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Integrating Artificial Intelligence in Historical Inquiry: Ancient Stories to Digital Humanities.

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Biography:

Ritu Bhagat is PhD from Centre for South Asian Studies, Jawaharlal Nehru University New Delhi, India. Currently she is Associate Professor in History Department, Shyama Prasad Mukherji (SPM) College University of Delhi, India. She was a Junior Fellow at Nehru Memorial Museum & Library (2009-2011) and was awarded the Charles Wallace India Trust Grant, UK short-term fellowship in 2001.

Some of her important publications include:

Book Forging Pakistan: Muslim League and the Movement for Pakistan. 2nd Ed, New Delhi: Anamika Publishers, 2016;

Book Chapter, 'Partition Ethnographies: Food and Memories Across Borders' in The Independence of India and Pakistan: New Approaches and Reflections, edited by Ian Talbot, Karachi: Oxford University Press, 2013

Book Chapter, 'Women's Movement in India: Contribution of Mahatma Gandhi' in Chayanika Uniyal and Rajiv Verma Ed. In pursuit of Gender Studies: Continuity and Change, Swaraj Prakashan, 2019

Article, 'Lost Cuisine: Food Culture of Partition Refugees from Multan' in Journal of Agricultural Engineering and Food Technology, ISSN: 2350-0085, Vol. 6, Issue 2, April-June 2019, p133-37

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Article: 'Food from Paradise: Identity and Cuisine Culture of Kashmir,' International Journal of Research and Analytical Reviews, December 2021, Volume 8, Issue 4, p. 936-943, www.ijrar.org (E-ISSN 2348-1269, P- ISSN 2349-5138)

Article: 'Looking Back: Lala Lajpat Rai, Nationalism and Diversity' Juni Khyat,12, No 1, July-Dec 2022, p.62-76 (ISSN 2278-4632)

Article: Evolution of Food Practices in India: Growth of Farm Tourism in Haryana, p212-218, Proceedings of the Haryana History Congress, Vol.2, 2023, ISSN: 2584-2331

Besides these, she has presented a number of Papers in National and International seminars as well.

Abstract

According to the New York Times 'AI is poised to rewrite History. Literally'. From pouring over dusty files in archives, libraries and museums for examining the past to data analysis at the click of button AI seems to have opened a world of information that would have been nearly impossible to imagine a few years ago. From its earlier oral traditions to recorded and documented history to current use of digital tools to analyse historical data the transformation in terms of 'sources' has changed dramatically. Since the nineteenth century, a range of themes have enriched historical inquiry—Archaeology, Economic, Intellectual history, social history, Cultural history, Subaltern accounts, Gender studies, Identity and Memory to name a few. In the contemporary times digitally mediated analysis, AI tools have opened new methods of analysis and data interpretation. However, it is important to be aware of the challenges associated with the use of AI technology in reconstructing the past. My article attempts to examine challenges, bias, and ethics of using AI technology and argues that AI cannot replace the role of traditional history writing. Although it can enhance in the analysis of large data and establish linkages and patterns that were previously difficult to establish. This can lead to a more multidimensional and complex understanding of the past. Although the use of AI redefines the practice of history writing I contend that even if AI acts as a powerful tool for analysis, it cannot replace reasoning and interpretation of a historian. Since my area of research focuses on post Partition refugee rehabilitation in Delhi, I propose to examine the use of digital media specifically in histories of Partition.

Keywords: AI, historical inquiry, Ancient Past, Digital histories, Partition narratives, Refugee Rehabilitation, Delhi

Introduction

The beginning of human evolution that took place over thousands of years from stone age to settled agriculture, growth of urban civilizations with writing, metallurgy, development of arts and sciences, social organisation, religion, indicate a human race' achievement and effort to grow and struggle to overpower vagaries of nature and to prove the superiority of Man. The writing of history too has evolved from earlier clay tablets, oral traditions trade records and written texts to interpretative historical analysis to very recent use of technology and digital repositories which can interpret human history within seconds. My article explores how the use of AI has transformed historical research.

Methodology

Earlier historical analysis required application of critical methods, Text and comparative analysis and evaluation to assess past historical records. The sheer vastness of historical data and inaccessibility for the historian at times made historical research difficult. But in the recent past the use of technology and AI tools have transformed analysis and access to vast amount of data in profound ways. Not only in terms of analysis but also access to data has transformed historical research. A notable example of this is Dead Sea Scrolls [1] In the context of sources of Indian history which included archaeological excavations, Literary sources, ancient scripts, Inscriptions, coins, folk tales and legends passed down through oral narratives, Medieval texts in Arabic, Persian have now been open to analysis and new programs of coding

and interpretation which helped open doors to processing large data through AI tools. Techniques such as Language processing (NLP) help researchers examine ancient historical texts linguistic structures and patterns. In addition, the active digitization of books, texts, manuscripts, archival sources have not only opened doors for researchers and made them accessible worldwide but also provided new interpretative models. With the use of AI the methodology has become data driven and quantitative.

Indian Knowledge System [2]

One area of research which has made use of AI and digitization to preserve ancient history is the Indian knowledge system. AI tools have helped overcome challenges like language, brittle manuscripts like palm leaves and parchment in dire need of preservation. The analysis of ancient Indian Sanskrit texts has opened traditional knowledge to modern interpretation. AI techniques such as OCR, Optical Character Recognition are crucial for digitizing manuscripts. Digital Library of India employs techniques like OCR and A14Bharat is a program for languages and dialects. Similarly, Indo WordNet is database that makes use of NLP techniques to retrieve Indian Languages. AI powered Virtual Reality (VR) helps create reconstructed sites of temples and thus provide an immersive experience of learning.

NLP Natural Language Processing technique in interpreting Sanskrit, Pali, Tamil and other languages have opened themselves to translation into modern language and thus newer interpretations. Intellectual traditions preserved in Vedas and Upanishads, Sanskrit literature, classical music, architectural sites like Ajanta and Ellora, temple inscriptions and works on medicine, grammar, documented in texts which suffered from easy accessibility due to non - digitization. AI has proved to be an important tool in this endeavour of preserving, digitization and accessibility to ancient texts and also preserving them for future generations.

Limitations

However, there are some limitations to the use of AI as they pose copyright issues and intellectual property rights. It is important that guidelines be set up to protect traditional indigenous knowledge. The use of AI is meant to supplement and enrich research patterns in order to interpret them more meaningfully. One has to keep in mind that bias in data can also lead to prejudicial interpretation or it might lead to simplistic presentation of complex narratives. In such a situation preserving authenticity of the historical context becomes more important. There is no doubt though that the use of AI marks a new era of research and historical inquiry but it also needs to be used with a great deal of caution.

AI and Partition Studies

The 21st century all over the world has led to continuous expansion in the use of digitisation and online accessibility of archival sources in history and other disciplines. Especially after the Covid

pandemic online work or teaching, research and publication became a necessity. Although the material which became accessible created opportunities as well as challenges for historical research. The democratisation of knowledge following the use of AI tools cannot take away from the importance of historian's interpretative skills and critical evaluation through historical methods. The data analysis can provide means for analysis and interpretation but not the interpretation itself. But undoubtedly the AI tools carry tremendous potential for research by posing new research questions, large data analysis to emerging new patterns of analysis.

Let us now examine the use of AI tools and analysis closer to home in national and oral narratives and the field of digital humanities specifically relating to Partition of India. A recent study makes extensive use of digital technology in order to study the patterns of refugee rehabilitation.[3] It explains in great detail the different AI tools which can be used to examine different aspect of Partition migration, patterns of refugee settlements and the impact on different communities impacted by Partition displacement of population. Geospatial technology like GIS mapping, automatic transcription and data analysis, has made it easy to identify migration patterns, as well as rehabilitation drive at district level in Delhi and Lahore, patterns of migration during the communal riots and transfer of population between the newly formed two nations of India and Pakistan in 1947. GIS like Kernel Density mapping has been suggested in the study to analyse refugee camp density areas and other tools Global Moran's I which takes into account socio economic issues of migration. Another example of AI tools like GISCorps and digital platform like the 1947 Partition Archive uses these to map partition survivors. The Punjab Remote sensing Centre PSRC in Ludhiana also has the potential to use this technology to study demographic changes, involving post-Partition studies. The use of aerial photography can help map land use and demographic changes. Tableau and Power BI can be used to further study the changing landscape of Delhi with the shift in refugee camps and the movement of refugee population into permanent housing facilities provided by the GOI Ministry of Rehabilitation. Historical climate data can also help identify the making of Punjab agricultural colonies; ArcGIS Urban tool can study the process of urbanisation and 3D technology can help construct virtually old refugee settlements lost to redevelopment. Other tools like OCR help in analysing archival material and allotment documents to refugees and by using NLP, in which themes and patterns within the document can be easily analysed. Also, Text mining tools can reveal an understanding of data regarding housing and employment of refugees Thus, techniques like OCR, text mining, and other digital interactive platforms can narrow the gap between archival data and contemporary analysis, help analyse the complexities of the post-Partition refugee rehabilitation process thereby validating the existing knowledge about administrative and Ministry of Rehabilitations efforts to help the refugees in India.

Digital sources

A project sponsored by Lakshmi Mittal and Family South Asia Institute and Harvard's Laboratory for Innovation has initiated a project titled "Looking Back, Informing the Future: The 1947 Partition of British India", on Crowd sourcing Memories of 1947. The project has collected 2300

oral histories of marginalised groups of partition sufferers between 2017-2019 through trained volunteers along with Citizen Archive of Pakistan. The Project however also recognises the limitations of authenticity of its recorded narratives.

The project "1947 Partition Archive", under Guneeta Singh Bhalla started in 2010, which also claims to have recorded more than 11000 oral narratives and also published in a book "10000 memories: A lived experience of Partition". They offer internships to train 'citizen historians' to record oral histories from Partition survivors in different parts of the world.
Tools like StoryMapJS has mapped partition stories along with 1947 Partition Archive in order to provide context to refugee displacement experience. Further these sites not only historicize such stories but help to include peoples lived experience in the narrative. Different aspects of refugee rehabilitation can be studied through Statistical tools such as SPSS and programming languages like R and Python in order to explain census data and compensation schemes for urban and rural refugees.

AI techniques in Museums and memorialisation

Another important aspect relates to Partition studies and digitization of oral narratives. Till about a few years back there existed no memorial to commemorate this profoundly challenging event which changed the destiny of millions of people inhabiting the India subcontinent and the nations themselves. In 2017 a Partition museum under the aegis of a Trust, Arts and Cultural Heritage Trust, opened in the historic city of Amritsar followed by another museum in Delhi. These sites preserved 'People's memory of Partition' creating an alternative experience to the official narrative. Another new online initiative opened in 2010 in Berkeley as the site of oral history, the 1947 Partition Archives. They have recorded interviews with Partition survivors through volunteers and digitise information for easy access online. The aim of both these commemorative sites is to provide space to alternate narratives of ordinary and marginalised voices. An important role in the development of these sites was played by South Asia diaspora, institutions which were based in the western world. The academic world has been greatly influenced by the feminist works of Urvashi Butalia, Ritu Menon and Kamla Bhasin published in 1998 which recorded women's experience of Partition[4]. The recording and the focus of study on individual especially women's experience followed the growth in subaltern history and hitherto unheard voices of marginalised groups like women impacted research work on Partition studies too. The violence against women during Partition and also later in independent India became the subject of historical analysis and greatly influenced the preservation of oral narratives in texts and digital sites.

However, the Partition Museum and the digitisation of oral narratives on these online sites also focus on the 'less celebratory aspect'[5] of independence of India and Pakistan. Instead, these sites account for the horrors of Partition perpetrated through unimaginable violence on the 'other' community in the name of religion.[6] At the same time these sites also profess to preserving heritage and memory building, as a kind of therapeutic experience which provides a cathartic release to stored trauma of Partition experience. The question remains as to what aspects of this common

heritage of suffering are acceptable to all communities? There is no denying that people on both side of the borders in India, Pakistan and later Bangladesh do acknowledge that violence was experienced by all communities and all communities displayed a human side in times of distress to 'save the other'. So, to what extent do these memorial sites offer to preserve heritage and hitherto unheard voices of Partition experience? Does the fact that these sites offer a commercial aspect to digital version of Partition memory influence how Partition is viewed, remembered and understood by a generation which did not experience the event and has only a received memory of it which again needs to be validated for its authenticity.[7] The crowdsourcing of Partition memories which underpins their ability to influence diasporic community as well as partition narratives for the younger generation due to use of technology cannot take away from the fact that although new methods of narrative have emerged with digitization tools, many of the survivors I spoke to did not feel comfortable talking about the Partition experience nor do they wish to make it public knowledge.[8]

Limitations

Although there is no doubt about the possibilities that modern AI tools and technology can demonstrate in analysing complex and vast data but it is a moot point how all this input data can be made available for analysis. Archival research for me personally involved physical visits to National and Delhi archives where most of the files pertaining to refugee rehabilitation were not open for research. Some were too 'brittle' while many files had been 'destroyed' and not preserved by the archivists. Newspapers available on microfilm readers meant missing pages and straining eyes and oral manuscripts were at times not easily accessible. But for the generation well versed in technology and the use of these AI tools research has opened new frontiers of historical analysis. These sites point towards a race against time to record the oral interviews of a generation in the danger of being lost to time. This becomes more problematic as the narratives recorded and those lost in time or those which remain hidden do not always represent oral history which authenticate partition experience. These oral recording require prior understanding of not just the region, community, time and space of the interviewee and the interviewer. The digitised version of oral interviews available on these websites may be edited versions and one has no way of knowing what is meant for the consumption of the reader. Digital recordings have certainly made the research material more readily available across different parts of the world but it has made the "histories and memories somewhat "rootless and devoid of context"[9]. The question which needs to be examined by all those engaged in historical research and use of AI and digital technology need to understand that a sanitised version of data analysis alone cannot provide all the answers to the interpretation of history

Content Notes

[1] These are oldest manuscripts of the Hebrew Bible from the 4th century BCE. Artificial Intelligence (AI) has helped researchers in Netherlands analyse the Great Isaiah Scroll, running 24 feet long and consumes 17 pieces of parchment.

[2] The Indian Knowledge System (IKS), which includes linguistic and philosophical knowledge like *Vedāngas*, *Vyākaraṇa* *Gaṇita* ,(Kerala school), *Nyāya* has made effective use of AI interpretations *Aṣṭādhyāyī* and *Yuktibhāṣā* have been analysed using Indra Sanskrit NLP from IIT Madras. Bharata Muni's *Nāṭyaśāstra* (c. 200 BCE) consisting of 26 formal *chandas*, *Mātrāmeru* binary sequences and *tala* or 108 rhythmic cycles have all used AI tools for analysis.

Kerala School's Mathematicians like Mādhava and Nīlakaṇṭh in 14th and 16th century developed infinite series for trigonometric functions, Pingala's *Chandaḥśāstra* (c. 300 BCE) made use of generative AI, such as variational autoencoders (VAEs).

[3] Gursimran Kaur Butalia, Partition Revisited: Bridging History and Technology to Trace Refugee Rehabilitation in *Digital Orienatalist.com* 2024/12/24

[4] Urvashi Butalia, *The Other Side of Silence: Voices from the Partition of India* (Delhi: Viking Penguin, 1998); Ritu Menon and Kamla Bhasin, Borders and Boundaries: Women in India's Partition (New Brunswick, NJ: Rutgers University Press, 1998). Pandey, G. (2001*). Remembering Partition: Violence, Nationalism and History in India.* United States: Cambridge University Press.

[5] Pippa Virdee (2022): Histories and Memories in the Digital Age of Partition Studies, *The Oral History Review*, DOI: 10.1080/00940798.2022.2097877,

[6] India decided to commemorate Partition Horrors Remembrance Day on 14 August.

[7] Chatgpt is now able to replicate any number of Partition stories/ experience of displacement and provide data of refugee rehabilitation in areas of resettlement which have become common knowledge in the public domain. Instagram is reproducing hard earned research work by changing the format in bite sized slides in free verse with absolutely no way of enforcing copyright.

[8] Many of the individuals and families who spoke to me about their partition experience did not wish the interview to be recorded. Many said that now there was no point in remembering the bitter experience as they had moved on and made a new life of themselves in the new nation.

[9] Virdee, ibid

References:

Nilesh Joshi, The Role of Indian Knowledge System in Generative Artificial Intelligence: Bridging Ancient Wisdom and Modern Innovation in SUṢAMĀ : Multidisciplinary Research Journal ISSN: 3107-4529 (International Peer-Reviewed & Refereed Journal) Vol. 1, Special Issue, (December) 2025

Pallavi S. Jambhulkar, Importance of Artificial Intelligence in the Indian Knowledge System UPA National E-Journal Interdisciplinary Peer-Reviewed Indexed Journal, ISSN 2455-4375,

Sunil Kumar Sain and Prasanta Kumar Behera, The Role of Artificial Intelligence in Preserving and Promoting Indian Knowledge Systems, Shodh Samagam ISSN: 2581-6918 (Online), 2582-1792 (PRINT)

Mohammad Hassan, S. (2024). Unveiling the Forgotten: The Role of Artificial Intelligence in Historical Writing and Research. Germany: BookRix.

D Sudha Rani, Rachel Irdaya Raj Ed. 2025 Memory Studies in the Digital Age: An Interdisciplinary Perspective. (2025). United Kingdom: Taylor & Francis.

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