opportunities, and lead to social unrest.

##### Income Inequality:

Disparities in wealth distribution can exacerbate social tensions and create social unrest.

#### 2. Community Issues:

##### Community Issues:

These include problems like lack of access to healthcare, inadequate infrastructure, and social isolation, which can negatively impact the overall well-being of communities.

##### Immigration:

Issues related to immigration, such as integration, cultural adaptation, and the impact on local communities, can create social tensions.

##### Urbanization:

The rapid growth of cities can lead to challenges like overpopulation, inadequate housing, and increased crime rates.

#### 3. Cultural Issues:

##### Cultural Diversity:

Balancing the preservation of cultural heritage with the need for social integration and tolerance can be a complex issue.

##### Cultural Preservation:

Maintaining and promoting cultural traditions and practices in the face of globalization and modernization is an ongoing challenge.

##### Religious Conflicts:

Differences in religious beliefs and practices can sometimes lead to social and political tensions.

#### 4. Individual and Social Issues:

##### Substance Abuse:

Drug and alcohol abuse can have devastating consequences for individuals, families, and communities.

##### Mental Health:

Rising mental health issues, often exacerbated by social and economic factors, require greater attention and support.

##### Domestic Violence:

Violence within the home, including domestic abuse, is a serious social problem with profound

consequences for victims.

**Child Abuse:**

Child abuse, both physical and emotional, can have long-lasting negative effects on children's development and well-being.

**Elder Abuse:**

Abuse and neglect of the elderly is another social issue that requires attention.

**Sexual Harassment:**

Sexual harassment in various settings, including workplaces and educational institutions, is a serious issue that needs to be addressed.

**Corruption:**

Corruption in public institutions and private organizations can undermine social trust, hinder development, and lead to social unrest.

**Education Disparities:**

Differences in access to quality education can perpetuate social inequality and limit opportunities for certain groups.

Addressing these social and cultural issues requires a multifaceted approach involving government policies, community initiatives, and individual actions. It is crucial to promote social justice, protect human rights, foster inclusivity, and create a society where everyone has the opportunity to thrive.

### **Arundhati Roy**

Literary style of Arundhati Roy's

Narrative technique is the method and device used by writers to narrate stories. It works upon specific uses of phrases, punctuations or exaggerations of description. Although every storyteller uses few foundational techniques but a part of writer is visible in its employment of his own way of narrating the story. Although there are so many technical aspects of narrative technique but setting, plot, perspective, style, theme and character form the crux of any narration.

When an author is as stylistic as Roy, she says a great deal through her style. Her kind of writing lends itself extremely well to literary interpretation because it is possible to find several meanings in her writing that lie hidden behind her style. No interpretation of such a literary style can be final. Yet an endeavour must be made to go beyond the surface of her writing. The fact that it is a woman writer that is in question also becomes evident from her stylistic utterances. The feminine sensibility, obvious or not, is another point of investigation that her style provides.

**Stylistic Impact on the Novel**

Roy, in order to narrate the novel, uses literary devices like defamiliarization, similes & metaphors, repetition of words and phrases, epigrams and paradoxes, irony, oxymoron,

metonymy, synecdoche, pun, saying versus showing in her writing, flashback narrative technique. She also uses some sound oriented techniques like rhythm, alliteration, internal rhyme, assonance, dissonance, etc. The content of Arundhati Roy's writing basically focuses on feminist perceptions, post-colonial dimensions, politics, literary tourism and her Indianness. The use of repetition in Arundhati Roy's novel is very significant it adds both emphasis and rhythm to its prose. Here are few examples:

My dearest Papa, I am well and happy in the service of our lady. But Koh-i-noor appears to be unhappy and homesick My dearest Papa, Today Koh-i-noor vomited after lunch and is running a temperature. My dearest Papa, convent food does not seem to suit Koh-i-noor through I like it well enough. My dearest Papa, Koh-i-noor is upset because her family seems to neither understand nor are about her wellbeing.... (p. 25).

Here is repetition of the words 'My dearest Papa' and 'Koh-i-noor'. The Repetition of 'my dearest papa shows the flattery as well as the constant pleading in the voice of Baby Kochamma to get favour. That is, she wants her father to bring her back from convent. She joined Roman catholic church is her quest to remain in company of Father Milligan. But, gradually, when she feels that her endeavour would leave her no were close to him, she wants to return. The repetition of 'Koh-i-noor' shows the high degree of greatness for herself Koh-i-noor in accordance to baby Kochamma's grandfathers will in which, he described that of his 7 grandchildren one is Koh-i-noor.

This is a story clearly depicting the confrontation between the haves and have not of the society between the high and mighty and the low and the weak, "Big Man, the Laltain and Small man, the Mombatti, between the "God of Big things' and 'God of Small things'. 'Laltain' means the big guns of tire society who like a Laltain (Lantern) are well fed, well protected and can survive the gush of the wind unlike the mombatti (candle) representing the marginalized, defenseless, the dalit, the deserted, down- trodden, have not, who have no glass of protection and can easily be blown away by the gushes of wind. Mombattis somewhat gentler than laltain can burn others light much easily than the laltain which is somewhat stubborn to burn other's light.

Through these symbolic representations the author has effectively been able to arouse the pity of the readers for these helpless mombattis Ammu and Velutha are these Mombattis put up against the Laltain of the society or the God of Big things (Pappachi, Baby Kochamma, Mamumachi. Chacko,

Comrade Pillai and Inspector Thomas Mathew) Amma and Velutha have to be against and forsake these Big things to indulge into Small things. Roy in her novel confronts boldly the male chauvinism, she retorts against the notion that women are a weaker sex and are inferior to men. They are possibly there to look after the needs and satisfy his baser instincts. She mocks at their attitude and registers her ardent protest that woman is not a mere toy to be manipulated by a man as and when he likes.

Chacko, a hypocritical male, brother of Ammu truly represents this picture. His selfish side and his false pride to be male are revealed any times in the story. He was sent to the Balliol College, Oxford to study by the virtue of the fact that he was the male member of the society. Am was not sent however because she was a girl and because of this simple fact she did not have access to higher studies as it was the popular belief that college studies corrupts a woman. This chronic conservative problem is still there in India whereby a large number of people are against the education.

### **Toni Morrison**

African Americans have experienced oppression throughout history as a result of the color of their skin. This was brought on by the idea that white people were better or more intelligent only by means of being white. As a result, black people have had a particularly difficult time adjusting to life after slavery was abolished.

Writing about racial issues, Toni Morrison has written quite a few novels which depict how prejudice and oppression can impact an innocent black person's life. She had a long career and has published several novels, with some of her most popular ones being her first novel "The Bluest Eye", "Beloved", "Song of Solomon" and "Sula". Her plot of Morrison's novel "Beloved" takes place in 1873, and revolves around the post-slavery life of a mother of four, Sethe. Sethe was deeply scarred by the events from her past, as she was enslaved at a Kentucky plantation called Sweet Home. After her escape from Sweet Home, Sethe, as traumatized as she was, attempted to murder all of her children, but managed to kill only her first-born daughter. Her late daughter's ghost proceeds to haunt Sethe's house. After the arrival of Paul D and the embodiment of her daughter's spirit, Beloved, Sethe was forced to face her past and stop running away from it. Every character in "Beloved" has struggles of their own. But one thing they all share is a devastating past which they are trying to forget. However, to be able to build a healthy future, they all must accept that the past can not be changed, but should also not be swept under the rug. In

"Beloved", we get to understand how much of a significant impact racism and slavery had on black people, to the point where they could never live a normal and peaceful life.

In her first novel, "The Bluest Eye", Toni Morrison focuses on the internal struggles a young adolescent girl has to go through due to the unreachable beauty standards. The main protagonist, Pecola, is taught from a young age by her surroundings that "whiteness" is beautiful, and that she is deemed to be ugly due to the color of her skin. This type of ideology takes away Pecola's innocence and forces her to grow up in an environment that wakes up all sorts of negative feelings towards herself. The reader gets to understand how racist ideologies can have a significant influence on the most innocent person in a society - a child.

Although Morrison's novel "Sula" does not directly speak about racial injustice, but mainly focuses on the characters' relationships and their status in their community, there are several situations that depict racism directly or indirectly. For instance, when a black boy fell into a river and drowned, the white bargeman who found him treated him as an inconvenience, rather than a human life being lost. This goes to show how insignificant a black person's life was to white people who were driven by racist beliefs.

Through her evocative storytelling, Morrison captures the intricate ways in which racial prejudice infiltrates societies, leaving behind scars that persist across generations. Importantly, as we turn the final pages of these novels, we are left with an undeniable truth: racism is not a relic of the past. The experiences from Morrison's fictional characters are the lived reality for many people. Morrison's books drive us to acknowledge the necessity of publicly discussing and dealing with this deeply-rooted issue.

Literature and artificial intelligence

The Future of AI in Literature - AI is significantly impacting literature by transforming its creation, analysis, and personalization, with tools helping writers overcome blocks, develop narratives, and polish texts, while also enabling AI to generate entire works. In literary criticism, AI can process vast amounts of text to uncover patterns and insights, while also raising ethical questions about authorship, originality, and the emotional depth of AI-generated content compared to human-written work.

Impact on Creation

Idea generation:

AI can provide writers with new ideas, plot twists, and character concepts, helping to overcome creative blocks.

Writing assistance:



AI tools can serve as co-authors, offering suggestions, improving consistency, and automating editing tasks to produce polished, error-free texts.

AI-generated content:

Recent advancements allow AI to generate complex and nuanced stories, poetry, and other literary works, often personalizing content for individual readers.

Impact on Analysis and Criticism

Text analysis:

AI can rapidly process and analyze large volumes of literary text to identify patterns, themes, and insights that human analysis might miss.

Literature mapping:

Tools like Research Rabbit use AI to help researchers explore and map relationships within existing literature.

Literature reviews:

AI can aid in conducting and synthesizing literary reviews, identifying key information and connections within vast bodies of text.

### Conclusion

God of Small Things by Arundhati Roy is a brilliant example of how culture functions in social life as both a defining factor and a devastating limitation. Roy shows culture as a complicated tapestry made of tradition, colonial legacies, and inflexible hierarchies that shape identities while upholding oppressive standards via the prism of Kerala's post-colonial, caste-bound society. The tragic arc of the book emphasizes how colonial-era social boundaries, patriarchal expectations, and cultural requirements of caste purity control relationships, determine power dynamics, and ruthlessly punish infractions. The conflict between personal desire and cultural norms, which leads to violence and reveals the cruelty of caste prejudice, is exemplified by the forbidden love between Ammu and Velutha. The twins Rahel and Estha also represent the broken effects of a culture that enforces boundaries through silence and shame. As seen by Velutha's destiny and the family's cooperation in maintaining repressive traditions, Roy criticizes how culture, despite being a vehicle of legacy, is turned into a weapon to isolate the "unworthy." Yet Roy also acknowledges culture's duality: it fosters belonging through shared rituals and history, even as it stifles freedom. The Syrian Christian traditions and Marxist ideals in the novel highlight tensions between preservation and progress, illustrating how post-colonial identity remains entangled in colonial hierarchies. Ultimately, Roy's narrative serves as a poignant indictment of cultural absolutism, arguing that rigid adherence to tradition perpetuates cycles of exclusion and trauma. The God of Small Things

remains a resonant commentary on the interplay of culture and social life, urging reflection on how societal structures both inherited and imposed can either nurture humanity or destroy it. Roy's work challenges readers to confront the enduring relevance of these themes in a world still grappling with caste, colonialism, and the quest for individual autonomy amid collective norms. Intricately, Toni Morrison's novels examine how social life is significantly impacted by culture, which is influenced by history, trauma, resiliency, and collective memory. Morrison sheds light on the dual function of culture as a source of emancipation and enslavement in books like *Beloved*, *The Bluest Eye*. As demonstrated by Pecola Breedlove's heartbreaking yearning for whiteness in *The Bluest Eye* or Sethe's tormented existence in *Beloved*, the legacy of slavery, systemic racism, and internalized Eurocentric values fracture communities and individual psyches. Morrison, however, also honors music, oral storytelling, and cultural customs as forms of resistance that promote unity and protect identity. Her narrative strategies, which combine folklore, non-linear timeframes, and collective voices, reflect the intricacy of cultural memory and show its unifying and dividing forces. Ultimately, Morrison's work underscores that culture is not static; it is a dynamic interplay of pain and beauty, shaping social interactions, kinship, and self-perception. By confronting historical truths and honoring cultural resilience, her novels affirm the necessity of acknowledging the past to navigate the present, offering a poignant testament to the enduring power of community and identity in the face of systemic erasure.

- 'Relationship between Cultural and Social Notions and Discrimination and exploitation, discusses, analyzes and explores the relationship between cultural and social notions in the literary works in general and due to its discrimination and exploitation in individual as well as social life in the novels of Arundhati Roy and Toni Morrison in particular. AI and literature can work together for better results. This pair can give solution to many cultural and social issues if used to create proper environment. Indeed this is the future of mankind and the restless world to promote sustainable progress .

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