An Introduction to Indigenous Kashmiri Numerals
(A Linguistic Contribution to Kashmiri Language during the Dogra Period)

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Research study under Ph.D. Topic:

Modern Education, Healthcare and Scholarship in Kashmir During the Dogra Period

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Paper Read & Presented at the International Conference:

‘In Dialogue with Mahatma Gandhi’

November 8 & 9, 2019.

Venue: Shyama Prasad Mukherji College for Women, University of Delhi.

DOI: 10.37648/ijrssh.v10i03.043

Received: 17th August, 2020; Accepted: 07th September, 2020; Published: 14th September, 2020

Mahatma Gandhi on National Language, Script & Provincial Languages

“Provincial patriotism is good where it feeds the larger stream of all-India patriotism, as the latter is good to the extent that it serves the still larger end of the universe. We need a common language not in suppression of the vernaculars, but in addition to them. If I could have my way, I would make learning of Devanagari script and Urdu script, in addition to the established provincial script, compulsory in all the provinces”. (Young India, August 27, 1925)

“The languages of India have suffered impoverishment. We are too near our own times correctly to measure the disservice caused to India by this neglect of its great
languages. The masses can make no solid contribution to the construction of Swaraj. It is inherent in Swaraj based on non-violence that every individual makes his own direct contribution to the independence movement. The masses cannot do this fully unless they understand every step with all its implications. This is impossible unless every step is explained in their own languages”. (Constructive Programme, pp19-20)

“Every day lost in making this necessary change is so much cultural loss to the nation. The first and foremost thing is to revive the rich provincial languages with which India is blessed”. (Harijan, September 21, 1947)

INDIAN LANGUAGE HERITAGE

India represents five language families comprising nearly 200 languages as reported in 1961 census but finally reduced to 114 languages spoken by a population of 1000 million. (Census India 1991) (Anvita Abbi, 2000; Gananasundaram & Elangaiyan, 2000)

KASHMIRI LANGUAGE & ITS LINGUISTIC CLASSIFICATION

The VIII th Schedule to the Constitution contains 18 languages that includes Kashmiri. (Koul, 2003) Before 1911, Kashmiri was treated as of Sanskritic origin. In the 1911 Census Report, it was grouped with Shino-Khorwar as per revised system of linguistic classification. Kashmiri is an Indo-Aryan language with vocabulary that is suffused with significant impress of both Sanskrit and Persian. (Grierson, 1932)

USE OF KASHMIRI

Kashmiri though spoken by the majority of the population of the Kashmir Valley however, has never been the official language in the State, now Union Territory. Post-Independence, though Kashmiri was introduced as a subject of study in primary schools, its use was discontinued in 1955 but reintroduced in 2008 up to secondary level. However, contrary to no presence of use of Kashmiri in the administration and only a scant use in the educational set ups, Kashmiri has a limited role in mass media (TV and Radio) at the state level. (Koul, 2003)

SCRIPTS FOR KASHMIRI LANGUAGE

Kashmiri, historically, has been written in four scripts; Sarada, Devanagari Persian and Roman. Kashmiris themselves, however, use three alphabets for writing their language; namely the Sarada, Devanagari and Persian.( Grierson, 1932) The use of Roman script for Kashmiri started when western scholars transliterated several Kashmiri works in that script during the early 20th century.. The official script of the Kashmiri language recognized by the Jammu & Kashmir Academy of Art, Culture and Languages is called as Nastaliq and is based on Persio-Arabic alphabet suitably modified with diacritic marks. (Koul, 2003)
RESEARCH ENGAGEMENT IN THE PRESENT STUDY

As the current research topic engages the study to access historical and archival sources to demarcate the contours of the development of modern education, healthcare and scholarship in Kashmir during the Dogra period (1846-1947), the present study reveals that, more than a decade after the Persian readers - Gaṭjaruk Gud, Kashmarha Parnak tah Lekhnak Qa’daḥ and Kashar Gadnach Kitab- on Kashmiri language had appeared towards the close of 19th century, the first language reader of the Kashmiri language in Devanagari script was published. (Dogra, 1986). It is a two-volume publication titled: Kashmiri Bhasha Pratham Pustakaha and Kashmiri Bhasha Dutiya Pustakam. These volumes appeared in 1912 and 1914 respectively. Both these volumes were published by Empire Press, Lahore. (Grierson-Nityanand Correspondence, 1912)

1914 Devanagari Primer of Kashmiri Language, Part II
(Source: Nityanand Shastri Papers - Author’s Personal Collection)

MORPHO-PHONO-MERIC SCHEME OF KASHMIRI NUMERALS

According to the available linguistic data, Kashmiri language is known to have no notational system of its own for the numerals. The numerals are expressed in the spoken and written forms only. In Kashmiri, cardinal numbers are a;kh, zae. tre;ah, choe;ar pance;h and so on up to da;eh. The numeral forms from eleven to eighteen are modified. They are formed by adding a;h as suffix ; e.g. ka;h, ba;h and so on. The suffix a;h shows traces of word da;eh for ten. First numerals are added to ten, twenty, and thirty and so on up to ninety and various morpho-phono-meric changes take place. For numerals less than ‘n’ plus ten, word ku;nh is prefixed to give e.g. ku;nvuh, ku;ntre;ah etc. ku;nh stands for less than corresponding numeral in tens. For numbers ‘one hundred’ to ‘nine hundred’, ha;eth is used for first seven numerals and then it is sh;aeth. Numerals, ‘thousand’, ‘ten thousand’, ‘one hundred thousand’, ‘one million’, ‘ten million’, ‘one hundred million’ and ‘one thousand million’ in Kashmiri morpho-phono-meric terms are ‘saas’, da;eh saas’, ‘la;ech’, ‘da;h la;ech’, ‘karor’, aerea;b and ‘khra;eb’. (Koul, 2003)

NUMERAL SYSTEMS OF ‘BORROWED LANGUAGES’ IN KASHMIRI:

Almost without any exception, in all works written in Sanskrit, Persian, Urdu, Hindi and Kashmiri that have originated in Kashmir, one encounters numeration on pages in Urdu, Persian, Devanagari and Sarada characters. In more recent times

INTERNATIONAL JOURNAL OF RESEARCH IN SOCIAL SCIENCES AND HUMANITIES
use of universal Hindu-Arabic numeral character is common and almost ubiquitous irrespective of the script the work is written in. However, in works written in English one also encounters Roman numeral characters besides the universal Hindu-Arabic numerals. Evidently, Kashmiri has predominantly used a notational numeral system from ‘borrowed languages’ with the exception of Sarada that is believed to have been the indigenous script for the language in the beginning even though no significant historical or literary Kashmiri documents written in Sarada character have been found till date.

NOTATIONAL NUMERAL SYSTEM IN KASHMIRI:

A physical perusal of the uniquely rare copy of the second volume of the 1914 Devanagari Primer of the Kashmiri language reveals that it bears, for the first time in the history of the language, a scheme of Kashmiri numeral notations. No previous scheme is reported to have come to light so far. The numeral scheme enumerated in the Kashmiri Bhasha Dutiya Pustaka, therefore, lays to rest the notion that Kashmiri language has no notational system of its own for the numerals.

From the present level of understanding and results obtained so far, after cross verification from evidence preserved in the accessed archival sources, the paper is an attempt to determine that the scheme is based on indigenous quadri-multiples Chakhh system used in olden times in Kashmir. The scheme preserved in the Devanagari Primer, is since in disuse and currently unknown.

Kashmiri Numeral Notations as Preserved in the 1914 Devanagari Primer

(Source: Nityanand Shastri Papers - Author’s Personal Collection)

KASHMIRI MEASURES BASED ON CHAKHH SYSTEM:

Kashmiri Numbers used for Counting:

Gyed, Boud and Chakh – e.g. naeder (lotus stem); haakh (green collards); wangan (brinjals); haar (seashells) – (Multiples of 4) (Grierson 1932)

(Kashmiri measures for Weight: Chatank, Paav, Seyr, Manut Trakh – (Multiples of 4 & Half 4s)

(Kashmiri measures for Money Payie, Paense, Anna, Ropay – (Multiples of 4)

(Kashmiri measures of Time: Tsysh, Pahar, Doh, Doh-Raat, Pachch, Reth, Warih – (Multiples of 4 and Half 4s) (Knowles, 1885)
ORTHOGRAPHIC FEATURES OF KASHMIRI NUMERALS:

The Kashmiri numeral scheme makes use of [ ] sign (half bracket) to the left of which cumulative notational number in the multiples of four (Chakh) is indicated for ascending numeral value. Higher numeral value lower than multiple of four (Chakh) is shown by additional vertical strokes outside the half-bracket on the right side. The numeral orthography is represented by straight or horizontal strokes. Another salient feature of the scheme reveals that, like the Roman Numeral System, it also does not make use of the notational sign ‘Zero’.

NUMERAL INTERPRETATION

Based on the understanding gained till now, hereunder is the illustration of the Kashmiri numeral system by identifying its numeral notations for first ten numbers through the depiction of the corresponding ‘borrowed’ numeral systems used for Kashmiri and the indigenous notational scheme as is preserved in the 1914 Devanagari Primer of the Kashmiri language.

ILLUSTRATION OF COMPARATIVE NUMERAL NOTATIONS

Universal Hindu-Arabic Numeral System

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Sarada Numeral System

<table>
<thead>
<tr>
<th>akh</th>
<th>zah</th>
<th>trih</th>
<th>chör</th>
<th>pānch</th>
<th>sheh</th>
<th>sath</th>
<th>aith</th>
<th>nav</th>
<th>dah</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

Persian Numeral System

![Persian Numbers 1-10]

Devanagari Numeral System

<table>
<thead>
<tr>
<th>०</th>
<th>१</th>
<th>२</th>
<th>३</th>
<th>४</th>
<th>५</th>
<th>६</th>
<th>७</th>
<th>८</th>
<th>९</th>
<th>००</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>
Roman Numeral System

I, II, III, IV, V, VI, VII, VIII, IX, X

1 2 3 4 5 6 7 8 9 10

Indigenous Kashmiri Numeral System

(As interpreted from the notational scheme of numerals denoted in the 1914 Devanagari Primer - Kashmiri Bhasha Dutiya Pustakam)

\(\text{I} \to \text{II} \to \text{III} \to \text{I} \to \text{II} \to \text{III} = \text{I} = \text{II}\)

1 2 3 4 5 6 7 8 9 10

CORROBORATIVE ARCHIVAL EVIDENCE

Extant Dogra revenue records from archival source (Ravinder Nath Kohli Collection, Jammu, Courtesy: Saleem Beg) accessed under the present research study depicts the fiscal value of the revenue stamp in notational features that followed the numeral scheme preserved in the 1914 Devanagari Primer.

As an additional evidence to this interpretation, another archival source: a facsimile of the cover page of an old but, now, almost defunct and out of circulation Kashmiri ritual and religious work- Chamunavakyam- published during the early decade of the 20th century also shows these typical Kashmiri numeral notations. (Bhavana Revoo Collection, Jammu)

Dogra Period Revenue Stamp with Kashmiri Numeral Notation

(Source: Ravinder Nath Kohli, Jammu; Courtesy: Saleem Beg, FB, 11-3-2018)
CONCLUSION OF RESULTS FROM PRESENT UNDERSTANDING

Evidently, these representative material illustrations support the interpretation of the numeral system as discussed in this paper. The revenue document and rare Kashmiri religious publication suggest that Kashmiri numeral notations were officially recognized and adopted for use during the Dogra period.

The material archival evidence also lends support to the assumption that the development and adoption of the native Kashmiri numeral system is a significant contribution to the promotion and propagation of the Kashmiri language during the Dogra period.

Kashmiri Religious Ritual Publication, Chamunavakyam, Showing Price in Kashmiri Numerals
(Source: Bhawana Revoo Collection, Jammu, 17-5-2018)

FURTHER OBJECTIVE & AIMS OF THE STUDY

The study underway continues to gain further access to more corroborating evidence from the archival and revenue sources pertaining to the Dogra period.

By reinterpreting, the ‘at-present-out-of-use’ numeral system, this paper, which is a part of the broader research study of the Dogra period, aims to reintroduce the indigenous numeral system of the Kashmiri language for adoption and wider use and thereby adds to its vast corpus of extant literature and also to the subject of numeral orthography itself.

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