

ENDANGERED INDIGENOUS NEPALI INSCRIPTIONS AND NUMERAL SYSTEMS

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Dedicated to Prof. A.K. Agarwal on his 70th Birth Anniversary

Abstract: Nepal is the multicultural, multilingual, and multiethnic and diversity in demographic flora and fauna. So, she is reach in indigenous properties in every entity. For cultural as well as lingual perspective she has many inscriptions and numerals with different symbols. In Nepal in different time periods of different communities used very different kinds of numerals. The numeral systems; like Brahmi, Ranjana, Lichhavi, Hindu-Arabic, Devanagari, Saptakshari letter, Golamol, Litu-mol, Kwemol, Kunmol, Hinmol, Pachumol and many more are highly popular in Nepal. But nowadays some our indigenous inscriptions and numerals are going to be disappeared and we need awareness to preserve these numismatic and fundamental indigenous inscriptions and numeral for our new generations. So, the aim of this paper is to encourage for documentation of the various numeral systems that going to disappears and currently spoken 14 national languages of the seven provinces of Nepal.

Keyword and Phrases: Endangered, Indigenous, Inscriptions, Numerals.

2010 Mathematics Subject Classification: 97A30.

1. Introduction

It is ground reality that our country Nepal is as our mother and she is multicultural, multilingual, and multiethnic and diversity in demographic and flora and fauna. So, she is reach in indigenous properties in every aspect of the above mentioned entities. For cultural as well as lingual perspective she has many inscriptions, that is lippies with different symbols. Few numeral systems practices

in Nepal was exposed as “Numeral Systems in Nepal” which also expressed some comparisons and contrast among them. In Nepal in different time periods in different communities used different kinds of numerals [1,2]. The numeral systems, like Brahmi, Ranjana, Lichhavi, Hindu-Arabic, Devanagari, Saptakshari letter, Golumol, Litumol, Kwemol, Kunmol, Hinmol, Pachumol and many more are highly popular in Nepal [7]. But nowadays some of our indigenous numerals are going to be disappeared and we sadly say why we do not preserve these numismatic and fundamental indigenous evidences for our new generations? Some accountability of protection of numerals was highlighted through a popular journal of Ramanujan Society of Mathematics and Mathematical Sciences [3]. Numeral systems are the basic supporters of human beings and anthropology. So, it is a field of research of an anthropologist that is a person engaged in the practice of anthropology. Anthropology is the study of aspects of humans within past and present societies and their activities. Social anthropology, cultural anthropology, and philosophical anthropology, mathematical anthropology study the norms and values of societies. Linguistic anthropology studies how language affects social life, while economic anthropology studies human economic behavior. Mathematical anthropology studies how numerals and numbers affect daily mathematical events either from kitchen, bed room to highly developed scientific phenomenon, etc. Biological (physical), forensic, and medical anthropology study the biological development of humans, the application of biological anthropology in a legal setting, and the study of diseases and their impacts on humans over time, respectively.

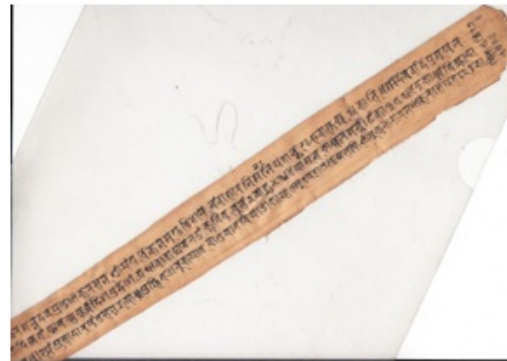
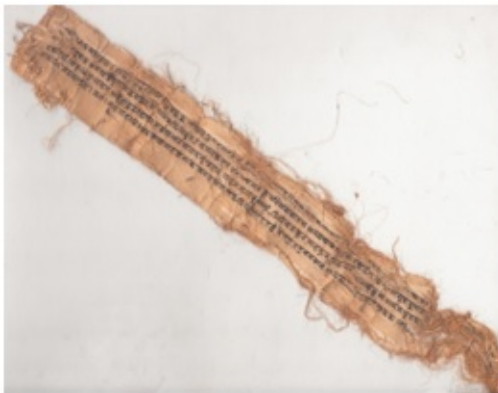
In some personal collections there are scattered many indigenous Nepali numerals. Some collections found by Prof. Ram Man Shreshtha are illustrated below. According to him in his collection there are very old documents around 200 years earlier. In the following papyrus (perhaps these were prepared in *Agave Americana* Linn, in Nepali it is Ketuki or from bamboo). He has so many such manuscript collections and experiences. So, the writers feel that Prof. Shreshtha as the living legends for mathematical sciences regarding as the expert, consumer, preserver of old manuscript etc. And it is not as exaggerations among the various mathematical communities.

According to K. P. Jayaswal we had no modern work which dealt with the chronology and history of Nepal from the earliest time to 880 A. D. For the period from 880 A. D., the foundation of the Nepal Era to the eighteenth century that the present situation. The chronology and history have been worked out by Dr. C. Bendall and embodied in the introduction to his *Nepal Catalogue of Manuscripts*, published by the Royal Asiatic Society of Bengal [5]. On the declaration of Lichhavi era Prof. Naya Raj Pant also announced many chronological scenarios of Nepal [6].

Pant explored the Lichhavi period was started from 576 to 880 [6]. In this book Pant used Lichhavi numerals to denote the page numbers up to 53. In writers concern such type of numbering page is not found elsewhere rather than this book [4].

2. Evidences of Endangered Manuscript of Nepali Inscriptions & Numeral Systems in Nepal

Here, the main concern of the writers is how to preserve the endangered classical (indigenous) Nepali inscriptions and the numerals that practiced in Nepal in earlier time. So, some illustrative materials are collected from the help of Prof. R. M. Shreshtha and they are illustrated below as evidences. All these collections from his personal collections.



Here, we can see a metallic stamp which is known by Nepali name Lal Mohar (authorized stamp). This stamp gives the legal scenario of this document. Such stamps are also seen the manuscript expressed below too.

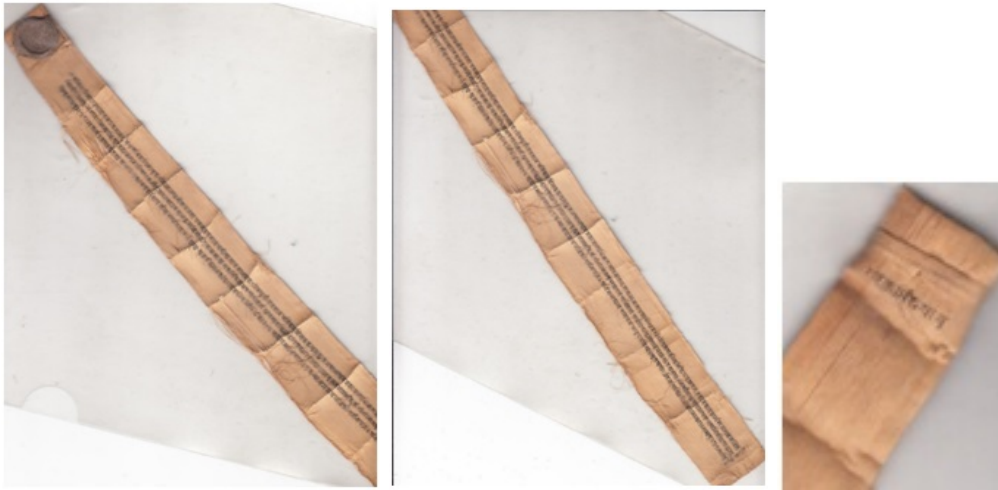
According to Shreshtha [8,9] today Nepal is rapidly facing the increasing threat

of her indigenous numeral systems of different ethnic and languages groups due to lack of concept and knowledge of inscriptions in modern generations. The younger generations need to attention to lift up the traditional numeral systems and adopt the borrowed ones; this phenomenon is especially prevalent in countries like ours. An indigenous numeral system is even more endangered than the other systems even if the language like Nepal Bhasa, Magar Bhasa, Tamang Bhasa, Gurung Bhasa, Maithili Bhasa, Bhojpuri Bhasa, Awadhi Bhasa, Tharu Bhasa, etc., is not itself endangered. This is because during rapid globalization, the act of counting in a minority language is left to older members of the community, while the younger generation is often found to tend to shy away from native numerals and prefer to express numerals in Hindu-Arabic or some other dominant languages, with the result that the traditional numeral systems of most small languages are being rapidly replaced by those of dominant languages.



The centrally recognized national language Nepali and the international language are additional ones. Research on numeral systems of the fourteen national

language systems appears to be at a very elemental stage. This is a very crude and fragmentary compilation only of a couple of minority languages of Nepal. It needs a lot training and encouragement to new generations and possibly drastic improvement [8].



As of now, this could not only a very interesting area of ethno mathematics study and Research in Nepal but also an academically valuable reference resource for those involved in the academic disciplines of Linguistics, Anthropology, Ethnology, History, and Philosophy of Mathematics [8]. Some mathematical documents found from Prof. R. M. Shreshtha are again added below. These numeric symbols are practice in Nepal. These numerals are developed in Nepal around the 2nd century B.C. In the following table clearly, it seems that these are Brahmi, early Lichhavi, later Lichhavi, Kirats, Ranjana, Bhujimol, Newari, Tibetan and Chandrinagari. These numeral are found in Pragyaparmita of the Nepali documents at different places of Nepal, like Birpustakalaya, etc. These are own properties we shall need to conscious to protect them.



3. Conclusions and Recommendations

How we will expose our scenario if not remains our indigenous developments! So, in short, it concluded that some of our fundamental developments of Inscriptions and numeral systems in Nepal seem to be disappeared. Due to which we will lose our ancestors' contributions and our originality and indigenous scenario not only of Nepal, perhaps it will hamper to the cultural heritage of the South Asian sub-continent and the world. So, we should be careful to protect them by any means like preparation of archaeological, cultural, lingual and mathematical sciences, mathematics education museums with preserving Nepal and hence, South Asian sub-continental and world's scenario as cultural and academic heritage through every indigenous development of Nepal and Nepali with regarding South Asian sub continental developments.

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