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# Analyzing Ancient Ayodhya City Planning Through Ancient Text

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**Abstract:** A significant aspect revolves around the astronomical positioning detailed in Sage Valmiki's Ramayan. By employing the "Platinum Gold" software, which enables simulation of the celestial sphere, extraction of English calendar dates corresponding to events mentioned in the Valmiki Ramayan, correlating them with planetary positions has been analyzing in the paper first. The findings reveal intriguing dates for significant events in Lord Rama's life, such as his birth, battles, and the completion of his exile. The meticulous alignment of these dates with the narrative in Valmiki's Ramayan underscores the precision and authenticity of the ancient text. The study also delves into the portrayal of Ayodhya, the ancient city described in the text, providing insights into its urban planning, fortifications, housing, and cultural significance. Through a multidisciplinary approach encompassing scientific methodologies and textual analysis, this work sheds light on the historical and cultural richness encapsulated in ancient Indian scriptures, offering valuable insights into the Vedic Ramayan eras

**Keywords:** ayodhya, city planning, platinum gold software

## I. INTRODUCTION

In their collaborative work titled "Historicity of Vedic and Ramayan Eras," Ms. Saroj Bala, a retired IRS officer and prolific author specializing in scientific dating of ancient events, along with Shri Kulbhushan Mishra, an archaeology enthusiast, delve into the application of various scientific tools and technologies for dating ancient events. This book meticulously explores methodologies such as computer-aided extraction of planetary references from ancient texts, planetarium software for astronomical dating, satellite-based remote sensing, underwater exploration, radiocarbon and thermo luminescence dating, human genome studies, and paleobotanical, paleo-zoological, and paleoclimate studies. This motivates to analyze the the city planning of the Ayodhya keep spiriuallity aside from Valmiki Ramayana.

## II. METHODOLOGY

To analyze the ancient city planning of ancient city ayodhya 3 book has been considered the first one is very recently written by Ms Saroj Bala "maned" Scientific dating of ancient event". In this book authenticity of Valmiki Ramayan has been tested using software. The second book is Ramayana by Valmiki, geeta press publication Ramayana has been considered for this study. The third book is Ayodhya mahatmya extracted from the Skandh Puran. The city planning mentioned in these has been analyzed in this study.

## III. LITERATURE STUDY

Ms Saroj Bala who is a retired IRS and author many books based on the scientific dating of ancient event along with Shri Kulbhushan Mishra who also has interest on archeology, named :historicity of vedic and Ramayan eras. In this book they describe about the various tool of science and technology that can be used in dating the ancient events. The tool which are mentioned –

- 1) Computer aided extraction of planetary references from the ancient books.
- 2) Planetarium software for astronomical dating of such references.
- 3) Satellite based remote sensing technique.
- 4) Underwater exploration and geospatial technologies.
- 5) Radiocarbon dating, thermo luminesces dating methods
- 6) Human genome studies, biological and cultural anthropology
- 7) Paleo botanical, paleo zoological and paleoclimate studies.
- 8) Geographical and geological research

In above mention all the technique has been used by author and detailed study has been done by her. Here the study which they both done on the astronomical positioning is referred here based on the writings of sage Valmiki's Ramayan. In the Valmiki Ramayana various event related to lord Rama has been mentioned with the astronomical positioning of the planet from that specific location.

The zodiac constellation, stars and planet which are visible where mentioned in the book for different event. Ms. Bala clarifies clearly in the book that same arrangement of constellation, start and planet can only repeat after 25,690 years later. So there is no chance that same situation can be repeated in the history. For this study “platinum Gold” software was used. This software helps in simulating the celestial sphere around the earth. This permit user to create celestial sphere on their computer at any time of day. This actually create the sky map of any time of past, present and future. Ms Bala was able to extract date of the events which explained in Valmiki Ramayan and events which occurred in lord Rama’s life according to English calendar. In Valmiki Ramayan the events which are mentioned with planetary positioning are as follows:

- a) Birth of Lord Ram.
- b) Battle with Khar
- c) Lord Hanuman’s return journey from lanka.
- d) Lord hanuman reached Sunaabh Hill
- e) When Ravan was killed
- f) Completion of 14 years of exile

The vedic astronomy which was mentioned in the Valmiki Ramayan entered in the software of the above mentioned event and the dates which was obtained are:

- Birth of Lord Ram.- 10<sup>th</sup> January 5114 B.C.
- Battle with Khar- 7<sup>th</sup> October 5077 B.C.
- Lord Hanuman’s return journey from lanka - 14<sup>th</sup> September 5076 B.C at 6:30 am
- Lord hanuman reached Sunaabh Hill- 14<sup>th</sup> September 5076 B.C. at 10 am
- When Ravan was killed- 4<sup>th</sup> December 5076 B.C.
- Completion of 14 years of exile- 2<sup>nd</sup> January 5076 B.C.

All the event the sequentially happened in lord Ram ‘s Life matched the time period as described in the book. There is no glitch has been found in the entire description of the dates. To analyze more geographical, geological and archeological evidences has been collected to prove the authenticity of the Valmiki Ramayan. Genetic research and oceanographic research which majorly based on the sea level curve also establish the fact of authenticity of the book.

The authenticity of the fact which is written in the Valmiki Ramayan discussed here because if we are analyzing the Ayodhya city, the first representation of the area is mentioned in this book only. So to start our study on the ayodhya city, the Valmiki Ramayan is referred. In Valmiki Ramayan, Ayodhya has been mentioned as Nagaar, Nagarii and Nagaram. All three words has same meaning, it is used only to fit the rhyming of the shlokas. The meaning of nagaram is a district which accommodated urban and rural area both. As some places Ayodhya has been referred as purii as well. Now the meaning of purii is an area where rulers of the kingdom and his men’s which helps in running the kingdom reside. In today’s time the difference between pur and nagar has been diluted for example Dispur and itanagar where both are capital city of indian state but the extension of the space has been used differently. In contemporary time we can compare the Ayodhya city which describe by the Valmiki is capital city. So, Ayodhya is a district where Urban and rural was existing with an area where the administrator of the area lives, now this capital area where administrator is residing are the administrator of the whole kingdom. In Valmiki Ramayan it is mention that Ayodhya is a part of Khosla Kingdom and it is in the bank of Saryu river. In Valmiki Ramayan, Kosal is mentioned as a *Mahan janpada* which means great kingdom. Now the question arises that why it is not mentioned as a only Janapada, why Mahan is added to it? If we take example from the history, the Roman Empire is an Empire, it is not a kingdom, Because under roman empire there are various countries or kingdom comes. So, when there is group of kingdom working under some organization that will be termed as an empire. In Valmiki Ramayan it has been mentioned when the management of Ayodhya is elaborated that more than 100 kings use to come and pay their taxes to Ayodhya. A country only payes taxes when it is coming under any empire. The area which comes under Ayodhya empire are Sindhu, Sauvira, Saurashtra, Paths, Vanga, Anga, Magadha, Matsya, Kasi, Kausala.

#### A. City Planning

In Valmiki Ramayan the size of the Ayodhya Nagar is mentioned. The unit which is used to describe the length is yojaan. So the dimension which describe is 3 yojaan in width and 12 yojan in length. In vastu Shastra the shapes for city which are mentioned are square, rectangle or semicircle(bow shaped). Ayodhya according to Valmiki Ramayan was a rectangular shaped city. We have seen that our ancient civilization were also based on the grid iron pattern. Now the 1 yojan is equals to the 14.5 kilometer so the dimension of the city would be 43.5 kilometers X 175 kilometer. The total area would be 4692 sq kilometer.



### B. Gates

In Valmiki Ramayan apart from city planning, there has been description of fortification and gateways around the city. The outer gateway to enter the city had arched opening. These gateway are present in major direction. Kalidas, the great poet of Sanskrit literature elaborate Ayodhya city planning in his writing as a city who has 4 gates in all major direction.

### C. Houses

The houses which were present in the city are majorly 3 in sizes which are small, medium and large. Few building are up to 7 stories. There is clear mention of shilpa Shastra and vaastu Shastra in the book. The description of palace of ayodhya and also few houses of nobels were compared to Vimaana and elaborated the grandeur of the house as that these buildings are many time of Vimaana. Now the Garbha griha of temple is also called as Vimaana and these Vimaana are mostly pyramidal in shape.

Torana were also part of entrance of the building . torana is a sanstrit word and its meaning is beautifully designed arch.

Ayodhya mahatma is also one of the another important book. There are 18 purana, in which Skandha Purana is the biggest. This book is divided into 9 part and each part explain the different region. explaining about the Ayodhya city. This book is part of Skandha Purana. This book explain importance of various places existed in the city for the hindu devotee. This book elaborate various places with their geographical location and imporatant some places is mention with their geographical location and measurement taking reference with other adjacent pilgrimage site. The geographic location of the city is referred from the saryu river, the area is located from the confluence point of river tilokadi and ghaghra. In the river the second most important point refered is Sahastradhara dhara. The referencing of Ayodhya Kshetra is taken from the sahastradhara. Although it is not mentioned any where that Ayodhya khsetra is habitable urban area or it is the influence area of the city or it is a boundary area of this city encompassing urbaan and rural area both. The ayodhya kshetra was spread over 2 yoja from east to west and 12 yojan from north to south which actually ends at tamasa river.

## IV. CONCLUSION

Through this study a glimpse of study planning of Ayodhya city can be seen and analzed. Various myths and observation has been checked although there are immense literature is available which can be utilized in the studying the planning and management aspect of the Ayodhya city and learning can be drawn from the study for current practical use.

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