JOURNAL OF THE ASIATIC SOCIETY

Vol. LXVI, No. 2, 2024

Special Issue
Scholarship Indelible: James Prinsep (1799–1840)

THE ASIATIC SOCIETY
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Guest Editor: Rajat Sanyal

ISSN 0368-3308

Published by
Lieutenant Colonel Anant Sinha
Administrator
The Asiatic Society
1 Park Street
Kolkata 700 016
Contact: director_ask@asiaticsocietykolkata.nic.in

Published in October 2024

Printed and bound in India at
Desktop Printers
3A, Garstin Place, 4th Floor
Kolkata 700 001

Price : ₹ 400
(Complete vol. of four nos.)

Journal of the Asiatic Society is a quarterly peer–reviewed international journal of the Asiatic Society enlisted in UGC–CARE.

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Foreword

James Prinsep (1799–1840) was fifteen years younger to the Asiatic Society, the latter being established in 1784. Ever since he joined the Society as a member in 1830, the names of Prinsep and Society have remained almost inseparably associated with each other. The scholarship of Prinsep is unparallel, to which the contents of this special issue of the journal stands vindicated. His erudite scholarship spanning across almost all the disciplines of natural and social sciences have identified his personality as a stalwart.

The Asiatic Society earlier had occasions to pay homage to his monumental scholarship by organising symposiums and publishing works commemorating his academic contributions in various fields of research. This volume, dedicated to commemorate 225 years of his birth, however, is set in a slightly different tone. Here we have been able to situate contributions by distinguished scholars across disciplines in not only underlining Prinsep's contributions, but also revisit the domains in the light of most recent studies.

The publication of this special issue of the journal under the guest editorship of Dr Rajat Sanyal marks the beginning of a series of academic and outreach programmes that we contemplate to undertake throughout the next one year, in order to situate Prinsep in the larger canvas of India's scientific and cultural heritage.

Anant Sinha
Lieutenant Colonel
Administrator
The Asiatic Society

SIR·WILLIAM·JONES
MDCCXLVI–MDCCXCIV

EDITORIAL

Scholarship Indelible: James Prinsep (1799–1840)

Rajat Sanyal

> After fighting fruitlessly against the approaches of disease for a couple of months, he was at last compelled, as will be found recorded in the pages of this Journal, to quit the country suddenly in the ship *Herefordshire* in the early part of the month of November. His friends and brothers are now anxiously expecting to receive from the Cape of Good Hope, the first accounts of the effect of the sea-voyage upon his health. In the midst of their anxiety, they may be excused for the apparent egotism, of placing so much of eulogy, and of personal memoir, in the Preface to the last volume of his series of the Journal.
>
> Anonymous, Preface to *JASB 7,* 1838 [Feb. 1839]: xii

Enough has been written by way of descriptive biographical accounts of James Prinsep's journey, of which the above words mark the final lap. His outstanding scholarship has been appraised and critiqued on more than one occasions, sometimes with repetitive citations to the same course of events connected with his life, though significant they are indeed. I am not interested, therefore, in imposing on the reader one more such narrative. To me, the more crucial issue is, rather than attempting a critical consideration of his academic, organizational or administrative endeavours, is to ask, why and how is Prinsep still relevant to us? His inseparable association and bond with the Asiatic Society is of course one, prima facie. But in a search for other possible cues to answering both the questions, it is imperative to dig into the time that nurtured the frame of mind and the executional faculty of Prinsep. His scholarship was certainly exceptional, but could not have been divorced from the spatio-temporal contexts within which it manifested.

Born in the family of a trader names John Prinsep (Fig. 1), with eleven legal and four illegitimate siblings (Allbrook 2014: xi), quite

understandably his formal education did not continue for long. But it was the inner zeal that evinced his is identity as a polymath from an early age. He successfully employed this passion for multi- disciplinary vision after he landed in India with an appointment at the Calcutta Mint. His early interests to participate in the process of 'reorganizing' the monetary mechanism of the Raj in a 'scientific' orientation certainly emanated from the deeply seated intellectual belief that almost all the historical beginnings commenced from the West. A closer look into his proposal in standardising the weight standard of the coinage system of the subcontinent bears a direct testimony to this (Garg 2001). His quest for the 'oriental antiquity', on the other hand, formed essentially a part of the Asiatic Society's 'cultural project' of the 'study of texts, scriptures, religion, philology, and laws of Orient critiquing Euro-centrism' (Basak 2020: 158, Chakrabarti 1999-2000), that oscillated between the compulsions of colonial rule and a liberal humanistic intellectual tradition (see Appendix B for a brief Timeline). It was the

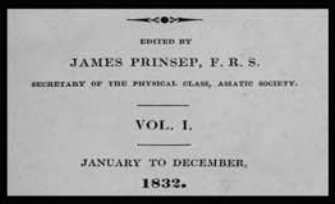
Figure 1. Prinsep's parents: Sophia [1760–1850], 'copy of a lost portrait by John Downman' and John [1746–1831], 'after his return from Calcutta in 1788' (after Allbrook 2014: 59–60).

latter that gained him the recognition as an ardent admirer of the Oriental system of dissemination of knowledge. His editorial epithets (Fig. 2), printed in the six volumes of *The Journal of the Asiatic Society of Bengal* (JASB), stands vindicated to the demonstration of this recognition.

It is impossible to grasp the limits of Prinsep's scholarship within the confine of a journal issue. We have, however, chased that ambitious goal in this collection, by revisiting Prinsep's scholarship in the domains of Indological studies, scientific pursuits, aesthetic endeavours and, above all, his organizational skills and strategies as the Secretary of the Asiatic Society, by putting together scholarly contributions from all these fields of enquiry. In the following I have inserted my observation on his time and academic eruditions by way of brief comments to the contributions presented here.

Prinsep's world of 'India Research' and 'Science' are exclusively connected with the cities of Calcutta and Banaras, each experiencing his web of activities for nearly a decade. And, for the case of the former, it was his six-year stint at the Asiatic Society that drew the layout of this institution's academic agenda for years to come. But it was not the best of Asiatic Society's times that Prinsep had entered this organization. The first essay of this volume, signed jointly by Tapati Mukherjee and Sujata Mishra, revisits the circumstances of crisis and upheaval from which Prinsep literally saved Asiatic Society's principal project of knowledge production by publishing editions of 'ancient' texts. By closely re-examining published correspondences of the Society, the authors demonstrate how Prinsep almost single-handedly rescued the Society from a baffled financial state of existence and revived its publication projects by offering and carrying out policy prescriptions to the government.

The three following articles focus on the palaeographic and epigraphic studies, the most widely known domain of research associated with the name of Prinsep. But these are not simply accounts of Prinsep's works. Sitabhra Sinha and Nandini Mitra critically reassess the issue of decipherment of Brāhmī, which is conceived by the



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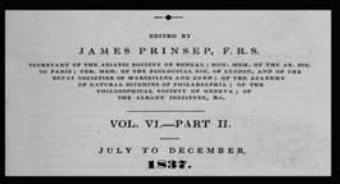

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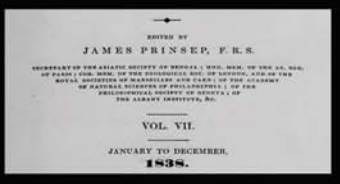

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informed public as resulting from Prinsep's 'sole genius' in decoding unknown alphabets. By analyzing a wide range of data from published sources, primarily on decipherment of Brāhmī in its various chronological incarnations, the authors argue that the notion of 'sudden breakthrough' should be seriously revisited in the light of an 'influence network' and examines this concept in the context of decipherment of Early Brāhmī vis-à-vis James Prinsep. They theorize, keeping Prinsep's decipherment under the lens, that a critical perusal of the 'network science' enables one to demonstrate how decipherment of ancient scripts can be and should be viewed as a process rather than a phenomenon. The next essay by Sayantani Pal concentrates precisely on what has been called the era of decipherment by Richard Salomon. A closer scrutiny might reveal, as Pal's essay shows, that the early phase of this 'era' may more precisely be designated as that of 'challenges', when both languages and scripts of South Asia appeared as elements of a larger set of puzzles. Pal explores the works of Prinsep's predecessors in general and then turns gaze at the works of Charles Wilkins, the beginner of the beginners, explaining how this stalwart had laid the foundation for Prinsep and some of his close contemporaries to complete the journey of the process of decipherment of Early Brāhmī. Although the first inscriptions of early India were read and presented by Wilkins, it was Prinsep who attempted to set a standard format in presenting the deciphered text of an inscription, by situating the inscription in its area of origin, reading and translating the text and finally summarizing the content and historical context of the inscription. Nearly two centuries of South Asia's epigraphic publications have witnessed, since Prinsep's last set of introspections were published in the JASB, series of changes in reading, editing, presenting and interpreting inscriptional texts. Advancements in computational technologies in the last two decades have almost altered our notions of interrogating and disseminating

Figure 2. Editorial epithets: Prinsep's steadily enhancing academic recognition displayed in his 'positions' inscribed in the JASB title pages between 1832 and 1838.

epigraphic texts. The third essay by Dániel Balogh is set in this specific methodological matrix. Balogh demonstrates the scholarly evolution of epigraphic studies from the time of Prinsep, by selecting a set of texts, and illustrates how the most recent software-aided encoding systems can meaningfully contribute to a more effective and easy-to-explore process of dissemination of epigraphic texts.

In the nineteen years of services in India, Prinsep spent more time in the city of Banaras than in Calcutta. Thus, it is no wonder that in Indian scholarship on the history of 'Prinsep research', he has been posited as the 'Banarsi Prinsep' (see the entry of R.C. Sharma in Appendix A). In the astonishingly varied domains and dimensions of his probing in Banaras, contemplated and accomplished on a row, the most celebrated one is of course marked by his drawings, published in different renditions between 1831 and 1833. His exercise of drawings centring round Banaras started right from the time of his journey from Calcutta to Banaras. I must be put on record that his passion for painting must have had its genesis from the family ambience; at least two of his siblings, William and Emily, were equally talented artists (Fig. 3). While the history of the making of Prinsep's Banaras illustrations has been revisited in the past, the eighteenth century setting that identified Banaras as a visual index in the Gangetic route of travellers and how this setting impacted Prinsep's foregrounding of the city in a visual album, has hardly been critically addressed. This exactly is the theme of the essay by Indrajit Chaudhuri. Instead of setting forth the illustrations simply in terms of manifestations of Prinsep's aesthetic eye, the essay raises a number of larger questions. Divided in three sections, it begins by dealing with the portrayal of visual indices of Banaras's architectural and urban heritage in the minds of eighteenth-century European voyagers. Then it draws on how Prinsep's 'precursors' have exploited these visual giants of Banaras and, further, how their imageries have underscored the changing contours of the city's landscape. Finally, it has attempted a critical gaze at the *Benares Illustrated*. Painstakingly comparing all the available copies of this book in the repositories in Kolkata, Chaudhuri situates

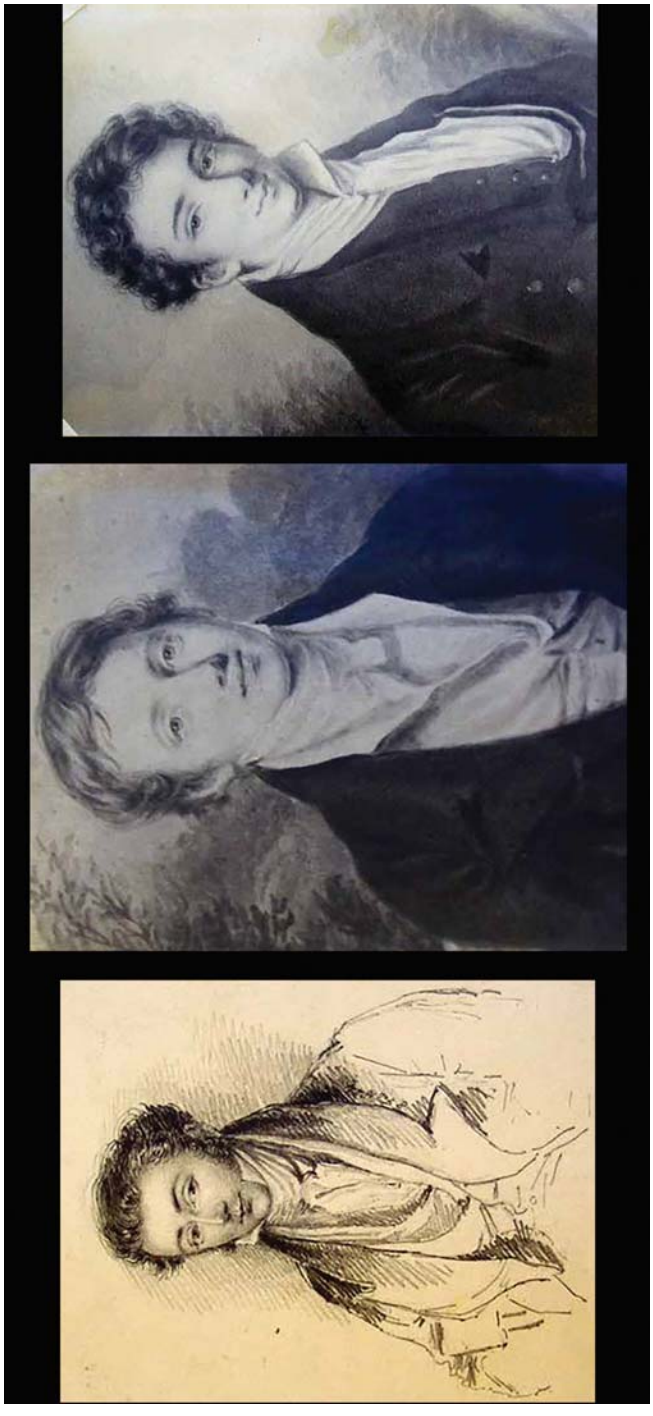

Figure 3. The three Prinseps: Portraits of James at the centre flanked by Charles [1789–1864] to left and Augustus [1803–1830] to right, drawn by their sister Emily [1798–1860] (after Allbrook 2014: 65–67).

the journey of these thirty-four lithographs on the larger canvas of early nineteenth century history of visual strategies by European artists, followed by an account of how his drawings of Banaras left a lasting impact on the substructure of works on Banaras in particular and that of Indian art in general.

Even a precursory glance at the published writings on Prinsep around the end of the preceding century would show (see Appendix A) that possibly the most closely appraised areas of Prinsep's interest, in the realm of archaeological research, is that of numismatics, thanks to series of essays by Sanjay Garg and Ajay Mitra Shastri. The next two essays by professional numismatists in this volume are set in two different tones. The first one by Susmita Basu Majumdar is essentially an overview afresh. Here the author has critically focused on the groundings and endeavours of Prinsep's roles as an Assay Master. Besides underlining his pivotal role in bringing in the standardised currency system in the subcontinent, the essay chronologically summarises his numismatic contributions between 1830 and 1838 and underlines how his works influenced future scholarship on Roman coinage and Indo-Roman exchange networks. The crucial role of Prinsep's engagements with coins in his process of decipherment of scripts is also aptly underlined, when the author remarks that he 'would not have deciphered the scripts if he did not engage in numismatics'—a crucial observation when it comes to his decipherment of Kharoṣṭhī. The second essay by Sutapa Sinha, another scholar of medieval numismatics and archaeology, has excavated data from a hitherto almost unknown archive of the British Museum, where a wealth of posthumously documented numismatic corpus, based on Prinsep's coin collection, is preserved. Methodologically, the work falls under the genre of what is labelled as history of collection. It brings to light, for the first time, rare visuals from the archives of the Ashmolean Museum and the British Museum. Concentrating on a set of 'coins and other antiquities (2642 in number)' acquired by the British Museum from his brother H.T. Prinsep, it presents a thorough classificatory account of the collection, further underlining the scope and framework for future holistic collaborative research on the Prinsep collection of coins.

Compared to his contributions in Indology and art, the vast domain of his scientific researches has admittedly received lesser attention. It is not possible to cover the various fields of his introspection within the limit of an essay. To my knowledge, there exists three articles written by Arun Kumar Biswas, Jagtpati Sarkar and Sukumar Sarkar, on his researches in science. While commenting on his scientific pursuits, Sukumar Sarkar has rightly identified that he was 'an architect, a draughtsman, a cartographer, a chemist, a meteorologist, an astronomer, a geologist, an engineer, a naturalist, a conservator and a demographer, all squeezed into one delicate frame' (Sarkar 1997: 91). It is the fourth, viz., Chemistry, that forms the subject of the essay by Syamal Chakrabarti. By drawing on a brief biographical account, Chakrabarti synthesizes Prinsep's published works in Chemistry chronologically, underlining his interventions in the form of 'Chemical Analyses'. The essay also portrays how James Prinsep's recognition as a scholar consolidated with the publications of his musings in 'science', one of the principal agenda institutionalized by the Asiatic Society in its formative decades.

The two following essays relate largely to the publishing and publications by James Prinsep. The one by Sukhendu Bikash Pal and Shakti Mukherji revisits the genesis of the *Journal of the Asiatic Society of Bengal*, as named by Prinsep, from the time of its predecessors *Asiatic(k) Researches* and *Gleanings in Science*. It deals with Prinsep's organizational skills and strategies in not only shaping the Asiatic Society's publication policy, but in successfully preparing a road map for the forthcoming volumes of the journal, before he left Calcutta in 1838. The final essay by Anuja Bose is the first ever successful attempt at making a comprehensive bibliography of Prinsep's works in all disciplines. While his publications from the Asiatic Society, Calcutta, were indexed, those appearing in other venues were less known and less referred. Further, this thematic bibliography is prefixed with short annotations on each section, giving an overview of his major contributions and lines of thought.

The *Communication* included here offers a fascinating story. The history of its making is narrated by the author Anant Sinha himself. It looks back into an almost unknown episode centring round a set of

Figure 4. The James Prinsep Monument: Recent image (Aug. 2024) of the magnificent Palladian Porch facing the Prinsep *ghat* with the *Vidyasagar Setu* in the background (Photo: Rajat Sanyal).

sculptures that adorned the celebrated city landmark and heritage destination called the Prinsep Ghat (Fig. 4). By digging out the history of the making and 'disappearance' of the lion figures, Sinha rediscovers these two extremely significant pieces of art in their present locale, at another point of heritage interest in the Kolkata city.

The section on *Gleanings from the Past* coupled with *Notes on Gleanings*, in this issue, is a deviation from the regular practice in the sense that here we have three separate Gleanings, harvested from Prinsep's works published between 1832 and 1838, arranged chronologically. The first Gleanings, annotated by Arun Bandopadhyay, focuses on a largely unknown area of Prinsep's interest—demography, again in the 'Banaras period' of his works. Here Bandopadhyay has critically revisited how his pioneering census exercise, in what may be called the 'pre-Census Era', has left a permanent ramification on future researches on demographic studies. In the second annotation. I have tried to argue, in the light of his note on an inscription in 'Gaur' script, that when it comes to palaeographic studies, it is equally important to look back at Prinsep's fundamental observations on later Indian writing systems, besides debating on the issue of decipherment of the 'earliest'

scripts. The third Gleanings is taken from his articles on inscriptions of Aśoka—the most well-acclaimed area of his research. By taking a critical look at his identification of the Greek king Antiochus in one of the edicts of the Mauryan king, Suchandra Ghosh has presented a detailed history of research since the time of his first identification and how later researches have enhanced our understanding of the course of India's political-cultural connections with the West in the later centuries of the pre-Christian era.

Selecting a book for the *Book Review* section of the issue was a challenge. The only monograph on Prinsep authored by P. Thankappan Nair on the occasion of his bicentenary remains an extremely important piece of work, but I was hesitant in requesting someone to contribute a review for two reasons: first, this work has been thoroughly cited in this volume by the contributors, as and when it found relevance, and second, it was published twenty-five years back. It was almost at the final stage of preparing the manuscript that Anuja Bose, currently the James Prinsep Fellow of the Society, drew my attention to a volume authored by Malcolm Allbrook. The work is a critical biography of Prinsep's nephew Henry Charles Prinsep. Though published about a decade back, it offers a provocative read, coupled with a set of hard-to-access visuals of members of the Prinsep family. Although the book does not centre round James Prinsep, it provides a pertinent opportunity to situate the lineage in longer terms of perspectives. Shreya Mandal kindly agreed to write a review of this book in a seemingly impossible deadline of a fortnight and delivered the task on time.

Thus, in physical constitution, this issue is framed in accordance with the current thematic structure of the journal, containing sections on *Article*, *Communication*, *Gleanings* and *Review*. The papers contributed here by specialists from different realms of research have tried to explore the multiple ways through which James Prinsep's scholarship and legacy could be nuanced and approached, from varying perspectives. I sincerely hope that these contributions published on the occasion of the Quasquibicentennial of Prinsep will holistically give rise to newer questions on Prinsep's cognitive persona in particular and the varying contours of late eighteenth and early nineteenth century intellectual eruditions in India in general.

Acknowledgements

A Special Issue of the journal commemorating 225 years of James Prinsep was the brainchild of Ramkrishna Chatterjee, who has been the chief guiding force throughout the tenure of this exercise. Members of the then Publication Committee cordially accepted the proposal and encouraged. Contributors generously accepted Society's invitation to submit the papers in a tight deadline of three months and kept their commitment. Insights from Gautam Sengupta were invaluable. Indrajit Chaudhuri and Subir Sarkar surprised, as always, with difficult-to-access references and their own research acumen. Anuja Bose remained relentlessly engaged throughout the making of this volume, providing interesting reading material and helping critically in the process of copyediting. Bidhan Halder and Rik Chattopadhyay kindly came to the aid in processing some of the maps and images used here. Sukhendu Bikash Pal and Shakti Mukherji continued to extend useful suggestions. Parthasarathi Sarkar of Desktop Printers ungrudgingly checked through series of proofs and carried out corrections in the text, at times sitting for hours on the other side of the telephone; note that it is he who had eventually designed and printed the sole biographical account of Prinsep in the form of a monograph by P. Thankappan Nair, published on the occasion of Prinsep's bicentenary. Finally, this work would simply be impossible but for unstinted support and consistent guidance of Anant Sinha, Administrator of the Society. I remain beholden to all of them.

References

Allbrook, Malcolm 2014. *Henry Prinsep's Empire: Framing a Distant Colony*. Canberra: The ANU Press.

Basak, Bishnupriya 2020. Asiatic Society and its Project of the 'Science' of 'Man' in the Late Nineteenth and Early Twentieth Century: An Ambivalent Space. *A Comprehensive History of Bengal, 1750–1950*, vol. 2 (Ed. Sabyasachi Bhattacharya), pp. 558–582.Delhi: Primus Books.

Chakrabarti, Pratik 1999–2000. The Asiatic Society and its Vision of Science: Metropolitan Knowledge in a Colonial World. *Calcutta Historical Journal* 21–22: 1–32.

Garg, Sanjay 2001. James Prinsep and the Currency Reform. *Journal of the Asiatic Society* 43/3: 40–55.

Sarkar, Sukumar 1997. Scientific Genius of James Prinsep. *Indian Museum Bulletin* 32: 91–103.

Appendix A

Major Publications on James Prinsep

Extant literature with references, thorough or in passing, to James Prinsep's original researches in Indological and scientific studies, are quite extensive; it is neither possible nor relevant to include all of them here. Keeping aside a few books or book chapters concentrating on Prinsep, two major journals published from Kolkata, containing studies on James Prinsep, are noteworthy. Both eventually came out around the time of his bicentenary. The first was the thirty-second volume (carrying the volume year 1997) of the *Indian Museum Bulletin*, published in November 1999, embodying eleven essays, commemorating his bicentenary. The second one was the third number of the forty-third volume of the *Journal of the Asiatic Society*, published in 2001, containing four articles on James Prinsep, taken from seminar presentations held in 1999 on the occasion of his bicentenary. References incorporated here are either of the genre of primary source, based chiefly on archival documents on Prinsep, or that of direct secondary source, focusing on Prinsep's original research. I do not claim that this bibliography is exhaustive, but it hopefully covers all the major published works on Prinsep.

Books/ Book Chapters

Allbrook, Malcolm 2014. *Henry Prinsep's Empire: Framing a Distant Colony* ['Biographical Sketches of the Family of Henry Charles Prinsep (1844-1922)', especially pp. xiv–xv]. Canberra: The ANU Press.

Garg, Sanjay 2019a. James Prinsep and the Currency Reform. *Monetary Foundations of the Raj* (Ed. Sanjay Garg), pp. 278–291. Oxon and New York: Routledge. [This is a reprint of Garg's article published in the *Journal of the Asiatic Society* 2001 43/3: 40–55, cited below].

Garg, Sanjay 2019b. Notes by James Prinsep. *Monetary Foundations of the Raj* (Ed. Sanjay Garg), pp. 387–413. Oxon and New York: Routledge.

Kejariwal, O.P. 1988. *The Asiatic Society of Bengal and the Discovery of India's Past* ['Chapter 5: James Prinsep and the Period of Great Discoveries, 1832–1838']. Delhi: Oxford University Press.

Kejariwal, O.P. 2009. *Benares Illustrated James Prinsep,* with *James Prinsep and Benares by O.P. Kejariwal*. Delhi: Pilgrims Publishing.

Mitra, Rájendralála, A. F. R. Hoernle and P. N. Bose 1885. *Centenary Review of the Asiatic Society (1784-1883)*. Calcutta: The Asiatic Society.

Nair, P Thankappan. 1999. *James Prinsep: Life and Work, vol. I, Background and Benares Period*. Calcutta: Firma K.L.M. Private Limited [rep. 2024].

Prinsep, H.T. 1844. *Historical Results Deductible from Recent Discoveries in Afghanistan*. London: Wm. H. Allen and Co.

Thomas, Edward [ed.] 1858. *Essays on Indian Antiquities, Historic, Numismatic, And Palæographic, Of The Late James Prinsep, F.R.S., Secretary to the Asiatic Society of Bengal; To Which Are Added His Useful Tables, Illustrative of Indian History, Chronology, Modern Coinages, Weights, Measures, Etc.* Vol. I. London: John Murray.

Articles

Anonymous. Obituary, 1840. *Annual Report of the Royal Asiatic Society [of Great Britain and Ireland] :* 6-9.

Bhattacharya, Asok K. 1997. James Prinsep and His Pictorial Views of Benares. *Indian Museum Bulletin* 32: 124–127.

Biswas, Arun Kumar 2001. The First Science Movement in Colonial India (1808-1840) and the Pivotal Contributions of James Prinsep. *Journal of the Asiatic Society* 43/3: 3–25.

Biswas, Arun Kumar and Jagatpati Sarkar 1997. James Prinsep's Scientific Contributions and an Era (1820-1849) of Cross Cultural Knowledge Transfer. *Indian Museum Bulletin* 32: 104–123.

Chakravarti, Shyamalkanti 1997. James Prinsep and the Earliest Museum of India. *Indian Museum Bulletin* 32: 164–166.

De, Amalendu 2001. The Asiatic Society and James Prinsep. *Journal of the Asiatic Society* 43: 56–58.

Garg, Sanjay 1997. James Prinsep and the Indian Numismatics. *Indian Museum Bulletin* 32: 83–90.

Garg, Sanjay 2001. James Prinsep and the Currency Reform. *Journal of the Asiatic Society* 43/3: 40–55.

Godrej, Pheroza J. 2023. Views of Benares by European artists of the colonial-era: A Picturesque Journey. *Commemorating CSMVS Centenary 1922-2022, CSMVS Research Journal 2022*: 109–150.

Kejariwal, O.P. 1993. The Prinseps of India: A personal quest. *The Indian Archives*, Volume 42, No. 1–2, January–December.

Kejariwal, O.P. 1997. James Prinsep: A Little Known Incident of His Life. *Indian Museum Bulletin* 32: 157–163.

Losty, J.P. 2004. Prinsep James (1799–1840). Oxford Dictionary of National Biography. https://doi.org/10.1093/ref:odnb/22812.

Mitra Shastri, Ajay 1999. James Prinsep and Study of Early Indian History. *Annals of the Bhandarkar Oriental Research Institute* 80/1: 191–201.

Mitra Shastri, Ajay 2001. James Prinsep and Indian Epigraphy. *Journal of the Asiatic Society* 43/3: 30–39.

Mitra Shastri, Ajay 1997. James Prinsep and the Study of Indian History. *Indian Museum Bulletin* 32: 70–79.

Mukherjee, B.N. 1997. James Prinsep: A Man with Many Splendours. *Indian Museum Bulletin* 32: 47–69.

Nair, P. Thankappan 1997. James Prinsep in Calcutta. *Indian Museum Bulletin* 32: 128–147.

Sarkar, Sukumar 1997. Scientific Genius of James Prinsep. *Indian Museum Bulletin* 32: 91–103.

Sen, Srabani 2001. James Prinsep and his Contribution to Palaeontology. *Journal of the Asiatic Society* 43/3: 26–29.

Sharma, I.K. 1997. James Prinsep and the Decipherment of Two Early Indian Scripts. *Indian Museum Bulletin* 32: 80–82.

Sharma, R.C. 2000. The Banarsi Prinsep. *Jnana-Pravaha Annual Bulletin* 3: 95–103. [https://www.jnanapravaha.org/download/research/rcs01.pdf, [last accessed 08.08.2024].

Sharma, R.C. 1997. James Prinsep in Benares. *Indian Museum Bulletin* 32: 148–156.

Smith, Vincent A. 1906. James Prinsep. *East and West* 5/57 [July]: 635–639.

Appendix B

James Prinsep: A Timeline in Outline

Year	Date	Event
1799	Aug. 20	Born at Chelsea, erstwhile county of Essex (now included in London), England, as the seventh of twelve sons and three daughters of John Prinsep
1809	—	John Prinsep leaves London and James sent to school of Mr Bullock, along with two younger brothers Thomas (1800–1830) and Augustus (1803–1830). Studies there for two years
1817	—	Possibility of being appointed as the Assistant Assay Master of the Calcutta Mint being conveyed to his father
1819	Sep. 4	Appointed Assistant Assay Master of the Calcutta Mint by Patterson, the Director of the East India Company, under the Assay Master H.H. Wilson
1819	Sep. 18	Arrived Calcutta accompanied by younger brother Thomas (1800–1830) and received by the elder brother Henry (1792–1878)
1819	Nov.	Singlehandedly performed all assays in the Calcutta Mint.
1819-20	—	Looked after the Calcutta Mint in the absence of Wilson, who stayed in Banaras to organise the new mint there
1820	Sep.8	Nominated to succeed Wilson as the Assay Master of the Banaras Mint
1820	Oct.	Set out for Banaras, continuously doing 'the exercise' of 'his pencil', drawing 'sketches of the scenery and incidents of his voyage'
1820	Nov. 26	Landed in Banaras where he found the 'dress of the natives […] far more elegant than in Bengal'
1820	—	Submitted a revised plan of a proposed architecture of the planned mint of Banaras to the Military Board of Calcutta
1820-25	—	Made the drawings of Banaras, one of them carrying a date of Nov. 25 1825 and sent to England between 1824 and 1825 for lithography

Year	Date	Event
1821	Dec. 27	Letter to father John Prinsep detailing the ongoing 'stupendous work of labour, just for my amusement this cold weather, making an accurate map of this Holy City'
1822	Sep. 26	Secretary to the Government of India forwarded a transcribed copy of the map of Banaras to the Secretary of the Asiatic Society, under the order of His Excellency the Governor General in Council
1822	—	Conducted the Census of Banaras, published a decade later in the *Asiatick Researches* (see Notes on Gleanings 1)
1822	—	Prepared the 'Benares Directory' (published by P.T. Nair 1999: 225–260)
—	—	Undertook successfully the conservation of the Aurangzeb's Mosque
—	—	Designed and constructed the Nandeshwar Kothi
—	—	Designed and constructed the bridge on the river Karmanasha
1823	—	Submitted the Census Register of Banaras in Nagari characters to the Governor General's Agent in Banaras, with another copy deposited to the library of the Banaras Library Society
1824	Mar. 31	The foundation of the new mint at Calcutta laid and finally commissioned at the end of 1833.
1824	Sep. 5	Gothic architecture of the St. Mary's Church, designed by Prinsep was consecrated by Right Reverend Reginald Heber, Lord Bishop of Calcutta
1824	Sep. 7	Obtained permission for the Lord Bishop of Calcutta to visit the Jain temple in Banaras
1824-26	—	Assay Master until 1826 when he was made the Secretary of the Benares Mint Committee
1825	—	Publication of the detailed monthly meteorological register and 'Latitude of the Hindu Observatory at Benares' in *Asiatic Researches* vol. 15
1826–29	—	Controlled Benares Mint Committee until the mint was abolished
1827	Jun.-Dec.	Continued observation on the longitudinal position of Banaras based on Lunar transits; results finally came out in *Gleanings in Science* May 1830

Year	Date	Event
1828	—	Elected a Fellow of the Royal Society, also began publishing in the Philosophical Transactions of the Royal Society of London
1828	—	Publication of the groundbreaking study titled On the Measurement of High Temperatures. *Philosophical Transactions of the Royal Society of London* (see 17.1828 in Anuja Bose's paper)
1829	May 19	Banaras Mint abolished
1830	Mar.	Returned to Calcutta Mint as Deputy Assay Master of a newly constructed mint at the Clive Street under Wilson
1830	May. 5	Name of Prinsep proposed for membership of the Asiatic Society
1830	Jul. 7	Elected a member of the Asiatic Society
1831	Jan. 15	Publication of 'Examination of a Metallic Button, supposed to be Platina, from Ava', the ancient capital of Central Myanmar (Burma)
1831	—	Made the following comment on the geographical position of Banaras, determined by Reuben Burrow: 'more recent observations make the latitude 3 seconds and the longitude about two miles less; but the extant error is, in the later respect, still uncertain'
1831	—	Started assisting Wilson in the study of ancient Indian coins
1831	—	Took charge of the publication of *Gleanings in Science*, when major Herbert left for Oudh
1832	Mar. 7	Society passed a resolution that the monthly journal hitherto published under the name of *Gleanings in Science*, should be permitted to assume the title *The Journal of the Asiatic Society of Bengal*, and to continue it as long as the publication remains under the charge of one or both of the Secretaries of the Society
1832	—	Wilson resigned and Prinsep was made the Assay Master
1832	—	Publication of first volume of *The Journal of the Asiatic Society of Bengal*
1832	Jul. 4	First publication of ancient Roman coins preserved in the cabinet of the Asiatic Society

Year	Date	Event
1833	Jan. 5	Wilson left to join Oxford
1833	Jan. 9	Prinsep unanimously elected the Secretary of the Asiatic Society in the evening
1833	Jan. 15	Appointed as the Assay Master of Calcutta Mint
1833	Feb. 7	Became officiating secretary of the Calcutta Mint Committee
1833	Apr. 11	Prepared and submitted to the Government a project for reforming weight measures
1833	Apr.24	Noticed a simple method employed by the 'natives' in taking off facsimiles of coins on paper: 'they daub a little printer's or *pakka* ink on the projecting parts of the coin, and then transfer it by pressure on to the fleshy part of the thumb —thence a faithful representation is impressed upon the paper, previously wetted, which has the advantage of not being reversed'
1833	Jul. 13	The regulation VII of 1833 was passed, which converted Prinsep's weight proposals into legislature.
1833	Dec. 26	Cease of publication under Asiatic Society: letter from G. A. Bushby, Esq., Officiating Secretary to Government, General Department, intimating the resolution of the Hon'ble Governor General in Council, that the privilege of franking accorded to the Secretary of the Asiatic Society, and extending to the JASB, should cease from the 4th June, 1834
1833	Nov. 8	Submitted detailed note 'on the device of the Indian coin', advocating for the appointment of an 'excellent native' engraver named Kashi Nath
1834	Mar.	First publication on inscription, read on 26-12-1833 (see 1.1834.a in Anuja Bose's article)
1835	May 14	Prinsep accused, by his 'jealous' and 'bitter' contemporary John Curnin, of indulging embezzlement at the Benares Mint; it was the same Curnin, who gave Rs. 100/-, 'one of the highest subscriptions', for the erection of Prinsep's bust at the Asiatic Society
1835	Jan. 2	Submitted sketches of designs bearing different inscriptions, as a prototype for the new coinage under East India company, found satisfactory by the Governor General

Year	Date	Event
1835	Apr. 25	Married to Harriet Aubert, elder daughter of Lieutenant-Colonel Jeremiah Aubert (grandson of Alexander Aubert) of East India Company's Bengal Army and Hannah, at the Cathedral in Calcutta, arranged probably by Agnes/ Catherine Blake, wife (m. 1822) of his elder brother George Alexander Prinsep (1791–1839)
1835	May. 6	A meeting chaired by Sir Edward Ryan recorded, based on a piece of information brought to the attention of the members in the form of a resolution in the preceding meeting, that the Secretary to take a stand against government's decision to stop publication of 'oriental works', undertaken by the Society
1835	Jun. 3	The draft of a memorial, addressed to government regarding Oriental Publications, prepared by a Special Committee constituted in the earlier meeting
1835	Jul. 1	Categorically negated any 'pecuniary aid to the Society, for further printing of these works […]'. Though the government allowed the Society to complete the publications at their own expense
1835	Sep. 2	Reported the general opinion of the Committee of Papers, in favour of continuing the publication of works of research and submitted the determination and arrangements of the Committee of Papers, in regard to the Oriental Publications made over by Government
1836	Feb. 25	Rare testimony of Prinsep's talents in performing arts; on his cast and attire in *Macbeth* at the Chowringhee Theatre, Issabella Fane, daughter of Sir Henry Fane, wrote: 'The witch scene was very well managed, but the hags themselves not well drest, that is to say they were too well drest, and would have been much better had they been less smart. Mr. Holroyd was one, and Mr. James Prinsep another […] Mrs. James Prinsep was not at the Theatre on that day as she was expecting,
1837	—	Birth of Eliza, the only surviving daughter
1837	Jun. 7	Deciphered the earliest of the early Brāhmī scripts
1838	Nov. 1	Wrote letter to the President Asiatic Society, conveying resignation as the Secretary: 'But the disability of sickness

Year	Date	Event
		is an accident to which we are all liable and from which there is no resource but in temporary departure to a better climate'
1838	—	Publication of 'Additions to Bactrian Numismatics and Discovery of the Bactrian Alphabet', carrying results of decipherment of Kharoṣṭhī (see 53.1838.b' in Anuja Bose's article)
1839	Jan. 9	Reached England and was put up at the house of his eldest sister Sophia Haldimand at 31 Belgrave Square, London
1839	Nov. 21	Last testament and will executed: 'I give and bequeath unto my dear wife Harriet Sophia my Brother William Prinsep of Calcutta merchant now a member of the Carr Tagore and Company of Calcutta aforesaid Acting Clerk to the Stationery Committee of the Bengal Government at Calcutta all and every my Estate Property and Effects whatsoever and wheresoever which I may die possessed of or initiated to in any manner in trust and with direction to dispose administer and apply the same […]'
1840	Jan. 31	His Will received probate in the Calcutta Supreme Court and William Prinsep and H.A. Aubert granted letters of administration
1840	Apr. 22	Demise at the age of 41, at his sister Emily's (1798–1860) house
1840	Jul. 1	Asiatic Society proposed the statement of mourning: 'The Asiatic Society is desirous of expressing its sense of the great loss it has sustained by the death of its Secretary, Mr. James Prinsep'
1841	Jun. 12	Bust of James Prinsep, modelled by H Weekes, reached Calcutta
1841	Jul. 30	Proposal of Dr W.B. O'Shaughnessy in the public meeting held at the Town Hall to commission a Commemorative Medal for Prinsep
1841	—	The newly constructed Prinsep's Ghat was declared open
1843	Aug. 4	Stand for the Bhabru edict of Aśōka with an inscription recording Prinsep's decipherment of the Aśokan Brāhmī,

Year	Date	Event
		was commissioned; it is now kept in the Museum of the Society
1843	—	Erection of the James Prinsep Monument at Prinsep Ghat, based on the design of W. Fitzgerald, later painted in oil-on-canvas by his brother William (1794–1874)
1858	—	Posthumous publication of *Essays on Indian Antiquities…* under the editorship of Edward Thomas
1910–15	—	The names Prinsep Street (mostly spelt as 'Princep' though), taking off from 63 Bentinck Street and Prinsep Lane from 99 Biplabi Anukul Chandra Street (renamed Jul. 5, 1957) were conferred to the road earlier named *Goomghar-ka-rusta*
1937	—	Building of the Banaras Mint declared as a Protected Monument with note of commemoration: 'This house was built as a Mint in 1820 from the designs of James Prinsep, who lived here till 1830. It was used as a place of refuge by the Europeans in June and July 1857'

To cite this article
Sanyal, Rajat 2024. *Scholarship Indelible: James Prinsep (1799–1840). Journal of the Asiatic Society* 66/2: 1–22.

ISSN:0368-3308

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ARTICLE

James Prinsep: The Architect of the Revival of Thwarted Oriental Studies in India and its Global Impact

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Abstract

Among the galaxy of young European personalities commissioned in India by the British Government with the overt intention of consolidating grip and hegemony over the Indian subcontinent, who subsequently developed profound bond for hitherto unexplored oriental wisdom, James Prinsep was a foremost pioneer. Not only did he decipher Aśokan Brāhmī script, thus unfolding a new chapter in Indian historiography, but his role in safeguarding the oriental knowledge trove is simply unparalleled. He started the *Journal of the Asiatic Society* since 1832, incorporating in its pages engaging discussions on early Indian architecture, inscriptions, and manuscripts, apart from literature. The present paper will substantiate Prinsep's role, involved in a spirited fight against British Government's decision to curtail financial assistance for preservation of oriental knowledge. As the Secretary of the Asiatic Society, Prinsep succeeded in keeping the flow of publication of the Society and finally compelled British Government to renew financial sanction.

Keywords: James Prinsep, The Asiatic Society, Aśokan Brāhmī, The Journal of the Asiatic Society of Bengal, Oriental Publication Committee, Memorial.

To cite this article
Mukherjee, Tapati and Sujata Mishra 2024. James Prinsep: The Architect of the Revival of Thwarted Oriental Studies in India and its Global Impact. *Journal of the Asiatic Society* 66/2: 23–34.
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ISSN:0368-3308

In a crucial juncture when India, under British subjugation, criss-crossed on one hand by orthodoxy immersed in age-worn ideas and superstitions under the veil of so-called 'tradition' and confronted, on the other, by new ideas ushered in by western enlightenment, was desperately looking forward to a new lease of life, the foundation of the Asiatic Society in Bengal by Sir William Jones was a landmark event because of its outstanding impact on Indian society in general and Indo-occident relations in particular, stretching for a long period of time. It may be noted in this context that traditional Indian knowledge was restricted within the domain of a few upper castes and was hardly accessible to the general milieu. In medieval India, the pursuit of knowledge and intellectual creativity was at a low web except in Persian, Arabic and Urdu. Sanskrit and other regional languages were neglected leading to erosion of oriental studies in India itself. As pointed out by Rajendralala Mitra, the first Indian President of the Asiatic Society and a renowned Indologist, history of India lies underneath its monuments, inscriptions, coins and manuscripts (Mitra 1881). However, there was absolute dearth of public awareness about Indian culture and heritage despite the fact that *Itihāsa* as ancient synonym of history has been accorded an exalted position by assigning it a similar status equitable with the sacred Vedas in ancient India. This unfortunate situation has been hinted at by O. P. Kejariwal—'It seems strange that only about two hundred years ago, even learned Indians were unaware of the existence or significance of such names as Chandragupta Maurya, Asoka, Samudragupta, Kanishka, Harsha and even Buddha—names which form the core of ancient Indian history' (Kejariwal 1988: 5). Against this background, the Asiatic Society since its inception in 1784, has ushered in a cultural revival through unravelling hitherto unexplored ancient Indian knowledge trove, scattered in the dilapidated, uncared for ancient relics, undeciphered inscriptions and fragile, age-worn pages of the manuscripts, pushed into absolute oblivion.

It is a fact that the year 1757 created a significant change in Indo-British relationship as it was during this period of transformation of the British from trader to ruler slowly and gradually took place, resulting in an urge of the British administration to include a group

of young and luminous personalities in the administrative machinery for the sake of exerting unassailable predominance over the ruled. The British officials touched the soil of India in series to shoulder the responsibility of consolidating British power in India. Charles Wilkins came in 1770, followed by Nathaniel Brassey Halhed and Jonathan Duncan in 1772. It was precisely with this objective William Jones was sent to India as a Puisne judge in the Supreme Court in 1784. But contrary to the general apathy of colonisers, boosted by a sense of superiority about European civilisation towards the vast, dark, unexplored Orient, dumped as uncivilised and barbaric, these young Britishers had developed a strong attachment and subsequent admiration towards the ancient Indian literature, religious texts, law books and above all, about the ancient Indian monuments and inscriptions, remaining in broken form, withering the ravages of time and decay.

Apart from Jones, a galaxy of Europeans who came to India at the behest of the East India Company, nurtured a keen interest in unfolding the marvels of oriental culture and dedicated themselves to the study of Sanskrit with the assistance of local Sanskritist Pandits as intermediaries. Mention may be made of Henry Thomas Colebrooke who held the position of judge and adorned the position of president at the Asiatic Society from April 1806 to February 1815 and contributed nineteen papers in the *Transactions of the Society*. Well-versed in Sanskrit, he translated the two ancient Indian digests on law, the *Mitākṣarā* of Vijñāneśvara and the *Dāyabhāga* of Jimūtvāhana under the title *Law of Inheritance*. His *A Grammar of the Sanscrit Language* was also a monumental work. Equally fascinating is the fact that Charles Wilkins, a writer in the East India Company's Civil Service, translated *Bhagavadgītā*, considered as epitomising the essence of Indian philosophy under the tutelage of then Governor General Warren Hastings. He also succeeded in deciphering a few hitherto unexplored inscriptions.[1] Following these iconic figures and against this

[1] For a critical appraisal of Wilkins' works, see the essay of Sayantani Pal in this volume. —Ed.

background, James Prinsep appeared in the Indian scenario, inspired by the enthusiasm and a zealous initiative of the British orientalists, who subsequently played a pivotal role in safeguarding the ancient Indian texts from isolation and oblivion.

To assess James's contribution to the revival of decaying oriental studies in India and also impeded at one stage through Government intervention, a cursory glance at his activities in India is essential. James came to India in 1819 and from a humble beginning as Assay Master at Beneres [*sic*], where he proved his mettle by preparing the first map of the city Banaras, by publishing his astronomical observations, based on findings in the observatory 'Manmandir', situated at Banaras, in his article titled 'Latitude of the Hindu conservatory at Beneres' in the *Asiatick Researches*, and further by laying of the underground drainage system in the old city which still serves the city and through the construction of the bridge across the river *Karamnasa* where all previous attempts to construct a bridge were washed away. His book *Beneres Illustrated in a Series of Drawings*, decked with an introduction, demonstrating his profound knowledge of Indian mythology and literature, is indeed a seminal contribution.[2]

With the abolition of mint at Banaras and transfer of entire coinage of the Bengal Presidency to Calcutta Mint, James joined as Deputy Assay Master of Calcutta Mint under his mentor Horace Hayman Wilson, an avid Sanskrit scholar and orientalist. Here James developed a keen interest in Indian coinage and his proposal for introduction of a uniform coinage system in India was unhesitatingly accepted by William Bentinck, the-then Governor General of India. Slowly and gradually, James became involved in intellectual pursuits side by side with his administrative responsibilities. By this time, the Asiatic Society had established its position as the most coveted centre of Indological research under the tutelage of its founder President Jones, Colebrooke and Wilson.

It was Wilson, the-then Secretary of the Asiatic Society who proposed his name for membership and James was duly elected as a

[2] For an interesting engagement with the celebrated *Benares Illustrated* and associated puzzles, see the essay of Indrajit Chowdhuri in this volume. —Ed.

member of the Asiatic Society in 1830. This was a turning point not only in the life of James but also for the future of Indological studies in India. James assumed the responsibility of the Society's publication of a science journal named *Gleanings in Science*. Under his editorship, *Gleanings* came to be published under a new title *The journal of The Asiatic Society of Bengal* since 1832. The introduction of this journal was a landmark event in the history of the Asiatic Society as gradually this journal became a repertoire of reflections of Indic knowledge, displayed not only in literature, but also in numismatics, architecture, undeciphered inscriptions and legal texts. His monumental achievement was his decipherment of Aśokan inscriptions, hitherto unexplored, which had propelled historian Vincent Smith to comment that for this particular invention, James would be entitled 'to rank with the men who unlocked the mysteries of the hieroglyphic and cuneiform writings and so revealed the long-lost histories of Egypt and Babilonia' (Kejariwal 2002: 20). This is a remarkable feat in Indian historiography because of the unravelling of a hitherto unknown saga of lost king Aśoka and Buddhism.

After the departure of Wilson to Oxford as first Boden Professor of Sanskrit, James became the Secretary of the Asiatic Society in 1833 and continued in this post from 1833 to1838. During his secretaryship, a disaster struck the future of Oriental studies in India and it was at this hour of crisis James came forward as one of the pioneers in safeguarding the interest of Oriental studies — a fact which is almost lost in oblivion and is hardly discussed today. Contrary to the provision of the Charter Act of 1813, which in its attempt to promote the interest of the ancient Indian knowledge trove side by side with the advancement and propagation of western idea, had made provision for a sum of not less than one lakh rupees every year, expected to be spent for revival and encouragement of Oriental studies and for the promotion of knowledge of modern sciences among the Indians. The Court of Directors of the East India Company strongly advocated introduction of European system of education in India at the cost of Oriental studies in the interest of British Government, so as to make

them enlightened Indians fit for administrative jobs to assist British officials. Backed by Macaulay, the Legal member of the Government, who censured in scathing terms the present General Committee of Public Instructions for (Nair 2000: 440)

> wasting public money for printing books which are of less value than the paper on which they are printed was while it was blank; for giving artificial enjoyment to absurd history, absurd metaphysics, absurd physics, absurd theology; for raising up a breed of scholars who find their scholarship an encumbrance and a blemish

The Court of Directors finally succeeded in slashing the stipends of students and discontinuing sanction for the amount earmarked for publication of Oriental treasured assets embodied in Sanskrit and Arabic languages, with the fund diverted to the promotion of European learning. Stiff opposition from Orientalists who were in favour of granting stipends to students of Oriental subjects and for the general expenditure on the publication of works in Indian languages was overruled. Accordingly, on 7th March, 1835, a government order was issued (Nair 2000: 439) —

> His Lordship in Council is of opinion that the great object of the British Government ought to be the promotion of European literature and science among the natives of India; and that all the funds appropriated for the purpose of education would be best employed on English education alone […]a large sum has been expended by the Committee on the printing of Oriental works; his Lordship in Council directs that no portion of the funds shall hereafter be so employed. His Lordship in Council directs that all the funds which these reforms will leave at the disposal of the Committee be henceforth employed in imparting to the native population a knowledge of English literature and science through the medium of the English language.

This promulgation by the British Government went against the spirit of the Asiatic Society, which by that time had established itself as a centre of Indological studies and research in the global scenario. The Society was forced to intervene and James Prinsep as the Secretary took upon himself the cudgel of protesting against the prejudiced decision of the Government. In a meeting of the Society, held on 6th May, 1835, chaired by Sir Edward Ryan, it was recorded in the

Proceedings that James as Secretary informed the members about an important decision of the government, which is going to impact activities of the society to a great extent as this will suspend the printing of all oriental works undertaken by the society and were already in press. Furthermore, this decision will jeopardize oriental studies in India—a situation to which the Asiatic Society cannot remain a silent spectator. James also pointed out that this piece of information was brought to the attention of the members in the form of a resolution in the last meeting, but was finally withdrawn with the expectation that the Government decision should be revised and such a step detrimental to Oriental learning would not finally be implemented by the government. From the tone of this statement, it is apparent to any sensitive reader to gauge the disappointment and dismay of an avid admirer of Oriental wisdom like James, who at the same meeting showed a copy of the order, directing the printers to discontinue already undertaken works midway without least hesitation. James appeared to be more disturbed when he pointed out that transcription and collation of manuscripts and other allied work connected with printing of Sanskrit books will also come under the same prohibitory order. James gave a list of works which were suddenly thrown out of publication midway and were on the verge of extinction —

1. The *Mahābhārata*, 2. The *Rājtaraṅginī*, 3. The *Naiṣadha*, 4. The *Suśruta*, 5. The *Śārīravidyā*, 6. The *Fatwa Alamgiri* (The Committee of Education however recommended for its publication), 7. The *Khazanat al Ilm* (a valuable expose of European Mathematics in Persian), 8. *The Inaya* and 9. *A treatise on Algebra* by Mill and many other gems of oriental knowledge system.

James vehemently protested against such an attempt, perpetrated by the Government which will lead to destruction of Oriental learning and

> opposed so sternly to the interests and objects of the Asiatic Society which seemed called upon not only to remonstrate, but in every way to exert its influence to save the venerable fabric of Indian literature from such a catastrophe, and to rescue our national character from the stigma of so unjust and unpopular and impolite an act, which was not far outdone by the destruction of the Alexandria library itself (Nair 2000: 683).

James finally proposed for formation of a committee, named 'Oriental Publication Committee', which will contemplate further plan of action for completion of publication of Oriental texts, which was stopped abruptly as a result of government proclamation. A difference of opinion among the members about the efficacy of this proposed committee was finally amicably solved by the President with the suggestion that an urgent memorial to be sent to government may be framed avoiding to the utmost all controversial points, which will be placed at the next meeting of the Society. The President also assigned the responsibility of drafting the memorial to the two Secretaries James Prinsep and Babu Ram Comal Sen with two other members Macnaghten and Mill.

In its meeting, held on 3rd June, the draft of a memorial, addressed to government regarding Oriental Publications, prepared by a Special Committee as constituted in the earlier meeting, was read out by the President Edward Ryan and finally adopted. In this long memorial, addressed to C.T. Metcalfe, Governor General of India in Council, the Asiatic Society not only raised questions about the propriety of the Government's decision to suspend grant for publication of Oriental works, but also expressed its anxiety about the possible adverse impact on Indian milieu this decision is going to exert about the goodwill and motive of the British administration and finally placed a prayer for resumption of publication grant to the Society for Oriental books (Nair 2000: 695)—

> If the Sanscrit [sic.] and Arabic languages, consecrated as they are by ages of remotest antiquity – enshrined, as they are, in the affections of venerating millions – the theme, as they are, of the wonder, and of the admiration of all the learned nations of Europe; if these languages are to receive no support from a Government which has been ever famed for its liberality and justice – from a Government which draws an annual revenue of twenty million from the people by whom these languages are held sacred, it is the decided opinion of the Asiatic Society – an opinion which they want words to express with adequate force, that the cause of civilization and the character of the British nation will alike sustain irreparable injury.

Finally, a humble request to renew grant for publication of oriental works has been echoed (Nair 2000: 696) —

> ... the Society respectfully intreat the Governor General in Council, that he will be pleased to afford to them the assistance of the learned natives hitherto employed in these literary undertakings, together with such pecuniary aid as may be necessary to complete the printing of the oriental works, which has been interrupted by the resolution of Government to direct the funds hitherto expended upon them to purposes of English education.

One can easily presume that Jones played a pivotal role in formulating this Memorial out of his profound reverence for Oriental knowledge system.

The British Government showed its reluctance to revise its decision which discontinued its financial assistance for publication of Oriental works, suspended midway, placing the Asiatic Society under terrible stress.This decision was conveyed to the society through a letter signed by G. A. Bushby, Secretary to the Government, dated 10th June, 1835, addressed to the President, the Asiatic Society. The letter which was read out at a meeting, held on 1st July, 1835 by the Secretary James Prinsep, though couched in a modest language expressing its 'highest respect for the Asiatic Society and the valuable and laudable pursuits in which it is engaged', categorically negated any 'pecuniary aid to the Society, for further printing of these works […]'. The reason behind such discontinuation was Government's denial 'to accumulate stores of waste papers.' However, the government allowed the Asiatic Society 'to complete the publications at their own expense' (Nair 2000: 711).

A disappointed and disillusioned James did not deviate from his vow to protest against such apathy and disregard to Oriental studies as he firmly believed that 'civilization and general information would never be spread through this vast country by English education'. His proposal to send a Memorial to the Court of Directors, appraising them of the situation and 'requesting them to adopt such means as they think fit for providing a sufficient sum for this important object' was accepted in the meeting (Nair 2000: 717).

James, as the Secretary of the Asiatic Society, appears to have taken Government's decision as a challenge to fight against. On 2nd September, 1835, at a meeting of the Society, James read out a draft of memorial, addressed to the Hon'ble Court of Directors, where it

has been emphatically stated and re-iterated that any attempt to discontinue financial grant for promotion and publication of Oriental wisdom may have a disastrous impact on the Indian masses who may consider it as a reflection of the contemptuous attitude of the rulers to their ancient heritage and culture. As such it was prayed (Nair 2000: 738) —

> that your Hon'ble Court will be pleased to continue the encouragement hitherto afforded to the revival of learning among its native subjects, and to direct that such reasonable sum may be supplied from the territorial revenues, as may be sufficient for promoting among the natives at large, the study of the ancient language and literature of the country.

Again, this request on behalf of the Society did not cut much ice, but the entire debate created a furore in intellectual circle in Europe. H.H.Wilson raised his voice against this atrocious decision of British Government and wrote two essays in the Asiatic journal, London to give vent to his angst against the arbitrary decision of the British Government. The Indian press also rendered overwhelming support to the Society. "The Indian Review" came forward with a bitter criticism of the Government decision (Kejariwal 2002: 25) —

> When the Consul Mummious sacked the Grecian city, he designated in his ignorance of their values the most precious specimens of painting and sculpture, as mere waste lumber. The cases are to our judgment nearly parallel […] a more unhappy measure never be emanated from the resolution of this Government.

But James remained undeterred. He resolved to continue printing of the incomplete Sanskrit, Arabic and Persian manuscripts with meagre financial resource of the Society.

Taking cognizance of the global criticism, the Court of Directors finally sanctioned a monthly grant of Rs five hundred to the Society for publishing standard and useful works of Oriental language in 1838.

James Prinsep finally succeeded in his mission to keep unabetted thwarted publication of a series of Oriental gems of treasured knowledge through his perseverance and unflinching devotion to Oriental wisdom. An avid Indologist who had succeeded in the

herculean task of deciphering hitherto unexplored Aśokan inscriptions, thus unveiling an unknown chapter of ancient Indian history, showed the guts and courage to raise his voice of protest as the Secretary of the Asiatic Society, an Indological Research Centre against an injudicious decision of British hegemony by withdrawing all financial assistance to the promotion and publication of Oriental knowledge repertoire. James deserves to be considered as one of the pioneers who was instrumental in sustaining the flow of Oriental knowledge unobstructed for subsequent generations, impeded on one hand through elitism and superstition of the Indian higher castes and apathy of the foreign rulers on the other. It may be noted in this context that hard labour and anxiety had taken a toll on James's health and he had to resign from the Secretaryship of the Asiatic Society and return to England due to his illness. We may conclude this article with a statement of James Prinsep, recorded in his Preface to the *Journal of the Asiatic Society*, volume IV, 1835—a testimony of his dogged determination to protect Oriental Studies in India: "Without venturing to impugn in any degree the wisdom or policy of a measure which has in the face of all India withdrawn the countenance of Government from the learned natives of the country and pronounced a verdict of condemnation and abandonment on its literature, it may be allowable in this place to prophecy, that the conduct of the Asiatic Society in stepping forward to rescue the half-printed volumes of Sanskrit, Arabic and Persian, will be approved and applauded by every learned Society and every scholar in Europe. Left in their unfinished state, they would have indeed merited the opprobrious designation of an 'accumulation of waste paper', applied to them by the Government which had originally ordered, and had expended vast sums, upon their publication. As Prinsep wrote (Prinsep 1835: VII–VIII):

> There seems something so anomalous in this sudden change of state resolve, that it can be explained (excused would be too presumptuous a term, only by the peculiar constitution of the British Indian Government, in which the interests of a literature, and of languages, necessarily foreign to the deputed ruler, of these distant provinces of the British empire, must be left to the fluctuating opinions and influence of his legal advisers.

[...] The learned world will at any rate rejoice that our Hindustani, Bengali Maratti, Tibetan and Sanscrit Dictionaries have passed into permanent existence anterior to the epoch of interdiction; and that while the Asiatic Society supplies, however feebly, the patronage lost elsewhere, India need not be wholly dependent upon France and Germany for its editions of the Sanscrit classics, and for the development of the ancient history and philology of the nations under British rule.

References

Chaudhuri, Sibadas 2019 [rep.]. *Index to the Publications of The Asiatic Society, 1788–1987*. vol. 1, pts. 1,2,3. Kolkata: The Asiatic Society.

Kejariwal, O. P. 1988. *The Asiatic Society of Bengal and the Discovery of India' s Past, 1784–1938*. Delhi: Oxford University Press.

—— 2002. *Beneres Illustrated by James Prinsep*, Varanasi: Viswavidya Prakashan.

Kopf, David 1969. *British Orientalism and the Bengal Renaissance: The dynamics of Indian Modernisation*. Berkeley and Los Angeles: University of California Press.

Mitra, Rájendralála 1881. *Indo-Aryans: Contributions Towards the Education of their Ancient and Mediœval History*, vol. I. Calcutta: W. Newman & Co.

Nair, P. Thankappan 1999. *James Prinsep: Life and Works*. Calcutta: Firma KLM Private Limited.

—— (ed.) 2000. *Proceedings of The Asiatic Society 1933–1841*. Vol. 4. Book 1, Kolkata: The Asiatic Society.

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ARTICLE

On the Shoulders of… : Uncovering the Critical Role of Knowledge Diffusion through Peer Influence Network underlying Prinsep's Decipherment of Brāhmī

Sitabhra Sinha* and Nandini Mitra

Abstract

The decipherment of ancient scripts often presents a romanticized view of lone geniuses making sudden breakthroughs. However, recent studies emphasize the role of social networks in fostering incremental advancements that culminate in major discoveries. Here we apply such concepts to partially reconstruct the influence network underlying the decipherment of Brāhmī script— a pivotal moment in South Asian archaeology—that is usually solely attributed to the genius of James Prinsep. By analysing published historical records, we unveil how ideas spread and evolve through interconnected nodes of scholars and their contributions. Our findings challenge the simplistic narrative of solitary genius, highlighting instead the collaborative nature of knowledge production and the pivotal role of network connectivity in scientific breakthroughs. This study not only sheds light on the complex dynamics of intellectual history but also demonstrates the applicability of network science in understanding the evolution of ideas across time and space.

Keywords: Brāhmī, Aśokan inscriptions, decipherment, social network, history of ideas, James Prinsep, Charles Wilkins.

To cite this article
Sinha, Sitabhra and Nandini Mitra 2024. On the Shoulders of… : Uncovering the Critical Role of Knowledge Diffusion through Peer Influence Network underlying Prinsep's Decipherment of Brāhmī. *Journal of the Asiatic Society* 66/2: 35–62.
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> The ancients had only the books which they themselves wrote, but we have all their books and moreover all those which have been written from the beginning until our time […].Hence we are like a dwarf perched on the shoulders of a giant. The former sees further than the giant, not because of his own stature, but because of the stature of his bearer. Similarly, we [moderns] see more than the ancients, because our writings, modest as they are, are added to their great works.
>
> William of Conches, c.1090 – c.1154 (Jeauneau1973)

The decipherment of Brāhmī provides, at least on the face of it, an archetypical example of the romantic notion of a "lone genius" realizing an intellectual breakthrough by their sheer brilliance. In this view, the English antiquarian James Prinsep in a space of a few years (1834-1838) single-handedly figured out how to read the inscriptions carved on pillars and rock faces found at far flung locations on the Indian subcontinent, as well as, engraved on coins. In the words of Cunningham (Cunningham 1871), this takes a romantic hue of Prinsep having worked out the essential clues in just a few days of continuous work: 'In these lively letters [from Prinsep] we see that the whole process of discovery occupied only three days, from the receipt of Stuart's plates [quarto engravings of 28 Saurāshtra coins, on 11th May 1837] to the complete reading of all the legends [May 14, 1837]', the results of this decipherment being published in the *Journal of Asiatic Society of Bengal* in the subsequent years (Prinsep 1837b, Prinsep 1837c, Prinsep 1838).

However, the genius theory of innovation has been increasingly questioned, certainly in the context of scientific discoveries and technical inventions (Moon 2014), but also in the social sciences (Catherine and Doehne 2018) and even in the case of archaeological findings (Lahiri 1991). The emphasis in this alternative approach is to reveal the role of social networks extended in both space (e.g., through personal communication via letters) and time (e.g., through citations to earlier work published in learned journals) in relaying ideas that develop and transform over time as a result - eventually culminating in a paradigm shift. The illusion of a sudden breakthrough appears because the slow, gradual accumulation of key facts and concepts

that are essential for the discovery are often not noticeable to contemporaries until a "tipping point" is reached (Scheffer 2009). However, recent innovations in network analytics and data science can provide quantitative techniques for reconstructing such *influence networks* from historical data (Finegold *et al.* 2016), allowing an *a posteriori* understanding of the probable sequence of incremental developments leading to the innovation under consideration.

To explain more clearly using a visual analogy the contrast between a lone genius theory and that provided by consideration of the influence network, we can turn to catastrophe theory, a branch of mathematics pioneered by René Thom (Thom 1975). It is particularly suited for describing abrupt transitions, providing a mathematical metaphor for how innovation happens in general, and which we use here to describe the process of scientific discovery. In analogy with Paulos (1980), we visualize a three-dimensional space (Figure 1) whose coordinates correspond to measures of (i) the information accumulated so far about a specific scientific problem, (ii) the effect of the influence network, measured in terms of the density of connections between individuals through which information can flow, and (iii) the level of understanding, that ranges between ignorance and enlightenment. Given any pair of values for information accumulated and network connectance (the pair of horizontal axes in Figure 1), there is at least one likely outcome in terms of the level of our understanding (the vertical axis). We note that such a picture is a specific instance of a more general view of historical events being the joint outcome of the social/intellectual *environment* in which historical actors or agents find themselves, and the *interactions* between them. Based on a theorem proved by Thom, the surface representing the level of understanding under certain conditions will have a very distinctive form, characterized by a cusp-like shape where the surface curves back to create a triple layered region. The cusp gradually tapers to a point as network connectance is increased – as shown by the projection of this multi-layer region on the horizontal plane at the bottom (shown as a grey region). The overhanging fold indicates that for a given quantity

of knowledge accumulated about the scientific question, it is possible to have two very different outcomes. Thus, depending on the level of understanding already achieved, one can either be very far from attaining comprehension, or in other circumstances, immediately achieve a complete understanding. The middle curve between the lower and upper surfaces represents the threshold that needs to be crossed for attaining enlightenment – sometimes referred to as the "a-ha!" moment in a scientific discovery (Bryce 2014) – realized as a sudden (or discontinuous) intuitive leap. Such a moment typically comes about when our brain spontaneously switches to a new interpretation of the available accumulated information to reach a previously unanticipated conclusion, perceived subjectively as an abrupt epiphany.

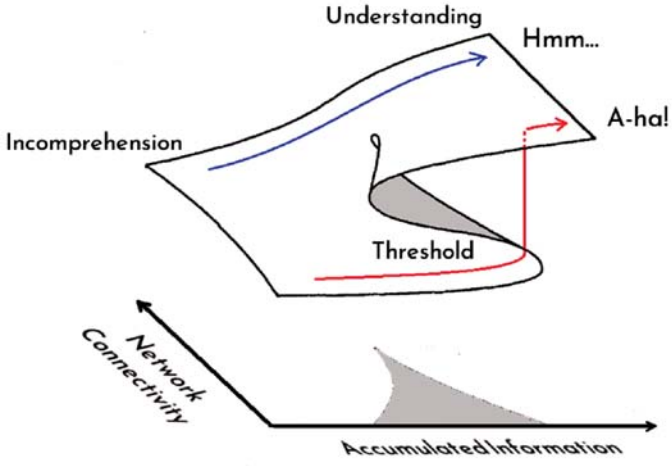

Figure 1. A schematic representation of the process of a scientific discovery (e.g., decipherment of a lost writing system) with complete knowledge being achieved as more information is accumulated over time eventually leading to a coherent synthesis as a threshold to comprehension is crossed. In absence of knowledge of the peer influence network, this may appear to be the work of a "lone genius" having an "A-ha!" moment. More likely than not there are a number of individuals whose prior or contemporaneous labours underlie this success and the impression of the "lone genius" being somehow solely responsible for the paradigm shift results from our lack of knowledge of the network through which the work of different individuals cross-pollinate further discovery. In light of a fuller understanding, the discovery may seem less abrupt and more gradual (a "Hmm…" moment), becoming almost inevitable as new data make retention of older perceptions untenable—even though the actual path taken to reach it may involve several detours and looping backs.

Figure 1 also suggests that the threshold to cross this barrier to the new perception decreases with increasing density of connections in one's influence network, so that the supposedly enormous creative leap required from a "lone genius" working in isolation can be replaced by pooling together the incremental insights obtained by different individuals whose results are disseminated to others via the network connecting them. Indeed, for a densely connected community of scholars where information flows freely with the accumulated wisdom being easily accessible to all, the path to comprehension may be smooth or continuous with the individuals becoming aware that a paradigm shift has occurred only after the fact. In Figure 1, we refer to this as the "hmm…" moment, to contrast it with the "a-ha!" moment referred to earlier. Such an experience fits well the following account of Thor Heyerdahl (Heyerdahl 1953): 'Once in while you find yourself in an odd situation. You get into it by degrees and in the most natural way but, when you are right in the midst of it, you are suddenly astonished and ask yourself how in the world it all came about.'

Thus, in the famous aphorism of seeing further by standing on the shoulder of giants[1], the "giant" can instead be a collective entity, essentially an influence network comprising contemporaneous scholars, as well as, those who have lived in the past, but whose ideas can still influence others by being disseminated through written records.

Several famous instances of deciphering ancient inscriptions, each of which established an unambiguous relation between a writing system not yet readable so far and the language which it represented, provide illuminating examples of how the diffusion of ideas both through correspondence and via written records (for example, in the form of archived journal articles or books), as well as, gradual accumulation of data, are all vital for the eventual breakthroughs.

[1] While this quote has often been exclusively associated with Newton who had written in a letter to Robert Hooke 'if I have seen further [than others], it is by standing on the shoulders of giants' (1675), the metaphor has a much longer history, appearing first in the writing of William of Conches in 1123 (see the opening quote of this article).

This is despite the fact that written accounts of these decipherments are often too ready to ascribe almost the entire credit to a "lone genius" having an "a-ha!" moment. As mentioned in Gelb and Whiting (1975)

> There are many stories connected with the decipherment of ancient writings and the recovery of forgotten languages […] they usually deal only with the discovery of the key, that brief moment of insight when some datum is arrived at, which when inserted causes the rest of the puzzle to fall into place. [Missing from such stories] is the tremendous amount of work, routine but necessary, which precedes that moment and make the decipherment possible, and the even more tremendous amount of work which follows that moment and results in the recovery of the language.

Apart from its intrinsic value in showing the critical role played by influence networks in making a scientific breakthrough possible, we have chosen the deciphering of Brāhmī as a case-study, compared to the almost contemporaneous decipherments of Egyptian hieroglyphics and West Asian cuneiform writing systems, as there are almost no secondary accounts (apart from a fairly succinct description in Salomon 1998) that provide a detailed step-by-step account of the process by which this remarkable achievement was accomplished[2]. This is somewhat surprising as there is no dearth of primary sources in the form of correspondence and presentations that appeared in contemporary scholarly journals, most notably the *Journal of the Asiatic Society of Bengal*, that was founded and edited by Prinsep himself for the first few years of its existence.

Prior to embarking on to the main focus of our article—viz., an attempt at reconstructing the influence network underlying the decipherment of Brāhmī and how it aided Prinsep in taking the final step of fitting together all the pieces to solve the puzzle—we shall look at the process of decipherment in general for context. As

[2] We note that P. Thankappan Nair's projected second volume of his account of the life and work of James Prinsep was to have dealt with 'his great discoveries and Secretaryship of the Asiatic Society' (as mentioned in the preface of Nair 1999). Unfortunately, the author's demise in June this year (2024) means that this volume in all likelihood will never appear.

mentioned by Gelb and Whiting (1995), decipherments differ in terms of the extent of one's 'knowledge of the two elements involved, the writing system and the language.' Setting aside the trivial case when both are known, the decipherer is faced with one of three possibilities: (a) an unknown writing system used for expressing a known language (this is the case for Brāhmī, once it was correctly guessed in different contexts to be either Sanskrit or Prakrit—or Tamil, as in the case of Tamil-Brāhmī inscriptions, see Mahadevan 1970), (b) an unknown language expressed using a known writing system such that it can be read but cannot be made sense of (an example is Sumerian which was deciphered by figuring out the Cuneiform writing system that was used for writing it, after the successful decipherment of cuneiform inscriptions in Akkadian and Old Persian, see Robinson 2002), and (c) when both the language and the writing system are unknown (as in the case of the yet undeciphered Indus Civilization inscriptions). Needless to say, in the case of (c), decipherment is almost impossible unless multilingual inscriptions, of which at least one is in a language already known, are found, or at least through the use of archaeological context, it can be reduced to either a type (a) problem by correctly deducing the possible underlying language (as was the case for Linear B inscriptions, that its decipherer Ventris guessed to be an archaic form of Greek, see Chadwick 1992) or to a type (b) problem, if a close relation can be found to another writing system used for writing a known language. In some cases, one could even surmise that the unknown writing system is referring to a linguistic object known from other sources, e.g., the proper names of historical figures (such as kings) that have been obtained previously from the records of neighbouring cultures (kingdoms). The decipherer may also use intrinsic characteristics of the unknown writing through statistical analysis – e.g., analysing the distribution of occurrence frequency of the various glyphs or signs and the position of their occurrence in a text, the significant co-occurrence of pairs of signs, consistent substitutions indicating syntactic rules for inflection, etc. (Robinson 2002). However, for a successful decipherment, the insights obtained through some or all of these means would have to be integrated into

a consistent mapping between sign and sound—and that can often come about suddenly via an intuitive leap. To paraphrase Daniels and Bright (1996), several features that characterize many other decipherments can also be seen in the case of Brāhmī, viz., the discovery of bilinguals (e.g., Christian Lassen's use of Indo-Greek coins with inscriptions in Greek on one side, and Brāhmī on the other, to identify the sound value of several Brāhmī characters, see Prinsep 1836), correctly guessing the language which the writing system encoded (e.g., Sanskrit, as in the case of Charles Wilkins' decipherment of the Gya cave inscription discussed later, and Prakrit in the case of many of the early Brāhmī inscriptions that were eventually deciphered by Prinsep), the occurrence of proper names (e.g., as in the *declaratory formula* of a royal edict – mentioning the regnal name of King Aśoka—that Prinsep found repeated in many of the early Brāhmī inscriptions, see Figure 2) and the reported sudden flash of insight (as given in Cunningham's account mentioned at the beginning of the article).

Figure 2. The original phrase comprising fifteen letters written using the early Brāhmī alphabet, shown along with its transcription into Prakrit language and translation (in successive rows) of the royal invocation that Prinsep found repeated in inscriptions on the Aśokan pillars of Allahabad, Feroz's Láth (Delhi) and Mathiah Láth (Lauṛiyā-Nandangaṛh). Prinsep guessed this to be "some formula of invocation" (Prinsep 166834b).

We now introduce the main contribution of this article—the reconstruction, at least partially—of the influence network that set the stage for the *glanzjahre* (golden years) of 1834-1838[3].

[3] See Ernst Windisch: "Die Jahre 1834 bis 1838 waren Glanzjahre der auf die indischen Altertūmer gerichteten Forschung, deren Ergebnisse zum großen Teil in den Bānden des Asiatic Journal of Bengal niedergelegt sind" (The years 1834 to 1838 were the golden years of research on Indian antiquities, the results of which are largely recorded in the volumes of the Asiatic Journal of Bengal) (Windisch 1917).

Tracing the historical route for decipherment of Brāhmī with reference to diffusion of ideas over such a reconstructed network provides an illustration of this landmark event in South Asian archaeology being only the culmination of a series of advances, beginning with the first decipherment of a Brāhmī inscription in 1785 by Charles Wilkins (Wilkins 1785)—but not published until 1788 along with a description of the cave where it was found by John Herbert Harrington (Harrington 1788)—to the series of papers James Prinsep published between 1834 and 1838 providing the complete key to reading all extant inscriptions in the script. Indeed, this work can serve as a template for examining other decipherments, many of which were contemporaneous to that of Brāhmī. In particular, one can point to the case of Egyptian hieroglyphic writing that was deciphered in the 1820s, with the most prominent figure in this venture, Jean-Francois Champollion, deliberately promoting a narrative of his entire life being a guided trajectory dedicated to the eventual cracking of hieroglyphic writing and thereby underplaying the vital contribution of others, most notably, Thomas Young (Robinson 2002). We also note that, just as for many scientific inventions that occurred in the nineteenth century it has been reported that the social networks responsible for the different innovations were often interlinked (Moon 2014), so is the case for the decipherments that occurred in this era. There are indeed passing references to the work of Champollion and Young in the papers of Prinsep, indicating the influence of their work on him. This is unsurprising in light of the fact that such discoveries permeated the *zeitgeist* and was a topic of frequent public discussions—often in the context of Anglo-French rivalry for intellectual laurels that crowned successful decipherments. Indeed, this period has been referred to as the "Age of Wonder" by recent historians (Holmes 2008), as a period when Europeans sought knowledge from all realms—physical, geographical, biological, anthropological, cultural - with a curiosity that still at the time was relatively free of a racist or supremacist agenda (Schwab 1950). Indeed, it is extremely unlikely that Prinsep had not been aware of the highly influential entry on Egypt written

in 1819 by Thomas Young as a supplement for the Encyclopaedia Britannica which outlined how hieroglyphic signs can be used to phonetically spell out the name 'Ptolemy' in the royal cartouches of the trilingual Rosetta stone which proved to be the crucial step in deciphering the hieroglyphic writing system. We also note that by 1822 Champollion had presented the elements of his proposal for reading hieroglyphics in the Lettre à Dacier. The sinologist John Barrow's publication in the *Quarterly Review* of a scathing commentary to the Letter inaugurated a bitter fight for credit that was predictably divided along national lines. Indeed, it is in this background that we can understand Prinsep's parting words in his first ever article on Brāhmī decipherment (Prinsep 1834a):

> […] when its [Brāhmī,] simplicity of vocables is compared with … the more abstruse hieroglyphics of Egypt attempted by Young and Champollion, it seems almost a stigma on the learned of our own country that this should have remained so long an enigma to scholars; and the object of the present notice is to invite fresh attention to the subject, lest the indefatigable students of Bonn or Berlin should run away with the honor of first making it known to the learned world.

This clear appeal to nationalistic sentiment suggests that at this early stage Prinsep was possibly looking at the possible decipherment as a battle for English intellectual pride – a sentiment that, to Prinsep's credit, is no longer observed in his later works where he enthusiastically promotes the contributions of not only the Norwegian-born, German orientalist Christian Lassen, but also extols the Indian pandits (e.g., Sárodáprasad Chakaravarti, 'a boy of the Sanskrit college, who had studied in the English class lately abolished', who Prinsep had gotten to make a 'more literal rendering' of the Gya cave inscription translated earlier by Wilkins and about whom Prinsep goes on to say 'how useful the combination of Sanskrit and English grammatically studied by these young men might have been made to both to Europeans and their own country'). Their assistance in rendering the Later Brāhmī era texts to standard Nāgarī characters were an invaluable aid in deciphering the writing system (Prinsep 1837d).

However, apart from these allusions and surmises, we can also point to a more substantial connection of Brāhmī decipherment exercise to one of the other two great decipherments of this era, viz., that of cuneiform. Carl Ludwig Grotefend, the German scholar whose work on Kharoṣṭhī was contemporaneous with that of Prinsep on the same script, was the son of Georg Friedrich Grotefend, who had played a key role in deciphering Persian cuneiform. Subsequent to Prinsep's decipherment, the decipherment of the cuneiform systems used for writing Akkadian and Sumerian was completed by among others, Hincks, Creswicke and Rawlinson, although the last-named individual—in a familiar pattern—deliberately tried to write out the others' contributions from the narrative (Cathcart 2011). Thus, the oft celebrated decipherment of two of the earliest writing systems bookends the period in which Prinsep gave the finishing touches to the initiative that had begun in 1785 for reading the oldest extant South Asian script at the time.

Figure 3 shows the partially reconstructed influence network based on scanning the contents of the principal papers that contributed to the Brāhmī decipherment effort. Even a casual perusal of the network of individuals who have been linked - in one way or another - to the decipherment of Brāhmī, immediately gives the lie to the popular perception that, e.g., in the words of Wikipedia, "The first successful attempts at deciphering the Brāhmī script were made in 1836 by Christian Lassen... The task was then completed by James Prinsep, who was able to identify the rest of the Brāhmī characters, with the help of Major Cunningham"[4]. In fact, as has already been stated, the first Brāhmī inscription to be read—as early as 1785 by Charles Wilkins better known as the first translator of Bhagavad Gita into English (Johnston 1940)—was the Gya Cave inscription or what is now known as Gopika Cave Inscription (alternatively, Nagarjuni Hill Cave Inscription) of Anantavarman dating from 5th-6th century CE, which is written in Sanskrit using late Brāhmī characters. Unfortunately,

[4] https://en.wikipedia.org/wiki/Christian_Lassen (accessed June 3, 2024)

Wilkins, in his brief introductory note to the translation (which is substantially correct) leaves little clue as to how he managed this feat except mentioning that the syllabic metre in which the verse was written and that he identified as Śārdūlavikrīḍita, 'was no small help in decyphering the vowels'[5] (Wilkins 1785). One can only speculate that his experience as a printer and font-maker (he is credited with creating the first successful metal type font cast in India) gave him an

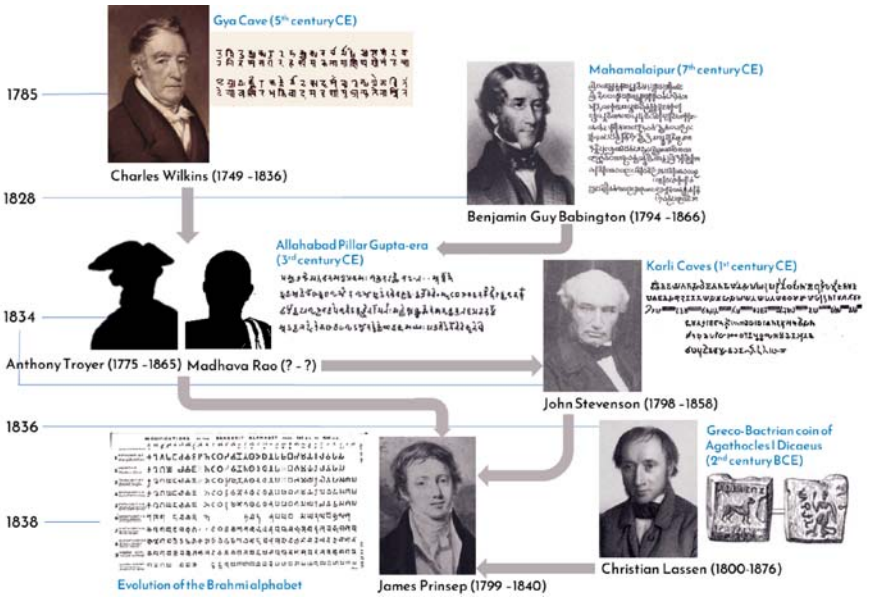

Figure 3. A partial reconstruction of the influence network, that indicates only a few principal figures, showing the diffusion of ideas – represented as shaded arrows – from Charles Wilkins, the first to read an inscription written in Brāhmī (albeit, that of a later era) to James Prinsep's final crowning achievement showing the evolution of the Brāhmī characters in 1838. The principal resource used by each individual in their decipherment of Brāhmī characters of a certain era is indicated next to their pictures (for lack of a known picture, we use schematic representations for Captain A. Troyer and Madhava Rao), while the year in which a particular breakthrough was achieved is indicated in the left of the figure (with horizontal lines connecting the date with the individuals concerned).

[5] In this context of the knowledge of metre helping in disambiguating a text, Colebrooke mentions of "the aid which was derived from a knowledge of Sanscrit prosody, in decyphering passages rendered obscure by the obsoleteness of the character, or by the inaccuracy of the transcripts" (Colebrooke 1811)

unique perspective amongst his peers in looking past the superficial differences in various letterforms representing the same character. It is possibly this intuitive feel for fonts that enabled him to read an inscription written in Sanskrit - a language that had become an obsession for him - even though it was written in an archaic set of characters. Again, it is popularly believed that even though Wilkins may have been the first to decipher a Brāhmī inscription, this was either not widely known or at least did not influence Prinsep (Keay 1981). The multiple references by Prinsep to the work of Wilkins in his published papers clearly reveal otherwise. In fact, even in his first paper on the subject (Prinsep 1834a), Prinsep credits Wilkins with deciphering the Gya inscription, which Burt, in the immediately preceding article (Burt 1834), had pointed out as being "identical in character" to the "No. 2" inscription (that is, the Gupta-era carving) in the Allahabad pillar.

Following Wilkins' pioneering work, there appears to be a long gap in the published record about work done on inscriptions written in (what would later be recognized to be) Brāhmī characters, until Dr Benjamin Guy Babington on July 12, 1828 read his account of the sculptures and inscriptions at 'Mahámalaipur' (present Mamallapuram) close to Madras, in a meeting of the Royal Asiatic Society and which was published in their Transactions in the following year (Babington 1829). Apart from describing the architecture of the temple remains and sculptured rocks—illustrated by drawings made on the spot by himself and Andrew Huddleston—Babington's article provides a detailed analysis of the inscriptions found among the ruins. Unlike earlier European visitors, Babington had a fairly good knowledge of Tamil that he had acquired soon after coming to India to join the Madras Civil Service in 1812. In 1822 he had published the Tamil Grammar compiled by the Italian Jesuit priest Constantine Joseph Beschi after editing and translating it from the Latin. In fact, Babington would continue his Tamil studies even after going back to England in 1819 where he began studying to become doctor, although after graduating as MD in 1831 he no longer contributed to activities of the

Royal Asiatic Society. Thus, it is no surprise that in his account of the inscriptions, Babington could make out that a number of them were in Tamil even though written in archaic scripts—which we now know to be the Pallava Grantha alphabet that was in use between 4th–8th c. CE, and which had developed from the Tamil Brāhmī script (third c. BCE–first c. CE). He also recognized that the other inscriptions were written in an early form of the Dévanágarí script. Most strikingly, he mentions having 'lately received' (i.e., much after his visit to the site) inscriptions 'purporting to be from the neighbourhood of Mahámalaipur'—which we can identify to be inscriptions from the Atirachanda Cave Temple located in Saluvankuppam, a few kilometres north of Mamallapuram—a pair of which he recognized to contain the same Sanskrit invocation but written in different characters. While one was in Pallava Grantha, the other was a 'species of ancient Dīvanágarí'. Being able to read the inscription, Babington drew up an alphabet of these various characters—which proved to be the crucial clue to the next stage of the decipherment. This is attested in the article of Anthony Troyer (Troyer 1834), the third in a series of three back-to-back publications—all of them dealing with the ancient stone pillar lying in the Fort of Allahabad that had inscriptions in four different types of characters engraved on its surface—in the March issue of the *Journal of the Asiatic Society of Bengal*. The publication of this series of articles is a watershed moment in the decipherment of Brāhmī, with the first describing, accompanied by detailed drawings, the different inscriptions (Burt 1834). These were classified as Nos. 1–3 (apart from a Persian inscription from the era of the Mughal prince Salim, later to become the Emperor Jahangir), with No. 3 being readable as Devanagari characters. Script no. 1 was perceived to be the oldest, and similar in nature to those inscribed on a pillar located in Delhi, that was referred to as the '*Firoz Shah lath*' (later both of these were recognized to be written in early or Aśokan Brāhmī). No. 2 was recognized by Burt to be related to the "ancient inscription in Gya" that was deciphered by Wilkins (as Burt found out by "examining all the 18 volumes of the As. Res.") and that it 'will

probably prove to be composed of fine Sanscrit' (as it indeed was). Burt also recognized that the Allahabad Pillar inscription no. 2 may be somewhat older than the script deciphered by Wilkins 'because some of the letters of the character No. 2 appear of a more illegible nature than those of the Gya sculpture, although manifestly of the same description.' This was quite prescient of Burt as we now know that the Allahabad inscription no. 2 to be a panegyric praising the fourth c. CE Emperor Samudragupta, and thus written in Gupta-era Brāhmī (now known to be in Gupta-era Brāhmī) while the Gaya or Gopika cave inscription of Anantavarman dates from the fifth–sixth c. CE.

The decipherment of the inscription no. 2 copied from the Allahabad Pillar was the subject of the third article in the series, in which Anthony Troyer, an Austrian officer who had arrived in Calcutta in 1828 as aide-de-camp to the new Governor-General of Bengal, William Bentinck (Stein 1940), and after studying Sanskrit had become Secretary to the Government Sanskrit College in Calcutta (1832–1835) reported that Madhava Rao, a pandit who was the head librarian of the Sanscrit College, had transcribed this inscription into readable Devanagari characters. Troyer notes that 'it was principally the alphabet of the Mahámalaipur inscriptions that enabled Madhava Rao to transcribe in Devanagari characters' (which dates from seventh c. CE) while also remarking that it had 'certainly a great apparent similarity to that of a part of the Gya inscription, examined by Dr. Wilkins […]' (as alluded to above). The transcription allowed identification of many Sanskrit words – thus vindicating Burt's conjecture that the entire inscription no. 2 was in Sanskrit. In the accompanying plate which had the facsimile of this inscription, we also find a reconstructed alphabet of the archaic signs compared with modern Devanagari letters (Figure 4). In hindsight, the most important part of this alphabetic chart is the listing of the forms of inflections of consonants or consonantal clusters by different vowels, which is a hallmark of alphasyllabaries or abugida system of writing. This would be the crucial clue to James Prinsep, the author of the second of the

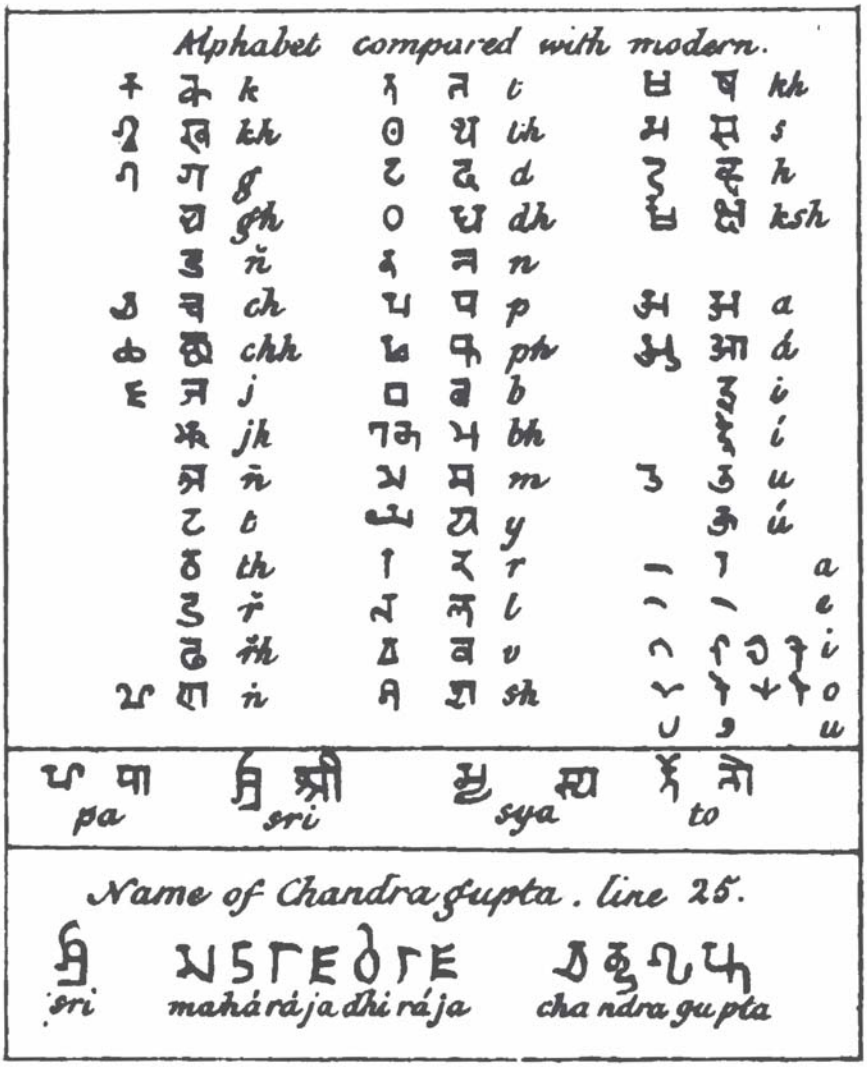

Figure 4. The alphabetical chart given in Plate VI of Vol III of JASB (1834) accompanying the article by Captain A Troyer (based on the work of Madhava Rao) that shows the form of inflections by various vowels as seen at the bottom of the last column. The middle block of the image shows the graphemes corresponding to several vowel-consonant combinations.

series of papers (Prinsep 1834a), to deduce that while the sound value of the characters in Inscription no. 1 could not be ascertained yet, they can be seen as vowel-consonant conjuncts by arranging the symbols in a table with putative basic (or as Prinsep puts it, radix) consonants arranged along the rows and the vowels along the columns (Figure 5). We can clearly see the impact that the transcription of the Gupta Brāhmī inscription and in particular, the reconstructed alphabet with the inflections marked out, had on Prinsep from his own words: 'Proceeding in this manner I soon perceived that each radical letter was subject to five principal inflections, the same in all, corresponding in their nature and application with the five vowel marks of the ancient Sanscrit No. 2' [i.e., the Gupta-era Brāhmī inscription]. Thus, it is probably not as much a surprise to note that, while he still couldn't ascertain the identity of the characters, he was largely correct in identifying the vowels corresponding to the different inflections (Figure 5). This is a remarkable step forward in deciphering early Brāhmī when one realizes that this is Prinsep's first published contribution in the area of linguistic decipherment.

What is perhaps even more striking is that Prinsep attempted to do a statistical frequency-based identification of the sound values of various characters by comparing the frequency of their occurrence in the inscription with that for the various letters used in Sanskrit. In principle, the idea is quite sound, as one can view the problem of deciphering an inscription in a known language written in an unfamiliar alphabet as that of decrypting a substitution cipher. Such a cipher involves substituting the alphabet used for writing the original text by another alphabet, with a unique one-to-one correspondence (the key to the cipher) between pairs of letters in the two alphabets. It is one of the oldest ways of securely transmitting a message by making it appear unintelligible to any person "other than the intended recipient" who manages to intercept it, the first documented use of it being mentioned in Julius Caesar's *Gallic Wars* (Kahn 1967). A well-known literary example occurs in the Sherlock Holmes short story "The Adventureof the Dancing Men" (Doyle 1903), with Holmes

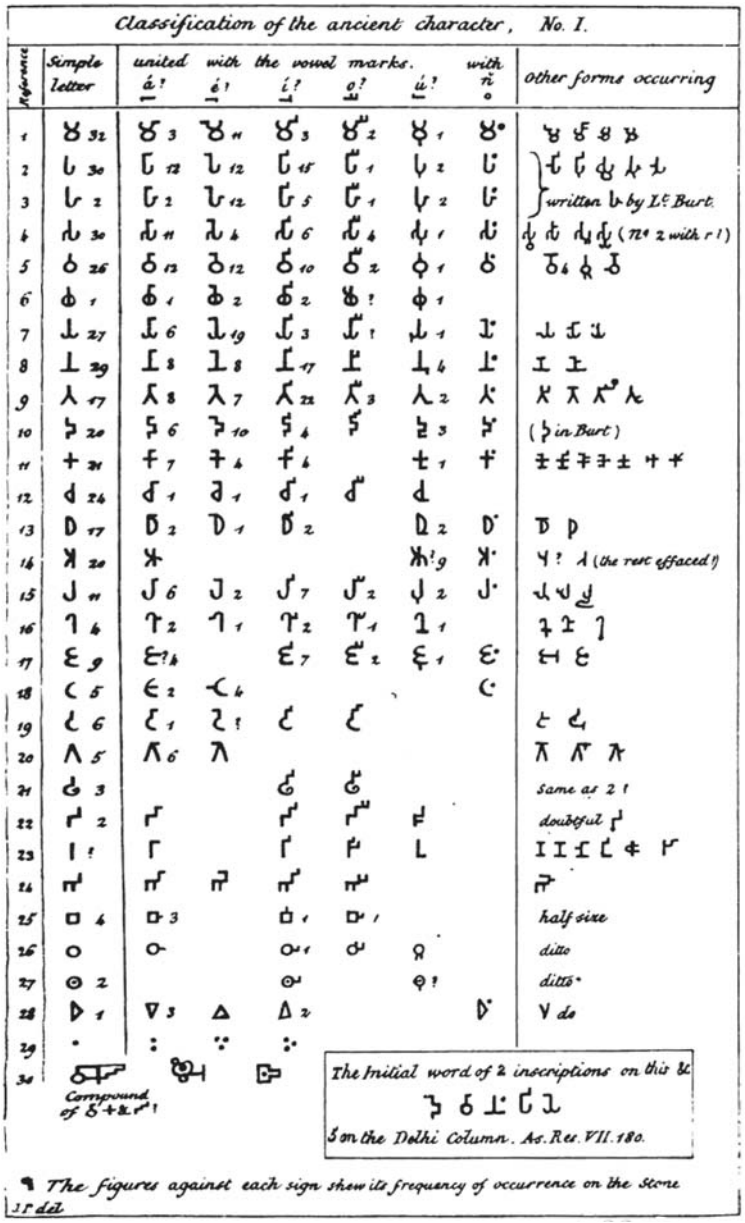

Figure 5. Prinsep's chart (Plate V in JASB, Vol 3, 1834) showing "each radical letter" and their "five principal inflections" obtained from the Gupta-era inscription in the Allahabad Pillar. While the radicals (consonants) were as yet unidentified, Prinsep's identification of the inflections (the vowels modifying the sound of the consonants) are on the whole (and somewhat remarkably) correct.

figuring out that a number of sequences of stick figure drawings were actually messages in English that were encoded as a substitution cipher using stick figures whose appendages were oriented in different ways constituting the alphabet of the ciphertext. While in the Sherlock Holmes story, the detective required additional knowledge (e.g. the name of the principal character involved) to solve the puzzle, it is now possible to do this by computational means alone using the method of Markov Chain Monte Carlo (Diaconis 2009). Thus, it appears that Prinsep was well ahead of his time, because, had he been able to guess the underlying language correctly (in this case, Prakrit), then simply by comparing letter frequencies obtained from a corpora of Prakrit texts to the occurrence frequencies of the various Brāhmī characters, he could have in principle deciphered Brāhmī by assigning correct phonetic values to each Brāhmī character. Note that, the use of statistical frequency-based techniques to decrypt ciphers was well-known in the Middle East much earlier, having been introduced by the Arab scholar Al-Kindī in his *Manuscript on Deciphering Cryptographic Messages* written in the ninth c. CE (Al-Kadi 1992, Broemeling 2011).

There is however a major obstacle to be crossed before such a method could be successfully applied. While English is written alphabetically, South Asian writing systems (including Brāhmī) are alphasyllabaries or abugida. The difference is that while in alphabetic writing each vowel and consonant are separately marked using the corresponding signs, "Indic scripts typically share the same basic principles of the *akṣara* system, i.e., a modified consonantal syllabary representing most vowels by diacritic signs attached to the consonants" (Daniels and Bright 1996). Thus, in Brāhmī, vowels are not indicated separately (except in the initial position) but instead modify the sign of the consonant (or consonant cluster) that they follow This means that the number of distinct characters (*akṣara*) number a few hundred—although the Brāhmī alphabet as such has only around 50 basic consonants and vowels. The much larger size of the set of graphemes makes decrypting an alphasyllabary from a limited corpus of

inscriptions much more challenging. This can be quantitatively indicated by measuring the *unicity distance* for the encoding system, viz., the minimum amount of ciphertext measured in the total number of characters available, required to uniquely determine the key (Menezes, van Oorschot and Vanstone, 1997). For a simple substitution cipher where each character in a writing system that has M distinct symbols are substituted by another set of M symbols, the number of possible keys is M! (= M x (M – 1) x (M – 2) x (M – 3) x …. x 2 x 1). The unicity distance for a cipher using a single alphabet, is the logarithm of this number (which gives the entropy or information content of the key-space) divided by the redundancy of each character (obtained by taking the logarithm of M and subtracting from it the entropy per character of the writing system as measured from a large corpus of texts). For English, this turns out to be around 28, while for Brāhmī it is likely to be a few hundred[6]. Thus, it seems that a frequency-based approach would probably not have availed Prinsep much – especially at a period when computations of such data were entirely manual.

The next important step following the publication of the three articles, was the publication in the same year of a report by the Scottish missionary Rev John Stevenson on certain inscriptions found in the Carlí Caves (Buddhist rock-cut caves at Karli near Lonavala in Maharashtra dating from second c. BCE–fifth c. CE) in the October issue of the Journal of the Asiatic Society of Bengal (Stevenson 1834). Rev. Stevenson had been sent to India by the Scottish Missionary Society in 1823 and eventually became a pioneering editor and translator of the Vedas (Galewicz 2019). His primary interest being quite different, Rev. Stevenson's appearance in this account is brief (as he puts it in his note "Many important duties prevent me from allotting much time to studies of this nature, and the time I can spare for such a purpose, will be better spent in endeavouring to illucidate the history of the Dakhan

[6] Exact calculation would require estimating not only the frequency of occurrence of each character in Prakrit or Sanskrit texts, but also considering pair-wise and higher order correlations to calculate the entropy per character. We note in passing that the entropy per syllable of Sanskrit has been estimated from the works of Kalidasa to be 2.05 bits (Shukla 2004).

(Deccan)…") but nevertheless quite significant as he managed to identify sound values of twelve of the consonants in a version of the Brāhmī script dating from the first–second c. CE and thus providing a vital link between the Aśokan and the later Gupta-era Brāhmī scripts. This achievement was made possible by the immediately preceding accomplishment of Madhava Rao in constructing a Brāhmī alphabet from the Inscription no. 2 of the Allahabad Pillar for as Rev. Steveson mentions

> happily the March No. of your Journal was sent me by a friend, and through the aid it afforded me, in furnishing me with the alphabet of Inscription No. 2, on the Allahabad Pillar, … I have been able to decypher [some of the] inscriptions [engraved on the excavated temple at Kárlí, near Puná]; and hope that if you have not found the key to the character of Inscription No. 1, my alphabet may carry you several steps towards its attainment, and so repay the debt I owe for the assistance derived from your Journal.

The same issue also saw another note from Prinsep (Prinsep 1834b), this time on his study of the text inscribed on the Mathiah Láth (now referred to as the Lauriya-Nandangarh pillar inscription) obtained by the British Political Resident in the royal court of Nepal, Brian Houghton Hodgson, from a village close to the India-Nepal boundary. Prinsep had immediately realized that the characters were identical to those in Inscription no. 1 in the Allahabad column as well as that in the Feroz Shah Láth located in Delhi. More importantly, he realized that the same 'formula of invocation' comprising 15 characters was occurring in numerous occasions (Figure 2). This led Prinsep to a more detailed comparison of the text in the three pillars and to his surprise, he noted that '*all three inscriptions are identically the same*' (italicized in original). This enabled him—by collating information from the various pillars—create a faithful rendition of the original text by identifying and then eliminating copying errors. Prinsep went on to revise his signary that he had created from the Allahabd Pillar (Prinsep 1834a) and noted that 'most of the anomalous letters […] [were], on comparison with the other texts, now reduced into simple and known forms.'

The next major step appears in November 1836, when we have Prinsep excitedly conveying news of the "very successful reading by

Professor Lassen of Bonn, of the [Brāhmī] legend on the coin of Agathocles" (Prinsep 1836). With the help of the Greek legend stating the name of the king on the other side of the coin, the Norwegian scholar Christian Lassen—who has been credited with founding the discipline of Prākrit philology—could ascertain the sounds values of a number of the Brāhmī characters. As the Indo-Bactrian king Agathocles I Dicaeus whose coin Lassen had analyzed reigned between around 190 and 180 BCE, this brought the knowledge of Brāhmī closer to the earliest, Aśokan form that was inscribed in the pillars of Allahabad, Delhi and Lauriya-Nandangarh).

And so, we arrive at Prinsep's *annus mirabilis* of 1837 during which in a series of papers (Prinsep 1837a, Prinsep 1837b, Prinsep 1837c) Prinsep worked out essentially the entire scheme of writing for the earliest form of Brāhmī. The sources he used for this exercise ranged from coins of the Western Kcatrapa rulers of 3rd–4th c. CE which allowed him to identify a few consonantal conjuncts (Prinsep 1837a) to the brief inscriptions (copied by Edward Smith) from the Buddhist stupa at Sanchí which led him to the consonants *d* and *n*, and from whence he could reconstruct the Brāhmī alphabet correct to a large extent, so that by the time the July issue of the Journal appeared, he could write 'that the several pillars of *Delhi*, *Allahabad*, *Mattiah*, and *Radhia* were erected under the orders of king Devánampiya Piyadasi of Ceylon, about three hundred years before the Christian era.'It is striking that Prinsep at some point had believed that the inscriptions spread throughout India could be the work of a King of Ceylon, but it was triggered by the fact that "in all the Hindu genealogical tables with which" Prinsep "was acquainted, no princes can be discovered possessing this remarkable name", while, on the other hand, 'in Mr. Turnour's epitome of Ceylonese History' he found 'once and once only […] the name of a king, Devenipeatissa, as nearly identical with ours [i.e., named in the inscriptions] as possible' who 'induced Dharmasoka, a sovereign of the many kingdoms into which [India] was divided, and whose capital was Pattilipatta to depute his son […] and his daughter… to *Anúrádhapúra* for the purpose of introducing

the religion of Buddha.'The mis-identification of the King who had ordered the erection of the Pillars was corrected by Prinsep in the September issue of the Journal (Prinsep 1837e) where he quoted from correspondence with his friend George Turnour working in the Ceylon Civil Service that the King 'Asoka was surnamed Piyadassi' and everything fell in place. Thus, the very next year, Prinsep published an article in which he provided charts showing the evolution of the Brāhmī consonants and vowels from its earliest form in the Aśokan era to the modern Devanagari alphabet (Prinsep 1838). Although the work on further understanding of the script and correcting several errors that still remained in Prinsep's work, would continue for the next few decades, the principal contours of the decipherment had thus been completed just about half a century after Wilkins had first deciphered a Brāhmī inscription.

One of the points that becomes apparent on examining the history of decipherment of Brāhmī is that successive progress happened by trying to read inscriptions that were closest in time to those which could still be read and then working out the closest match between a character in the known script and those in the unknown script. After this allowed a few of the characters to be identified, the partial reading of the text (assuming the language is known) and the context (e.g., whether it was the invocation to a specific god) allowed the remaining characters to be associated with their sound values. Subsequently the knowledge of the newly described script was used to decipher the next unknown one that was closest in time to it. We see this with the date of the script being deciphered by the individuals in Figure 3 gradually going back in time from the Nagarjuni Cave inscription (deciphered by Wilkins) and culminating with the earliest, i.e., Aśokan Brāhmī inscriptions deciphered by Prinsep.

Thus, a preliminary analysis of the network shown in Fig. 3 strongly suggests a much more nuanced picture of how eventual success was achieved than the simplistic interpretation in which almost all credit is laid to Prinsep and to some extent Lassen. Indeed, it appears that, as in the case of other innovations, such as the steam engine (Moon

2018), individuals with high betweenness centrality—i.e., who appear to act as an essential "bridging" node of the network through which the majority of the nodes have to traverse to reach other nodes—garner almost exclusive attention. In the case of Brāhmī, this is underlined by the fact that before Lassen's "reading" of a few characters in 1836 had been reported by Prinsep, Rev Stevenson in 1834 (Stevenson 1834) and William Henry Wathen in 1835 (Wathen 1835) had deciphered lengthy inscriptions dating from 1st century CE in the Karli caves and copperplate found in Gujarat, respectively. While the achievement of Prinsep is undeniable in his capacity as the Secretary of the Asiatic Society of Bengal in synthesizing these various insights and discoveries, and putting them in a coherent framework, a social history of the decipherment paints a much richer and more nuanced picture of how disparate individuals contributed key pieces of the puzzle whose solution has often been almost solely attributed to Prinsep.

The influence network that we have described here is the outcome of an exploratory study where we have focused only on a few principal figures involved in the decipherment of Brāhmī. We hope that it will show the way towards a more comprehensive study comprising those who had contributed to the enterprise by their related expertise such as Henry Thomas Colebrooke, Alexander Cunningham, John Herbert Harrington and Brian Houghton Hodgson, to name a few, or indeed those who indirectly wielded their influence on this network, such as Nathaniel Brassey Halhed or William Jones. We ourselves plan to extend the preliminary analysis reported here by placing it in the context of the other decipherments (such as that of Cuneiform and Hieroglyphs) that were simultaneously being carried out in other parts of the world in this 'Age of Wonder' (Harris 2008). Construction of a more complete network will also allow application of the entire suite of analytical techniques from network science, such as centrality measures—enabling a more detailed understanding of the sequence of innovations leading to decipherment of Brāhmī. More generally, this work illustrates how quantitative methods borrowed from network

science can inform us about how our ideas about the past transform as they diffuse over influence networks.

Acknowledgements

The research reported here was supported by financial assistance for the IMSc Computational Epigraphy Lab (iCEL) from the Department of Atomic Energy, Government of India. The authors are grateful for several stimulating discussions at various stages with Md Izhar Ashraf, Shakti N Menon, and Sumithra Surendralal. We would also like to place on record our gratitude to the work of Alexandra Elbakyan (Sci-Hub), Brewster Kahle (Internet Archive), Tom Garnett and Chris Freeland (Biodiversity Heritage Library), and the legions of their anonymous co-workers who are responsible for creating the open access digital archives that has made it possible for us to peruse the primary sources of our study without so much as leaving our desktop. This has made us appreciate even more the achievement of Prinsep who achieved his breakthrough by synthesizing an incredible number of distinct pieces of information without having at his disposal the means of instantaneous search and acquisition of desired data that the internet has now made possible for historians and epigraphers.

References

Al-Kadi, I.A. 1992. Origins of cryptology: The Arab contributions. *Cryptologia* 16/2: 97 –126.

Babington, B.G. 1829. An Account of the Sculptures and Inscriptions at Mahāmalaipur. *Transactions of the Royal Asiatic Society of Great Britain and Ireland* 2/1: 258–269.

Broemeling, L.D. 2011. An account of early statistical inference in Arab cryptology. *The American Statistician* 65/4: 255–257.

Bryce, N. 2014. The A-ha moment. *Scientific American Mind* 25/4: 36–41.

Burt, T.S. 1834. A description with drawings, of the ancient stone pillar at Allahabad called Bhim Sīn's Gadá or Club, with accompanying copies of four inscriptions engraven in different characters upon its surface. *Journal of the Asiatic Society of Bengal* 3: 105–113.

Cathcart, K.J. 2011. The Earliest Contributions to the Decipherment of Sumerian and Akkadian. *Cuneiform Digital Library Journal*, 2011.1.

Catherine, H. and M. Doehne 2018. Five reasons for the use of network analysis in the history of economics.*Journal of Economic Methodology* 25: 311–328.

Chadwick, J. 1992. *The Decipherment of Linear B*. Cambridge: Cambridge University Press.

Colebrooke, H.T. 1811. On Sanscrit and Prákrit poetry. *Asiatic Researches* 10: 389–474.

Cunningham, A. 1871. Introduction, *Four Reportsmade during the years 1862–63–64–65*. Simla: Government Central Press.

Daniels, P.T. and W. Bright (eds.) 1996. *The World's Writing Systems*. Oxford: Oxford University Press.

Diaconis, P. 2009. The Markov Chain Monte Carlo Revolution. *Bulletin of the American Mathematical Society*, 46/2: 179–205.

Doyle, A.C. 1903. The adventure of the dancing men.*The Strand Magazine* 26/156: 606–617.

Finegold, M., J. Otis, C. Shalizi, D. Shore, L. Wang, and C. Warren 2016. Six degrees of Francis Bacon: A Statistical Method for Reconstructing Large Historical Social Networks. *Digital Humanities Quarterly* 10/3.

Galewiz, C. 2019. The Missionaries in the Race for putting the Veda to Print: Rev. John Stevenson and his *Threefold Science* of 1833. *Cracow Indological Studies* 21/1: 137–164.

Gelb, I.J. and R.M. Whiting 1975. Methods of Decipherment. *Journal of the Royal Asiatic Society of Great Britain and Ireland* 2: 95–104

Harrington, J.H. 1788. A description of a cave near Gya. *Asiatick Researches* 1: 276–278.

Heyerdahl, T. 1953. *Kon-Tiki: Across the Pacific by Raft.* Chicago: Rand McNally.

Holmes, R. 2008. *The Age of Wonder.* New York:Vintage.

Jeauneau, É. 1973.*Lectio philosophorum: Recherches sur l'École de Chartres*. Amsterdam: Hakkert.

Johnston, E.H. 1940. Charles Wilkins. Contribution to, M. Shafi (ed.) *Woolner Commemoration Volume*, pp. 124-32. Lahore: Mehar Chand Lachhman Das.

Kahn, D. 1967. *The Codebreakers: The story of secret writing* (Revised edition, 1996). New York: Macmillan.

Keay, J. 1981. *India Discovered: The Recovery of a Lost Civilization*. London: Collins.

Lahiri, N. 1991. Are archaeological discoveries like scientific discoveries? The curious case of the Indus civilization. *World Archaeology* 49: 174–186.

Mahadevan, I. 1970. *Tamil-Brāhmī Inscriptions*. Madras: State Department of Archaeology, Government of Tamil Nadu.

Menezes, A.J., P. C. van Oorshot, and S. A. Vanstone 1997. *Handbook of Applied Cryptography*. Boca Raton: CRC Press.

Moon, F.C. 2014. *Social Networks in the History of Innovation and Invention*. Dordrecht: Springer.

Nair, P.T. 1999. *James Prinsep, Life and Work. Volume 1: Background and Benares Period*. Calcutta: Firma K.L.Mukhopadhyay.

Paulos, J. A. 1980. *Mathematics and Humor*. Chicago: University of Chicago Press.

Prinsep, James 1834a. Note on Inscription no. 1 of the Allahabad Column. *Journal of the Asiatic Society of Bengal* 3: 114–118.

—— 1834b. Note on the Mathia Lath inscription. *Journal of the Asiatic Society of Bengal* 3: 483–487.

—— 1836. Postscript to New types of Bactrian and Indo-ScythicCoins, engraved as Plate XLIX. *Journal of the Asiatic Society of Bengal* 5: 723–724.

—— 1837a. The legends of the Saurashtra group of coins deciphered. *Journal of the Asiatic Society of Bengal* 6: 377–392.

—— 1837b. Note on the facsimiles of inscriptions from Sanchí near Bhilsa, taken for the Society by Captain Ed. Smith, Engineers; and on the drawings of the Buddhist monument presented by Captain W. Murray, at the meeting of the 7th June. *Journal of the Asiatic Society of Bengal* 6: 451– 477.

—— 1837c. Interpretation of the most ancient of the inscriptions on the pillar called the lát of Feroz Sháh, near Delhi and of the Allahabad, Radhia and Mattiah pillar,or lát, inscriptions which agree therewith.*Journal of the Asiatic Society of Bengal* 6: 566–609.

—— 1837d. Facsimiles of ancient inscriptions. *Journal of the Asiatic Society of Bengal* 6: 663–682

—— 1837e. Further elucidation of the lát or Sílasthambha inscriptions from various sources. *Journal of the Asiatic Society of Bengal* 6: 790–794.

—— 1838. On the Edicts of Piyadasi, or Asoka, the Buddhist monarch of India, preserved on the Girnar rock in the Gujerat peninsula, and on the Dhauli rock in Cuttack; with the discovery of Ptolemy's name therein. *Journal of the Asiatic Society of Bengal* 7: 219–282.

Robinson, A. 2002. *Lost Languages: The Enigma of the World's Undeciphered Scripts*. New York City: McGraw-Hill.

Salomon, R. 1998. *Indian Epigraphy: A guide to the study of inscriptions in Sanskrit, Prakrit, and the other Indo-Aryan languages*. New York: Oxford University Press.

Scheffer, M. 2009 *Critical Transitions in Nature and Society*. Princeton: Princeton University Press.

Schwab, R. 1950. *La Renaissance Orientale*(trans. by G. Patterson Black and V. Reinking 1984. *The Oriental Renaissance: Europe's rediscovery of India and the East, 1680-1880*. New York: Columbia University Press). Paris: Editions Payot.

Shukla, H.L. 2004. *Thesaurus of Kâlidâsa* Vol. 2. Delhi: B.R. Publishing.

Stein, A. 1940. Notes on the life and labours of Captain Anthony Troyer. *Journal Royal Asiatic Society of Bengal. Letters.* 6: 45–59.

Stevenson, J. 1834. Restoration and Translation of some Inscriptions at the Caves of Carlí. *Journal of the Asiatic Society of Bengal* 3: 495–499.

Thom, R. 1975. *Structural Stability and Morphogenesis: An outline of a general theory of models* (trans. D. H. Fowler). Reading, Mass.: W. A. Benjamin.

Troyer, A. 1834. Remarks upon the second Inscription of the Allahabad Pillar. *Journal of the Asiatic Society of Bengal* 3: 118–123.

Wathen, W.H. 1835. Account of the Inscriptions upon Two Sets of Copper Plates, found in the Western Part of Gujerat. *Journal of the Asiatic Society of Bengal* 4: 477–484.

Wilkins, C. 1785. A letter from Charles Wilkins, Esq. to the Secretary. *Asiatick Researches* 1: 279–283.

Windisch, E. 1917. *Geschichte der Sanskrit-Philologie und indischen Altertumskunde*. Strassburg: Trübner.

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ARTICLE

Decipherment of Early Indian Inscriptions: The Pre-Prinsep Era

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Abstract

The important role of epigraphy in writing history, particularly in the case of early India, is well known. However, the process of understanding this importance was a lengthy one and had several phases. In the beginning, understanding the script and language of the inscriptions of different periods appeared as a challenge to scholars, and the decipherment of the Aśokan Brāhmī inscriptions by James Prinsep in 1837 has been regarded as a landmark in this process. However, it was in the late eighteenth century that the earliest decipherment of inscriptions was accomplished by another Indologist named Charles Wilkins. With his reading of a sixth century inscription written in what is now designated as Late Brāhmī characters, the keystone to the decipherment of scripts still earlier came to be possible. The present paper aims to discuss the achievements of Wilkins and his contemporary Indologists of the pre-Prinsep era of Indian epigraphic research.

Keywords: Epigraphy, Charles Wilkins, James Prinsep, Aśokan Brāhmī, Late Brāhmī, decipherment.

To cite this article
Pal, Sayantani 2024. Decipherment of Early Indian Inscriptions: The Pre-Prinsep Era. *Journal of the Asiatic Society* 66/2: 63–78.

ISSN:0368-3308

Early Indian inscriptions when first encountered appeared as enigmas to European eyes since the characters were completely unknown to the decipherment of the characters, understanding the language and finally utilising them for writing history was a prolonged and gradual process. In this process the much-celebrated achievement of the decipherment of Aśokan Brāhmī script by James Prinsep in 1837 was a landmark. Through this accomplishment the earliest written records of India in the Aśokan Brāhmī script of the third century BCE came to be decoded.

The foundation for this remarkable achievement, however, was laid long ago by another European scholar, Charles Wilkins (1749–1836), who also earned the title of a 'Sanskrit-Mad' scholar from H.T. Colebrooke who was in all praise for Wilkins' translation of the *Bhagavad Gita* (Salomon 1998: 200). It was the first direct English translation of a Sanskrit text and evidently had brought the text to the knowledge of the Western world. This achievement together with the discovery of the first Bengali type font for printing by Wilkins has practically overshadowed another significant achievement in the field of epigraphic studies in India. He was the earliest scholar to decipher Sanskrit inscriptions in the late eighteenth century, a period when those epigraphic records were unintelligible to others of his time. It may be pointed out that when Wilkins began his study, there was no idea of epigraphs as sources of history, since they were unknown and also unintelligible to the researchers. No one could read the script. The present paper aims to discuss the initial period of the study of Indian epigraphy preceding the achievement of Prinsep's decipherment of the Aśokan Brāhmī script in 1837 with a particular focus upon the reading of inscriptions in the late eighteenth century by Charles Wilkins.[1]

Since the study of inscriptions was almost absent from the traditional curriculum of Sanskrit learning, it has been aptly remarked that the field of Indian epigraphy was born only with the beginning

[1] This period of early readings of the inscriptions (1781–1834) has been regarded as Pioneering Era by Richard Salomon (Salomon 1998: 193–203).

of European Indology in the late eighteenth century (Salomon 1998: 199). The account of the transportation of Aśokan pillars from Topra and Meerut to Delhi by Firoz Shah Tughlaq in 1356 have been narrated by Shams-i-Sirāj 'Afif. He states that none of the Hindu Brahmins and devotees who were summoned to read the characters engraved upon them could succeed (Elliot and Dowson 1871: 352). It indicates that reading of these characters was not practiced by them and was not a part of the traditional curriculum of Sanskrit learning in the fourteenth century.

Thus, records engraved on stone and metal on portable items like copperplates, stone tablets, stūpa replicas or small images, and again inside caves in remote hilly or jungle areas or unnoticed structures like pillars, temples or architectural members remained unexplored and therefore unknown. They came to notice only after large scale survey throughout the country was undertaken by the British. Among the earliest discovery of inscriptions, mention may be made of the Munger copperplate of Devapāla which was found by Colonel Watson at the town of Munger in 1780. The Badal pillar inscription of Nārāyaṇapāla was again discovered by Charles Wilkins in November, 1780 in a jungle in the vicinity of the town of Badal in the old Dinajpur District (now in Bangladesh) of the Bengal Province. Inscriptions were also found inside the Nāgārjuni Hill cave near Gaya by J. H. Harington. As he reports, he visited the cave and with the help of his Munshee took a copy of the inscription (Harington 1788). But a *pundit* from Banaras failed to read it. Finally, with Wilkins' help it had been deciphered. Wilkins was able to read the sixth century script of the Nāgārjuni hill inscription after a great effort of four years (Wilkins 1799). Together with this he was also able to decipher some half of the characters of the Gupta/Late Brāhmī script.

Therefore, in such an era when Indian inscriptions were completely unknown things, Charles Wilkins' decipherment and publication of three inscriptions of different periods in 1788 was simply surprising. He deciphered the Munger copperplate of Devapāla, the Nāgārjuni hill cave inscription of Maukharī king Anantavarman (sixth century) and the Badal pillar inscription of Nārāyaṇapāla between 1781 and

1785 when he presented all three to the Society (Salomon 1998: 201/ fn.10).

Richard Salomon, one of the prominent authors of a textbook on early Indian epigraphy, has regarded Charles Wilkins as 'one of the greatest of pioneer Indologists' (Salomon 1998: 200). Wilkins' reading of the sixth century script of the Nāgārjuni hill cave discovered by J.H. Harrington was practically remarkable,[2] since it differed very much from the modern Indian scripts and even the Munger copperplate (the first half of the ninth century) and the Badal pillar inscription (the last quarter of the ninth to the mid tenth century), the other two inscriptions read by Wilkins himself.

The very first volume of the *Asiatic Researches* (hereinafter AR) which came out in 1788 contained altogether six publications of inscriptions from different places and among them four came from the pen of Wilkins. The other two inscriptions stated to have been explained by two Indian *pundits* were written in Nāgarī characters that resembled the modern Devnāgarī script of north India. One of them, a copperplate of Arikesara Devaraja dated 1078 CE found at Thane Fort was explained by Ramlochan Pandit and communicated by Carnac who informs that none of the Gujarat Brahmins could read the set of six copperplates (Carnac 1788). Finally, Ramlochan Pandit was able to explain them. It may be assumed that he read the script also. Another publication of inscriptions (Sarman 1788) was on the basis of the explanation by Radhakanta Sarman of three Sanskrit inscriptions of Viśāladeva of the Cāhamāna dynasty of the twelfth century (1163 CE). These inscriptions were engraved below an edict of Aśoka on the Delhi-Topra pillar. Thus apart from Wilkins the other two publications were on inscriptions written in comparatively later scripts of the eleventh-twelfth centuries and due to their resemblance with modern Devanāgarī script the task, though hard, was not impossible.

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[2] Near Gaya and thus it is repeatedly referred to as Gaya inscription or the script as 'Gaya alphabet' in the early publications on epigraphy in the late eighteenth and the early nineteenth century.

All these works had put the study of Indian epigraphy into motion. It opened the path through which fellow scholars, both European and Indian (whose names often remained unmentioned) like William Jones, H.T. Colebrooke, Radhakanta Sarman, Ramlochan Pandit (who worked with William Jones), H. H. Wilson, Christian Lassen and finally, James Prinsep and others treaded and succeeded in deciphering early Indian scripts of different regions and periods. It played a decisive role in uncovering India's ancient past, in building the chronological framework of early Indian history and its contact with the contemporary world.

In 1837, James Prinsep's much famed and glorious achievement of the decipherment of the Aśokan Brāhmī script opened up a closed door behind which the key to the beginning of the literate period of Indian history lay hidden. Only bits and pieces were found, analysed and interpreted by his predecessors in the field. However, the reading of the Aśokan Brāhmī script by Prinsep was not achieved all of a sudden and behind it lay efforts of several scholars, both Indian and European, who traced the early inscriptions, often visiting remote hilly or jungle areas, made drawings of structures, and also meticulous eye copies of inscriptions even without knowing the script and finally sent them for analysis to competent authorities. After its establishment in 1784, the Asiatic Society became the premier institution of such studies in India (Rocher and Rocher 2009). Prinsep's reading of Aśokan Brāhmī was also achieved under the aegis of this institution.

Wilkins' decipherment of the Gupta/Late Brāhmī script was particularly instrumental for gradually uncovering the mystery of the earliest script of India, namely the Aśokan/Early Brāhmī, since it is only after the decipherment of this sixth century script it was possible to work further back, basing upon it.

The Aśokan pillars at the Allahabad Fort (believed to have been originally located at Kauśāmbī) and at Delhi (removed from Topra by Sultan Firoz Shah Tughlaq) attracted the notice of the British on account of the writings engraved on different parts of the column in various characters. In 1834, T. S. Burt published a drawing and description of the column at Allahabad fort and eye copies of the

four inscriptions engraved on it (Burt 1834). Among them was the famous Allahabad *praśasti* of Samudragupta, referred to as inscription number 2 by Burt and the subsequent authors (while inscription no.1 was that of Aśoka himself). Burt then searched all 18 volumes of the *AR* and found that it resembled an inscription from Gaya published by Charles Wilkins in the very first volume. It was the Nāgārjuni hill inscription of Maukharī Anantavarman of the sixth century. Since it was an inscription written immediately after the Guptas, the characters had recognisable similarity and thus Burt expressly states that, 'This (Wilkins' reading) will evidently serve as a guide, by which nearly half of the letters can be made out' (Burt 1834: 111). The author was also confident that Wilkins who was then at home in UK or any other Sanskrit scholar in India would be able to read and translate it. Two more inscriptions, viz., the Badal pillar inscription and the Munger copperplate, the earliest Sanskrit inscriptions to be deciphered by Wilkins also served as key to understanding the characters and determining the period of the inscription. Since several lines of the inscription of Samudragupta end with the same letter, Burt postulated that it could have been written in verse. In case of the decipherment of the Nāgārjuni hill inscription Wilkins followed the method of identification of the Sanskrit metre and since each metre follows a specific and distinct format for the placement of the vowels and consonants one can guess the probable characters in each line of the verse. Wilkins' identification of the metre as *Śārdūlavikrīḍita* helped him in deciphering some vowels. Burt also understood that Wilkins' method of decipherment would be of great help (Burt 1834: 112).

Burt's essay was followed by Prinsep (Prinsep 1834) who states that he himself appointed Burt to copy the characters and draw the column and describe it. He supports Burts' speculation that the characters of the inscription of Samudragupta resemble the Gaya inscription (Nāgārjuni hill inscription of Anantavarman) published by Wilkins. However, there was confusion regarding its date. In the absence of other inscriptions and knowledge of their script which could offer a scope for comparison in order to postulate a precise date for the sixth century Nāgārjuni hill inscription, Wilkins thought

that its script could be as ancient as the Christian era. This led Prinsep to ponder whether Chandragupta of the Allahabad *praśasti* (written in similar characters as the Nagarjuni hill inscription) could be the same as the one mentioned by Arrian. However, since the name Samudragupta was not to be found in the 'Hindu catalogue' of the Maurya dynasty, Prinsep was doubtful whether the Nagarjuni Hill inscription could have been of such an early date. Wilkins' publication of two more inscriptions, namely, the Badal pillar and the Munger copperplate of two Pāla kings, also enabled Prinsep to find similarities between them and the inscription of Samudragupta on the Allahabad pillar.

Prinsep then tried to understand (Prinsep 1834) the very first inscription engraved on the topmost part of the pillar. It was the Allahabad Pillar Edict of Aśoka. Its language (Prākṛit) was then unknown. Still from both the appearance of the characters, their simplicity and limited number of radicals (Prinsep 1834: 116) and the position of the inscription on top of all other inscriptions, Prinsep correctly guessed that it bears the most ancient characters and also resembles the first inscription on the Delhi Topra pillar (called the Feroz' láṭh by the British). Further similarity was also found with an inscription on Khandgiri Rocks, the impression of which was provided by Mr. Stirling in 1825 (Stirling 1825: 314) and another inscription on Bhīmsen láṭh in Sarun. Thus, a categorization of characters of different ages was achieved by this method of comparison of different inscriptions (Prinsep 1834: 116). Again, in case of the Allahabad *praśasti*, both Burt and Prinsep noticed similarities with Tibetan characters and they thought that since these were also derived from 'Sanskrit', it became a hint to its later date, may be the seventh century. In this volume Prinsep published the transcript of the Allahabad pillar inscription of Samudragupta from the original by T. S. Burt (Prinsep 1834: pl. VI). That the language was likely to have been Sanskrit was also understood by Prinsep on the basis of the occurrence of five vowel marks (Prinsep 1834: 116).

Prinsep's article is followed by that of A. Troyer, the Secretary of Sanskrit College who gave his observations on the inscription of

Samudragupta (Troyer 1834). With the help of Madhava Rao Pandit, Troyer was able to decipher some parts of the Allahabad praśasti. Madhava Rao compiled a chart comparing the letters with Devnāgarī characters (Troyer 1834: Pl. VI). Troyer also agreed that it had much similarity with the Nāgārjuni Hill inscription (Gaya inscription) published by Wilkins (Troyer 1834: 119). Still, everyone was confused with the identity of Candragupta of the Allahabad *praśasti* and took him as Maurya Candragupta and this resulted in further confusion regarding the date of the inscription. In this article the eye copy of the Aśokan edict on the Allahabad pillar was published (Troyer 1834 : Pl. IV) and in it the classification of the characters was made, showing addition of vowel signs with different consonants. It was also noticed that the initial characters (*devānaṁpiya*) of both the Allahabad and Delhi-Topra pillars are similar. Discovery of inscriptions from Mahavalipuram also helped in further comparison of characters of different ages and Troyer noticed similarity with the characters of the inscriptions of Samudragupta in two cases (Babington 1830). Now, with the help of these inscriptions Madhava Rao was able to transcribe the remains of the inscription on the Allahabad pillar containing 30 lines. It was understood that the language is Sanskrit (Troyer 1834: 119). Some of the names in the genealogy portion were also read correctly (like Candragupta, Samudragupta etc.) while others were not (like Yagnakaca instead of Ghaṭotkaca). But the problem of identification of this Candragupta and confusion with Maurya Candragupta still persisted. A preliminary translation of the inscription was published (Troyer 1834: 120–121) but in many cases it was obviously not correct. Difficulty of reading the script was responsible for this. The lithograph reduced by Prinsep from the original received from T. S. Burt was published along with a comparison with modern Devnāgarī script (Troyer 1834 : Pl. VI). Thus, although not fully correct, still a preliminary reading and understanding the language of the Allahabad *praśasti* was achieved by 1834.

In the June issue of the *Journal of the Asiatic Society of Bengal*, 1834 W. H. Mill made further attempts to read the inscription of Samudragupta (Mill 1834 a). Mill identifies the language with Classical

Sanskrit and he once again draws comparisons with the Nāgārjuni hill inscription deciphered by Wilkins and composed in Classical Sanskrit metre *Śārdūlavikrīḍita*. This understanding of the language gave a hint to its period as later than the Epics (Mill 1834: 258). There was still difficulty in reading vowels like *i* (Mill reads *ravibhuvo* instead of *ivabhuvo* in line 30) and takes the king as 'Sun-born'. However, Mill was able to correct Troyer's reading in case of Ghaṭotkaca. On the whole Wilkins' method of reading inscriptions through the determination of the Sanskrit metre served as eye-opener as Mill states and repeatedly refers to the 'Gaya' inscription (Mill 1834: 260). Thus, Mill provides a summary and a translation of Samudragupta's *praśasti* (Mill 1834: 261–265).

In his supplement to the article Mill (Mill 1834 b) attempted a comparison of the names of the kings known from other sources like Colonel Tod's *Annals and Antiquities of Rajasthan*. He was trying to corelate the names of king Candragupta or Samudragupta known from various inscriptions or literary texts like the *Purāṇas* in order to identify them. He also tried to progress through the identification of contemporary kings like Dhanañjaya (line 20 of the text but mistaken as line 17 by Mill 1834: 344) from other sources known to him. All these attempts failed due to the misreading of the text. The correct and full decipherment of the Gupta script was still far away.

The hard task of reading the inscriptions of Aśoka was also pursued side by side. In the October issue of the *JASB,* 1834 B. H. Hodgeson (Hodgeson 1834) published further discussion on some inscriptions on the Allahabad pillar. Similarity of the Aśokan inscription on the Allahabad pillar with similar characters occurring on Aśokan pillars of Radhia (Lauriya Araraj) and Mathia (Laudiya Nandangarh) was traced. Prinsep was thrilled to find that the inscriptions of Bettiah, Delhi and Allahabad pillars were identical (Prinsep 1834a). The possession of copies of Aśokan inscriptions on pillars of different places enabled him to a comparison of the characters and he soon realised that *ya* is the commonest secondary consonant in case of several conjunct characters, like *tya*, *sya* and so on (Prinsep 1834: 485).

Again, he compared this letter with the corresponding letter *ya* in the 'Gya alphabet' (Nāgārjuni hill inscription). He prepared a plate (Prinsep 1834: Pl. VI) showing transcript of Allahabad *praśasti* of Samudragupta and comparison of its characters with Devanāgarī characters. Thus, he was able to identify *ya* in the Aśokan Brāhmī script. Now he looked forward to the proper understanding of the language which would be helpful in revealing the nature of these pillars and the inscriptions. The occurrence of conjuncts in the manner of Sanskrit led him to remark that the 'alphabet is a modification' of Devanāgarī and the language Sanskrit.

Prinsep again discussed the inscriptions of Bhilsa and Sanchi Stupas in the same volume (Prinsep 1834c), while J. Stevenson was able to translate some inscriptions from the Karla cave (Stevenson 1834). In this case the Allahabad *praśasti* of Samudragupta again proved to be of much help in identifying the characters.

Further discussion and comparison with inscriptions found at different places went on (Prinsep 1835a). Comparison of the Mandar Hill inscription with that of the Allahabad *praśasti* (Prinsep 1835b) made clear the differences between the scripts.

Encouraged by the success in reading scripts on the Allahabad pillar attempts were made to read scripts discovered in Western Gujarat on two sets of copperplates (Wathen 1835). The author expressly states that comparison with characters of the inscriptions from Karla, Kanheri, Ellora and Gaya (Nāgārjuni Hill) deciphered by Wilkins in the very first volume of the *AR* enabled him to the attempt to read the ancient characters (Wathen 1835: 478). These charters belonged to the Maitrakas of Valabhī (Bhamārka) of the fifth century.

Prinsep now began to publish facsimilies of inscriptions which by this time had piled up since from different parts of the country they continued to be sent to him for decipherment. That epigraphs could be a major source in uncovering the past of the country to be ruled by the British was understood. Thus started the publication of the series of facsimilies of ancient inscriptions by Prinsep who felt the necessity to preserve the copies of numerous inscriptions received by

him in the Asiatic Society in printed form for study by the learned and competent authorities (Prinsep 1836a,1836b, 1836c).

There was still confusion regarding the language and script of the inscriptions. While studying the Asirgadh seal inscription of the Maukharis (sixth century) Prinsep regarded the characters as the old form of Devanāgarī (Prinsep 1836b). It was transcribed and translated by W. H. Mill who was partially successful in reading the Allahabad *praśasti* of Samudragupta. However, earlier, the impression of this seal originally discovered by H.T. Colebrooke in 1805/6 was sent to Charles Wilkins when none of the Indian *pundits* could read the characters. Wilkins could decipher and translate it shortly before his death in 1836 and it was published by H.H. Wilson (Wilson 1836). Similarity with the praśasti of Samudragupta and the Gaya inscription was also noticed (Wilson 1836: 379). Wilson thus ends his article by saying, '[…] and one of the latest as well as of the earliest labours of Sir Charles Wilkins has thus contributed to supply an indispensable key to the historical information that may be locked up in an obsolete and, until lately, undeciphered alphabet.' (Wilson 1836: 380)

As Fleet observes that Mill's reading was erroneous, he more or less agreed with the reading of Wilkins and pointed out that the seal was perhaps not properly cleaned before taking the impression and since lithographs had been prepared from the impression (the original seal being lost) some of the *akṣaras* were not clear to Wilkins (Fleet 1960: 219–220).

As Prinsep remarks in the JASB, 1836 (Prinsep 1836: 483) that this inscription lay hitherto undeciphered it appears that he was unaware about Wilkins' reading of the same and perhaps Wilkins' reading and translation somehow lay unknown and came to the notice of H.H. Wilson later who published it in the same year (Wilson 1836).

Since the discovery of inscriptions inside the caves near Gaya in the late eighteenth century, more inscriptions have came to notice. Prinsep while discussing inscriptions from Bodhgaya points out the initial reading of inscriptions by Wilkins in and around this site (Prinsep 1836c). In the 1837 issue of the JASB, Prinsep published a lithograph from a new copy of the inscription of Anantavarman

received from Mr. Hathorn (Prinsep 1837: 671). He thus attempted a new reading. The name of the granted village could be read from this better impression. Since Wilkins could not publish the transcript of the inscription (obviously due to the want of Devanāgarī type fonts and also publication of texts in vernacular languages adding diacritics being unknown then) a comparison of his readings with that of Prinsep cannot be attempted. However, apart from reading the name of the village there do not appear to have been any other major revision upon Wilkins' reading. Prinsep acknowledged the contribution of Charles Wilkins in the following words, 'No.1 of the list (of all the inscriptions from the Gaya caves) is Wilkins' inscription (Nāgāarjuni hill inscription of Anantavarman), the same which instructed us in the reading of the secondary character of the Allahabad pillar, & c.' (Prinsep 1837b).

By 1836 Prinsep was successful in reading inscriptions on the copperplates of the Vākāṭakas written in box-headed Brāhmī characters (Prinsep 1836: 726–731). On the whole, by 1836 most of the inscriptions of the post-fifth century period could be read while majority of the Gupta/Late Brāhmī characters were deciphered and the only work left was the full decipherment of Aśokan/Early Brāhmī script.

Another major Gupta inscription found and deciphered was that of the *praśasti* of Skandagupta on the Bhitari pillar (Saidpur in U.P.). In January 1837 W.H. Mill published the transcript, translation and his observations on it. His reading, although not fully correct, was satisfactory and indicates the successful decipherment of Gupta/Late Brāhmī characters by this period. (Mill 1837). He noticed a similarity in names and genealogy with the inscription of Samudragupta. In the same volume G.T. Marshall published transcript and translation of the Bhuvaneswar *praśasti* of Bhaṭṭa Bhavadeva dated to the first half of the twelfth century (Marshall 1837).

By this time the collection of drawings and eye copies of sculptures, architecture, images and inscriptions forming a part of the collection of John Mackenzie was in the possession of the Asiatic Society of Bengal. Lithographs of two long inscriptions from Amaravati were sent by Alexander Cunningham. Thus, with the increase in the volume of the inscriptions comparison between the characters of scripts from

different parts of the country (like Amaravati, Mahavalipuram, Allahabad) was possible and Prinsep prepared such a chart (Prinsep 1837: Pl. XIII).

Finally came, in the June issue of 1837 of the JASB the formal announcement of the decipherment of Aśokan Brāhmī script by Prinsep (Prinsep 1837a). He deciphered the Sanchi inscription of Chandragupta II. Prinsep's identification of the word *dānam* which occurs at the end of each line of the donative inscriptions leading to the ultimate decipherment of Aśokan Brāhmī script is well known. Another significant understanding was the identification of the character of dental *sa*. His acquaintance with ancient inscriptions helped him in this endeavour and 'in the course of a few minutes I thus became possessed of the whole alphabet' as he states in p.461. He thus was able to decipher at once the Aśokan inscriptions from different pillars known to him so far. In the following issues of the journal, he thus published readings of Aśokan inscriptions on the Firoz Shah pillar, Allahabad pillar etc. (Prinsep 1837c : 566–609).

Prinsep has now revised his readings on the Allahabad *praśasti* in page (Prinsep 1837c: 963) on the basis of the copy supplied by Capt. Edward Smith. The Allahabad *praśasti* of Samudragupta continued to be studied with further improvements in reading and interpretation. A complete understanding of Gupta Brāhmī script could only be achieved after James Prinsep's decipherment of the Delhi, Kahaum, Sanchi, Amaravati and Sanchi inscriptions of the Gupta period.

The above discussion on the achievements towards the decipherment of early Indian scripts in the initial period amply brings out the fact that it was a gradual process and that Prinsep's decipherment of the Aśokan Brāhmī script was not a sudden event. It followed several steps of achievements by several scholars whose conjoined efforts ultimately made it successful and in this long journey the foundation stone was laid by Charles Wilkins whose brilliant achievement had set the motion of this journey of the decipherment of Indian inscriptions. Of course, to Wilkins, reading epigraphic texts was another way to learn the language Sanskrit and the role of the epigraphs as sources of history was something unknown and

uncomprehensible in the era in which he lived. It has been rightly pointed out that the observation of Mary Lloyd (Lloyd 1978: 21) that Wilkins was one of the first Europeans to realise the importance of ancient inscriptions as sources of historical study is not justified (Rocher and Rocher 2009: 168).

In the beginning of nineteenth century H.T. Colebrooke (1765–1837) introduced the practice of publishing the text of the inscriptions together with a facsimile reproduction and thus set the methodology of publication of inscriptions with introductory remarks to his publication of inscriptions (Colebrooke 1809: 398–444) situating its historical importance. Epigraphic researches saw many more advancements in the years to come. Situating Indian inscriptions as sources for historical study was a long process.

Decipherment and interpretation of Indian inscription being quite a problem in these initial years (Rocher and Rocher 2009), the Europeans sought the help of Indian *pundits* and quite often they did not mention their role. It has been pointed out that Wilkins never mentioned the assistance which he received from *pundit* Kasinatha Bhattacharya (Davies 2015).[3] Still, in view of the fact that whenever inscriptions of the pre-sixth century were found the Brahmins proficient in traditional Sanskrit learning could never read it. The main hindrance to this was that in pre-sixth century script the characters were much different from modern Indian scripts. By reading the sixth century script of the inscription of Anantavarman, Wilkins provided the basis for understanding the still earlier characters, the earliest of which was Aśokan Brāhmī. Thus, this feat is not to be overshadowed by the accomplishments of the immediate followers and the more imposing work of the decipherment of Aśokan Brāhmī script.

References

Babington, B.G. 1829. An Account of the Sculptures and Inscriptions at Mahamalaipur, Illustrated by Plates. *Transactions of the Royal Asiatic Society of Great Britain and Ireland* 2/1: 258–269, Pls. XIII & XIV.

[3] The name is found in a letter from William Jones to Charles Wilkins dated 1785 (Saturday, noon) although the handwriting is not very legible. It refers to Kasinatha as the pandit of Wilkins. This is also discussed by R.H. Davies.

Burt, T. S. 1834. A Description, with Drawings, of Ancient Stone Pillar at Allahabad called Bhim Sén's *Gadā* or Club, with accompanying Copies of four inscriptions engraven in different characters on its surface. *Journal of the Asiatic Society of Bengal* 3: 105–113.

Carnac, General. 1788. An Indian Grant of Land in Y.C. 1018. *Asiatic Researches or Transactions of the Society Instituted in Bengal* 1: 357–367.

Colebrooke, H.T. 1802. Translation of One of the Inscriptions on the Pillar at Dehlee, called the Lat of Feeroz Shah. *Asiatic Researches Comprising History and Antiquities, The Arts, Sciences and Literature of Asia* 7: 175–183.

—— 1809. On Ancient Monuments, *Containing*[*sic*] Sanskrit Inscriptions. *Asiatic Researches or Transactions of the Society Instituted in Bengal* 9*:* 398–444.

Davies, Richard H. Wilkins 2015. Kasinatha, Hastings, and the First English Bhagavad Gita. *International Journal of Hindu Studies* 19/1-2: 39-57

Elliot, H.M and Dowson, J. 1871. *The History of India as told by its Own Historians: The Muhammadan Period*, vol. III. London: Trubner & co. London.

Fleet, J.F. 1960 (Third Revised Edition). *Corpus Inscriptionum Indicarum* III, Inscriptions of the Early Gupta Kings and their Successors. Varanasi: Indological Book House.

Hall, F. and Jones, W. 1872–1880. Thirteen Inedited Letters from Sir William Jones to Mr. (Afterwards Sir) Charles Wilkins. *Journal of the American Oriental Society* 10: 110–117.

Harington, J. H. 1788. A Description of a Cave Near Gya. *Asiatic Researches or Transactions of the Society Instituted in Bengal* 1: 236–241.

Hodgeson, B.H. 1834. Notice of some Ancient Inscriptions in the Characters of the Allahabad Column. *Journal of the Asiatic Society of Bengal* 3: 481–482.

Lloyd, M. 1978. Sir Charles Wilkins, 1749-1836. *India Office Library and Records: Report for the Year 1978*, pp. 9–39. London: Foreign and Commonwealth Office.

Marshall, G.T. 1837. Translation of an Inscription on a stone in the Asiatic Society's Museum, marked no.2. *Journal of the Asiatic Society of Bengal* 6/1:88–97.

Mill, W.H. 1834a. Restoration of the Inscription, No. 2 on the Allahabad Column. *Journal of the Asiatic Society of Bengal* 3: 257–270.

—— 1834b. Supplement to the Historical Remarks on the Allahabad Inscription, No.2. *Journal of the Asiatic Society of Bengal* 3 : 339–344.

—— 1837. Restoration and Translation of the Inscription on the Bhitari Lat, with critical and historical remarks. *Journal of the Asiatic Society of Bengal* 6/1: 1–17.

Prinsep, J. 1834a. Note on Inscription No.1 of the Allahabad Column. *Journal of the Asiatic Society of Bengal* 3: 114–117.

—— 1834b. Note on the Mahiah Lāth Inscription. *Journal of the Asiatic Society of Bengal* 3: 483–487.

—— 1834c. Inscription on the Iron Pillar at Delhi. *Journal of the Asiatic Society of Bengal* 3:488–494.

—— 1835a. Further particulars on the sarun and Tirhut Lāths, and Account of two Buddha Inscriptions Found. *Journal of the Asiatic Society of Bengal* 4: 124–127.

—— 1835b. Note on an Inscription on the Mandara hill near Bhagelpur (forming a postscript to Article III of the present number. *Journal of the Asiatic Society of Bengal* 4: 166–167.

—— 1836a. Facsimiles of Various Ancient Inscriptions. *Journal of the Asiatic Society of Bengal* 5: 340–349.
—— 1836b. Facsimilies of Ancient Inscriptions, Lithographed by James Prinsep. *Journal of the Asiatic Society of Bengal* 5: 482–487.
—— 1836c. Facsimilies of Ancient Inscriptions, Lithographed by James Prinsep; Inscriptions from Buddha-Gaya. *Journal of the Asiatic Society of Bengal* 5: 657–660.
—— 1837a.Note on the Facsimilies of Inscriptions from Sanchi near Bhilsa, taken for the Society by Captain. Ed. Smith, Engineers; and on the drawings of the Buddhist monument presented by Capt. W. Murray, at the meeting of 7th June. *Journal of the Asiatic Society of Bengal* 6/1: 451–463.
—— 1837b. Facsimiles of Ancient Inscriptions, Lithographed by James Prinsep, Gaya Cave Inscriptions. *Journal of the Asiatic Society of Bengal* 6/2: 671–680.
—— 1837c. Note on the Facsimilies of Various Inscriptions on the Ancient Column at Allahabad. *Journal of the Asiatic Society of Bengal* 6/2: 963–979.
Rocher, L. and Rocher, R. 2009. Indian Epigraphy and the Asiatic Society: The First Fifty Years. *Bulletin of the Asia Institute, New Series* 23: 159–170.
Salomon, R. 1998. *Indian Epigraphy, A Guide to the Study of Inscriptions in Sanskrit, Prakrit, and the other Indo-Aryan languages*. New York: Oxford University Press.
—— 1788. Inscriptions on the Staff of Firuz Shah Translated from the Sanscrit. *Asiatic Researches or Transactions of the Society Instituted in Bengal* I: 379–382.
Stevenson, J. 1834. Restoration and Translation of some Inscriptions at the Caves of Carlī. *Journal of the Asiatic Society of Bengal* 3: 495–498.
Stirling, A. 1825. An Account, Geographical, Statistical and Historical of Orissa Proper, or Cuttack. *Asiatic Researches or Transactions of the Society Instituted in Bengal* 15: 163–338.
Troyer, A. 1834. Remarks upon the second Inscription of the Allahabad Pillar. *Journal of the Asiatic Society of Bengal* 3: 118–123.
Wathen, W.H. 1835. Account of the Inscriptions upon two sets of Copper Plates, found in Western part of Gujeārat. *Journal of the Asiatic Society of Bengal* 4: 477–486.
Wilkins, C. 1799. Two Inscriptions from the Vindhya Mountains, translated from the Sanscrit by Charles Wilkins, Esq. *Asiatic Researches or Transactions of the Society Instituted in Bengal* 2: 167–170.
Wilson. H.H. 1836. Translation of an Inscription on an Ancient Hindu Seal by the late Sir Charles Wilkins LL.D & c.; with Observations by Professor Wilson. *Journal of the Royal Asiatic Society of Great Britain and Ireland* 3: 377–380.

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ARTICLE

On the Brink of the Third Century of Indic Epigraphic Publication

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Abstract

Scholarly editions of inscribed texts have changed greatly since James Prinsep's days, and we stand at the threshold of another major qualitative change. An epigraphic edition is expected to convey both the inscription as received, and the editor's interpretation of it. Technological advances have greatly facilitated the production, dissemination and accessibility of editions. However, in order to exploit the potential of the massive material now available, publications must be accompanied by computer-readable annotation (metadata) in a standardised framework. Within the actual editions of texts, the established system of annotation consisting of symbols and footnotes must likewise be replaced by computer-based descriptive markup. Such markup is concerned with the conceptual classification of parts of the text rather than with how they should appear on the page or screen. Separating the particulars of presentation from this conceptual classification permits flexible manipulation, searching and visualisation for the editions of the future.

Keywords: digital humanities, digital epigraphy, Sanskrit epigraphy, text editing, copperplate inscriptions.

To cite this article
Balogh, Dániel 2024. On the Brink of the Third Century of Indic Epigraphic Publication. *Journal of the Asiatic Society* 66/2: 79–108.

ISSN:0368-3308

When James Prinsep was my age… he had been dead for ten years. Quite incidentally to his initial aspirations as an architect, his training in chemistry and his day job as an assayer at the mint, he had designed bridges, drained swamps, reconstructed buildings, founded and edited the Journal of the Asiatic Society of Bengal, and contributed vitally to the decipherment of Aśokan Brāhmī (e.g. Kejariwal 1988: 162–164). Yet the purpose of this essay is not to dwell on his achievements, but to offer a glimpse of how epigraphic methodology has progressed since his day. I shall take as an example the inscription published by Prinsep (1836a: 726-731) under the name *Seoní grant*. When D. M. McLeod, the assistant of the Commissioner of the 'Nerbudda' territories, sent an eye copy of this grant to Prinsep, he recognised its script as akin to that of a copperplate set from Chattisgarh, which had already been deciphered with the aid of a Jain scholar named Śrī Varma Sūri and published in *Asiatic Researches* (Jenkins and Wilson 1825).[1]

Prinsep sent a copy of the alphabet of this latter inscription to McLeod, who aspired to decipher the plates himself, but eventually relinquished that ambition and instead dispatched an eye copy of the entire grant to the Asiatic Society. Thereupon, Prinsep determined (1836a: 727), that in spite of the script's superficial similarity to the Chattisgarh plates (written, as we now know, around the turn of the seventh century), the glyphs of McLeod's plates were essentially more akin to those of the second inscription on the Allahabad (now Prayagraj) pillar,[2] engraved in or very shortly after the time of Samudragupta (which we can now allocate to the second half of the fourth century CE). He correctly deciphered the name of the plates' issuer as Rudrasena, along with those of several of his predecessors, and that of his dynasty. This is how the appellation Vākāṭaka first surfaced in modernity. It baffled Prinsep, who assumed that these

[1] Now known as the Rājim plates of Tīvaradeva, Year 7: Fleet (1888: 291-299, No. 81). DHARMA digital edition by Natasja Bosma: https://dharmalekha.info/texts/INSDaksinaKosala00026.

[2] The Allahabad inscription of Samudragupta: Fleet (1888: 1–17, No. 1). Siddham digital edition by Dániel Balogh: https://siddham.network/inscription/in00001.

princes 'were of inferior grade' (Prinsep 1836a: 727), even though he gave due importance to the plates' claim of a matrimonial alliance with the Gupta dynasty, the notion of whose existence (as distinct from the Maurya dynasty) was just then beginning to take shape in Prinsep's circles (Prinsep 1836b: ix–x).

This first humble report of the Vākāṭaka dynasty's legacy on the Journal's pages includes McLeod's drawing of the first page along with Prinsep's interpretive copy of the rest of the plates (part of which is shown here in Figure 1). This is accompanied by a full transliteration of the text into modern Devanāgarī (illustrated in Figure 2) and an English translation. Due to the (at the time) unfamiliar nature of the original script, the transliteration contains a fair number of mistakes, especially in the more obscure passages where a general knowledge of the Sanskrit language was insufficient for educated guesses.[3]

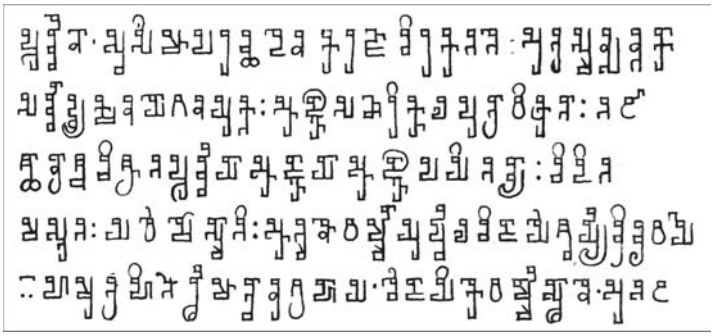


Figure 1. Eye copy published by Prinsep (1836a, Pl. 33)

पूर्व्वेण स्वसीमापरिच्छदेन करजाविरकतटे अत्रास्मत्सामन्तकाः
सर्व्वाध्यक्षानियोगनियुक्ताः आज्ञासत्कारिकुलपुत्राधिकृताः भटा
श्छन्नाश्च विश्रुतपूर्ब्बया आज्ञया आज्ञापयितव्याः विदित
मस्तु वः यथैषोस्माभिः आत्मनोधर्म्मायुर्ब्बलविजयैश्वर्य्यव्रिवृद्धये
इहामुत्र हितार्थमात्मानुग्रहाय वैजयिके धर्म्मस्थाने अभट

Figure 2. The text as transliterated by Prinsep (1836a, 729; shown as a re-creation, not a facsimile)

[3] It may be noted here that Prinsep's own Sanskrit was quite rudimentary, so while he is probably to be credited with a first transcription of the original text to Devanāgarī, it must have been his pandit Kamalakānt who then improved on that transcription on the basis of language expertise.

Subsequently, the plates were re-examined in John Faithfull Fleet's monumental *Inscriptions of the early Gupta kings and their successors* (Fleet 1888: 243–249, No. 56) and assigned the name by which we know them today: the Siwani plates of Pravarasena II. Fleet obtained the original and produced inked estampages from it (illustrated in Figure 6 below), published together with his edition of the text in Romanised transliteration (Figure 3), a commentary and an English translation.

Third Plate; Second Side

23 purvvêṇa | sva-simâ-par[i*]chchh[ê*]dêna **Karañjavi(?chi)raka**-taṭê |(‖) Atr=âsmat-santakâḥ

24 sarvvâdhyaksha-n[i*]yôga-n[i*]yuktâḥ âjñâsañchâri-kulaputr-âdhi-kṛitâḥ bhaṭâḥ-

25 ś[2]=chhâtrâś=cha viśruta-pūrvvayâ âjñayâ âjñâpayitavyâḥ [|*] Vidita-

26 m=astu ta(va)ḥ yath=aishô=smâbhiḥ âtmanô dharmm-âyur-bbala-vijay-aiśvaryya-vi[3]vṛi[d*]dhayê

27 ih-[â*]mutra-hit-ârttham=âtv(tm)-ânugrahâya |[4] vaijayikê dharmma-sthânê[5] | a-bhaṭa-

2 Read *bhaṭâś*.

3 First *vṛi* was engraved here, and then, it was corrected into *vi*, by adding the *i* and partially erasing the *ṛi*.

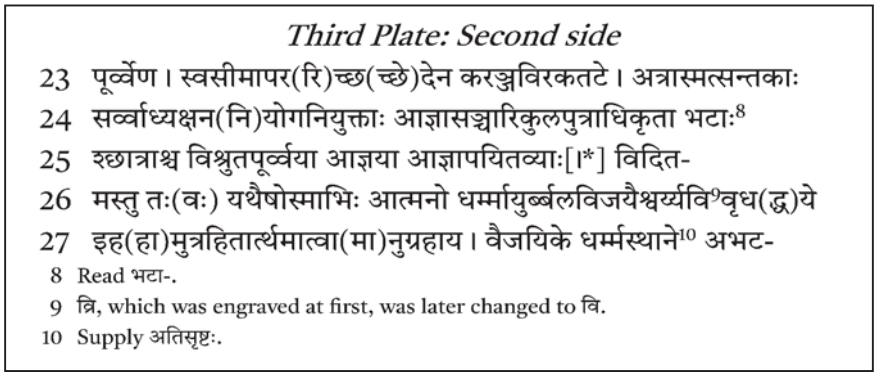
4 This mark of punctuation is unnecessary.

5 After this word, we require *atisṛishṭaḥ*, or some similar word […]

Figure 3. The text as edited by Fleet (1888, 246; shown as a re-creation, not a facsimile)

Vasudev Vishnu Mirashi's opus *Inscriptions of the Vākāṭakas* (in the same *Corpus Inscriptionum Indicarum* series as Fleet's above-mentioned work) also includes a re-edition of this inscription (Mirashi 1963: 28-32, No. 7). Mirashi rechecked the text against Fleet's inked estampages, and rendered it in modern Devanāgarī (Figure 4), accompanied by a new translation and commentary.

As a further incarnation of the scholarly publication of the same text, I introduce a twenty-first century digital edition. This was first created for the project Asia Beyond Boundaries (2014–2020), funded



Third Plate: Second side

23 पूर्व्वेण । स्वसीमापर(रि)च्छ(च्छे)देन करञ्जविरकतटे । अत्रास्मत्सन्तकाः
24 सर्व्वाध्यक्षन(नि)योगनियुक्ताः आज्ञासञ्चारिकुलपुत्राधिकृता भटाः[8]
25 श्छात्राश्च विश्रुतपूर्व्वया आज्ञया आज्ञापयितव्याः[।*] विदित-
26 मस्तु तः(वः) यथैषोस्माभिः आत्मनो धर्म्मायुर्ब्बलविजयैश्वर्य्यवि[9]वृध(द्ध)ये
27 इह(हा)मुत्रहितार्त्थमात्वा(मा)नुग्रहाय । वैजयिके धर्म्मस्थाने[10] अभट-

8 Read भटा-.
9 त्रि, which was engraved at first, was later changed to वि.
10 Supply अतिसृष्टः.

Figure 4. The text as edited by Mirashi (1963, 30; shown as a re-creation, not a facsimile)

by the European Research Council (ERC)[4] and focussing on the Gupta and early post-Gupta period. The epigraphic sources relevant to the project were encoded to become part of a database of inscriptions called Siddham. At present, project DHARMA (2019-2026), likewise funded by the ERC,[5] continues to expand the digital archive of South and Southeast Asian epigraphic texts. Inscriptions newly encoded for DHARMA employ a slightly different standard, but the Siwani plates are one of the few Siddham editions that have already been revised to the DHARMA conventions.[6]

At first sight, this digital edition, illustrated in Figure 5, differs from those of Fleet and Mirashi only in superficial details. To be sure, the text has been read with full accuracy by the great epigraphists of the 19th and 20th centuries. The edition is complemented by a translation and, apparently as its sole novel feature, an apparatus criticus documenting the readings offered by previous editors. In order to illuminate what makes it essentially new and different from earlier editions, I now wish to examine how some aspects of the ideal of 'a scholarly edition of a premodern inscription written in an Indic

[4] Grant agreement no. 609823.
[5] Grant agreement no. 809994. See Griffiths (2023) about DHARMA and predecessor projects.
[6] Siddham digital edition by Dániel Balogh: https://siddham.network/inscription/in00163. DHARMA digital edition by Dániel Balogh: https://dharmalekha.info/texts/INSSiddham00163.

⟨Page 3v⟩
⟨23⟩ pūrvveṇa| sva-sīmā-par¿a? ⟨i⟩cch¿a? ⟨e⟩dena _ karañjaviraka-taṭe| Atrāsmat-santakā(ḥ)
⟨24⟩ sarvvāddhyakṣa-n¿a? ⟨i⟩yoga-n¿a? ⟨i⟩yuktāḥ Ājñā-sañcāri-kulaputrādhikṛtāḥ bhaṭāḥ
⟨25⟩ {ś}chāttrāś ca viśru◯ta-pūrvvayā _ Ājñayā _ Ājñāpayitavyāḥ⟨.⟩ vidita-
⟨26⟩ m astu ¿t? ⟨v⟩aḥ yathaiṣo ⟨'⟩smābhiḥ Ātmano dharmmāyur-bbala-vijayaiśvaryya-v⟦r⟧ivṛ⟨d⟩dhaye
⟨27⟩ Ih¿a? ⟨ā⟩mutra-hitārttham āt¿v? ⟨m⟩ānugrahāya| vaijayike dharmma-sthāne| A-bhaṭa

(23) **pūrvveṇa** M ◇ *purvveṇa* F • Fleet does not emend, so this is probably a typo in his edition. — **-sīmā-** M ◇ *-simā-* F • Fleet does not emend, so this is probably a typo in his edition. — **karañjaviraka-** • Fleet tentatively offers the alternative reading *karañjaciraka-*. This cannot be excluded altogether, but does not seem likely. — **-santakā(ḥ)** • The *visarga* is not visible in the estampage, but both previous editors show it.
(24) **sarvvāddhyakṣa** F ◇ *sarvvādhyakṣa* M. — **-n¿a?⟨i⟩yuktāḥ** F ◇ *-niyuktāḥ* M. — **-kulaputrādhikṛtāḥ** F ◇ *-kulaputrādhikṛtā* M.
(26) **-v⟦r⟧ivṛ⟨d⟩dhaye** M ◇ *-v⟦r⟧⟨⟨ri⟩⟩vṛ⟨d⟩dhaye* F.
(27) **-sthāne|** F ◇ *-sthāne* M • As both F and M note, *atisṛṣṭaḥ* or an equivalent is missing after this word. In fact, related grants typically have *apūrvva-datyā udaka-pūrvvam atisṛṣṭaḥ*. This might be a case of eyeskip omission where instead of continuing with *apūrvva*, the scribe jumped to *abhaṭa-*. Compare the omission in line 37.

Figure 5. The text as presented in a digital edition

language' have changed over time as a result of the co-evolution of the discipline's paradigm and the technology that supports it.

When copperplate inscriptions came to notice in the days of Company and Crown Raj, at least some of them were expected to have direct relevance to legal and administrative matters. McLeod learned of the Siwani charter because it was 'supposed to be a *jatas* or *sanad* confirming lands granted by former *Goand* chiefs, but wholly illegible to the pandits' (Prinsep 1836a: 726), and similar circumstances accompanied the emergence of other copperplate sets, such as the early Rāṣṭrakūṭa charter now known as the Sangalooda grant of Nannarāja (Venkataramayya 1951). Manaton Ommaney, Esquire of the Civil Service, who sent this inscription to Prinsep, reports that a Goswami of Multai (MP) had brought the plates to him 'as his *sanad* and begged me to use my influence in procuring the restoration of

his rent-free village […] The plates he said were proof of right; for no one could read them, they were so old and authentic' (Prinsep 1837a: 869). As for Prinsep himself, he seems rather indifferent to such a mundane purpose, and explains his motives as follows (Prinsep 1836a: 340):

> Fearing that many of the inscriptions with copies of which I have been favored […] may be mislaid or lost sight of unless committed to print, I am led to anticipate the full explanation which many of them doubtless might receive from those who have learning, industry, and will, to decypher them, but want the necessary leisure at present to undertake the task,—by transferring them to the stone at once, and recording them in the Journal along with the notes that accompanied them, where they may be at all times available when accidental discovery may open a clue to their interpretation.

While couched as an apology for publishing lithographs of inscriptions in advance of in-depth study, the above rationale clearly expresses a generic drive to accumulate and disseminate knowledge for the sake of knowledge or, as Prinsep put it elsewhere, 'We build not fanciful theories, but rather collect good stones for others to fashion […] to the benefit and pleasure of mankind' (Prinsep 1837c: ix). It is not for me to explore if—and how deeply—such laudable concerns were enmeshed with the machinery and discourse of colonial governance. Prinsep's professed disinterested eagerness to enable continuing discovery certainly did not lack a sprinkling of competitiveness and national pride. In connection to the Aśokan inscription on the Allahabad pillar, he observes that 'it seems almost a stigma on the learned of our own country that this should have remained so long an enigma to scholars; and the object of the present notice is to invite fresh attention to the subject, lest the indefatigable students of Bonn or Berlin should run away with the honor of first making it known to the learned world' (Prinsep 1834: 118). This did not, however, prevent him and his contemporaries from sharing knowledge with the general public and actively helping any member of the small community of specialists. As he says elsewhere, 'at this

moment a French gentleman of fortune well grounded in Sanskrit and other oriental studies at Paris, is come to Calcutta […] We wish [him] every success, we proffer him every aid; yet we do so not without a blush that any thing should be left for a foreigner to explore!' (Prinsep 1837c: vi–vii).

The ground motive to preserve and share knowledge has evidently persisted to this day, and has perhaps also shed some of its entanglement with less lofty goals. What has, however, changed greatly over time, is the underlying paradigm that determines what is endorsed as constituting knowledge. The general, and grossly oversimplified, trend was for scholars of earlier times to conceive of history as an objectively existing mesh of facts—such as names, places and dates—which are obscured but potentially discoverable, and of inscriptional and other sources as imperfectly transmitted clues to these facts (cf. Salomon 1998: 228–231). We have all seen remarks to the effect that an inscription 'contains nothing else of historical interest' in the pages of *Epigraphia Indica* or, indeed, of the *Journal of the Asiatic Society of Bengal*.[7] This notion of history is well served by the perception of an inscription as a message whose information content must be extracted through eliminating the noise in the transmission channel. The early scholars were concerned foremost with the linguistic content of primary texts, abstracted from their tangible manifestations as inscriptions or manuscripts. Accordingly, Prinsep ignores many punctuation marks present in the Siwani plates;[8] where he perceives a scribal error, he changes the text to what he (or his pandit) deems to be correct Sanskrit and/or the intended message of the composer,

[7] Compare Prinsep's (1836a: 728) remark on the inscriptionshowcased here:'What would have added still more to the value of the [Siwani charter], is the exact date it cites, were it not unfortunately in an unknown era.'

[8] Where the original has a double *daṇḍa* (not occurring in the excerpt), it is replicated in Prinsep's edition, while where it has a dot or a dash (represented by dots in the eye copy), these are ignored in the transliteration.

[9] Thus, in the first line of his text, he prints *paricchadena* for the original *paracchadena*; *sāmantakāḥ* for *santakāḥ*; in the second line, *niyoganiyuktāḥ* for *nayoganayuktāḥ*, etc.

doing so without any indication that he has intervened;[9] and he likewise does not indicate where his reading is tentative, even though some of his readings appear to be educated guesses for the value of an unfamiliar character.[10]

Palaeographic study was foremost a prop to decipherment in Prinsep's days, and a means of relative dating and geographic localisation in subsequent times. The physical characteristics of the inscription as an actual object were all but ignored by Prinsep, but were duly recognised as subjects of scholarly interest shortly afterward. The introduction to Fleet's edition of the Siwani plates provided a detailed description of the plates' appearance and dimensions, followed by a palaeographic analysis and observations on orthography (which are repeated verbatim in Mirashi's edition). Fleet also made an effort to document the context, disclosing the name and accurate location of the village of the plates' owner. In part because most early epigraphists were philologists working in an office with no access to the originals, the eventual analysis of features extraneous to the text was—and is—often left to archaeologists and art historians. This sundering of disciplines is to some extent inevitable and may be perceived as the price of increasing specialisation, negotiable only through interdisciplinary approaches and teamwork (cf. Matsumoto 2022: 288–289). Nonetheless, the material aspect of inscriptions is now a fruitful area of study not only on its own, but especially in combination with their textual aspect (e.g. Hawkes and Abbas 2016). Fleet, moreover, attempts to identify one of the geographical names in the text, and Mirashi continues in this vein, suggesting further identifications for some toponyms. His greatest improvement vis-à-vis Fleet is a far better understanding of the technical terms describing the rights and privileges associated with the donation than was possible in the nineteenth century.

Communication models have evolved to recognise the role of the receiver as an active constructor of meaning, and historiography

[10] Thus, in the first line, *karajāviraka* for *karañjaviraka*, and in the second line, *ājñāsatkāri* for *ājñāsañcāri* are probably misreadings rather than silent emendations.

encompasses an ever-broadening range of potential subjects of study, frequently far less concrete than those foregrounded in previous centuries (e.g. Ali 2000: 165–170). The corollary of this is that insights gained from acknowledging the involvement of social and cognitive factors ought to qualify and nuance our approach to historical facts, without disqualifying the empirical stance (cf. Salomon 1998: chapter 7, esp. pp. 231–232). The airy edifices of modern historical study could not have been erected had Prinsep and his colleagues not begun collecting 'good stones for others to fashion,' and cannot continue to be built unless this groundwork is carried on with unrelenting detail and rigour. With respect to the edition of inscriptions, 'detail' encompasses not only the meaning of the intangible text, but also the features of the tangible original, including its physical characteristics, its built and natural settings, and its history; while 'rigour,' in addition to diligence and accuracy in collecting and reporting such information, involves transparency and intellectual honesty in the separation of data as received from information as interpreted (or constructed) by the editor.

Hand in hand with the evolution of the scholarly paradigm, technological advance has had profound effects on epigraphic studies, directly—as on the means of preparing visual documentation—and indirectly, by way of the infrastructure grown up around us, which makes it vastly easier, faster, and cheaper in terms of matīriel and effort, to carry on research both in the field and at the desk. Already in the nineteenth century, documenting the physical appearance of inscribed objects was—as evidenced by Prinsep's inclusion of eye copies of the Siwani plates—recognised as a crucial element of the desirable detail. It provides a surrogate in case the original is damaged or lost sight of, and facilitates access, since it is normally much more costly and onerous to retrieve the one and only original for study than to pick up one of many specimens on paper. But to print such an illustration, artistic skill was required both for the initial creation of a drawing and for its reproduction on a lithographic plate. The great technical innovation of the day was that one could draw on transfer paper out in the field, and the result, 'packed in a tin roll,

may be subjected to a journey of 1000 miles, either in the hottest or the dampest period of the year with impunity' (Prinsep 1836b: ix), thereby eliminating the need to recreate a drawing for the lithographic process. Mechanical reproductions, such as inked estampages (a technique already well established in Mediterranean epigraphy and Egyptology), were of course also made when feasible (e.g. Burnell 1870), but for printing, they had to be hand-traced on paper.[11] By the time of Fleet and the *Corpus Inscriptionum*, photolithography (and later, offset printing) had become available, greatly increasing the accuracy and reducing the expense of printing facsimiles, such as the one in Figure 6.

Figure 6. Fleet's estampage (1888, Pl. 35)

[11] The estampages of the Allahabad pillar's inscriptions, comprising 24 sheets with a total area of almost 15 square metres, were prepared in triplicate. One on paper and one on cloth were dispatched to Calcutta, while another paper specimen was retained on site in case the first two did not survive the 800-kilometre journey (Prinsep 1837b: 964). That the risk of such losses was real is driven home by the fate of the 'very large and valuable collection of sculptures, coins, and other objects of antiquarian interest […] together with books, papers, note-books, photographic negatives, etc.' amassed by Prinsep's protīgī and successor Alexander Cunningham, which were lost in a shipwreck near Sri Lanka in 1885, on the way from India to England (Anonymous 1894: 175). Intriguingly, the remains of the SS Indus, which carried Cunningham's collection, have probably been found (Muthucumarana 2019: 1667–1672). Continuing maritime excavations of the wreck may in fact bring back to light some of the treasures that have resisted seawater exposure.

Today, many compact cameras and even some mobile phones can snap print-quality images at no cost other than the initial investment. These pictures can be displayed forthwith on a screen, conveyed almost instantaneously over a global wireless network, reproduced flawlessly any number of times and practically for free, edited swiftly, cheaply and without detriment to the original, and printed on physical media at reasonable prices. As most epigraphists know from experience, photos—no matter how excellent they may be—are not ideal for the reading of inscriptions, since they are a two-dimensional rendering of one view of a three-dimensional original, so the details they capture vary depending on the lighting at the moment the picture was taken. Recent advances in optical technology and computer vision have brought us techniques such as photogrammetry and reflectance transformation imaging (e.g. Matsumoto 2022: 291–292, Seales and Chapman 2023: 131–136). Generating a three-dimensional model based on a set of photos taken from varying angles, or from the same viewpoint with varying lighting, these methods require more resources, effort and expertise than clicking a few pictures, but offer extraordinary visualisation of three-dimensional objects with simulated lighting and surface properties. This burgeoning of imaging technology continues with no end in sight. Indeed, it is a tad frustrating to anticipate that the best visual documentation recorded with state-of-the-art equipment may be found as inadequate tomorrow as we find Prinsep's eye copy today. Still, multiply redundant photography can go some way toward compensating for the shortcomings of any individual image.

The same trend applies to scholarly publications. To specialise in the antiquity of South Asia no longer requires a most extraordinary combination of talent, dedication, privilege and circumstance. Generating new scholarly output still (or increasingly) necessitates specialised training and continues to be labour-intensive, but the accumulated mass of previous scholarship can now be stored, reproduced and disseminated with a far smaller investment of resources. Prinsep's readiness to proffer every aid to colleagues of

any nationality has bloomed into initiatives for open access, opening up unprecedented opportunities for the now much broader international community of researchers to collaborate and in general to build upon each other's work.

The resulting deluge of material—both raw data such as images, and processed information such as scholarly articles—has fundamentally transformed the practice of armchair research. With lightning-fast searching of digitally stored data, productivity has increased greatly, but selective retrieval has become one of the most pressing problems. A nineteenth-century practitioner in our field could reasonably be expected to be familiar with the profiles of all journals relevant to his work and the research topics of all his peers, and to be able to locate almost everything worth knowing about a topic (or all existing visual documentation of an object) after a quick look through some catalogues, indices and tables of contents, if not from personal memory. Doing so has become all but inconceivable: to be efficient, searching must take place on the digital plane. Even with the explosive advance of artificial intelligence in our days, it is uncertain when, if ever, a computer will be able to analyse massive amounts of unclassified images or diverse publications written for human readers. For the time being at least, such material—in the interpretation of which the human scholar deploys a vast store of contextual knowledge—must be 'pre-digested' in order for the computer to be able to deal with it.

One straightforward step in this direction is to associate metadata with the material. Metadata or 'data about data' can take diverse forms and be employed for a variety of purposes (e.g. Gilliland 2008, Riley 2017), but all share the common purpose of recording and systematising additional information about an item of data. On the one hand, computer files of various kinds generally carry administrative metadata with basic information about the file itself: when it was created, when it has been modified, what kind of data it contains, etc. Image recording equipment such as a digital camera adds further technical metadata such as camera model, image resolution, exposure, light sensitivity, focal length, GPS coordinates, etc., while word processing files can include descriptive metadata

such as the name of the author, the title, or keywords. More germanely to the present topic, the term 'metadata' as generally applied in a cultural heritage context also includes data which are 'meta' to an object or a primary source text, but are themselves subjects of scholarly study in the more comprehensive paradigm of antiquarian scholarship. An epigraphic text's metadata may thus include items like the language, topic, protagonists, or sectarian affiliation of the text, and an inscribed object's metadata may record a wealth of information such as object classification, material, creation technique, dimensions, findspot, archaeological context, current location, and so forth. While most technical metadata can be (and often are) generated automatically by the hardware and software employed for creating digital data, descriptive metadata must as a rule be created by a human being exercising judgement based on expertise.

Metadata of all sorts are an infinitely versatile and expandable equivalent to catalogue cards, which may be used to look up entities (photos, scholarly articles, epigraphic texts, inscribed objects, etc.) on the basis of selected criteria. Thanks to computer processing, the metadata of a vast number of entities can be checked in next to no time, provided that two essential conditions are met. Even if profuse metadata accurately recorded by an expert are available for a data corpus, in order to be useful, those metadata must on the one hand conform to a structured and coherent ontological model, and on the other hand follow a standard classification. With the extensiveness of text and artefact metadata desirable in epigraphic research, this is no small task (e.g. Mannocci, Casarosa, Manghi, and Zoppi 2014), and has not yet been fully achieved for Indic epigraphy. The introductions to Fleet and Mirashi's editions provide copious detailabout the text and the inscribed artefact. This is grist for the mill of other scholars but, even though it comprises metadata in the second sense, it cannot be parsed by a computer confidently enough to afford search or analysis in a corpus of such editions. One essential feature of a digital

[12] The DHARMA edition of the Siwani plates is no fitted out with descriptive metadata as yet, and although many other digital editions of the DHARMA project are, a web-based user interface that will allow the reader to take full advantage of those metadata is yet to materialise. Metadata are available in the Siddham edition.

edition is thus the embedding of metadata in a standardised structure, pertaining both to the technical details of the edition and to the documentation of the text and the physical object, and linked to other digital entities such as visual representations.[12]

Turning back to the texts themselves, I shall now explore how technology can promote detail and rigour in editing. Like any scholarly article and indeed like any document, an epigraphic edition can of course be converted to bits of information interpretable by specialised software, which allows a reader to interact with the data by rendering them visually on a screen or, as the case may be, a paper printout. If we had a large corpus of such digitised data, say, one obtained by running optical character recognition on scans of Fleet's and Mirashi's volumes of the *Corpus Inscriptionum* and the texts published by Prinsep, querying it for information would still be difficult. First of all, the same word is often represented by three different strings of characters in these three subsets of our corpus. Editors must transliterate the text of inscriptions into a form that can be read by an audience wider than the handful of people able todecipher the original writing. A prerequisite to transliteration is a writing system whose symbols can be mapped one on one to the characters of the inscriptions. Modern Devanāgarī (as in Prinsep's and Mirashi's text) is a convenient pre-existing example of such a system. As long as Sanskrit inscriptions are concerned, Devanāgarī transliteration and Romanisation are about equally viable, with different advantages and disadvantages. The characters of most Brāhmī-derived scripts have straightforward correspondence to Devanāgarī, so a reader already familiar with that script—anyone raised in the Hindi and Marathi belt, most Indians raised in other parts, and all foreign scholars educated in Sanskrit or a related language—can make sense of the transliteration without any additional training. Then again, as soon as a wider audience—for instance non-Indian scholars of other disciplines such as history or linguistics—or a broader set of source languages—including, say, Kannada, Tamil, Burmese or Javanese—is involved, Devanāgarī's suitability declines. It is generally feasible to transliterate non-Sanskritic

inscriptions into the standard script of a closely related modern language, but doing so has a sharp impact on accessibility to readers without a background in that particular language. It is perhaps for this reason that in international forums, Romanisation (transliteration into letters of the Latin script) is increasingly preferred. The foremost hurdle to this solution is of course the fact that the Latin alphabet has fewer characters than Indic scripts.[13] Enriching the Latin letters with diacritical marks (as in Fleet's text and the digital edition) is a long-established tradition, but it requires a consistently applied and understood convention.

Indeed, such a convention was proposed already by Sir William Jones (1788), but failed to gain widespread acceptance. Prinsep renders the first word of the Siwani inscription as *drĭshtam*, which is much like how Jones would have transliterated it, except that Prinsep uses *t* (indistinguishable from the dental *t*) where Jones would have employed *t'* to represent the unvoiced retroflex stop. It may be argued that the distinction is redundant here, since *sh* invariably represents the retroflex sibilant, and Sanskrit phonotactics forbid the occurrence of a dental *t* after this sound.[14] However, an ideal transliteration system should be interpretable and reversible without calling on context. The traditional transliteration convention employed with slight variations in Monier-Williams's *Sanskrit Dictionary* as well as in the *Corpus Inscriptionum Indicarum* series (including Fleet's edition of the Siwani plates) and the pages of *Epigraphia Indica*, to name just a few, would show the same word as *dṛishṭam*, allowing the transliteration to be

[13] Less conspicuously, the problem applies to modern Devanāgarī too. Editions in that script lack a consistent way of transliterating some characters that occur in inscriptions, such as the *upadhmānīya* and *jihvāmūlīya*, Dravidian consonants not found in Sanskrit but nonetheless occasionally occurring in Sanskrit inscriptions, and special final forms of consonants (as opposed to those written by adding a *virāma* sign).

[14] This may have been Prinsep's rationale, for in transliterating the dynasty's name as *Vákáṭaka*, he shows that he has the means to distinguish the dental from the retroflex, although not by the same diacritic as Jones. A typographic error in Prinsep's article is likewise possible, but unlikely, as the word *drĭshtam* occurs with a plain *t* no less than three times.

reversible without the need for contextual rules, and to be searchable by computer. The International Alphabet of Sanskrit Transliteration renders it as *dṛṣṭam*, reducing the number of digraphs in the transliteration, while the ISO-15919 standard (used in the digital edition) represents it as *dr̥ṣṭam*, increasing consistency in the way a given diacritical mark modifies any Latin letter to which it is attached.[15]

Even with an ideal set of conventions, the act of transliteration is itself interpretive: a written text is never altogether unequivocal, and extracting meaning from its glyphs involves knowledge not only of the script, but also of the language and the context. This is particularly—but not only—so when the original has been damaged or was imperfectly engraved to begin with.[16] The editor's interpretation of the text's meaning comes more strongly into play when there is reason to suspect that the scribe (or the composer) committed mistakes beyond the level of a misshapen character, so that the text requires emendation in order to be intelligible, or to carry the meaning presumed to have been intended by its originator. In order to provide information synoptically and separably about the received particulars of the tangible text on the one hand, and the editorial version of the intangible text on the other, scholarly editions of epigraphic texts

[15] The consistency of diacritical marks is irrelevant to computer processing and impacts only the intuitiveness of the transliteration system and the ease with which it can be learned. Digraphs, the use of two Latin characters for a single phoneme of the original language (limited in the latter two systems to the diphthongs and aspirated consonants of Indic languages) do affect computer processing (think of searching a Sanskrit corpus for the word *hanti* and getting results that include *gacchanti*, *tiṣṭhanti*, etc.), but with the processing power now available to all computer users, software solutions for circumventing such problems are feasible. See also Scharf and Hyman (2012: 21–46) for a critical review of transliteration systems and a contrary argument for a standard that involves no digraphs.

[16] A good case in point for ambiguity prevailing even if neither damage, nor scribal inadequacy are present is the identical appearance of the glyphs for the initial vowel *a* and the syllable *su* in the script of the Siwani plates (the illustration in Figure 3 does not include an instance of *su*, but its shape can be inferred from *stu*, the second character in the fourth line). The last word on the plate illustrated here can be read as either *abhaṭa* or *subhaṭa*, both meaningful in Sanskrit, and only context can tip the balance.

usually employ markup in addition to written commentary. The term 'markup' refers to a set of conventional symbols or other devices employed by editors to convey supplementary information about specific parts of a written text. At a superficial glance, there is no markup in Prinsep's presentation of the Siwani plates, but in fact even the spaces between words qualify as such. They are—by and large—absent from the tangible original, and the supplementary information the spaces in the publication convey is that these are the boundaries of words in the intangible text as interpreted by the editor.[17] Typesetting into lines is another form of markup: in this respect Prinsep chose to adhere to the received tangible text, with each line of his edition homologous to one line engraved on the plate, whereas written lines—whether on a stone slab, a copperplate or a paper page—are irrelevant to the intangible text.

The markup in Fleet and Mirashi's editions—and in modern editions in general—is much more conspicuous. All include various kinds of brackets and some additional symbols to indicate details such as which parts of the text are notclearly legible, which are wholly illegible (lacunae), what might have been written that is now illegible (restoration), and what ought to have been written instead of something legible but unintelligible or unexpected (emendation).[18] Fleet, like Prinsep, provides spaces between words, also adding double hyphens (equals signs) at word boundaries which are separable in Romanisation but fall within a single *akṣara* of the original, and hyphens to analyse compound words into members. His edition, moreover, employs uppercase initials to indicate where according to his interpretation a sentence begins, and a combination of an uppercase initial and bold face to show what he takes to be proper names.

Suppose that we have surmounted the problem of transliteration and converted all texts in our hypothetical corpus to a single system,

[17] Prinsep's spacing is, however, not entirely consistent, perhaps due to his incomplete understanding of the text.

[18] Bracket-based markup has been adopted from Mediterranean and Near Eastern epigraphy, for which it was eventually standardised in the Leiden Conventions (Van Groningen 1932). However, Indological usage retains a different, and not entirely consistent, set of conventions (Salomon 1998: 163).

such as ISO-15919. If we now wanted to retrieve, for instance, all occurrences of the Sanskrit word *niyoga* to study their context, the search would miss the instance in the Siwani plates (in the second line of the excerpt, line 24 of the inscription) in each of the editions illustrated here. In Fleet's edition, it appears (after conversion to ISO-15919) as n[i*]yoga to inform the reader that the vowel *mātrā* for *i* was omitted by the engraver and the vowel has been supplied by the editor. The same annotation takes the form na(ni)yoga in Mirashi's edition, and n¿a?⟨i⟩yoga in the Dharma edition. Like milk mixed with water, particular kinds of brackets placedat particular points are intermingled with the text's characters. The reader needs only to learn the markup conventions to become a *haṁsa* and filter the milk out of the water, but a mechanical search algorithm is incapable of this.

To understand how a true digital edition circumvents this problem that cripples digitised classical editions, we need to look at how markup can be applied to digital data. Documents stored in digital form typically carry their own kind of markup, encoded in a formal *markup language* and serving to instruct the machine how various parts of the text must appear on a screen or in print, for example in bold face or regular. This approach, usually called *presentational markup*,[19] is employed in Word and other popular WYSIWYG ('what you see is what you get') word-processing software. Some computer applications, such as TeX, instead employ *procedural markup* comprised of instructions for generating a formatted document from the text, and permit (or require) the end user to produce and interact with that markup. Computer markup (or encoding) is also interspersed with the text's characters, but remains essentially distinct from it, like rice and sesame seeds. As a result, the machine can easily sift one out of the other and hide the markup from the end user's eyes, manifesting only its effects in the formatting of the text, and can also search selectively for segments of texts marked up in a particular way. Yet these kinds of markup are quite independent of the editorial markup of a scholarly edition, even though the two can occasionally overlap,

[19] The kinds of markup approaches mentioned here follow the typology introduced by Coombs, Renear, and DeRose (1987).

as when bold face is used in Fleet's edition to highlight proper names to the reader. Even so, searching for bold face in our hypothetical digitised corpus would not be sufficient to retrieve proper names in the Sanskrit texts, because it would also return anything else with bold formatting, such as headings, or proper names in Fleet's English commentaries and translations.

The distinction between the tangible and intangible aspects of a text apply not only to premodern source texts, but to any text including scholarly editions. Presentational (and procedural) markup is concerned with the tangible, while *descriptive markup* (also called conceptual markup) is concerned with the intangible. Instead of specifying details such as 'this is left-aligned in 16-point italic Times' or 'this is bold,' it associates a conceptual classification with chunks of text, such as 'this is a top-level heading' or 'this is a proper name.'[20] Instructions for presentation—the rules for generating a tangible text—are handled separately. The versatility of descriptive markup brings vast advantages, such as ensuring consistency of formatting,[21] facilitating various ways of presentation without the need to re-format the document,[22] allowing the selective extraction of specific entities,[23] and moreover, enabling us to apply conceptual labels—that is, metadata—to anything in the text that can be conceptualised.

Classical scholarly editions are produced with a view toward the tangible: a particular way of presentation in a printed medium, in which the ink on the paper is simultaneously the stored representation of the edition's data (coded in graphic symbols interpretable by a person familiar with those symbols) and the interface through which the reader interacts with the data. This 'classical' approach to

[20] Styles in WYSIWYG word processors and macros in LaTeX may be employed like descriptive markup.

[21] Everyone is familiar withpoorly formatted documents where each heading is subtly different from the other.

[22] Consider attempting to read a PDF file (involving procedural markup) on the screen of a smartphone, and compare the experience with reading modern web pages, which usually employ something approaching descriptive markup coupled with different presentation instructions depending on the kind of device on which they are displayed.

[23] For example to generate tables of contents or indices of proper names.

producing editions, which has been described as output-driven (Rehbein 2010: 2), now has a 'digital' alternative, in which the main driving forces are on the one hand the input, namely the features of the tangible original; and on the other hand the user, whose anticipated interest determines which of these features are relevant and how they are categorised. The real sea change from digitised editions to digital editions takes place through shifting much of the scholarly annotation of the edited text (i.e. the editorial markup) from the tangible plane to the intangible by implementing it as computer-based descriptive markup. Instead of 'this is in square brackets' and 'this is in round parentheses,' it says, 'this is an editorial restoration' and 'that is an editorial emendation.' This shift makes it possible to process the text independently of the markup (for instance to search for strings in the text regardless of the markup applied to them), to search specifically for marked-up concepts, and to visualise the markup in a multiplicity of forms depending on the needs of the end user.

Adding descriptive markup to a wide gamut of texts is tremendously useful in a variety of fields (many of them involving far more stakeholders and vastly greater business opportunities than Indic epigraphy), from digital publishing to text mining and artificial intelligence. As a result, already since the 1980s the Text Encoding Initiative or TEI (e.g. Burnard 2014) has been developing standards for doing so in the XML (Extensible Markup Language) format. Figure 7 shows part of the actual digital edition of the Siwani plates corresponding to the edition excerpts.[24] The characters shown in black are those that belong to the inscription, while the rest, enclosed in angle brackets and highlighted in colours, comprise the computer-readable descriptive markup in XML. Each unit of markup, called an *element*, is generally comprised of two such tags: an opening tag to indicate its beginning in the text (with a label in angle brackets), and an end tag (with the same label, preceded by a slash within the angle brackets). When an element does not contain any text, a single tag

[24] The code shown here has been slightly simplified to serve better as an illustration. The code responsible for the 'critical apparatus' is separate from the code for the text, and is not shown here.

can be used for both the beginning and the end, formulated by adding a slash after the label within the angle brackets, as in <space/> in the figure. Some of the elements include *attributes* with various values (after the label within the opening tag), which are used to encode further details, for instance the number of the element <lb/> ('line beginning') marking where an originally inscribed line starts, or the information that the space in line 25 is in fact the hole that serves for binding the copperplates.

The syntax of XML as a markup language determines the general rules for the use of elements and attributes, while what makes it an *extensible* markup language is that elements, attributes, and the specific rules for their use in various contexts are defined separately. This is where the TEI comes in, providing a complex set of definitions and usage rules for the conceptual encoding of texts. Because the encoding solutions potentially available in TEI are extremely versatile and manifold, they are best applied in any specific field of text processing as a subset tuned to the needs of that field by reducing the number of conceptual categories that receive markup and mapping these to concrete encoding solutions. The EpiDoc standard (e.g. Bodard 2010) is such a subset of the TEI standard, specifically developed for the encoding of epigraphic documents. The DHARMA project's epigraphic editions are encoded according to a convention (Balogh and Griffiths 2020)[25] that is a further concretisation of EpiDoc adapted to South and Southeast Asian inscriptions, primarily those written in an Indic (Brāhmī-derived) script.

A further advantage of descriptive markup is a reduction of ambiguity. When confronted with bracket-based markup, readers must sometimes rely on context and their own expertise to determine its

[25] An updated and revised version is currently in preparation.

[26] Fleet, for example, employs hyphens at compound boundaries (e.g. *sva-simâ* in line 23), at the ends of epigraphic lines that fall inside a word (e.g. *vidita-m* in lines 25–26), and at the ends of lines in his printed edition that fall inside a word (e.g. *âdhi-kṛitāḥ* in line 24). When there is a hyphen at the end of an epigraphic or printed line, readers are left to their own devices to decide whether a compound boundary is also present (as at the printed line ending with *bbala-* in line 26 and the end of the epigraphic line 27 with *bhaṭa-*) or not (as at the printed line ending with *âdhi-* in line 24, or the end of the epigraphic line 25 with *vidita-*).

exact meaning, and may need to refer to the visual material provided with the edition to be certain, because the markup conventions vary to some extent from editor to editor, and even within a single edition, some symbols are used for more than one purpose[26] or bear no indication of their scope.[27] To return again to the word *niyoga*, written as *nayoga* in our inscription excerpt, we can see in Figure 3 that Fleet shows it as n[i*]yôga. By his conventions, text followed by an asterisk in square brackets means a scribal omission, and his annotation describes what happened in the process of writing: the engraver omitted the *i* marker. However, reconstructing the received text from his edition necessitates expert knowledge. The specialist reader is of course aware that the omission of a dependent vowel entails the presence of the default vowel *a* in the same syllable, unlike the omission of an independent vowel or a consonant (for which compare vivṛi[d*]dhayê in line 26 of Fleet's edition), in which case the received text can be reconstructed by ignoring the editorial restoration without putting anything in its place.[28] For a computer to do so, complex rules must be formalised.

All these ambiguities can be eliminated by the consistent use of conceptual markup where, for instance in an editorial alteration of the text, the scope of the original and editorial versions must always be explicit. Thus, in the figure, the encoding of this word as n<choice><sic>a</sic><corr>i</corr></choice>yoga means that after the letter *n*, there exist alternative versions of the text (with a 'choice'

[27] Both Fleet and Mirashi employ parentheses to propose emendations, as in correcting the inscribed *taḥ* to *vaḥ* in line 26. The implicit understanding is that the text shown in parentheses is to replace the same number of *akṣara*s (or transliterated characters) in the received text, so emendations involving a change in the number of *akṣara*s or characters need to be clarified in footnotes. Not all editors, however, do so consistently.

[28] In Mirashi's edition, the same editorial intervention is shown as a correction rather than a restored omission: na(ni)yoga. In his Devanāgarī text, it is of course more convenient to show every editorial annotation on the level of the *akṣara*. This way, it is quite clear that the received text was *nayoga* while the corrected text is *niyoga*, but the consonant *n* must be redundantly present in both versions, and concerns about the scope of the correction, as in the previous note, still apply.

```
<pb n="3v"/><lb n="23"/>pūrvveṇa<g type="comma">.</g> sva-sīmā-
par<choice><sic>a</sic><corr>i</corr></choice>cch<choice><sic>a</sic>
<corr>e</corr></choice>dena <space/> karañjaviraka-taṭe<g
type="comma">.</g> Atrāsmat-santakā<unclear>ḥ</unclear> <lb
n="24"/>sarvvāddhyakṣa-n<choice><sic>a</sic><corr>i</corr></choice>yoga-
n<choice><sic>a</sic><corr>i</corr></choice>yuktāḥ Ājñā-sañcāri-
kulaputrādhikṛtāḥ bhaṭāḥ <lb n="25"/><surplus>ś</surplus>chāttrāś ca viśru<space
type="binding-hole"/>ta-pūrvvayā <space/> Ājñayā <space/>
Ājñāpayitavyāḥ<supplied reason="subaudible">.</supplied> vidita<lb n="26"
break="no"/>m astu <choice><sic>t</sic><corr>v</corr></choice>aḥ yathaiṣo
<supplied reason="subaudible">'</supplied>smābhiḥ Ātmano dharmmāyur-bbala-
vijayaiśvaryya-v<del>r</del>ivṛ<supplied reason="omitted">d</supplied>dhaye <lb
n="27"/>Ih<choice><sic>a</sic><corr>ā</corr></choice>mutra-hitārttham
āt<choice><sic>v</sic><corr>m</corr></choice>ānugrahāya<g
type="dash">.</g> vaijayike dharmma-sthāne<g type="dash">.</g> A-bhaṭa
```

Figure 7. The text as encoded in the digital edition

available between them), namely one exactly as inscribed ('sic,' i.e. the reading *a*) and one as corrected by the editor ('corr,' i.e. the reading *i*), after which the segment involving a choice ends before the text continues with *yoga*. In the snippet of the digital edition rendered for the human reader (Figure 5), I have shown this as n¿a?⟨i⟩yoga, but it must be kept in mind that not every detail which is tagged in the encoded text needs to be shown and distinguished in any particular rendering: the intangible digital edition can be translated into various tangible documents custom-tailored to the user's needs. For instance, the code excerpt in Figure 7 can be rendered as a diplomatic edition prioritising the tangible original, as in Figure 8, where editorial changes to the text are hidden except for spacing and hyphenation, but the loci where the editor finds the received text problematic are still marked for the reader's attention; or as a 'logical edition' prioritising the intangible, as in Figure 9, where the text is laid out in accordance with its semantic structure (but still labelled for the original document's pages and lines), and editorial interventions are shown on a par with the received text (though marked to let the reader

[29] The diplomatic and logical editions shown here are illustrations and are not identical to the diplomatic and logical renditions currently displayable on the DHARMA website.

know that intervention has taken place at these points).[29] Such alternative presentations, along with any number of others, can be created systematically from all digital editions encoded along the same conventions, and doing so requires only the articulation of a formal set of instructions for generating a rendered document from the marked-up edition. Elena Pierazzo (2016: 29) calls such editions 'paradigmatic' to emphasise that they provide the reader with a choice between alternative tangible expressions.

A further corollary of the facility to hide or show markup at will is that, in principle at least, the descriptive markup can saturate the text to a far greater degree than character-based traditional markup can.[30] In the latter, too many instances of too many different kinds of brackets and other symbols would make the resulting document unintelligible to any reader, but the computer is not hindered by the extent and complexity of descriptive markup so long as it is rigorously structured. In the traditional Indological bracket system, round parentheses may be used 'for letters which are damaged and partially illegible in the original, or which, being wholly illegible, can be supplied

⟨Page 3v⟩
⟨23⟩ pūrvveṇa| sva-sīmā-par¿a?cch¿a?dena _ karañjaviraka-taṭe| Atrāsmat-santakā(ḥ)
⟨24⟩ sarvvāddhyakṣa-n¿a?yoga-n¿a?yuktāḥ Ājñā-sañcāri-kulaputrādhikṛtāḥ bhaṭāḥ
⟨25⟩ {ś}chāttrāś ca viśru◯ta-pūrvvayā _ Ājñayā _ Ājñāpayitavyāḥ vidita
⟨26⟩ m astu ¿t?aḥ yathaiṣo smābhiḥ Ātmano dharmmāyur-bbala-vijayaiśvaryya-v[[r]]ivṛdhaye
⟨27⟩ Ih¿a?mutra-hitārttham āt¿v?ānugrahāya| vaijayike dharmma-sthāne| A-bhaṭa-

Figure 8. Diplomatic edition rendered from the digital edition

... ⟨Page 3v⟩ ⟨23⟩ pūrvveṇa| sva-sīmā-par⟨i⟩cch⟨e⟩dena karañjaviraka-taṭe| Atrāsmat-santakā(ḥ) ⟨24⟩ sarvvāddhyakṣa-n⟨i⟩yoga-n⟨i⟩yuktāḥ Ājñā-sañcāri-kulaputrādhikṛtāḥ bhaṭāḥ ⟨25⟩ {}chāttrāś ca viśruta-pūrvvayā Ājñayā Ājñāpayitavyāḥ⟨.⟩ vidita⟨26⟩m astu ⟨v⟩aḥ yathaiṣo ⟨'⟩smābhiḥ Ātmano dharmmāyur-bbala-vijayaiśvaryya-v[[r]]ivṛ⟨d⟩dhaye ⟨27⟩ Ih⟨ā⟩mutra-hitārttham āt⟨m⟩ānugrahāya| vaijayike dharmma-sthāne| A-bhaṭa ...

Figure 9. Logical edition rendered from the digital edition

[30] In actual practice, there are some constraints, chiefly stemming from the difficulty of handling situations where segments of text requiring different annotations overlap partially.

with certainty' (Fleet 1888: 194). These are two ontologically different features (although the distinction blurs when vestiges are insufficient to afford a reading, but do allow ruling out certain restorations). Part of the reason why classical editions do not distinguish the two may be a desire to keep the markup simple, but this distinction can and should be made in a digital edition; once the information is encoded, it is still possible to hide the distinction from the reader's eyes. Some particulars of the received text, such as scribal (rather than editorial) correction in the first syllable of the word *vivṛddhaye* in line 26 of our excerpt, were reported in footnotes by Fleet and Mirashi. Conceptual markup allows for annotating such a pre-modern correction directly in the body of the text, and for presenting this annotation to the end user in various forms: from hiding it altogether,[31] to indicating it with brackets,[32] to describing it in an automatically generated footnote or—on screen—in a mouseover tooltip.

Indeed, there is no reason to stop at philological annotation. Conceptual markup can accommodate any kind of annotation applicable to text segments of any size. Metadata—both of the

[31] One example of hiding encoded information from the reader is the treatment of the punctuation marks in the figures here. In all forms of the rendered text, the punctuation marks of the received text have been represented by vertical bars. The code in Figure 7, however, actually employs an attribute and a controlled vocabulary for classifying the appearance of the original punctuation marks, which in this inscription take the shape of very short vertical bars (classified as 'comma' in the encoding) and very short horizontal lines (classified as 'dash'). Once such details are encoded in a digital edition, they can just as easily be presented with distinct symbols as with a generic punctuation sign. For another example, notice that spaces in the original document (as opposed to editorial spaces between words) are not shown in Fleet and Mirashi's editions, but they are encoded (along with the binding hole as a special kind of space) in the digital edition. Their location is indicated by symbols in the diplomatic edition of Figure 8 but hidden in the logical edition of Figure 9.

[32] The figures show it as v⟦r⟧i, with the double square brackets indicating the pre-modern deletion of a superfluous consonantal *r* in this *akṣara*, which is how I (and Mirashi) interpret the correction that took place here. Fleet, conversely, believes that a vocalic *ṛ* was first engraved here, which was subsequently deleted and the marker for the dependent *i* was added. This is represented in the apparatus of Figure 5 as v⟦ṛ⟧⟪ri⟫, where the double angle brackets signify pre-modern addition.

administrative sort and the scholarly sort—may be encoded for the edition as a whole, while scholarly concepts can be attached to medium-sized sections such as stanzas of verse, and to smaller segments such as proper names. The latter are then of course searchable without false positives (like those resulting from the bold formatting of names)and, if desired, they may be differentiated, for instance, into personal and geographical names, the latter into natural and human geography, and so on. With a sufficiently large corpus of texts semantically tagged in a standardised manner, it will become possible to mine the text for such items, contributing to the creation of prosopographies, gazetteers and any other overviews of concepts for which tagging has been implemented.

Finally, an extra advantage to descriptive markup over editorial brackets and symbols is enforced rigour. As most of us know from experience, it is all too easy to make a mistake and insert the wrong kind of bracket, forget to close an opened parenthesis, or put an asterisk in the wrong place. For a computer to be able to interpret the markup, such mistakes must be avoided: the phenomenon to be annotated must be identified unambiguously and marked up accurately. This compels the editor to undertake to some extra labour, but on the gain side, the computer can also check the correctness of the encoding and point out where an error has been made.

As will be evident from the above discussion, the opportunities are tantalising, but the way forward is not easy. Project DHARMA is making headway in establishing standards for the encoding of Indic epigraphic texts, but this endeavour cannot be completed all in one go. Versatility sufficient to cater to a broad base of epigraphic traditions and research interests must be achieved without the standard becoming too complex to be manageable. The drive to get ahead with scholarly research and concentrate on the juicy bits such as semantic tagging must also be balanced with the necessity of encoding the fundamental aspects of text structure and philological details. Moreover, tools need to be developed for creating human-readable outputs (attuned to various uses and interests) from the digital editions, and for exploiting the potential of the encoded texts for selective, faceted searching. Most

of this work, unfortunately, takes place in an academic environment where on the one hand funding is available only for a limited and pre-determined period, and on the other hand, there is a pressure on the scholars to deliver traditionally recognised publications. The fast-paced development of technology means that solutions may, in some respects, be dated already by the time they are developed.

The good news is that unlike a printed edition, a digital edition is an ongoing work. Even once it has been 'completed' by one definition of the word, it can continue to be corrected, improved, and enriched with additional details such as semantic tagging and more extensive metadata. Any scholar or team can complete the basic encoding of a larger number of texts while focussing on a smaller core on which they carry out more extensive tagging and research. Merely the largely mechanical transmigration of a pre-existing printed edition into a digital incarnation is a great step toward the accumulation of a critical mass of digital editions that will in turn make it easier to develop further utilities for improving productivity (e.g. by automating the conversion from bracket markup to digital descriptive markup) and open up new vistas for research. Since the TEI is a widely used international standard that has already been applied to a vast number of texts in diverse fields, it has a good chance of being 'future-proof.' Even if a decade or fifty years from now the field of digital humanities evolves into something quite different, there will in all probability be established tools and procedures for backward compatibility, so that texts encoded according to the current standard shall still be usefully processable by computer.

Acknowledgements

The present publication is a result of the project DHARMA 'The Domestication of "Hindu" Asceticism and the Religious Making of South and Southeast Asia'. This project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement no 809994). This paper reflects only the author's view. The funding Agency is not responsible for any use that may be made of the information it contains. The author wishes to thank Arlo Griffiths for commenting on an earlier draft of this article.

References

Ali, Daud. 2000. 'Royal Eulogy as World History: Rethinking Copper-Plate Inscriptions in Cōḻa India'. In *Querying the Medieval: Texts and the History of Practices in South Asia*, edited by Ronald Inden, Jonathan Walters, and Daud Ali, 165–229. Oxford: Oxford University Press.

Anonymous. 1894. 'Obituary Notices: Major-General Sir Alexander Cunningham'. *Journal of the Royal Asiatic Society*, New Series, 26:166–177.

Balogh, Dániel, and Arlo Griffiths. 2020. 'DHARMA Encoding Guide for Diplomatic Editions'. Project documentation version 1. Paris, Berlin: Centre d'Études de l'Inde et de l'Asie du Sud; École française d'Extrême-Orient; Humboldt-Universität. https://halshs.archives-ouvertes.fr/halshs-02888186.

Bodard, Gabriel. 2010. 'EpiDoc: Epigraphic Documents in XML for Publication and Interchange'. In *Latin on Stone: Epigraphic Research and Electronic Archives*, edited by Francisca Feraudi-Gruénais, 101–118. Lanham: Lexington Books.

Burnard, Lou. 2014. *What Is the Text Encoding Initiative? How to Add Intelligent Markup to Digital Resources*. OpenEdition Press. https://doi.org/10.4000/books.oep.426.

Burnell, A. C. 1870. *A Few Suggestions as to the Best Way of Making and Utilizing Copies of Indian Inscriptions*. Madras: Higginbotham.

Coombs, James H., Allen H. Renear, and Steven J. DeRose. 1987. 'Markup Systems and the Future of Scholarly Text Processing'. *Communications of the ACM* 30 (11): 933–947. https://doi.org/10.1145/32206.32209.

Fleet, John Faithfull. 1888. *Inscriptions of the Early Gupta Kings and Their Successors*. Corpus Inscriptionum Indicarum, III. Calcutta: Superintendent of Government Printing.

Gilliland, Anne J. 2008. 'Setting the Stage'. In *Introduction to Metadata*, edited by Murtha Baca, 2nd ed., 1–19. Los Angeles: Getty Research Institute.

Griffiths, Arlo. 2023. 'Le projet DHARMA et le renouvellement de l'épigraphie des mondes indien et indianisé'. In *L'École française d'Extrême-Orient : 120 ans de recherches en Asie. Actes du colloque organisé par l'École française d'Extrême-Orient, sous le haut patronage de l'Académie des Inscriptions et Belles-Lettres à l'Académie des Inscriptions et Belles-Lettres, le 3 décembre 2021*, edited by Christophe Marquet and Nicolas Grimal, 71–86. Paris: Académie des inscriptions et belles-lettres.

Hawkes, Jason, and Riza Abbas. 2016. 'Copperplates in Context: A Preliminary Investigation of the Study and Archaeological Settings of Land Grant Inscriptions'. *Pratnatattva* 22:41–71.

Jenkins, R., and Horace Hayman Wilson. 1825. 'Account of Ancient Hindu Remains in Chattísgher, with Translations and Observations by H. H. Wilson'. *Asiatic Researches* 15:499–516.

Jones, William. 1788. 'A Dissertation on the Orthography of Asiatick Words in Roman Letters'. *Asiatick Researches* 1:1–56.

Kejariwal, Om Prakash. 1988. *The Asiatic Society of Bengal and the Discovery of India's Past, 1784-1838*. Delhi: Oxford University Press.

Mannocci, Andrea, Vittore Casarosa, Paolo Manghi, and Franco Zoppi. 2014. 'The Europeana Network of Ancient Greek and Latin Epigraphy Data Infrastructure'. In *Metadata and Semantics Research*, edited by Sissi Closs, Rudi Studer, Emmanouel Garoufallou, and Miguel-Angel Sicilia, 286–300. Cham: Springer. https://doi.org/10.1007/978-3-319-13674-5_27.

Matsumoto, Mallory E. 2022. 'Archaeology and Epigraphy in the Digital Era'. *Journal of Archaeological Research* 30 (2): 285–320. https://doi.org/10.1007/s10814-021-09162-4.

Mirashi, Vasudev Vishnu. 1963. *Inscriptions of the Vākāṭakas*. Corpus Inscriptionum Indicarum 5. Ootacamund: Archaeological Survey of India.

Muthucumarana, Rasika. 2019. 'Recently Discovered Shipwrecks in Sri Lankan Waters'. *Current Science* 117 (10): 1664–1672.

Pierazzo, Elena. 2016. *Digital Scholarly Editing: Theories, Models and Methods*. London, New York: Routledge.

Prinsep, James. 1834. 'Note on Inscription No. 1 of the Allahabad Column'. *Journal of the Asiatic Society of Bengal* 3:114–118.

—— 1836a. 'Facsimiles of Various Ancient Inscriptions, Lithographed by James Prinsep, Secretary As. Soc. &c.' *Journal of the Asiatic Society of Bengal* 5:340–349, 482–486, 554–561, 657–661, 724–731, 795.

—— 1836b. 'Preface'. *Journal of the Asiatic Society of Bengal* 5:v–xi.

—— 1837a. 'Facsimiles of Ancient Inscriptions, Lithographed by James Prinsep, Sec. As. Soc. &c.' *Journal of the Asiatic Society of Bengal* 6:88–97, 218–223, 278–288, 663–682, 777–786, 869–887.

—— 1837b. 'Note on the Facsimiles of the Various Inscriptions on the Ancient Column at Allahabad, Retaken by Captain Edward Smith, Engineers.' *Journal of the Asiatic Society of Bengal* 6:963–979.

—— 1837c. 'Preface'. *Journal of the Asiatic Society of Bengal* 6:v–ix.

Rehbein, Malte. 2010. 'The Transition from Classical to Digital Thinking: Reflections on Tim McLoughlin, James Barry and Collaborative Work'. *Jahrbuch für Computerphilologie* 10:55–67.

Riley, Jenn. 2017. *Understanding Metadata*. Baltimore: National Information Standards Organization.

Salomon, Richard. 1998. *Indian Epigraphy: A Guide to the Study of Inscriptions in Sanskrit, Prakrit, and the Other Indo-Aryan Languages*. South Asia Research. New York: Oxford University Press.

Scharf, Peter M., and Malcolm D. Hyman. 2012. *Linguistic Issues in Encoding Sanskrit*. Delhi: Motilal Banarsidass.

Seales, W. Brent, and Christy Y. Chapman. 2023. 'From Stone to Silicon: Technical Advances in Epigraphy'. *International Journal on Digital Libraries* 24 (2): 129–138. https://doi.org/10.1007/s00799-023-00362-5.

Van Groningen, B. A. 1932. 'Projet d'unification des systèmes de signes critiques'. *Chronique d'Egypte* 7 (13–14): 262–269.

Venkataramayya, M. 1951. 'Sangalooda Plates of Rashtrakuta Nannaraja: Saka 615'. *Epigraphia Indica* 29:109–115.

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ARTICLE

Benares Illustrated: Dawn of a New Picturesque

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Abstract

Amidst the huge churning in the eighteenth-century Indian subcontinent, European travellers, adventurers, artists and army officers radically changed the perception of ancient sites which lingered on for a long time. Banaras, situated on the main riverine route of communication through the Ganges from Calcutta to Delhi, and at the same time occupying a pivotal position as the most important centre of Brahmanical religion and Sanskrit learning, attracted the early attention of English East India Company. It was young James Prinsep, who almost singlehandedly created a structured image of Benares through his paintings, drawings and maps as to be seen in the *Benares Illustrated* (1831–33) along with his archaeological, architectural, engineering and ethnological pursuits, and influenced successive generations to move within that pre-fixed frame.

Keywords: Banaras, travelling gaze, picturesque, riverfront *ghat*s, minarets, city-maps

To cite this article
Chaudhuri, Indrajit 2024. *Benares Illustrated*: The Dawn of a New Picturesque. *Journal of the Asiatic Society* 66/2: 109–134.

ISSN:0368-3308

Introduction

In the eighteenth century, the Indian subcontinent presented a fabulously rich and vast unexplored territory to the European vision. The information trickled down from early travel writings did more to excite and attract than to factually substantiate. Naturally, as the traders and adventurers swooped upon this fertile land to grab whatever share of the riches they can amass, the artists didn't lag behind either. The first impressions created by the travelling artists who visited remote places to capture the exotic and the picturesque profoundly impacted the formation of subsequent ideas about such places. David Arnold has discussed the '…European responses to an unfamiliar landscape, about the land as an object of colonial fear and desire, utility and aesthetics'. (Arnold 2005: 3). I would like to focus here mainly from the aesthetic point of view on a single site of unique importance which attracted the colonized and the colonizer alike, and would discuss how one young man's vision compounded with his multifarious activities transformed the potpourri of travelling gaze to a structured notion about that site.

The Travelling Gaze

> Banaras is unique: the city's location on the western bank of the holy Ganga, which flows in a curve to the north and north-east at this point, the elevated riverfront where bathers face the rising morning sun above an empty landscape—these and similar geographical peculiarities contribute to the special character of the town (Gaenszle and Gengnagel 2008: 7).

The east-west route along the Ganges on which Banaras was situated has been frequented by all and sundry for more than 1500 years, and it was simply impossible not to notice the Banaras crescent while cruising through the waterway. But sadly, though not unexpectedly, the impressions of the Indians mostly remain unrecorded before the eighteenth century. Only in *Ardhakathanaka*, which is 'perhaps the only autobiography in the Indian tradition' completed in 1641 by Banārasi, a Jain merchant, we find a brief mention of his pilgrimage to the birthplace-temple of Tīrthaṅkara Pārśvanātha at

Banaras in the Vikrama year 1662/1605. (Lath 2005: 161, 63, See also Vanina 1995). Just two decades back, in 1584 Ralph Fitch recorded his impressions of 'Bannaras' as the first English visitor (Eck 1993: 9–11). Though Fitch and his party came down the Ganges from Allahabad, he was not at all eloquent about the panoramic view of the Banaras riverfront and only mentions: 'Here alongst the waters side bee very many faire houses, and in all of them, or for the most part, they have their images standing […]' (Foster 2012: 20). Fitch was abhorrent of the images of the deities of 'idolaters' as was usual of most of the early visitors to India, and that might have clouded his perception to a certain degree. In fact, Partha Mitter mentions that 'Ralph Fitch, travelling between 1583 and 1591, was the first Englishman to report that the Hindu idols in Bijapur looked like the devil' (Mitter 2013: 21). The same is applicable to the French traveller Jean Baptiste Tavernier, who made six voyages to India between 1636 and 1668 and visited Banaras on his last trip. But his account is important because it mentions the great riverside temple of Bindumādhava, probably the last and only description before its so-called demolition by Aurangzeb.[1] The poet Tulsi Dâs termed it as a 'choice temple', writing in the sixteenth century. Diana Eck elaborates, 'The choice temple […] sat at the top of the Panchaganga Ghat, one of the highest and finest temple sites along the Ganges. It is clear from Tavernier's account that this "great pagoda", as he called it, was the most impressive building along the Banaras riverfront'. (Eck 1993: 206) So, we can assume that during the 1660s, the Banaras riverfront presented a completely different and not so magnificent panorama of architectural constructions in stone like huge *ghat*s and large temples. Another fact corroborates this assumption. After the early constructions by the Royal families of

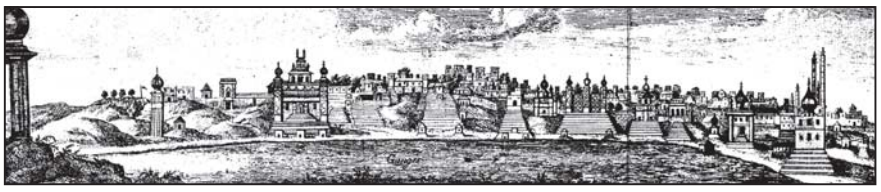
[1] 'Tradition holds that another mosque [after the Gyanvapi mosque] of Aurangzeb's reign was constructed on the site of a destroyed temple, although no evidence supports this. Today known as the Jami or Aurangzeb's Mosque, it dominates the famous Benares riverfront […] Inscriptions of later date record repairs to the mosque, but none reveals its original construction date or patron' (Asher 1992: 278–79). Currently the mosque is enlisted as 'Dharahra Mosque (Aurangzeb Mosque)', a protected monument of the Archaeological Survey of India.

Rajasthan, most of the patronage for the large-scale building activities on the riverfront and inside the city came from the Maratha chiefs and their families, who actually rose to power and prominence in the eighteenth century, and came to control the Banaras region, especially the sacred city during this period. That is why, the panoramic drawing of Banaras riverfront by Joseph Tieffenthaler, the apostolic missionary who was the first to survey the course of the Ganges and visited Banaras in 1765, is our earliest visual document of the spectacular landscape in the making, which never failed to amaze succeeding generations of travellers.

The Precursors

Joseph Tieffenthaler arrived in India in 1743. He visited many places, drawn charts and maps, and written historical and geographical descriptions of a large part of India. James Rennell's best source of information on the early course of the Ganges was a map published by Johann Bernoulli and drawn by Anquetil du Perron from the materials sent by Tieffenthaler (Barrow 2005: 90). Some of his Latin manuscripts were translated in German and published in Berlin by Johann Bernoulli in 1785, the year Tieffenthaler died in Lucknow. The French edition followed in 1786. The panoramic view of Banaras riverfront, probably drawn by Tieffenthaler himself, was published first in the German edition of his accounts. (Gutschow 2008: 194, Fig. 1)

The panorama presents only ten stepped *ghat*s between Assi and Panchaganga *ghat*s (Fig.1). As Gutschow points out (Gutschow 2008: 194)—



Figuure 1. 'Banares', Joseph Tieffenthaler, 1765

> The viewer stands on the eastern side of the "Ganges" behind a nondescript foreground which is framed architecturally on the left. Clearly identifiable is the Alamgir Mosque on the right, while one can only

suggest that the dominant structure towards the left, with corner towers and a tiered centre depicts Chet Singh's palace, which must just have been completed when Tieffenthaler visited the place in 1765.

There is no doubt about Chet Singh's palace, because it can be easily compared with William Daniell's oil titled 'Shivala Ghat and Cheyt Singh's House near Benares' (Shellim 1979: 105). Though Gutschow remarked that '[n]ot a single towering *sikhara* structure which characterizes North Indian temples, is visible', and instead we see 'domes that are peaked by crosses', which might have been the handiwork of those responsible for the final production of the view in Berlin, on a closer scrutiny we can discern at least four other structures which were probably large temples on the riverfront with domical towers (without any cross, but with the usual *kalaśa* finial), most probably due to the unfamiliarity of the engravers in Europe with the *śikhara* type temples. Also, the identification of another early *ghat*, the Rana Mahal *ghat* donated by the Maharana family of Udaipur, can be suggested, with its three towers clearly visible in Tieffenthaler's drawing. A closer comparison of Tieffenthaler's panorama with that of an unknown Indian artist painted around 1800 and retrieved from The British Museum bears this out (Krishna 2003). Fortunately, *Tīrthamaṅgal*, the account of a journey to Banaras around the time of Tieffenthaler's visit by a Bengali elite, Krishnachandra Ghoshal of Bhūkailāś, Khidirpur in 1769, written by Bijayrām Sen Viśārad, survives. The riverfront finds almost no mention in this poem, except the high towers of Aurangzeb's Mosque ('mādhaber dhwajā') where pilgrims flocked to have a top-view of the city by paying a pice each to the Fakir who was in charge of it. (Sen Viśārad 2009: 95-96). More than a century later, the poet-dramatist Manomohan Bāsu writes in his Diary dt. 31st January 1888 that during his first or second visit to Banaras in 1850/1854, he climbed to the top of the minarets of the mosque ('Benimādhaver Dhwajā') and sitting there composed a song regarding the minarets and etched the song with a knife on its walls (Das 1981: 42)! Thus, it is clear that Aurangzeb's Mosque, perched on a vantage point of the Banaras riverfront, has already commanding a

landmark view as its predecessor Bindumādhava temple did during Tavernier's time. Within the next half a century, the mosque with its minarets became iconic and in a way inseparable from any representation of the riverfront view.

Within fifteen years of Tieffenthaler's visit, the scenario had quickly changed. The East India Company started consolidating their grip on more and more areas. Artists started to visit uncharted places in search of the picturesque, to test their fortunes in unknown lands. Unlike the portrait-painters, who naturally remained closely connected to the seats of power, artists like William Hodges travelled to distant places. Hodges was the first professional landscape painter from Britain to work in India. As Giles Tillotson puts it, 'The paintings and aquatints which he made as a result of his travels in the early 1780s opened the eyes of his contemporaries to India's scenery and architecture and, together with his writings, made a vital contribution to the British perception of India's past' (Tillotson 2000: vii). Hodges visited Banaras with the entourage of his patron Warren Hastings, Britain's first Governor General in India, in the late summer of 1781. Banaras to him was going to be a rich field of intellectual and antiquarian enquiry, 'one of the most ancient Hindoo cities' and in his own words, 'It certainly is curious and highly entertaining to an inquisitive mind, to associate with a people whose manners are more than three thousand years old' (Tillotson 2000: 1). But the situation turned out to be less conducive to an artistic endeavour because of the strife between Hastings and the local ruler Raja Chet Singh. Ultimately Hodges published only two views of Banaras in his *Select Views* (Pls. 21 and 45) containing 48 aquatints (Hodges 1785–8) and Tillotson refers to a few drawings made in the city and mainly preserved in the Yale Center for British Art (Tillotson 2000: 7, Fig. 57, 58), as well as oil paintings in various collections (Tillotson 2000: Pl. 1, Fig. 18, 37). Curiously enough, Pl. 21 of the *Select Views* (captioned by Hodges as 'A View of Part of the City of Benares, upon the Ganges') (Fig. 2) as well as an oil now in the Oriental and India Office Collections, British Library, bear the same caption (Tillotson 2000: Pl.

Figuure 2. 'A View of Part of the City of Benares', William Hodges 1781. *Select Views* Pl. 21.

1), centrally focusing on the Aurangzeb's Mosque on the Panchaganga *ghat*. In Pl. 45 of the *Select Views* ('A View of Part of the City of Benares') also, the only identifiable structure, though diminutive, throughout the riverfront crescent, is the same mosque, which is ubiquitous even in another oil in Private Collection (Tillotson 2000: Fig. 37). W. G. Archer mentions an oil, 'Views of Ghauts of Benares' in the Royal Academy, London, and a watercolour 'The Ghats of Banaras' in a Private collection in London which, however, present different views (Archer 1971: 45, Fig. 125, 126).

Tillotson raises the obvious question. '[…] why then, in depicting what he knew to be a site of peculiar distinction for the Hindu religion, Hodges has chosen to concentrate on a gesture of alien domination which looms over and dwarfs those very pilgrims in whose customs he professed such interest'. Different readings had been analyzed by Tillotson, e.g. 'The context of the painting's production suggests a parallel with his [Hodges's] patron's [Hastings] own assumption of authority over the city': '[…] whilst it is true that Hodges often aligns himself with Hindu tradition against Islamic iconoclasm, his many

expressions of sympathy with "Hindoo manners" invariably place them in a timeless and mythical past, whilst his painting depicts and so repeats the visible gesture of a historically specific, political reality', and finally in the context of its production as a contemporary English landscape image, the choice of the subject might well have been (Tillotson 2000: 3–4, 2023: 153)—

> suggested by the desire for the irregular outline that was required by the artist's aesthetic… The great height of the minarets, by which the mosque declares its dominating presence in the city, ensures too that it offers the greatest diversity of form, and is thus the object most likely to appeal to an artist of the picturesque.

The last two points would be pivotal in our discussion of James Princep's drawings.

Hodges has been closely followed in his footsteps by the more famous uncle-nephew duo, Thomas and William Daniell, who extensively toured India in 1786–93 AD. While they were busy producing twelve aquatints titled *Views of Calcutta* (1786–88), Hodges's *Select Views* reached Calcutta. As Mildred Archer sees it (Archer 1980: 37):

> […] Hodges had set a standard as a pioneering recorder of India, and his views became a guide in general terms to the route that they should follow. The Daniells decided to outdo him, to see for themselves the tombs, mosques, temples and picturesque scenes that he had depicted and to make a more impressive and more accurate record of those same places.

On their upward journey along the Ganges they sailed past Banaras (5th December 1788) recording only a view of the Ramnagar Fort (*Oriental Scenery* I.14), as they were in a hurry to join the British officers at Fatehgarh, who were planning a visit to Agra and Delhi. During their return journey, the Daniells stopped at Banaras and worked there for about a week (c.17th to 25th November 1789). Intriguingly enough, we get only one aquatint of 'Dusasumade Gaut' (*Oriental Scenery* I.16) from the riverfront,[2] and one of 'The Baolee at

[2] George Michell mentions it as 'Ahalya Bai ghat' (Michell 1998: 72, Pl. 35). AhalyaBai and Dashashwamedh *ghat*s are no doubt contiguous, but Daniells clearly caption it 'Dusasumade Gaut' in *Oriental Scenery*.

Ramnagur' (*Oriental Scenery* III. 20) in their published oeuvre. But Maurice Shellim catalogued seven oil paintings of the Daniells (TD 40, 51, 61, 87; WD 3, 4, 15), all of which portray different sections of the Banaras riverfront: (i) Panchaganga and Durga *ghat*s (p. 62, TD51), a similar version of which in watercolour is at the Yale Center for British Art; (ii) Do (viewed from a little north) (p. 106, WD4), a similar version of which in watercolour is at the Yale Center for British Art, inscribed 'Brima and Narsingdasagaut'; (iii) Shivala *ghat* and Cheyt Singh's House (p. 105, WD3), the watercolour version of which is in the IOLR; (iv) The Manikarnika *ghat* (p. 55, TD 40); (v) Manmandir *ghat* and the Observatory (p. 111, WD15); (vi) View of the River from Benimadhava *ghat* (p 67, TD 61) and (vii) Aurangzeb's Mosque and Benimadhava *ghat* (p. 83, TD 87) (Fig.3). Of these seven, TD 40 and TD 87 are in the National Gallery of Modern Art, Delhi, and WD 15 is in the Asiatic Society, Kolkata, while others are in Private Collections

Figuure 3. 'Panchganga and Durga Ghats', Thomas Daniell. 1802. Oil, Private collection (Shellim 1979: 62).

(Shellim 1979). Six more oils by the Daniells depicting Banaras have been exhibited in the Royal Academy, London, between 1797 and 1802 (Archer 1971: 46, Shellim 1979: 124–27), which cannot be located. William finished another oil later, 'Lalita and Mir Ghat', which is in the Victoria and Albert Museum, London (Archer 1971: 46, Fig. 131). At least three watercolours of Banaras by the Daniells are in the Victoria Memorial Hall Kolkata, but they have not yet been studied in detail. (Ray n.d.: 39, 49). With their penchant for details, the Daniells have presented specific locations of the Banaras riverfront in separate paintings, and not a panoramic view, which Prinsep would emulate later. If we study the available reproductions of the seven oil paintings in Shellim's book, one thing cannot be missed: four centres on the area of Panchaganga *ghat*, over which, we know, looms large the mosque of Aurangzeb, though its view is recorded in only one painting. Obviously, paintings drawn from close quarters could not show the lofty minarets, but to a discerning viewer, the mosque is always present in the background, as the stone 'deepastambha' (lamp stand) recurs in all the four paintings as a leitmotif. Another important element subtly introduced by the Daniells would be used by Prinsep, the transformation of the viewer's gaze. In TD 61, the artist is viewing the river from the land, opening a new vista in riverfront painting. In Prinsep's work using almost the same location on the Panchaganga *ghat* (Fig.4) we would find a far more refined dimension of a similar gaze.

Here we can consider W. G. Archer's observation on why the artists mostly concentrated on Aurangzeb's Mosque as their prime subject, or rather a visual index. Archer explains (Archer 1971: 44),

> Traveller after traveller, as the boat neared Banaras, reached for his sketchbook and prepared to record the impressive scene. But, as Fanny Parks lamented, "In the midst of hundreds and hundreds of temples and ghats, piled one above another on the high cliff, or rising out of the Ganges, the mind is perfectly bewildered; it turns from beauty to beauty, anxious to preserve the memory of each, and the amateur throws down

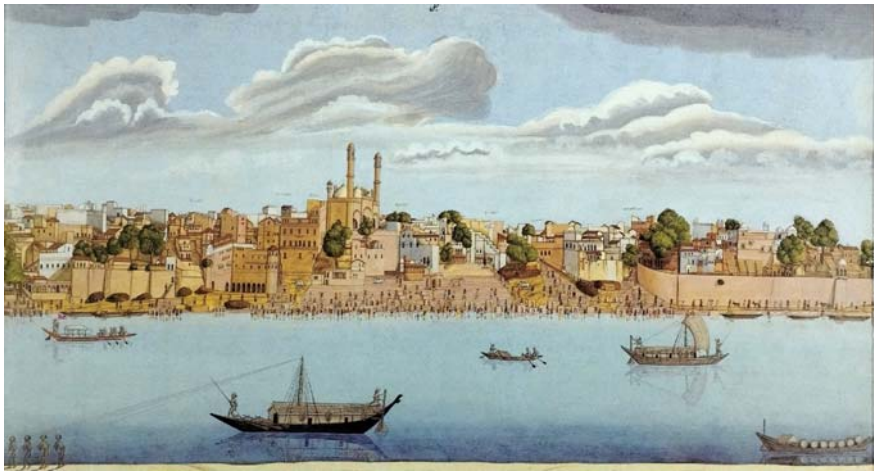
Figuure 4. 'View from Punchgunga Ghat', James Prinsep. *Benares Illustrated*, 1831-33, The Asiatic Society, Kolkata.

> the pencil in despair." For this reason, most amateur artists found the scene too complex and gave up the attempt to draw the ghats, concentrating paradoxically enough, on Aurangzeb's great mosque towering above the city; its clear-cut silhouette providing a more manageable composition.

Prinsep was a competent draughtsman and used his sharp imagination to delineate the individual characteristics of the myriad riverfront structures, but even he felt inclined to use this iconic monument in his drawings more often than not.

Only twelve years before Prinsep came to Banaras, we find another artist recording a few interesting views of Banaras in the picturesque tradition. Leaving Calcutta on 2nd December 1807, Forrest, Lt. Col., visited Banaras probably in early January of 1808. Out of a total of 24 views published in 1824, three views were drawn in and around the city, only one of which show the riverfront. Though the temples dot the foreground, the righthand side of Pl. xiv clearly shows the minarets and three domes of Aurangzeb's Mosque, which also found mention in the accompanying text (Forrest 2015: 151–54).

According to Rai Anand Krishna, 'In the 1810s, a painter from Patna arrived in Banaras, to be followed by at least two distinct groups of the "Company School" painters.' But with the discovery of a painted



Figuure 5. Riverfront panorama of Banaras, Panel 8, Unknown Indian artist. c.1800 (Krishna 2003)

folder divided into twelve panels by an unknown Indian artist forming a panorama of Banaras riverfront in The British Museum, he asserts that the Company School existed with flourish in Banaras as early as about 1800. The dates have been ascertained by Krishna in the light of the presence/absence of datable ghats in the panorama. (Krishna 2003: 3–22). This can very well be a plank, standing on which Prinsep's drawings could be compared (Fig.5).

James Prinsep

James Prinsep (1799–1840) landed in Banaras on 26th November 1820 to take up his new assignment as Assay Master of the local Mint. As his elder brother H. T. Prinsep narrates, '[…] his journey up the Ganges afforded opportunities for the exercise of his pencil, of which he freely availed himself' (Prinsep 1858: iv). Even at the age of fifteen, his skill and ingenuity in design was apparent, but an eye-injury prevented him from taking the career of an architect. Banaras enchanted him in the very first sight and in his decade-long residence in the city, he became intrinsically involved with it.

Prinsep stayed longer in Banaras than any other artist whoever captured its views. He redesigned the Mint, built the St. Mary's Church and some private buildings among which Nandeswar Kothi, the residence of the Raja of Banaras was notable and executed a stupendous job in building the Karmanasha Bridge on the high road from Calcutta to Banaras along with successfully implementing a drainage scheme for the city, the first of its kind in India. He meticulously surveyed the city, which resulted in an accurate Map (prepared in 1822, published in 1824), a Directory of Banaras (prepared in 1822, but printed only in 1999 as an Appendix to Nair 1999), and a Census of the city (published in the *Asiatic Researches*, vol. 17, 1832: 470–98).

All these engagements subtly contributed to his drawings of the city which finally took the shape of *Benares Illustrated: In a Series of Drawings* (1831–33) (Fig.6). Prinsep writes in his Preface (Prinsep 1831: 6):

Figuure 6. Title page with Prinsep's complimentary, *Benares Illustrated*, 1831. The Asiatic Society, Kolkata.

BENARES ILLUSTRATED,

IN

A SERIES OF DRAWINGS,

BY

JAMES PRINSEP, ESQ. F.R.S.

LITHOGRAPHED IN ENGLAND

By Eminent Artists.

Calcutta:

PRINTED AT THE BAPTIST MISSION PRESS, CIRCULAR ROAD.

1831.

> The specimens here presented to the public have no pretension to vie with the works of professional art, by which the cities of Europe have been illustrated. The collection of them amused a portion of the leisure of a ten years' official residence upon the spot […]. The only merit aimed at, has been that of faithful delineation.

Prinsep has made the drawings and sketches between 1820 and 1825 ('Eve of an Eclipse of the Moon' mentions the date 25th November 1825), and sent them to England in 1824 and 1825 for publication. A total of 34 Lithographic Plates and a Map were published in three installments between 1831 and 1833. The order of the plates as they were printed in London and sent to Calcutta, and in the final volume which contains the Title Page, Frontispiece, Dedication, Preface (2 pages), Introduction (12 pages) and descriptions of Plates (33 plates), and one map vary a little in their arrangement. As P. T. Nair mentions (Nair 1999: 148, 150-51), at least two complete sets of Prinsep's *Benares Illustrated* are available in Kolkata: one in the Museum of the Asiatic Society, signed and presented by the author himself on 31st July 1833, and the other in the Asutosh Collection, National Library. The Asutosh Collection has another copy which only contains 34 Plates including the Frontispiece but not the map. The Rare Division of the National Library has the Second and Third Series of 13 and 10 Plates with Title pages dated 1831 and 1833 respectively (not noted by Nair), in separately bound volumes. Another copy from the collection of the Asiatic Society of Bombay is now available online. I have checked all these copies recently and some new information have come to light.

As we cannot trace any copy of the First Series of 11 Plates of which 9 arrived in Kolkata in March 1830 (Nair 1999: 148), and two (not 3 as expected, see the 'Advertisement' quoted below) at some later date, probably in early 1831, we can only assume that this series was issued to the subscribers with a 1831 Title page. The Preface and Introduction might have accompanied the Series, as it ought to be. The Second Series with 13 Plates arrived in September 1831, but the letterpress took some more time (Nair 1999: 148-49). The National Library copy shows that a 1831 Title page was attached to it. The Third Series has an 1833 Title page, and it must have arrived around

July 1833, because Prinsep presented the autographed copy on 31st July. The Preface probably had to be reissued, because it refers to the Map, which, though printed in 1824, has been attached to the complete set. At least two of the descriptions to the Plates have also been edited to mention latest developments ('View from Ugneswur Ghat' and 'View Westward from Ghoosla Ghat'). In no extant copy the directions to the binders for placing the Plates could be found, so it is difficult to guess what would have been the final intended sequence of Plates. O. P. Kejariwal raises a point in his 'About this Edition' (Prinsep 2009):

> The first edition of James Prinsep's "Benares Illustrated", for some unexplained reason, carried two title pages: one showing the date of publication as 1833, and the other, 1831. The first part with the dateline 1833, had nine illustrations, while the other with the dateline 1831, had seventeen illustrations and five drawings.

Now, Kejariwal nowhere mentions from which copy/copies he reproduced his edition, so the statement cannot be verified. But it is clear from the foregoing discussion that probably the First Series of Plates and surely the Second Series carried the 1831 Title page, and the Third 1833. So it might have been a binder's mistake to insert both Title pages in the final set which Kejariwal has seen. That the final, complete set has been prepared with the 1831 Title page is evident from the autographed copy preserved in the Asiatic Society, Kolkata.

The names of the Lithographic artists who have worked on the drawings of Prinsep could be traced from the Plates (mentioned as 'Drawn on stone by […]'). They are given below with some details. Nair listed the lithographers according to the Plates (Nair 1999: 144–45)

1. L. Haghe [Louis Haghe (1806-85) was a lithographer and watercolour artist from Netherlands, who settled in England in 1823. With William Day (1797–1845) he formed a partnership firm around 1830 named Day and Haghe, which became the most famous early Victorian Lithographic printing firm in England. Some Plates in *Benares Illustrated* including the Frontispiece which were 'Drawn on stone by L. Haghe' has been printed by 'W. Day Lith' (Lithographers) of 17 Gate Street, London, and (later?) by

'Day and Haghe' of the same address, who were 'Lithographers to the King' then.]

2. All other lithographers of London mentioned in *Benares Illustrated* like George Bernard (Illustrator and lithographer, a pupil of artist James Duffield Harding and died in 1890), William Walton (William Louis Walton b. 1808? d. 1879, was one of the first artists to become prominent in the relatively new medium of lithography), J. D. Harding (James Duffield Harding, b. 1798 d. 1863 was a British landscape painter, lithographer and author of drawing manuals), J. W. Giles (John West Giles who flourished between 1830-1865, was a British painter, engraver and lithographer), G. Scharf (George Johann Scharf b. 1788 d. 1860 was a German watercolour artist, draughtsman and lithographer who settled in London), W. Sharp (William Sharp b. 1803 d. 1875 was a British-born painter who introduced chromolithography in America in 1840) and T. Dighton probably worked for another famous Lithographic printing firm, C. Hullmandel (Charles Joseph Hullmandel b. 1789 d. 1850 became one of the most important figures in the development of British lithography. He maintained a lithographic establishment on Great Marlborough Street from about 1819 until his death). All the Plates drawn on stone by the above-named lithographers were printed by C. Hullmandel, who himself has engraved one Plate.
3. James Prinsep himself has 'etched' the Plate 'Boorwa Mungul' and 'reduced from Col. Garstin's plate' the 'Elevation of the Temple of Vishveshvur'.
4. Four Plates record the name of 'Kasheenath Sculpts'. Prinsep mentions in his 'Preface', 'Some of the Plates have been engraved in Calcutta, and although very inferior to the advanced production of the art at home, still it is hoped they will give a favourable idea of the capabilities of native artists'. Also, in the descriptive text to the Plate 'Ghoosla Ghat', Prinsep further comments, 'Some indulgence is solicited for this and the other outline engravings given in the present series: they have been executed by a Native,

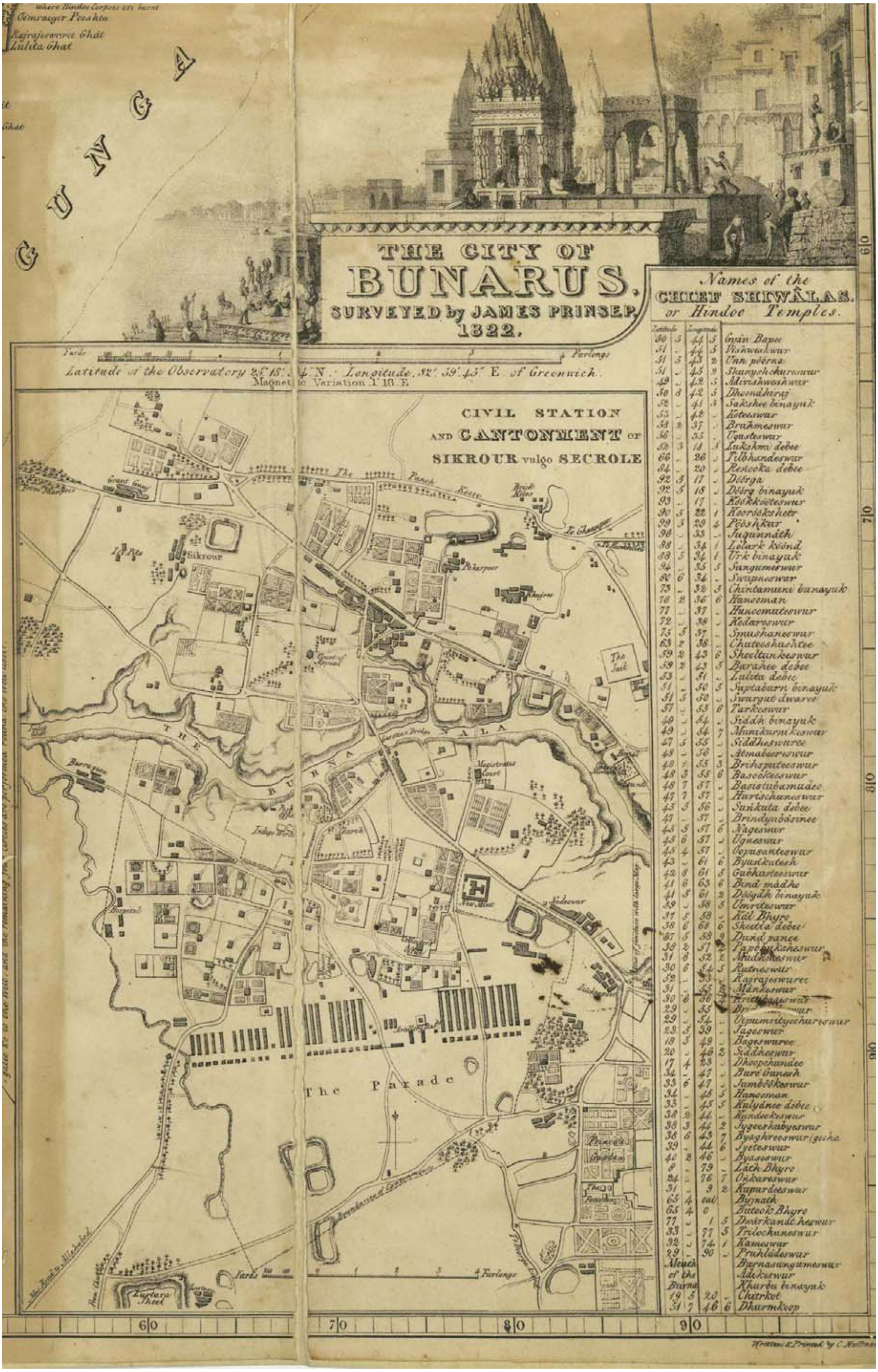
who has much to learn in perspective both aerial and linear; in other respects, the plates are creditable enough to the progress of the Arts in Calcutta'. Nair explains that Kashinath Mistry is the native artist referred to by Prinsep. 'He was a resident of Garstin's Place, working at the nearby Mint in Church Lane. He engraved the plates for the Asiatic Researches and the Journal of the Asiatic Society of Bengal, sometimes free or at $^{1}/_{3}$rd or ¼th of the charges of European artists stationed in Calcutta. His patrons, Dr. H. H. Wilson and James Prinsep, brought him to limelight.' (Nair 1999: 143–44)

5. In case of six Plates (Four by Kashinath, one by Prinsep and another with no engraver mentioned) where the outlines are presented, we find border impressions on paper. Other lithographic Prints were probably pasted on pages, which could be understood by the difference in the whiteness of the Print and the underlying page due to acidification. The Asutosh Collection copy, which retains much of its original character including the tissue-guards covering all the Plates and a remnant of the original (?) binding, clearly bears this out.

In the Second Series preserved in the National Library, we find an 'Advertisement' inserted after the Title page, which reads:

> Subscribers to the first series of these views, who received only eleven plates, will find the missing plate added to the present set. The designer was most anxious on the present occasion to have reduced the price of his work, which seems exorbitant when compared with publications of a much higher order at home; he has however been prevented from so doing by the result of his former publication: it is indeed hardly to be expected that the expences attendant upon the execution of works of a graphic nature in England, should be even balanced by their necessarily limited sale in this country, unless a price is charged disproportionate to their merit. Should the designer be induced to continue the series, to which he feels well inclined by the number of objects still remaining to be illustrated in the holy city, he can only assure his friends and the public, that their patronage shall never be taxed beyond the actual cost of production!

Figuure 7. Inset Map, 'The City of Bunarus Surveyed by James Prinsep', 1822, *Benares Illustrated*, 1831-33. The Asiatic Society, Kolkata.



THE CITY OF
BUNARUS,
SURVEYED by JAMES PRINSEP,
1822.
Latitude of the Observatory 25° 18' 54" N. : Longitude, 82° 59' 45" E. of Greenwich.
Magnetic Variation 1° 18' E.
CIVIL STATION
AND CANTONMENT OF
SIKROUR vulgo SECROLE
Names of the
CHIEF SHIWÂLAS.
or Hindoo Temples.
Sikrour
The Jail
THE BURNA NALA
The Parade
Boundaries of Cantonments
Furlongs
G U N G A
Lalita Ghat

This clearly indicates that Prinsep could never probably recoup the expenses of his album as indicated by Nair (Nair 1999: 151).

Prinsep's Map ('The City of Bunarus Surveyed by James Prinsep', 1822) is another remarkable achievement (Fig.7). It is the first map of Banaras drawn in the Western tradition of cartography, which are designed to represent everything considered characteristic of factual urban qualities and hence essential. As Jan Pieper summarizes, 'It shows the essentials of the relief, which is totally neglected on the pilgrims' map, the built-up and open spaces, it gives a correct picture of the size, direction and spatial organization of the streets and it shows all public places of importance… The little inset at half-scale shows all the achievements and the infrastructure of the British Raj as assembled in Cantonments and Civil Lines.' (Pieper 1979: 215).

Prinsep's original drawings remained untraceable for a long time. As Joachim K. Bautze points out, 'Some of Prinsep's original watercolours surfaced only very recently and it seems, that Prinsep made many more watercolours which were not reproduced in his book' (Bautze 2008: 214, 224). Patricia Kattenhorn listed sixteen such drawings in her Catalogue (Kattenhorn 1994: 260–61). Pheroza J. Godrej's recent survey of the views of Banaras by European artists is based on private collections (Godrej 2023: 109-150).

James Prinsep very carefully presented his views of Banaras to a discerning audience. As he became an insider to the city, not a passing traveller, he has chosen his subjects accordingly. Here we do not have the scope to separately discuss his 34 Plates, but we may note a few observations. *Benares Illustrated* was dedicated to

> William Augustus Brooke Esq., Senior Civil Servant of the Bengal Presidency, who, as Agent to the Governor-General and Chief Judge of Appeal for six and twenty years, has exercised the principal civil authority in Benares […] as a tribute due to the public character, and in grateful remembrance of the amiable qualities which have endeared him alike to the Hindoo, the Mosulmen, and the Christian inhabitants of the Holy City.

If we juxtapose the Frontispiece (Fig. 8) with this dedication, we can clearly discern Prinsep's outlook: his Banaras does not exclude the 'others', nor does it want to wield extra authority on the part of

Figuure 8. Frontispiece, James Prinsep, *Benares Illustrated*, 1831.
The Asiatic Society, Kolkata.

new rulers. We must remember that only a decade before Prinsep's arrival in Banaras, there happened the so-called 'War of the Lat' in 1809 between Hindus and Muslims which resulted in the felling of the sacred stone pillar ('Lat Bhairo'). Prinsep carefully repaired the minarets of Aurangzeb's Mosque, drawn it and used it in other drawings as well, drawn the Gyanvapi mosque with the old Vishwanath temple, even presented a measured ground plan of it, along with the elevation of the new temple. 'Ramleela' (Fig. 9) and 'Bhurut Melao' or the 'Boorwa Mungul' Festivals have been presented side by side with 'Procession of the Tazeeas' (Fig. 10) and 'Lal Shah's Tomb'.

Figuure 9. 'Festival of the Ram Leela', James Prinsep, *Benares Illustrated*, 1831-33. The Asiatic Society, Kolkata.

A view of Thutheree Bazar, A Preacher Expounding the Poorans, A Morning Concert, the Hindoo Nach Girls Ulee Bundee, even the Sleeping Apartments of Kashmeeree Mul's House provide a rare glimpse into the inner life of the city. The Plates are not mere representations frozen in time, to remain framed and hung on the drawing room walls of a connoisseur's house, but are enlivened profiles of a bustling city which has survived for millennia with much cultural diversity and syncretism. This structured, composite and cosmopolitan point of view distinguished Prinsep's drawings from others, as if he gives a new interpretation of the picturesque which helped to create a long lasting impact.

Epilogue

According to Joachim K. Bautze, 'The most influential publication in terms of views from the sacred city is *Benares Illustrated* […] As no copyright then existed, Prinsep's lithographed watercolours were the most influential in illustrating the Western view of Benares' (Bautze 2008: 214). Bautze gives numerous examples to elucidate his point. We

Figuure 10. 'Procession of the Tazeeas', James Prinsep, *Benares Illustrated*, 1831-33. The Asiatic Society, Kolkata.

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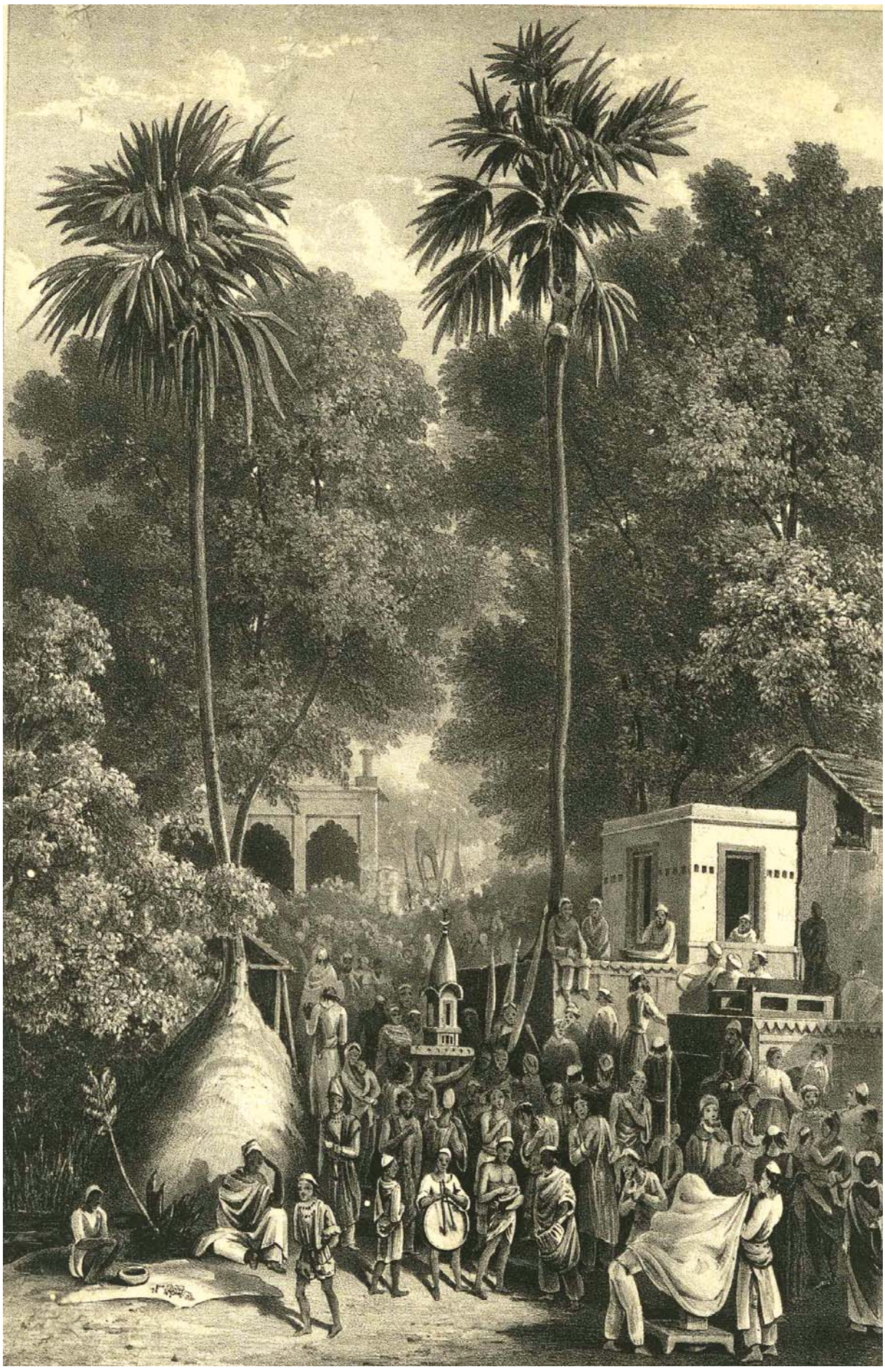
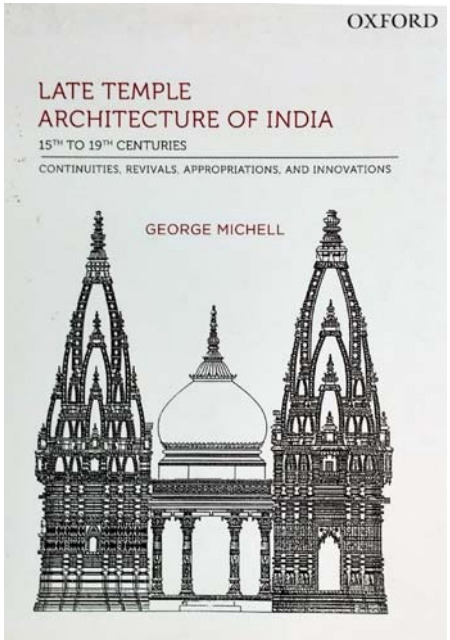


Figuure 11. 'Benares', Frontispiece, *Leupolt's Erinnerungenan das Missionswerk in Benares*, Albert Ostertag, 1846.



Figuure 12. Jacket visual, 'Vishvanatha temple of Ahilyabai, 1777, Banaras; architectural drawing by James Prinsep, 1831', *Late Temple Architecture of India*, George Michell, 2015.

here mention only one: Prinsep's lithograph of 'Benares: A Brahmin placing a Garland on the holiest Spot in the sacred City' reappears as the frontispiece ('Benares'), in Albert Ostertag's *Leupolt's Erinnerungen an das Missionswerk in Benares,* 1846 (Fig.11). Even in the 21st Century, nearly 200 years after his demise, Prinsep's drawings still make to the covers of influential literature. Two examples will suffice. Vasudha Dalmia's *Orienting India: European knowledge formation in the Eighteenth and Nineteenth centuries*, New Delhi: Three Essays Collective (2003) uses Prinsep's 'A Preacher Expounding the Poorans' as its cover illustration and George Michell's *Late Temple Architecture of India: 15th To 19th Centuries: Continuities, Revivals, Appropriations, and Innovations*, New Delhi: Oxford University Press (2015) uses 'Elevation of Temple of Vishveshvur' as its jacket visual (Fig.12).

References

Archer, Mildred 1980. *Early Views of India: The Picturesque Journeys of Thomas and William Daniell 1786-1794: The Complete Aquatints*. New York: Thames and Hudson.

Archer, W. G. 1971. Banaras and British Art. *Chhavi: Golden Jubilee Volume, Bharat Kala Bhavan 1920*-1970, (ed.) Rai Ananda Krishna, pp. 43–47. Banaras: Bharat Kala Bhavan.

Arnold, David 2005. *The Tropics and the Traveling Gaze: India, Landscape, and Science 1800–1856*. Delhi: Permanent Black.

Asher, Catherine B. 1992. *Architecture of Mughal India*. Cambridge: Cambridge University Press.

Barrow, Ian J. 2005. *Making History, Drawing Territory: British Mapping in India, c.1756–1905*. New Delhi: Oxford University Press.

Bautze, Joachim K. 2008. Examples of Unlicensed Copies and Versions of Views from Benares: Their Authorship and Identification. *Visualizing Space in Banaras: Images, Maps, and the Practice of Representation*, (eds.) Martin Gaenszle and Jorg Gengnagel, pp 213–232, New Delhi: Oxford University Press.

Das, Sunil [ed.] 1981. *Manomohan Basur Aprakāśita Diary* (i.e. *The Unpublished Diary of Manomohan Basu*, in Bangla). Calcutta: Sahitya Loke.

Eck, Diana L. 1993. *Banaras: City of Light*. New Delhi: Penguin Books India.

Forrest, Lt. Col. 2015 [rep]. *A Picturesque Tour Along the Rivers Ganges and Jumna, in India: Consisting of Twenty-four Highly Finished and Coloured Views, A Map, and Vignettes, From Original Drawings Made on the Spot; With Illustrations, Historical and Descriptive*. New Delhi: Niyogi Books [1st pub. 1824].

Foster, William [ed.] 2012 [rep]. *Early Travels in India 1583–1619*. Delhi: Low Price Publications [1st pub. 1921].

Gaenszle, Martin and Jorg Gengnagel, [ed.] 2008. *Visualizing Space in Banaras: Images, Maps, and the Practice of Representation*. New Delhi: Oxford University Press.

Godrej, Pheroza J. 2023. Views of Benares by European artists of the colonial-era: A Picturesque Journey. *Commemorating CSMVS Centenary 1922-2022, SMVS Research Journal 2022*: 109-150.

Gutschow, Niels 2008. Panoramas of Banaras. *Visualizing Space in Banaras: Images, Maps, and the Practice of Representation*, (eds.) Martin Gaenszle and Jorg Gengnagel, pp. 191-211, New Delhi: Oxford University Press.

Hodges, William 1785–88. *Select Views in India drawn on the Spot in the Years 1780, 1781, 1782, and 1783*. London, [rep. in Tillotson 2023].

Kattenhorn, Patricia 1994. *British Drawings in the India Office Library*, Vol. III. London: The British Library.

Krishna, Rai Anand and Manu Krishna 2003. *Banaras in the Early 19th Century: Riverfront Panorama, Panorama of Banaras Viewed from across the Ganges by 'a native artist'*. Varanasi: Indica Books.

Lath, Mukund (tran., int. and ann.) 2005. *The Ardhakathanaka*. New Delhi: Rupa & Co.

Michell, George 1998. *India: Yesterday and Today: Two hundred years of architectural and topographical heritage in India*, Aquatints by Thomas and William Daniell, Modern photographs by Antonio Martinelli. Shrewsbury: Swan Hill Press.

Mitter, Partha 2013. *Much Maligned Monsters*. New Delhi: Oxford University Press [1st pub. 1977].

Nair, P. Thankappan 1999. *James Prinsep: Life and Work*. Vol. I, Background and Benares Period. Calcutta: Firma KLM Private Limited [Vol. 2 not published].

Pieper, Jan 1979. A Pilgrims' Map of Benares: Notes on Codification in Hindu Cartography. *GeoJournal* 3/2: 215–18.

Prinsep, H. T. 1858. Memoir of the Author. *Essays on Indian Antiquities, Historic, Numismatic, and Palaeographic, of the Late James Prinsep, F.R.S., Secretary to the Asiatic Society of Bengal; To which are added his Useful Tables, Illustrative of Indian History, Chronology, Modern Coinages, Weights, Measures ETC*. Vol. I, (ed.) Edward Thomas, pp. i–xvi. London: John Murray.

Prinsep, James 1831. *Benares Illustrated in a Series of Drawings, By James Prinsep, ESQ. F.R.S. Lithographed in England by Eminent Artists*. Calcutta: The Baptist Mission Press.

—— 2009. *Benares Illustrated* with *James Prinsep and Benares by O. P. Kejariwal.* Varanasi: Pilgrims Publishing.

Ray, N. R. n.d. *A Descriptive Catalogue of Daniells work in the Victoria Memorial*. Calcutta: The Trustees of The Victoria Memorial.

Sen Viśārad, Bijayrām 2009 [rep.]. *Tirtha-Mangal*. Kolkata: Parashpathar Prakashan [1st pub. 1916].

Shellim, Maurice 1979. *India and the Daniells: Oil paintings of India and the East by Thomas Daniell RA 1749-1840 and William Daniell RA 1769-1837*. London: Inchcape & Co Limited.

Tillotson, Giles 2000. *The Artificial Empire: The Indian Landscapes of William Hodges*. Surrey: Curzon Press.

Tillotson, Giles [ed.] 2023. *William Hodges & The Prospect of India*. New Delhi: DAG Pvt. Ltd.

Vanina, Eugenia. Ardhakathanaka by Banarasi Das: A Socio-Cultural Study. *Journal of the Royal Asiatic Society, Third Series* 5/2: 211–224.

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ARTICLE

Assaying the Assay Master: James Prinsep and His Engagement with Coins

Susmita Basu Majumdar

Abstract

This essay attempts to explore the contribution of the assay master, James Prinsep in the field of assaying and also his efforts in the field of numismatics. Prinsep's engagement with numismatics, especially to read the legend on the coins, allowed him to find the clue to decipher the ancient scripts. His contribution was not only in the field of numismatic researches but also in contemporary coinage. He engaged himself in reforming the coinage of the East India Company by bringing a uniform currency to reduce complications. We shall not discuss his errors or problems in decipherment; rather the essay tries to evaluate his approach and methodology. Our prime concern is to understand his passion and urge to unravel the mysteries and explore the unknown India's ancient and medieval past.

Keywords: James Prinsep, assay master, assaying, the Royal Mint in London, East India Company, Calcutta mint, Banaras mint, Roman coins, Greek coins, Persian coins, Bate's Medal-ruling Machine.

To cite this article
Basu Majumdar, Susmita 2024. Assaying the Assay Master: James Prinsep and His Engagement with Coins. *Journal of the Asiatic Society* 66/2: 135–148.
ISSN:0368-3308

At the close of the eighteenth century was born James Prinsep, who was destined to shine in spite of his short life span of forty-one years. He carved his own niche and was instrumental in changing the course of ancient Indian history by deciphering coins and scripts, and thus made his mark in the field of epigraphy and numismatics. He was a laborious researcher who was not only methodical but highly meticulous in all aspects of his research. He was interested in pursuing architecture but due to the problems which he was facing with his eyesight he was not allowed to carry on with his studies in architecture. His eyesight was restored with the help of good treatment but he could not pursue a career in architecture as that demanded sustained pressure on his eyes for creating drawings. His father was aware of an opening in the assay department in India and to equip his son with the skills, he sent him for a training in Chemistry at Guy's Hospital. Then he also made him an apprentice to Robert Bingley, The Assay Master at the Royal Mint in the London (1818–19). This training in assaying later shaped the path for his arduous researches in the field of numismatics. Had Prinsep's father known the fact that he would indulge in academic research on coins, he would have never encouraged Prinsep to take up the profession of assaying. This reminds us of Upali, whose father desired his son to be a money changer when he grows up, but his mother did not want him to be one as it would affect his eyesight (Rhys Davids and Oldenberg 1899). His interests were varied and he mastered them all as and when required without any formal training. His engagements with these disciplines are reflected in his multifaceted publications on diverse themes on which he had published extensively. His engagement with epigraphy and numismatics was from a strange passion to unravel the past and solve mysteries. Often his writings record the thrill of unravelling mysteries. His contribution was not only in the field of numismatic researches but also in contemporary coinage. He engaged himself in reforming the coinage of the East India Company by bringing a uniform currency to reduce complications.

He joined the Calcutta Mint and later moved to the Banaras Mint to finally return to Calcutta Mint as the Assay Master. On the 4th of September 1819 the Governor General appointed James Prinsep to the post of Assistant Assay Master for Calcutta Mint under H.H. Wilson who was the then Assay Master. Prinsep reached Calcutta on the 18th of September 1819. Soon Wilson had to move to Banaras and Prinsep equipped himself with the knowledge to run the mint within two months and successfully managed the Calcutta Mint. Prinsep was then sent to the Banaras Mint and was upgraded to the post of Assay Master of that mint in October 1820. He worked as an Assay Master until 1826 when he was made the Secretary of the 'Benares Mint Committee' which he controlled till 1829. When the Mint of Banaras was abolished, he returned to Calcutta Mint as Deputy Assay Master of a newly constructed mint at the Clive Street under Wilson. He was very hard working and was a perfectionist. He was a trained Assay Master, expert in mathematical calculations and statistical applications. Engaging in innovations and knowing the unknown by solving mysteries was his passion. His engagement with his principal job of assaying, made him to make a balance with such accuracy as to indicate the 3000th part of a grain. The utility of this creation can be assessed from the fact that the balance was purchased by the Government for use at the largest mint of India, the Calcutta Mint, when Prinsep left for London in 1838.

Prinsep engaged in assaying and he pursued it with passion and rigour. He was a born researcher and his inquisitive mind was constantly engaged in innovations and finding new avenues for making progress in his own field. He also explored the unknown and was involved in diverse researches. It was his scientific bent of mind which led him to the researches in the field of measuring high temperatures in furnaces accurately. The result of this research was published in the *Philosophical Transactions of the Royal Society of London* in 1828, which opened the path of his selection as a Fellow of the

Royal Society. His constant researches opened up new avenues and he suggested the possibility of visual pyrometric measurement using a calibrated series of mica plates and also by watching the melting of calibrated combinations of platinum, gold and silver alloys placed in a crucible. He also described a pyrometer that measured the expansion of a small amount of air held within a gold bulb.

The varied weight of the coinages in circulation all over India was a major issue and Prinsep was instrumental in solving this discrepancy. Garg mentions in his article on James Prinsep that '[t]he decline of the Mughal empire had resulted in the mushrooming of a large number of mints throughout the country. These mints produced debased coins of varying weights and differing values' (Garg: 1997: 85). For the sake of smooth transaction and enhanced efficiency of audit and finance, Prinsep proposed the currency reforms by introducing a new and uniform weight standard in 1833, which was then submitted to the Government and based on this the weights and measures were reformed. William Bentinck approved Prinsep's proposal. He proposed to adopt the Indian weight standard of the silver rupee (one *tola* or 12 *māṣa*s) as a standard for the Calcutta, Bombay and Madras Presidencies of the East India Company, and thus a uniform weight standard was introduced over a larger part of the Indian subcontinent. This uniformity was brought about by introducing a new metrology which was quite a challenge as the new weight standard was to be used not only at the Mint but at all associated levels like the Custom's House, the Treasury, Banks, Collector's offices and all related Government offices.

After the success of the reform in weight standard, which was well received, reforming the device of the present coinage struck his mind. He started sketching new devices for a fresh coinage. Kashinath who was a die cutter was asked by Prinsep to create new dies. Prinsep had to constantly try new ways to introduce a reformed currency. In 1835 he wrote a note to the Government on reasons for reforming currency.[1]

Thus, Prinsep was successful in introducing a uniform metallic currency in a major part of India in two stages-uniformity in metrology and then a uniform cum universal coinage. The Company rupee was thus established by the Act XVII of 1835. The introduction of new currency now demanded the minting of a large number of coins for the next 3 years (Garg: 1997: 87).

It was Prinsep's training in assaying which led him to engage with ancient Indian coinage as well as the same time his superior H.H. Wilson's engagement with numismatics also inspired him. Initially when Wilson was working on the Mackenzie's collection preserved in the Asiatic Society, Prinsep began assisting him in the study of ancient Indian coins in 1831. Wilson published his work in the *Asiatick Researches* in 1832 and the same year he resigned and Prinsep was made the Assay Master, though Wilson tried to promote James Atkinson yet it was Prinsep's destiny to contribute to the shaping of India's new coinage and also leave his mark in the field of numismatics and epigraphy.

His posting at Calcutta in 1830 may be said to have been a landmark in his short-lived academic career (Mitra Shastri 1999: 191). Prinsep's interest in engaging in serious academics associated him with the Asiatic Society and also with Major Herbert who initiated *Gleanings in Science* to which Prinsep contributed articles which were much appreciated. In 1831, Prinsep took the charge of the publication when major Herbert proceeded to Oudh. He was instrumental in converting this generic publication to a specific journal, the *Journal of the Asiatic Society of Bengal* (hereinafter JASB). He soon became the Secretary

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[1] *National Archives of India,* Financial Department (cited in Garg 1997: 86, 89). Garg has consulted them personally and quotes Prinsep's attempt to expedite the whole process of introducing a reformed coinage to the Company in following words which made a major impact, 'The sovereignty of the King of England over India has now been broadly declared and promulgated over the world, after which to continue with the unmeaning distich of Shah Alam is ridiculous, if it be not lese [*sic*].'

and continued from 1832–39. He published his own researches on varied themes of Indian history; of course most of them were on numismatics and epigraphy. He published his study of the Roman coins first and then the Greek and Persian coins in the collection of the Asiatic Society. Besides numismatics, Prinsep also published articles on Chemistry, Mineralogy and Indian Antiquities. He was the editor of the JASB and his art of sketching led him to make illustrations for several articles. He continued this work of editing till 1838 when he fell ill and had to leave for London where he expired.

In the very first volume of the JASB (1832) Prinsep described the Roman coins of the Society's cabinet. This paved the way to the initiation of the whole genre of studies on the so-called Indo-Roman trade (which is a misnomer). Prinsep, after examining the 'insignificant collection' (in terms of quantity) of Roman coins in the collection of the Asiatic Society, mostly without any documented provenance and at times even the donor, believed that in the absence of these details the sole importance of these Roman specimens was in the fact that they were of 'Indian origin'. He suggested that these were reported from India and not in the literal sense that they were minted in India. In 1814 the Asiatic Society opened its museum to receive the collections from private individuals. It is indeed interesting that while writing on the Roman coins, Prinsep anticipated and pointed out that several such discoveries of Roman coins would have happened in the recent past by Europeans who would have collected these specimens and carried them back to Europe for their personal gain. But after reaching Europe they might have found or realised that these were very common in the West and could not fetch them what they had expected. Prinsep mentions (Prinsep 1832: 392),

> [...] they may be mortified in finding them swallowed up and lost among the immense profusion of similar objects in the public and private cabinets of European antiquarians; and they may perhaps regret that they did not leave them where, from their rarity, they would have been prized, and from their presence, have promoted the acquisition of further stores for antiquarian research from the wide continent of India.

This statement of Prinsep is of extreme significance. It not only shows that the removal of the antiquities from their place of finding or detaching them from their provenance makes them loose their context, but also the urge to study the specimens in their original context. It was Major Tod's collection which was retained in India and was published in the *Transactions of the Royal Asiatic Society*. Prinsep added to his publication the Roman coins in the collection of the Asiatic Society which were already catalogued by R.Tytler in 1826 where twelve Roman coins were catalogued; besides this, the private collections of Mr. Wilson, Col. T. Wilson and his own collection found from different parts of India were also included. After this publication the collection of Roman coins increased and scholars began investigating why Roman coins had travelled all the way to the east. Thus, Prinsep's publication worked as a catalytic factor and opened new vistas for the study of Roman coins found in India and also the trade between India and Rome. When Prinsep was writing this article on the Roman coins which were also in the possession of the Asiatic Society (~50-60 coins) the Asiatic Society acquired a collection of 250 coins from an Armenian. Prinsep clarifies the exclusion of these 250 coins as he was sure that these were not found or discovered in the Indian subcontinent (Prinsep 1832: 392–3, 408). He clarifies this in a note, but what is interesting is that the numismatist in Prinsep was not satisfied by simply excluding them and refraining from publication. Though he writes that if there are any rare specimens in this lot of 250 coins then he might consider publishing them. But at the same time, he identified them and attributed them to rulers. He appended a list of this at the end of his article as a note. After this publication more and more Roman coins were now reported from the Indian subcontinent as people could now recognise them. His training in the mint had taught him to draw the devices with accuracy and he utilised his skills to create drawings of Roman coins and publish them not for the numismatists but for the enthusiasts interested in antiquarian

remains and also in unravelling mysteries. While doing this, Prinsep explained his endeavour 'to be of use to those who were untutored in the mysteries of numismatology, so that, by the aid of the drawings, they might be able to recognize the type of Roman fabrication in any antique specimens which they were likely to discover on the continent of India (Prinsep 1833a: 27).

Prinsep and his contribution to numismatics and epigraphy have already been assessed by Ajay Mitra Shastri and Sanjay Garg, hence it is not worth repeating the previous assessments (Garg 1997, Mitra Shastri 1999). His contribution lies in his superb numismatic sense and in the understanding of the significance of the monetary value of the Roman coins found in India. As he was well aware of the fact that the specimens found in India were not of high value to the collectors neither were these extraordinary medallions of collector's choice nor coins par excellence. But his historical sense and numismatic understanding allowed him to assign the real value of the Indic specimens as marker of 'the principal channel of commerce between India and the Roman Europe'. However, Prinsep was not the first to mention this as Robertson had already mentioned that these Roman coins were one of the principal returns in trade for the spices, precious stones, silk etc. However, Prinsep was of the opinion that Indian subcontinent did not have its indigenous coinage and hence these Roman specimens were in circulation which in the initial stage of development of Indian numismatics can be well understood.

Prinsep's training as an Assay Master was helpful in developing his numismatic understanding. He soon realised that the numismatists should not only be concerned with names of the metallic pieces and the values or relative values of these issues. As he himself points out that "this part of the subject is generally disregarded by writers on medals, properly so called, who look to their *numismatic* value only as elucidatory of history and the arts…" (Prinsep 1832: 395). He elaborately describes the names of the gold, silver and copper issues

and also added descriptions on the value and relative values of these coins. However, being trained as an assyist his major focus was on cataloguing with as much efficiency as possible and making accurate drawings of the devices on coins. Though Prinsep himself enjoyed to unravel mysteries and explore the unknown past of India by identifying coins and attributing them to specific dynasties and ruler, but he did not engage in this initially. He first began with the known coinage i.e. the Roman, then intended to indulge with the Greek, and then with Persian and finally, with the new unidentified and unattributed Indian specimens. While working on the Roman coins Prinsep had already decided his next publication on Greek and Persian coins in the cabinet of the Asiatic Society. He wished to instigate those who had the opportunity of forming collections especially in the north western provinces stating the efforts of Major Tod who during his stay in the Indian subcontinent had successfully created a large collection of 20000 coins over a span of twelve years and published it in the first volume of the *Transactions* of the Royal Asiatic Society. Major Tod pointed towards the find of Apollodotus and Menander's coins in his collection which triggered interest of the European scholars especially interested in Greek coins.

Prinsep would not have deciphered the scripts if he did not engage in numismatics. It was his in-depth study of ancient Indian coins, their legends, that he could, with the help of a logical thought process, engage in decoding the values of the alphabets within a short span of three years (1834-1837). Prinsep was of the opinion that Kharoṣṭī which was not deciphered till then was a type of 'Pehlevi' (Prinsep 1833a: 36). In 1833 Prinsep mentioned that until the legends in Pehlavi (Kharoṣṭī) were read, it would not be possible to identify and attribute the coins which he considered to be Sassanian. But at the same time, he was sure that if a considerable collection of these coins was made, some key might be discovered to the value of the alphabet as the names and titles would be alike in all especially the names were already known from

history (Prinsep 1833a: 36). Though he was writing about the Kharoṣṭī script but it was applied for the discovery of Brāhmī as well and thus, much before the discovery of the Indic script Prinsep was clear about the methodology or the clue for its decipherment.[2] The publication on the discoveries by Charles Masson in Afghanistan which was published in the JASB led Prinsep to engage in the study of legends on the coins and the decipherment of the unknown script on the coins.

Prinsep was meticulous in his descriptions and more so in making the line drawings of the devices on the coins especially when it came to the legend, he was extremely careful. It is interesting to note that at times he felt that the onus of explaining the details of the coins which he has published was on him and many a times he published further notes and drawings on his own previous publications. (Prinsep 1835a: 327–337). Of course, the identifications were most of the times incorrect, owing to the nascent stage in which the history of the subcontinent was at that time. These wrong attributions or errors in deciphering correct legends by no means reduce the significance of Prinsep's efforts or his level of dedication and intellect.

Prinsep also studied the coin collection of Alexander Burnes during his travel in Punjab and the valley of the Oxus (Prinsep 1833b: 310–318). He also studied the Bactrian and Indo Scythian coins collected by Swiney (Prinsep 1833c: 405–416). Maharaja Ranjit Singh's employee General Ventura's collection was the next to engage Prinsep in numismatic studies in 1833. General Ventura had asked for a French translation of the final publication, which Prinsep published in 1834 in the form of two memoirs. Another collection of General Ventura, sent through General Allard, was also studied by Prinsep (Prinsep 1835a:

[2] In 1838, he observes that 'It must be remembered that the only incontestable authority for the determination of a vowel or consonant is, its constant employment as the equivalent of the same Greek letter in the proper names of the Bactrian kings. Beyond this we have only analogies and resemblances to other alphabets to help us, and the conjectural assumption of such values for the letters that occur in the titles and epithets of royalty as may furnish an admissible translate of the Greek in each and every case' (Prinsep 1938: 639).

327). Then he published the coin collection of Captain Court—another officer in Ranjit Singh's army—discovered at various places in Punjab and Afghanistan.

In 1834, he also engaged in the study of the coin collections of Captain Cautley (Prinsep 1834: 227–320), Lieutenant A. Conolly, Swiney, Sheikh Karamat Ali, Mohun Lal, Burnes and Geraard. All these came to the Asiatic Society and Prinsep engaged in their study and also published them in 1835 in the JASB (Prinsep 1835b). He also engaged himself in the study of the lesser known and unidentified punch marked coins, uninscribed cast copper coins of the Western Kṣatrapas, Kuṣāṇas, Guptas, Post-Gupta coins, besides the known Indo-Greek, Roman, Indo Scythian, Indo Parthians, Indo Sassanian coins, as well as Rajput coins and also medieval coins. The Western Kṣatrapa coins were mentioned by him as the Saurashtra group of coins while he was trying to decipher the legends on them (Prinsep 1837: 377–392). He also studied the coins found from Sri Lanka (Prinsep 1837b: 288–377).

Another trait of Prinsep was his obsession with precision of instruments. While publishing an article on Bactrian coins, he made it clear in the title itself that this was a sequel to his previous publication (Prinsep 1838: 636–658); he commences on an apologetical note saying that

> It is not easy to gratify my numismatological readers with a plate of entirely new Bactrian coins so frequently as they would wish; for, independently of the time and labour requisite for engraving them, the subject, as to new names at least, may be looked upon now as nearly exhausted. Opportunities however still occur of verifying doubtful readings, of supplying names where they were erased or wanting in former specimens, and of presenting slight varieties in costume, attitude, and other particulars, which tend to complete the pictorial history of the Bactrian coinage.

The above statement clearly shows how dedicated Prinsep was to his readers and how much he was concerned with their expectations from his publication. At the end of this article Prinsep adds a postscript which is quite interesting and explain how difficult and tedious it

was to produce plates. He illustrated two coins engraved with a ruling machine which he had made with the help of an instrument imported from England. Getting this instrument i.e. Bate's Medal-ruling Machine, shipped to India was a 'long cherished expectation' (Prinsep 1838: 655). It reached after two years delay and Prinsep was not satisfied by the results. As he mentions, 'instead of being their patent instrument, warranted to correct all distortion in the engraving of the object ruled, it is precisely the original defective instrument which has long been discarded as unfit for use.' He was not satisfied by just bringing out this fact to his readers but went further to demonstrate it as he thought it his duty to support it with proof. His scientific aptitude is reflected in his attempt to create his own instrument. He first expressed his dissatisfaction and after strong criticism, he mentioned that he was now compelled to invent and make better and an error-free instrument himself with his own resources. Since Mr. Bate's instrument came with a condition that he can use it outside England only, Prinsep clearly stated in his postscript that 'I shall moreover be at liberty to use it wherever I please'(Prinsep 1838: 658).

Prinsep was obsessed with researches and was a workaholic; in this process he had exhausted himself and could not regain a sound health. Due to his deteriorating health, he was forced to return to England and passed away at the young age of forty-one. His contribution and discoveries in the fields of epigraphy and numismatics, as well as, in the natural sciences and technical fields will be remembered forever. What has made him immortal is the decipherment of the Brāhmī and Kharoṣṭī scripts. Prinsep preferred the artefacts to remain in their original context but it is an irony that his collection of coins and artefacts from the Indian subcontinent is now partly preserved in the British Museum, London. The memory of this passionate assay master and researcher is best preserved in the medal made in his memory and his bust made by Francis Chantrey which was finished by Henry Weekes, housed at the Asiatic Society,

Calcutta. The genius who wanted to be an architect but dedicated his life to the study of India's past, in his memory a wonderful structure was made; the Prinsep Ghat. Calcutta, now called Kolkata, keeps his memory alive as the Ganges flows past the Prinsep Ghat, and it is this river which keeps him connected to his second work place Banaras. I would like to express my gratitude to Prinsep and all the scholars who worked in the nineteenth century and burnt their midnight oil to pave the path for future researchers. Their primary efforts for collection of coins, inscriptions and other artefacts helped to create the repository for the forthcoming generations to come. Their passion for the discipline and the desire to unravel mysteries and unknown past of the subcontinent made them to explore new vistas. They identified coins, attributed them to issuers, at times correct and mostly wrong, as the discipline was in its nascent stage. Discussions on their failures and errors are futile, but what is important is the development of a methodology which instructed future scholars how to proceed and further what not to be pursued.

Acknowledgements

I would like to thank my students Soumyadeep Mitra and Dr Mintu Sannyasi for their help.

References

Garg, Sanjay 1997. James Prinsep and the Indian Numismatics. *Indian Museum Bulletin* 1997: 83–90.

Mitra Shastri, Ajay 1999. James Prinsep and Study of Early Indian History. *Annals of the Bhandarkar Oriental Research Institute* 80/1/4: 191–201.

Prinsep, James 1832. On the Ancient Roman Coins in the Cabinet of the Asiatic Society. *The Journal of the Asiatic Society of Bengal* 1: 392–408.

—— 1833a. On the Greek Coins in the Cabinet of the Asiatic Society. *The Journal of the Asiatic Society of Bengal* 2: 27–41.

—— 1833b. Note on the Lieutenant Burnes' Collection of Ancient Coins. *The Journal of the Asiatic Society of Bengal* 2: 310–318.

—— 1833c. Bactrian and Indo-Scythic Coins. *The Journal of the Asiatic Society of Bengal* 2: 405–416.

—— 1834. Note on the Coins found by Capt. Cantley, at Behat. *The Journal of the Asiatic Society of Bengal* 3: 227–231.

—— 1835a. Further Notes and Drawings of Bactrian and Indo-Scythic coins. *The Journal of the Asiatic Society of Bengal* 4: 327–348.

—— 1835b. On the connection of various ancient Hindu Coins with the Grecian or Indo-Scythic series. *The Journal of the Asiatic Society of Bengal* 4: 621–643 and 668–690.

—— 1837a. The Legends of the Saurashtra group of Coins deciphered. *The Journal of the Asiatic Society of Bengal* 6: 377–392.

—— 1837b. Specimens of Hindu Coins descended from the Parthian type, and of the Ancient Coins of Ceylon. *The Journal of the Asiatic Society of Bengal* 6: 288–302.

—— 1838. Additions to Bactrian Numismatics and discovery of the Bactrian Alphabet. *The Journal of the Asiatic Society of Bengal* 7: 636–658.

Rhys Davids, T. W., and Hermann Oldenberg. 1899. *Vinaya Texts: The Pātimokkha, The Mahāvagga I-IV (The Sacred Book of the East, Part I)*, Edited by. F. Max Müller. Vol. 13. New Delhi: Motilal Banarsidass

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ARTICLE

James Prinsep and His Numismatic Collection at the British Museum

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Abstract

James Prinsep's contribution towards Indian numismatics has thoroughly been researched by many scholars from Europe and India. In this discourse, an endeavourer has been made to focus on his coin collection preserved under the Department of Coins and Medals of the British Museum, since 1847. This collection of coins and other antiquities (2642 in number) was purchased from his elder brother H.T. Prinsep, who acted as the executor of the transaction. These coins from the Prinsep collection are of various categories. The Catalogues of the Indian Coins have been published only in a small fraction of the total collection. No comprehensive attempt has ever been made to throw light on the history of collection and a detailed study of these coins and antiquities by a person like James Prinsep during his nineteen years (1819–1838) stay in Calcutta and Banaras and especially as the Secretary of the Asiatic Society and Assay Master of the Calcutta mint.

Keywords: James Prinsep, numismatics, The British Museum The Asiatic Society, coin collection, H.T. Prinsep, catalogue, 2642 coins and antiquities.

To cite this article
Sinha, Sutapa 2024. James Prinsep and His Numismatic Collection at the British Museum. *Journal of the Asiatic Society* 66/2: 149–175

ISSN:0368-3308

Introduction

James Prinsep (1799–1840), a British Orientalist and antiquarian, was a versatile scholar who made significant contributions, besides a wide range of other fields, to Indian numismatics and epigraphy during the mid-nineteenth century. His work primarily focussed on deciphering ancient Indian coins and inscriptions, which proved crucial in understanding historical and cultural identities of early India. The Coin Cabinet of the British Museum (hereinafter 'Museum') in London, under the Department of Coins and Medals, houses one of the world's largest and most comprehensive collections of coins. The Museum received a substantial number of coins from explorers, archaeologists, and bureaucrats, including notable figures like Charles Masson, William Marsden, Alexander Cunningham, Richard Burn, and James Prinsep (hereinafter Prinsep).

In connection with my research on Bengal Sultanate coins and coin hoards, I eventually discovered that a small number of coins of my interest came from the Prinsep collection, preserved since 1847.[1] Upon further investigation, it was found that on December 1, 1847, a number of 2,642 coins and antiquities were purchased by the British Museum.[2] These items were 'purchased from the executors of the late James Prinsep'. The last column of 'Remarks' on the same page of the Register notes, 'The Bill says Coins and Antiquities and this purchase made vide Bill no. XCI.' This note indicates that not only coins but also other antiquities from the Prinsep collection were acquired in 1847 for a sum of £500 (Fig.1).

H[enry] T[hoby] Prinsep, Prinsep's elder brother, published a book where I first noticed the reference to this collection. In his Preface,

[1] This happened in course my four-month tenure of UK visiting Fellowship of Nehru Trust for Indian Collections at the Victoria and Albert Museum way back in 1998.

[2] Information retrieved from the Accession Register of the British Museum (Register, Coins and Medals, Vol. IV, Nov. 1847–Aug. 1849) and I had occasion to publish this information on the Prinsep collection in brief elsewhere (Sinha 2011: 351–52).

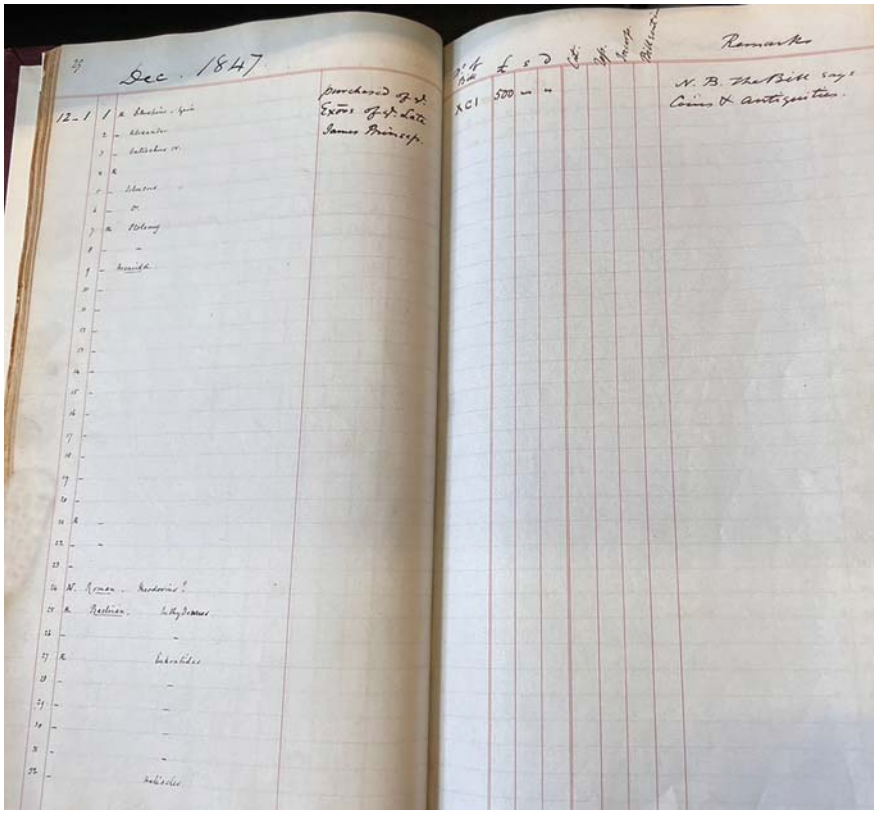

Figure 1. Page 29 of Accession Register Vol. IV, registration details of James Prinsep collection purchased on 01.12.1847. Courtesy of Trustees of the British Museum.

H.T. Prinsep categorically mentioned the reason and opportunity Prinsep had for developing his private cabinet of coins. He observes that owing to his dual position as the Secretary of the Asiatic Society and the Editor of its journal (Prinsep 1844: iv),

> he was naturally placed in direct and constant communication with those engaged in the work of practical discovery; and the assistance and instruction he was thus enabled to give, and readily and freely imparted to those, who, by the accident of position, were led to prosecute such researches, or who, by other means, became possessed of objects of antiquarian curiosity, was so frequently acknowledged by the gift of the articles discovered, that a very rich and extensive cabinet was the fruit.

H.T. Prinsep also briefly mentioned the richness and variety of his brother's cabinet, which was otherwise 'unsorted and uncatalogued',

yet he never specified the number of coins and other antiquities in the collection. However, to understand the basic categories of coins in the collection, H.T. Prinsep's direct and brief evaluation is important for this discussion (Prinsep 1844: iv):

> The present Note is confined to Bactro-Arian relics, but the late Mr. James Prinsep's Cabinet is richer far in coins of India, Buddhist, and Brahmanical, extending from periods of the most remote antiquity to the date of the Mohammedan conquest; and for these, a separate study, and if the subject be of sufficient general interest, a separate Note of explanation may be required.

Prinsep's meticulous research on coins and other artefacts unearthed in British India was regularly published and disseminated through the *Journal of the Asiatic Society of Bengal* (hereinafter JASB), spanning from 1832 to 1836, where he documented his findings with detailed engravings and drawings (Thomas 1858). In addition to the work published in JASB, the Asiatic Society served as a central repository for these discoveries, and many items were deposited in the Society's museum. This institutional collection was complemented by the private collections of scholars and officials who were directly involved in the excavation and study of these artefacts. This practice of building personal collections was quite common among those engaged in the exploration and scientific study of the antiquities, particularly from the late eighteenth century onwards and the Prinsep collection of coins and antiquities was no exception.

H.T. Prinsep stated another important point, 'The Cabinet thus came to his widow, rich and various, but unsorted, and uncatalogued. In this condition, she applied to the Author of the following pages for advice and assistance as to its disposal […]' (Prinsep 1844: v). The statement implies that H.T. Prinsep played a key role in managing the coin collection and other antiquities belonging to his younger brother after his brother's demise. It suggests that H.T. Prinsep undertook this responsibility at the request of his brother's widow Harriet Prinsep, who likely needed assistance in handling this valuable collection. It is interesting to note, however, that H.T. Prinsep's name was not mentioned by Prinsep himself as one of the executors of his last will (Nair 1999: 63). This action might have involved selling,

donating, or otherwise distributing the important collection of Prinsep. He must have thought that the British Museum as the most suitable institution to preserve this invaluable collection. This extensive and rich cabinet was presumably sold in its entirety to the British Museum in 1847 by H.T. Prinsep as an executor of the trust, as recorded in the Museum Register. It is possible that other museums in the UK might possess parts of Prinsep collection, but none have been reported so far.

Errington and Curtis draw our attention to three volumes of Prinsep's manuscripts preserved in the Ashmolean Museum,[3] Oxford (Errington and Curtis 2014: 10). According to these scholars: 'These manuscripts comprise correspondence, rubbings, and information on coins and inscriptions sent to him by Charles Masson, Colonel Stacy, Alexander Burnes, and others; his working notes; and a posthumous catalogue of 1,066 coins in his collection.'

Since the posthumous catalogue of 1,066 coins mentioned above does not bear any name, it is plausible that the catalogue was actually prepared by H.T. Prinsep, though one cannot be certain on that score (Fig. 2). Who prepared this catalogue and why the number of coins is less than half of the total sold to the British Museum remains unresolved unless one thoroughly examines the Ashmolean manuscripts. Prinsep's correspondence, his working notes, and information on coins and inscriptions sent to him by people like Masson, Stacy and Burnes are immensely important for understanding and reconstructing the history of his collection. For the first time, Errington and Curtis asserted the exact number of coins in their essay (Errington and Curtis 2014: 10):

> On 1 December 1847, Prinsep collection of antiquities and 2,642 coins were sold to the British Museum by the executors of his estate. The antiquities include the Buddhist relic deposits from the Great Stupa of Manikyala in the Punjab, given to Prinsep by General Ventura (pp. 211-12, fig.177). The coins comprise one of the most comprehensive collections from the Indian subcontinent in the Museum.

[3] Prinsep, J. (MSS) 'James Prinsep Oriental Coins', 3 vols, Ashmolean Museum, Oxford, Heberden Coin Room Archives, Arch. Ash. fol.18. A few pages of the manuscript incidentally came to my notice in course of the preparation of this paper.

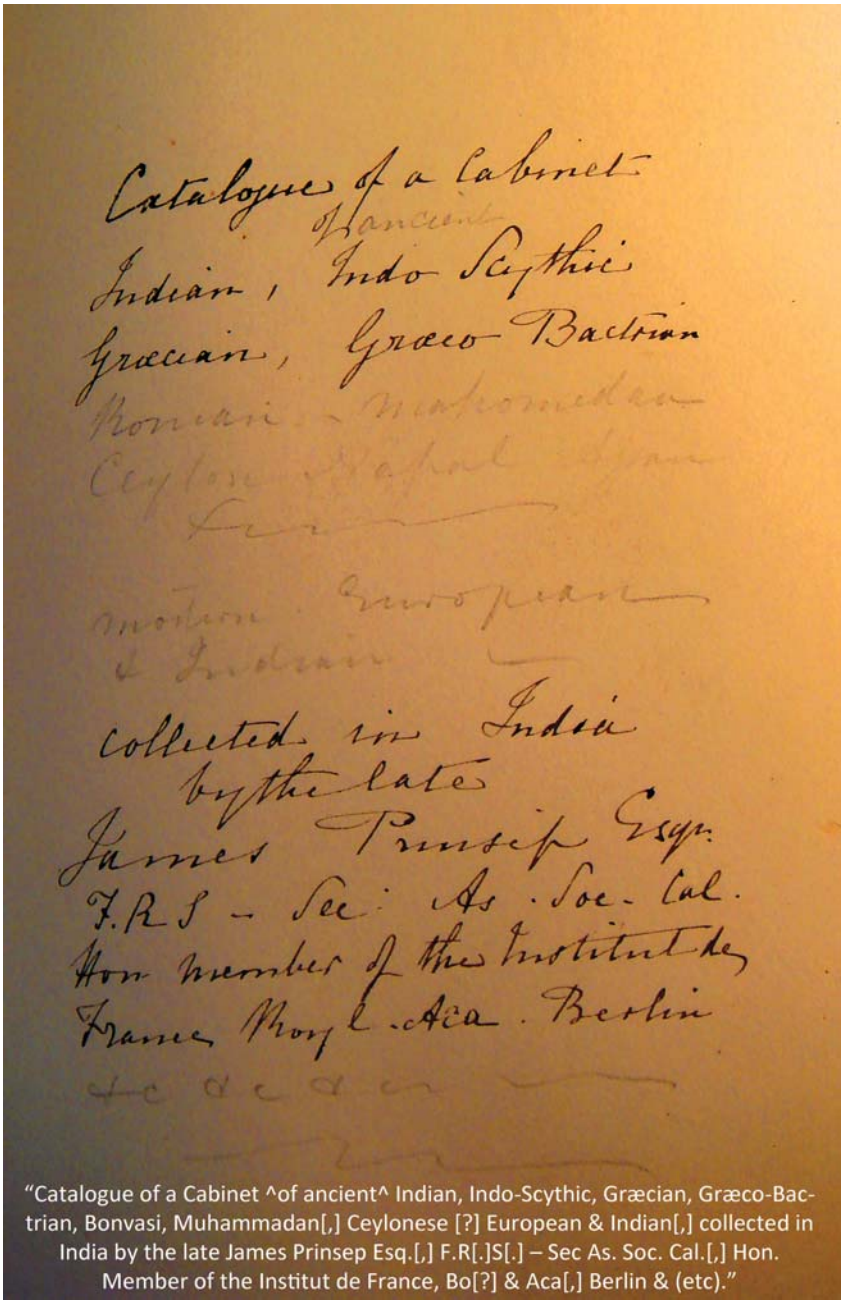

Figure 2. A page from the unpublished posthumous catalogue of 1066 coins collected by James Prinsep preserved in the archive of the Ashmolean Museum, Oxford. Courtesy of Ashmolean Museum.

The collection of antiquities includes Buddhist reliquary caskets that General Jean-Baptiste Ventura excavated from the Manikyala *stūpa* in 1833 and handed over to Prinsep for study and preservation. Two successive articles were published in the same volume of JASB on the Manikyala excavation, carried out by General Ventura (Prinsep 1834a, 1834b).

Errington and Curtis also referred to this collection as one of the most comprehensive from the Indian Subcontinent, which is fairly attested by the Museum's online digital coin collection.[4] A digital database of Prinsep coin collection (in MS Excel format) has been downloaded to develop this article in the absence of original coins of entire Prinsep collection housed in the Museum.[5]

The Museum began to publish a series of catalogues of Indian coins in its collection in 1884, and seven volumes of catalogues were published until 1936 (hereinafter *BMC* I–*BMC* VII, 1884–1936).[6] A careful study of these catalogues revealed that coins from the Prinsep collection have been selectively included in some volumes along with coins from other collections. In the following pages, a critical analysis of the above-mentioned sources, along with an intensive study of seventeen coins from the Prinsep collection belonging to Governors and Sultans of the Bengal have been attempted and this endeavour may shed light on the previously unknown details of the Prinsep collection in the Museum. Several ambiguities regarding their identification, inappropriate placement in the cabinets, inadequate publications, and related issues persist, after 175 years of the collection's deposition in the UK's leading and largest museum.

[4] https://www.britishmuseum.org/collection/search?keyword=coins&keyword=James&keyword=Prinsep&keyword=collection (last accessed on 06.07.2024)

[5] An Ms Excel datasheet was downloaded from the above website with a total number of 634 coins which were retrieved in response to the search for James Prinsep collection. Further, searching with the year of accession 1847 resulted in 501 coins which came to the Museum from the Prinsep collection purchased from the Executor on December 1, 1847.

[6] *BMC* I:Lane-Poole (1884); *BMC* II: Lane-Poole (1885); *BMC* III: Gardner (1886); *BMC* IV:Lane-Poole (1892); *BMC* V: Rapson (1908); *BMC* VI: Allan (1914); *BMC* VII: (Allan 1936).

A table of only twenty-two coins (including two gold coins) of the Turkish rulers of Bengal (thirteenth–sixteenth century CE) has been prepared with basic details that belong solely to the Prinsep collection, studied by me long back. These coins were compared with relevant pages of the Register of the Museum (Fig. 3),[7] as well as with the online database, confirming that fifteen silver coins and two gold coins of the series actually belong to the Prinsep collection. (Table 1).

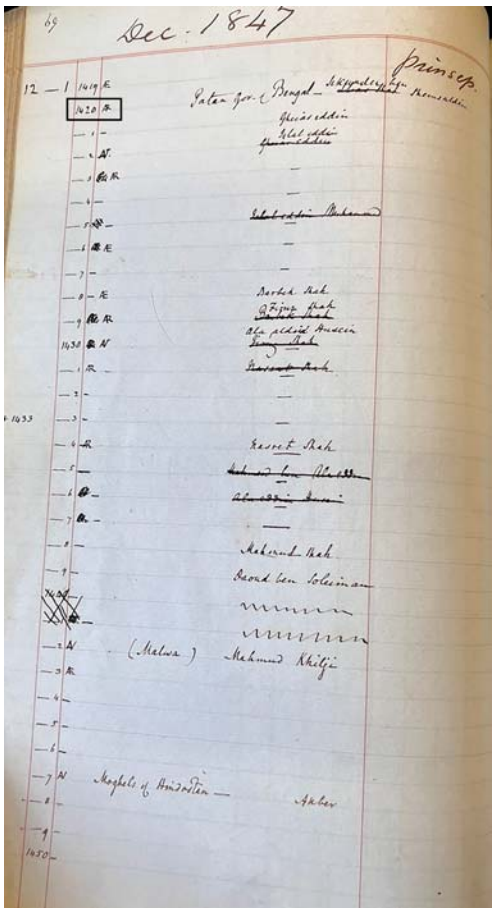

Figure 3. Page 69 of Accession Register Vol. IV, registration of the coins of 'Patan Gov. of Bengal' starts with serial number 1420 (silver), 'Malwa' starts from 1442 (gold) and 'Mughals of Hindustan' starts from 1447 (gold). Courtesy of Trustees of the British Museum.

[7] Accession Register, Vol. IV, pp. 69 and 62.

Sl. No.	Accession No.	Collection Ref. as on the Reg. Ticket **	Governor & Sultans of Bengal	Mint	Date (A.H.)	Metal	*BMC* II Ref.	Size (cm)	Weight (gm)	Remarks
1	47 12-1-1198	Bequest by Mr Prinsep in 1847	Shams al-din Ilyas Shah 1345-1357 CE	Firuzabad	Nil	Silver	No. 19, p.15	2.685	10.89	Incorrectly assigned to 'Shamsuddin Iltamash of Afghan Sultans of Hindustan' in the Accession Register, Vol. IV of the Museum
2	47 12-1-1205	Bequest by Mr Prinsep	Ghiyath al-din Bahadur Shah (Bengal Governor) 1320-1328 CE	Lakhnauti	728	Silver	No. 9, p. 11	2.58	10.57	Incorrectly identified as 'Ghiyas aldin Balban of Afghan Sultans of Hindustan' in the Accession Register, Vol. IV of the Museum
3	47 12-1-1211	Bequest by Mr Prinsep	Ghiyath al-din Bahadur Shah	Lakhnauti	(72)4	Silver	No. 7, p. 11	2.628	10.91	Incorrectly assigned to 'Ghiyas aldin Balban of Afghan Sultans of Hindustan' in the Accession Register, Vol. IV of the Museum
4	47 12-1-1421	Bequest by Mr Prinsep	Ghiyath al-din Azam Shah 1389-1410 CE	Satgaon	790	Silver	No. 59, p. 26	2.73	10.37	Only Ghiyasuddin is mentioned in the Accession Register, Vol. IV of the Museum
5	47 12-1-1422	Bequest by Mr Prinsep	Jalal al-din Muhammad Shah 1415-1433CE	Nil	Nil	**Gold**	No. 81, p. 34	2.53	10.85	Arabic inscription in *Tughra* style of calligraphy. Rare coin. Only Jalaluddin is mentioned in the Register, Vol. IV of the Museum
6	47 12-1-1423	Bequest by Mr Prinsep	Jalal al-din Muhammad Shah	Cut out of flan	834	Silver	No. 76, p. 32	2.84	10.40	Only Jalaluddin is mentioned in the Register, Vol. IV of the Museum.

7	47 12-1-1424	Bequest by Mr Prinsep	Jalal al-din Muhammad Shah	Firuzabad	827	Silver	No.82, p.34	3.16	10.63	*Tughra* style of calligraphy on reverse. Larger flan coin.
8	47 12-1-1425	Bequest by Mr Prinsep	Jalal al-din Muhammad Shah	Chatgaon	Nil	Silver	No.87, p. Pl. IV	3.10	10.40	*Tughra* style on both sides. Larger flan coin.
9*	47 12-1-1426	Bequest by Mr Prinsep	Jalal al-din Muhammad Shah ?	____	____	Copper	____	____	____	This coin is grouped under 'Jalal uddin' as found from the jpg image of the p. 69 of the Accession Register, Vol. IV. (Fig. 3) This is a copper coin too. It is not present in the cabinet of Bengal Sultan. Must have been correctly assigned and placed in some other Indian Sulatanate cabinet.
10*	47 12-1-1427	Bequest by Mr Prinsep	Jalal al-din Muhammad Shah ?	____	____	??	____	____	____	This coin is grouped under 'Jalal uddin' as found from the jpg image of the p. 69 of the Accession Reg., Vol. IV. (cf. Fig. 3). Not present in the cabinet of Bengal Sultan. Must have been correctly assigned and placed in some other Indian Sultanate cabinet.
11*	47 12-1-1428	____	Barbak Shah Bahlol 1486-1493 CE	Jaunpur	1492 (AH 898)	Copper				Incorrectly ascribed to 'Barbak Shah' of Bengal in the said Register. Incorrectly assigned to Barbak Shah Lodi of Delhi in BM online database. It is of Barbak Shah Bahlol of Jaunpur. *BMC* II, no. 342, p. 112.

12	47 12-1-1429	Bequest by Mr Prinsep	Sayf al-Din Firuz Shah 1488-1490 CE	Fathabad	893	Silver	No. 99, p. 41, PL.V	2.60	10.64	Publication reference in online database is incorrect. It was not published in *BMC* I of Delhi Sultans.
13	47 12-1-1430	Bequest by Mr Prinsep	Ala al-din Husain Shah 1493-1519 CE	Nil	919	**Gold**	No. 122, p.47, PL.VI	2.17	10.32	Victory IV type coin of Husain Shah
14	47 12-1-1431	Bequest by Mr Prinsep	Ala al-din Husain Shah	Khajanah	899	Silver	No.116, p. 46	2.83	10.67	Mint name written Arabic in *BMC* II, but not in column.
15	47 12-1-1432	Bequest by Mr Prinsep	Ala al-din Husain Shah	Fathabad	89	Silver	No.124, p. 48	2.66	10.66	*Bin Sayid Ashraf* type
16	47 12-1-1433	Bequest by Mr Prinsep	Ala al-din Husain Shah	Fathabad	89	Silver	No. 125, p. 48	2.736	10.67	*Bin Sayid Ashraf* type
17	47 12-1-1434	Bequest by Mr Prinsep	Nasir al-din Nusrat Shah 1519-1531 CE	Dar al-zarb Husainabad	925 89	Silver	No.138, p. 51	2.61	10.38	*BMC* II published Husainabad 89 (in Arabic) and Dar ai-zarb 925 (in Arabic) but in Min: Date column it is mistakenly written Fathabad 925 in English.
18	47 12-1-1435	Bequest by Mr Prinsep	Nasir al-din Nusrat Shah	Dar al-zarb Husainabad	925 89	Silver	No. 139, p. 51	2.65	10.56	*BMC* II published Husainabad 89 (in Arabic) and Dar ai-zarb 925 (in Arabic) but in Min: Date column it is mistakenly written Fathabad 925 in English. Shroff mark on obverse
19*	47 12-1-1436	Bequest by Mr Prinsep	Nasir al-din Nusrat Shah	____	____	____	____	____	____	This coin is grouped under 'Nasret Shah' as found from the jpg image of the p. 69 of the Accession Register, Vol. IV. (Fig. 3) It is not present

										in the cabinet of Bengal Sultan. Must have been correctly assigned and preserved in some other Indian Sulatnate cabinet of the Museum.
20*	47 12-1-1437	Bequest by Mr Prinsep	Nasir al-din Nusrat Shah	____	____	____	____	____	____	This coin is grouped under 'Nasret Shah' as found from the jpg image of the p. 69 of the Accession Register, Vol. IV. (Fig. 3) It is not present in the cabinet of Bengal Sultan. Must have been correctly assigned and preserved in some other Indian Sulatnate cabinet of the Museum.
21	47 12-1-1438	Bequest by Mr Prinsep	Ghiyath al-din Mahmud Shah 1532-1538 CE	Dar (al-zar) b	(9)33	Silver	No. 148, p. 55	2.45	10.91	*BMC* II records mint obliterated, but the author found traces of mint as *Dar (al-zar)b*
22	47 12-1-1439	Bequest by Mr Prinsep	Daud Shah Kararani 1572-1576 CE	Tandah	Nil	Silver	No.161, p. 59	2.83	11.21	*Svastik* symbol as mint mark

Table 1. Table showing comparative study of 20 silver coins and 2 gold coins of the accession record found from the Accession Reg., vol. IV (1847–49) of the British Museum with the database developed by me in 1998 (unpublished) and the database downloaded from online coin collection of British Museum website.
* *Out of these, only seventeen are of Bengal Governors and Sultans including two gold coins. Five coins are incorrectly assigned to this group (from 1421 to 1439, p.69 of the Accession Reg., fig.3). The Reg. shows no. 1420–1439 belong to 'Patan Gov. of Bengal', i.e. twenty coins, of which five have been found incorrectly assigned to the Bengal series. Coin no. 1420 identified and recorded as 'Sikyender ben Shamsuddin' [sic.] could not be traced in any of the above database. Three silver coins (Sl. Nos. 1, 2 and 3) were incorrectly ascribed to Delhi Sultans, while these three actually belong to Bengal Sultan and Governor.* Complete reference of *BMC* I and *BMC* II are cited in-text.
** *These were actually purchased by the Museum*.

Here the coins have been arranged according to the sequence of their registration numbers recorded in the Register and therefore chronological order of the kings' timelines could not be maintained for the first three entries (one of Shams al-din Ilyas Shah and two of Ghiyath al-din Bahadur Shah). These coins were mistakenly listed under 'Afghan Sultans of Hindustan' and accession numbers were assigned to that group[8] (Fig.4). It implies that occasionally the Register

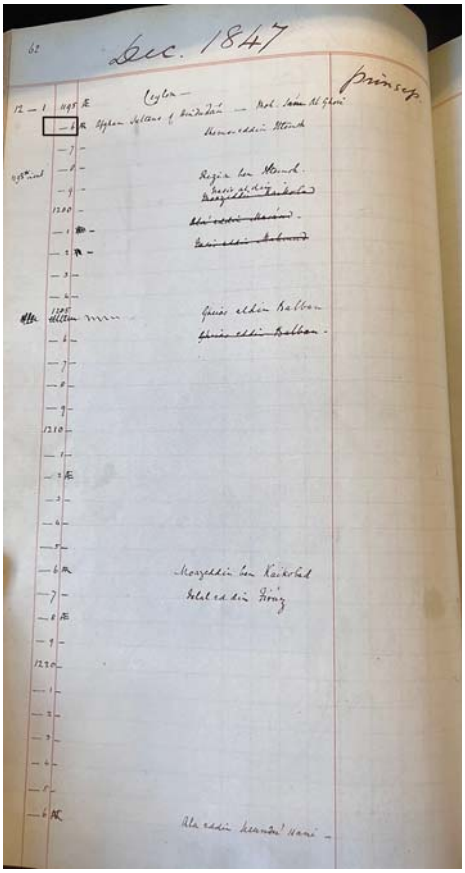

Figure 4. Page 62 of Accession register Vol. IV, registration of the coins 'Afghan Sultans of Hindustan' starts with serial number 1196 (silver). Nos. 1198, 1205 and 1211 are incorrectly identified and grouped under this series. Courtesy of Trustees of the British Museum.

[8] Serial nos. 1198, 1205 and 1211 prefixed with 1847.1201. See p. 63 of the Register vide Fig. 3.

incorrectly recorded coins within inappropriate groups for some reason or the other. This may also suggest that these coins of the Prinsep collection were sold without any inventory prepared by the previous owner or the executor. The curator who recorded them in the register was unable to identify the Islamic coins accurately in 1847. Later, another curator might have correctly identified these coins and relocated them to the 'Bengal Sultans' cabinet of the Museum. This scenario might have taken place to any other group of coins from Prinsep collection.

Fortunately, all these seventeen coins (fifteen silver and two gold) of the series under question are published in the *BMC* II (see coin nos mentioned in the table 1 for these coins, BMC II: 11 -59) with a few incorrect readings or information. Errors occurred in the BM online database too, even though only two silver coins among fifteen were uploaded (Figs. 5 & 6) until now. However, the URL attached to the respective cells of these two coins are incorrectly placed; a technical mistake occurred either unknowingly or due to ignorance. Thus, rediscovery of the entire Prinsep collection in the Museum is a herculean task that demands immediate attention and expert intervention.

Figure 5. Coin of Bengal Sultan Jalal al-din Muhammad Shah (1414–1431 CE vide Museum No: 1847, 1201. 1425) https://media. britishmuseum.org/media/Repository/Documents/2014_10/8_17/503d4e47_89e6_4dbb_a033_a3be011a60ce/preview_00448725_001.jpg.

Figure 6: Coin of Bengal Sultan Sayf al-din Firuz Shah (1488–1490 CE vide Museum No: 1847, 1201.1429). https://media. britishmuseum.org/media/Repository/Documents/2014_10/6_6/a110dcc0_57c7_4100_963d_a3bc0070bbc8/preview_00391827_001.jpg.

I have not provided any typological classification and numismatic details as per recent research on coins of the Bengal Sultanate (1205–1576 CE). Instead, I wanted to show the British Museum registration numbers, indicating that all these seventeen coins of the above series belonging to the Prinsep collection were published in *BMC* II in 1885 with proper identification and Arabic legend readings. Notably, within this small number of Islamic coins of Bengal ('Muhammadan' or 'Mahomedan' as referred in nineteenth century), the collection covers a period of more than 250 years, from Governor Ghiyath al-din Bahadur Shah (1312 CE) to Afghan Sultan Daud Shah Kararani (1576 CE). Two questions arise: first, did Prinsep collect these coins with the vast span of Turko-Afghan rule in Bengal in mind, or was it merely a coincidence? Second, from whom and where did Prinsep collect these coins before departing for England in 1838 due to his severe illness?

To answer the first question, it is likely that Prinsep had a deep interest in numismatics and the history of the Bengal Sultanate, which would have driven him to collect coins spanning over such a broad period. His connections and role, as the Secretary of the Asiatic Society and the editor of JASB, likely provided him with unique opportunities to acquire these coins from various sources. Prinsep was actively

involved in documenting and deciphering ancient inscriptions and coins, but was he himself equipped enough to decipher and document medieval coins too? If yes, then it indicates a scholarly intent behind his collection rather than mere coincidence.

As for the second question, the sources from which Prinsep obtained these coins remain somewhat ambiguous. Given his position and the period's context, it is plausible that Prinsep acquired these coins from local antiquarians, collectors, and possibly from chance discoveries reported to him. The Asiatic Society served as a hub for such exchanges, and Prinsep's extensive network facilitated his access to these artefacts.

In 1841, a significant coin hoard of Bengal Sultans was unearthed in Howrah and reported in the JASB (Prinsep 1841: 168–71, Sinha1997–1999: 141–44, 2017: 38–41). Thirty-one silver coins were presented to the Asiatic Society by Robert Torrens, the then Magistrate of South 24 Parganas, and were deciphered by H.T. Prinsep. This suggests that prior to the discovery of the Howrah hoard, stray coins or hoards from Bengal were acquired by the British scholars and officials but were not documented in the JASB. Additionally, earlier acquisitions of Bengal Sultan coins by Sarah Sophia Banks (1818) and William Marsden (1835) are documented in the Museum's collection (Sinha 2011: 351).

A systematic search of the British Museum's online database revealed coins of thirty-three dynasties out of total 501 coins from the Prinsep Collection. While some dynasties are represented by a single specimen, most are represented by a substantial number of coins in silver, gold, copper, and alloy. The details of these thirty-three categories are provided in Table 2, which include inter aliaancient coins from the Greco-Bactrian, Indo-Greek, Indo-Parthian, Indo-Scythian, Kuṣāṇa, Huna, and Gupta dynasties; a few tribal coins of the Yaudheya; early medieval coins from Samataṭa, Coḷa, and Pallava; considerable number of medieval Sultanate coins from Delhi, Bengal, Malwa, Kashmir, and of the Suris; large number of coins of the Mughals and late medieval coins of Nepal Kings, Malla Kings and

Sl. No.	Dynastic Affiliation	Number of online digital collection filtered by the Prinsep Collection Total under each Group	Total number of coins published in *BMC*
1	Gondopharnes (Indo-Parthian)	2 **Total 1**	None
2	Azes I–1 coin AzesII–7 coins	375 *BMC* 3*BMC*, 4*BMC*, 7*BMC*, 357*BMC*, 376*BMC*, 377*BMC*, 380*BMC* **Total 8**	8
3	Malla	5, 129 to 139, 141 to 49, 151 to 58, 160 to 169,171 to 189, 191, 216, 257 **Total 61**	None
4	Kushan	8 to 11, 20, 24, 44 *BMC*, 58, 59, 61, 74, 82, 84, 109, 113, 117, 121,123 to 128, 140, 150, 159,170,190,215,217,242, 260, 262 to 283 (266 *BMC*, 276 *BMC*) 285 to287, 288*BMC*, 289*BMC*, 290*BMC*, 292 to 295*BMC*, 298 to 300, 307, 310 to 312, 314 to 320, 358*BMC*, 360 to 367, 369, 384, 545, 558, 559 **Total 92**	8
5	Suri Rulers	46–53*BMC* (Sher Shah) & 54–57*BMC* (Islam Shah) **Total 12**	12
6	Delhi Sultanate	12 to 19*BMC*, 2–23*BMC*, 25–41*BMC*, 42, 43*BMC*, 45*BMC*, 63*BMC*, 551*BMC*, 552*BMC* **Total 34**	34
7	Bengal Sultan	62*BMC* (Jalal al-din Muhammad Shah) and 64*BMC* (Sayf al-din Firuz Shah) **Total 2**	2
8*	Mughal	60, 65 to 73, 75 to 81, 83, 85 to 108, 110–112, 114–116, 118–120, 122 **Total 52**	
9	Nepal	192–214, 218–241, 243–256 **Total 61**	None
10	Govt. of Tibet	258*BMC*, 259*BMC*, 261 **Total 3**	2

11	Greco-Bactrian	284, 291*BMC*, 296, 297, 302*BMC*, 313, 322–325*BMC*, 345, 346*BMC*, 347*BMC*, 370*BMC*, 560 **Total 15**	9
12	Kashmir	301, 303–306, 308, 309 **Total 7**	None
13	Yaudheya	321 **Total 1**	None
14	Gupta	326 to 342*BMC*, 343, 534–540, 561–633*BMC* **Total 98**	90
15	Samatata	344*BMC* **Total 1**	1
16	Indo-Greek	348–356*BMC*, 359*BMC*, 368*BMC*, 374*BMC* **Total 12**	12
17	Pallava	371 **Total 1**	None
18	Spalirises; Spalagadames	372*BMC*, 373*BMC* **Total 2**	2
19	Indo-Parthian (Abdagases, Sasan)	6, 381, 383, 378, 379, 382 **Total 6**	None
20	Vologases I (Parthian) Vologases III	555*BMC* 556*BMC* **Total 2**	2
21	Huna	522 **Total1**	None
22	Cooch Behar	523–526 **Total 4**	None
23	Sri Lanka (Rajaraja Chola)	528 **Total 1**	None
24	Chola: (minted in india)	529 to 533 **Total 5**	None
25	Manipur	634 and 635 **Total 2**	None
26	Ilkhanid	527 *BMC* **Total 1**	1
27	Bajrangga/ Gwalior	541–544 **Total 4**	None
28	Kritavirya, Sri Sailanavirya (Kashmir)	546, 547 **Total 2**	None

29	Yasovarman:	548	**Total 1**	None
30	Shahi Tigin	55	**Total 1**	None
31	Qing dynasty	396, 397, 398, 553,	**Total 4**	None
32	Arab-Sasanian & Sasanian	554*BMC*, 557	**Total 2**	1
33	Burma (Forgery)	399, 400	**Total 2**	None

Table 2. Table showing classified details of 501 coins (of which 184 are published in different volumes of *BMC*) uploaded in the website of the British Museum online collection (https://www.britishmuseum.org/collection/search?keyword=coins&keyword=James&keyword=Prinsep&keyword=collection) belonging to the Prinsep collection, purchased on 1st December, 1847(2,642 coins and some relics).

* *BMC* actually includes 65 coins of the Moghuls and 17 of the Bengal Sultans.

the Government of Tibet.[9] The total number of coins retrieved from the digital database is less than one-fifth of the total of 2,642 coins of Prinsep collection. Nevertheless, it represents a remarkably diverse range of Indian coinage spanning over 2,000 years of history.

Incidentally, I had procured digital photos of nine pages from the Accession Register of the Museum, which document the registration of the Prinsep collection.[10] Each page contains 32 lines, each entry detailing a single coin with minimum curatorial information, primarily including the names of rulers and dynasties as known in mid-nineteenth century Indian history.[11] The following is a summary of the entries from these pages:

Register Vol. IV (November 1847–August 1849)

1. Pages 29 and 30–December 1, 1847, Serial No. 1–64: Greek and Indo-Greek coins (cf. Fig.1 for p. 29).
2. Page 34–December 1, 1847, Serial No. 161–192: Indo-Scythian coins.
3. Page 62–December 1, 1847, Serial No. 1195: Ceylon; Serial No. 1196–1226: Afghan Sultans of Hindustan coins (cf. Fig. 4).
4. Page 63–December 1, 1847, Serial No. 1227–1258: Afghan Sultans of Hindustan (continued).
5. Page 69–December 1, 1847, Serial No. 1419: Unknown; Serial No. 1420–1439: Patan Government of Bengal; Serial No. 1442–1446: Malwa; Serial No. 1447–1450: Mughals of Hindustan. Serial Nos. 1441 and 1442 are deleted, with no details provided (cf. Fig. 3).
6. Page 70–December 1, 1847, Serial No. 1451–1482: Mughals of Hindustan.

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[9] See Table 2 for more details

[10] The images of the Register published by courtesy of the Trustees of the British Museum. The author was formally invited by the Museum in 2009 for their World Coin Project that enabled her to get access of these Registers and other relevant documents (see Wang and Errignton 2019: 23).

[11] A total of 2,642 coins from the Prinsep collection have probably been recorded in a single volume (Register, Vol. IV) covering 83 pages. However, due to the author's specific interests, only the relevant pages were documented earlier.

7. Page 71–December 1, 1847, Serial No. 1483–1514: Mughals of Hindustan.
8. Page 72–December 1, 1847, Serial No. 1515–1546: Mughals of Hindustan.

The terminology used to identify different dynasties aligns with that in the Register. A total of 286 coins are recorded across these pages, though not all are included in the online catalogue. A careful review of these nine pages reveals that the coins of the Mughal Emperors under serial numbers 1447–1546 (pages 69–72) and may include additional coins of the same in next few pages. Coins of the Greek and Indo-Greek periods are documented on the first two pages, which include details of 64 coins. For additional information and a thorough appraisal of the Register, a fresh review and examination are required.

Prinsep Collection and the Catalogues of Indian Coins in the British Museum (1884–1936)

From 1884 to 1936, the Museum's Department of Coins and Medals, under Reginald Stuart Poole (Keeper of the Department), published catalogues of Oriental (Islamic) and Indian coins of the Museum collected since 1835. Poole envisioned a five-volume series, of which four volumes were completed by the time of his retirement in 1892 (three jointly with his nephew Stanley Lane Poole, and the fourth by Percy Gardner). E.J. Rapson and John Allan completed the remaining three volumes from 1908 to 1936. After a long gap of seven decades, Indian scholar Paramdip Kaur Khera published the eighth volume, focusing on Sikh coins (Khera 2011). Helen Wang and Elizabeth Errington critically analysed these eight volumes and provided insights into the Museum's coin collection (Wang and Errington 2019: 3–32).

In the first catalogue on Delhi Sultans' coins, the authors of the volume acknowledged several contributors namely Dr. Hoernle, Mr. Rodgers, Mr. Thomas, Mr. Redhouse, Dr. Stickel, M. Tiesenhausen, and M. Sauvaire but no mention of James Prinsep was made (Wang and Errington 2019:5). It appears that no Delhi Sultans' coins is

catalogued in *BMC* I but the fact remains, a search of the British Museum Online Catalogue reveals 34 coins of Delhi Sultans from Prinsep collection, are published in the *BMC* I.

This discrepancy in cataloguing has been noted by Wang and Errington. In their analysis of *BMC* II, which covers coins of other Muhammadan States of India, they have highlighted that the catalogue only identifies coins from the India Office Collection, failing to mention other sources like Marsden, Cunningham and Asiatic Society of Bengal (Wang and Errington 2019:8–9). Even so, James Prinsep's name is omitted from Wang and Errington's analysis. The author has located 17 coins of Bengal Governor and Sultans, published in *BMC* II.[12] However, the online database included only 2 coins out of 17, along with 12 coins of the Suri rulers (Sher Shah and Islam Shah), all published in *BMC* II.[13]

In the third catalogue *BMC* III, covering Greek and Scythic Kings of Bactria and India, Wang and Errington noted that important references included Prinsep's *Essays on Indian Antiquities* (Wang and Errington 2019: 10–11), published after his demise by Edward Thomas (Thomas 1858). This catalogue acknowledges the significance of Prinsep's work, though no specific coin from Prinsep collection is mentioned. According to the online database, the *BMC* III includes 9 coins of Indo-Scythian and Greco-Bactrian rulers, 12 of Indo-Greek, 8 of the Kuṣāṇas, and 3 of Parthian Kings from Prinsep collection only. Notably, the database shows ninety-two Kuṣāṇa coins from Prinsep collection, but only eight are published in the catalogue.[14] Recent research by Joe Cribb has provided a critical analysis of all Kushan coins from the Prinsep collection, a notable contribution that deserves special mention but is beyond the scope of this brief discussion on the Prinsep collection in the Museum (Cribb 2014).

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[12] For details, see Table 1 for *BMC* II reference.

[13] See Table 2, the number of coins published in *BMC*s has been mentioned in a separate column.

[14] For Prinsep collection in online BM coin collection, see Table 2 and the website, URL website is mentioned above.

The fourth volume of the series, *BMC* IV catalogues sixty-five Mughal coins from the Prinsep collection as has been mentioned by Wang and Errington (Wang and Errington 2019: 13). However, only fifty-two Mughal coins from Prinsep collection are available in the online database, with no *BMC* or other publication references.[15]

In the fifth catalogue *BMC* V, E.J. Rapson notes that all Andhra Dynasty coins described as belonging to General Godfrey Pearse were presented by the Government of India. Consequently, the online database is also silent on Andhra coins from the Prinsep collection.[16]

The sixth catalogue, which focuses on Gupta dynasty and Śaśāṅka's coins, includes 30 Gupta coins from the Prinsep collection. Wang and Errington mentioned: 'In 1847 the Museum purchased from his estate the entire collection formed by James Prinsep, which included 30 Gupta coins, many of which he had already published in his articles in the *Journal of the Asiatic Society of Bengal*' (Wang and Errington 2019: 18). John Allan, the author of the catalogue gave details of the British Museum's collection of Gupta coins which included James Prinsep collection too. The online database shows 98 Gupta dynasty coins from Prinsep Collection, with 90 published in the *BMC* VI.

The seventh catalogue, *BMC* VII based on the coin collection of Alexander Cunningham preserved in the Museum since 1888, deals with Ancient Indian coins. As a vast repository of antiquities and artefacts, the selection process for the coins published in these catalogues was highly selective. As a result, the relatively smaller Prinsep collection is represented less extensively compared to other collections in the museum.

Prinsep, as the Secretary of the Asiatic Society, published numerous articles in the JASB between 1832 and 1838. He acquired coins from various sources, including scholars, bureaucrats, and Indologists across India and the north-western frontier. H.H. Wilson, in his article in

[15] It should be noted that Wang and Errington (2019: 13) observed that 'two pages are devoted to the provenance of the Mughal coin collection at the British Museum, which consisted then of about 1,250 coins (excluding those from 'East India Company').'

[16] This reference figures in the preface of *BMC* V.

Asiatick Researches (Wilson 1832), reflected on British and European collectors' trends, noting that coins from different periods and regions, including those in the Prinsep collection, were often collected and eventually found their way to Europe. In this context, Wilson's comments are as follows (Wilson 1832: 560):

> The coins found in India, either purchased in the Bazar or dug up at Arsakian and Sassanian Princes are occasionally met with, and Roman Coins are not at all uncommon. The Coins of the Mohammedan Kings of the several principalities founded by the Mussalmans, constitute a third and extensive division; whilst the fourth, the rarest and least familiar, are either of comparatively recent date and known Hindu origin, […].

Wilson frequently referred to Prinsep's private collection, and in some cases the provenance of the coins was also noted. As he stated: 'Of the coins now engraved, two belong to the Society, and, two to Mr. JAMES PRINSEP, who has several others. He states that they are very common in Upper India; particularly about Benaras, Mirzapore, and Allahabad' (Wilson 1832: 580). Wilson further stated 'A number of these coins belong to the Society, and several are in Mr. Prinsep's possession: they have been found in various places, some along with the preceding, indicative of their being current at a similar period' (Wilson 1832: 587). If Prinsep's working notes and correspondence are examined and studied in future, it would be possible to trace the history of his coin collection. If Wilson was aware of the discovery circumstances and provenance of the coins in Prinsep's private collection, Prinsep's personal notes might provide even more detailed and intriguing information.

The rediscovery and re-classification of the entire Prinsep collection, especially the coins, would indeed be a formidable task. It would require collaboration between numismatists, historians, and museum curators to accurately identify and document the coins, correcting any historical inaccuracies and ensuring that the collection is properly understood and documented. Thus, the study of the James Prinsep coin collection in the British Museum highlights the complexities of early museum acquisitions, the importance of proper cataloguing, and the ongoing need for scholarly research to uncover and correct

historical records. The collection itself, particularly the coins from the Bengal Sultanate, offers valuable insights into the region's history and the interconnectedness of global numismatic studies.

Acknowledgements

I could not have undertaken this discourse without the generous support of the Nehru Trust for Indian Collections at the Victoria and Albert Museum. Their grant of a UK visiting Fellowship in 1998 allowed me to study the reserve collections of coins at the British Museum in London and the Ashmolean Museum in Oxford. Additionally, the Professor Hirayama Trainee Curatorship at the Department of Coins and Medals, British Museum in 1999 significantly broadened my research on Indian Islamic coins.I am deeply grateful and much indebted to Dr Joe Cribb, former Keeper of the Department of Coins and Medals at the British Museum, for his unwavering support, guidance, and crucial advice, without which this research would not have been possible. My heartfelt thanks also due to Mr Subir Sarkar, Regional Officer of the AIIS in Kolkata, for his active assistance and invaluable suggestions. I am sincerely appreciative of Dr Rajat Sanyal of the University of Calcutta for his inspiring support and cooperation. Finally, I extend my thanks to Ms Ayesha Joynab, one of my research scholars, for her spontaneous help in preparing the tables and bibliography included here.

References

Allan, John 1914. *Catalogue of the Coins of the Gupta Dynasties and of Śaśāṅka, King of Gauḍa*. London: The Trustees [of the British Museum].

— 1936. *A Catalogue of Indian Coins in the British Museum: Coins of Ancient India*, London: The Trustees of the British Museum.

Cribb, Joe 2014. Rediscovering the Kushans. *From Persia to Punjab: Exploring ancient Iran, Afghanistan and Pakistan*. (eds.) Elizabeth Errington and Vesta Sarkhosh Curtis, pp. 179–211. Mumbai: The British Museum Press and Chhatrapati Shivaji Maharaj VastuSangrahalaya [1st pub. 2007, London as *From Persepolis to Punjab*…].

Errington, Elizabeth 2014. Exploring Gandhara. *From Persia to Punjab: Exploring ancient Iran, Afghanistan and Pakistan*, (eds.), Elizabeth Errington and Vesta Sarkhosh Curtis, pp. 211–227. Mumbai: The British Museum Press and Chhatrapati Shivaji Maharaj VastuSangrahalaya.

Errington, Elizabeth and Vesta Sarkhosh Curtis [eds.] 2014. Part 1: Awakening the Past. *From Persia to Punjab: Exploring ancient Iran, Afghanistan and Pakistan*, pp. 1–17. Mumbai: The British Museum Press and Chhatrapati Shivaji Maharaj VastuSangrahalaya.

Gardner, Percy 1886. *The Coins of the Greek and Scythic Kings of Bactria and India in the British Museum*(Reginald Stuart Poole ed. Catalogue of Indian Coins in the British Museum: Greek and Scythic Kings of Bactria and India). London:The Trustees [of the British Museum].

Goron, Stan and J.P. Goenka 2011. *The Coins of the Indian Sultanates: Covering the Area of Present-day India*, *Pakistan and Bangladesh*. New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.

Khera, Paramdip Kaur, 2011. *Catalogue of the Sikh Coins in the British Museum*. British Museum Research Publication 190. London: British Museum Press.

Lafont, Jean 2014. From Taq-i Bustan to Lahore: French and Italian officers in Persia and the Punjab 1816-46. *From Persia to Punjab: Exploring ancient Iran, Afghanistan and Pakistan*,(ed.) Elizabeth Errington and Vesta Sarkhosh Curtis, pp.141–153. Mumbai: The British Museum Press and Chhatrapati Shivaji Maharaj VastuSangrahalaya.

Lane-Poole, Stanley 1884. *The Catalogue of the Coins of the Sultáns of Dehlí in the British Museum* (Reginald Stuart Poole ed. Catalogue of Indian Coins in the British Museum: Sultáns of Dehlí). London:The Trustees [of the British Museum].

— 1885. *The Coins of the Muhammadan States of India in the British Museum* (Reginald Stuart Poole ed. Catalogue of Indian Coins in the British Museum: The Muhammadan States). London: The Trustees[of the British Museum].

— 1892. *The Coins of the Moghul Emperors of Hindustan in the British Museum* (Reginald Stuart Poole ed. Catalogue of Indian Coins in the British Museum: The Moghul Emperors). London: The Trustees.

Nair, P. Thankappan 1999. *James Prinsep: Life and Work*, Vol. I, Background and Benares Period. Calcutta: Firma KLM Private Limited.

Prinsep, H. T. 1841. Proceedings of the Asiatic Society. *The Journal of the Asiatic Society* 10: 168–171.

— 1844. *Historical Results from Bactrian Coins, discovered in Afghanistan*, London: Wm. H. Allen and Co.

— T. 1858. Memoir of the Author. *Essays on Indian Antiquities, Historic, Numismatic, and Palaeographic, of the Late James Prinsep, F.R.S., Secretary to the Asiatic Society of Bengal; To which are added his Useful Tables, Illustrative of Indian History, Chronology, Modern Coinages, Weights, Measures ETC*. Vol. I, (ed.) Edward Thomas, pp. i–xvi. London: John Murray.

Prinsep, James 1832. On the Ancient Roman Coins in the Cabinet of the Asiatic Society. *Journal of the Asiatic Society of Bengal* 1: 392–408.

— 1833a. Bactrian and Indo-Scythian Cions. *Journal of the Asiatic Society of Bengal* 2: 405–16.

— 1833b. Note on Lieut. Bumes' Collections of Coins. *Journal of the Asiatic Society of Bengal* 2: 310–18.

— 1833c. On the Greek Coins in the Cabinet of the Asiatic Society. *Journal of the Asiatic Society of Bengal* 2: 27– 41.

—1834a. On the Coins and Relics Discovered by M. Chevalier Ventura, General in the Service of Mahrajah Ranjit Singh, in the Tope of Manikyala. *Journal of the Asiatic Society of Bengal* 3: 313–320 [rep. Thomas 1858: 90–117].

— 1834b. Continuation of Observations on the Coins and Relics Discovered by General Ventura, in the Tope of Manikyala. *Journal of the Asiatic Society of Bengal* 3: 436–455, pl. XXVI [rep. Thomas 1858: 118–37].

Prinsep, James [MSS]. 'James Prinsep Oriental Coins', 3 vols, Ashmolean Museum, Oxford, Heberden Coin Room Archives, Arch. Ash. fol. 18.

Rapson, Edward James 1908. *A Catalogue of the Indian Coins in the British Museum: Catalogue of the Coins of the Andhra Dynasty, the Western Kṣatrapas, the Traikūṭaka Dynasty and the "Bodhi" Dynasty*. London: Trustees of the British Museum.

Sinha, Sutapa 1997–1999. Coin Hoards of the Bengal Sultans: Anatomy of the Hoards. *Pratna Samiksha* 6–8: 136–242.

— 2011. History of the Coin Collection of the Bengal Sultans in the British Museum. *Feclicitas: Essays in Numismatics, Epigraphy and History in Honour of Joe Cribb*, (ed.), pp. 347–363. Mumbai: Reesha.

— 2017. Coin Hoards of the Bengal Sultans (1205–1576AD): From West Bengal, Bihar, Jharkhand, Assam and Bangladesh. Gurgaon: Shubhi Publications.

Wang, Helen and Elizabeth Errington 2019. The British Museum Catalogues of Indian Coins. *Money and Money Matters in Pre-Modern South Asia*: *Nicholas G. Rhodes Commemoration Volume,* Susmita Basu Majumdar and S.K. Bose (eds.), pp. 3–32. New Delhi: Manohar.

Wilson, H. H. 1832. 'Description of select coins, from originals or drawings in the possession of the Asiatic Society', *Asiatick Researches* 17: 559–600.

Wilson, H. H. 1841. *Ariana Antiqua. A Descriptive Account of the Antiquities and Coins of Afghanistan: with a Memoir on the Buildings called Topes, by C. Masson, Esq.*, London: Wm. H. Allen and Co. [rep. Delhi 1971].

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SIR·WILLIAM·JONES
MDCCXLVI–MDCCXCIV

ARTICLE

James Prinsep – A Doyen of the Chemical Kingdom

Syamal Chakrabarti

Abstract

This paper delves into the illustrious life and remarkable contributions of James Prinsep, a prominent chemist and Assay Master at the Calcutta Mint, whose influence was instrumental in fostering scientific inquiry in early nineteenth century India. His scholarly findings, disseminated through the journals like *Asiatick Researches, Gleanings in Science*, and the *The Journal of the Asiatic Society of Bengal* not only enriched the comprehension of diverse minerals but also elucidated the chemical properties of waters, including assessments of hot springs. Moreover, the paper elucidates Prinsep's educational journey, highlighting his tutelage under Robert Bingley at the Royal Mint in London and mentorship by the esteemed orientalist H.H. Wilson. It recounts his transition to Banaras, where he enhanced the mint's architecture and engaged in civic initiatives. His election as a Fellow of the Royal Society and the Asiatic Society attests to his esteemed position in the scientific realm, ultimately positioning as a pivotal figure in the confluence of chemistry and colonial science, with a legacy that endures in the field today.

Keywords: James Prinsep, assay master chemical analysis, mineralogy, meteorology, metallurgy, chemist.

To cite this article
Chakrabarti, Syamal 2024. James Prinsep—A Doyen of the Chemical Kingdom. *Journal of the Asiatic Society* 66/2: 177–192.

ISSN:0368-3308

Arthur Llewellyn Basham (1914–1986), a Professor at the School of Oriental and African Studies, London and a noted historian, Indologist and author of several books wrote a foreword in the book titled *The Asiatic Society of Bengal and the Discovery of India's Past*, (Kejariwal 1988), where he mentioned the names of 'a small band of scholars', viz., William Jones (1746–1794), Horace Wilson (1786–1860), Henry Thomas Colebrooke (1765–1837), and James Prinsep (1799–1842). The founder scholar of the Asiatic Society lived only for forty-eight years, whereas the life span of James Prinsep was only forty-one years. In fact, Sir William survived only for a decade after the establishment of the Asiatic Society.

We shall begin with a concise biography of James Prinsep. He was the seventh son and tenth child of John Prinsep (1746–1830) and Sophia Elizabeth Auriol (1760–1850). He was born on 20 August 1799, exhibited exceptional talent from an early age. His elder brother, Henry Prinsep (1793–1878), an officer of the Indian Civil Service, recalled how young James constructed a detailed model of a carriage, measuring no more than six inches in length, complete with functional springs, doors, windows, lamps, and retractable steps (Prinsep 1858: ii). This incident reveals James's innate scientific and technical aptitude. Additionally, he excelled in drawing, and this combination of skills positioned him as a prominent architect. He received architectural training from Augustus Charles Pugin (1762–1832), a distinguished Anglo-French artist, architectural draughtsman, and leading authority on medieval architecture. Interestingly, James Prinsep's name is absent from accounts of Pugin's notable students, likely because he abandoned architecture shortly after his training due to eye problems. Despite the many accolades associated with him—numismatist, epigraphist, decipherer of ancient inscriptions, archaeologist, and meteorologist—his scientific contributions remain largely overlooked. A.K. Biswas notes that while there are numerous studies on Prinsep, his scientific achievements have not been adequately acknowledged, with even Blanpied's comprehensive review neglecting this aspect (Biswas 2001:3). Similarly, Kejariwal's analysis focuses on Prinsep's

work in Indian antiquity, omitting his contributions to science and technology. Edward Thomas's two volumes also suffer from the same defect. Therein James Prinsep's brother Henry writes in his memoir that he would not 'weary the reader' by describing the scientific contributions of James, for which one can 'refer to the seven volumes of the Journal' from 1832 to 1838 inclusive.

Biswas concluded : 'Even Henry, his brother overlooked that James had made useful scientific contributions in 1825 as well!' *Asiatick Researches* (hereafter AR) volume XV, 1825 reprinted the following extracts from the *Proceedings of the Benares Corresponding Society:*

> (a) Latitude of the Hindu Observatory at Benares (Co-author: W. Cracroft) - p.i, (b) Meteorological Journal- pp. vii-xii, (c) Description of a Pluviameter and a Evaporometer constructed at Benares – p. xiii, (d) Analysis of Mineral Water – p. xiv, (e) Abstracted Results of Marine Observations – pp. xv-xviii.

To better understand the early academic influences on James Prinsep, it is important to revisit his formative years. After leaving the field of architecture, Prinsep pursued studies in chemistry by attending lectures at Guy's Hospital in London, delivered by Alexander Marcet (1770–1822). Marcet, who had earned his MD degree from the University of Edinburgh, lectured on chemistry at Guy's Hospital from 1805 to 1819 (Moore 1893). Among his contributions to the field, Marcet authored a paper titled 'A Chemical Account of the Brighton Chalybeate' which was included in the volume 'A Treatise on Mineral Waters' edited by William Saunders (Saunders 1805: viii, 370). This work was also published as a pamphlet, wherein Marcet described various experiments using water from a natural mineral spring containing iron salts, reflecting the rudimentary chemistry of the time. Additionally, Marcet contributed articles on chemistry to *Rees's Cyclopaedia*, a significant British encyclopedia edited by Rev. Abraham Rees (1743–1825) (Rees 1819). It is quite likely that Marcet's work on mineral water analysis significantly influenced Prinsep, whose initial publication also focused on the analysis of mineral water (Prinsep 1825: xiv–xv).

At the age of twenty, on 15 September 1819, Prinsep arrived in Calcutta accompanied by his elder brother, Henry Prinsep. Even during his voyage from England to India, James engaged in scientific experiments. His elder brother, George Alexander Prinsep, had previously measured the salinity, specific gravity, and temperature of oceans worldwide. Building on this work, James collected additional data at various locations, such as near the Cape of Good Hope and the mouth of the Cuttack River. These findings were later communicated to Alexander Marcet of the Royal Society, who was elected a Fellow in 1815. The results were published in AR titles 'Abstracted Results of Marine Observations' in 1823. Shortly before arriving in Calcutta, in August 1819, James conducted experiments 100 miles south of the Cape, where he observed that a southeast warm current caused a rapid increase in temperature from 57° to 63.5°F. He found the specific gravity of seawater to be remarkably consistent at 1.0271±0.0016. Additionally, he measured the specific gravity of seawater near the mouths of Orissa rivers, finding it lower (1.016 to 1.0194), and concluded that this variation could assist navigators in estimating their proximity to river mouths.

Prinsep started his professional career as the Assistant to the Assay Master of the Calcutta Mint. He was trained earlier by Robert Bingley, the Assay Master of the Royal Mint, London (1798–1836). An Assay Master working in a Mint is responsible for quality inspection and analysis of metal coins which requires a thorough knowledge of chemical analysis. The Calcutta Mint was first established in 1757 and was located in a building next to the 'Black Hole' in the old fort where the General Post Office (GPO) stands today. His supervisor was famous orientalist H.H. Wilson, not only an expert in medicine and mint but also a dedicated Indologist, Secretary of Asiatic Society, a great scholar in Sanskrit Who became later the Boden Professor of Oxford University. Wilson played the role of a mentor in forming the future career of James Prinsep.

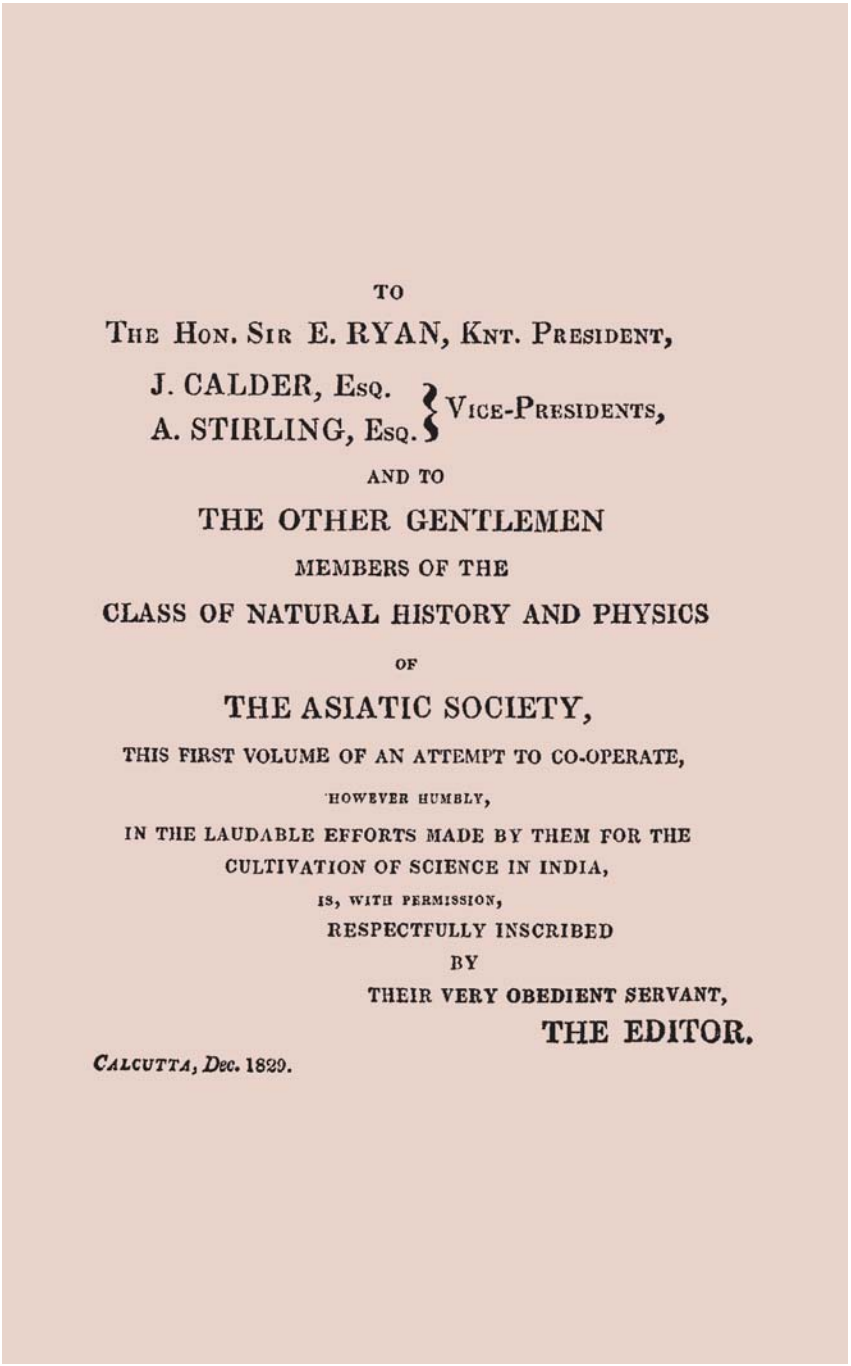
James Prinsep worked at the Calcutta Mint for about a year before moving to Banaras in 1820. Drawing on his architectural knowledge,

he improved the design of the newly established Mint in Banaras, where he served as an Assay Master. Beyond his official duties, Prinsep applied his technological and scientific expertise to various projects. He built a church, widened street, and constructed a sewer system with an arched tunnel beneath the densely populated areas, extending from the lowest water-line of the Ganges. He also built a five-arched stone bridge over the 'Caramnassa' River (Prinsep 1831 b: 297–299, pl. xvi) and restored the minarets of Aurangzeb's Alamgir Mosque. He also designed a precision balance, formulated a gas mixture for balloon flights, created a steam-powered ceiling fan, and developed rust prevention methods for iron surfaces.

Prinsep spent a decade in Banaras, performed outstanding works and people of Banaras were ever grateful to him. Coming back to Calcutta, Prinsep joined as a deputy Assay Master to the Calcutta Mint. After Wilson's resignation in 1832 Prinsep became the Assay Master. In the meantime, the scientific community observed his brilliance and elected him Fellow of the Royal Society. Around the same time Prinsep's name was nominated as a Fellow of the Asiatic Society. The nomination was placed at the meeting of 5 May 1830 and he was duly elected on 7 July 1830.

Let us now place the historical background of the journal named *Gleanings in Science* (hereinafter GS). In 1829, Major J.D. Herbert, a scientific officer in the Company's army initiated this monthly periodical. His intention was to deliver the latest discoveries and developments in the arts and sciences of Europe, as soon in the dedicatory page of the first volume of the journal (Fig. 1).

Major Herbert in 1831 got the post of Astronomer to the King of Oudh and joined there. He transferred the responsibility of publication to James Prinsep. We would like to highlight several important points from the Preface of the volume. A weekly press (unnamed) remarked that 'Science must continue at a low ebb; not only in India, but in England.' It was suggested that education should focus on 'the knowledge of words, not things.' Even in England, sustaining two monthly journals (*The Philosophical Magazine* and *Annals of Philosophy*)



TO

THE HON. SIR E. RYAN, KNT. PRESIDENT,

J. CALDER, ESQ.
A. STIRLING, ESQ. } VICE-PRESIDENTS,

AND TO

THE OTHER GENTLEMEN

MEMBERS OF THE

CLASS OF NATURAL HISTORY AND PHYSICS

OF

THE ASIATIC SOCIETY,

THIS FIRST VOLUME OF AN ATTEMPT TO CO-OPERATE,

HOWEVER HUMBLY,

IN THE LAUDABLE EFFORTS MADE BY THEM FOR THE
CULTIVATION OF SCIENCE IN INDIA,

IS, WITH PERMISSION,

RESPECTFULLY INSCRIBED

BY

THEIR VERY OBEDIENT SERVANT,

THE EDITOR.

CALCUTTA, Dec. 1829.

Figure 1. Dedication page of the first volume of *Gleanings in Science*.

and one quarterly journal on general science was challenging. In contrast, Bengal, with a reading public of scarcely more than 200, supported one such publication. The Preface noted that 'some of the articles in this first volume are of real merit,' and that 'the majority do not yield in interest to the average quality of those we find in the journals there.'

The journal's quality was elevated to compete with similar European publications, with no intent for financial gain; the sole aim was the promotion of science (Biswas 2001: 8). In March 1832, Prinsep requested the Society to rename GS as *The Journal of the Asiatic Society of Bengal* (hereinafter JASB), a proposal that was accepted. From then, under James Prinsep's editorship, JASB began publishing, and he pursued historical investigations with scientific rigor. However, our focus will remain on Prinsep's chemical and metallurgical expertise. It is very difficult to overlook the statement made by our noted science historian Arun Kumar Biswas where he said 'James Prinsep (1799–1840) not only cultivated modern science in India but also restored a sense of self pride amongst Indians through his antiquarian studies' (Biswas 2001: 6).

Prinsep spent two decades in India, the first decade at Banaras and the second decade at Calcutta. He started his own technical and scientific works in Banaras from 1820. He undertook many meteorological measurements. Atmospheric pressure was measured during 1821–1823 on different dates and time of a particular day by Dollond Barometer in consultation with Captain Herbert's Survey Office at Calcutta. By comparing the barometric heights at two places and reducing the values at 32°F, the relative difference in altitude could be calculated. Prinsep computed the 'barometric altitude of Banaras to be 246.75 ft. above Chowringhee.' Prinsep measured the wet-bulb temperature and through hygrometric calculation computed relative humidity. He constructed his own evaporometer and pluviameter to record the rainfall at Banaras. An evaporometer is a scientific instrument used for measuring the rate of water evaporation from a wet surface to the atmosphere whereas pluviameter is an

instrument for measuring the amount of precipitation at a given location over a specified period of time. The huge amount of data was categorised and they were put in tabular forms. He published the meteorological data of Banaras in the *Proceedings of the Benares Corresponding Society* (a society founded by him) in 1823.

Prinsep analysed the mineral water of Banaras determining the contents of NaCl, $NaNO_3$, KNO_3 and $MgCl_2$. He collaborated with William Cracroft and wrote an interesting paper in the AR in 1823 to determine the latitude and also longitude of the Hindu Observatory at Banaras. He attentively followed the movements of stars and Jupiter's satellites and was able to fix the latitude and longitude of several cities like Banaras, Jaunpur, Delhi, Karnal, Meerut, etc.

A very good example of technical and engineering Excellency of James Prinsep is reflected from the construction of a bridge on river 'Caramnassa'. It was a necessity for a long time but due to several factors like technical, financial and religious it could not be done. The religious factor was that people did not want to come in contact with the river water. It was because if they touched water, all their merits (*puṭya*) would be destroyed since the name of the river 'Caramnassa' (destructs the merits). Ahalyabai Holkar tried before by spending a huge amount of money but the foundation sank and the four piers were taken away by the swift current of flood. In the meantime, a wealthy trader and philanthropist *Putnee Mal* thought of doing something which was 'great and impossible'. He approached James Prinsep to take up the assignment and Prinsep agreed. To a great surprise, the bridge was constructed with full satisfaction and also at a lower cost than anticipated. One day the then Governor General Lord William Bentinck visited the site and admired Prinsep for doing the marvelous job (Sharma 1999).

Firstly, we mention his paper on water analysis which was published in the ARin 1825 (Prinsep 1825). The title of the paper was 'Analysis of a Mineral Water'. He had a particular interest in this work. Prinsep observed: 'Having heard that the water of the Bridhkâl Kund (a well in the city of Benares) possessed slightly aperient

medicinal properties when taken in large draughts, I procured a bottle full of it to submit to chemical analysis.' Prinsep first mentioned the quality of water. 'The water was clear, devoid of smell, and yielded no traces of iron.' The specific gravity of the sample was 1.0059 at the temperature 92°F. He took 1000° grains weight (1 grain = 64.79891 mg). On evaporation he obtained a dry weight of 7.4 grains. 5.6 grains got dissolved in alcohol and the rest was proved to be carbonate of lime and a soluble sulphate. Prinsep then analysed the constituents present in alcoholic solution. He followed Woollaston's method (William Hyde Woollaston, famous as Palladium and Rhodium discoverer) with a slight modification. He used platina foil instead of gold, 'since it has the advantage of telling whether the nitrate be of potash or soda;' Out of 1000 grains of water, he got the following results:

Carbonate of lime	1.33 grains
Sulphate of Soda	0.75 ,,
Muriate of Magnesia	0.94 grains
Muriate of Soda	2.10 ,,
Nitrates (of Soda and Potash)	2.48 ,,

Prinsep did not have the interest only for chemical investigation. That's why, at the end of his communication, he wrote 'the presence of Magnesia was determined with much care, as to it may be attributed the purgative qualities of this water.'

Prinsep wrote a paper 'On the Analysis of Dolomite' (Prinsep 1829: 265–68) which was published in 1829. We know that Dolomite is a type of limestone rich in magnesium carbonate and calcium carbonate. In order to ascertain the extent of accuracy, Prinsep made artificial mixtures of the two carbonates in different proportions. He mentioned the carbonates as calcareous spar (an old common name used for crystalline Calcium Carbonate prior to 1845 when the name was changed to Calcite) and carbonate of magnesia (Magnesium Carbonate). He followed calcination (thermal treatment at high temperature under limited supply of oxygen to remove impurities) and then slaking (the process of alternate wetting and drying).

It is very interesting to note that he had written in his paper 'atomic weight of magnesia and lime'. Both of them are compounds. Thus, they cannot have atomic weights but molecular weights. At the beginning of nineteenth century, it was a convention in the history of Chemistry. Prinsep proved he was correct by making a comparison of Dolomite analysis performed by the great Chemist Jacob Berzelius (1779–1848). In fact, Berzelius is considered, along with Robert Boyle, John Dalton and Antoine Lavoisier to be one of the founders of modern Chemistry. Prinsep was comfortable in his experiment as his results were 'most consistent' with those of Berzelius. Prinsep developed a formula for his calculation. He got the following result:

Carb. Lime 54.0

Carb. Mag. 45.7

Prinsep even explained the small error not simply by saying that it is 'experimental'. His sample for magnesia was collected from a medicine which contained water. He confirmed it by a direct experiment. Prinsep put the result in tabular form very nicely. Sometimes he got erroneous results. It is quite common in these kinds of analytical experiments. That's why Prinsep mentioned in his paper 'By way of removing, however, any doubt which might arise from the imperfection of the last experiments. I repeated the proof with additional precautions.' When he got different results than expected, he always attempted to place a proper explanation of it. In the paper he added,

The loss sustained by the magnesia is trivial, and certainly due to a partial absorption of hygrometric moisture in the corked bottle, in which it had been kept; the access of weight in slaking must be attributed to imperfect desiccation; for magnesia appears to be exceedingly slow in absorbing carbonic acid, scarcely taking up an appreciable quantity even in a very long interval of time.

Prinsep read a paper before the Physical Class of the Asiatic Society on 15 January 1831 which was published later (Prinsep 1831a: 39–42). The title of the paper was 'Examination of a Metallic Button, supposed

to be Platina, from Ava'. Ava was a British colony from 1824 to 1948. It was the ancient capital of Central Myanmar (Burma). Henry Burney, a British army officer and later worked as an agent of the East India Company used to collect materials from Burma (Prinsep mentioned as Ava) which he made available to England during First Anglo-Burmese War (1823–1826). From 1829 he became the British Resident at the court of the King in Ava (the then capital of Burma). From him, Charles Lane collected a number of mineral products of the Burmese empire and gave them to Prinsep for analysis. They were mixed with gold dust, available at the northern part of Ava, apparently seemed to be iron. 'They are easily corroded and are also affected by the magnet'. Prinsep mentioned that the metal when mixed with gold is found to increase its brilliancy. The King's earrings are made of a small quantity of it, mixed with pure gold. It is also very brittle in nature. Charles Lane wrote to Prinsep that they made several attempts but failed in making it malleable. The specimen received by Prinsep had a shape like a bright metallic button with 45 grains weight with a colour like platina. The specific gravity was measured by three trials which was 17.2. It did not visibly affect the magnetic needle. The bead could be broken into pieces. A piece weighing 13 grains was heated under a muffle furnace at 1900°F. It lost all brilliancy, and assumed a dull granular spongy texture getting dark black colour without any loss of weight. On further heating and hammering, it fused into a hard brittle button, with tarnished surface and bubble of air within. Loss in weight was one-five hundredth times than the original. The residue was further heated with borax holding by a platina spring forceps under flame. The exterior domain of the bead became dull green but the bead retained all its brittleness. When the sample was heated strongly on mica, a deeply indented globule of rosy steel colour appeared. The experiments and observations in the whole process were extremely meticulous which represented the true scientific attitude of James Prinsep. We are not going to discuss the 'analysis' part of the paper. At the end of it Prinsep presented the composition.

Platina	25
Gold	5
Iridium	40
Osmium	—
Iron	10
Arsenic	20
Lead	—
Rhodium (?)	—
Palladium (?)	—
	100

Prinsep's conclusion was 'the metal is undoubtedly, therefore, an alloy of platina […]' He congratulated Charles Lane to be the first discoverer of the precious metal (i.e. platinum) in southern Asia. Finally, the author of the paper wrote, 'Should the platina always have accompanied the gold dust of the Ava mines, and have always been thrown aside as a brittle, useless alloy; there may, possibly, be a quantity of the rejected metal procurable at a trifling cost, and this would, indeed, be a valuable acquisition for the chemist in India.' Unfortunately, the hopeful statement made by Prinsep did not work out. Ava or Myanmar is not considered a producer country for Platinum today. Presently the ten countries of highest platinum production are South Africa, Russia, Zimbabwe, Canada, UNITED States, China, Japan, Finland, Colombia and Australia as provided by United States Geological Survey (2018). India is also not in the picture.

Prinsep then published a 'Note on the Discovery of Platina in Ava' (Prinsep 1833.a: 279–84) where he wrote: it was shown that the metallic bead was a fused alloy of platina, gold and iridium, with iron, arsenic and lead […] Platina cannot be purified by cupellation like gold, on account of its infusibility […].' The locality and the mode of collection of the sample was given in this paper. After detailed analysis, it was concluded by Prinsep that the platina constitutes 20 percent of the cleaned ore and it is accompanied with about twice its weight of iridium. The rest seems to oxide of iron.

Prinsep wrote a very important paper in 1829 titled 'Experiments on Indigo' (Prinsep 1829: 13–19). We have already noted that his father John Prinsep became very rich after adopting Indigo cultivation as suggested by Warren Hastings, the first Governor-General of Bengal. He performed a short series of experiments in conjunction with 'an intelligent friend' engaged in an Indigo establishment. General literature about Indigo was discussed in the paper. There is a paragraph that reads:

> When first dissolved from the plant, the Indigo is in colourless state, and is readily soluble in water; but it becomes blue on absorbing oxygen from the air […] it is very unalterable, quite insoluble in water, alcohol, ether, saline infusions, alkalies, and dilute acids […]. Nitric acid converts it into a yellow bitter principle. Chlorine also destroys its colour immediately.

Concentrated sulphuric acid does not destroy the colouring matter, or cause decomposition as would be the case with most other vegetable compounds. Three different kinds of modifications of Indigo may be brought about by concentrated sulphuric acid. One can have Pure Indigo, Saxon Blue or Purple Indigo in crystalline forms. Composition of the pure Indigo was studied by Thomson and also by Crum. Since pure Indigo is almost totally insoluble, it can be purified by simple methods. On analysis of Indigo from Calcutta, there found two varieties of having 75 per cent and 80 per cent blue colour respectively. Prinsep presented the process of manufacture in the paper. Fermentation is a very crucial step in case of Indigo preparation. The length of fermentation ranges from 7 to 15 hours. Rate of Fermentation depends upon 'temperature, the weather, the wind, the water employed, and the ripeness of the plants;' Fermentation takes a long time 'When the temperature is high, the weather cloudy, but not rainy; the wind eastward and moderate, the plant ripe and fresh.' When prinsep discussed the similar kind of works performed by Gay-Lussac, Thenard, Marcet, Prout and others, he indicated their limitations also. Lastly, Prinsep presented the composition of fine blue available in Calcutta market with a hope that other will give attention on the subject. Prinsep read a paper at a meeting of the Physical Class of The Asiatic Society on 27 October 1830. It was later published with the title 'Examination of the Water of several Hot

Springs of the Arracan Coast: from specimens preserved in the Museum of the Asiatic Society' (Prinsep 1831a: 16–18).

The paper titled 'Chemical Analyses' (Prinsep 1831a: 277–84) starts with a very thought-provoking sentence, 'A mineralogical cabinet is of comparatively little use, unless the composition of the substances it contains is satisfactorily determined: it should therefore be the constant duty of those in charge to examine the new specimen contributed occasionally from various quarters.' He also added that this may not be applied to geological samples but important for mineral waters, metallic minerals, etc. In this paper, Prinsep considered the water of Katkamsandi hot spring, the Gâzipurkankar, and the arenaceous iron ore from Rev. R. Everest. The sub-headings of the paper were: 1. Katkamsandi Hot Spring 2. Gāzipur Kankar 3. Iron Sand from Râniganj 4. Graphite from Ceylon (Given by Bishop of Calcutta) 5. Varieties of Indian Coal (Cannel Coal, Anthracite, or Slate-Coal, Lignite from Derah Dun Valley and Glance Coal). He prepared a table where he gave the report of assay from Calcutta Assay Office with thirty-one varieties of coal i.e. Indian and other coal.

In a paper 'On the Supposed Adulteration of Banca Tin' (Prinsep 1831a: 32–4) it was written at the beginning that 'The tin trade of Singapur with China has suffered materially of late, from a supposition that the metal has been brought to market mixed with lead and other inferior metals.' The alleged sample was sent to Mint Master of Calcutta for chemical examination.

Eight specimens of Singapur Tin from Messrs. Thomas and Co. of Singapur were tested. Prinsep submitted that 'Knowing that the subject was of considerable importance to the mercantile world, I did not confine myself to…rough mode of testing […].' Results were given in the tabular form. His conclusion was: 'with regard to the present samples, I should pronounce them perfectly good in a mercantile sense; and by no means liable to the deduction of 25 per cent on their value, stated to have been exacted in the China market[…].'

Prinsep published another communication with the similar title 'Chemical Analyses' (Prinsep 1833b: 434–37). The samples he examined were as follows:

1. Three specimens of soil from sugar-cane fields, 2. Slaty anthracite from the hills south of Fatepur in the Hoshangūbād district, Nerbudda; transmitted to Government by Captain J.R. Ouseley 3. Peat of Calcutta Alluvium, dug up from 30 feet below the surface, at the Chitpūr Lock-gates, 4. Bell of St. John's Cathedral, Calcutta, 5. Ancient Copper Spear-heads, from Agra, 6. New Patent Sheathing Metal for Ships.

Regarding the bell, he noted 'the metal of which the old bell was composed turns out to be of a very brittle nature, and it is not surprising that it should have cracked (as recorded) [...]'

His next publication on which we like to give our attention is related to rusting of Iron and its prevention. The title was 'Experiments on the Preservation of Sheet Iron from Rust of India'(Prinsep 1834: 191-92). In case of iron steam boats for navigation of the Ganges, one has to be confident 'what varnish or composition would best preserve the exterior surface of such vessels from the rapid corrosion to which iron is so peculiarly subject in a hot climate.' At the end of his study, he concluded that 'The bituminous (coal-tar) coating was finally adopted, and it has been successfully applied to the iron steamer ...'

Prinsep published a paper in 1834 entitled 'Note on the Brown Liquid, contained in the Cylinders from Māniklayā' (Prinsep 1834: 567–76). It was again a very long paper. Manikyala stūpa relic deposits were discovered by Jean-Baptiste Ventura in 1830. M. Court discovered another metallic vessel or urn filled with brown liquid evidently analogous to that found by General Ventura. Prinsep collected a large volume of data and also did experiments by himself. His observation was that the brown substance was chiefly composed of vegetable, with perhaps a little animal matter, carbonized and blackened by age, and mixed with earths and metallic oxides.

The paper published in 1835 also had the generic title 'Chemical Analyses' (Prinsep 1835: 509–14). The samples were:

1. Saline water of Red Sea, 2. Native Carbonate of Magnesia from South India, 3. Tin from Malacca, 4. American Self-generating Gas Lamp, 5. Native Remedy for the Spleen, 6. Three bottles of Water from Hot Springs in Assam, 7. Mineral Water from Ava, 8. Hot Springs in the Mahadeo hills, 9. Minerals from Moulmien, 10. Sulphuret of Molybdenum.

To conclude, I quote from the work of R.C. Sharma where he introduced James Prinsep in his 'humble homage' on the eve of his

bi-centenary in 1999 (Sharma 2000): 'He was an illustrious Indologist, epigraphist, numismatist, archaeologist, writer, surveyor, geographer, astrologist, technologist, engineer, architect, artist, restorer, musicologist, assay master, census expert, administrator […].'

References

Biswas, Arun Kumar 2001. The First Science Movement in Colonial India (1808–1840) and the Pivotal Contributions of James Prinsep. *Journal of the Asiatic Society*, vol. 43/3, 2001: 8–9.

Thomas, Edward ed.) 1858. Essays on Indian Antiquities: Historic, Numismatic and Palaeographic, of the Late James Princep ... to which are Added His Useful Tables Illustrative of Indian History, Chronology, Modern Coinage, and Weight Measures etc. vol. I, London: John Murray.

Prinsep, James (1825). Analysis of a Mineral Water. *Asiatic Researches,* vol. XV, 1825: App. Xiv– Xv.

—— (1829). Chemical Analysis. *Gleaningsin Science*, vol. 1, 1829: 13–19, 265–68.

—— (1831a). Chemical Analysis. *Gleanings in Science*, vol. III, 1831: 16–18, 39–42, 277–284, 332–334.

—— (1831b) The Caramnassa Bridge. *Gleanings in Science*, vol. III, 1831: 297–299, pl. XVI.

—— (1833a). Note on the Discovery of Platina in Ava. *Asiatic Researches,* vol. XIX, 1833: 279–84.

—— (1833b). Chemical Analysis. The Journal of the Asiatic Society of Bengal, vol. II, 1833: 434–438.

—— (1834). Chemical Analysis. *Journal of the Asiatic Society of Bengal*, vol. III, 1834: 191–192, 567–576.

—— (1835). Chemical Analysis. *The Journal of the Asiatic Society of Bengal,* vol. IV, 1835: 509–514.

Kejariwal, O.P. (1988). The Asiatic Society of Bengal and the Discovery of India's Past. Delhi: Oxford University Press.

Moore, N. (1893). Alexander John Gaspard. *Dictionary of National Biography*, ed. by S. Lee, vol. 36, London: Smith, Elder & Co.

Rees, Abraham 1819. *The Cyclopædia; or, Universal Dictionary of Arts, Sciences and Literature*, vol. 8. London: Longman, Hurst, Rees, Orme, & Brown, Parernosver-Kow.

Saunders, William 1805. *A Treatise on the Chemical History and Medical Powers of Some of the Most Celebrated Mineral Waters with Practical Remarks on the Aqueous Regimen, to which are added, Observations on the Use of Cold and Warm Bathing*. London: Phillips and Fardon.

Sharma, R.C. 2000. The Banarsi Prinsep. *Jnana-Pravaha Annual Bulletin* 3: 95–103. [https://www.jnanapravaha.org/download/research/rcs01.pdf, last accessed 08.08.2024].

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ARTICLE

James Prinsep's Journal : The Formative Period

Sukhendu Bikash Pal and Shakti Mukherji*

Abstract

At the outset of the nineteenth century, it was necessary for the colonial rulers to re-structure the mints that were scattered across India. With this intention, James Prinsep, a youth of twenty years, was sent to India by the East India Director with an appointment of assistant to the Assay Master of Calcutta Mint and subsequently to Banaras Mint. After a successful, decade-long stint in Banaras, Prinsep returned back to Calcutta in 1830 and got associated with The Asiatic Society, where his mentor H.H. Wilson was in the position of Secretary. After his departure for England, Prinsep became the Secretary of The Asiatic Society as well as the editor of its Journal which later became the evidence of extensive research in social and natural sciences. In the following pages, attempts have been made to ascertain how *The Journal of the Asiatic Society of Bengal* played a pivotal role in the history of sciences, antiquities, and literature.

Keywords : Publications, Journal, Asiatic Society, James Prinsep, Plassey.

To cite this article
Pal, Sukhendu Bikash and Shakti Mukherji 2024. James Prinsep's Journal: The Formative Period. *Journal of The Asiatic Society* 66/2: 193–206.
*Email:sakti@cheerful.com
ISSN:0368-3308

Introduction

At the close of the eighteenth century, East India Company faced numerous challenges in establishing control over India. The company endured the battle of Plassey, the catastrophic Bengal famine, widespread tyranny, and various disasters. However, by 1818 it had solidified power over the Indian subcontinent. Following the destructive Anglo-Maratha War of 1817–18, the company's political and military dominance became unchallenged by any European rival or similar significant Indian power. With military threats mitigated, the Company's servants were now positioned to shift from a wartime footing to focusing on economic development and refining the state's bureaucracy. It was the time to explore the entire Indian subcontinent, its resources, culture, economy, agriculture and trades—elements crucial for establishing a stable and strong foothold in the Indian empire and to 'coax a surplus out of revenue' (Lee 2020: 144).

At this historical juncture, James Prinsep, the seventh son of John Prinsep—an alderman of London and a Member of Parliament—was dispatched to Calcutta by East India Director Patterson, taking up the position of Assistant to the Assay Master at the Calcutta Mint. This occurrence significantly influenced Asiatic Society, raising the question of whether the Asiatic Society could have revived its former prestige or emerged from its stagnation, nearly forty years after its establishment, had this event not transpired. It should be pertinent to recall that with the direct support and help of Warren Hastings, the Asiatic Society was founded in 1784 by the young Puisne Judge Sir William Jones, at a time when Bengal was still recovering from the bloody memories of the battle of Plassey, tyranny, and the great famine. Jones, already a Persian scholar before coming to India, learned Sanskrit upon his arrival, while Warren Hastings was already familiar with the native language. Understanding the native culture, religion, customs, language, geography, and ancient civilization was crucial. Jones articulated this in his first discourse, aiming to establish the Asiatic Society: 'The bounds of its investigations will be the geographical limits of Asia, and within these limits its inquiries will be extended to whatever is performed by man, or produced by nature.' (Jones 1788 : vii)

Before his endeavours in British India Prinsep attended chemical lectures by Dr. Morcet at Guy's hospital at London and later he joined Bingley, the Assay Master of the Mint, London. Here he received a certificate of proficiency and consequently, in 1819, was appointed as the assistant to the Assay Master of the Calcutta Mint. James Prinsep arrived in Calcutta on 15th September, 1819 at the age of only twenty and the following years witnessed the excellence of progress in scientific and historical development in India.

Upon his arrival in India, James Prinsep began assisting Horace Hayman Wilson, the prominent Sanskrit scholar, Assay Master of the Calcutta Mint and also the honorary Secretary of the Asiatic Society since 1815. They collaborated at both the old Mint and the newly constructed facility on Strand Road. Despite their productive partnership, Prinsep's time working with Wilson was short-lived as within a few months, Governor-General Lord Hastings assigned Wilson to remodel the Banaras Mint and tasked Presgrave of the Bengal Army with establishing a new mint at Saugor. Lacking experience in assaying, Presgrave was assisted by Prinsep, who played a crucial role in preparing the machinery for the Saugor mint. This establishment was subsequently recognized as the most efficient in India. (Nair 2000: 57). Wilson departed for Banaras, and during his absence, Abraham Lockett served as the acting Secretary of the Asiatic Society from November 13th, 1819, to April 13th, 1821.

Wilson returned to Calcutta, and James Prinsep was nominated Assay Master to the Banaras Mint. James travelled to Banaras by water in the beginning of October 1820. H. T. Prinsep while writing a memoire of his brother recollected, 'His journey up the Ganges afforded opportunities for the exercise of his pencil, of which he freely availed himself.' (Thomas 1858: ix). His publication, *Views and Illustrations of Benares*, remains esteemed both as an artistic work and as a historical document. The subsequent sections will focus on his contributions as the Secretary of the Asiatic Society.

Formation of Journals of the Society

By late 1827, some members of the Society with a strong interest in scientific research observed that the Society had neglected scientific enquiries. They suggested reviving the 'Physical Committee,' established

in 1808, to advance the sciences of zoology, meteorology, mineralogy, and geology in India. They also criticized the Society's publications for its irregularity and literary focus, deeming it rarely useful to scientists. Consequently, at a meeting on January 2, 1828, the Society resolved to hold scientific seminars bi-weekly.

While in Calcutta, Prinsep developed a closer relationship with J. D. Herbert, a scientific officer in the Company's army, whom he had previously known in Banaras. Herbert, now stationed in Calcutta, planned to launch a periodical titled *Gleanings in Science* (hereafter GS). This publication aimed to disseminate recent European advancements in art and science to India and provide a platform for Indian scientists to share their findings (Fig. 1). Prinsep was a major contributor from the outset, and his papers are highly valued among its original essays and articles.

During this period, Wilson retired from his positions with the East India Company, thereby vacating additional roles he had in India. James Prinsep then took over as Assay Master at the Calcutta Mint, Secretary to the Mint Committee and also as Secretary to the Physical Class, Asiatic Society in 1832. His expertise in Sanskrit literature was scarcely disputed, as his scientific achievements and interactions with Indian scholars rendered him particularly well-suited for the role. (Thomas 1858: ix).

The periodical GS, India's first scientific journal, was established by J.D. Herbert in January 1829. During his time in Banaras, Prinsep founded the Benares Corresponding Society, with selected proceedings included in the 1825 volume of the *Asiatick Researches* (hereafter AR). The monthly issues were printed at the Baptist Mission Press. Reflecting on a year of editorial work in 1829, Herbert stated,

> 'To cast a solitary ray of light on any particular branch of a subject is within the power of all. To collect and retain these scattered rays, till they can be combined into one strong focus of light, is the object of works devoted to periodical publication' (Herbert 1829: v).

After joining the Calcutta Mint, Prinsep assisted Herbert with scientific journalism and engaged with Wilson in Indological studies. When Herbert became the astronomer to the king of Oudh in 1831, Prinsep assumed responsibility for Herbert's periodical. Starting in

January 1832, he continued the publication under the new title, *The Journal of the Asiatic Society of Bengal* which, unlike the AR, was produced regularly every month for the following eight years. This journal featured three main sections—Science, Natural History, and Miscellaneous Intelligence. The period from 1832 to 1838 marked a golden era for the Asiatic Society, with over 200 papers published on various subjects like antiquities, numismatics, palaeography, zoology, and geology. In the Preface of its first publication Prinsep writes (Prinsep 1832 : vi):

> to give publicity to such oriental matter as the antiquarian, the linguist, the traveller and the naturalist may glean, in the ample field open to their industry in this part of the world (i.e. Asia), and as far as means would permit, to the progress of the various sciences at home, especially such as are connected in any way with Asia.

The title page from Volume I to X (1832–1841) quoted William Jones's motto contained in the Preface to the AR: 'It will flourish if naturalists, chemists, antiquaries, philologers, and men of science, in different parts of Asia, will commit their observations to writing and send them to the Asiatic Society at Calcutta' (Jones 1788).

The first nine volumes (1832–1840) of the journal were titled *The Journal of the Asiatic Society of Bengal* and only Volume X, which was 'Edited by the Secretary' without mentioning the name, was printed as *Journal of the Asiatic Society of Bengal*. This omission of 'The' is not known whether it was accidental or incidental. (Nair 2000: 410). The first seven volumes of the Journal were edited by James Prinsep, who was the proprietor as well. The name printed in the first volume as editor was 'James Prinsep, F.R.S., Secretary to the Physical Class, Asiatic Society'. It is interesting that the last volume, Prinsep edited, in 1838, had the longest introduction in the title page: 'Secretary of the Asiatic Society of Bengal; Hon. Member of the Asiatic Society of Paris; Cor. Mem. of the Zoological Society of London; and of the Royal Societies of Marseilles and Caen; of the Academy of Natural Sciences of Philadelphia; of the Philosophical Society of Geneva; of the Albany Institute, etc.' After Prinsep, vols. VIII-X were published in 1839, 1840, and 1841 but no name was mentioned as 'Editor' and the subsequent volumes were edited by the then Acting Secretary and finally by Secretary.

During the secretaryship of Prinsep, the first seven volumes of the *Journal of the Asiatic Society of Bengal* were printed at the Baptist Mission

Press, Circular Road, Calcutta, but after him, the next three volumes were taken away to Bishop's College Press, Calcutta. Daniel Wilson was Vice-President during 1838–39. These three volumes were designated as 'New Series' as the very title pages found, to distinguish them from Prinsep's property. The journals were designed to incorporate maximum reading material with typesetting of 8 point for text and 6 point for notes, being the size Octavo of double demy paper. It was a monthly publication in paper covers bearing running numbers of the issue and the month it was issued. The title page, contents, and other materials which should go in the beginning and index etc. to be bound at the end, were issued together with guidelines for the binders, when the volume was completed (Nair 2000: 411). The JASB started with 188 pages including illustrations and index in 1832 under the secretaryship of Prinsep and continued to pages 1086 of the 7th volume of JASB in 1838.

The content and popularity of the JASB surpassed even the grandeur of the Royal Asiatic Society of Great Britain and Ireland. In 1837, Col. W. H. Sykes, Honorary Member of the Asiatic Society wrote to Prinsep (Sykes 1837: 1038).

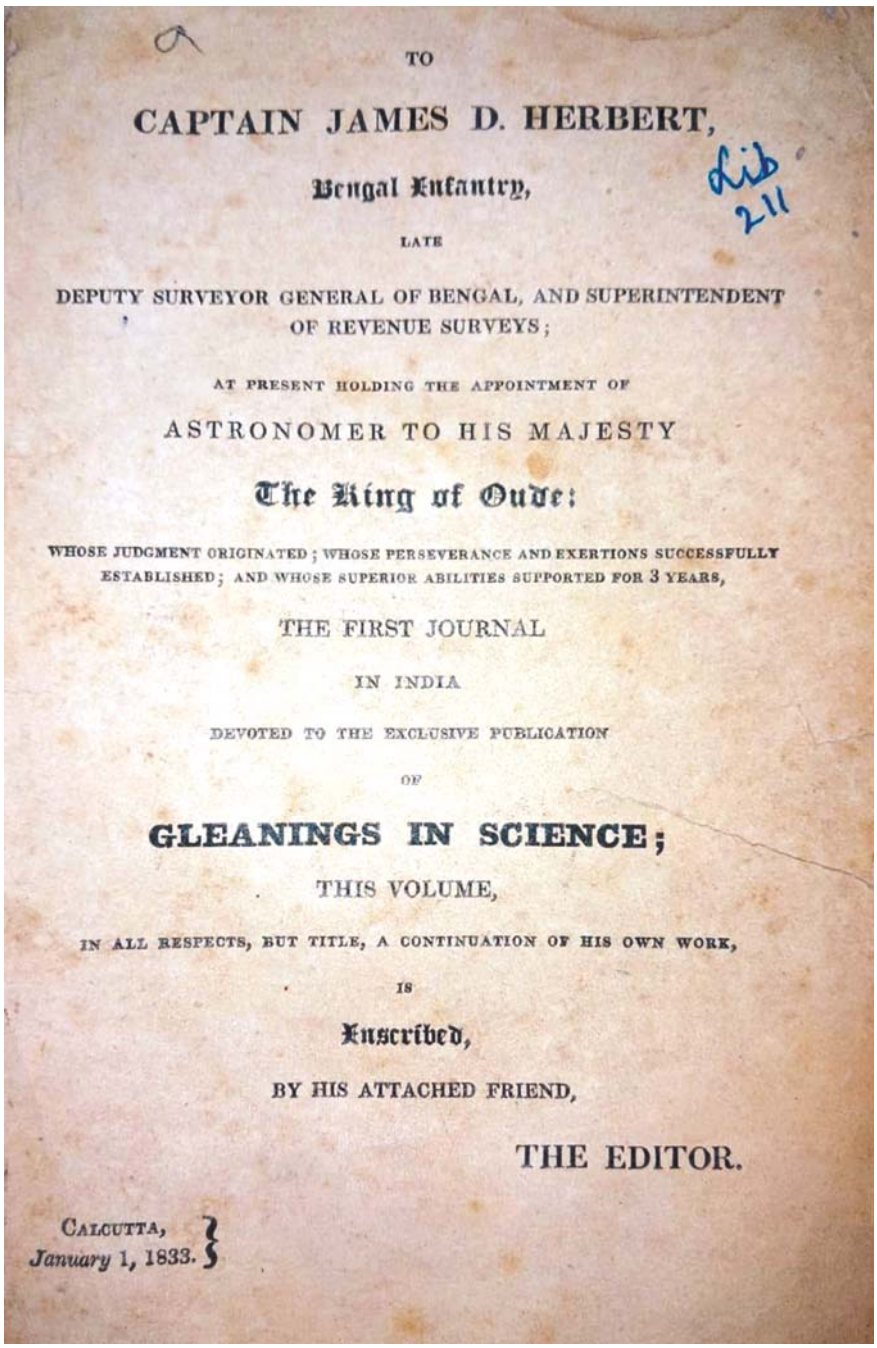
> The admirable and efficient use you have made in your able Journal of the ancient inscriptions and ancient coins found in various parts of India induced me to apply to withdraw all my copies of inscriptions met with in Western India from the hands of the Royal Asiatic Society with a view to offer them to you to make such use of as you might think proper.

From the very beginning, scientific discussion was greatly boosted through Prinsep's irrepressible enthusiasm. W. V. Harcourt, Secretary of the British Association for the Advancement of Science, solicited collaboration with the Society and specifically the enthusiasts of the physical class such as Captain Herbert, Prinsep, etc. (Letter read in the Meeting of 15th August 1832). Asiatic Society's spectacular achievements in various fields eclipsed all other learned bodies during his secretaryship. One instance may be referred. Prof. W. Whewell of the Trinity College, Cambridge and Vice President of the Royal Society requested the Asiatic Society to supply information on the subject of tides of the Indian coasts. Accordingly in the monthly meeting of 7th June 1837 it was resolved that to address a circular to the Society's members and correspondents residing on the coastal stations, requesting their aid in procuring data for the tides of the Indian

Ocean. The Society also instituted the requisite observations since June 1837 at various coastal areas in India and also Ceylon, Mauritious and Bourbon. Progress reports were submitted to the Society. Government of India reimbursed the Society the expenditure incurred in the collection of data for tide research. The tidal observations for various parts of the Eastern Hemisphere were published in the Society's Journal between 1836 and 1850. (Nair 2000 : 69-70).

The Journals were illustrated with appropriate engravings. The last volume edited by Prinsep contained 61 engravings of inscriptions, coins, subjects of natural history, maps etc. Most of these illustrations were engraved by James Prinsep himself and printed by J.B. Tassin at his Lithographic press. Though plates of Vols. VIII–X were printed by T. Black at the Asiatic Lithographic Press. While discussing the illustrations the names of Jean Baptist Tassin and native Kasinatha cannot be ignored. Tassin was the most celebrated cartographer and engraver of Calcutta during 1833–41 and Kasinatha was the die-engraver of the Mint. While talking to the engravings of AR, James Prinsep brought the notice of the members on 4th January, 1837 that Cantor and the artists of Wallich were credited to draw the lithographs of snakes & botanical plates, one or two were executed by himself but for the rest Prinsep gave where credit was due (Prinsep 1836:834).

JASB started its publication with print run of 300 copies, and rose to 500 copies within the span of 1833 to 1841. Each monthly number was priced Re 1 (or Rs. 12 for the year) for the first five years (1832–1836) including extra numbers. Price of the monthly nos. was increased from Re. 1 to Re. 1-8-0 to annual subscribers and Rs. 2 to others. In the meantime, number of pages increased to almost double around 1837 compared to 40 pages or so in 1832. We should note that Prinsep's regular publication of the Journal of the Asiatic Society, 1832-1838 just met the cost of printing and circulation charges. Even in the first two years Prinsep spent Rs. 2000 of his own to sustain the standard and circulation of the journal. He wrote in the Preface (Prinsep 1838: IX): 'Since it [the journal] was established as the channel for giving to the world original discoveries in the East, there has been opened an entirely new field of research… .'



TO

CAPTAIN JAMES D. HERBERT,

Bengal Infantry,

LATE

DEPUTY SURVEYOR GENERAL OF BENGAL, AND SUPERINTENDENT OF REVENUE SURVEYS;

AT PRESENT HOLDING THE APPOINTMENT OF

ASTRONOMER TO HIS MAJESTY

The King of Oude:

WHOSE JUDGMENT ORIGINATED; WHOSE PERSEVERANCE AND EXERTIONS SUCCESSFULLY ESTABLISHED; AND WHOSE SUPERIOR ABILITIES SUPPORTED FOR 3 YEARS,

THE FIRST JOURNAL

IN INDIA

DEVOTED TO THE EXCLUSIVE PUBLICATION

OF

GLEANINGS IN SCIENCE;

THIS VOLUME,

IN ALL RESPECTS, BUT TITLE, A CONTINUATION OF HIS OWN WORK,

IS

Inscribed,

BY HIS ATTACHED FRIEND,

THE EDITOR.

CALCUTTA,
January 1, 1833.

Figure 1. Title page of *Gleanings in Science* published in 1833 (vol. of 1832.)

Actually, he opened the new field in Buddhist annals, Brahmanical doctrines with the Sanskrit language, numismatic discoveries, Aśokan edict, and so on. It was the numismatic discoveries of Prinsep which established the link between the histories of the East and West. Races of kings were traced down from the followers of Alexander the Great, who settled in Bactria and Kabul and established a Grecian device and inscription for their coin, and even from before that, when Western India was a province of Persia, to the times when the Hindu successors of the Satraps & Grecian kings yielded to the Mohammedan conquerors and afterwards (Prinsep 1838). Actually, the JASB (vols. I to X), the most enriched and praiseworthy publication of the Asiatic Society, was not the property of the Society and no monetary involvement had the Society for the Journals.

We may quote from the Proceedings of the meeting of the Society dated 7th February, Wednesday evening 1838: 'The Secretary read the following letter from Government on the subject of the Journal, deeming it, though of more immediate concern to himself as editor and proprietor of that work, in principle addressed to the Society, whose labours it eulogized'.

Ownership of the Journal

Prinsep, because of his extreme ill health forwarded resignation from the post of Secretary, with the hope that after getting well he would come back again from homeland. President Edward Ryan called for a special meeting on 11th November 1838 to discuss the work process for the interim period. The President enumerated the acquirements of James Prinsep in Oriental literature, natural history, museum, correspondence, finance etc. but found no one successor to discharge them as he did. In the discussion when the context of 'Journal' rose, H.T. Prinsep observed that it was his brother's (i.e. James') own Journal with the accounts of which the Society had nothing to do. (Nair 1999: 13). The President agreed and explained the origin of the JASB. The papers which could not be published in the transactions were sent to Capt. Herbert for printing in GS. The Society never had any responsibility of the journal.

It only allowed the name of the Society when Prinsep became the Editor because the papers not published in the transactions were

published in it, and Prinsep was the Society's Secretary. As such, the papers were contributed by the Society (Nair 1999: 194). The President declared that the Society had never conducted a journal but had only sanctioned its name (Nair 1999: 195).

Asiatick Researches

AR was the official organ of transactions of the Asiatic Society from 1788, since its inception in 1784. The first 17 volumes were completed by 1832. Before his departure for England, Professor H.H. Wilson reported the completion of the 17th volume. The 18th, 19th, and 20th volumes of the AR, each containing two parts, were printed and published during 1833–1841, mostly during the secretaryship of Prinsep. As we find from the proceedings dated July 31, 1833, Prinsep reported the completion of the 2nd part of the 18th volume of the *Asiatick Researches or Transactions* and submitted a bill from the Military Orphan Press for Rs. 1962, being the expense 'incurred in its publication.'

Printers and Distributors

The journals were printed at the Baptist Mission Press as long as Prinsep was its proprietor. G.H. Huttman printed the first and second parts of the 18th and only first parts of the 19th and 20th volumes of the AR at the Bengal Military Orphan Press, Calcutta. The second part of the said volumes was printed at the Bishop's College Press. After Prinsep, JASB was brought out by the officiating secretaries– S.C. Malan, Professor at the Bishop's College, and W.B. O'Shaughnessy in 1839–1840 in Bishop's College Press. The distribution method of the journals warrants attention. The responsibility for selling the initial three volumes (1832, 1833, and 1834) was assumed by Messrs. Thacker and Co. of St. Andrew's Library, Calcutta. Subsequently, the editor managed the sales of the fourth to seventh volumes directly from the Society's office. Information on the sales locations for the eighth to tenth volumes is absent, likely indicating that the journals had by then achieved significant recognition.

Other Publications

Prinsep was credited with the publication of the index of the 18 volumes of AR. At the meeting of March 11, 1835, Prinsep reported the completion of the index and submitted a bill from the Military Orphan

Press for Rs. 1210 for expenses incurred in its publication. The members, who were present, voted their unanimous thanks to Prinsep 'for his trouble in getting this troublesome work through the press.' (Nair 2000: 407). Alexander Csoma de Koros's *Tibetan Dictionary* and *Tibetan Grammar* were also published by the Society during Prinsep's tenure at the expense of the Indian Government. Between 1833 and 1842 Prinsep was also credited with the publication of books such as: *The Travels of Moorcroft and Trebeck*, vols. 1–2; *Bishop of Isauropolis's*, vols. 1–2; *Cochin-Chinese Dictionary*; Brownlow's *Alifleila*, vols.1–4; Lane's *Anglo-Burmese Dictionary*, and E. Macnaughton's *Shah Nameh* in Persian, vols. 1–2.

The Government of India initially granted a postal concession to the GS, facilitating the publication of the new title, JASB. However, this concession was unexpectedly revoked on June 4, 1834. Despite this setback, the Secretary's persistent efforts led to the reinstatement of the privilege in June 1836, allowing the Editor to send proof-sheets to authors and editors for correction and receive them back postage-free.

Cessation of Oriental Publications

During his tenure, Prinsep encountered numerous challenges, including the cessation of all Oriental publications by the government. This may be noted that in 1813, when the Charter was up for renewal, the British Parliament ordered the East Indian Company to set aside Rs.1 lakh annually for the revival and promotion of literature, encouragement of learned Indian natives and introduction and promotion of science. (Mitra Shastri 1999).

Within two decades, the British Government reversed its position and halted the publication of all oriental works sponsored by the Society. On May 6, 1835, Prinsep reported receiving an order instructing printers to cease all current projects (with one exception) and to disband the team responsible 'for the transcription and collation of manuscripts and for the correction of the Sanscrit and Arabic Press'. (Nair : 2000, 681) Prinsep strongly opposed this detrimental government decision, urging action to 'rescue our (British) national character from the stigma of such an unjust, unpopular, and impolitic act, which was not far outdone by the destruction of the Alexandria library itself!' This response reflects Prinsep's genuine passion for knowledge, transcending his role within the ruling class.

Prinsep's love and respect for Indian talents were often argued. As we know, Prinsep's efficient and effective reformation in metallic currency could introduce single currency system throughout India. For the production of a large coinage a large number of dies were required for Calcutta, Bombay as well as other mints. In this issue almost everyone in the Govt. was in favour of obtaining the services of a competent die-engraver from England (Garg 2001: 46). But Prinsep had full faith in the efficiency and capabilities of his Indian co-workers and his views were however in sharp contrast to those of many of his compatriots. In November 1833, James Prinsep chose Kasinatha as an engraver, stating, 'There can be no hesitation however in pronouncing Kasinatha's engraving to be superior to the other two, [who were shortlisted namely Dela Combe and Hari Mohun Roy] and indeed his skills as the engraver, for copy work is without an equal in Calcutta' (Garg 2001: 46). Prinsep also supported employing an Indian die-cutter, believing that 'justice to our Indian subjects ought to be an additional motive to the encouragement of Native talent and skill.'

Conclusion

During the eighteenth and nineteenth centuries, many Europeans travelled to India in search of fortune. John Prinsep, the father of James Prinsep, introduced indigo cultivation in Bengal and was responsible for the introduction of copper coinage in the region (Nair 1999: 2). He was also the first European to print cotton fabrics in Bengal. While we can only imagine what kind of dreams and aspirations James Prinsep had as a twenty-year old but within a decade, transformed him into a distinguished scholar. His work provided significant insights into India's centuries-old history, antiquities, undeciphered inscriptions, scripts, and dynastic legacies. Prinsep emerged as a scientist who inspired his peers and disseminated new experiments and discoveries globally through his publications.

JASB, which he conducted all alone giving his time and energy in correcting the proofs and executing the illustrative plates in his own hands, in most cases, cost him every month a financial loss of one hundred rupees (Nair 2000:67). During his secretaryship he was burdened with heavy official duties at the Assay department at the

Mint, but hardly failed to conduct chemical analysis of minerals, metals and other objects for the Asiatic Society. Apart from many scientific contributions that he personally made in different disciplines (like topics on artificial hydraulic cement, sandstone of India, Himalayan fossils, several varieties of Indian coal and their compositions, migration of birds from Nepal, volcanic specimens from Mt. Vesuvius and more, within 1831-1832), he was a path-finder in collaborative research, the tradition of which was rare even in England during his time. Even Rev. W.V. Harcourt, Secretary of the British Association for the Advancement of Science solicited collaboration with the Asiatic Society, specifically the enthusiasts of the physical class such as Captain Herbert, James Prinsep etc... (Meeting dated 15th August 1832). He was the first in India to make a comprehensive survey on Indian coal reserves based on data collected by different scientists at his request (Biswas 2001: 21). Prinsep's endeavour and intellect enhanced the quality of JASB to such a level that in 1835 Prinsep reported that the new findings in the JASB were 'greedily transferred to the pages of European literary and scientific periodicals of wide established circulation.' (Biswas 2001: 20)

After Prinsep's demise, Edward Ryan, Chief Justice of Calcutta Supreme Court and President of the Asiatic Society wrote (Ryan 1840: 336) :

> The reputation which the Society now enjoys in Europe, I may with truth say, is mainly owing to his efforts. Amidst the most laborious public duties, he carried on a most extensive correspondence on literary and scientific subjects with Europe and Asia. He conducted the Journal of the Society, which he enriched by a variety of original papers, especially by his researches into the antiquities of India, in which his discoveries have attracted the admiration of all who have any taste for antiquarian research, leading to results the most important, and connecting, in truth, the histories of the East and West.

Prinsep's memorial gathering organised at Town Hall saw a huge presence of many pundits and other learned natives of Bengal who expressed their feelings of loss. Kamalakanta of the Hindu College recited a Sanskrit poem as homage to this man of talents. It is safe to conclude that Prinsep came to India with the goals akin to that of the other colonisers, that of exploring the resources of India and generating revenue for the British throne. However, his legacy remains in his

contributions towards extensive scientific and historical researches and deciphering valuable edicts from the glorious past of India. His unending efforts and dedication illumined new avenues that were seemingly closed to the Indians who had to go through the numerous invasions and political turmoil for centuries.

References

Biswas, Arun Kumar 2001. The First Science Movement in Colonial India (1808–1840) and the Pivotal Contributions of James Prinsep. *The Journal of the Asiatic Society* 43/3: 3–25.

Beveridge, H. 1978. *Warren Hastings in Bengal,* Calcutta: Sanskrit Pustak Bhandar.

Garg, S. 2001. James Prinsep and the Currency Reform. *The Journal of the Asiatic Society*, vol. 43/3:40–55.

Herbert, J.D. 1829. Preface. *Gleanings in Science 1:* v.

Jones, William 1788. A Discourse on the Institution of a Society, for Inquiring into the History, Civil, and Natural, the Antiquity, Arts, Sciences and Literature, of Asia by the President. *Asiatick Researches* 1: vii–xi.

Lee, James 2020. *Bureaucratic Culture in Early Colonial India*. London: Routledge.

Mitra, Rājendralāla, A. F. R. Hoernle, P. N. Bose 1885. *Centenary Review of the Asiatic Society (1784–1883)*. Calcutta: The Asiatic Society.

Mitra Shastri, Ajay 1999. James Prinsep and Study of Early Indian History. *Annals of the Bhandarkar Oriental Research Institute* 80: 191–201.

Nair, P. Thankappan 1999. *James Prinsep: Life and Work*, Volume I, Calcutta: Firma K.L. Mukhopadhyay.

—— 2000. *Proceedings of the Asiatic Society 1833–41*, Vol. IV, Book I, Calcutta: The Asiatic Society.

Prinsep, James 1832. Preface. *The Journal of the Asiatic Society of Bengal* I : vi.

—— 1836. Proceedings of the Asiatic Society for 4th January, 1837. *The Journal of the Asiatic Society of Bengal* V : 834.

—— 1838. Preface. *The Journal of the Asiatic Society of Bengal VII* : ix

Ryan, Edward 1840. Proceedings of the Asiatic Society for June 1840. *The Journal of the Asiatic Society of Bengal IX:* 336

Sinha, N. K. 1962. *Economic History of Bengal*. Calcutta: Firma K. L. Mukhopadhyay.

Sykes, W. H. 1837. Specimens of Buddhist Inscriptions, with Symbols, from the West of India. *The Journal of the Asiatic Society VI:* 1038–1043.

Thomas, Edward (ed.) 1858. *Essays on Indian Antiquities: Historic, Numismatic and Palaeographic, of the Late James Prinsep…to which are Added His Useful Tables Illustrative of Indian History, Chronology, Modern Coinage, Weight Measures etc.* Vol. I, London: John Murray.

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ARTICLE

James Prinsep (1799–1840): An Annotated Bibliography

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Abstract

James Prinsep (1799–1840), the prodigious scholar of the early nineteenth century, left an indelible mark on the fields of chemistry, town planning, census, architecture, natural sciences, palaeontology, numismatic and epigraphy. Although scholars like Rajendralal Mitra and Sibadas Chaudhuri have catalogued Prinsep's work in their indexes, a comprehensive annotated bibliography has been lacking. This paper seeks to address this gap by providing a thematic annotated bibliography of James Prinsep's works from 1825–1840, while recognising the ongoing need for detailed individual annotations.

Keywords: James Prinsep, annotated bibliography, epigraphy, palaeography, numismatics, mineralogy, meteorology, metallurgy, palaeontology, AR, GS, JASB, PTRASL

To cite this article
Bose, Anuja 2024. James Prinsep (1799–1840): An Annotated Bibliography. *Journal of the Asiatic Society* 66/2: 207–230.

ISSN:0368-3308

Introductory

The scope of investigation under the Asiatic Society of Bengal, as articulated by Sir William Jones, encompassed all human activities and natural phenomena. No scholar conceived this expansive vision more thoroughly than James Prinsep. His extensive research across diverse fields such as chemistry, civil engineering, meteorology, mining, metallurgy, urban planning, census, architecture, astronomy, natural sciences, palaeontology, anthropology, and archaeological studies, including numismatics and epigraphy, led to significant discoveries. Prinsep served as the Secretary of the Asiatic Society of Bengal, a prestigious position that underscored his influence in scholarly circles. Further, he contributed to major publications: *Asiatic Researches* (hereafter AR), Vols. XV-XVII; *Gleanings in Science* (hereafter GS), Vols. I-III; and he was the editor of the *Journal of the Asiatic Society of Bengal* (hereafter JASB) Vols. I-VII. During his editorship, the JASB became a premier publication of scholarly articles on Asian history, culture, and science. The compilations of James Prinsep's essays and discoveries, particularly his work on numismatics, epigraphy, and palaeography was done by Edward Thomas as early as in 1858 (Thomas, 1858). Thomas's publication not only highlighted Prinsep's contributions to these fields but also provided valuable resources like tables on Indian history, chronology, and coinages, which have been instrumental for scholars and researchers. Besides Thomas, James Prinsep (Prinsep, 1835: 161), Rajendralal Mitra (Mitra, 1856: 125-128), and Sibadas Chaudhuri (Chaudhuri 1956: 248-251) have indexed Prinsep's work, but there has still been an absence of a comprehensive annotated bibliography. Thus, creating a thematic annotated bibliography of Prinsep's publications is essential as it will provide an overview of his works, making it easier for researchers to access and study his writings. This paper seeks to address this gap by providing a thematic annotated bibliography of James Prinsep's works from 1825 – 1840. The bibliography has been prepared following the format outlined by Gerd J. R. Mevissen (Mevissen 2023). Adhering broadly to the APA guideline, the entries are organised thematically

and chronologically, with publications from the same year distinguished by alphabetical notation. This method appears to ensure clarity and coherence in presenting Prinsep's extensive range of work.

Palaeography and Epigraphy

James Prinsep's writings on epigraphy and palaeography serve as a testament to the enduring allure of epigraphy and its capacity to unravel the mysteries of the past. Prinsep's most remarkable work in the field of epigraphy was deciphering the ancient Indian scripts of Brāhmī and Kharoṣṭhī. The study of Sanskrit inscriptions had seen some progress before Prinsep's time, however, despite these advancements, inscriptions from the Gupta period and earlier remained largely undeciphered, as it presented a particularly daunting challenge. In several publications, Prinsep introduced systematic recording techniques of inscriptions and emphasised how accurate facsimile production is crucial for preserving and studying inscriptions without causing any damage to original artefacts. His collaboration with T. S. Burt to obtain reliable facsimiles of the Allahabad Pillar Inscriptions including the Aśokan Pillar Edicts and the Queen's Edict as well as the Inscription of Samudragupta, marked the beginning of significant progress in deciphering the Brāhmī script (JASB III, 1834.a: 114–118). Despite limited knowledge, his arrangement of the unknown alphabet with mostly correct phonetic values and vowel diacritic was a sophisticated effort (JASB III, 1834.a: plt. V). Prinsep's statistical analysis of letters in a Sanskrit text named 'Bhaṭṭikāvya' to aid his investigation into these unknown alphabets demonstrated an advanced approach to script decipherment, setting a precedent for future scholars. His call for his countrymen to turn their attention to this subject, lest German scholars from Bonn or Berlin claim the honour, reflects his competitive spirit and national pride (JASB III, 1834.a:118). Prinsep's 'Note on the Mathiah Lāth Inscription' (JASB III, 1834.b: merge 483-487) was another milestone where he identified a recurring series of syllables, which eventually turned out to be the introductory formula used by King Aśoka in all his edicts. This identification was

crucial, leading to further decipherments (JASB III,1834.b: pl. XXIX). Between 1834 – 1837 through regular publications on the Iron Pillar Inscription of Delhi, Konkan inscription, Asirgarh seal inscription, and other inscriptions from Ceylon, Bodh Gaya Prinsep set out on a journey from known to unknown script which ultimately heralded a new era of Indological studies. Prinsep's monumental breakthrough came in 1837 with his note on the inscriptions from Sanchi. The Sanchi inscriptions, brief and consistent structure, led Prinsep to recognise the genitive case endings on these inscriptions, and eventually, he deciphered the Sanchi inscriptions recording 'dānaṁ or the gift of so and so' (JASB VII, 1837. 7.c: 451-77). His alphabet table at the end of this article was nearly perfect, marking the successful decipherment of the early Brāhmī script. Despite some inaccuracies due to imperfect copies and limited linguistic knowledge, Prinsep's achievement was groundbreaking. Prinsep's reading underscored the linguistic diversity of ancient India and the administrative sophistication of Aśoka's empire. The period from 1834 – 1838, is often referred to as 'the golden era in the history of Indian epigraphy and numismatics' solely due to the contributions of James Prinsep.

1. 1834.a Note on Inscription No. 1 of the Allahabad Column. *The Journal of the Asiatic Society of Bengal*, Vol. III, 1834: 114-118, pl. V.
2. 1834.b Note on the Mathiah Lath Inscription. *The Journal of the Asiatic Society of Bengal*, Vol. III, 1834: 483–487, pl.XXIX.
3. 1834.c Note on the Bhilsa Inscription at Sanchi, Including the Note by Captain E. Fell. *The Journal of the Asiatic Society of Bengal*, Vol. III, 1834: 488–494.
4. 1834.d Inscription on the Iron Pillar at Delhi. *The Journal of the Asiatic Society of Bengal,* Vol. III, 1834:494, pl. XXX.
5. 1835 Further Particulars on the Sarun and Tirhoot Laths, and Account of two Buddha Inscriptions found, the one at Bakhra, Tirhut, the other at Sarnath, near Benares. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835:124–128, pls. IV–V.

6. 1836.a Facsimiles of Konkan Inscriptions. *The Journal of the Asiatic Society of Bengal*, Vol. V, 1836: 340–341, pl. X.
7. 1836.b Facsimiles of Moulmein Inscription. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 341, pl. X.
8. 1836.c Facsimiles of Asirgarh Inscription. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 482–485, pl. XXVI.
9. 1836.d Inscriptions on Kemaon Tridents. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 485–486, pl. XXIX.
10. 1836.e Facsimiles of Various Ancient Inscriptions from Trincomalee in Ceylon. *The Journal of the Asiatic Society of Bengal*, Vol. V, 1836: 554–561, pls. XXVIII–XXIV.
11. 1836.f Facsimiles of Various Ancient Inscriptions from Buddha-Gaya. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 657–661, pl. XXX.
12. 1836.g Facsimiles of Stone Slabs in the Society's Museum. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 724–732, pls. XXXI–XXXIV.
13. 1836.h Facsimiles of Ancient Inscriptions on a Cannon from Goa. *The Journal of the Asiatic Society of Bengal*, Vol. V, 1836: 795, pl. XLIX.
14. 1837.a Facsimiles of Ancient Inscriptions at Dipaldinna at Amarāvatī. *The Journal of the Asiatic Society of Bengal,*Vol. VI/1, 1837: 218–223, pl. X.
15. 1837.b Facsimile of Museum Inscription, No. 6. *The Journal of the Asiatic Society of Bengal,* Vol. VI/1, 1837: 278–288, pl. XVII.
16. 1837.c Note on the Facsimiles of Inscriptions from Sanchī near Bhilsa, taken for the Society, by Capt. Ed. Smith, Engineer; and on the drawings of the Buddhist monument presented by Captain W. Murray, at the Meeting of the 7th June. *The Journal of the Asiatic Society of the Bengal*, Vol. VI/1, 1837: 451–477, pl. XXV.
17. 1837.d Interpretation of the most ancient of the Inscriptions on the pillar Called the lāt of Feroz Shāh, near Delhi and of the Allahabad, Radhia, and Mattiha pillar or lāt,

inscriptions which agree there with. *The Journal of the Asiatic Society of the Bengal,* Vol. VI/2, 1837: 566–609.

18. 1837.e Facsimiles of Ancient Inscriptions. *The Journal of the Asiatic Society of Bengal,* Vol. VI/2, 1837: 663–682, pls. XXXII-XXXVII.
19. 1837.f Account of an Inscription Found by Mr. H.S. Boulderson, in the Neighbourhood of Bareilly. *The Journal of the Asiatic Society of Bengal*, Vol. VI/2, 1837: 777–786, pl. XLI.
20. 1837.g Further elucidation of the lāt or Shīlasthamba inscriptions from various sources. *The Journal of the Asiatic Society of Bengal*, Vol. VI/2, 1837: 790–797, pl. XLII.
21. 1837.h Facsimiles of Ancient Inscriptions. *The Journal of the Asiatic Society of Bengal,* Vol. VI/2, 1837: 869–887, pls. XLV–XLVI, XLVIII.
22. 1837.i Note on the Facsimiles of the various Inscriptions on the ancient column at Allahabad retaken by Captain Edward Smith, Engineers. *The Journal of the Asiatic Society of Bengal,* Vol. VI/2, 1837:963–984, pl. LV.
23. 1837.j Note on an Inscription at Udayagiri and Khandgiri, Cuttack, in the lāt character. *The Journal of the Asiatic Society of Bengal,* Vol. VI/2, 1837:1072–1091, pls. LIV, LVII.
24. 1838.a Notice of antiquities discovered in the eastern division of Gorakhpur; with a copy of an inscription on a stone pillar, &c. by D. Liston. *The Journal of the Asiatic Society of Bengal,* Vol. VII/1, 1838: 33–39.
25. 1838.b Tibetan Inscription from Iskardo. *The Journal of the Asiatic Society of Bengal*, Vol. VII/1, 1838: 39.
26. 1838.c Copperplate Grant from Bākerganj; with the English version made by Sārodāprasād Pandit. *The Journal of the Asiatic Society of Bengal,* Vol. VII/1, 1838: 40–51.
27. 1838.d Inscriptions on Jain images from Central India. *The Journal of the Asiatic Society of Bengal,* Vol. VII/1, 1838: 51– 52.
28. 1838.e Discovery of the name of Antiochus the Great in two of the edicts of Asoka, king of India. *The Journal of the Asiatic Society of Bengal*, Vol. VII/1, 1838:156–167.

29. 1838.f On the Edicts of Piyadasi, or Asoka, the Buddhist monarch of India Preserved on the Girnar rock in the Gujerāt peninsula, and on the Dhaulī rock in Cuttack; with the discovery of Ptolemy's name therein. *The Journal of the Asiatic Society of Bengal*, Vol. VII/1, 1838: 219–282.
30. 1838.g Examination of the Inscriptions from Girnar in Gujerāt, and Dhaulī in Cuttack. *The Journal of the Asiatic Society of Bengal*, Vol. VII/1, 1838: 334–356, pl. XV.
31. 1838.h Examination of the separate edicts of the Aswastama inscription at Dhaulī in Cuttack. *The Journal of the Asiatic Society of Bengal*, Vol. VII/1, 1838: 434–456, pls. XXI, XXV.
32. 1838.i More Dānams from the Sanchi Tope near Bhilsa, taken in impression by Capt. T. S. Burt, Engineers Translated by J. Princep. *The Journal of the Asiatic Society of the Bengal*, Vol. VII/1, 1838: 562–567, pl. XXIII.
33. 1838.j Translation of Inscription in the Society's Museum. *The Journal of the Asiatic Society of Bengal*, Vol. VII/1, 1838: 557–562, pl. XXIV.
34. 1838.k Rudradeva Inscription of Warangal, (1132 A.D.). *The Journal of the Asiatic Society of Bengal*, Vol. VII/2, 1838: 901–908.
35. 1838.l Abstract translation of an old copper grant made by rāja of the Gajjara race named Prasanga rāja, which bears the date of the Sambat year 380. *The Journal of the Asiatic Society of Bengal*, Vol. VII/2, 1838: 908–914
36. 1838.m Dr. A. Burns' Karia Tamba-patra, No. 1. *The Journal of the Asiatic Society of Bengal*, Vol. VII/2, 1838: 966–978, pl. XX.

Numismatics

Prinsep's initial role as an assistant of the assay master at the Calcutta Mint was the position that catalysed his interest in numismatics. Prinsep's painstaking study of numismatic data paved the way for deciphering the Kharoṣṭhī script. By the third decade of the nineteenth century, the discovery of bilingual coins carrying Greek and Kharoṣṭhī legends by General Ventura (JASB III, 1834.b : 313–321), M. Court

(JASB III, 1834.d: 562) and others brought Kharoṣṭhī to scholarly attention. Prinsep's first attempts at decipherment in 1835 were based on these coins, bearing Greek legends on one side and Kharoṣṭhī inscriptions on the other (JASB IV, 1835.b: 621–643). Prinsep was primarily misled by the prevailing assumption that the Kharoṣṭhī script was of Semitic or Iranian origin. Prinsep's initial reading of the script rendered the term 'malakao-malako' (JASB IV,1835.a: 335) instead of the correct 'mahārājasya mahātaḥ' reflects a common tendency to impose foreign linguistic patterns on unknown scripts. Despite this, Prinsep's intuition led him to suspect inaccuracies in his interpretations. Prinsep's methodical approach to the script's phonetic values, particularly through the analysis of proper names, marked a significant breakthrough. He rightly noted recurring sequences in the Greek and Kharoṣṭhī inscriptions, isolating characters corresponding to the names of Greek kings such as Apollodotus, Eukratides, Menander, and Antialkidas. This comparative analysis enabled him to identify several phonetic values of the Kharoṣṭhī character (JASB IV, 1835.a: pl. XX). The decisive shift in Prinsep's journey came in July 1838 when he abandoned the constraints of Semitic interpretations, embracing the pliant nature of Indian scripts, and realised that the languages used in those inscriptions were not Sanskrit but rather Prakrit. This paradigm shift allowed him to recognise that all numismatic inscriptions ended with the Prakrit genitive suffix 'sa' (JASB VII/2, 1838.a: 636–658). This realisation enabled him to read the Kharoṣṭhī legends accurately. Despite some gaps, such as the incomplete understanding of long vowels and consonantal conjuncts, Prinsep's insights significantly advanced the comprehension of Kharoṣṭhī. James Prinsep's study of coins provides valuable insights into the economic, political, and cultural aspects of historical periods. His detailed study unravelled various ancient Indian dynasties, including the Indo-Greeks, Kuṣāṇa, and Gupta, among others. He also recorded the physical attributes of coins, such as size, weight, material, and iconography, providing a comprehensive framework for future numismatists. He examined the metallic composition and minting techniques of coins, shedding light on the economic conditions

and technological advancements of different periods. Thus, Prinsep's legacy extends beyond the mere decipherment of scripts; it underscores the importance of interdisciplinary collaboration and the value of integrating linguistic and cultural insights into epigraphic and numismatic studies.

37. 1832.a On the Ancient Roman Coins in The Cabinet of the Asiatic Society. *The Journal of the Asiatic Society of Bengal,* Vol. I, 1832: 392-408, pl. VII-X.
38. 1833.a Bactrian and Indo-Scythic Coins. *The Journal of the Asiatic Society of Bengal, Vol. II,* 1833: 405–416, pl. XIL.
39. 1833.b On the Greek Coins in the Cabinet of the Asiatic Society. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 27–41, pls. I–II.
40. 1833.c Note on Lientenant. Burnes' Collection of Ancient Coins. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 310–318, pl. XII.
41. 1834.a Note on the Coins, found by Captain Cautley, at Behat. *The Journal of the Asiatic Society of Bengal,* Vol. III, 1834: 227.
42. 1834.b On the Coins and Relics discovered by M. Chevalier Ventura, General in the Service of Mahārajā Ranjit Singh, in the Tope of Mānikyāla. *The Journal of the Asiatic Society of Bengal,* Vol. III, 1834: 313–321, pls. XXI–XXII.
43. 1834.c On the Coins and Relics discovered by M. Chevalier Ventura, General in the Service of Mahā Rājā Rānjeet Singh, in the Tope of Mānikyāla. *The Journal of the Asiatic Society of Bengal,* Vol. III, 1834: 436–456, pls. XXIV–XXVI.
44. 1834.d Note on the Coins discovered by M. Court in a Second Tope at Mānikyāla. *The Journal of the Asiatic Society of Bengal*, Vol.III, 1834: 562–567, pls. XXXIII–XXXIV.
45. 1835.a Further Notes and Drawings Bactrian and Indo-Scythian Coins. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 327–348, pls. XIX–XXVI; XXXI.
46. 1835.b On the connection of various Ancient Hindu Coins with the Grecian or the Indo- Scythian Series. *The Journal of the*

Asiatic Society of Bengal, Vol. IV, 1835: 621–643; 668–690, pls. XXXIV–XXXIX; L.

47. 1836.a New Varieties of the Mithraic or Indo-Scythian Series of Coins and their Imitations. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 639–657, pl. XXXVI.

48. 1836.b New varieties of Bactrian Coins, from Mr. Masson's drawings and other Sources. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 548–554, pl. XXXV.

49. 1836.c New types of Bactrian and Indo-Scythian Coins. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 720–724, pl. XLVI.

50. 1837.a Specimens of Hindu Coins descended from the Parthian type, and of the Ancient Coins of Ceylon. *The Journal of the Asiatic Society of the Bengal,* Vol. VI/1, 1837: 288–302, pl. XIV.

51. 1837.b The Legends of the Saurashtra group of Coins Deciphered, *The Journal of the Asiatic Society of Bengal*, Vol. VI/1, 1837: 377–392, pls. XXIV.

52. 1838.a On the application of a new method of block printing with examples of unedited coins printed in facsimile. *The Journal of the Asiatic Society of the Bengal,* Vol. VII/1, 1838: 414–420, pl. XXII.

53. 1838.b Additions to Bactrian Numismatics and discovery of the Bactrian Alphabet. *The Journal of the Asiatic Society of the Bengal*, Vol. VII/2, 1838: 636–658, pls. XXVII–XXVIII.

54. 1838.c Coins and Relics from Bactria. *The Journal of the Asiatic Society of the Bengal,* Vol. VII/2, 1838: 1047, pl. XXXII.

Astronomy and Meteorology

James Prinsep made significant contributions to the field of meteorology through thorough observation, innovative experimentation, and methodological rigor. Despite limited opportunities, Prinsep's diligent recording of chronometric data and the use of a wire micrometer showcase his commitment to accuracy and precision (JASB

I, 1832: 408–411). One of his initial works documents the dramatic barometric pressure drop preceding and during a severe gale along the Hugli coast. This detailed recording of barometric readings provides crucial empirical evidence linking sudden atmospheric pressure drops to severe weather events. This relationship is vital for understanding and predicting phenomena such as severe storms (JASB II, 1833.b: 427–428). Prinsep's other major contribution to meteorological study is the acknowledgment and adjustment of data imperfections. In one of his papers, Prinsep not only demonstrated the deficiencies in Gedde's meteorological observations in the Nagpur region but also offered a solution by providing barometrical data obtained from Wylib's registers spanning from 1820 – 1830. Despite acknowledging the imperfections in Wylib's barometer, Prinsep suggested several adjustments to enhance its accuracy, allowing for the determination of annual and diurnal oscillations in Nagpur's climate (JASB II, 1833.c: 542–546). Prinsep's call for simultaneous observations of monthly means of barometric pressure, temperature, and rainfall at multiple locations to understand the regional climate patterns underscores a key methodological advancement (JASB II, 1833.c: 546). Also, Prinsep's introduction of coordinated data collection enhances the ability to track and predict the progression of storms, a principle still relevant in modern meteorology (JASB II, 1833.b: 427–428). Prinsep's method of using parallel lines to represent daily barometric oscillations of different places allows for intuitive data analysis. This graphical approach simplifies the complex relationships between atmospheric pressure and geographical factors (JASB V, 1836.b: 816–827). Despite the limitations of nineteenth century technology, Prinsep's pioneering work in meteorology laid a foundation for modern scientific inquiry in the field.

55. 1825.a Meteorological Journal (With Diag.), *Asiatic Researches*, Vol. XV, 1825: Appendix vii–xii.

56. 1825.b Description of a Pluviameter and an Evaporometer Constructed at Benares. (With Diag.) *Asiatic Researches*, Vol. XV, 1825: Appendix xiii, pl. XVII.

57. 1828 Abstract of a meteorological journal kept at Benares during the years 1824, 1825, and 1826. *Philosophical Transactions of the Royal Society of London,* part I, 1828: 252–255

58. 1832 Observation of the Transit of Mercury. *The Journal of the Asiatic Society of Bengal*, Vol. I, 1832: 408–411.

59. 1833.a Description of a Compensation Barometer, and Observations on Wet Barometers. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 258–262, pl. V.

60. 1833.b Note on the extraordinary Fall of the Barometer during the Gale of the 21st May last. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 427–428.

61. 1833.c Additional Note on the Climate of Nagpur. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 542–546.

62. 1835 Horary Meteorological Observations made at Calcutta on the 21st to 22th September. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 514–515.

63. 1836.a Experimental Researches on the Depression of the Wet-blub Hygrometer. *The Journal of the Asiatic Society of Bengal*, Vol. V, 1836: 396–432, pls. XXI–XXII.

64. 1836.b A Comparative view of the daily range of the Barometer in different parts of India. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 816–827, pl. XIII.

65. 1836.c Experimental researches on the Depression of the Wet blub Thermometer. *The Journal of the Asiatic Society of Bengal*, Vol. V, 1836: 828.

Palaeontology

James Prinsep's pioneering work in palaeontology, particularly his careful analysis of fossil specimens from various regions in India, significantly contributed to the understanding of prehistoric fauna and geological processes. In his papers on Jabalpur fossil materials he discussed the chemical analyses of the specimen and revealed variations in composition, with carbonate of lime being a prominent component along with phosphate and siliceous fibres (JASB I, 1832:

456–458). Prinsep conducts a comparative study of fossils from both the Ava in Myanmar and Jabalpur specimens and explains how they differ in their mineralising substances and composition. Despite limited data, Prinsep highlights the complexities of fossil preservation and underscores the need for further research to unravel the origins and significance of the Jabalpur fossils. While analysing fossil bones found in the Nerbudda Valley (modern-day Narmada River valley) (JASB III, 1834: 396–403) Prinsep recounts the challenges of transporting bulky fossil specimens over vast distances, highlighting the detailed care taken to preserve their integrity. Prinsep's detailed examination of mammoth-like elephant femora and buffalo-like skull morphology demonstrates his expertise in fossil study. He delves into a comparative study of anatomy, drawing comparisons between fossil and modern specimens to discern specific characteristics indicative of species. Furthermore, Prinsep's discussion of geological context and stratigraphy enriches our understanding of fossil deposits in the Madhya Pradesh region, highlighting their potential implications for reconstructing past ecosystems and environmental changes. It is significant that in every paper Prinsep acknowledges scholars who have previously contributed to the study of fossils (JASB IV, 1835: 500). He notes the disagreement between different scholars regarding the age and formation of these fossils and challenges prevailing theories and offers alternative interpretations (JASB IV, 1835: 503). Thus, Prinsep's work laid the foundation for future paleontological research in the region, emphasising the importance of interdisciplinary collaboration in unravelling the mysteries of India's paleontological heritage.

66. 1832 Note on the Jabalpūr Fossil Bones. *The Journal of the Asiatic Society of Bengal*, Vol. I, 1832: 456–458.

67. 1833 Note on the Fossil Bones Discovered near the Jabālpur. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 583–588, pls. XX–XXI.

68. 1834 Notes on the Fossil Bones of the Nerbudda Valley discovered By Dr. G.G. Spilsbury, near Narshinhpūr, etc. *The Journal of the Asiatic Society of Bengal*, Vol. III, 1834: 396–403.

69. 1835 Note on the Fossil Bones of the Jumna River. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 500–506, pl. XXXIII.

Chemical Analysis, Metallurgy and Mineralogy

James Prinsep made significant contributions to various scientific fields, including mineralogy, metallurgy and chemical analysis. He conducted single and comparative chemical study of different mineral ores from Myanmar, South India, and Molybdenum. Prinsep tried highlighting their physical properties such as colour, hardness, etc. and chemical behaviour like their reaction to heat and other chemicals. His meticulous examines and documents on minerals such as asbestos, mica, gypsum, malachite, black oxide of manganese, and argentiferous galena found from Ava provides valuable insights into the mineral wealth of Ava and showcased the potential for commercial exploitation of these resources (JASB I, 1832: 14–17). Some of his papers also provide contextual insights into the extraction process and usage of minerals (JASB II, 1833: 284). His brief paper on tin specimens from Malacca investigates discrepancies in the weight of the metal and highlights the importance of continuous experimentation and the need for further examination after reaching unexpected results (JASB IV, 1835.c: 512). Prinsep analysed the salinity of waters from the Red Sea and the Arabian Sea, addressing concerns about differences in salt content affecting steam navigation (JASB IV, 1835.a: 509–510). Understanding the scope that chemical analyses of the archaeological materials can posses Prinsep did an extensive study on a brown liquid substance discovered during the excavation of Mānikyāla stupa, at Taxila. The study begins with a reference to a similar finding by Ventura, establishing a context for the examination. Prinsep emphasised the original deposition of the liquid in the vessels, distinguishing it from permeation from external sources. He describes that the innermost cylinder of the artefact contained a deposit of brown matter with unique properties, including a vitreous lustre and fragments of glass and revealed it was primarily composed of carbonised and decomposed organic matter mixed with earth and metallic oxides.

Prinsep concludes by proposing an interpretation of the monuments as tombs or mausoleums, possibly belonging to individuals of high rank or religious significance. He suggests reconciliation between theories suggesting they are either royal tombs or Buddhist shrines, proposing that they could serve as both memorials to the deceased and objects of worship. Moreover, Prinsep draws parallels between these monuments and similar structures found in other cultures, highlighting their significance in understanding ancient burial practices and religious beliefs (JASB III, 1834.b: 567–576). James Prinsep's contributions to chemical studies in colonial India are characterised by experimentation, detailed analysis, and practical applications. While some of his papers could benefit from clearer exposition and broader contextual discussion, Prinsep's detailed analyses and practical insights highlight his significant role in the field of analytical chemistry.

70. 1825 Analysis of a Mineral Water. *Asiatic Researches,* Vol. XV, 1825: App. xiv–xv.

71. 1828 On the Measurement of High Temperatures. *Philosophical Transactions of the Royal Society of London,* part I, 1828: 79–96.

72. 1829 On the measurement of high temperatures. *Gleanings in Science,* Vol. I, 1829:148–150.

73. 1830 Examination of the Minerals Collected by E. Stirling, Esq. at the Turquoise Mines, near Nishapūr, in Persia. *Gleanings in Science,* Vol.II, 1830: 375–379.

74. 1831.a Examination of the Water of several Hot Springs on the Arracan Coast. *Gleanings in Science,* Vol.III, 1831:16–18.

75. 1831.b Examination of a Metallic Button, supposed to be Platina, from Ava. *Gleanings in Science,* Vol.III, 1831: 39–43.

76. 1831.c Chemical Analysis of Katkamsandi Hot Spring. *Gleanings in Science,* Vol.III, 1831: 277–278.

77. 1831.d Chemical Analysis of Gāzipur Kankur. *Gleanings in Science,* Vol.III, 1831: 278.

78. 1831.e Chemical Analysis of Iron sand from Raniganj Iron Stand. *Gleanings in Science,* Vol.III, 1831: 278.
79. 1831.f Chemical Analysis of Graphite from Ceylon. *Gleanings in Science*, Vol.III, 1831: 278-280.
80. 1831.g Chemical Analysis of Varieties of Indian Coal. *Gleanings in Science,* Vol.III, 1831: 280-284.
81.1831.h On the supposed Adulteration of Banca Tin. *Gleanings in Science,* Vol.III, 1831: 332–334.
76. 1832 Examination of Minerals from Ava. *The Journal of the Asiatic Society of Bengal*, Vol. I, 1832: 14–17.
77. 1833.a Note on the Discovery of Platina in Ava. *The Journal of the Asiatic Society of Bengal*, Vol. II, 1833: 279–284, Pl. XVII.
78. 1833.b Chemical Analyses. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 434–438.
79. 1834.a Experiments on the Preservation of Sheet Iron from Rust in India. *The Journal of the Asiatic Society of Bengal,* Vol. III, 1834:191–192.
80. 1834.b Note on the Brown Liquid, contained in the Cylinders, from Mānikyāla. *The Journal of the Asiatic Society of Bengal,* Vol. III, 1834: 567–576.
81. 1835.a Chemical analysis of Saltness of the Red Sea. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 509–510.
82. 1835.b Chemical analysis of Native Carbonate of Magnesia from South India. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 510–511.
83. 1835.c Chemical analysis of Tin from Malacca. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 512.
84. 1835.d Chemical analysis of American Self- generating Gas Lamp. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 512–513.
85. 1835.e Chemical analysis of Native Remedy for the Spleen. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 513.
86. 1835.f Chemical analysis of waters from different places. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 513.

87. 1835.g Chemical analyses of different minerals including Subphuret of Molybdenum. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 513–14.

88. 1835.h Analysis of Copper Ore from Nellore; with notice of the Copper Mines at Ajmīr and Singhāna. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 574–578.

89. 1836 Action of Copper on Ink. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 317–318, pl. XIV.

90. 1838 Table of Indian Coal analysed at the Calcutta Assay Office, Including those published in the Gleanings in Science, September 1831, arranged according to localities, extracted from the Report of the Coal Committee. *The Journal of the Asiatic Society of the Bengal,*Vol. VII/1, 1838: 197–199.

Metrology

Prinsep's interest in understanding the various methods of measuring the height of the mountains was probably embedded within the progress made in the great trigonometrical survey. Prinsep's detailed experimental procedures regarding the expansion of iron, gold, silver, and copper bars at various temperatures and heights emphasised the necessity of measuring expansions of various metals and their application in the great Indian trigonometrical survey. The apparatus used by Prinsep was diligently designed to ensure minimal errors in measurements. The relevance and scientific nature of Prinsep's scientific interventions in the trigonometrical study is underscored by the thorough discussion of instruments used, such as micrometers and thermometers, and the detailed calibration procedures employed by him (JASB II, 1833.a: 130–143). Besides this method Prinsep also discussed the process of measuring heights by using the temperature of boiling water (JASB II, 1833.b: 194–200). In his study he discusses various experiments and formulas by renowned physicists like Tredgold, Dalton and Laplace and highlights Tredgold's formula as the most accurate. Prinsep provides a table and instructions for using boiling water temperature to estimate altitude and addresses the

practical need for measuring heights without a barometer, offering a potentially valuable alternative method. Additionally, his papers focus on empirical formulas and experimental data highlighting the importance of ongoing research in this field to improve the reliability of altitude measurements using different methods. Prinsep's encouragement for further experimentation underscores his scientific spirit, promoting collaboration and innovation in the pursuit of more accurate measurement techniques.

91. 1831 Expansion of Metals by Heat. *Gleanings in Science,* Vol. III, 1831: 377–380.

92. 1833.a Determination of the Constant of Expansion of the standard 10 feet Iron Bar of the great Trigonometrical Survey of India; and expansion of Gold, Silver and Copper by the same Apparatus. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 130–143, pl.VII.

93. 1833.b Table for ascertaining the Heights of Mountains from the Boiling Point of water. *The Journal of the Asiatic Society of Bengal,* Vol. II, 1833: 194–200.

Miscellaneous

James Prinsep's diverse studies, ranging from the optical properties of Japanese mirrors to ancient Arab navigational instruments and population censuses in Benares, showcase his ability to perform research on wide range of topics. His work not only advanced scientific understanding and historical knowledge but also highlighted the importance of blending cultural insight with scientific inquiry. Through his detailed investigations and comprehensive analyses, Prinsep contributed significantly to the fields of physics, engineering, and census study leaving a lasting legacy in each domain.

94. 1831 Suggestions for the Improvement of Mineralogical Cabinets, in general, and those of the Asiatic Society, in particular. *Gleanings in Science,* Vol. III, 1831: 27–28.

95. 1832.a Census of the People of the City of Benares. *Asiatic Researches,* Vol. XVII, 1832: 470–498.

96. 1832.b Note on the Magic Mirrors of Japan. *The Journal of the Asiatic Society of Bengal*, Vol.I, 1832: 242–245, pl. L.
97. 1836 Note on the Nautical Instruments of the Arabs. *The Journal of the Asiatic Society of Bengal*, Vol. V, 1836: 784–794, pl. XLVIII.

Editorial Notes

As a main contributor of the journal GS and the editor of the JASB one of Prinsep's key role was his notes on various scientific and historical topics. These notes helped to spread knowledge and foster discussions among scholars. These notes were reference in the 'Index to Volumes XIX and XX of the Asiatic Researches and to Volumes I to XXIII of the Journal of the Asiatic Society of Bengal', published in 1885 by Rajendralal Mitra. This references to Prinsep's notes, indicates their lasting importance and the high regard in which they were held by the academic community.

1. 1831.a Accurate Balances. *Gleanings in Science*, Vol.III, 1831: 218–224, pls. XI–XII.
2. 1831.b The Caramnassa Bridge. *Gleanings in Science*, Vol.III, 1831: 297–299, pl. XVI.
3. 1831.c On the Copper Works at Singhāna near Khetrī in the Shekhāwatī Country. *Gleanings in Science*, Vol.III, 1831: 380–384.
4. 1831.d Alum Works in Kutch. *Gleanings in Science*,Vol.III, 1831: 384–385.
5. 1832 Analysis of the Chinese Varnish. *The Journal of the Asiatic Society of Bengal*, Vol. I, 1832: 184.
6. 1834.a Professor Schlegel's Enigma, Mode of expressing numerals in the Sanskrit and Tibetan languages. *The Journal of the Asiatic Society of Bengal*, Vol.III, 1832: 1–7.
7. 1834.b Observations of the Moon and Moon-culminating Stars at Sehāranpūr, Nasīrabad and Dholeswar with the Longitudes deduced. *The Journal of the Asiatic Society of Bengal*, Vol. III, 1834: 297–299.

8. 1835.a Editorial note on the correspondence regarding the discovery of the genuine Tea Plant in Upper Assam. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 42.
9. 1835.b Explanation of the differences in the quantity of rain at different elevations. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 59.
10. 1835.c Suspension of the Survey of the Brahmaputra River. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 63.
11. 1835.d Roof of the New Iron Foundery at Kāsipur near Calcutta. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 111.
12. 1835.e Desiderata and Recommendations of the British Association for the Promotion of Science. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 116–118.
13. 1835.f Manilla Indigo, (so called). *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 119.
14. 1835.g Note on an Inscription on the Mandara hill, near Bhagelpur. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 166–167.
15. 1835.h On a new species of Snake, discovered in the Doab. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 217.
16. 1835.i Results of the Observations made on the Tides at Madras, from the 31st May to the 10th October, 1821, by means of a Tide-gauge fixed near the north-east angle of the Fort. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 325–326.
17. 1835.j Proposed Meteorological Combination in Southern Africa. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 357-359.
18. 1835.k Statistics and Geology of Kemaon. *The Journal of the Asiatic Society of Bengal*, Vol. IV, 1835: 359.

Co-edited Notes

Besides the editorial notes, Prinsep also wrote comments on many essays. These essays were the work of various scholars, both Indian

and foreign. Nevertheless, Prinsep explained these topics with his own perspective. These notes differ from editorial notes as they offer a broad view of the authors, along with Prinsep's comments on different topics.

1. 1825 Cracroft, William Latitude of the Hindu Observatory at Benares, *Asiatic Researches*, Vol. XV, 1825, appendix I: I-VI.
2. 1832 Kalikishen, Behadūr Maharaja. Oriental accounts of the precious minerals, translated, with remarks by James Prinsep. *The Journal of the Asiatic Society of Bengal,* Vol. I, 1832: 353–363.
3. 1834 Stacy, D. L. Note on two coins of the same species as those found at Behat, having Greek Inscriptions, with notes by James Prinsep. *The Journal of the Asiatic Society of Bengal,* Vol. III, 1834: 431–436, pl. XXV.
4. 1835 Dean, Edmund. On the Fossil Bones of the Jumna river, With notes by James Prinsep. *The Journal of the Asiatic Society of Bengal,* Vol. IV, 1835: 495–506, pl. XXXIII.
5. 1836.a Colvin, Col. Catalogue of a second collection of fossil bones presented to the Asiatic Society's Museum by Col. Colvin, with a note by J. Prinsep. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 179–184.
6. 1836.b Barrow, H. Horary Observations of the Barometer, Thermometer and Wet bulb Thermometer, made at Calcutta on the 21st and 22nd of March, 1836, With a note by J. Prinsep. *The Journal of the Asiatic Society of Bengal,* Vol. V, 1836: 243–244.
7. 1837 Sykes, W.H. Specimens of Buddhist Inscriptions with symbols, from the West of India. *The Journal of the Asiatic Society of Bengal*, Vol. VI, 1837:1038–1043.
8. 1838 Liston, D. Notice of antiquities discovered in the eastern division of Gorakhpur; with a copy of an inscription on a stone pillar. Note by J. Prinsep and tran. by Sārodā Prasād'. *The Journal of the Asiatic Society of Bengal,* Vol. VII, 1838: 33–52.

Book

James Prinsep's book showcases his deep connection to Benares and his visionary approach. He described Benares as a mix of Hindu learning and superstition. During his stay at Benares Prinsep undertook significant engineering projects, such as draining pools, building markets, constructing stone bridges, and repairing mosques. In this book, Prinsep provides vivid descriptions of such works and creates artistic representations of Benares. For instance, he depicts a priest in the Annapurna Temple teaching devotees, highlighting the sacred and serene environment. Another notable lithograph shows the Kashi Vishvanath Temple, reconstructed multiple times, reflecting the city's rich history. His fastidious documentation of Baneres ghats, temples, and architectural elements paints a sanctified picture of the sacred city. By focusing on the anatomy and expressions of figures, Prinsep brings out the true essence of devotion and reverence in his representations. His work is a testament to his deep appreciation for Baneres, making *Benares Illustrated* an essential resource for understanding the city's historical and cultural heritage.

1. 1833 *Benares Illustrated in a Series of Drawing*. Calcutta: The Baptist Mission Press.

The books "Useful Tables: Part First and Second" by James Prinsep provide an intriguing look into the monetary systems of both ancient and British India. The first section of these books provides an explicit description of the science and research that went into standardising the money, weights, and measures during the colonial era. In the second section, Prinsep's painstaking investigation and comprehensive tables offer insightful information about India's economic past. The books examine British India's monetary system in depth as well as the practical and legal implications of various forms of currency. Prinsep also shines a light on regional differences, like the use of the 'Moorahedababadee' or 'Sicca' Rupee in Bengal, Bihar, and Odisha regions. These books are also packed with detailed tables on various coins, complete with their weight and purity. He also points out the efforts made to standardise coin designs throughout British India,

aiming to reduce confusion and prevent any fraud. Prinsep also throws in a comparison between Indian monetary standards and those of English and French currencies. He points out the differences in their gold-to-silver ratios, giving readers a better understanding of how India's monetary system fit into the wider global economy. To conclude, James Prinsep's *Useful Tables* are comprehensive and enlightening books that shed light on the monetary, system of ancient to British India.

2. 1834 *Useful Tables Forming an Appendix to the Journal of the Asiatic Society, Part the First, Coins, Weights, and Measures of British India*. Calcutta: The Baptist Mission Press.
3. 1836 *Useful Tables Forming an Appendix to the Journal of the Asiatic Society, Part the Second, Chronological and Genealogical Tables of Ancient and Modern India*. Calcutta: The Baptist Mission Press.

The following index was prepared by James Prinsep in 1835. The purpose of the index was to provide a comprehensive reference for the volumes of the *Asiatic Researches*. One unique feature of this book is its detailed indexing, which was done by various contributors over time, leading to a mix of thorough and brief references. Another distinctive aspect is the inclusion of different spellings for Oriental words, acknowledging the variations rather than imposing a uniform system. The index was designed to be useful for readers of both Calcutta and London, with noted page and volume correspondences.

4. 1835 *Index of the First Eighteen Volumes of the Asiatic Researches or Transactions of the society*. Calcutta: Bengal Military Orphan Press.

Besides, the two posthumous publications deserve mention. The well-known and well-read Essay was edited by Edward Thomas and came in print in the year 1858. The other one was his 'Benares Directory', that came as an Appendix to P. Thankappan Nair's *James Prinsep: Life and Work*, vol. I: Background and Benares Period, pp. 226–260, published by Firma K.L.M., Calcutta, on the occasion of his bicentenary in 1999.

References

Choudhuri, Sibadas 1956. *Index to the Publications of the Asiatic Society 1788-1953*, Vol. I/1, Calcutta.

Mevissen, Gerd J. R. 2023. *Gerd J.R. Mevissen: List of Publications 1980-2023,* https://www.academia.edu/93576171/Mevissen_Publications_1980_2023.

Mitra, Rājendralāla 1856. *Index to Volumes XIX and XX of the Asiatic Researches and to Volumes I to XXIII of the Journal of the Asiatic Society of Bengal*. Calcutta: Baptist Mission Press.

Thomas, Edward (ed.) 1858. *Essays on Indian Antiquities : Historic, Numismatic and Palaeographic, of the Late James Princep ... to which are Added His Useful Tables Illustrative of Indian History, Chronology, Modern Coinage, Weight Measures etc.* Vol. I, London : John Murray.

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COMMUNICATION

James Prinsep's Lions

Anant Sinha

Abstract

James Prinsep was one of the pioneering figures in the domain of scientific and Indological studies. One of the lasting memories of this giant in the city of Kolkata is the built heritage called the Prinsep Ghat. This landing stage and an associated monument was dedicated by the people of the city immediately after his demise. Two gallant sculptures of lion were placed at the *ghat*. Subsequently, these lions were relocated and gradually they faded away from the public memory. This communication explores Prinsep's Lions afresh to find them well-preserved within the Fort William premises.

Keywords: Prinsep's Lions, Prinsep Ghat, built heritage, landing stage, Fort William.

To cite this article
Sinha, Anant 2024. James Prinsep's Lions. *Journal of the Asiatic Society* 66/2: 231–238.

ISSN:0368-3308

This is indeed an 'occasional' communication, resulting from what is called a 'courtesy visit', of the Guest Editor of this volume to my office about a couple of weeks back. While discussing subjects centring round the publication of this special issue of the Journal on 225 years of James Prinsep, I was suddenly self-reminded of the 'story' that I heard, in bits and specs, of what I call 'Prinsep's Lions'. I was, however, immediately entrusted with the responsibility of writing this story in the form of an article. The following is the result.

As we all know, James Prinsep stands out among the luminaries of the Asiatic Society, Kolkata. He was a polymath. To commemorate Prinsep's contributions in the fields of natural and engineering sciences and Indology, the most widely acclaimed among these being the decipherment of the earliest Kharoṣṭhī and Brāhmī scripts[1], a committee called the 'James Prinsep Testimonial Committee'was constituted in Calcutta,[2] headed by Sir Edward Ryan, after the premature demise of James Prinsep in 1840.

The Committee decided to construct a *ghat* on the bank of river Hooghly with James Prinsep's name inscribed on it, a marble bust of James Prinsep to be placed in the Asiatic Society,[3] a medallion with his effigy and name to be modelled—all in his commemoration. (Nair 2000: 1583)

> [t]he most appropriate and best monument to his memory would be a spacious and handsome Ghaut upon the bank of the noble river, upon a site where it is much wanted and will be extensively useful. The structure will unite as he did in everything he undertook, what is the most beautiful and engaging, with what is the most useful. Placed at the entrance of the city, it will be the first object that strikes the eyes of those who come from distant lands to visit the capital of British India, while it will be

[1] For debates and discussions on the decipherment of Brāhmī and Kharoṣṭī by Prinsep, see the essay of Sitabhra Sinha and Nandini Mitra in this volume. — Ed.

[2] Calcutta was renamed as 'Kolkata' in 2001; therefore, for the period before 2001, with which I will be throughout concerned here, I refer to Kolkata as Calcutta.

[3] This bust, sculpted by H. Weekes and used as the frontispiece of this volume, is currently placed on the right side of the approach to the Museum in the second floor of Society's building at 1 Park Street, Kolkata 16. — Ed.

> presented daily to the views of the inhabitants recalling to them, as they take their evening exercise, the recollection of his talents, of his labours and of his worth.

The design of the *ghat* was proposed by Robert Halden Rattray, a judge and friend of James Prinsep. The construction work was awarded to the Burn & Co. and they submitted an estimate of Rs 26000/- out of which Rs 12000/- was raised by the citizens through subscription and the balance Rs 10000/- was donated by Governor from Public Treasury (Chattopadhyay 2016: 30).

The *ghat*, stylistically a Palladian porch, designed by W. Fitzgerald, was erected in his memory by the citizens of Calcutta in 1843 (Fig. 1). The site between George gate and Water gate of Fort Willam was given by the government for constructing this monument. The superstructure of the *ghat* was constructed in neoclassical architectural principle, along with steps leading to the river with two couchant lion standing guard at the head of the stairs leading to the river (Nair 1999: 198). These two Chunar stone lions were brought by James Prinsep's brother William, at the cost of Rs 700/- from Buxar. As William had put on record (Nair 2000: 1591) —

Figure 1. View of the 'Prinsep's Ghat' in the early twentieth century (after Massey 1918).

> The erection of a very neat Palladiun Porch at the head of a flight of steps was entrusted to our friend Fitzgerald an Officer of the Engineers. It is an ornament to the river […]. My last act in India was to add 2 stone recumbent lions to slope off the stairs which I got well done in Buxar for 700 rupees, but I did not remain long enough to see them in place. It is called Prinsep's Ghaut so that our name cannot easily be forgotten in India.

It is interesting to note that James Prinsep was the decipherer of the earliest historical scripts of India, appearing on the inscriptions of Aśoka, whose royal emblem was, inter alia, couchant lions. Did William wish to honour his deceased brother with the most vibrant emblem of Aśoka? Be the case as it was, with the passage of time the Prinsep Ghat was gradually forgotten as the principal landing stage to the people coming from the other side of the sea. Now the commemorative monument and the Prinsep Ghat are separated by a few meters of landmass, due to change in the landscape along the river.

The construction of a second bridge on the river Hooghly, called the 'Vidyasagar Setu', started in 1978; the area adjacent to the Prinsep Ghat was fenced off for construction purpose (of the bridge) and slowly it faded away from the public memory. In 1993, INTACH restored the Prinsep Ghat at a cost of Rs 14 Lakhs and handed it over to the Public Works Department (Nair 1999: 196). With the passage of time, both nature and man-made activity led the Prinsep Ghat to divide itself into three parts: first, James Prinsep Monument (the original monument opposite to the George Gate, Fort William), second, the Prinsep Ghat on the river Hooghly (approximately 100 meters away from the monument) and third—the subject of this communication—the recumbent lions. While the neoclassical porch and the staircase are located in situ, the lions are not. Where are they now?

I started the quest of finding about the lions of James Prinsep and thus began the hunt for them, who once adorned the commemorative monument of James Prinsep, with a rich history of their own. Interviewing local people near the Prinsep Ghat did not yield any

positive result. These two couchant lions have faded away from public memory and their whereabouts was not known. It is relevant to note at this juncture that hundreds of photographs of the James Prinsep Monument roam about in the internet, but no photograph of the *ghat*, where the lions once sat, does. This is because, prima facie, the ghat lacked the grandeur of the monument that preceded it and secondly, because the *ghat* is organically detached architecture from the monument, though located at a short distance from the latter. Naturally, all the photographs, taken from the side of the city, shows the monument, but not the *ghat*. The only visual of the lions were produced, to the best of my knowledge, in a Bengali monograph by Rathin Mitra (Mitra 1988), who not only provided two excellent line drawings of the lion (Fig. 2), but also reported that the lions have been relocated. His notice, however, never reached the international academia.[4] Finally, after a thorough and detailed search, the stone

Figure 2. Line drawing of one of the lions of Prinsep *ghat* by Rathin Mitra (after Mitra 1988).

[4] I am indebted to Indrajit Chaudhuri for drawing my attention to this reference. A photo of the *ghat*, as it looked around 2016, has been published by Swati Chattopadhyay (Chattopadhyay 2016: 32).

figures of the lions were located inside the Fort William, with an interesting story about their relocation.

Vidyasagar Setu (more popular as the 'Second Hooghly Bridge') connects the twin cities of Kolkata and Howrah. The bridge is named after the nineteenth century reformist Ishwar Chandra Vidyasagar. It is a cable-stayed bridge with a main span of 457 meters (approximately) with a deck 35 meters wide. Its construction stared in 1978 and bridge was finally inaugurated on 10th October 1992. The commissioning agency was Hooghly River Bridge Commission (HRBC) and the contractors for construction were Braithwaite Burn and Jessop. During the construction of this bridge, the entire area adjoining the James Prinsep Monument was fenced off for construction purpose. A small portion of the Prinsep Ghat was given away for the construction of the bridge and a new site had to be earmarked for relocation of these two couchant lions. Lieutenant General J.F.R. Jacob, PVSM, General Officer Commanding-in-Chief, Eastern Command of Indian Army,

Figure 3. Present location of the Prinsep's Lions within the Fort William Premises. Photo Anant Sinha, courtesy of the Headquarters, Eastern Command.

(1974 to 31 July 1978) assured Shri Jyoti Basu, then Chief Minister of West Bengal, that these two couchant lions will be placed in a splendid way inside the Fort William. The lions were relocated to the present location on 16th December 1977, by 13 Engineer Regiment of Indian Army. I find it relevant to quote here the two passages written in the commemorative plaque, placed at the centre with the two lions flanking it on either side (cf. Fig. 3).

> THESE TWO LIONS EARLIER ADORNED THE ERSTWHILE PRINCEP [*sic*] GHAT CONSTRUCTED IN MEMORY OF JAMES PRINCEP[.] A PORTION OF THE GHAT WAS TO GIVE WAY FOR THE CONSTRUCTION OF THE VIDYASAGAR SETU AND A NEW SHED HAD TO BE FOUND FOR THE PRINCEP LIONS", [*sic*] THEN IN AN ADVANCE [*sic*] STATE OF DECAY BY THE ELEMENTS OF NATURE AND VANDALISM.
>
> LT GEN JFR JACOB, PVSM, THEN GOC-IN-C EASTERN COMMAND OBTAINED THE LIONS AND ASSURING SHRI JYOTI BASU, CHIEF MINISTER OF WEST BENGAL IN 1977 THAT THE ARMY WOULD ACCORD THEM SANCTUARY AND A PLACE OF PRIDE AT FORT WILLIAM. THEY WERE EMPLACE AT THE PRESENT SITE ON 16 DECEMBER 1977 BY 13 ENGINEER REGIMENT[.]

On this date, James Prinsep's Lions are relocated inside the Fort

Figure 4. Map showing comparative locations of Prinsep's Lions vis-à-vis Prinsep ghat. Courtesy of Google Earth.

William at the junction of East Gate and the bridge connecting the inner and outer ramparts of the Fort William, looking as majestic as they were in 1843 (Fig. 4).

Acknowledgements

I am indebted to Indrajit Chaudhuri for drawing my attention to a number of crucial sources of information on the subject.

References

Chattopadhyay, Swati 2016. Claiming the River Front: Building the Prinsep Ghat in Colonial Calcutta. *Tekton* 3/2: 22–35.

Mitra, Rathin 1999. *Śāśvata Kolkata, Pratham Parva: Gaṅgār Ghāṭ* (i.e., *Eternal Kolkata, Part 1: Landing Stages of the Ganga*). Calcutta: Pratikshan

Nair, P. Thankappan 1999. *James Prinsep: Life and Work*, vol. 1.: Calcutta: Firma KLM Private Limited.

— 2000. *Proceedings of the Asiatic Society,* vol. 4, book. 2. Calcutta: The Asiatic Society.

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ASIATIC RESEARCHES;

OR,

Transactions of the Society,

INSTITUTED IN BENGAL,

FOR ENQUIRING INTO

THE HISTORY, THE ANTIQUITIES, THE ARTS AND SCIENCES, AND LITERATURE

OF

A S I A.

VOLUME XVII.

CALCUTTA:

PRINTED AT THE BENGAL MILITARY ORPHAN PRESS,

BY G. H. HUTTMANN.

1832.

V.

CENSUS

OF THE

POPULATION OF THE CITY OF BENARES.

By JAMES PRINSEP, Esq. F. R. S.

In the year 1800, a Census of the Population of this City was taken by Zulficar Ali, Kotwal, under the orders of the Resident, Mr. Deane, which was published as an Appendix in Lord Valentia's Travels in India.

Benares was there stated to contain about thirty thousand houses and six hundred thousand inhabitants; but very little examination of the data upon which the latter assumption was made, would have been sufficient to prove its total inaccuracy. The houses were classed according to their height, and an assumed rate of population was assigned to each, thus—

Brick Houses of	1 story were supposed to contain	15 persons.
Ditto ..... of	2 ditto	20
Ditto ..... of	3 ditto	25
Ditto ..... of	4 ditto	40
Ditto ..... of	5 ditto	100
Ditto ..... of	6 ditto	150

and the whole statement was of the same extravagant character.

The Kotwal, doubtless, was interested in swelling the list of townspeople, whom it was his duty to keep in subordination; and SÍTAL SINH, Mr. DEANE'S Múnshí, who drew up the account, may have thought it complimentary to his master to magnify the importance of the place under his rule; but it is difficult to forbear smiling at the ultra display of their zeal and diligence in the classification of "*suspected persons*" in the town: Thus, after a catalogue of the trades and sects, we find inserted the following curious item:

"Badmásh—Those who are ready to commit forgery, ...	40	houses.
Ditto to give false evidence, ...	400	ditto.
Ditto to commit theft, ...	200	ditto.
Thángí, or those who employ thieves, ...	50	ditto.
Gamblers, ...	40	ditto.
Persons who have been taken up for theft, ...	150	
Persons who have been engaged in brawls, &c.	100	
Persons who have a pugnacious disposition, ...	400	
Persons without any profession, and therefore *strongly suspected*, ...	200	

When engaged in making a Map of the Town in 1822, I could hardly fail to entertain suspicions of ZULFICAR'S vague estimate, and I would have attempted a more accurate enumeration had not apprehensions existed among the Civil Authorities that an enquiry of such a nature would be likely to lead to disturbance and dissatisfaction among the people. This opinion was grounded on the occurrences of more than one period, when an unpopular measure, on the part of the English Government, had given rise to disaffection, and even to open resistance in the Town; and, indeed, as long as such erroneous ideas of the magnitude of the place prevailed, there was room for alarm at the slightest symptom of turbulence on the part of the populace.

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During the operations of the Committee of Improvement, founded by Governor General ADAM in 1823, a more constant intercourse with the Natives soon convinced me that there could be no difficulty whatever in obtaining the desired information, provided the real motives were declared, and any incipient alarms at once quieted by unreserved explanations. The classification of the *mehalas* and streets for the assessment of the *Behri*, a small *mehala* tax levied for the purpose of cleaning and repairing the street drains, afforded a convenient pretext for the com mencement of the Register, as the more direct prosecution of the object was interdicted, but all precautions of this nature were, in fact, unnecessa ry, and only tended to impede the progress and injure the arrangement of the matter, which it thus occupied two years to bring to completion. On other grounds, the City of Benares prevented facilities for the prosecution of statistical enquiries, from its division into numerous *mehalas* or wards, under the protection of a police on the *phátekbandi* system, so called from the *pháteks* or gates of each *mehala*, which were, in former days, regularly closed at night. The watchmen are well acquainted with every house within their beat, and can generally tell the names and circumstances of their various inmates: with the assistance of these men, who also pointed out the limits of the *mehala*, my enquiries were continued from house to house, either addressed to the householders themselves, or to servants and neighbours. The *chumars* of the *mehala* having daily admittance to each house to remove dust and rubbish, were found to be useful auxiliaries in checking the estimates of population derived from other sources.

In some *mehalas*, chiefly where the richer classes resided, more difficulty was experienced in obtaining accurate returns than in others; but in general the results are worthy of confidence. I have frequently questioned native visitors as to the number of inmates in their houses, and have been surprised at its close accordance with the Register. To

ascertain however the degree to which it might be trusted, a few *mehalas*, in different parts of the town, were selected for a careful re-examination by myself, and the opportunity was taken to insert separate returns of the males and females of each family, and further to distinguish the lodgers from the proprietors. Into these points the *Lálas* had not been permitted to enquire, on account of the delicacy of the natives, particularly the Muselmans, on the former subject. No reluctance, however, was shewn in affording to myself such additional information, except among Muselmans of rank, who sent me the details of their household in closed letters rather than declare them vivâ voce in the street.

In the re-examination I found the houses in almost every case faithfully described: the householders' names were also correct, unless where death or sale had induced changes in the course of two years: the number of inmates fluctuated a good deal, but not more than could be explained from the continual change of guests and lodgers. To render the work complete, a Census of the Civil Station and the Cantonment of Secrole was afterwards added, as well as of sixteen villages in the vicinity which may be considered as immediately dependent upon the European establishment.

The Register is in the *Nágari* character, and has been deposited in the office of the Governor General's Agent at Benares: a copy in the *Devanágari* character, is lodged in the Society's Library. The materials are arranged in nine columns, in the following order:

1. Number of the House.
2. Name of Proprietor.
3 and 4. Caste and profession of ditto.
5, 6 and 7. Number and structure of *Chouks*.
8. Height of the House in stories.
9. Number of Inhabitants.

At the close of each *mehala* is given a summary or *goshwara*. As the *mehalas* are not arranged according to any system, a double index has been appended, for alphabetical reference and for the distinction of the Town divisions. A general abstract of the whole, in English, forms the record now submitted to the Society.

I will now beg leave to recapitulate some of the results of the Census.

1. The number of houses nearly corresponds with ZULFICAR ALI's statement, being nearly thirty thousand; but there must have been a considerable increase of buildings towards the south and west of the town since 1800; as has been observable within the last few years on the side of Secrole: we can hardly, therefore, allow that the dimensions of the town have remained stationary during the last thirty years, although seemingly borne out by the above coincidence.

2. The gross population of the City may be stated at one hundred and eighty thousand souls; while Secrole and the vicinity contain twenty thousand, making a total of two lakhs; much beneath the former estimate, but still amply sufficient to justify the title of a populous city; for Benares exceeds in population either Edinburgh or Bristol, and is twice as large as Rotterdam or Brussels.

3. The average number of inmates to a house rather exceeds six; being one-twelfth greater than the average rate for the Burdwan Zillah, according to the statistical report of Mr. (late the Hon'ble) W. B. BAYLEY. It might have been expected, indeed, that the loftier houses of the City would affect the average more considerably, but there are circumstances which counteract such a tendency. In the first place, the term *Chouk* employed in the Register, does not express precisely a house, but rather a "Court" or "Quadrangle," of a tenement capable of being separately occupied or

rented. Wherever space will allow it, Indian houses are built with an open court in the centre, towards which the apartments front on all sides. A house of any magnitude comprehends several such compartments, and is assessed according to the number of these, as separate houses, in the levy of the *Behri*, the *Phátekbandi*, or any similar tax: the average inmates of a large house therefore, will be, properly speaking, some multiple of seven, the mean rate per *chouk*. Again, the lower stories of such houses are divided off into small shops, facing the street, which are tenanted, during the day only, by artisans and tradesmen : and further, the domestic servants of the upper classes, with very few exceptions, sleep at their own houses in the suburbs, and are included in the Register of those quarters, so that it often happens that the largest mansions are the most thinly peopled. This explanation is deemed necessary on account of the great discrepancy between the Kotwal's estimate of the number of inmates in the larger class of houses and my own results.

4. If the seventeen *mehalas* of the second examination may be taken as a fair average for the whole town, the number of lodgers rather exceeds that of householders ; among the latter are included also those who hold *parjoti* tenures, paying ground rent to the Zemindar without any specific term of lease ; a system which is generally prevalent in the suburbs or *kacha mehalas*, such as Pírí, Alípúra, Assí, &c.

5. The proportion of males and females appears to be very nearly on an equality both in the City and in Secrole: there is, however, a deficiency in the amount of female children, which is also observable in the Burdwan Tables. This may be partly owing to the system of early marriage, which causes the removal of girls from their parents' houses at a tender age, and partly to the frequent inclusion of girls with boys in the general term "*larké*," when they are spoken of by their relations.

6. The proportion of children to adults, as might be expected, is much smaller in the City than in the villages around Secrole; where the ratio of one to two and a quarter, is closely in accordance with Mr. BAYLEY's statements.

The Register is capable of affording other information which I have not yet found leisure to extract. One of principal curiosity would be the relative number of Hindú and Mohammedan inhabitants. The omission, however, is of less consequence, because another distinct method of obtaining this branch of information was adopted, which, though not capable of the same degree of accuracy, may be assumed as tolerably correct in relative numbers, while it forms a collateral check upon the Census itself.

The Hindús are divided by the circumstances of their castes, and of such trades and professions as are of a similar exclusive character, into a number of distinct corporations, united among themselves under a headman, who is variously entitled, as Choudrí, Kotwal, Mahant, Jattí, Dulpatí, &c. Many of the Muselman trades are similarly constituted. Upon many occasions of festivity, the whole of a community is assembled together; at other times apportionate presents are obliged to be distributed to every adult member of the clan. Lists of their clansmen, therefore, are commonly to be met with among the choudrís, to which access is easily obtainable. Of the different sects of Brahmans, who hold so conspicuous a place in the population of the Holy City, accurate catalogues are procurable from the *Dánádhyaksh*, or almoners of native princes, or from the pundits and priests. Thus, a list of eighty-four different sects of Gújratí Brahmans was obtained from RATANJI PANDA, a respectable native, who had several times been employed in distributing largess for opulent visitors on their pilgrimage to Kasí. The number of individual members in these was afterwards ascertained from the leading man of each sect.

Where there were no *Choudrís*, as with the *Kaeths*, or *Bhúihárs*, &c., I was obliged to have recourse to actual investigation throughout the mehalas in which they were known chiefly to reside. With the *Júláhas*, or weavers, I took advantage of one or two large feasts given by principal weavers on the marriage of their children. The number entered for these and a few other classes, must be held only as approximations; while on the contrary many of the items in the catalogue, where the authority is given, are precise and accurate enumerations. I have, on this account, inserted the names of my informants, or the authority whereon each return is quoted.

The population of Benares, according to this mode of reckoning, falls considerably short of the number given by the regular Census. By increasing each item about one-sixth, to cover omissions of children in the *Choudrís'* estimates,and unavoidable oversights in the list itself, it might have been easily made to coincide in amount, but it is more satisfactory in its present form, as pointing out the limits of error. The descriptive nomenclature of the principal persons, *Múselman*, *Hindú*, *Mehájan*, *Pandit*, and *Fakír*, which accompanied the map of Benares presented to the Society in 1822, will be found of use in explanation of the present list. In the catalogue of *Hindús*, it may be remarked, there is no separate entry for "Gentlemen" as with the *Múselmans*. The reason of this is that every *Hindú*, of whatever rank he be, belongs to a particular caste. Thus the Rajah of Benares is included in the *Bhúihár* caste, and the tables of *Brahmans*, *Kshetrís*, *Vaisyas* and *Sanyasí Fakírs* (or *Gosaíns*) comprise persons of all trades and professions.

The *Múselmans* apparently form but one-fifth of the population, and are not more numerous than the *Brahmans* alone; very few of them reside within the City, properly so called, which is almost exclusively *Hindú*.

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On occasions of eclipses, religious festivals and *Mélas*, Benares is well known to be crowded with an influx of pilgrims, not only from the neighbourhood, but from every part of India. I once endeavoured to make an estimate of their numbers, and as the subject is connected with my present enquiry, I here introduce the substance of a memorandum on the subject, inserted in the proceedings of the Committee of Improvements at the time.

" For three days and nights previous to the Eclipse of the 21st May 1826, *Chaprásis* and Bearers were stationed, in pairs, at the five principal approaches to the City, for the purpose of counting the passengers by means of small pebbles, which they threw into a bag as the people passed. The Ferry people had also directions to supply returns, but it is feared that they may have purposely underrated the number of persons crossing from the south of the river. The results were as follows :

	19th May.	20th May.	21st May.	Total.
At *Nadesvar* or *Lakhípúr* bridge, ..	336	1,250	11,800	13,386
Béní Rám Pandit's garden, ...	715	1,250	9,695	11,660
Well north of *Jagatganj*, ...	151	457	4,550	5,158
Ousán Ganj, near the *T'háneh*, ..	75	675	2,971	3,721
Hanumán Phátek, ...	211	450	3,244	3,905
Total, without counting people of the town and vicinity,				37,830
Ferry at *Raj Ghat* during three days, omitting common passengers, ...			806	
Ditto *Rajmandil* and *Gaí Ghát*, ...			400	
Ditto *Kylí Ghát*, 20th May, ...			69	
Ditto at *Mánmandil*, *Sivála*, *Rám Ghát*, &c. say, ...			1200	
				2,475
Add for all the other approaches to the Town, say, ...				15,000
Total strangers at the Eclipse, 21st May, 1826, about ..				55,000

It should be remarked that the concourse at this eclipse was very small, and by no means to be compared with that of November 1825, when forty or fifty lives were lost in the press of the bathers on the Ghats."

Hence it is not unreasonable to conclude, that the accession to the population on such occasions sometimes even surpasses a hundred thousand persons.

The gross amount of the principal articles of food consumed, affords a tolerable method of computing or checking the comparative magnitude of places inhabited by similar races of men; and if these data could be ascertained with sufficient accuracy, the absolute population might even be calculated therefrom.

Grain would appear to be the best test to employ in such an estimate, being the most bulky, as it is the most universal article of food; but since it is not subject to a Town Duty at Benares, the quantity annually imported cannot be easily ascertained.

Salt is nearly of equally general consumption, although on a comparatively minute scale. As far as my own enquiries furnish data,* one-ninth of a maund per man per annum, is a fair average consumption; and this rate, upon a population of one lac and eighty thousand, would yield an annual total of twenty thousand maunds; now this is in close accordance with the Custom House Returns, allowing a fraction for salt smuggled into the Town out of the regular channels.

Upon other articles, such as *ghí*, tobacco, &c. less reliance can be placed, because they must be esteemed luxuries rather than necessaries.

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* Among the labouring classes, I found the rate per man, three seers; which is, according to themselves, a minimum. *Sipahis*, and servants consume from four to six seers: *Mahájans* gave me an average of nine or ten seers; with the richer classes it may be double or treble this amount from wastage, and some allowance must be made for cattle and other sources of consumption. I have assumed four and a half seers as the mean.

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I have, however, appended a table of several, obtained from the Custom House, which may prove useful in making comparisons with other Towns. I am indebted to Mr. R. N. HAMILTON, Magistrate of Benares, also, for a further table of the price of different varieties of grain for a period of twenty-one years inclusive.

One of the chief utilities of a correct Census is, that it introduces a right understanding as to what should be the produce of any tax levied upon the food, the houses, or the inhabitants of a Town. I remember once hearing a public functionary upbraided for laxity of diligence, because the consumption of *ghí* in the City of Benares fell so far short of what might have been expected upon a population of six hundred thousand souls !

The following is a Summary of the results furnished by the present Census :

	In the City.	*In Secrole and the vicinity.*
Number of Inhabitants, ...	181482	11876 in Native Houses. 7092 in European ditto, including Cantonments.
Number of Houses or *Chouks*, ...	30205	2754 Native Houses. 114 English Estates, &c.
Mehalas as divided in the Census, ...	369	21
Paka Houses (of Brick and Stone), ...	11325	73
Kacha Houses (of Mud), ...	16552	2639
Kacha-Paka Houses (mixed), ...	2328	88
Houses of One Story in height, ...	12590	2444
Two Stories ditto, ...	11838	282
Three ditto, ...	2993	2
Four ditto, ...	1019	0
Five ditto, ...	200	0
Six ditto, ...	7	0
Seven ditto, ...	1	0
Ruins of Houses, or spaces marked out for building, ...	1498	72
Gardens, *Talaos*, &c.	174	
Sivalas, or Hindoo Temples, ...	1000	7
Mesjids, or Muselman Mosques, ...	333	5
Proportion of original census to re-examination, ...	8932 to 8814	
Proportion of Proprietors to Lodgers in seventeen *Mehalas*, and in the Suburbs,	4310 to 4504	7753 to 1684
Proportion of Males and Females.		
Men, ...	3424	3354
Women, ..	3564	3151
Boys, ...	1085	1698
Girls, ...	741	1234
Proportion of Adults to Children.		
Adults, ...	6988 4 to 1	6505 2½ to 1
Children, ..	1726	2932
Average ratio of Inhabitants in each *Chouk* as above, ...	6	6
Ditto for the *Paka* Houses, ...	7	
Ditto for the *Kacha* Houses, ...	4½	

TABLE I.

Alphabetical List of Mehalas in the City of Benares, with the Number of Houses, Inhabitants, &c. taken from the Devanágari Register, to which reference is given.

Page of *Devanágari* Register.	Name of the *Mehala, Sarak, Gali, Katra, Serai, Bazar, Ghat,* or other Division in the Census.	Number of Inhabitants.	*Chouks, or* Houses.			Total.	Height.						Ruins.	Tanks and Gardens.	Shiwalas.	Mesjids.
			Kacha.	Paka.	Mixed.		One Story.	Two Ditto.	Three Ditto.	Four Ditto.	Five Ditto.	Six Ditto.				
	A.															
183	Abkárì hâta, ...	147	30	1	0	31	29	1	0	0	0	0	1	0	0	0
49	Adivisveswar, ...	365	4	43	15	62	11	36	10	1	0	0	0	0	4	0
191	Adampùra, ...	337	60	16	11	87	40	34	1	0	0	0	6	0	1	5
9	Agaganj mehala, ...	721	162	1	3	166	85	77	0	0	0	0	4	0	0	0
7	sarak, ...	413	72	7	6	85	55	88	0	0	0	0	0	0	1	1
196	Agast kùnd, ...	2392	59	234	1	294	51	95	97	27	2	0	3	2	16	1
'62	Ahila Baì brahmpùrì, ..	228	2	22	1	25	1	3	15	2	0	0	1	0	3	0
151	Ajaib Sinh ka bagh, ...	444	77	3	8	88	46	39	0	0	0	0	1	0	0	2
13	Alìpùra, ...	670	161	4	3	168	97	45	1	0	0	0	17	3	0	5
93	Alempùra, ...	584	81	14	31	126	34	78	0	0	0	0	8	0	0	6
90	Ambiya mandei, ...	674	116	19	22	157	58	75	3	0	0	0	27	1	1	2
20	Amì Chand galì, ...	35	0	5	0	5	0	1	4	0	0	0	0	0	0	0
168	Ama Mihr galì, ...	134	8	12	3	23	11	11	0	0	0	0	1	0	0	0
178	Anaj kì mundeì, ...	364	51	5	1	57	39	13	0	0	0	0	2	1	2	0
62	Arhaì Kangùra Mesjíd, ..	285	42	8	14	64	21	37	1	0	0	0	2	0	0	3
30	As-bhyro, ...	474	0	81	1	82	5	27	29	16	0	0	3	0	2	0
41	Atmabìreswar, ...	295	0	39	0	39	2	7	9	5	1	0	0	0	15	0
11	Arab kì Mesjíd, ...	49	10	2	1	13	9	2	0	0	0	0	1	0	0	1
102	Aurípúra, ...	308	59	3	5	67	22	41	0	0	0	0	3	1	0	0
179	Aurangabád mehala, ...	868	108	40	3	151	75	63	2	0	0	0	10	0	0	1
174	serai, ...	185	36	45	0	81	64	12	0	0	0	0	3	0	0	2
174	sarak, ...	1300	180	80	9	269	123	127	6	0	0	0	10	1	1	1
1	Ausánganj bazar, ...	1010	86	21	81	188	172	11	0	5	0	0	0	0	0	0
172	Ausánganj Siunarain's house , ..	56	1	21	47	69	69	0	0	0	0	0	0	0	0	0
140	Awedh, ...	1615	297	48	25	370	150	205	4	0	0	0	10	0	1	1
56	Azìzan mundei, ...	395	102	2	5	109	75	29	0	0	0	0	0	3	0	2
	B.															
41	Babarseid mehala, ...	205	1	25	0	26	1	6	11	5	2	0	0	0	0	1
155	Badshah ganj, ...	1665	366	54	21	448	210	209	2	0	0	0	8	5	4	3
93	Bahilia tola, ...	171	45	1	0	46	27	11	0	0	0	0	6	0	0	2
101	Bakharabád, ...	395	62	2	8	72	41	27	0	0	0	0	2	2	0	0
165	Balúe-bír, ...	406	144	12	19	175	68	88	0	0	0	0	15	1	0	3
131	Balúa, ...	78	9	1	1	11	9	2	0	0	0	0	0	0	0	0
128	Balam Das bagh, ...	168	15	5	2	22	19	2	0	0	0	0	1	0	0	0
216	Bandholal púra, ...	153	33	0	0	33	32	0	0	0	0	0	1	0	0	0
10	Bandhú, ...	666	130	4	6	140	26	10	0	0	0	0	10	0	0	4
122	Bara dev, ...	696	131	4	6	141	73	58	0	0	0	0	9	0	1	0
146	Baryar Sinh kí bagh, ...	161	29	2	2	33	26	7	0	0	0	0	0	0	0	0
145	sarak, ...	599	92	1	1	94	70	23	0	0	0	0	1	0	0	0
192	Bengalí tola, ...	1113	8	157	0	165	3	57	86	7	0	0	1	0	10	1
21	Bibì hatia, ...	248	0	25	0	25	0	4	10	10	1	0	0	0	0	0
86	Behára Mal katra, ...	290	13	37	8	58	8	35	6	0	0	0	6	0	1	2
26	Bhat mehala, ...	387	2	47	0	49	1	10	17	15	4	0	2	0	0	0
43	Bhélùpùr, ...	365	117	11	0	128	109	11	0	0	0	0	5	0	3	0
37	Bhikharì Das, ...	637	4	59	0	63	0	2	30	22	5	0	4	0	0	0

Page of *Devanágari* Register.	Name of Mehala.	Number of Inhabitants.	Houses.				Height.						Ruins.	Tanks and Gardens.	Shiwalas.	Mesjids.
			Kacha.	Paka.	Mixed.	Total.	One story.	Two ditto.	Three ditto.	Four ditto.	Five ditto.	Six ditto.				
131	Bhùlotan, ...	706	58	12	6	76	47	25	0	0	0	0	2	0	2	0
17	Bhùtahì Imlì boulì, ...	81	2	10	3	15	1	10	2	0	0	0	1	1	0	0
190	Bhadahùn, ...	698	99	16	12	127	85	28	0	0	0	0	6	0	1	12
157	Bhadynì, ...	3885	610	64	97	771	244	480	14	0	0	0	16	4	12	1
48	Bhandárì galì, ...	274	3	29	0	32	5	20	7	0	0	0	0	0	0	0
21	Bhandariya galì, ...	60	2	6	0	8	0	4	2	0	0	0	2	0	0	0
128	Bharat Dùajì khás, ...	386	48	9	15	72	37	25	3	0	0	0	6	0	1	0
189	sarak, ..	204	16	11	6	33	13	15	1	0	0	0	4	0	0	0
	tola, ..	263	38	17	13	68	23	27	2	0	0	0	14	0	1	1
24	Bhyronáth khás, ...	397	1	83	0	84	3	39	29	4	1	0	0	0	8	0
23	sarak, ..	315	1	48	0	49	0	27	19	0	0	0	0	0	0	1
26	bazar, ..	383	0	63	0	63	2	2	25	21	11	0	0	0	1	1
22	Bindraban Jánì, ...	215	4	30	0	34	0	0	20	10	0	0	4	0	0	0
39	Birjù Sáh galì, ...	134	0	9	0	9	0	0	4	2	2	1	0	0	0	0
108	Bùchaì tola, ...	147	8	36	4	48	4	19	17	1	0	0	3	1	2	0
40	Bùla nala, ...	1429	54	110	23	187	45	56	39	10	4	0	29	0	2	2
169	Bridhkál kùa khas, ...	272	50	5	5	60	25	26	0	0	0	0	4	2	0	3
	sarak, ..	229	21	20	15	56	16	31	0	0	0	0	2	1	5	1
115	Brahmnál, ...	815	6	139	1	146	10	48	61	4	0	0	2	0	21	0
	C															
31	Champa Saíd, ...	31	0	7	0	7	1	4	1	0	0	0	0	0	0	1
38	Chandúnaì galí, .. .	56	0	7	0	7	0	5	2	0	0	0	0	0	0	0
,,	khás, ...	415	1	47	0	48	0	12	17	14	1	0	2	0	2	0
95	Chandúpúra	191	47	10	8	65	22	31	0	0	0	0	8	0	0	3
44	Chaparía katra, ...	28	1	24	0	25	20	1	3	1	0	0	0	0	0	0
162	Chatúshastí ghát, ...	215	2	39	0	41	2	8	13	0	0	0	0	0	18	0
19	Chaukhambha, ...	312	0	50	0	50	1	8	13	23	4	0	0	0	1	0
151	Chét ganj gola, ...	264	58	15	9	82	41	40	0	0	0	0	0	1	0	0
148	sarak, ...	164	42	1	0	43	32	10	0	0	0	0	1	0	0	0
57	Chítanpúra khas, ...	820	153	29	20	202	51	128	3	0	0	0	12	2	0	6
89	sarak, ...	188	29	4	8	41	11	30	0	0	0	0	0	0	0	4
11	Chohra (Ausanganj), ..	291	57	2	3	63	36	22	1	0	0	0	3	0	0	0
32	Chouk (53 Sirkarí shops), ..	187	0	85	0	85	0	6	23	0	0	0	0	0	0	3
215	Chamrotí (Secrole), ...	1159	232	0	3	235	205	22	0	0	0	0	7	0	0	1
222	Cantonments, ...	3195	17	11	6	34	0	0	0	0	0	0	0	0	0	0
	D															
22	Dadú chouk, ...	219	1	30	0	31	3	17	8	2	0	0	1	0	0	0
52	Dál kí mandeí, ...	749	0	86	6	102	16	46	39	1	0	0	0	0	0	0
144	Dalépganj, ...	85	2	2	2	6	2	4	0	0	0	0	0	0	0	0
144	Dandí *(Hanuman)* Ghat, .	268	18	34	13	65	29	31	1	0	0	0	2	0	2	0
134	Dasáswamedh khas, ..	294	9	35	2	46	11	27	2	0	0	0	0	0	6	0
122	sarak, ..	358	20	41	15	76	24	35	10	0	0	0	0	0	7	0
3	Dáránagar khas, ...	884	69	58	42	169	61	78	5	22	0	0	0	0	0	3
4	sarak, ...	634	68	29	22	119	60	41	4	0	0	0	11	0	3	0
171	Dénanáth gola, ...	380	24	64	31	119	37	72	2	2	0	0	6	0	0	0
195	Deonáthpura bara, ...	465	13	59	4	76	16	33	15	1	0	0	0	0	10	1
195	chhota, ..	144	10	10	1	21	2	16	1	0	0	0	2	0	0	0
200	galí, ..	202	23	6	0	29	7	18	4	0	0	0	0	0	0	0
98	Dhanípúra, ...	315	73	4	0	77	57	35	0	0	0	0	3	0	0	2
167	Dhanésra, ...	93	17	1	0	18	11	5	0	0	0	0	3	0	0	0

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Page of *Devanágari* Register.	Name of Mehala.	Number of Inhabitants.	Houses.			Total.	Height.						Ruins.	Tanks and Gardens.	Shiwalas.	Mesjids.
			Kacha.	Paka.	Mixed.		One Story.	Two Ditto.	Three Ditto.	Four Ditto.	Five Ditto.	Six Ditto.				
116	Dharmkúp, ...	121	2	25	0	27	0	6	10	0	0	0	2	0	9	0
102	Digía, ...	120	18	1	3	22	10	8	0	0	0	0	2	2	0	0
116	Dir Mal galí, ...	177	0	25	1	26	1	11	11	2	0	0	0	0	1	0
96	Dosípúra, ...	383	79	17	2	98	28	52	0	0	0	0	4	7	0	7
84	Douriabír, ...	780	187	9	1	197	157	17	1	0	0	0	16	1	5	0
25	Dúgdh Binaik, ...	1236	1	122	0	123	0	1	59	48	7	0	1	0	1	0
167	Dulí garha, ...	174	26	5	9	40	7	32	0	0	0	0	1	0	0	0
138	Dúrga kúnd, ...	898	94	34	3	131	72	22	0	0	0	0	10	19	7	1
212	Déthúra (Secrole,)	219	48	1	4	53	41	7	0	0	0	0	4	0	0	1
	E															
123	Ehía Ber *(Ramapura,)* ..	748	17	92	8	117	7	39	43	9	0	1	3	1	14	1
162	Ehía Ber *(Dasáswamédh,)* ..	161	0	26	1	27	1	6	10	4	0	0	0	0	6	0
	F															
45	Ferid Seid, ...	228	65	1	0	66	50	11	0	0	0	0	4	0	0	1
	G															
109	Gái ghát, ...	925	86	94	26	206	60	103	18	1	0	0	17	1	3	3
142	Gambhír Sinh Bára, ..	504	120	6	5	131	73	39	0	0	0	0	19	0	0	0
23	Ganésh chameria, ...	344	1	80	0	81	0	6	56	16	1	0	1	0	1	0
21	Ganésh gali, ...	44	0	8	0	8	1	6	1	0	0	0	0	0	3	0
199	Ganésh mehala, ...	1231	26	34	7	167	19	97	29	0	0	0	4	0	17	1
26	Ganésh diksit, ...	351	0	54	0	54	0	1	25	27	1	0	0	0	0	0
161	Ganga mehal, ...	163	19	17	4	40	2	26	5	0	0	0	3	0	4	0
35	Garwási tola, ...	1357	11	183	3	197	10	79	71	17	0	0	4	0	16	1
24	Ghasí tola, ...	423	1	47	0	48	0	1	18	24	4	0	1	0	0	0
192	Ghasíara tola, ...	384	73	7	10	90	58	17	1	0	0	0	12	0	0	2
137	Ditto *(Ramapúra,)*	342	106	0	0	106	84	1	0	0	0	0	19	2	0	0
20	Ghats (Assi to Berna,) ..	887	58	455	1	514	69	42	18	2	0	0	12	0	370	1
176	Ghihata, ...	1144	140	32	18	190	119	61	4	0	0	0	3	3	0	0
51	Gogharána, ...	147	4	11	0	15	7	5	3	0	0	0	0	0	0	0
123	Gobindpúra (bara,)	795	24	76	1	101	20	69	8	0	0	0	3	0	0	1
30	ch,hota, ...	247	3	59	0	62	8	25	22	1	0	0	1	0	3	0
31	sarak, ...	332	1	57	0	58	23	24	7	0	0	0	2	0	1	1
29	Gobind Das katra, ...	272	18	32	3	53	19	29	0	0	0	0	4	1	0	0
25	Gobind Naik mehala, ..	691	0	61	0	61	1	2	17	29	12	0	0	0	0	0
118	Gobardhen serai, ...	2199	313	17	54	384	184	171	4	0	0	0	22	2	1	0
152	sarak, ...	289	48	12	9	69	33	29	4	0	0	0	2	1	0	0
37	Gola galî	649	0	48	0	48	0	2	19	25	2	0	0	0	0	0
37	Gopál Das Sah, ...	281	0	44	0	44	1	3	13	19	7	1	0	0	0	0
102	Gopál pura, ...	171	30	5	5	40	27	10	0	0	0	0	3	0	0	0
85	Gouri ganj, ...	822	192	1	4	197	126	45	0	0	0	0	24	0	2	0
73	Gouri Ganesh, ...	1026	92	31	23	146	72	63	2	0	0	0	6	0	3	0
27	Gual Das Sah, ...	1052	3	148	1	152	2	28	45	50	20	2	4	0	1	0
106	Gular talé, ...	372	43	32	16	91	29	51	0	0	0	0	10	0	0	1
125	Gulzár Mehal, ...	159	19	16	3	38	8	25	1	0	0	0	3	0	0	1
58	Gyán Bápi, ...	89	1	18	1	20	2	6	7	0	0	0	0	0	3	2
207	Ganga Dher Pura, (Secrole,) ..	232	44	0	3	47	41	5	0	0	0	0	1	0	0	0
213	Grant Bazar.	434	91	0	3	94	77	14	0	0	0	0	3	0	0	0

Page of *Dewanigari* Register.	Name of Mehala.	Number of Inhabitants.	Houses.			Total.	Height.						Ruins.	Tanks and Gardens	Shiwalas.	Mesjids.
			Kacha.	Paka.	Mixed.		One story.	Two ditto.	Three ditto.	Four ditto.	Five ditto.	Six ditto.				
	H															
77	Háji Dás mehala, ...	71	0	16	0	16	2	8	4	1	0	0	1	0	0	0
150	Habíbpura khas, ...	1331	215	10	4	229	167	51	1	0	0	0	9	1	0	0
150	sarak, ...	208	39	0	1	40	14	25	0	0	0	0	1	0	0	0
180	Hankár tola, ...	670	55	61	8	224	28	78	9	0	0	0	12	0	1	0
54	Hakák tola, ...	572	42	44	6	92	48	35	5	0	0	0	0	0	0	4
113	Hanumán ganj west, ..	107	19	0	0	19	9	9	0	0	0	0	1	0	0	0
113	east, ..	256	59	4	1	64	37	27	0	0	0	0	0	0	0	0
114	sarak, ..	62	14	0	2	16	13	3	0	0	0	0	0	0	0	0
114	Hanumán phatek, ...	94	23	8	3	34	18	13	0	0	0	0	0	0	0	0
135	Hanumán pura, ...	176	47	0	0	47	40	6	0	0	0	0	1	0	0	0
167	Hanstírath khás, ...	620	80	54	14	148	65	61	5	0	0	0	13	1	3	0
	sarak, ...	286	43	17	11	71	33	29	5	0	0	0	3	0	0	0
130	Har,ha khás, ...	1460	165	59	18	242	123	89	2	0	0	0	21	0	4	3
129	sarak, ...	415	27	50	4	81	24	42	10	0	0	0	3	0	0	2
139	Hára bagh, ...	972	146	39	28	213	61	133	5	0	0	0	13	0	1	0
143	Hát,hi kháneh, (Princes,) ..	146	48	0	1	49	24	14	0	0	0	0	11	0	0	0
107	Himet Behádur galì, ..	39	4	5	1	10	1	5	3	0	0	0	1	0	0	0
143	Hingua, ...	373	74	18	5	97	45	44	0	0	0	0	3	3	1	1
154	Hoscinpura, ...	287	50	9	14	73	16	50	0	0	0	0	4	1	0	2
50	Houz katora khás, ...	909	45	96	13	154	46	89	15	1	0	0	0	0	2	1
49	sarak, ...	473	16	63	3	82	16	37	23	2	0	0	0	0	3	1
	Hyder ganj, ...	431	101	0	0	101	78	11	0	0	0	0	12	0	0	0
101	Hyder Ali háta, ...	88	34	0	1	35	15	6	0	0	0	0	5	5	0	4
10	Hynstalé, ...	166	28	3	7	38	6	26	0	0	0	0	4	0	0	2
208	Húgal ganj (Secrole), ...	274	92	1	0	93	82	5	0	0	0	0	5	0	0	1
	I															
219	Impur, ...	488	115	0	0	115	0	0	0	0	0	0	0	0	0	0
104	Iswargangi khas, ...	782	111	3	5	119	75	34	0	0	0	0	3	1	6	0
103	sarak, ...	385	58	6	9	73	38	26	0	0	0	0	8	0	1	0
	J															
104	Jagéswar, ...	243	20	23	7	50	12	23	0	0	0	0	1	12	1	0
119	Jagjéwanpura, ...	551	93	13	16	122	59	52	0	0	0	0	6	0	0	5
66	Jagat ganj, ...	1045	228	18	3	249	187	43	7	0	0	0	9	1	0	2
	Jelálipura, ...	406	117	1	4	122	84	22	0	0	0	0	12	3	0	1
15	Jelálud-dínpura, ...	186	51	3	1	55	31	32	0	0	0	0	0	0	0	2
198	Jangam barí, ...	1063	183	17	1	201	120	61	0	0	0	0	15	0	5	0
11	Jynpura, ...	287	68	5	0	73	42	24	0	0	0	0	4	0	0	3
68	Jytpura, ...	380	40	8	7	55	44	9	0	0	0	0	0	2	0	0
20	Jytanber, ...	634	20	79	6	105	18	39	33	2	1	0	6	0	5	1
	K															
191	Kasim Ali Khan katra, ..	135	0	14	0	14	0	9	5	0	0	0	0	0	0	0
57	Kazi kí mandei, ...	454	51	43	20	114	40	64	9	0	1	0	0	0	0	0
126	Kazi ka darwaza, ...	391	57	39	18	114	49	38	11	0	0	0	11	0	1	4
65	Kazi ki gali, ...	137	30	3	6	39	10	24	1	0	0	0	4	0	0	0
172	Kazipura, *(Shékh Salím)* ..	654	57	21	13	91	57	31	2	0	0	0	1	0	0	0

Page of *Devanágari* Register.	Name of Mehala.	Number of Inhabitants.	Houses.				Height.									
			Kacha.	Paka.	Mixed.	Total.	One story.	Two ditto.	Three ditto.	Four ditto.	Five ditto.	Six ditto.	Ruins.	Tanks and Gardens.	Shiwalas.	Mesjids.
16	Kazipura, *(Alipura)* ..	400	114	5	0	119	71	32	0	0	0	0	6	8	0	2
173	Kazipura, ...	465	33	56	2	91	34	46	8	0	0	0	1	0	0	2
219	Kazipura, ...	135	37	0	0	37	37	0	0	0	0	0	0	0	0	0
	Kileh kohna, (*vide* Purani kot)															
181	Kali mehal, ...	167	31	2	1	34	23	10	0	0	0	0	1	0	0	0
117	Kalika gali, ...	162	0	54	0	54	2	25	19	2	0	0	2	0	4	0
61	Kámeswar, ...	215	25	8	6	39	9	25	0	0	0	0	5	0	0	0
134	Kashmiri ganj, ...	748	168	0	0	168	136	26	0	0	0	0	5	1	0	0
54	Kásipura, ...	522	18	56	7	81	29	48	3	0	0	0	0	0	0	1
200	Kasirám Pátak, ...	100	0	11	0	11	8	3	0	0	0	0	0	0	0	0
162	Kéwalgiria, ...	148	0	32	0	32	0	5	24	1	0	0	0	0	2	0
14	Khájapura, ...	255	74	5	4	83	45	26	0	0	0	0	10	0	0	2
163	Khálispura, ...	898	1	116	3	120	2	47	61	5	0	0	0	0	3	2
107	Khirki derwázeh, ...	165	12	33	2	47	6	18	13	2	0	0	7	0	1	0
87	Khójwa serai, ...	736	164	7	2	173	129	38	0	0	0	0	3	1	2	0
38	Khadéru mal, ...	136	0	13	0	13	0	0	2	10	1	0	0	0	0	0
107	Koila bazar, ...	191	18	20	12	50	9	33	5	0	0	0	3	0	0	0
55	Kundigar tola, ...	285	0	55	0	55	8	35	10	1	0	0	0	0	0	1
39	Kunj gali khas, ...	61	0	22	0	22	2	5	11	3	0	0	0	0	0	0
32	phatekbáher, ..	36	0	51	0	51	27	29	3	2	0	0	0	0	0	0
33	chakla, ..	47	0	7	0	7	4	3	0	0	0	0	0	0	0	0
58	Kutbar Seid, ...	149	24	3	5	32	17	13	0	0	0	0	0	0	0	2
169	Kutwa, ...	335	63	9	17	82	17	16	0	0	0	0	12	0	0	4
48	Kotwálpura, ...	692	15	77	1	93	23	46	22	0	0	0	0	0	2	0
8	Kachí bagh, ...	646	150	2	0	152	56	88	0	0	0	0	7	0	0	1
44	Kachouri gali, ...	112	1	12	0	13	1	2	5	5	0	0	0	0	0	0
70	Kabir Choura khas, ..	916	117	9	11	137	69	64	0	0	0	0	4	0	0	0
69	sarak, ..	372	38	6	14	58	25	32	0	0	0	0	0	0	0	1
82	Kamaksha, ...	1023	147	32	5	184	147	23	4	0	0	0	1	0	9	0
97	Kamálpura, ...	255	52	5	6	63	20	38	0	0	0	0	3	1	0	1
11	Kaman garha, ...	140	34	2	7	43	13	18	0	0	0	0	3	1	0	8
12	sarak, ...	225	71	0	0	71	58	5	0	0	0	0	7	0	0	1
42	Kanhya Lal bazar, ..	350	31	7	4	42	26	11	2	0	0	0	3	0	0	0
68	Karni bazar, ...	250	22	11	8	41	15	22	0	0	0	0	0	0	1	3
29	Kern ghanta, ...	327	27	41	2	70	23	35	4	0	0	0	7	0	0	1
64	Ketwapúra sarak, ...	337	45	23	16	84	19	50	2	0	0	0	7	0	0	6
91	khas, ..	1334	220	50	62	332	141	155	5	0	0	0	27	0	2	2
213	Khajúree (Secrole), ..	984	228	11	3	242	214	16	0	0	0	0	10	0	1	1
	L.															
77	Lalúsur, ...	179	4	37	0	41	1	10	24	2	0	0	4	0	0	0
12	Lalanpúra khas, ...	94	18	1	0	19	12	7	0	0	0	0	0	0	0	0
12	sarak, ...	45	25	0	0	25	16	3	0	0	0	0	3	2	0	2
43	Lahorí tola, ...	617	5	125	0	130	2	40	51	9	0	0	5	0	23	0
108	Lala Sand gali, ...	175	2	22	3	27	1	14	10	1	0	0	1	0	0	0
69	Lál Khan mehala, ...	579	80	58	13	151	52	66	5	0	0	0	23	1	1	3
62	chouhata, ..	228	35	41	12	88	30	46	2	0	0	0	8	0	0	3
220	Lachipura, ...	435	87	0	0	87	83	1	0	0	0	0	3	0	0	0
76	Lachmi Josi gali, ..	41	3	6	0	9	0	2	2	2	0	0	3	0	0	0
97	Ladhenpúra, ...	452	93	3	1	97	26	59	0	0	0	0	9	0	0	3
181	Lahanpúra khas, ...	256	34	6	2	42	20	18	0	0	0	0	1	0	0	2
181	sarak, ...	496	60	14	4	78	28	48	1	0	0	0	1	0	0	0
39	Lakhi chabútré, ...	219	0	20	0	20	0	2	6	7	5	0	0	0	0	0

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79	Lakusár, ...	201	30	3	0	33	24	5	0	0	0	0	1	0	3	0
177	Lakhsmi kúnd, ...	777	52	45	3	100	57	23	12	1	0	0	1	4	2	0
46	Lalita Ghát, ...	112	0	13	0	13	0	12	1	0	0	0	0	0	0	0
22	Latu ka gali	141	1	21	0	22	0	1	12	8	0	0	1	0	0	0
184	Lillapura.	986	183	10	0	193	166	12	1	0	0	0	5	5	2	3
	M.															
18	Mádhoray Mehala, ..	656	0	80	0	80	0	3	45	16	4	0	0	0	11	1
26	Mádho Das Samia gali, ..	51	0	9	0	9	0	0	3	5	1	0	0	0	0	0
71	Mádho Das ki bagh, ..	354	23	10	16	49	17	29	1	0	0	0	2	0	0	0
104	sarak, ..	425	48	24	7	79	32	38	0	0	0	0	8	1	0	0
29	Machharhata, ...	402	3	79	0	82	7	59	8	3	0	0	3	0	2	0
58	Madár tola, ...	136	29	6	3	38	9	20	0	0	0	0	7	0	0	2
5	Madhméswar, ...	840	122	22	25	169	73	56	1	0	0	0	33	0	6	0
193	Madenpúra, ...	1851	71	189	28	288	38	172	51	1	0	0	4	1	8	13
21	Maden Mohen gali, ..	91	0	14	0	14	0	4	9	1	0	0	0	0	0	0
52	Mahima inára, ...	658	19	53	0	79	25	51	3	0	0	0	0	0	0	0
189	Malai tola, ...	546	80	19	8	107	54	34	5	0	0	0	11	0	1	2
39	Manirudouleh, ...	142	0	11	0	11	0	2	7	2	0	0	0	0	0	0
110	Manhari pipal, ...	90	1	13	1	15	0	14	0	0	0	0	1	0	0	0
22	Mansárám gali, ...	55	0	5	0	5	0	2	2	1	0	0	0	0	0	0
121	Manyar Sinh houli, ..	1165	245	15	23	283	138	119	3	0	0	0	19	8	1	0
33	Mámádeo, ...	489	19	78	0	97	16	24	34	11	1	0	9	0	2	0
46	Mán Mandil, ...	738	77	27	4	108	25	76	5	0	0	0	0	0	2	0
127	Mán Ray gali, ...	57	4	19	2	25	7	13	4	0	0	0	1	0	0	0
99	Mánpúra, ...	414	102	1	5	108	56	45	0	0	0	0	6	0	0	1
200	Mánsarwar, ...	1503	27	6	4	91	16	49	7	0	0	0	1	0	18	0
47	Márkandi Sookul brp. ..	157	0	10	0	10	0	8	2	0	0	0	0	0	0	0
61	Mátha tola, ...	155	4	21	5	30	2	25	2	0	0	0	1	0	0	0
115	Mir Ghát khas, ...	602	58	61	4	123	20	61	19	5	0	0	10	0	8	0
45	sarak, ..	318	1	57	0	58	1	16	34	3	0	0	0	0	4	0
178	Mir Ján ke bagh, ...	17	12	1	0	13	9	4	0	0	0	0	0	0	0	0
31	Mirza Imámi chata, ..	34	0	5	0	5	1	1	3	0	0	0	0	0	0	0
185	Misr pokhra, ...	1125	63	82	9	154	69	49	18	6	0	0	5	1	6	0
126	Mokim ganj, ...	335	85	7	15	107	59	37	0	0	0	0	9	0	0	2
147	Molni tola, ...	682	113	4	7	124	83	41	0	0	0	0	0	0	0	0
22	Moni ka gali, ...	31	0	4	0	4	0	0	2	2	0	0	0	0	0	0
166	Mohamed Seid,..... ..	285	63	2	2	67	16	44	0	0	0	0	3	2	0	2
63	Múlvi bazar, ...	99	21	2	1	24	14	9	0	0	0	0	1	0	0	0
164	Munshi gali p,hatek, ..	94	0	12	0	12	0	2	8	0	0	0	0	0	2	0
170	Murgia tola, ...	161	52	1	9	62	19	26	0	0	0	0	12	2	1	2
58	Murli gali, ...	78	1	11	0	12	1	5	6	0	0	0	0	0	0	0
21	Mesjid gali, *(Jytanber)* ..	397	10	43	13	66	17	37	7	0	0	0	4	0	0	1
108	Matsyodari khas (subdivided)															
108	Ditto chamrauti, ...	24	12	0	0	12	12	1	0	0	0	0	0	0	0	0
	N.															
127	Nachni Kúa, ...	625	97	48	21	166	51	86	3	0	0	0	21	0	2	3
221	Nadéswar, ...	1389	234	12	0	246	184	48	2	0	0	0	9	2	1	0
105	Nakhás, ...	413	88	8	17	113	48	51	3	0	0	0	9	0	0	2
171	Ditto, *(Ausanganj)* ..	268	53	16	8	77	48	19	1	0	0	0	4	2	2	1
17	Naik ka bazar, ...	821	51	56	24	131	50	49	5	0	0	0	17	4	6	0

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99	Nág Kúa, ...	325	74	2	0	76	45	26	0	0	0	0	5	1	0	1
44	Nandú Farya Gali, ...	126	5	15	0	20	6	10	4	0	0	0	0	0	0	0
35	Nanden Sah m.	724	2	87	0	89	1	7	28	35	15	1	1	0	0	0
72	Narharpúra, ...	775	143	3	14	160	95	60	0	0	0	0	4	0	0	1
163	Nánú Sah brahmpurí, ...	177	0	17	0	17	0	3	12	1	0	0	1	0	0	0
22	Narain Diksit m.	444	0	65	0	65	7	34	18	4	0	0	1	0	1	0
79	Nawab ganj, *(Mizrpokhra)* ..	379	60	16	2	78	65	9	2	0	0	0	0	0	2	0
136	Nawab ganj, *(Durgakúnd)* ..	1015	307	0	0	307	246	39	0	0	0	0	21	1	0	0
113	Negapúra, ...	59	26	0	0	26	25	0	0	0	0	0	1	0	0	0
48	Níchí brahmpurí, ...	339	4	44	0	48	3	23	22	0	0	0	0	0	0	0
43	Nipáli Khapra, ...	195	2	27	0	29	3	11	14	1	0	0	6	0	0	0
41	Nya Ghát, ...	118	0	9	0	9	0	0	3	5	1	0	0	0	0	0
2	Nyapúra, *(Ausánganj)* ..	693	67	28	29	124	52	56	4	1	0	0	8	2	0	1
90	Ditto, *(Kazi mandei)*	250	38	8	5	51	5	38	1	0	0	0	6	0	0	1
80	Nyí Basti, *(Rámápura)* ..	639	101	0	0	101	71	29	0	0	0	0	1	0	0	0
69	Ditto, *(Gouriganj)*	576	79	2	0	81	69	12	0	0	0	0	0	0	0	0
103	Ditto, *(Iswargangí)*	305	49	1	1	51	35	11	0	0	0	0	2	2	1	0
98	Ditto.	122	33	2	0	35	27	6	0	0	0	0	2	0	0	0
	O.															
211	Orderly bazar (Secrole). ..	1076	273	12	7	292	192	93	0	0	0	0	5	0	1	1
	P.															
162	Panri Ghat, ...	259	3	28	5	36	1	14	15	0	0	0	2	0	4	0
107	Páta Derwázeh, ...	112	9	16	3	28	4	13	5	1	0	0	4	0	1	0
74	Piri bari, ...	2601	326	34	25	385	291	110	2	0	0	0	16	0	1	5
132	chhoti, ...	1117	120	31	8	159	109	34	2	0	0	0	13	0	1	0
132	sarak, ...	783	73	22	10	105	62	36	1	0	0	0	3	0	2	1
20	Phúl bari brahmpuri, ...	134	1	16	0	17	0	0	9	4	3	0	1	0	0	0
113	Phúlwaria, ...	119	22	1	2	25	7	16	0	0	0	0	1	0	0	1
183	Pitr kund mehala, ...	1538	275	23	10	308	234	52	1	0	0	0	13	1	2	5
118	sarak, ...	883	154	28	10	192	106	59	0	0	0	0	8	10	0	9
144	Pitambarpura, ...	339	77	13	3	93	57	31	0	0	0	0	3	0	2	0
53	Púráni Adálat, ...	904	17	86	1	104	21	54	26	0	0	0	0	0	0	3
187	Púráni Kót, ...	729	121	8	16	145	95	40	1	0	0	0	6	0	0	3
21	Pouti gali, ...	62	0	9	0	9	0	3	3	3	0	0	0	0	0	0
39	Pránnáth gali, ...	157	0	15	0	15	0	2	10	3	0	0	0	0	0	0
124	Prehlád Ghát, ...	478	39	90	21	150	27	97	9	0	0	0	10	0	6	1
76	Pathar gali, *(Bhyronáth)* ..	208	0	36	0	36	0	12	13	8	3	0	0	0	0	0
50	Pathar gali, *(Houzkatora)* ..	272	6	17	4	27	4	19	1	0	0	0	3	0	0	0
41	Patni tola, ...	497	0	48	0	48	2	4	30	6	0	0	1	0	5	0
106	Pytháni tola, ...	260	74	11	10	95	37	40	0	0	0	0	11	0	0	7
220	Piaria pokhri, (Secrole) ..	185	36	0	0	36	36	0	0	0	0	0	0	0	0	0
206	Pahárpur (Secrole).	1115	245	1	0	246	209	29	0	0	0	0	7	0	1	0
	R.															
187	Ráj Ghát	341	82	4	6	92	73	15	0	0	0	0	2	0	0	2
189	Ráj Ghát bazar, ...	269	14	16	6	36	10	19	1	0	0	0	4	0	0	2
44	Ráj Gir tola, ...	528	30	87	5	122	17	62	24	0	0	0	2	0	15	2
110	Ráj Mandil Mehala, ...	650	52	83	45	180	18	110	26	1	0	0	10	0	15	0
110	pushta, ...	113	23	12	1	36	11	18	2	0	0	0	0	0	5	0

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111	Rajmandil bazar, ...	233	3	40	1	44	3	15	19	5	0	0	0	0	2	0
6	Rájapura mehala, ...	877	112	9	41	162	52	102	0	0	0	0	8	0	0	0
6	sarak, ...	437	22	6	15	43	18	22	0	0	0	0	2	1	0	0
27	Rája Rám gali, ...	53	5	5	0	10	1	1	2	1	1	0	4	0	0	0
31	Rája Derwazeh, ...	329	2	50	0	52	25	0	19	0	0	0	4	0	2	2
19	Rájrajéswari ghat, ...	1577	0	142	0	142	5	11	59	45	15	0	1	0	6	0
78	Rámapura khas	1661	188	66	15	269	150	92	11	0	0	0	9	0	7	0
79	sarak, ...	565	32	20	8	60	30	27	0	0	2	0	0	0	1	0
	chota, ...															
163	Rána mehal, ...	158	7	23	1	31	4	16	5	0	0	0	2	0	4	0
117	Rána Bhuwáni brahmpurí, ..	151	0	33	1	34	0	15	10	7	0	0	0	0	2	0
19	Rangil Das mehala, ...	296	0	24	0	24	0	1	3	15	5	0	0	0	0	0
100	Rasulpura, ...	715	151	11	13	175	64	84	0	0	0	0	20	2	0	5
76	Ratan phatek, ...	179	5	27	0	32	1	3	15	7	1	0	4	0	1	0
88	Reori taláo, ...	71	23	1	0	24	22	1	0	0	0	0	0	0	1	0
32	Resham katra, ...	277	4	38	0	42	4	14	19	2	0	0	1	0	0	0
	S.															
18	Sadánand bazar, ...	572	114	22	10	146	89	49	0	0	0	0	6	0	2	0
187	Sadár mehala, ...	191	48	10	7	65	36	22	0	0	0	0	5	0	0	2
64	Salimpura, ...	429	77	13	7	97	34	56	1	0	0	0	4	0	0	2
28	Sapt Ságar, ...	656	60	70	2	132	51	55	6	1	0	0	13	1	3	2
188	Sarétabad, ...	589	118	12	8	138	113	13	0	0	0	0	4	0	6	2
47	Sákshi Binaik, ...	483	4	59	3	66	10	26	9	5	0	0	0	0	15	1
14	Salárpura mehala, ...	486	107	10	3	120	49	58	1	0	0	0	5	2	0	5
15	sarak, ...	246	66	10	1	77	41	35	0	0	0	0	0	0	0	1
148	Séndpura, ...	963	130	1	9	140	106	30	0	0	0	0	3	1	0	0
149	sarak, ...	504	84	2	1	87	69	15	0	0	0	0	2	0	0	1
4	Sésman bazar, ...	150	6	14	11	31	7	20	1	0	0	0	2	0	0	1
201	Shahzadeh's family, &c. ..	247	26	12	20	58	12	46	0	0	0	0	0	0	0	0
51	Sháma gali, ...	91	2	7	1	10	1	6	2	1	0	0	0	0	0	0
186	Shékh Salim phatek,.... ..	665	103	31	6	40	60	75	0	0	0	0	1	0	0	4
22	Shukul gali, ...	75	0	8	0	8	0	0	6	2	0	0	0	0	0	0
117	Shakarkund gali, ...	336	1	40	3	44	6	17	12	6	2	0	0	0	1	0
34	Sidhéswari, ...	1396	6	135	1	142	6	9	55	48	10	1	3	0	10	0
17	Sidhmáta gali, ...	255	3	30	3	36	5	13	15	1	0	0	2	0	0	0
24	Síva Choudri gali, ...	109	3	13	0	16	4	7	3	0	0	0	2	0	0	0
76	Siw Rám Bhat gali, ...	84	0	11	0	11	0	2	5	3	1	0	0	0	0	0
63	Sohga Garhi, ...	218	59	6	4	69	46	18	0	0	0	0	4	0	0	1
164	Sonarpura, ...	1050	99	101	24	224	61	112	23	24	0	0	0	0	3	1
36	Sukhlál Sah mehala,.... ..	932	6	109	2	117	3	39	27	29	5	0	5	0	9	0
16	Sundar Das bagh, ...	433	0	55	2	57	2	17	19	14	5	0	0	0	0	0
17	sarak, ...	134	22	5	1	28	17	6	1	0	0	0	2	2	0	0
21	gali, ...	57	0	7	0	7	0	0	1	3	3	0	0	0	0	0
39	Sundya, ...	741	18	66	6	90	13	43	17	8	0	0	9	0	0	0
176	Súraj kúnd, ...	783	59	43	3	105	58	38	0	0	0	0	6	2	1	0
42	Sút tola, ...	1762	2	147	0	149	0	11	78	48	9	1	2	0	0	0
208	Secrole or Sikror, ...	933	185	0	0	185	173	7	0	0	0	0	5	0	0	0
216	Seopur khas, ...	138	45	2	0	47	47	0	0	0	0	0	0	0	0	0
217	pichli, ...	695	158	10	0	168	163	2	0	0	0	0	2	0	1	0
218	pancho pándava, ..	930	22	9	1	232	224	0	0	0	0	0	6	0	2	0
216	Station, Civil	957	0	3	57	60	59	1	0	0	0	0	0	0	0	0
209	Sadar bazar.	898	231	0	1	232	196	32	0	0	0	0	0	0	0	0

Page of *Devanágari* Register.	Name of Mehala.	Number of Inhabitants.	Houses.				Height.							Ruins.	Tanks and Gardens.	Shiwalas.	Mesjids.
			Kachha.	Paka.	Mixed.	Total.	One story.	Two ditto.	Three ditto.	Four ditto.	Five ditto.	Six ditto.					
	T																
124	Télia nála, ...	306	49	27	2	78	23	46	3	0	0	0		4	0	0	2
67	Télia bagh, ...	659	128	0	4	132	113	14	0	0	0	0		5	0	0	0
95	Terhí Ním, ...	714	61	49	6	116	29	62	10	7	0	0		5	2	3	0
38	Thathérí bazar, ...	873	2	82	0	84	1	15	32	25	7	0		2	0	1	1
60	Trilochan khas, ...	304	9	53	9	71	15	42	9	1	0	0		1	0	3	0
61	sarak, ...	441	59	29	15	103	47	34	10	1	0	0		4	0	1	6
94	Tripur bhyravi, ...	420	24	61	5	90	18	43	8	3	0	0		0	0	18	0
	V																
45	Visvéswar gali, ...	114	0	27	2	29	5	3	11	1	0	0		0	0	9	0
	U																
55	Unkareswar, ...	495	125	9	16	150	86	53	0	0	0	0		4	0	2	5
171	Udhopura, ...	387	47	24	13	80	16	48	0	0	0	0		10	1	0	5
146	Umrao Sinh bagh, ..	337	50	1	4	55	44	11	0	0	0	0		0	0	0	0
	sarak, ..	551	73	0	7	80	64	16	0	0	0	0		0	0	0	0
76	Unchí gali, ...	68	0	12	0	12	4	5	3	0	0	0		0	0	0	0

TABLE II.

Re-examination of several Mehalas personally, in the year 1829, *with a view to ascertain the accuracy of the first Census, and to distinguish the Males, Females, &c.*

Reference to Hindi Register.	Name of Mehala.	Inhabitants,		Europeans.	Proprietors.					Lodgers.				
		in 1827–8	in 1829		Men.	Women.	Boys.	Girls.	Total.	Men.	Women.	Boys.	Girls.	Total.
21	Ganésh Chameria gali, ...	344	672		103	110	35	25	279	172	136	49	36	393
25	Bhyronáth, ..	397	440		113	107	43	29	292	54	58	19	17	148
29	Bhátki gali, ..	387	290		131	101	9	9	250	15	24	1	0	40
31	Mádho Das Swami gali, ...	51	68		12	16	1	0	29	19	13	5	2	39
32	Raja Rám gali, ..	53	78		21	18	6	3	48	15	9	3	3	30
22	Siva Choudri gali, .	109	90		30	44	5	2	81	5	3	1	0	9
51	Rám ghát, ..	1577	1239		187	162	53	58	460	366	331	78	54	829
80	Nipáli Khapra, ..	195	204		29	36	15	7	87	50	47	13	7	117
85	Visvéswar gali, ..	114	93		45	20	4	1	70	11	7	4	1	23
81	Kachouri gali, ..	112	71		10	9	4	5	28	26	12	2	3	43
164	Bari Pírí mehala, ..	2601	2616		393	400	176	85	1054	619	642	201	130	1592
306	Shékh Salim phatek,	655	445		100	115	46	17	278	52	60	22	33	167
308	Bengalí tola, ..	1113	1163		157	248	39	30	474	250	353	47	39	689
206	Alipura, ...	670	692		149	182	93	58	482	73	86	26	25	210
382	Gulzár mehal, ..	159	164		42	52	22	15	131	11	13	6	3	33
380	Télia Nála, (in part)	147	160		46	25	4	8	83	23	31	9	14	77
43	Súnderdas ki Bagh (ditto,)	248	249		71	61	33	16	184	24	24	11	6	65
		8932	8814		1639	1715	588	368	4310	1785	1849	497	373	4504

Reference to Hindi Register.	Name of Mehala.	Inhabitants, in 1827-8	Inhabitants, in 1829	Europeans.				Proprietors. Men.	Women.	Boys.	Girls.	Total.	Lodgers. Men.	Women.	Boys.	Girls.	Total.
	Secrole & the Vicinity.																
439	Lachipura,(only once counted)	.....	435					129	131	71	61	392	17	21	3	2	43
440	Périapokhri, ...	.....	185					49	61	36	28	174	3	4	3	1	11
442	Nadéswar, ...	.....	1389					290	296	161	110	857	288	142	58	44	532
445	Orderly Bazar, ..	.....	1076					207	225	96	78	606	218	158	55	39	470
426	Déthúri, ...	.....	219					48	61	35	24	168	16	18	9	8	51
431	Chamrouti, ...	.....	1159					269	328	166	153	916	87	74	52	30	243
427	Grant Bazar, ...	.....	438					144	137	77	63	421	6	5	4	2	17
420	Sikror, (or Secrole)	.....	933					296	296	183	132	907	8	8	8	2	26
418	Peharpura, ...	.....	1115					368	249	214	137	1068	14	19	8	6	47
429	Khajri, ...	.....	984					343	326	172	113	954	12	11	4	3	30
418	Gangadherkapura, ..	.....	232					75	77	51	29	232	0	0	0	0	0
419	Hugal ganj, ...	.....	274					105	116	67	44	332	19	13	7	3	42
422	Sadar Bazar in the Lines, ...	.....	898					281	217	133	95	726	62	58	25	27	172
			9337					2604	2620	1462	1062	7753	750	531	236	167	1684
	Siwpur, (males and females not specified)	.....	2051														
	Inpúr, ditto	.....	488														
			11876	Men.	Women.	Children.	Total.										
	Bangalos and houses of Europeans and Eurasians, including Military Staff,	.....	.....	54	41	51	146	Native Servants 1636	653	54	0	2343					
	Regimental Bangalows, ...	.....	.....	60	20	46	126	0	0	0	0	738					
	Troops in Cantonments, (with followers)	.....	.....	0	0	0	125	0	0	0	0	2880					
	Native Jail, ...	.....	.....	0	0	0	0	570	37	7	0	614					
	Lunatic Asylum, ..	.....	.....	2	0	0	2	98	18	0	0	118					
			7092				399					6693					
	Total inhabitants of Secrole, ...	.....	18968														

TABLE III.

CATALOGUE *of the principal* CASTES *and* TRADES *of the City of* BENARES, *as ascertained from the* Choudris, *or principal men of each Caste, or where such source was not available, from actual investigation.*

HINDUS.				
Bráhmans.		Number.	On whose authority.	Profession or occupation.
PANCH DRAVIR.				
Mahárashtr,	Dravir, ...	300	Ch,hanujì,	Pandits—Recluses, or Káshi-báshi—and a few are Merchants.
	Tylang, ...	500	ditto,	
	Chitpaur, ...	3300	Bál Dikshit,	
	Yujúrbédí, ...	5000	Ragunáth Pant,	
	Raghurbédi,.. ..	755	Mór Bhat Kotwál,	
	Sanwai, ...	25	Appajì,	
	Kan no, ...	471	No Bhat,	
	Prabhu, ...	20	Trimbak Rao,	
	Kánharé, ...	400	Ch,hanujì,	
	Karháré, ...	475	ditto,	
	Abhir, ...	65	Ratanjì and enquiry,	
		11311		
Nágar,	Bishan Nágari, ..	250	Nátho Rám,	Capitalists, lending money and jewels on interest.
	Barnagari, ...	500	ditto,	
	Ahmedabádi, ..	315	ditto,	
	Sathódara, ...	20	Ganésh Rám,	Servants.
	Sipahi, ...	70	Késwar Rám,	
	Prishnora, ...	51	Ratanji,	
	Chitrora, ...	25	ditto,	
		1231		
Mór,	Bhar Bedi, ...	71	Ratanjì,	Fire-worshippers—Recluses—perform the duty of púja daily at temples, on stipend, for individuals.
	Chatur bedi,.. ..	175	Badri Shanka,	
	Agyarakshana, ..	17	Ratanjì and enquiry,	
	Dhinouja, ...	61	ditto,	
	Chácher bedi Dhinouja, ...	33	ditto,	
	Talujina, ...	13	ditto,	
	Raychandrjina, ..	17	ditto,	Some few Pandits, and Khyráti, or living on charity.
	Patni Chatur bedi,..	27	ditto,	
	Puchhana, ...	37	ditto,	
	Gulákhna, ...	100	ditto,	
	Lorha Bhantána, ..	16	ditto,	
		567		
Údich,	Sahsr, ...	700	Enquiry,	From the Doab.
	Tolakia, ...	125	Balujì Rugunathjì,	
	Bagria, ...	80	Ratanjì,	
	Kham Bhaeti, ..	72	ditto,	
	Anter bedi, ...	100	ditto,	
	Máthabi, ...	23	ditto,	
	Surati, ...	23	ditto,	
	Modaru Surati, ..	23	ditto,	
		1146		

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Bráhmans.		Number.	On whose authority.	Profession or occupation.
Mewára,	Bhat, ...	176	Ratanjì,	Khyrati, Noukari, and Gumashtagi.
	Marosí, ...	7	ditto,	
	Triwári, ...	7	ditto,	
	Dungurpúra Bhat, ..	80	ditto,	
	Sarvari, ...	63	ditto,	
	Maluvi Brahmans, ..	75	ditto,	
	Baródara, ...	23	ditto,	
		430		
Khérewál,	....	1000	Surajnáth Dubé,	The greater part are Merchants—some live on charity, &c.
	Kharanja, ...	100	Ratanjì and enquiry,	
	Balmik, ...	11	ditto,	
	Púshkarnia, ...	90	Moti Lál,	
	Disáwal, ...	55	Ratanjì and enquiry,	
	Sri Máli, ...	250	ditto,	
	Jambú, ...	19	ditto,	
	Narmdeo, ...	16	ditto,	
	Raikwál	19	ditto,	
	Choubisa, ...	27	ditto,	
	Palliwál, ...	83	ditto,	
		1670		
Puch,hna,	Srímalí, ...	77	ditto,	
	Bishen nagarí, ..	87	ditto,	
	Jharula, ...	77	ditto,	
Nandora,	....	45	Ratanjì,	
Karsora,	....	27	ditto,	
Údambwar,	....	21	ditto,	
Kharachata,	....	27	ditto,	
Bhárgava,	....	70	ditto,	
Kamloja,	....	81	Ratanjì and enquiry,	
Rorwalu,	....	35	ditto,	
Parbháskar,	....	37	ditto,	
Raithélu,	....	45	ditto,	
Samora,	....	55	ditto,	
Gugalú,	....	18	ditto,	
Motalu,	....	57	ditto,	
Tapodhan Bharaí,	.... ..	12	ditto,	
Nardík,	....	17	ditto,	
Sanáwar Gopálí,	.. ..	57	ditto,	
Medípurna,	....	26	ditto,	
Líkna phutkal,	.. ..	16	ditto,	
Bhojak,	....	12	ditto,	Parohits and Pujèris of the Jyn religion and of the Oswáls.
Bansí	....	87	ditto,	
Jharula,	....	70	ditto,	
		1056		
PANCH GAUR.				
Kán-kubj	Brahmans, ...	1500	Bidhya Dhar,	Of various professions; none very rich.
	Sarwaria, ...	4500	Ganésh Datt,	
	Sanouria, ...	575	Chakan,	
	Jijautia, ...	27		
		6602		

OF THE CITY OF BENARES. 493

Bráhmans.		Number.	On whose authority.	Profession or occupation.
Gaur,	Srí Gaur, ...	20	Ganésh Datt,	Employed as cooks by the Vá-
	Adi Gaur, ...	1500	Sita Rám,	ishyas and Brahmans: some
	Srí Gaur Marwarí, ..	35	Ratanji,	few Gomashtas or Merchants.
	Gaur, ...	150	ditto,	
	Hirania, ...	75	ditto,	
	Kirtnia, ...	36	ditto,	
	Biréswar wala, ..	39	ditto,	
	Silujana, ...	57	ditto,	
	Girnaria, ...	7	ditto.	
		1919		
Athbansí Sáraswat, ...		200	ditto,	Parohits of Kshetris.
Maha brahmans, ...		250	Debipersád Chaubé,	Inherit the effects of all Hindus except Oswals.
Ganga putrs, ...		1000	Enquiry,	Attend bathers, &c.
Bengali brahmans, ...		3000	Antnarain Bhattacharj,	Kashibash.
Shákal Dwípí, ...		300	Ratanji,	Various.
Panchnadea, ...		200	ditto,	Ghat-waiters.
Kashmírí, ...		200	ditto,	Writers.
Ch,henáth, ...		900	Lachman Joshi,	Reside in Rajmandil—chiefly servants.
Soní, ...		11	Enquiry,	Goldsmiths.
Parbatí, ...		125	Kashináth,	Various.
Mathuria Choubé, ...		26	Gobind Chand,	Khyrati.
Khandua, ...		31	Ratanji,	
		6243		
KSHETRIS.				
Rajputs, ...		6160	Shiwsahay Sinh,	Service—wire-drawers, &c.
Bhuihars, ...		5000	Enquiry,	call themselves Brahmans—Cultivators.
Oswál, ...		294	Gopi Chand,	
Khatrí,	Lahorí, ...	1400	Bakhtaur Lal,	
	Púrabi, ...	648	Ch,hotù Lal,	
	Bávanjai, ...	400	Enquiry,	Brokers, Cloth Merchants, and
	Panchjotí, ...	200	ditto,	Servants.
	Barehjati, ...	150	ditto,	
Sisoudia,	Rajputs, ...	40	ditto,	
		14292		
VAESYA.				
Agarwála, ...		2000	Ratan Chand,	Merchants.
Kasrwáni, ...		2100	Babù Lal,	Tradesmen.
Mahéswari, ...		150	Ramnarain,	ditto.
Bisanágar Bania, ...		160	Makhan Lal,	
Dasanágar Bania, ...		100	ditto,	
Disával Dasa Bania, ...		750	Gokul Das,	
Disával Bísa Bania, ...		80	ditto,	Gomashtas or mercantile agents
Mor Dasa Bania, ...		183	Bangati Das,	
Lanr Dasa Bania, ...		75	Enquiry,	
Patél Gujarátí, ...		125	Chunu,	
Srímáli Soní, ...		200	Manu Lal,	Goldsmiths.
Bhátia, ...		214	Sewpersád,	Brokers to ditto.
Parvál, ...		50	Enquiry,	ditto.

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Bráhmans.		Number.	On whose authority.	Profession or occupation.
Rora, ...		700	Enquiry,	Shop-keepers.
Aumar, ...		155	Bhola Chaudri,	ditto.
Kasaundhan, ...		90	Jagan,	Utr distillers.
Bengali, ...		200	Chandnarain Bh :	
Jharula, ...		76	Enquiry,	
Sunri, ...		16	Debi Dyal Chaudri,	
Bandrwár, ...		14	Badlu Chaudri,	
Rastokí, ...		40	Damudar Das,	
Bhát, ...		800	Ch,hakan Lal,	Khyrati.
Gujaratí Bhat,....		22	Enquiry.	
		8300		
SUDRAS.				
Bengali,	Baéd, ...	200	Ojan,	Physicians.
Kaeth,	Shribastab, ...	5000	Siw Gholám,	
	Ashthána, ...	250	Enquiry,	
	Gour, ...	72	Lala Murlí Dhar,	
	Saksena, ...	40	Ganpati Lal,	Writers, &c.
	Bhat Nágar, ..	55	Lala Murlí Dhar,	
	Mathar, ...	13	ditto,	
	Bengalí, ...	1500	Chandrnarain,	
Sathia, ...		150	Enquiry,	Surgeons and Oculists.
Darzí Sríbastab, ...		900	Sahay,	Tailors.
Dhobi, ...		800	Nakú Jag,	Washermen.
Ahir, ...		5250	Bhai Rám Goordial,	Cowherds.
Ját, ...		54	Enquiry,	
Kaséra, ...		1300	Sita Ram,	Braziers.
Koeri, ...		8351	Fakir Sanoki Chaudri,	Gardeners—Farmers.
Ditto,	allahabadí, ..	100	Enquiry,	
Kahar, ...		5000	Sewpersád Chaudri,	Bearers,
Kunbí, ...		600	Murlí Dhar,	Servants.
Mallah, ...		1500	Mehgú,	Boatmen.
Kalwár, ...		6600	Ganésh Choudri,	Distillers.
Telí, ...		2500	Mohan Choudri,	Oilmen.
Telí,	diliwál, ...	1200	Lachman Phé,	
Telí,	bengalí, ...	100	Chundnaráin,	
Tamolí, ...		1200	Baboo Lal Choudri,	Sellers of Pawn.
Halwaí, ...		1500	Khaderu,	Confectioners.
Khatik, ...		400	Ganpat and Persad,	Fruiterers.
Sonar,	purabia, ...	1100	Dulam,	Goldsmiths.
Tara Gaur,	soni, ...	30	Enquiry,	
Mera Soni,	jypurí, ...	50	Khushial,	
Karía,	sonar, ...	60	Enquiry,	
Lohar,	kanouji, ...	1800	Mol Chand,	Smiths.
	parabia, ...	100	Harak Chand,	
Barhi, ...		900	Hichha,	Carpenters.
Kharádí, ...		194	Sital,	Turners.
Lahera, ...		300	Enquiry,	Workers in Lac.
Lahera churí wala, ...		60	Badlu,	Lac Bracelet-makers.
Patwa, ...		400	Enquiry,	Threaders of Beads, &c.
Tantí pitambar baph, ...		260	Sitaram Chaudri,	Silk Weavers.
Khatrí Gota baph, ...		75	ditto,	Lace Embroiderers.
Sarkí wala, ...		14	Enquiry,	Ear-ring Makers.
Mochí, ...		500	Bisesvar,	Shoemakers.
Hiratarash bundalkhandí, ..		95	Khaho,	Diamond Cutters.
Nau sríbastab, ...		850	Ram Baksh,	Barbers.
Nau paehian, ...		12	Bisesvar,	
Nau gujarati, ...		30	Enquiry.	

OF THE CITY OF BENARES. 495

SUDRAS.	Number.	On whose authority.	Profession or occupation.
Kasbi khangi, or Ramjani, ..	1500	Enquiry,	Courtezans.
Ditto, ghungruband, ..	264	Sankat Ram,	Nach girls.
Kathak, ...	118	Siw Sahay,	Music and Dancing Masters.
Bhunja Kanoujia, ...	556	Ramjiawan,	Sellers of parched grains.
Kandu, ...	1200	Ghinhu,	Ditto.
Gadaria, ...	350	Gajjan,	Shepherds.
Bharéria, ...	395	Ganpat,	Brahman beggars.
Kumhar, ...	700	Enquiry,	Potters.
Ditto Gadha wala, ...	37	Kishun,	Brick-makers.
Lonia, ...	400	Gulu,	Salt-makers, Builders of mud walls, &c.
Bénu Bansi, ...	125	Enquiry,	Cane workers.
Ch,hípí, ...	160	Anant Rám,	Chintz printers.
Sirkí Walé	35	Kishun,	Thatchers.
Barí, ...	415	Lachman and Sankar,	Link boys.
Chumar, ...	1850	Khadéru,	Leather workers.
Kutta Chumar, ...	180	Krishna,	Silk-dyers.
Thuwai, ...	30	Ganésh Das,	Silk-workers.
Laru Marhattá, ...	4	Panru,	Shoe-makers,
Dóm, ...	213	Babu Lal,	Corpse-dressers, eaters of dead animals, &c.
Tarí wala pasí, ...	96	Jéwan Chaudri.	Toddy sellers.
Mochí Dekhaní, ...	50	Rama	Curriers.
Dabgar, ...	76	Bakshu Chaudri,	Leather vessel makers.
Kanjar, ...	33	Enquiry,	Rope-makers.
Dharkar narsinha wale, ..	50	Rám sarak,	Cane-workers.
	60302		
HINDU FAKIRS.			
Dandi, ...	700	Enquiry,	Live on charity.
Jatti, ...	22	ditto,	Jyns.
Kanphata, ...	38	ditto,	Attend at Bhyronath temple.
Kabírpanthi, ...	40	ditto,	Have land in Goruckpoor.
Naniksáhi, ...	1000	ditto,	Sikhs.
Ramanandi, ...	2500	ditto,	
Sanyasi, ...	2500	Motigir Kotwál,	Mostly Gosain merchants.
Dravir Sanyasi, ...	50	Kumar Swami,	
Lingía, ...	106	Enquiry,	Take all offerings to Mahadeo.
Jangam, ...	16	Jangambari Mahant,	Go about with cows and bells.
Aghorí, ...	200	Enquiry,	Naked outcasts.
	7171		

MUSELMANS.			
Professions.	Number.	On whose authority.	
Raís, Shékh, Seid, Moghel, Patán, &c, ...	10000	By estimation,	Persons of independent fortune.
Juláha, ...	10000	Wali Sah Mohamed, confirmed by enquiry,	Weavers.
Ghalla wala Trilochani, ..	1000	Muradan,	Grain Merchants of Trilochan.
Mali, ...	62	Kinga,	Gardeners.
Kunjra, ...	325	Ramzani Chaudri,	Green grocers.
Darzi, ...	700	Sahay,	Tailors.

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Professions.		Number.	On whose authority.	
Dhobi,	dilewal, ...	80	Imam Baksh, Pírbaksh,	Washermen.
	benaresi, ..	100	Budhu Choudri,	
Kasbi,	khangi, ...	1212	Enquiry,	Courtezans.
	ghungruband, ..	500	ditto,	Dancing girls.
Jarrah,	....	225	ditto,	Surgeons.
Dafali,	....	200	Bakhshu,	Musicians.
Hijra,	....	50	Enquiry,	Eunuchs—take fees on births.
Atashbaz,	....	200	Babu Khán & Séra Ch:	Fire-work makers.
Rangréz,	....	475	Bakshan Choudri,	Dyers.
Halál Khor,	....	900	ditto,	Scavengers.
Hakak,	....	112	Karman,	Gem polishers.
Moharkhand,	....	25	Rajab,	Engravers.
Sikligar,	....	71	Imambaksh,	Metal polishers.
Kundigar,	....	75	Míran,	Wire flatteners.
Kalabatun walé,	.... ..	28	Enquíry,	Gold and silver lace makers.
Lohar,	....	50	Rajab Ali Mukarband,	Blacksmiths.
Kheradi,	....	50	ditto,	Turners.
Chúri walé,	....	300	Zía Ullah,	Cutlers.
Mochi,	jíndaz, ...	105	Madar Baksh Choudri,	Saddlers.
	jutiwala, ...	212	Behadur Choudri,	Shoe makers.
Kasai,	bara, ...	354	Mihter Bhangar,	Butchers.
	ch,hota, ...	250	Titu and Benaresi,	ditto.
Nán Bai,	....	130	Pír Mohamed Choudri,	Bakers.
Sabon walé,	....	41	Subhani Choudri,	Soap sellers.
Satrinji walé,	....	63	Ramzani,	Makers of Setrinjees.
Bhatteara,	....	381	Khanu and Jumani,	Servants in Serais.
Galicha walé,	....	52	Bechan Choudri,	Carpet makers.
Bihisti,	....	180	Ch,hedi Choudri,	Water carriers.
Intpaz,	....	173	Gausi and Madari,	Brick-makers.
Nycha band,	....	62	Nur Mohamed,	Hookah-snake makers.
Dhunia,	....	100	Enquiry.	Cotton spinners.
Madari,	....	20	ditto,	Snake catchers.
Rafugar,	....	233	Mir Fazl Ali,	Shawl menders.
Tarke ch,háta walé,	.... ..	18	Phénku Bádkash,	Umbrella makers.
Chylodar,	....	9	Parásahi,	
Niaria,	....	125	Karm Khán,	Refiners.
Chabuk Sawar,	.. ..	200	Enquiry,	Grooms.
Raj,	....	300	ditto,	Bricklayers.
Kahar,	....	200	ditto,	Bearers.
Fakirs—(there are 80 Fakirs and 6 Sirdars,	....	500	Enquiry at each takia,	
Chandál,	....	700	Madarí Choudri,	Outcasts.
		31248		

Abstract of the Castes and Sects in the foregoing Catalogue.

HINDUS.				Number.
Brahmans,	Maharáshtr, ...	11 denominations.	11311	
	Nágar, ...	7 ditto,	1231	
	Mar, ...	11 ditto,	567	
	Udich, ...	8 ditto,	1146	
	Mewari, ...	7 ditto,	430	
	Khérewal, ...	20 ditto,	2068	
	Kan-kubj	4 ditto,	6602	
	Gaur, ...	10 ditto,	1000	

HINDUS.			Number.	
Brahmans,	Bengali,	1 denomination.	3000	
	Gangaputr,	1 ditto,	1000	
	Twenty-seven less important sects,		3026	32381
Kshétris,	Rajputs,	2 ditto,	6200	
	Bhuihar,	1 ditto,	5000	
	Khetri,	6 ditto,	3092	14292
Baesyas, or Bunyas,		22 ditto,	8300	
Sudras, including sixty-nine professions,			60302	
Hindu Fakirs,		11 ditto,	7171	75773
MUSELMANS.				
Gentry, or Raís,			10000	
Forty-four professions and trades,			20048	
Fakirs and Chandáls,			1200	
	Hindu population,			122365
	Muselman ditto,			30248
Add for children not estimated by the Chaudris, and for visitors and unavoidable omissions,				26387
Population of the City, as by the Mehala Census,				180000

TABLE IV.

Annual consumption of several Articles of Food, upon which Town duties are levied in the City of Benares, extracted from the Custom-house returns.

ARTICLES.	1824.	1825-6.	1826-7.	Average.
	Maunds.	Maunds.	Maunds.	Maunds.
Ghí,	16500	17400	13100	15700
Tobacco,	13900	12600	15100	13800
Beetlenut,	1500	1200	2500	1700
Turmeric,	1900	2200	2400	2200
Sugar, dry,	4700	5000	3300	4300
Sugar, wet,	3600	2200	3300	3000
Jagrí,	12300	2400	9400	8000
Molasses,	12800	6700	16400	11900
Oil,	1900	1100	1800	1600
Oil Seeds,	15400	8700	4400	9500
Salt, Lahori,	33	349	229	200
Sámer,	10736	9738	13336	12270
Bálamba,	5266	5636	7354	6080
Sálamba,	1980	915	1312	1400
Soehar,	115	195	134	150
Bobcha,	6	12	25	15
Khári,	2	147	4	50
Total of Salt,	18000	17000	22500	19200
	Rupees.	Rupees.	Rs. farmed.	
Gross amount of Town duties collected, deducting the expence of collection,	52000	53000	70000	

TABLE V.

Price Current of Grain, &c. in the City of Benares, from the year 1209 *to* 1229 *Fasli.*

	Year. 1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229
	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.	md. sr.
Wheat,.	1 0	1 5	0 35	1 5	0 32½	1 5	0 36	0 32½	0 26	0 29	0 30	0 35	0 32½	1 5	1 10	0 33¾	0 17	0 19	0 30	0 35	0 35
Dhal,..	0 25	0 37½	0 27	0 30	0 37½	0 37½	1 0	0 28	0 15	0 26	0 26	0 32½	0 35	0 32½	1 2½	0 35	0 16½	0 15	0 28	0 37½	1 0
Barley,.	1 15	1 17½	1 0	1 10	1 10	1 25	1 5	1 0	0 30	0 35	1 15	1 10	1 6½	1 20	1 27½	1 12	0 28	0 28	1 0	1 20	1 20
Paddy,.	1 20	1 5	1 0	1 11¼	1 0	1 15	1 7½	0 35	1 0	1 5	1 0	1 18	1 0	1 10	1 25	1 0	0 24	1 0	1 0	1 10	1 2½
Boot Gram,..	1 12½	1 16¼	1 2½	1 1¼	0 33¾	1 17½	0 15	1 0	0 32½	0 35	1 1¼	1 7½	1 2½	1 15	1 5	1 5	0 25	0 25	0 31¼	1 12½	1 12½
Kodo, ..	2 0	2 0	1 10	1 5	1 0	2 0	2 0	1 10	1 0	1 10	1 10	1 20	1 30	2 0	2 5	1 20	0 35	1 0	1 20	2 10	2 0
Jowar, .	1 12½	1 22½	1 5	0 36	1 10	1 12½	1 15	0 31¼	0 35	1 5	1 5	1 0	1 7½	1 20	1 35	1 5	0 22	0 35	0 32½	1 20	2 0
Bajrah,.	1 0	1 0	0 35	0 35	1 0	1 10	0 35	0 32½	0 24	0 28	0 35	0 35	0 36¼	1 5	1 20	0 35	0 20	0 21	1 0	1 5	1 5
Merwa,.	1 25	1 30	1 10	1 15	1 20	1 30	1 25	1 20	0 35	1 5	1 15	1 25	1 20	1 32½	1 37½	1 15	0 35	0 35	1 12½	2 0	1 35
Jagrí,..	0 22	0 23	0 16	0 19	0 22	0 16	0 12	0 20	0 19	0 21	0 22	0 18	0 18	0 17	0 20	0 15	0 10	0 15	0 10	0 15	0 15½
Oil,.....	0 9	0 6½	0 5	0 10	0 9	0 11	0 7½	0 9½	0 5¼	0 4	0 5	0 8	0 7	0 8¼	0 8¼	0 4½	0 3½	0 4	0 5½	0 5	0 4½
Ghí, ..	0 3¼	0 2¾	0 2½	0 2½	0 3	0 2¼	0 3	0 2½	0 2¾	0 2¼	0 2	0 2½	0 2½	0 2¾	0 2½	0 1¾	0 1¾	0 2½	0 2¼	0 1¾	0 1 13/16

R. N. C. Hamilton, *Magistrate Benares.*

Population of Banaras City in the Late 1820s: Rediscovering Prinsep as an Early Demographer

Arun Bandopadhyay

James Prinsep (1799–1840) was a scholar extraordinary, and he has been rightly acclaimed for his rich contributions in a number of diverse fields such as architecture, metallurgy, mathematics, natural sciences, town-planning, epigraphy, numismatics, Indology and history. Unfortunately, comparatively speaking, very few attempts have been made to assess the contribution of Prinsep as an early demographer of India. Prinsep's present tract on the *Census of the Population of the City of Benares,* reproduced here, bears testimony to this. Considering the time, context, methodology and range of his demographic exercises, it still appears surprising why his achievement as an early practitioner in the field has not been adequately noticed, and virtually ignored so far.

It is also to be noted that this study was done when Prinsep was quite young, in his twenties. He was at that time posted by the Directors of the East India Company as an Assay Master in Banaras Mint, during 1820–1830. The demographic studies were also just taking shape. Though there were instances of such earlier studies of counting population as the one by Gregory King as early as 1695 in England, the official Census of the United Kingdom began in 1801. In India, the official census was introduced only in 1872, but there were many attempts at limited but early counting of the population in various parts of the country before that. These may now all be called early Demographic studies, a subject important for various reasons. Prinsep's study of Banaras population stands as a unique example of such early studies. It is also to be put on record that there is a strong temptation

to see Prinsep's work as a sequel to the controversy on the effect of population growth between Thomas Robert Malthus (1766–1834) and David Ricardo (1772–1823), a debate that continued for decades.

The background of the Prinsep's study was a kind of revision of the population estimate made by Zulfikar Ali, the-then Kotwal of Beneras, in 1800 under the direction of the resident, Deane, which was later published as an appendix of Valentia's *Travels in India*. The study shows that Banaras had about 30,000 houses and about 600,000 population at that point of time. Prinsep questioned the number and the methodology at the same time. He more or less accepted the number of houses as estimated in 1800, but seriously questioned the population figure by arguing that the multiplication of the houses ranging from one-storey to six-storey ones by inhabitants residing in each storey had been wrongly done, the result being that the population figure of the city had been grossly exaggerated. He also said that the Kotwal tried his best by swelling the figure of townsmen to underscore his 'duty to keep them in subordination', and so did the Resident's Munshi Sital Singh to make it 'complementary to his master to magnify the importance of the place under his rule.' The same is true of the classification of the 'suspected persons', of the people called *badmashes*—accused of theft, forgery and gambling etc., residing in about 1280 houses, of which 200 'persons [were] without any profession, and therefore *strongly suspected*.'

It is not the purpose of this note to examine each and every aspect of Prinsep's estimation of the population of Banaras made in 1827–28. Such an examination might be the subject of a detailed research based on his methods and estimates. What is important here is to go through, in a nutshell, the principal conclusions that Prinsep reached, based on this exercise.

First and foremost, in Prinsep's revised estimation, the Banaras population was as high as 200,000 (the city proper with 180,000, Secrole and the vicinity with 20,000 population), a figure that was the highest in India next to the population of Calcutta (Magistrate's estimation of her population as 230,552 in 1822) at that time (Bhattacharya and Bhattacharya 1964: ix), and higher than the population of Bombay, as

well as many European cities such as Edinburgh and Bristol, almost double the population of those of Rotterdam and Brussels. Obviously, this was lower than Zulfikar's estimation but still a very high figure for a city anywhere in the world by contemporary standards. Prinsep started to make his own estimation around 1822 when he was 'engaged to make a Map of the Town', but at that time he could not continue his attempt to make 'a more accurate enumeration' because of 'the apprehensions (that) existed among the Civil Authorities that an enquiry of such a nature would be likely to lead to disturbance and disaffection among the people.' The situation changed after the initiation of the Committee of Improvement during Governor-General Adam's tenure in 1823 when it was felt 'that there could be no difficulty whatever in obtaining the desired information, provided the real motives were declared.'

Secondly, the city of Banaras as envisaged by Prinsep was composed of a mixed population of various castes and communities, Hindus and Muslims (see particularly Table III, containing a catalogue of the principal castes and trades of the city). The city's ethnographic character was given considerable attention in Prinsep's report, clarifying who came from which areas throughout the ages. 'The Hindus [we]re divided by the circumstances of their castes, and of such trades and professions as [we]re of similar exclusive character, into a number of distinct corporations, united among themselves under a headman, who [wa]s variously entitled, as Choudrí, Kotwal, Mohant, Jattí, Dulpatí & etc. Many of the Muselman trades [we]re similarly constituted.' There were different sects of Brahmans who held a conspicuous place in the holy city of Banaras. Prinsep collected a list of eighty-four different sects of Gujarati Brahmans from Ratanji Panda who had several times been 'employed in distributing largesse for opulent visitors on their pilgrimage to Kasí.' He also noted that there were over 3000 Brahmans and 1500 Kayasthas from Bengal, staying as permanent residents of Banaras at that time.

Thirdly, a special section has been created to study the combination of castes and professions, illustrated by detailed tables, and marked by changes that occurred from time to time. In this context, our attention should be again drawn to the intricacies of the various castes

and professions as enumerated in Table III. The Information included here can be explored further for a more ambitious ethnographic study of Banaras. Fourthly, Prinsep's report shows interesting evidence: Banaras as the residence of a large number of Brahmans (32,381) of various origins, coming from different parts of the country, outnumbering the total number of Muslims (30,248) in the city. Fifthly, a study was also made, counting the number of people entering the city during the time of festivals, particularly in May each year, from outside, and then leaving the city, with the total number of such people numbering about 100,000. Sixthly, Prinsep's study included a full account of certain localities or *mahallas* furnishing various figures on castes and professions that require further research to highlight their demographic implications (see Table II of Prinsep's tract on population). Seventeen such *mahallas* were specially surveyed. Generally speaking, nine types of enumerations were made, namely: (1) number of the house (2) name of the proprietor (3) data on caste (4) data on profession (5) number of *chouks* (6–7) structure of *chouks* (8) height of the house in stories and (9) number of inhabitants. As he observes: 'If the seventeen *mehalas* of the second examination may be taken as the fair average of the whole town, the number of lodgers rather exceeds that of the householders […].' Moreover, 'it often happens that the largest mansions [we]re the most thinly populated.'

Finally, preliminary studies of sex ratio were also made. 'The proportion of males and females appears to be very nearly on an equality […].' The fact that the ratio of the girl child population was very low compared to the adult population was suggestive of the early child marriages, as Prinsep noted among other things: 'This may be partly owing to the system of early marriage, which causes the removal of girls from their parent's houses at a tender age, and partly to the frequent inclusion of girls with boys in the general term *larke*, when they were spoken of by their relations.'

Another important contribution of Prinsep was the study of the consumption of the city of Banaras, particularly of salt and grain, whenever the figures were available: 'The gross amount of the principal articles of food consumed, affords a tolerable method of computing

or checking the comparative magnitude of places inhibited by similar races of men; and if these data could be ascertained with sufficient accuracy, the absolute population might even be calculated therefrom.' The implications of this study are still to be properly worked out.

That Prinsep's study is very important in understanding the early demography of India was also partly noted by Durgaprasad and Bibhavati Bhattacharya of the Socio-Economic Research Institute, Calcutta, in their pioneering work titled 'Report on the Population Estimates of India (1820–1830)', published in the mid-sixties of the preceding century (Bhattacharya and Bhattacharya 1964). Durgaprasad and Bibhavati worked for more than thirty years in their research on the various aspects of pre-Census population data of India. It is important to note that they have categorically stated, methodologically speaking, that Prinsep was far more advanced than his contemporaries in population estimates, though he did not fully clarify the geographical limit of his field, as per their argument. It may be that they have not properly estimated the value of the map that Prinsep prepared of Benaras in this context. Bhattacharyas have particularly appreciated the use of watchmen and *chamar*s in Prinsep's enumeration of Banaras population. In Prinsep's own words,

'The watchmen are well-acquainted with every house within their beat, and can generally tell the names and circumstances of their various inmates, […] my enquiries were continued from house to house, either addressed to householders, or to servants and neighbours. The *chumars* of the *mehala* having daily admittance to each house to remove dust and rubbish were found to be useful authorities in checking the estimates of population from other sources.' The daily consumption records, particularly of salt and grain, were another means of checking demographic data for Prinsep in the contemporary context.

It can be generally argued that James Prinsep was quite aware of the latest developments in demographic studies in the early nineteenth century. It may also be assumed, however, that he was probably in touch with the economic debate, along with its theoretical implications, that went on the demographic change between Malthus and Ricardo by the end of the second decade of the nineteenth century. We now

know that Malthus and Ricardo have been in correspondence since 1817 on a number of theoretical issues of economic explanation of change in classical economic thought, with a strange combination of notions of Adam Smith's wealth of nations, Malthusian population principle and Ricardo's theory of rent. However, for both Malthus and Ricardo, Smith's classical economics was the 'paradigm-constituting exemplar' (for further discussion, Cremaschi and Dascal 1998: 247), but the puzzles faced by both were different. While Malthus thought about several puzzles to be solved for his kind of economic analysis, Ricardo thought of only one big puzzle, that of Value Theory. There is scope for a detailed analysis of Prinsep's thoughts on demographic change and economic development in the context of the prevailing debate on the subject.

The demographic school of historiography is full of possibilities, and in this regard, the study of early demographic data is of great importance. In India, this kind of historical inquiry is still at its primitive stage. In formulating the course of social, economic, political, cultural and environmental history of land, both urban and rural, various parameters of demographic data are of vital importance. Viewed from this perspective, it may not be an exaggeration to suggest that Prinsep's study of the population of the City of Banaras, pioneering as it was from various standpoints then and even now, needs a closer and deeper study for more than one reason.

References

Bhattacharya, Durgaprasad and Bibhavati Bhattacharya (eds.) 1964. *Census of India 1961: Report on the Population Estimates of India (1820–1830)*. Delhi: Office of the Registrar General, India (Ministry of Home Affairs).

Cremaschi, Sergio and Marcelo Dascal 1998. Malthus and Ricardo: Two Styles of Economic Theory. *Science in Context* 11/2: 229–254.

To cite this article
Bandopadhyay, Arun 2024. Population of Banaras City in the Late 1820s: Rediscovering Prinsep as an Early Demographer. *Journal of the Asiatic Society* 66/2: 269–274.

ISSN:0368-3308

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THE

JOURNAL

OF

THE ASIATIC SOCIETY

OF

BENGAL.

EDITED BY

JAMES PRINSEP, F. R. S.

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VOL. V.

JANUARY TO DECEMBER,

1836.

"It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science, in different parts of *Asia*, will commit their observations to writing, and send them to the Asiatic Society at Calcutta; it will languish, if such communications shall be long intermitted; and will die away, if they shall entirely cease."

SIR WM. JONES.

PRINTED AT THE BAPTIST MISSION PRESS, CIRCULAR ROAD.

SOLD BY THE EDITOR, AT THE SOCIETY'S OFFICE.

1836.

V.—*Facsimiles of various Ancient Inscriptions, lithographed by* James Prinsep, *Secretary As. Soc. &c.*

[Continued from page 561.]

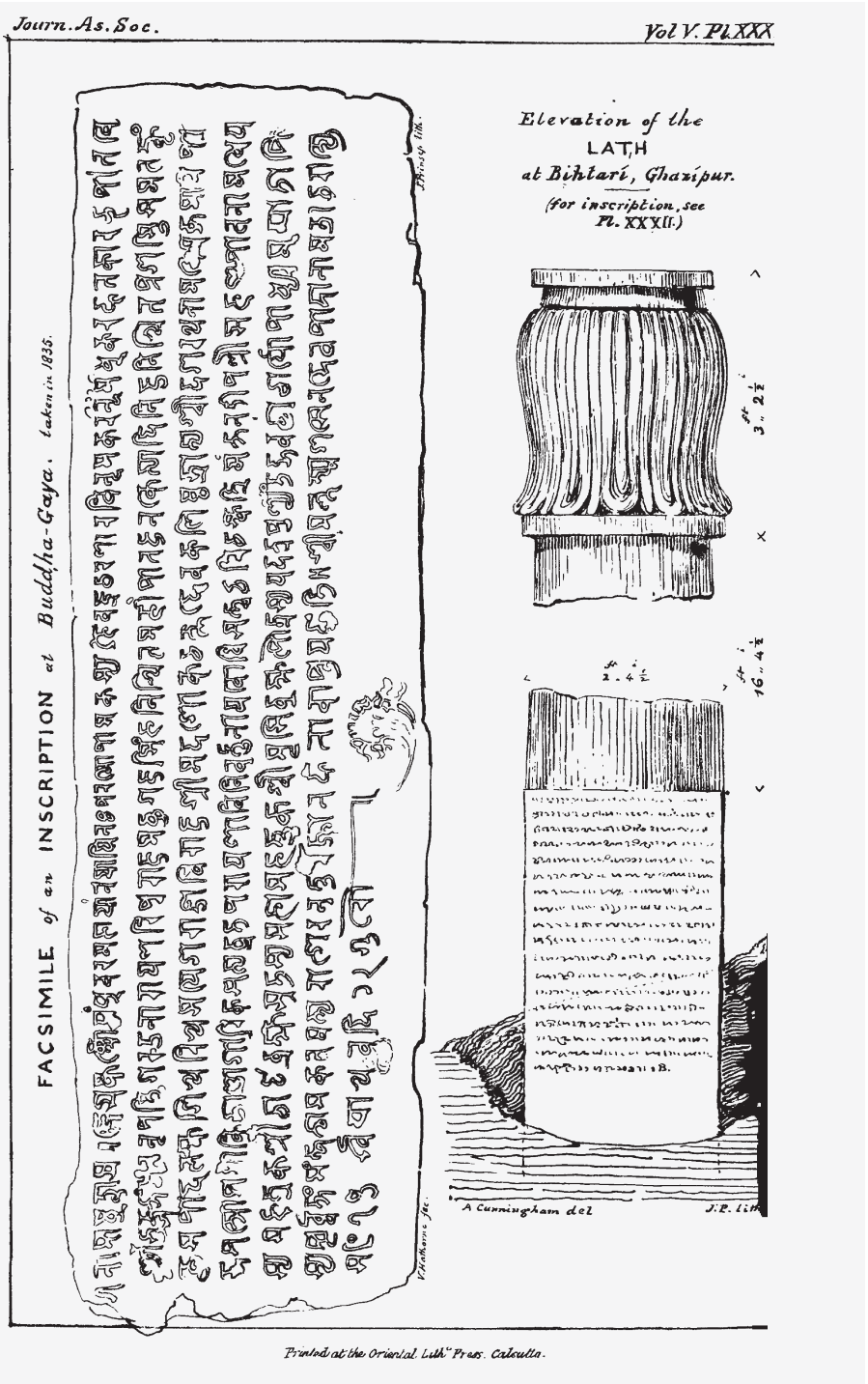
Inscriptions from Buddha-Gaya, Plate XXX.

The neighbourhood of *Gaya* has long been known to be prolific of inscriptions :—yet, notwithstanding the various notices of them which have appeared in the Researches, of the Bengal, and of the London Societies, the theme is, as yet, by no means exhausted. Mr. Harington furnished our Society at a very early period after its institution with copies of two inscriptions from the principal cave, lying in the hill of *Nagarjuna*, (the name, it will be remembered, of a celebrated Buddhist patriarch,) one of which was decyphered by Dr. Wilkins, and proved to be a record of the excavation of the cave by Ananta Varma, the grandson of Yagna Varma. The date is not given, but the character (No. 2 of the *Allahabad láth)* shews it to belong to an early century of the Christian era. Mr. Harington mentions several other caves and inscriptions which have not yet been examined.

Dr. Wilkins also translated one inscription copied from a stone by Mr. Wilmot in 1785, (As. Res. vol. i. 284,) dated Samvat 1005, purporting that Amara Deva, the author of the *Amera kosha*, built the temple of Buddha at *Buddha-gaya*.

Dr. Hamilton (Roy. As. Soc. Trans. vol. ii. 44,) in his account of the ruins of Buddha Gaya, alludes cursorily to inscriptions on two images of *Gautama*, recording their erection, one by Jaya Sen and Kuma'ra Sen, sons of Punyabhadra, son of Samanta, all untitled persons : the other by Rája Vijyabhadra, of whom nothing more is known.

The Burmese inscription found by the Embassy in 1831, was of a more interesting description. It is described in the Journal (vol. iii. page 214), and more fully by Colonel Burney in the last volume of the Researches. It was upon the occasion of my requesting Mr. Hathorne, then magistrate of *Gaya*, to take a duplicate of the Bur-


Journ. As. Soc.
Vol V. Pl. XXX
FACSIMILE of an INSCRIPTION at Buddha-Gaya. taken in 1835.
Elevation of the
LAT,H
at Bihtarí, Ghazípur.
(for inscription, see
Pl. XXXII.)
A Cunningham del
J.P. Lith
Printed at the Oriental Lith. Press. Calcutta.

mese facsimile, that this gentleman went beyond his commission, and kindly furnished me with facsimiles of several other inscriptions in the neighbourhood of the ancient temple, all of which, he says, are quite illegible to the learned pandits of *Gaya*.

"No. 2, (No. 1 being the Burmese inscription) he writes, is on a stone lying near the *Mahá Buddha* temple." A copy of this, noted by HAMILTON as 'an inscription of considerable length,' appears to be deposited in the E. I. C.'s Museum, labelled No. 113, but no further account of it is furnished. It is this inscription which I have lithographed in Plate XXX; but before proceeding to its discussion, it will be better to notice the other items of Mr. HATHORNE's dispatch.

"No. 3 is an inscription on a stone, inserted in the wall of a Brahman's house erected on the site of the old fort, said to have belonged to Rája AMI'R SINH, who went over to the Burman empire, became converted to the Bauddha faith, and died in that country." This is evidently the inscription translated by WILKINS ; the Rája AMI'R being the AMARA above mentioned, : and the story of his conversion has merely been altered a little in repetition, and mixed up with the more recent collisions between the Burmese defendants of the shrine and the Rajput expeditions against these infidels in the 12th and 13th centuries. Perhaps the similarity of the name to the celebrated HAMI'RA SINH of *Chitor* may have helped to confound the tradition. It is unnecessary to republish this inscription.

"No. 4 is inscribed in a circular form over an image of *Devi* in the *Mahant's* garden." This, again, is alluded to by Dr. HAMILTON as No. 99 of the India House museum, "on a *male* figure now called *Saraswatí* (a goddess), is the usual pious sentence of the Buddhist." It is useless to lithograph this inscription, which does not differ even in the form of the letters from the "*Yè dharma hetu*, &c." of the *Sárnáth* and *Tirhut* images.

"No. 5 is a word engraved on a pillar which now forms one of the stanchions to an upper story in the convent. The character you will observe assimilates to the ancient inscriptions." This I have found room to insert in Plate XXXIII., but it is impossible to make any thing of it: perhaps it formed part of a longer inscription in the oldest láth character.

No. 2, then, is the only one of the series which requires further observation. From my acquired experience in such matters, there was little difficulty in transcribing the whole from the facsimile (lithographed on a reduced scale in Plate XXX.) into the modern Nágarí, nor in preparing a translation with the assistance of the Society's pandit, and of RATNA PAULA, whose acquaintance with the Buddhist

tenets enabled him to correct the former in several doubtful readings.

The character may be properly designated as the *Gaur* alphabet, the parent of the modern *Bengálí* form. The specimen is chronologically valuable to the investigation of the gradual alterations it has undergone, because it contains a date, *Samvat* 73 or 74, of an era that has been the subject of some misapprehension. Mr. Colebrooke rectified Dr. Wilkins' mistake in supposing this *sambat* could refer to the era of Vikramáditya, and assumed a position for it 1000 years more modern, in connection with the *Gopala* or *Bhupála* dynasty of *Gaur*. The document before us corroborates this view ; but by the expression, " after the expiration of the reign of Laxmana Se'na," it would seem that the term *samvat* applied generally to whatever epoch might be mentioned in the preceding sentence. Laxmana Se'na, the son of Belal Sen, who built the city of *Gaur*, reigned in A. D. 1116—1123 : so that the date of the inscription on this supposition would be A. D. 1197, only three years prior to the destruction of the monarchy by the Musalmans. The figures, however, are unfortunately doubtful, just where their identification is of the greatest consequence :—the first might be read as the Nágarí 1, were not the numerals of the month so clearly of the Bengálí form. If counted from the foundation of *Gaur* in 1066, the date would fall in 1140. Were there any possibility of assuming a starting point on satisfactory data, the day of the week, Thursday, would afford a sure test of its being correctly fixed, by the calculation of the luni-solar period elapsed : but according to the formula in my calendric tables, neither of the epochs above selected will bring about such a result.

The following is the transcript of the facsimile in modern Nágarí. One letter after *Namobuddháya* is illegible, and the next word is consequently doubtful : *anusvara* is substituted for ङ.

नमो बुद्धाय संकल्पोऽयं प्रवरमहावीरस्वामिनः परमोपासकस्य दैवज्ञचरणारविन्द
मकरन्दमधुकरहलकारभूपालवंशोत्पन्न क्ष्मान्तपतिगरुडनारायणरिपुराजमत्तगज
सिंहनिखिलमहीपालजनकेत्यादिनिजनिखिलप्रशस्तिसमलंकृतं सपादलक्षशिखरि
खसमेण राजाधिराजश्रीमदशोकचन्द्रदेवकनिष्ठभ्रातृश्रीदशरथनामधेयकुमारपादप
द्मोपजीवि भाण्डागारिकसत्यव्रतपरायणा विनिवर्त्तनीयवोधिसत्वचरितस्कन्धि स्वकुल
द्वीपश्रीसहस्रपातनामधेयस्य महात्मकश्रीचाटब्रह्मसुतस्यमहामहात्मकश्रीम्हषिब्रह्मपौत्र
स्ययदत्रपुण्यं तद्भट्टाचार्य्योपाध्यायमातापितृपूर्व्वाङ्गसङ्गतासकलपुण्यराशिरनन्तवि
ज्ञानफलावाप्तयइति श्रीमल्लक्षणसेनदेवपादानामतीतराज्ये
सं ७४ वैशाख वदि १२ गुरौ

Translation.

" Salutation to *Buddha.*—May this votive aspiration of the devoted votary to *Mahávira Swámi**—(Of him who is) in holiness like the blue-bee steeped in the honied lotus of the feet of a divine personage, and in might like the lion triumphant over the infuriate elephant, who reigns over the royal and puissant progeny of Hulkara Bhupa'la, named Krishna Nripati and Garudana'rayana, his inveterate antagonists—who is himself the gracious father (protector) of tributary kings—who, adorned with such might and virtues, sways the imperial sceptre over 125000 kingdoms well people with mountaineer warriors—the king of kings—the auspicious and high in dignity Asoka Chandra Deva,—(of the aforesaid Rája's) younger brother, Dasaratha Kuma'ra, supported and maintained through the lotus of his gracious feet, his dependent treasurer, a conscientious Bodhisatwa —the light of his tribe and family, by name Sahasrapa'da, son of the dignified Sri' Cha'ta Brahma, and grandson of Mrishi Brahma —may (this his holy act), united with the virtues of his teachers and *guru*, his mother and father, enable to attain the fruit of immortal wisdom, salvation from passions and delusions of sublunary existence, and absorption of his soul in the Supreme Being."

" Written after the conclusion of the reign of *Srí mat* Laxmana Sena Deva, in the year 74, on Thursday, the 12th day of the dark half of the month of *Vaisakha.*"

The inversion of the sentence, and the multitude of epithets applied to each party, makes it difficult for an English reader to follow the sense through such a labyrinth :—in a few words, it prays that some good act (probably the building or endowment of a temple) may redound to the eternal welfare of one Sahasrapa'da, the treasurer of Dasaratha Kuma'ra, the younger brother of Maharája Asoka Chandra Deva, the reigning prince of a dynasty that had supplanted by conquest some descendants of the Bhupala family, (of *Gaur* doubtless,) by name Krishna and Garudana'ra'yan. All these names and persons I believe are new to history : at least I find no Asoka among the successors of Bela'l Se'n. From his assumption of such a name it may be presumed that he was of the Buddhist faith, as the invocation shews to have been the case also with his officers of state.

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* Buddha, the transcendently victorious hero. The construction of the sentence, which it is endeavoured to follow closely, will be hardly intelligible without explaining that this first epithet belongs to Sahasrapa'da, whose name occurs lower down.

Ahead of Time: James Prinsep's Musings on an Inscription from Bodhgaya in 'Gaur' Script

Rajat Sanyal

Before I begin, a clarification on the reproduction of the *Gleanings* introspected here is necessary. In its original incarnation, published in *The Journal of the Asiatic Society of Bengal (*hereinafter JASB) in 1836,[1] plate XXX accompanying this essay was placed before p. 657; again, a plate (Pl. XXXI) on a different subject was located between pp. 660 and 661. For the sake of readers' convenience, the former has been added here after p. 657 and the latter has been removed from this *Gleanings*.

That James Prinsep was a polymath has become almost a cliché in the extant literature on the intellectual history of early colonial India, particularly centring round the institutionalised project of knowledge production initiated with the establishment of the Asiatic Society in Calcutta. Prinsep's interest in epigraphy germinated essentially as a corollary to his official association with the newly founded Society. His decipherment of the earliest of the Brāhmī and Kharoṣṭhī scripts, besides his works on a wide range of epigraphical documents from different parts of India, were published in JASB—a nomenclature of his own assigned to the journal of the Society—between 1832 and 1838.

In discussions on Prinsep's achievements in Indian epigraphic and palaeographic studies, all arguments almost unexceptionally start and end with questions revolving round his decipherment of the 'earliest historical script of India', i.e. the Early Brāhmī of Aśoka's inscriptions.

[1] For a classified bibliographic entry of this essay, see 11.1836.f in Anuja Bose's essay in this volume.

That is quite well taken, for the culmination of the process of decipherment of the 'earliest' of Early Brāhmī was unequivocally phenomenal and unquestionably Prinsep's credit.[2] But, a review of his reports and researches on Indian inscriptions fairly proves that he was equally interested in later Indian epigraphic texts, like almost all of his predecessors and successors. This note is aimed at focusing on one such brief but extremely significant work of Prinsep, underlining, apparently in passing—but having far-reaching implications—on the nomenclature and terminological identity of an early medieval eastern Indian script.

The article under study forms a segment of his project of lithographing inscriptional records sent by British officers and antiquaries from different parts of India. Here Prinsep reported his readings of a set of inscriptions from the site of 'Buddha-Gaya', the celebrated site of the Buddha's enlightenment. It begins with reference to Wilkins' reading of the Maukhari inscriptions from Gaya and Buchanan Hamilton's attempts at reading two image inscriptions on sculptures of Buddha from Bodhgaya. But the main agenda of the essay is to offer an account of a set of four inscriptions from Bodh Gaya, besides the already well-known Burmese inscription originally copied by Buchanan Hamilton,[3] that were 'quite illegible to the learned pandits' of Gaya, recovered under the initiative of an enthusiast named

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[2] Two things are to be pointed out here: By this statement I do not argue, by any means, the it was Prinsep's sole epigraphic genius that led to the decoding of the Early Brāhmī script (for two critical and engaging discussions on the issue, see the two essays, one jointly signed by Sitabhra Sinha and Nandini Mitra and the other by Sayantani Pal, in this volume). Second, it is relevant to put on record that whether the Brāhmī of Aśoka's edicts represents the 'earliest' documentary evidence of the script in South Asia has to remain a question, in the light of the discovery of Brāhmī inscribed pottery from Anuradhapura in Sri Lanka. Richard Salomon's critique on the 'chronological significance' of the Anuradhapura specimens, based on the supposed possibility of the artefacts being 'intrusive in the strata concerned', demands a serious re-examination (Salomon 1998: 12)

[3] Tilman Frasch has recently undertaken a critical study of the entire corpus of Burmese inscriptions from Bodhgaya (Frasch 2021).

Mr Hathorne, the then magistrate of Gaya. These inscriptions were: (a) a stone inscription, 'No. 3' of Hathorne's list, found 'inserted in the wall of a Brahman's house erected on the site of the old fort, said to have belonged to' a king named 'AMÍR SING', (b) an inscribed image of a goddess, recorded in the 'Mahant's garden' carrying the *ye dharmāḥ* stanza, (c) an inscription in the form of a single word, that Prinsep believed was the extant part of larger text in 'oldest láth character' and (d) an inscribed slab, 'No. 2' of Hathorne's list, found near the 'Mahá Buddha' temple.

It would be of course interesting to delve into the history of later researches on all these significant records form Bodhgaya, but I refrain from embarking into that, since I am specifically interested here with Hathorne's 'No. 2', which is also the central programme of Prinsep's essay. As Prinsep writes: 'A copy of this, noted by HAMILTON as "an inscription of considerable length", appears to be deposited in the E.I.C.'s Museum, labelled No. 113, but no further account of it is furnished. It is this inscription which I have lithographed in Plate XXX […].' The 'E.I.C.' museum alluded to by Prinsep is the India Museum, established by the East India Company in 1801 under the planning and guidance of its first curator Charles Wilkins, to house the antiquarian remains gathered from sites in the newly acquired Indian territory. After 1879 the collection of this museum dispersed, finally finding room in the Victoria and Albert Museum and the British Museum (Desmond 1982, MacGregor 2023 for further details). This note on its supposed location in the 'E.I.C' museum will find relevance shortly, when I will be reconsidering the question of present location of the inscription.

Coming to the inscription, it was with his 'acquired experience in such matters', that Prinsep offered a Devanāgarī transcription of the text and an attempted translation, with the help of Society's *pandit*s and a scholar named Ratna Paula, 'whose acquaintance with the Buddhist tenets enabled him to correct the former [i.e. the anonymous *pandit*] in several doubtful readings.' He rightly detected that the inscription is dated in the year 74 of the Lakṣmaṇasena era and dated

it to 1197 CE.[4] The text and the translation were followed by a summary of the record (p. 660):

> The inversion of the sentence, and the multitude of epithets applied to each party, makes it difficult for an English reader to follow the sense through such a labyrinth :—in a few words, it prays that some good act (probably the building or endowment of a temple) may redound to the eternal welfare of one SAHASRAPÁDA, the treasurer of DASARATHA KUMÁRA, the younger brother of Maharája ASOKA CHANDRA DEVA, the reigning prince of a dynasty that had supplanted by conquest some descendants of the BHUPALA family (of *Gaur* doubtlessly) by name KRISHNA and GARUDANÁRÁYAN.

After generations of research, we now know that (a) the record under question is dated to c. 1253 CE, (b) Prinsep's 'Aśokacandra' was actually to Aśokacalla/ Aśokavalla, a member of a local ruling family of the Bodhgaya area and (c) the record refers to some donations by Sahaṇapāla/ Mahaṇapāla (Prinsep's 'Sahasrapāda'), an officer of Aśokacalla's brother Daśaratha (Balogh 2021, Sircar 1982: 127–128).

Before entering into the specific purport of this note, aimed at revisiting one of Prinsep's extraordinary palaeographic insights, it is further important to revisit the puzzle surrounding its present location. Prinsep writes that the inscription entered the India Museum with accession 'No. 113' after it was first documented by Buchanan Hamilton. However, the accounts of a later editor of the inscription tells us a different tale. After its first notice by Prinsep, the record was referred to by several scholars, but a careful edition of the text was first attempted by Vinoda Vihari Vidyavinoda in the early twentieth century, when he edited two stone inscriptions from Bodhgaya, both recording the name of Aśokacalla. The present inscription was the 'second' of Vidyavinoda. In his introductory note on the location of and history of research on the document, Vidyavinoda writes (Vidyavinoda 1913–14: 28):

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[4] The puzzle of the date of commencement, reckoning and chronological extent of the Lakṣmaṇasena era still demand a thorough study. Following the estimates of D.C. Sircar, the date of commencement of this era is almost unanimously considered in current scholarship to be in 1179 CE (Sircar 1965: 271–278).

> The second inscription was discovered seventy-three years ago and was published by Prinsep with a drawing by Mr. V. Hathorne. It was subsequently lost sight of and Dr. Rajendra Lala Mitra could not find it at Bõdh-Gayā, while Pandit Bhagwan Lal had to edit it from Prinsep's drawing. Babu Rakhaldas Banerji, however, found the inscription stone [*sic*] built into the walls of a modern building at Bõdh-Gayā, in January 1906. I am indebted to him for an inked impression of this inscription.

Clearly, thus, the Bodhgaya inscription of Aśokacalla, dated to Lakṣmaṇasena year 74, was not deposited in the India Museum. Its present whereabouts are unknown. Possibly, same was the case with another inscription reported in this article by Prinsep,[5] but we are not concerned here with the issue of history of preservation. I just wanted to underline that time is ripe to revisit the present locations of many of these eastern Indian epigraphic records, of which the current preservation details are far from adequate recording.

Coming to the issue of the script used in this inscription (Fig. 1), the following observation of Prinsep is crucially significant (p. 659).

> The character may be properly designated as the *Gaur* alphabet, the parent of the modern *Bengálí* form. The specimen is chronologically valuable to the investigation of the gradual alterations it has undergone, because it contains a date, *Samvat* 73 or 74, of an era that has been the subject of some misapprehension. Mr. COLEBROOKE rectified Dr. WILKINS' mistake in supposing this *sambat* could refer to the era of VIKRAMÁDITYA, and assumed a position for it 1000 years more modern, in connection with the *Gopala* or *Bhupála* dynasty of *Gaur*. The document before us corroborates this view; but by the expression, "after the expiration of the reign of LAXMANA SÉNA,'' it would seem that the term *samvat* applied generally to whatever epoch might be mentioned in

[5] In his introductory note on the already known inscriptions from the site, he mentions an image inscription, engrave on a sculpture of 'Gautama', originally recorded by Hamilton. One of them, according to Prinsep (possibly based on Hamilton's reading, though this is not explicitly pronounced), records the name of 'Rája Vijyabhadra'. Possibly this is the first notice of the otherwise well-known image recording a dedication by a monk named Vīryendra, a resident of the Somapura monastery and a native of Samataṭa (Sircar 1983: 59). The image in unique, for it contains as many as eight separate text elements on its body and therefore deserves a close scrutiny.

[6] Suchandra Ghosh's recent essay focuses on the shifting political geography and identity of the Gauḍa school of scribes in the light of available textual sources (Ghosh 2020).

> the preceding sentence […]. The figures, however, are unfortunately doubtful, just where their identification is of the greatest consequence :— the first might be read as the Nágarí 1, were not the numerals of the month so clearly of the Bengálí form.

This long quote is reproduced here to underline that it provides the earliest notice of a script named after the toponym 'Gaur', i.e. Gauḍa. Prinsep rightly observed that the palaeographic features of the script qualify it to be designated as the precursor of the modern Bengali script and also correctly realised its importance in being used as a test record, since it contained a date. Now, the question is: are we aware of any such script named after Gauḍa, a significant geopolitical unit of early Bengal? The two most widely read books on Indian palaeography are silent. The work by Ahmad Hasan Dani, first published in 1963 (Dani 1997), follows a methodology centring round the systemics and morphological analyses of palaeographs and draws on a policy of nomenclature which is of course geographical but beyond premodern toponyms. Thus, Gauḍī does not figure in his list of any of the derivatives of proto-regional scripts. The earlier pioneering work by Georg Bühler, originally published posthumously as an appendix to the thirty-third volume of the journal *Indian Antiquary* in 1904 (Bühler 2004), does not make any reference to a script associated with Gauḍa, though he records the name Siddhamātṛkā.

In an essay published in 2007 by a scholar named Lore Sander, the following observation on the early medieval scripts of India is offered (Sander 2007: 121).

> Al-Bīrūnī enumerates the names of eleven Brāhmī scripts and the where they are used. The scripts from North India are the following: "Siddhamātṛkā", "Ardhanāgarī", "Mālwarī", "Saindhava", "Gauḍī" and "Bhaikṣukī" […]. A detailed description is given only for the "Siddhamātṛkā" […]. It can be concluded from al-Bīrūnī [*sic*] that in the early eleventh century many types of Brāhmī existed in India, and that the names were taken form different contexts. To demonstrate what I mean, I will give two examples: "Gauḍī" refers to Gaur, the central district of Bihar. This term is local […].

Prima facie, all the three arguments of Sander are difficult to be accepted: first, the 'many types' of scripts prevalent in India in the

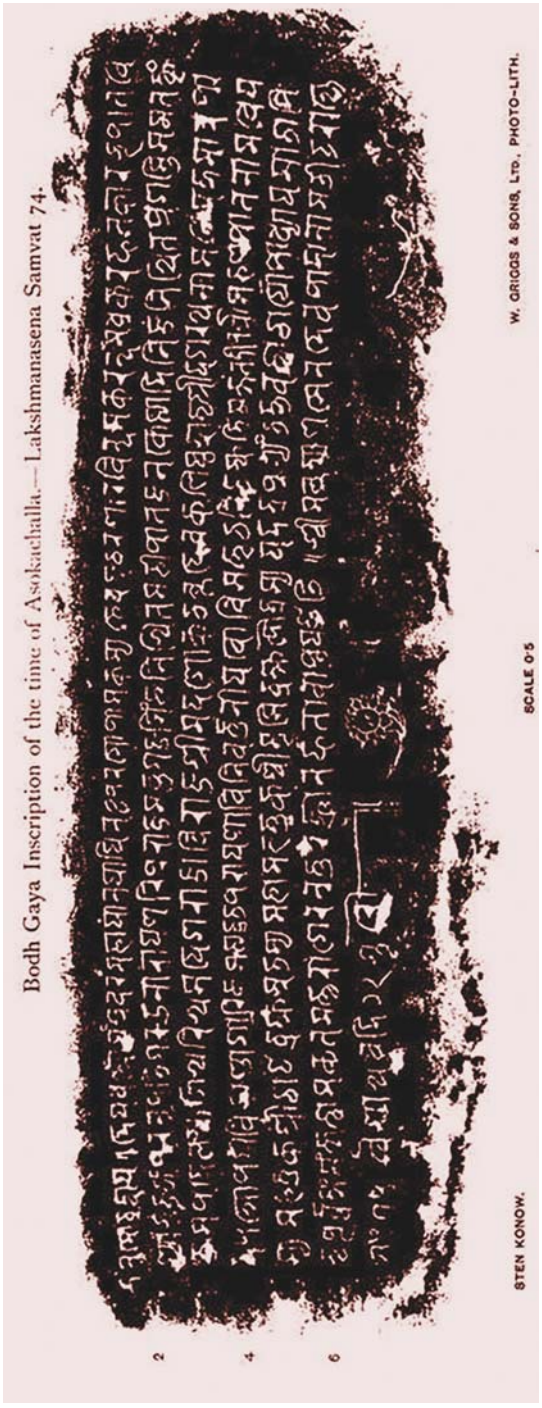

Figure 1. Inked impression of the inscription of Lakṣmaṇasens Year 74 (after Vidyavinoda 1913-14)

eleventh were not different Brāhmī-s, but later regional derivatives of Brāhmī; second, Sander has no idea that the toponym Gauḍa was never connected in its history with any specific 'district' of Bihar;[6] third, Gauḍī as a palaeographic school of writing had a much wider geographical orbit than a 'local' palaeographic type. But most crucially, Sander is completely unaware of the seminal work of D.C. Sircar, who, as early as 1971, had categorically argued that Gauḍī is the eastern Indian derivative of Siddhamātṛkā and rightly credited Al-Bīrunī, for the first time, of recording this name. A detailed citation to Sircar's observation is relevant here (Sircar 1971: 120).

> Gauḍī, i.e. the East Indian derivative of the Siddhamātṛkā alphabet, was used in Bengal, Bihar, Nepal, Assam and Orissa between the 10th and 14th centuries. Bühler, one of the greatest authorities on Indian palaeography, and his followers have called it Proto-Bengali. But the name Gauḍī was used by Al-Bīrūnī in the 11th century A.D. to indicate the alphabet of Eastern India, and it is undoubtedly a more suitable name since the use of the alphabet in question was not confined to Bengal […]. The letters of this alphabet sometimes exhibit a hook like sign at the top *mātrā* referred to above. This is designated by some scholars as 'the Nepalese hook', though it is also found in the other regions of the Gauḍī-using area outside Nepal. In Orissa, the same sign ultimatly [*sic*] developed into the curved top mātrā of the letters of the Oriya alphabet.

Thus, the term Gauḍī as a supra-reginal school of writing derived from its geographically still wider precursor called Siddhamātṛkā, was current in eastern India, incorporating the modern West Bengal-Bangladesh-Bihar-Jharkhand-north Odisha-Assam-Nepal regions, between the late tenth and fourteenth centuries. The principal palaeographic features of this school were distinct: (a) the formation of the proper vertical right line of each of the *akṣara*s, unlike its predecessor Siddhamātṛkā, where the line is convex and is responsible for the making of the 'acute angle' with the horizontal plane; (b) the formation of a prominent slant at the base of the principal vertical element as well as a proper horizontal *mātrā* the top and (c) a more or less standardised system of formation of medial vowels. All these features are shared by the eleventh-fourteenth/fifteenth century scripts of Bengal, Odisha and Assam, before they are separated to form their own script families as Proto-Bengali, Proto-Odishan and Tai-Ahom

respectively. The palaeographic term 'Proto-Bengali', still considered by epigraphists as coterminous to Gauḍī (Salomon 1998: 41), should actually be applied, thus, to the successor of the latter in Bengal from the fifteenth century.

To sum up, Al-Bīrūnī's account on the scripts of India attracted scholarly attention only after its translation by Edward C. Sachau came out in 1888 (Sachau 1910). More than five decades before this, Prinsep had proposed a nomenclature for the script that perfectly matched the name recorded in the text. This foresight demonstrates Prinsep's fundamental research acumen in what was essentially the formative phase of Indian palaeographic studies. He was indeed much ahead of his time. I will conclude by putting on record two curious notice and usage that are difficult to explain. As I have already mentioned, it was Georg Bühler who for the first time observed that the term Siddhmātṛkā is noted by Al-Bīrūnī (Bühler 2004: 68). How he missed, then, Al-Bīrūnī's reference to other Indian scripts including Gauḍī, remains a mystery. Secondly, it was D.C. Sircar who expressly argued that the name of the script of medieval eastern India should be changed from Proto-Bengali to Gauḍī in the light of Al-Bīrūnī's note. In many of his later epigraphic exercise, however, he himself deviated from this and used the term 'Gauḍīya' for the scripts of Bengal and north Odisha (Sircar 1983: 115, 156), and the same practice was continued by his disciple and close associate Gouriswar Bhattacharya (for e.g. Bhattacharya 1987: 298). This redundant deviation, when Gauḍī is recognisable as the accepted terminology, remains equally inexplicable.

References

Balogh, Dániel 2021. Pīthīpati Puzzles: Custodian's of the Diamond Throne. *Precious Treasures from the Diamond Throne: Finds from the Site of the Buddha's Enlightenment* (Eds. Sam van Schaik, Daniela De Simone, Gergely Hidas and Michael Willis), pp. 40–58. London: The British Museum.

Bhattacharya, Gouriswar 1987. The God Pradyumneśvara and Two Interesting Hari-Hara Figures from South Bihar. *East and West* 37/1–4: 297–307.

Bühler, Georg 2004 [rep.]. *Indian Palaeography*. Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.

Dani, Ahmad Hasan 1997 [rep. of 2nd ed.]. *Indian Palaeography*. Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.

Desmond, Ray 1982. *The India Museum, 1801-1879*. London: H.M. Secretary Office.

Frasch, Tilman 2021. Early Burmese Inscriptions from Bodhgayā. *Precious Treasures from the Diamond Throne: Finds from the Site of the Buddha's Enlightenment (*Eds. Sam van Schaik, Daniela De Simone, Gergely Hidas and Michael Willis), pp. 59–64. London: The British Museum.

Ghosh, Suchandra 2020. Gauḍa: Viewing its Political Geography and Writing Tradition. *Sources on the Gauḍa Period in Bengal: Essays in Archaeology* (Ed. Jean-Franśois Salles), pp. 44–54. Delhi: Primus Books.

MacGregor, Arthur 2023. *The India Museum Revisited*. London: UCL Press. https://doi.org/10.14324/ 111.9781800085701.

Sachau, Edward C. 1910. *Alberuni's India. An Account of the Religion, Philosophy, Literature, Geography, Chronology, Astronomy, Customs, Laws and Astrology of India about the 1030. An English Edition, with Notes and Indices*, vol. 1. London: Kegan Paul, Trech, Trūbner and Co. Ltd.

Salomon, Richard 1998. *Indian Epigraphy: A Guide to the Study of Inscriptions in Sanskrit, Prakrit, and the Other Indo-Aryan Languages*. New York: Oxford University Press.

Sander, Lore 2007. Confusion of Terms and Terms of Confusion in Indian Palaeography. *Expanding and Merging Horizons: Contributions of South Asian and Cross-Cultural Studies in Commemoration of Wilhelm Halbfass* (Ed. Karin Preisendanz), pp. 121-139. Wien: Verlag Österreichischen Akademie der Wissenchaften.

Sircar, D[inesh] C[handra] 1965. *Indian Epigraphy*. Delhi: Motilal Banarsidass.

—— 1971. Introduction to Indian Epigraphy and Palaeography. *Journal f Ancient Indian History* (1970–71) 4/1–2: 72–136.

—— 1982. *Pāl-Sen Juger Baṁśānucarit* (i.e. *Genealogy and Chronology of the Pāla-Sena Period*, in Bangla). Calcutta: Sahityalok.

—— 1983. *Select Inscriptions bearing on Indian History and Civilization from the Sixth to the Eighteenth Century A.D.*, vol. 2. Delhi: Motilal Banarsidass.

Vidyavinoda, Vinoda Vihari 1913–14. Two Inscriptions from Bodh-Gaya. *Epigraphia Indica* 12: 27–30.

To cite this article
Sanyal, Rajat 2024. Ahead of Time : James Prinsep's Musings on an Inscription form Bodhgaya in 'Gaur' Script. *Journal of the Asiatic Society* 66/2: 281–290.
ISSN:0368-3308

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THE

JOURNAL

OF

THE ASIATIC SOCIETY

OF

BENGAL.

EDITED BY

JAMES PRINSEP, F. R. S.

SECRETARY OF THE ASIATIC SOCIETY OF BENGAL ; HON. MEM. OF THE AS. SOC. OF PARIS ; COR. MEM. OF THE ZOOLOGICAL SOC. OF LONDON, AND OF THE ROYAL SOCIETIES OF MARSEILLES AND CAEN ; OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA ; OF THE PHILOSOPHICAL SOCIETY OF GENEVA ; OF THE ALBANY INSTITUTE, &c.

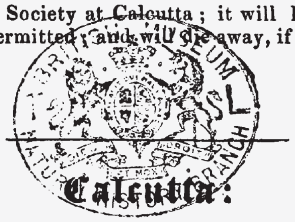
VOL. VII.

JANUARY TO DECEMBER,

1838.

" It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science, in different parts of *Asia* will commit their observations to writing, and send them to the Asiatic Society at Calcutta ; it will languish, if such communications shall be long intermitted ; and will die away, if they shall entirely cease."

SIR WM. JONES.



PRINTED AT THE BAPTIST MISSION PRESS, CIRCULAR ROAD.

SOLD BY THE EDITOR, AT THE SOCIETY'S OFFICE.

1838.

VII.—*Discovery of the name of* Antiochus *the Great, in two of the edicts of* Asoka, *king of India.* By James Prinsep, *Sec. &c.*

[Read at the Meeting of the 7th March.]

As long as the study of Indian antiquities confines itself to the illustration of Indian history it must be confessed that it possesses little attraction for the general student, who is apt to regard the labour expended on the disentanglement of perplexing and contradictory mazes of fiction, as leading only to the substitution of vague and dry probabilities for poetical, albeit extravagant, fable. But the moment any name or event turns up in the course of such speculations offering a plausible point of connection between the legends of India and the rational histories of Greece or Rome,—a collision between the fortunes of an eastern and a western hero,—forthwith a speedy and spreading interest is excited which cannot be satisfied until the subject is thoroughly sifted by the examination of all the ancient works, western and eastern, that can throw concurrent light on the matter at issue. Such was the engrossing interest which attended the identification of *Sandracottus* with *Chandragupta* in the days of Sir Wm. Jones : such the ardour with which the Sanskrit was studied, and is still studied, by philologists at home after it was discovered to bear an intimate relation to the classical languages of ancient Europe. Such more recently has been the curiosity excited, on Mr. Turnour's throwing open the hitherto sealed page of the Buddhist historians to the development of Indian monuments and Pauranic records.

The discovery I was myself so fortunate as to make, last year, of the alphabet of the *Delhi* pillar inscription, led immediately to results of hardly less consideration to the learned world. Dr. Mill regarded these inscriptions as *all but certainly demonstrated* relics of the classical periods of Indian literature. This slight remainder of doubt has been since removed by the identification of Piyadasi as Asoka, which we also owe to Mr. Turnour's successful researches; and, dating from an epoch thus happily achieved, we have since succeeded in tracing the name of the grandson of the same king, Dasaratha, at *Gaya* in the same old character; and the names of Nanda and Ai'las, and perhaps Vijaya in the *Kalinga* caves: while on Bactrian coins we have been rewarded with finding the purely Greek names of Agathocles and Pantaleon, faithfully rendered in the same ancient alphabet of the Hindus.

I have now to bring to the notice of the Society another link of the same chain of discovery, which will, if I do not deceive myself, create a

yet stronger degree of general interest in the labours, and of confidence in the deductions, of our antiquarian members than any that has preceded it. I feel it so impossible to keep this highly singular discovery to myself that I risk the imputation (which has been not unjustly cast upon me in the course of my late undigested disclosures) of bringing it forward in a very immature shape, and perhaps of hereafter being obliged to retract a portion of what I advance. Yet neither in this, nor in any former communication to the Society, have I to fear any material alteration in their general bearing, though improvements in reading and translation must of course be expected as I become more familiar with characters and dialects unknown for ages past even to the natives themselves, and entirely new to my own study.

A year ago, as the Society will remember, Mr. W. H. WATHEN, of *Bombay*, kindly sent me a reduced copy of the facsimiles of the inscriptions on a rock at *Girnar (Girinagara)* near *Junagarh* in *Gujerat*, which had been taken on cloth by the Rev. Dr. WILSON, president of the *Bombay* Literary Society. He also sent a copy to M. JACQUET of *Paris*, which I dare say before this has been turned to good account.

After completing the reading of the pillar inscriptions, my attention was naturally turned to these in the same character from the west of India, but I soon found that the copy sent was not sufficiently well done to be thoroughly made out; and I accordingly requested Mr. WILSON to favor me with the facsimile itself, which with the most liberal frankness he immediately sent round under a careful hand by sea. Meanwhile Lieut. KITTOE had, as you are also aware, made the important discovery of a long series of inscriptions in the same character at a place called *Dhauli*, in *Cuttack*. These were in so mutilated a state that I almost despaired of being able to sift their contents; and they were put aside, at any rate until the more promising portion of my labour should be accomplished.

I had just groped my way through the *Girnar* text, which proved to be, like that of the pillars, a series of edicts promulgated by ASOKA, but essentially different both in language and in purport; when I took up the *Cuttack* inscriptions of which Lieut. KITTOE had been engaged in making a lithographic copy for my journal. To my surprise and joy I discovered that the greater part of these inscriptions (all indeed save the first and last paragraphs which were enclosed in distinguishing frames), was identical with the inscription at *Girnar!* And thus as I had had five copies of the pillar inscription to collate together for a correct text, a most extraordinary chance had now thrown before me *two* copies of the rock edicts to aid me in a similar task! There was however

one great variance in the parallel,—for, while the pillars were almost identical letter for letter, the *Girnar* and *Cuttack* texts turned out to be only so in *substance*, the language and alphabet having both very notable and characteristic differences.

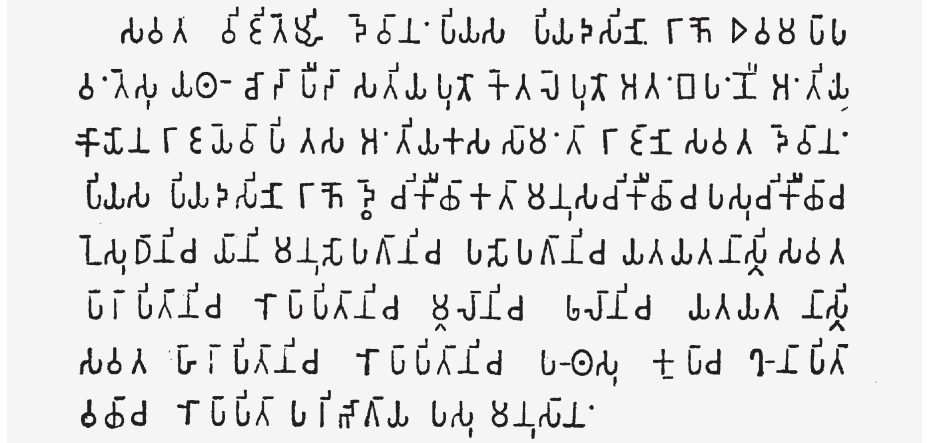
Having premised thus much in explanation of the manner of my discovery, I must now quit the general subject for a time, to single out the particular passage in the inscriptions which is to form the theme of my present communication.

The second tablet at *Girnar* is in very good preservation; every letter is legible, and but two or three are in any way dubious. The paragraph at *Aswastuma* which I found to correspond therewith, is far from being in so good a state; nevertheless when the extant letters are interlined with the more perfect *Girnar* text, as in the accompanying copy, they will be seen to confirm the most important passage, while they throw a corroborative evidence upon the remainder, and give a great deal of instruction on the respective idioms in which the two are couched.

The edict relates to the establishment of a system of medical administration throughout the dominions of the supreme sovereign of India, one at which we may smile in the present day, for it includes both man *and beast;* but this we know to be in accordance with the fastidious humanity of the Buddhist creed, and we must therefore make due allowance for a state of society and of opinions altogether different from our own.

I here present the whole paragraph in the old character as it stands at *Girnar*, following it up with an interlined transcript in the roman character, so as to place under one view the parallel texts from opposite sides of India.

Second Tablet at Girnár.



The same in Roman character, with the Dhauli copy interlined.*

Savata vijitemhi devánampiyasa Piyadasino raṇo, evama-
Savata vimitamsi devánampiyasa Piyadasine.....
pápavantesu, yathá Choḍa, Píḍa, Satiyaputo, Ketaleputo,
.....
á-Tambapaṇṇi, ANTIYAKO YONA rájaye vápi (tasa
..... *ANTIYOKE náma YONA lájaya vápi* (*...sa*
ANTIYAKASA sámino rájáno), savata devánampiyasa Piya-
Antiyakasa sámantá lájáne) *savata devánampiyasa Piya-*
dasino raṇo dwe chikíchhá katá ;—manusa chikíchhá cha pasu
dasine .....chiki.....
chikíchhá cha : osudháni cha, yáni manusopagáni cha paso-
.....cha..... dháni áni muniso.....ni pasu
pagáni cha. Yata yata násti, savata párápitáni cha
opogánáni cha ata—tá nathi, sa..... pálápitá
ropápitáni cha ; múláni cha phaláni cha ; yata yata násti,
lopapitá cha : mú... .....
savata hárapitáni cha ropápitáni cha. Pathesu kúpá
vata hálopitá cha, lopápitá cha. ma (gesu) udapanáni
cha khánápitá ; vachhá cha ropapitá ; pari bhogáya
cha khánápitáni, lukháni cha lopapitáni paṭi bhogáya
pasu manusánam.
p.....ánam.

Translation.

" Everywhere within the conquered provinces of rája PIYADASI the beloved of the gods, as well as in the parts occupied by the faithful, such as *Chola*, *Píḍa*, *Satiyaputra*, and *Ketalaputra*, even as far as *Tambapanni (Ceylon)*—and moreover within the dominions of ANTIOCHUS the Greek, (of which ANTIOCHUS' generals are the rulers,)—everywhere the heaven-beloved rája PIYADASI's double system of medical aid is established ;—both medical aid for men, and medical aid for animals : together with medicaments of all sorts, which are suitable for men, and suitable for animals. And wherever there is not (such provision)—in all such places they are to be prepared, and to be planted: both root-drugs, and herbs, wheresoever there is not (a provision of them) in all such places shall they be deposited and planted.

And in the public highways wells are to be dug, and trees to be planted, for the accommodation of men and animals."

* I reserve the lithographed facsimile until next month.

Many things are deserving of comment in this short edict. To begin in due order ;—

The opening words which are equally well preserved in both the *Girnar* and the *Dhauli* inscriptions, will be remarked to differ, in the two examples, only in a single letter (disregarding of course the variation of the inflection, which we shall see by and by to be peculiar to the dialect of each place, and constant throughout) ;—the former text reads *Savata vijitamhi* equivalent to the Sanskrit *savatra vijite*, 'every where in the conquered (country)' whereas the latter has *savata vimatamsi* (S. *vimate*) throughout the inimical (in religion) country*. This difference is inconsiderable ; and both expressions will contrast equally well with *apápavantesu* (S. *apápavatsu*) 'in the sinless-like,' or 'the provinces containing the believers.' Of the places enumerated as belonging to the latter division, unfortunately one list only is preserved, and we are unable to identify any of their names with certainty, except the last. *Choda* may indeed be the *Chola* kingdom, and *Piḍa* the country named in the Brahmanda Purána†, as *Pidika* in the same list with *Chúlica :* but in what part of India situated does not very clearly appear. *Satyapúto* and *Ketalaputo* are equally unknown ; unless the latter be *Ketorapuri* of WILFORD—hod. *Tahneswar*. The former seems rather an epithet of some 'holy city' of the time. Our only certain landmark then is *Tambapaṇṇi*, the ancient name of *Ceylon*, spelt exactly in the same manner as in the Páli text of the *Mahávansa* just published by Mr. TURNOUR. The Greek name of this island, *Taprobane*, as Dr. MILL has elsewhere observed‡, seems rather to be taken from the Sanskrit *Tamra-páni*, which is also the true *Singhalese* name for the same place.

But the principal fact which arrests attention in this very curious proclamation, is its allusion to ANTIOCHUS the *Yona*, (Sanskrit *Yavana*) or Greek, king. The name occurs four times over, with only one variation in the spelling, where in lieu of *Antiyako* we have *Antiyoko*, a still nearer approach to the Greek. The final *o* is the regular *Pali* conversion of the Sanskrit nominative masculine termination *as*, or the Greek *os*. In the pillar dialect the *visarga* of the Sanskrit is replaced by the vowel *e*, as we see in the interlined reading, *Antiyake*. Again the interposition of the semivowel *y* between the two Greek vowels *i* and *o*, is exactly what I had occasion to observe in the writing of the words *Agathuklayoj* and *Pantalawanta* for Αγαθοκλεως and πανταλεοντος on the coins. All this evidence would of itself bias my choice to-

* While correcting the press, I received a revision of the Cuttack inscription, by Mr. KITTOE, in which the word is plainly *vijitamsi*.

† As. Res. VIII. 336. ‡ Journal As. Soc. Vol. V. 830.

wards the reading adopted, even were it possible to propose any other; but although I have placed the sentence, exactly transcribed in the Devanágari character, in the pandit's hand; he could not, without the alteration of very many letters, convert it to any other meaning, however strained. And were there still any doubt at all in my mind, it would be removed by the testimony of the *Cuttack* version which introduces between *Antiyake* and *Yona* the word *náma*,—making the precise sense 'the Yona rája *by name* ANTIOCHUS.'

Having then, I trust, established the existence of a genuine Greek name in an authentic Indian edict, let us turn to the histories of the period and ascertain who he may be, and how far the circumstance tallies with the Grecian and Persian records of these ancient times.

The age of ASOKA, as fixed by the Buddhist annals falls close after the invasion of ALEXANDER the Great, but when adjusted by the established epoch of CHANDRAGUPTA, it coalesces with the flourishing period of Bactrian independence.

The name of ANTIOCHUS occurs solely in the Seleucidan dynasty which enjoyed supremacy over the whole extent of the Macedonian conquests, until the satraps of Persia and higher Asia threw off the Syrian yoke, and assumed to themselves the regal title. It was to re-establish his sway over the revolted provinces that ANTIOCHUS the Great in the third century before Christ, conducted an extended campaign in *Bactria*, which ended in an accommodation with EUTHYDEMUS whereby he was permitted to hold the regal title. The Bactrian king consented probably to be tributary to ANTIOCHUS, for the treaty was ratified by the surrender of all EUTHYDEMUS' elephants to ANTIOCHUS; who, on his side, cemented the alliance by granting his daughter in marriage to the handsome DEMETRIUS, EUTHYDEMUS's son. This memorable event is fixed by BAYER in the year 205 B. C.

"In the reign of ANTIOCHUS the Great," says MAURICE, "the affairs of India again become conspicuously prominent in the page of Asiatic history." POLYBIUS informs us that subsequently to the settlement of *Bactria*, this monarch led his army over the Indian Caucasus, and entered India, where he paid a visit to, and *renewed his alliance** with SOPHAGASENES, king of that country, and received likewise his elephants, which with those he had from EUTHYDEMUS amounted now

* The treaty thus *renewed*, may have been that entered into between SELEUCUS and SANDRACOTTUS. Alluding to the obscure origin of this prince JUSTINUS says, "By such a tenure of rule was it that SANDRACOTTUS acquired India at the time SELEUCUS was laying the foundations of his future greatness, and the latter *having concluded a league with him*, and settled his affairs in the east came down and joined the war against ANTIGONUS." L. XV. C. 4.

to a hundred and fifty*; he then recrossed the *Indus* and returned homeward through *Arachosia*, *Drangiana*, and *Carmania*, settling in all those countries due order and discipline. "The boldness of his attempts and the wisdom of his conduct during the whole course of this long war, gained him the reputation of a wise and valiant prince, so that his name became formidable to all Europe as well as Asia, and well deserved the addition of 'Great' which was given him†."

In all, save the name of the Indian monarch, do these circumstances agree with the terms of our inscription. We may readily imagine it to have been a provision in the treaty, that the Buddhist king of India should be allowed to establish his religious and humane regulations among those of the same faith who resided under the rule of ANTIOCHUS' generals, that is, in *Bactria* and perhaps *Sinde*. We see an acknowledgment of fealty to him in the very wording of the sentence, and it is curious that, while the *Cuttack* inscription calls the Greek princes, *Sámantá* his generals—the other edict names them *Swámino* ‡, 'lords.'

With regard to the name of *Sophagasena* I should not have much hesitation in asserting that it was a palpable corruption of *Asoka sinha* or *sena*, the first two syllables transposed§,—but that I am saved the trouble by that more daring etymologist Col. WILFORD, who long ago pronounced *Sophagasena* to be nothing more than *Sivaca-sena*, a term equivalent to *Asoca-sena*, 'one whose army is clement,'—and which was another name for ASOCA-VERDDHANA the third in descent from CHANDRAGUPTA in the Pauranic lists ‖.

Mr. TURNOUR fixes the date of ASOKA's accession in B. C. 247, or 62 years subsequent to CHANDRAGUPTA, the cotemporary of SELEUCUS. Many of his edicts are dated in his 28th year, that is in B. C. 219, or six years after ANTIOCHUS the Great had mounted the throne. The medical edict is not absolutely dated; we however perceive that there can be no positive anachronism to oppose the conclusions to which other powerful considerations would lead.

* The words of POLYBIUS are:—Ὑπερβαλώνδε τον Καύκασον, και κατάρας εἰς την Ἰνδικὴν, τήν του φιλίαν ἀνενεὼσατο τὴν προς Σοφαγασῆνον τον βασιλέα των Ἰνδῶν, καί λαβών ἐλέφαντας, ὥσε γενέσθαι τοὺς ἅπαντας εις ἑκατὸν και πεντήκοντα, ἔτι δε σιτομετρήσας πάλιν ενταῦθα τὴν δύναμιν, αὐτὸς μὲν ἀνέζευξε μετὰ της στρατιᾶς. Ἀνδροσθένη δε τον Κυζικηνὸν ἐπὶ τῆς ἀνακομιδῆς ἀπέλιπε τῆς γαζης, τα ὁμολογηθείσης αὐτῷ παρὰ τοῦ βασιλέως. Pol. Histor. lib. xi.

† Universal History, vol. VIII. p. 157.

‡ The last letter is however doubtful (more resembling *pham*) and I feel very certain that re-examination will prove the reading to be *Sámantá*.

§ Just as the natives persist in calling OCHTERLONY, Loni-akter;—many such whimsical perversions might be quoted.

‖ Asiatic Researches, V. 286.

But the subject of elucidation is not exhausted here. The Persian historians have yet to be examined; and their account of this eventful period may be gathered, from FERISHTA's words, to have been copied not from the Greeks, but from native authorities now no longer extant.

"SINSARCHAND* assumed the imperial dignity after the death of PHOOR, and in a short time regulated the discomposed concerns of the empire. He neglected not in the mean time to remit the customary tribute to the *Grecian captains*, who possessed Persia under and after the death of ALEXANDER. SINSARCHAND and his son possessed the empire of India *seventy years*. When the grandson of SINSARCHAND acceded to the throne, a prince named JONA, who is said to have been a grand nephew of PHOOR, though that circumstance is not well attested, aspiring to the throne, rose in arms against the reigning prince and deposed him†."

* MAURICE's Modern Hindustan, vol. I. 65—*Sinsár-chand* is just as much of a Sanskrit name as CHANDRAGUPTA, and nearly of the same import; viz. संसारचन्द्र *Sansára-chandra*, 'moon of the world.'

† The whole passage in Ferishta is not too long to be extracted, that it may be consulted in the original. The Society's copy however differs from that translated in the above quotation from Maurice in the substitution of other names for those of the *Greek captains*.

سنسار چند نامي زمام حكومت هندوستان بكف آورده در اندك مدتی تمام هندوستان را كه برهم خورده بود مصفا ساخت و چون كشته شدن فور را بچشم خود مشاهده نموده بود از ترس هرساله پيشكش پيش از طلب براي كودرز و ترسی كه دران ايام سلطنت ايران داشتند ميفرستاد و بعد ازانكه هفتاد سال از سلطنتش سپري شده بود جونه نامی خروج كرده استيلا يافت *

خروج راجه جونه بعضی برانند كه جونه خواهر زادهٔ فوراست چون بر تخت برآمد افعال حميده و خصال پسنديده ظاهر گردانيد و در معموري ملك كوشيده در كدار بحر گنگ و جمنه قريات و قصبات احداث فرمود و در عدل داد سعي بليغ بجا آورد و به اردشير بابكان معاصر بود سالی كه اردشير قصد تسخير هند نموده تا حوالي سرهند آمد جونه مضطر گشته بخدمت وی شتافت و زرو جواهر بسيار وفيلان اژدها كردار پيشكش كرده بر گردانيد و خود بقنوج بر گشته مدتها بر بستر استراحت تكيه داشت بعد از فرد سال رخت هستی بربست بيست و دو پسر ازوی ماندوله انبر كليان چند جانشين شد *

ARDESHER BABEGA'N, began to reign A. D. 223. There is an anachronism therefore of near 500 years in this account! The name of KALIANCHAND is

Now it is not by any means improbable that the JONA (or *Yona*) here introduced as a rival to ASOKA, may be the identical *Yona rája*, mentioned in the edict before us, or in other words, ANTIOCHUS himself; although it is certainly true that the Persian historian goes on to give a circumstantial account of his reigning at *Canouj* for a long time, with indefatigable attention to the police of the country and the peopling and cultivation of the waste tracts of Hindustan! YONA is placed 260 years before CHRIST, and is stated to have made a present of elephants and a vast quantity of gold and jewels to ARDESHIR, who claimed tribute from the empire of India. This seems to be, mutato nomine, a repetition of the story given by POLYBIUS, for, independently of the anachronism, it is hardly probable that the Arsacidæ, themselves tributary to *Syria*, should have yet mustered courage to exact the like respect from their powerful neighbours.

I think the edict furnishes a satisfactory solution of the difficulty, by enabling us to erase *Yona* from the Indian list, and to transfer him either to *Syria* or to some principality of the Bactrian Greeks who are acknowledged to have held sway in the upper part of India.

As for the Pauranic histories of the Hindus, all I need say is, that if any thing can tend to persuade the brahmanical pandits of the erroneous basis on which their chronology rests, and the necessity of seeking its explanation (which I do not deem at all impossible) it will be this discovery of a coincidence between our histories and these sculptured monuments in their own language, which cannot have been tampered with, and cannot be suspected of giving false testimony on such a matter.

The best accounts however of the early occurrences of Indian history are to be sought in the Buddhist annals. Let us see what light they throw on the term *Yona*.

In Mr. TURNOUR's introduction to the *Maháwanso* (which I have only this moment seen through the kindness of Dr. BLAND of the Wolf) I find these words: "In regard to the geographical identification of the *Yona* country, I am of opinion that we shall have to abandon past speculations on the similarity of the names "*Yona*" and "*Yavana*," and the consequent inference that the *Yavanas* were the Greeks of Bactriana;—as *yona* is stated to be mentioned long anterior to ALEXANDER's invasion in the ancient Páli works. The term in that case can have no connection with the Greeks." Now on turning to the only two passages indicated in the glossary; I find that the first relates to the

unknown in the *Puranas*:—neither are *Koderz* and *Terasi*, known as kings of Persia of that period. The former resembles much the *Kodes* of our Bactrian coins: the latter may be *Tiridates* (B. C. 253).

deputation by ASOKA himself of a missionary named MAHA'RAKKHITO to effect the conversion of the *Yona* country, while MAJJHANTIKO goes to *Kásmira* and *Gandhára*, and others to various places.

The other passage cited (page 171) occurs in an elaborate and most circumstantial account of the erection of the *Maháthupa*, or great tope, at *Ruanwelli*, by DUTTHAGAMINI king of *Ceylon*, in the year 157 B. C. Among the priests who resort to *Ceylon* to assist at its consecration are the following from Upper India—for the passage is so interesting to us Indians who are nearly in the dark as to those periods, that I cannot refrain from extracting it entire:

"Nánádesápi aganchhun bahawó bhikkhawó idha:
Idhadipatthasanghassa kákatháwa idhágame?
Therásiti sahassáni bhikkhú ádáya ágamá
Rájágahassa sámantá Indagutto mahágani.
Sahassán Isipatané Bhikkhunan dwádasádya
Dhammaseno maháthéro chetiyatthánamágamá.
Satthin bhikkhusahassáni ádáya iddhamágama
Piyadassi maháthéro Jetarámawihárato.
Wesálimaháwanato théroru Buddharakkhito
Atthásasahassáni bhikkhu ádáya ágamá.
Kosambighositárámo théroru dhammarakkhito
Tinsa bhikkhusahassáni ádáya idhamágamá.
Adáya Yujjeniyan théro Dakkhinagirito
Yati chattárisahassáni ágoru Dhammarakkhito
Bhikkhunan satasahassánan satthi-sahassani chádiya.
Pupphapure sókáramá thero mittinnanámako.
Duwe satasahassáni sahassáni cha satthicha,
Bhikkhu Pallawabhogamhá mahadewo mahámati.
Yónanaggar álasanna Yona mahádhammarakkhito
Théro satthisahassáni bhikkhu ádáya ágamá.
Winjhé tawlwatániyá senásanútu uttaro.
Thero satthi sahassáni bhikkhu ádáya ágamá.
Chittagutto maháthéro Bodhimanda wihárato
Tinsa bhikkhusahassáni ádiyitwá idhágamá.
Chandagutto maháthéro wanawásapadesato,
A'gásiti sahassáni ádiyetwá yati idha.
Suriyagutto maháthéro kélásamaháwihárato
Chhanawati sahassani bhikkhu ádáya ágamá."

"From various foreign countries many priests repaired thither. Who will be able to render an account of the priests of the island who assembled here? The profound teacher INDAGUTTO, a sojourner in the vicinity of *Rájaguha*, attended, accompanied by eight thousand théros. The mahá théro DHAMMASENO, bringing with him twelve thousand from the fraternity of the *Isipattana* temple (near *Báránesi*), repaired to the site of the *thúpo*. The mahá théro PIYADASSI from the *jeto wiháro* (near *Sáwatthipura*) attended, bringing with him sixty thousand priests. The théro BUDDHARAKKHITO attended from the *Maháwanno wiháró* of *Wésali*, bringing eight thousand priests. The chief théro DHAMMARAKKHITO, attended from the *Ghositá* temple of *Kósambiú*, bringing thirty thousand priests with him. The chief théro DHAMMARAKKHITO, bringing forty thousand disciples from *Dakkhinágíri* temple of *Ujjéni*, also attended. The théro named MITTINNO, bringing sixty thousand priests from his fraternity of one hundred thousand at the *Asóko* temple at *Pupphapura*. The théro RETTINNO, bringing from the *Kásmira* country two hundred and eighty thousand priests. The great sage MAHADEWO with fourteen lacs and sixty thousand priests from *Pallawabhágo*; and mahá DHAMMARAKKHITO, théro of *Yona*, accompanied by thirty thousand priests from the vicinity of *A'lasaddá*, the capital of the *Yóna* country, attended. The théro UTTARO attended accompanied by sixty thousand priests from the *Uttaría* temple in the wilderness of *Winjha*. The mahá théro CHITTAGUTTO repaired hither, attended by thirty thousand priests from the *Boddhimando*. The mahá théro CHANDAGUTTO repaired hither, attended by eighty thousand priests from the *Wanáwásó* country. The mahá théro SURIAGUTTO attended, accompanied by ninety-six thousand priests from the *Kélaso wiháro*."

'The vicinity of *A'lasaddá* (in the text *A'lasanná*, but corrected in the errata) the capital of the *Yona* country'—follows, in this enumeration, the mention of *Kásmir*, while it precedes the wilderness of *Vinjha* which is evidently *Vindravan*, the modern *Bindrabund*. In situation then as well as in date I see nothing here to oppose the understanding of *Yona* as the Greek dominion of *Bactria* and the *Panjáb*, and I dare even further propose that the name of the capital near which the Buddhist monastery was situated, and which Mr. Turnour states in his glossary to be unidentified, is merely a corruption of *Alexandria*, the right reading being perhaps *A'lasanda*, halfway between the authorities of the Páli '*variorum*.' Thus in lieu of finding any difficulty in regard to the use of the term *Yona* by oriental authors, we perceive them all rather to admit the interpretation which the sagacity of our antiquarians had long since suggested, but which could only be thoroughly confirmed by such an incontrovertible testimony as it has now fallen to my lot to bring to notice. The particular *Alexandria* alluded to may probably be that *ad calcem Caucasi* which is placed at *Beghram* by Mr. Masson in the 5th volume of my Journal, and in the neighbourhood of which so many stupendous *stupas* have been brought to light through his able investigations.

The purport of the edict thus promulgated to the subjects of the Indian monarch and of his Greek ally, now merits a few observations.

I have said that its object was to establish a system of medical administration. The word *chikichha* is the regular Páli form of the Sanskrit *chikitsa* (चिकित्सा), the administration of medicine, or healing. In fact a medical service seems to have been instituted and supported at the expense of the state, with depôts of the herbs and drugs then, and still, used as remedies by Indian practitioners. The term osudháni, (Sans. *aushadháni* ओषधानि,) according to Wilson, may even comprehend mineral as well as vegetable medicaments, and it may possibly be thus used in contradistinction to *muláni* and *phaláni*.

In reading the particular allusion to a *separate* system of treatment for animals, one is reminded of that remarkable institution at *Surat* usually called the Banyan hospital, which has been so frequently described by European visitors of the last century. If proper inquiry were directed to this building, I dare say it would be discovered to be a living example, (the only one that has braved twenty centuries,)—of the humane acts of Asoka, recorded at no great distance on a rock in *Gujerat*.—" This hospital consisted of a large piece of ground enclosed by high walls and subdivided into several courts or wards for the accommodation of animals. In sickness they

were attended with the greatest care, and here found a peaceful asylum for the infirmities of old age. When an animal broke a limb or was otherwise disabled, his owner brought him to this hospital, where he was received *without regard to the caste or nation of his master*. In 1772, it contained horses, mules, oxen, sheep, goats, monkeys, poultry, pigeons, and a variety of birds, also an aged tortoise which was known to have been there 75 years. The most extraordinary ward was that appropriated for rats, mice, bugs, and other noxious vermin, for whom suitable food was provided." (*Ham. Hindostan*, I. 718.)

The order for digging wells and planting trees along the sides of the high roads in this edict, is of a similar nature with, but rather more laconic than that on the Ferôz láth, which it may be remembered, specified that the wells were to be half a coss apart, and the trees to be of the mango species: besides which there were to be serais and villages—a provision which seems pointed at in the passage quoted from FERISHTA, about SINSARCHAND'S successor "establishing towns and villages along the *Ganges* and *Jumna*."

The word used for wells at *Girnar* is *kupá*, pure Sanskrit:—at *Dhaoli* it is *udapanáni* as on the pillars,—and so for road, one uses *patha*,—the other *maga* (S. *marga*) as on the pillars;—and in the same manner one dialect employs *manusdnam* the other *munisánam*, 'of men;' but of this and other idiomatical peculiarities I shall hereafter have more to say when I shall have presented the remainder of these most interesting relics of antiquity to the Society's notice; fearing that I have almost transgressed the bounds of their patience in the observations to which I have been led by the one selected for my theme on the present occasion.

SIR·WILLIAM·JONES
MDCCXLVI–MDCCXCIV

Prinsep, Aśoka and Antiochus: A Peek into their Connected World

Suchandra Ghosh

James Prinsep's name will always be associated with Aśoka among his large trajectory of scholarly achievements, not only for the decipherment of Brāhmī, but also for providing deep insights into various facets of Aśokan edicts. This essay foregrounds such a facet in the sense that with the decipherment of two of these edicts, we became acquainted with five kings belonging to the Hellenistic world who are otherwise not known in Indian sources. Among these kings of prime importance was reference to Antiochus, the Seleucid ruler contemporary to Aśoka.

The name of Antiochus, the *Yona* king is well known to any student of Indian history as it appears in two of the Aśokan Rock Edicts, II and XIII. The context in Rock Edict II is Aśoka's assertion that medical missions for treatment of human beings and animals had been sent to the Yona (Greek) kingdom of Antiochus and in Rock Edict XIII, conquest of Dhamma had been achieved in these kingdoms (Basak 1959). The present essay by James Prinsep relates to these edicts in general, but reference to Antiochus in particular. His excitement in the reading of Antiochus's name in the second Rock Edict is discernible from the very beginning and more so as, in his own words,

> as long as the study of Indian antiquities confines itself to the illustration of Indian history it must be confessed that it possesses little attraction […]. But the moment any name or event turns up in the course of such speculations offering a plausible point of connection between the legends of India and the rational histories of Greece or Rome, — a collision between the fortunes of an eastern and a western hero,—forthwith a speedy and spreading interest is excited which cannot be satisfied until the subject is thoroughly sifted by the examination of all the ancient works, western and eastern, that can throw concurrent light on the matter at issue.

This desire to trace a connection with the Greek world was deeply entrenched in the minds of his contemporaries and later antiquarians or archaeologists too. Prinsep read the inscription almost correctly and drew our attention to other places mentioned in the inscription along with the content which is significant as it talks about medical provisions for men and animals. Moreover herbs, both for men and animals were to be stocked and planted along with the planting of trees and digging of wells on the roads for men as well as animals (For a translation, Basak 1959: 5–8, Tieken 2023: 437). Even though the idea of providing medical assistance along with other concerns for both men and animals struck him as something unusual, yet for him of singular importance was the presence of the name Antiochus who was a Seleucid ruler. The existence of 'a genuine Greek name in an authentic edict' excited him. Thus, the rest of the essay was dedicated to the identification of Antiochus as there were many kings bearing the same name. His attempt was also to ascertain how far the circumstances tallied with the Grecian and Persian records of these ancient times.

The problem in this essay is Prinsep's identification of Antiochus with Antiochus III also known as Antiochus the Great. This confusion stems from wrongly dating the reign period of Aśoka. Prinsep thought that many of the Aśokan edicts were dated around 219 BCE, which is close to Antiochus the Great's reign, c. 223 – 187 BCE. But Prinsep is not to be blamed altogether as when he was writing this piece, there were confusions regarding the date of Aśoka. B. N. Mukherjee opines that Aśoka succeeded Bindusāra in c. 276–75 or 273–72 BCE. According to the Mahāvaṁsa, his consecration took place four years after attaining sovereignty and so in the year 272–71 BCE or 269–68 BCE and he prefers 269–268 BCE as the year of consecration (Mukherjee 2000: 26).

The clinching evidence that finally proved that his regnal years were 'expired' years comes from Shar-i-Kuna bilingual Edict (Greek and Aramaic) of Aśoka. This edict was discovered in 1957 near present Kandahar in south-eastern Afghanistan (for further details, Chakravarti 2014, Chakravarti 2014 Mukherjee 1984: 32–35). It clearly says that Aśoka is issuing this edict after the completion of ten years, obviously meaning

the completion of ten years since his consecration. Following that calculation his seventh Pillar Edict which is considered to be his last edict, issued in his 27th regnal year, would be dated to 242–41 BCE. Therefore, Aśoka in no way can be a contemporary of Antiochus III and the Antiochus in his inscriptions has to be identified with Antiochus Theos II (Thapar 2003:182), though some scholars intend to identify him with Antiochus I Soter (Jansari 2021), Soter (Jansari 2021), whose reign period was 294 – 261 BCE which falls marginally within the commencement of Aśokan reign.

Prinsep deliberates briefly on the identification of the Yona (Yavana) country and then in the next section discusses the content of Rock Edict II where emphasis is given on providing medical assistance to both human and animal life. He introduces his readers to a hospital called Banyan Hospital in Surat, Gujarat which was providing similar services to men, animals, and visitors from the eighteenth century. The concluding section of his essay is rather anachronistic in the sense that he brings in Firishta, the sixteenth century historian, for a discussion on Aśoka's idea of taking care of his subjects through the construction of wells, planting trees etc.

It will be in order now to briefly situate the reign of Antiochus Theos, who is the main protagonist of Prinsep's essay, in the background of the Seleucid empire of the time which was in the 3rd century BCE, the largest empire in the world (Strooman 2021: 11–37). Their control over the strategic Taurus Mountain passes between Anatolia and Syria, as well as the Hellespont between Thrace and Anatolia, allowed them to dominate commerce and trade in the region. Again, the Seleucid empire should be understood in the context of an even larger 'Hellenistic' world of connectivity, cultural exchange and inter-imperial competition (Sherwin-White and Kuhrt 1993). There was a high degree of connectedness between Mauryan and Seleucid central Asia and Asoka's reference to sending emissaries to Yona country reflects the past connections. The reign of Antiochus I Soter is the period of Seleucid history in which we can identify the first coherent formation of Seleucid imperial ideology and of a Seleucid dynastic identity. Antiochus I

implemented for the first time or in new ways many facets of Seleucid rule that would come to define the dynasty's imperial approach for nearly all subsequent Seleucid kings. Unfortunately, the grandeur of Antiochus I's rule could not be seen in the rule of Antiochus II Theos. His kingship was mostly associated with the Second Syrian War against the Ptolemaic Kingdom of Egypt and several revolts by his satrap. During most of his reign he was preoccupied by the Second Syrian War, which ended in 251 BCE. He married Berenice, the daughter of Ptolemy II. Antiochus was already married to Laodice and had two sons. The result was instability at the Seleucid court and the mysterious death of Antiochus while reunited with Laodice at Ephesus. The neglect of the eastern provinces during the reign of Antiochus II probably contributed to the growing independence of Bactria under Diodotus, Parthia under Androgoras, and the region of Astauene under Arsaces. The satraps appear to have become increasingly dependent on the Greek and native inhabitants of their provinces to defend the northern and eastern frontiers, while the Seleucid king remained in the west (Will 1966: 234–248, 281–290).

The result of the neglect of the eastern provinces could be seen in the action of the Seleucid satrap of Bactria, Diodotus I. He issued silver coins in the name of the Seleucid emperor, Antiochus II but with his own image on the obverse and on the reverse an image of the Thundering Zeus, replacing the Seleucid seated Apollo type.The last Seleucid king in whose name coins were struck in Bactra was Antiochus II, who ruled between 261-246 BCE (Bopearachchi 1994, 2004).

With the two other Macedonian kingdoms the relations of the Seleucid continued to be the same under Antiochus II as under Antiochus I—friendship with the house of Antigonus and a state of war with Ptolemy. Demetrius, the son of Antigonus Gonatas and Phila, married a Seleucid princess, Stratonice, the daughter of the elder Stratonice and Antiochus the First. We may recall that Antigonus Gonatas, ruler of Macedon was mentioned by Aśoka among the other kings who lived beyond the territories of Antiochus Theos and Aśoka's emissaries reached his court too. Antiochus and Antigonas found a common enemy in Ptolemy II.

While Antigonus defeated the Egyptian fleet at sea, Antiochus reconquered much of Anatolia, including the cities of Miletus, an Ephesus, and also the Phoenician coast. With the two dynasties in Cappadocia the relations of the Seleucid court continued to be friendly. The region of Cataonia was ceded by Antiochus to the new Cappadocian kingdom as his daughter's dowry. The war with Ptolemy was still, as far as Asia Minor was concerned, a war of which the Greek states of the coast and the neighbouring islands were both the theatre and the prizes of victory. Ephesus was an important commercial centre of Asia Minor and it passed from Seleucid to Ptolemaic possession. This was balanced by the capture of Miletus by Antochus II. The citizens of Miletus proclaimed Antiochus Theos (God) for liberating the city from a tyrant supported by the Ptolemies. One must remember that this was a way of establishing a cult empire, while Antiochus extended Seleucid control in Asia Minor, including expansion into the Troad and also made forays into Thrace. He also established the freedom of the other Ionian cities. Further, he continued his predecessors' policies of encouraging the foundation of cities in his realm. Suddenly in the last years of Antiochus II we find a complete revolution in the relationship between the powers. The tedious war between Seleucid and Ptolemy, which had seemed to have become a permanent feature of the world, ceased. To formally conclude the war, Antiochus married Ptolemy II's daughter Berenice at Antioch in 252 BCE. It is implied that Ptolemy took the initiative in proposing a peace to Antiochus (Sherwin-White and Kuhrt 1993).

The continuous attrition caused by the wars with the Ptolemies over Syria was detrimental to the growth of the empire. The strife within the family added to the problems of the empire. As a result of Antiochus II's unexpected death, the young Seleucus II was the first Seleucid monarch not to have served as co-ruler in the east. This failure by Antiochus to appoint a co-ruler over the eastern satrapies may have contributed to the eventual loss of the eastern provinces, particularly Bactria and Parthia, as the satraps lacked a royal figure to serve.

In other matters Antiochus Theos did not bring any new reform or change, but there were marriage alliances through which he consolidated

the empire. If we look at the devices used in his coins, we find that he continued the iconographic pattern of his father Antiocus I. This could be regarded as an attempt to portray dynastic continuity. His most widespread coinage remained the Apollo-on-the-omphalos type. His continuation of seated Heracles as a reverse deity was the continuation of a similar device used by his father, though limited in circulation. This type was used by Antiochus II to demonstrate his benefactions to Asia Minor and celebrate his success in the Second Syrian War. The overall impression gained from Antiochus' coinage is that it reflects a Greek characterisation of the Empire (Erickson 2009: 134–136).

The above brief overview of the reign of Antiochus will help us to finally grasp the connection between Antiochos Theos (261 – 246 BCE), Antigonas Gonata of Macedon (277 – 239 BCE), Ptolemy Philadelphus of Egypt (284 to 246 BCE), Magas of Cyrene (285-258 BCE), who was the king of Cyrenaica and became a member of the Ptolemaic dynasty, and Alexander king of Epirus (272 – 255 BCE), mentioned in the Thirteenth Rock Edict of Aśoka (Basak 1959: 63 – 73). These five rulers were located much beyond the Mauryan empire but were engaged with Antiochus Theos, whose eastern boundaries remain the closest to the Mauryan kingdom in some kind of relationship, either of friendship or of bitterness. The connected world of the Seleucids was known to Aśoka and it could be his desire to connect to these rulers through his idea of Dhamma. What finally happened remains elusive as these edicts are the only testimonial to any kind of claim of contact between Aśoka and the western world.

References

Basak, R.G. [ed] 1959. *Aśokan Inscriptions*. Calcutta: Progressive Publishers.

Bopearachchi, Osmund 1994. L'independence de la Bactriane'. *Topoi* 4/2: 519–531.

Bopearachchi, Osmund 2004. La politique monītaire de la Bactriane sous les Séleucides. *Topoi*, Suupl. 6: 349–369.

Chakravarti, Ranabir 2014. The Mauryas. *History of Ancient India-III: The Texts, Political History and Administration Till c. 200 BC*, (eds.) Dilip K. Chakrabarti and Makkhan Lal, pp. 231-75. New Delhi, Aryan Books International.

Erickson, Kyle Glenn 2009. *The Early Seleucids, their Gods and their Coins*. Unpublished Ph.D. thesis Submitted to the University of Exeter as a thesis

for the degree of Doctor of Philosophy in Classics and Ancient History. Available at https://www.researchgate.net/publication/42744624_The_early_Seleucids_their_gods_and_their_coins [accessed Jul 05 2024].

Jansari, Sushma 2021. South Asia. The Graeco-Bactrian and Indo-Greek World (ed Rachel Mairs), pp. 38–56. London and New York: Routledge.

Mukherjee, B. N. 1984. *Studies in the Aramaic Edicts of Aśoka*. Calcutta: Indian Museum.

—— 2000. *The Character of the Maurya Empire*. Calcutta: JB Enterprises.

Sherwin-White, Susan and Amélie Kuhrt 1993. *From Samarkhand to Sardis: A New Approach to the Seleucid Empire*. Berkeley/Los Angeles: University of California Press.

Strootman, Rolf 2021. The Seleukid Empire. *The Graeco-Bactrian and Indo-Greek World* (ed Rachel Mairs), pp. 11–37. London and New York: Routledge.

Thapar, Romila 2003. *A History of Early India from the Origins to AD 1300*. Delhi: Penguin.

Tieken, Herman 2023. *The Aśoka Inscriptions, Analysing a Corpus*. Delhi: Primus Books.

To cite this article
Ghosh, Suchandra 2024. Prinsep, Aśoka and Antiochus: A Peek into their Connected World. *Journal of the Asiatic Society* 66/2: 305–311.

ISSN:0368-3308

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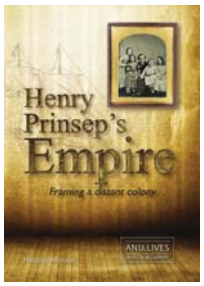
Malcolm Allbrook. *Henry Prinsep's Empire: Framing a Distant Colony*, Australian National University Press, Canberra, 2014, ISBN: 978-19-2502-160-8 (PB), 978-19-2502-161-5 (EB), xx+343.



In definitional terms, a biography is a detailed third-person account of one's life. It involves more than just bare facts and events; it is also meant to portray the subject's experience and ideologies retained in memory and materials—oral, written, and pictorial. And the best biographies are sympathetic. Malcolm Allbrook's *Henry Prinsep's Empire* is a sympathetic biography. Writing and editing for years as the managing editor of the *Australian Dictionary of Biography* and editor of the *Australian Journal of Biography and History*, the present title stands as the final fruition of his doctoral thesis titled 'Imperial Family: the Princeps, Empire and Colonial Government in India and Australia' (Griffith University, 2009). The volume is one of the most recent publications on historical biography and life writing, and demonstrates Allbrook's classic use of a range of documentary source materials, including letters, paintings, photographs, journals and archives of visual and oral histories.

Published about a decade ago, the volume remains a welcome work on an expansive and remarkable archive—the Prinsep archive of the State Library of Western Australia (J.S. Battye Library of Western Australian History)—that constitutes a long chronicle of cross-

To cite this review
Mandal, Shreya 2024. [Review of] Henry Prinsep's Empire: Forming a Distant Colony. *Journal of the Asiatic Society* 66/2: 313–318.
ISSN:0368-3308

generational private writings of the Prinsep family (including their extended branches and that of business acquaintances), essentially spanning the seventy-eight years life of Henry Prinsep (1844–1922). In Allbrook's words: 'This is an archive that illuminates the public and private worlds of a colonial family, from attitudes about the bigger questions of politics, race, religion, the affairs of the Empire to the domestic details and internal life of a colonial family, their sentiments and emotions, networks and relationships' (p. 14). The author makes a compelling assessment of how and how much history can be written from such a corpus. True to its title, the book is not just about Henry Prinsep or the Prinsep family, but a discursive interpretation of the sustenance of an empire: a deeply personal space with distant overseas networks of family, friends and acquaintances from every quarter of the British imperial world. The historical framework of the book brings together individuals, networks of their personal and public lives, and the broader narratives of state and colonial developments.

Before I proceed, let me put on record that this Henry is not H[enry] T[hoby] Prinsep, the brother of James Prinsep. He is Henry Charles Prinsep, the nephew of James, the son of one of his elder brothers, Charles Robert Prinsep (1789–1864).

The Prinsep Estate in Western Australia, the key purpose of which was to export horses to India, had been established by Charles Robert Prinsep, a member of a distinguished family and Advocate General of the English East India Company. When a young Henry, Charles's son, inherited the estate but soon sold off and joined colonial civil service, it led the way to his role as the first Chief Protector of Aborigines, a position for which Henry Prinsep would be best known in Western Australian history. With this background at the fore, the opening chapter introduces the archive under study and locates its primary subject, Henry Prinsep, at the intersections between the domestic and trans-imperial elements of his life. The author here probes into a historical figure not only in the latter's capacity as a colonial bureaucrat, but also looks beyond to find a man who does not fail to remain in touch with his family overseas and writes to his siblings with impeccable regularity. The introduction notes the immense utility of the digitization of voluminous archives that expands the capacity to situate a personality within an extensive network of people, time and spaces.

The second chapter, which discusses Prinsep's forebears and their life and career in colonial India, was particularly enjoyable. Allbrook brings in an interesting differential in his reading of personal memoirs vis-à-vis a novel (*The Baboo* by Augustus Prinsep) as historical sources of British imperial life in the early nineteenth century. Both are set on the same stage, and the author does not fail to note the different degrees of complexity and depth of each genre and the unique perspectives each has to offer. In his narrative, Allbrook also provides a glimpse of the governed 'others' and the interactions thereof in colonial India. Additionally, there is a separate sub-section on James Prinsep and his extraordinary range of scholarly activities. The final sections of the chapter conclude by delivering the idea that the Princeps of the early nineteenth century were colonisers who were thoroughly involved with the British cultural formations in India and not only helped distribute and perpetuate the ideologies, imageries and assumptions of the empire, but also made a fortune out of the latter through their positions in administration, Orientalist research and commercial activities. The remaining eight chapters carry forward a consistent portrayal of the latter Princeps too as empire-builders of imperial Britain. The third chapter focuses on the nature of the metropolitan world in which Henry Prinsep was growing up, his Anglo-Indian community in England, the Calcutta connection of the Princeps and their ideologies surrounding the Indian colonial project. The chapter goes on to illustrate how the Anglo-Indian identity of the Princeps' revealed itself through their social, professional and familial networks. As 'benevolent' colonials, the Princeps continued to participate in the debates around the *Charter Act* of 1833 and the high-pitched contentions regarding the indirect rule of the British administrators in India. In Chapter 4, Allbrook provides an exploration of the 'Indian Ocean Connections' of the family, beginning with Henry Prinsep's voyage to Western Australia in May '1866. The narrative finally focuses on Henry and his commercial ventures. The history takes us on a journey from Calcutta as a profitable imperial hub and Singapore as an emerging alternative for investment, to the weakening of the East India Company monopolies in the 1830s and the consequent quest for newer Indian Ocean commercial ventures. In the final sub-section of the chapter, Allbrook takes us through many a failed business of Henry

Prinsep's in the Indian market and his mounting bankruptcy in Western Australia. The reader feels the gloomy note that the chapter ends with.

Keeping with the preceding observation of Henry Prinsep's shift from businesses into a more colonising role in Western Australia, the next five chapters follow Prinsep as he and his family lived almost half a century in Australia. It was also a period that saw the institution of oppressive government policies and laws within a colonial system, which reigned (or ruined) the lives of the Aboriginal people through acts and arms for most of the 20th century. The book takes you through a series of appalling accounts of the ensuing interactions, interventions and resistance between the traditional owners of the land and the white settler population. Allbrook devotes sections of Chapter 5 to reproducing an account of the range of activities of the colonists, from oblivious curiosities to blatant savageries. Nonetheless, episodes such as the massacres at Pinjarra (1834) and Busselton (1841) deserve more than an incidental mention. Allbrook expounds: 'This was a pattern of behaviour that recurs throughout narratives of British colonialism, in which are found conceptions of indigenous people being like children, who require short, sharp punishments to keep them under control, contradicting humanitarian principles of non-violence and equality before the law. Men such as John Bussell and Henry Prinsep, who professed to abhor violence, were able to rationalise its use to control unruly workers and servants' (p. 156). More riveting are the sections employed to serve glimpses of people like George Coolbul, Fanny Balbuk, and Ngilgie as liminal figures and the historical context in which they were serving and surviving with the colonial onslaughts of their kinds. The following chapter continued with the narrative of how the settler colonialists established their home institutions in Australia and replicated the same orders and hierarchies of social relationships as in Europe, while the Indigenous 'others' continued to face incarceration and systemic marginalisation at the hands of the now-landowning colonists. Chapters 6 and 7 deliver lengthy discussions on Henry Prinsep's family life, his circle of acquaintances, a career in the civil service, his participation in the internal politics of the colony, and his artistic involvement. Crucial here is the perception that the author lends to the imagery in Prinsep's photographs—of a world

that was familiar, inhabited by families who regularly interacted with each other, together with a contrasting reflection of the over arching reality of the marginalised lives in the colony: '[of] hunger and dispossession, alienation from the system of power and authority, loss of control over destinies and life freedoms' (p. 205). While Chapter 7 focuses on the social and cultural world of Henry Prinsep as a colonial elite, Chapters 8 and 9 explore his role as the Chief Protector of Aborigines. Allbrook critically assesses the period when Prinsep often found himself uncharitable of the state policies and had to balance his approaches to colonisation with the latter. It was his ideas for segregation, the creation of separate protected reserves for the Aborigines and the Whites, and legislative interventions against interracial relationships that gave way to the introduction of the infamous *Aborigines Act* of 1905. The author notes that Henry's writing during this time demonstrates a parallel consciousness of the Australian colony as part of a global system and unifying ideologies of the late nineteenth century British imperialism. The book further illustrates how the early efforts to document and enumerate the Aboriginal population across Western Australia marked the beginning of a system of official data collection that ultimately evolved into a detailed archive of the Indigenous people. The final chapter is relatively shorter and ends the long narration with a somewhat nostalgic note of the post-retirement days of an ageing Henry Prinsep.

Allbrook's book is a fascinating read of the *mentalité* of the time. His prose is splendidly crisp and clean, with his creative twists in the chapter titles and sub-titles. The work is a tidy volume of a little over 350 pages of text along with contemporary pictures, broken into the ten relatively succinct chapters. While each chapter is magisterial on its account and narrates a different part of the personal-political timeline of Prinsep's life, the ten chapters also weave together a fascinating story of nearly two centuries of British empire-making across Britain, India and Australia. Particularly welcome is a biographical sketch of the family from 1844 to 1922 at the beginning of the book and the plentiful collection of rare pictures, which are integral to the value of the book rather than simply illustrations. The bibliography and the alphabetical index at the end of the book, in addition, aid the reading of this profound and meticulous study.

The author has brilliantly penned a very niche anthropological take on a very expansive historical archive. He approached the archive chronologically, although his commentary is more descriptive than a mere timeline of the events. The book does not have a tunnel focus on only a singular subject, but offers lively glimpses of the dynamics of the contemporary world, both in the colonies and at the British front. The narrative is exquisitely full of details and interesting anecdotes, delving unflinchingly into the poignant realities of colonial politics in India and Australia. My favourite part is the debates and heated contention between the Princeps and Thomas Macaulay over the overturn of Orientalist policies on education.

Overall, this book is an abundance of observations, analyses and inferences—a timely and valuable addition to existing biographical literature, and a novel and outstanding contribution to historical-anthropological methodology in social sciences. Although I like how the text is remarkably lucid, the reader may get lost in the mires of details, especially with the winding discussions in the second half of the book. The narration keeps swinging to and from the ensuing debates in the political circles and back to the sketches of the lives of the Prinsep family, sometimes with too many details and excerpts that do not serve well with the overall flow of the thesis. Secondly, and perhaps more importantly, the language of the history (albeit biographical) of a colonial empire can hardly afford to be neutral and uncritical—a glaring lacuna in Allbrook's writing. His reading of the violent subjugation and dispossession of the traditional owners of Western Australia into a servile state of living, for instance, the growing desperation and disquiet in the lives of the Aboriginal communities, and a slow but steady invisibilisation of their people from the image of Australia, felt rather unfulfilling and distant at best.

Finally, the overall production of the book is good, with its text and gallery of visual resources. As a biography and a work of history, the book is suitable for a wide audience—students and researchers in the academic community, especially those delving into the areas of the history of colonialism, and the imperial histories of Britain and her overseas networks of commerce and politics.

Shreya Mandal

GUIDELINE FOR CONTRIBUTORS

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BOOK

1. Das, S.R. 1978. *Rājbāḍīḍāṅgā 1962*. Calcutta: The Asiatic Society.
2. Chimpa, Lama and Alaka Chattopadhyaya (trans.) 1980. *Tāranātha's History of Buddhism in India* (ed. Debiprasad Chattopadhyaya), Delhi: Motilal Banarsidass Publishers Pvt. Ltd.
3. Bhattacharyya, Benoytosh 1958. The Indian Buddhist Iconography Manily Based on the SĀDHANAMĀLĀ and Cognate Tantric Texts of Rituals. Calcutta: Firma K.L. Mukhopadhyay.

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BOOK IN OTHER LANGUAGE

Mitra, Rajendralala 1854 [ŚE 1776]. *Prākṛta Bhūgol Arthāt Bhūmaṇḍaler Naisargikāvasthā-Barṇan-BiṣayakGrantha* (i.e., *Physical Geography or a Treatise on the Physical Features of the Earth*, in Bangla), Baptist Mission Press, Calcutta.

Note: The date in any other system of reckoning (viz., ŚE or BS), if any, should immediately succeed the year of publication, in square bracket.

REPRINTED BOOK

1. Rao, T.A. Gopinatha 1914. *Elements of Hindu Iconography*, vol.2, part 2. Madras: The Law Printing House [rep. 1999, Delhi: Low Price Publications].

Note: The year of reprint comes at the end in a square bracket, NOT aftername(s) of author(s).

BOOK CHAPTER

CONTRIBUTION

Sanyal, Rajat 2008. Decorative and Non-Decorative Bricks. Contribution to, Asok Datta. *Excavations at Moghalmari: First Interim Report (2003-04 to 2006-07)*, Kolkata: The Asiatic Society.

JOURNAL

Rajani, M.B. 2016. The Expanse of Archaeological Remains at Nalanda: A Study using Remote Sensing and GIS. *Archives of Asian Art* 66/1: 1–23.

Note: 1. DO NOT write place of publication, editor etc. for journal citations.

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UNPUBLISHED THESIS

1. Gunderson, Warren Martin 1969. *The Worlds of the Babu Rajendralala Mitra and Social and Cultural Change in Nineteenth Century Calcutta*, unpublished Ph.D. Thesis submitted to the Faculty of the Division of the Social Sciences, Department of History, University of Chicago, (December).
2. Revire, Nicolas 2016. *The Enthroned Buddha in Majesty: An Iconological Study*, unpublished Ph.D. thesis submitted to the Universitī Sorbonne Nouvelle – Paris 3 http://www.thesis.fr/2016USPCA157/abes/These_REVIRE_Nicolas_2016.pdf

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Dubey, D. P. 2012. A New Royal Pāla Seal. *Journal of History and Social Sciences* 2/1.,*http://www.jhss.org/archivearticleview.php?artid=119* (accessed 3/7/2019).

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Sir William Jones
on the publication of the Asiatic Society

ISSN : 0368-3308