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AI: A Threat to Indian Culture and Society

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Abstract

This paper examines the potential threats posed by artificial intelligence (AI) to Indian culture and society. While acknowledging the benefits of AI technologies, the analysis focuses on how the rapid adoption of AI without appropriate safeguards could undermine traditional values, exacerbate social inequalities, and lead to cultural homogeneity. Through examining the impacts of AI on language, creative expression, labor markets, and social structures, the paper argues that India needs a culturally sensitive AI governance framework that balances technological progress with the preservation of cultural heritage.

1. Introduction

India stands at a technological crossroads. As one of the world's fastest-growing digital economies, the country is rapidly adopting artificial intelligence across sectors, including healthcare, agriculture, education, and governance. While AI promises substantial economic benefits – it could potentially add $957 billion to India's economy by 2035 according to Accenture Research (2017) – these technological changes also hold significant cultural and societal implications that demand critical scrutiny.

India's unique cultural landscape, characterized by linguistic diversity, traditional knowledge systems, religious pluralism and sectarian social structure, is facing unprecedented challenges from AI systems designed primarily within a Western cultural framework. This paper examines how unchecked AI adoption could threaten Indian cultural identity and social cohesion through various mechanisms: linguistic marginalization, cultural homogeneity, disruption of traditional livelihoods, reinforcing existing prejudices and erosion of human connectedness in social relationships.

2. Linguistic Marginalization and Knowledge Systems

2.1 Threat to Linguistic Diversity

India's constitutional recognition of 22 official languages and over 1,600 mother tongues represents one of the world's richest linguistic landscapes. However, AI language technologies remain dominated by English and a handful of commercially viable languages. Natural Language Processing (NLP) models for Indian languages lag significantly in development, with Khanuja et al. (2021) reporting that even high-resource Indian languages like Hindi have less than 1% of the training data available for English.

This linguistic divide threatens to marginalize speakers of regional languages in accessing AI benefits. Studies by AI 4 Bharat indicate that error rates for Indian language processing can be 2-3 times higher than for English (Kakwani et al., 2020). As voice assistants, automated translation, and other language-based AI systems become increasingly embedded in daily life, this digital linguistic divide risks accelerating language extinction and cultural loss.

2.2 Devaluation of Indigenous Knowledge Systems

India is known for its traditional medicinal systems—Ayurveda, Siddha, and Unani. Medical systems are also mentioned in the ancient Vedas and other scriptures. The Ayurvedic concept appeared and evolved in India between 2500 and 500 BCE. India's traditional knowledge systems in medicine (Ayurveda), mathematics, agriculture, and craftsmanship represent millennia of empirical observation and practice. However, these knowledge systems are often incompatible with the algorithmic frameworks that dominate AI development.

Vasant et al. (2020) observe that traditional diagnostic approaches in Ayurveda—relying on holistic observation of patient prakriti (constitution)—resist easy formalization into the binary logic of computational systems. The reductionist approaches of machine learning models risk

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supplanting these nuanced traditional frameworks rather than complementing them, potentially leading to irreversible loss of indigenous epistemologies.

3. Cultural Homogenization and Creative Expression

3.1 Algorithmic Cultural Imperialism

AI systems trained predominantly on Western cultural data propagate embedded cultural assumptions. Content recommendation algorithms on platforms like YouTube, Netflix, and Spotify often prioritize globally popular content over locally relevant cultural products. Research by Mehta and Shah (2022) demonstrated that recommendation systems consistently favor Western cultural content even for Indian users, creating a homogenizing effect on cultural consumption.

This algorithmic bias threatens India's cultural production ecosystem. Indian classical music, regional cinema, and folk traditions must increasingly conform to algorithmically determined patterns of global palatability, risking dilution of their distinctive characteristics.

3.2 Impact on Creative Expression

Generative AI tools trained primarily on Western artistic traditions struggle to authentically represent Indian aesthetic sensibilities. A study of image generation models by Gupta and Kumar (2023) found significant misrepresentations of Indian cultural symbols, religious imagery, and traditional art forms, revealing embedded biases in these systems.

As creative AI tools become commonplace in content creation, there exists real concern that distinctly Indian artistic expressions—from classical dance forms like Bharatanatyam to regional architectural styles—may become homogenized through AI-mediated creative processes that lack deep engagement with their cultural foundations.

4. Labor Displacement and Social Structures

4.1 Threat to Traditional Livelihoods

India's economy includes substantial informal and traditional sectors that provide livelihood to millions. The handloom sector alone employs over 4.3 million people (Ministry of Textiles, 2021). AI-driven automation threatens these traditional craft-based livelihoods through mass-produced alternatives.

Unlike Western economies where industrial displacement occurred gradually, AI threatens to compress this transition in India, potentially eliminating traditional economic activities before alternative employment structures emerge. Research by the Indian Council for Research on International Economic Relations (2023) estimates that 52% of activities in traditional craft sectors could be technically automatable within the next decade.

4.2 Disruption of Communal Social Structures

Communalism has been a significant issue in India, both before and after independence, that has contributed to social conflicts and political tensions. Rooted in the belief that one's religious community is superior, it has often resulted in violence and divisions between different religious groups. But, in fact Indian society has historically been organized around communal structures—joint families, caste-based occupational groups, and village communities—that provide social security and identity. AI-driven economic changes threaten these structures by accelerating urbanization, individualizing economic activity, and disrupting intergenerational knowledge transfer.

Sharma and Prakash (2023) document how AI adoption in agricultural contexts has begun disrupting traditional family-based farming knowledge systems in rural Punjab, with younger generations increasingly relying on algorithmic recommendations rather than elder wisdom for agricultural decisions.

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5. Ethical Concerns and Bias Amplification

5.1 Reinforcement of Existing Social Hierarchies

India's complex social landscape includes historical inequalities based on caste, religion, gender, and region. AI systems trained on historical data risk perpetuating and amplifying these biases. Research by the Centre for Internet and Society (2022) identified significant disparities in facial recognition accuracy across different Indian demographic groups, with higher error rates for rural, lower-income, and darker-skinned populations.

The increasing reliance on algorithmic decision-making in education, employment, finance, and law enforcement threatens to encode existing prejudices into seemingly objective systems, potentially creating new forms of technological discrimination.

5.2 Digital Colonialism

The concentration of AI development in Western corporations or large Indian conglomerates raises concerns about what Couldry and Mejias (2019) term "data colonialism"—the extraction of data resources from individuals and communities without equitable compensation or control. India's vast population makes it an attractive data source for AI development, yet the economic and cultural value derived from this data primarily benefits corporate entities rather than contributing to community welfare. This asymmetry reproduces colonial extraction patterns in digital form.

6. Erosion of Human Connection and Values

6.1 Transformation of Interpersonal Relationships

Indian cultural traditions emphasize interpersonal bonds, familial duty (dharma), and community interdependence. The increasing mediation of human relationships through AI interfaces—from elder care robots to AI companions—threatens these foundational values.

Studies by the National Institute of Mental Health and Neurosciences (2023) indicate growing dependence on digital interaction among Indian youth, with concerning implications for development of empathy and social bonding. As AI systems become more personally engaging, they risk supplanting rather than supplementing human relationships.

6.2 Challenge to Traditional Value Systems

Traditional Indian value systems emphasize concepts like dharma (duty), karma (consequence of actions), and ahimsa (non-violence) that guide ethical decision-making. AI systems operate through utilitarian frameworks that may fundamentally conflict with these value structures.

As AI increasingly influences decision-making in healthcare, justice, resource allocation, and other domains, values embedded in algorithms may supersede traditional ethical frameworks, creating cultural dissonance and moral confusion.

7. Path Forward: Culturally Sensitive AI Governance

7.1 Indigenous AI Development

Developing AI within Indian cultural frameworks represents a vital response to these challenges. The Digital India initiative's focus on developing Indian language computing, documented by Mittal and Kumar (2022), demonstrates early progress in creating linguistically appropriate AI tools.

Efforts like AI4Bharat's open-source language models trained specifically on Indian language corpora represent promising steps toward technological sovereignty. Similarly, projects incorporating Ayurvedic principles into healthcare AI show potential for culturally syntonic technological development.

7.2 Regulatory Frameworks and Ethical Guidelines

India requires AI governance frameworks that specifically address cultural preservation. The National Strategy for Artificial Intelligence (NITI Aayog, 2021) begins to acknowledge cultural concerns but requires more robust provisions for:

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Mandating diversity in AI training data
Requiring cultural impact assessments for AI deployments
Ensuring community ownership of culturally significant data
Supporting traditional knowledge digitization on equitable terms
Protecting cultural IP rights in the age of generative AI

7.3 Educational Approaches

Developing critical technological literacy among Indian citizens represents another essential countermeasure. Educational initiatives should emphasize:
Understanding algorithmic influences on cultural consumption
Critical evaluation of AI-generated content
Awareness of data rights and digital sovereignty
Preservation of traditional knowledge alongside technological education

8. Conclusion

Artificial intelligence presents both opportunity and threat to Indian culture and society. Without deliberate intervention, AI systems designed primarily within Western conceptual frameworks risk undermining India's linguistic diversity, traditional knowledge systems, creative expressions, and social structures.

The path forward requires neither wholesale rejection of AI nor uncritical adoption, but rather thoughtful integration that preserves cultural distinctiveness while embracing beneficial technological advances. This demands development of Indian AI capabilities, culturally sensitive regulatory frameworks, and educational initiatives that empower citizens to engage critically with these technologies.

By consciously shaping how AI technologies integrate with Indian society, there exists the possibility of technological advancement that strengthens rather than undermines cultural identity—but this outcome requires immediate and sustained attention to the cultural dimensions of technological change.

References

Accenture Research. (2017). Rewire for Growth: Accelerating India's Economic Growth with Artificial Intelligence. Retrieved from Accenture.com.

AI4Bharat. (2022). Indic NLP Catalog: Resources for Indian Language NLP. Retrieved from ai4bharat.org.

Centre for Internet and Society. (2022). Facial Recognition Technology in India: Examining Bias and Accuracy Across Demographic Groups. Bangalore: CIS.

Couldry, N., & Mejias, U. A. (2019). The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism. Stanford University Press.

Gupta, R., & Kumar, P. (2023). Cultural Misrepresentation in Image Generation Models: A Study of Indian Cultural Symbols. Journal of AI Ethics, 5(2), 78-93.

Indian Council for Research on International Economic Relations. (2023). Automation and the Future of Traditional Craft Sectors in India. New Delhi: ICRIER.

Kakwani, D., Kunchukuttan, A., Golla, S., Gujral, G. P., Bhattacharyya, A., Khapra, M. M., & Kumar, P. (2020). IndicNLPSuite: Monolingual Corpora, Evaluation Benchmarks and Pre-trained Multilingual Language Models for Indian Languages. Findings of EMNLP.

Khanuja, S., Bansal, D., Mehtani, S., Khosla, S., Dey, A., Gopalan, B., Margam, D. K., Aggarwal, P., Nagipogu, R. T., Dave, S., et al. (2021). MuRIL: Multilingual Representations for Indian Languages. arXiv preprint arXiv:2103.10730.

Mehta, A., & Shah, K. (2022). Algorithmic Cultural Preferences: Analysis of Content Recommendation Systems in India. International Journal of Communication Studies, 34(3), 215-231.

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Ministry of Textiles. (2021). Annual Report 2020-2021. Government of India.
Mittal, S., & Kumar, V. (2022). Digital India's Language Computing Progress: A Review of Indic Language Technologies. International Journal of Digital Society, 13(2), 45-58.
National Institute of Mental Health and Neurosciences. (2023). Digital Media Usage and Social Development in Indian Youth: A Longitudinal Assessment. Bangalore: NIMHANS.
NITI Aayog. (2021). National Strategy for Artificial Intelligence #AIForAll. Government of India.
Sharma, P., & Prakash, A. (2023). Intergenerational Knowledge Transfer in the Age of Agricultural AI: A Case Study from Punjab. Journal of Rural Technology, 15(2), 123-139.
Vasant, L., Sharma, S., & Kumar, A. (2020). Challenges in Computational Approaches to Ayurvedic Diagnostics. International Journal of Ayurvedic Medicine, 11(3), 456-468