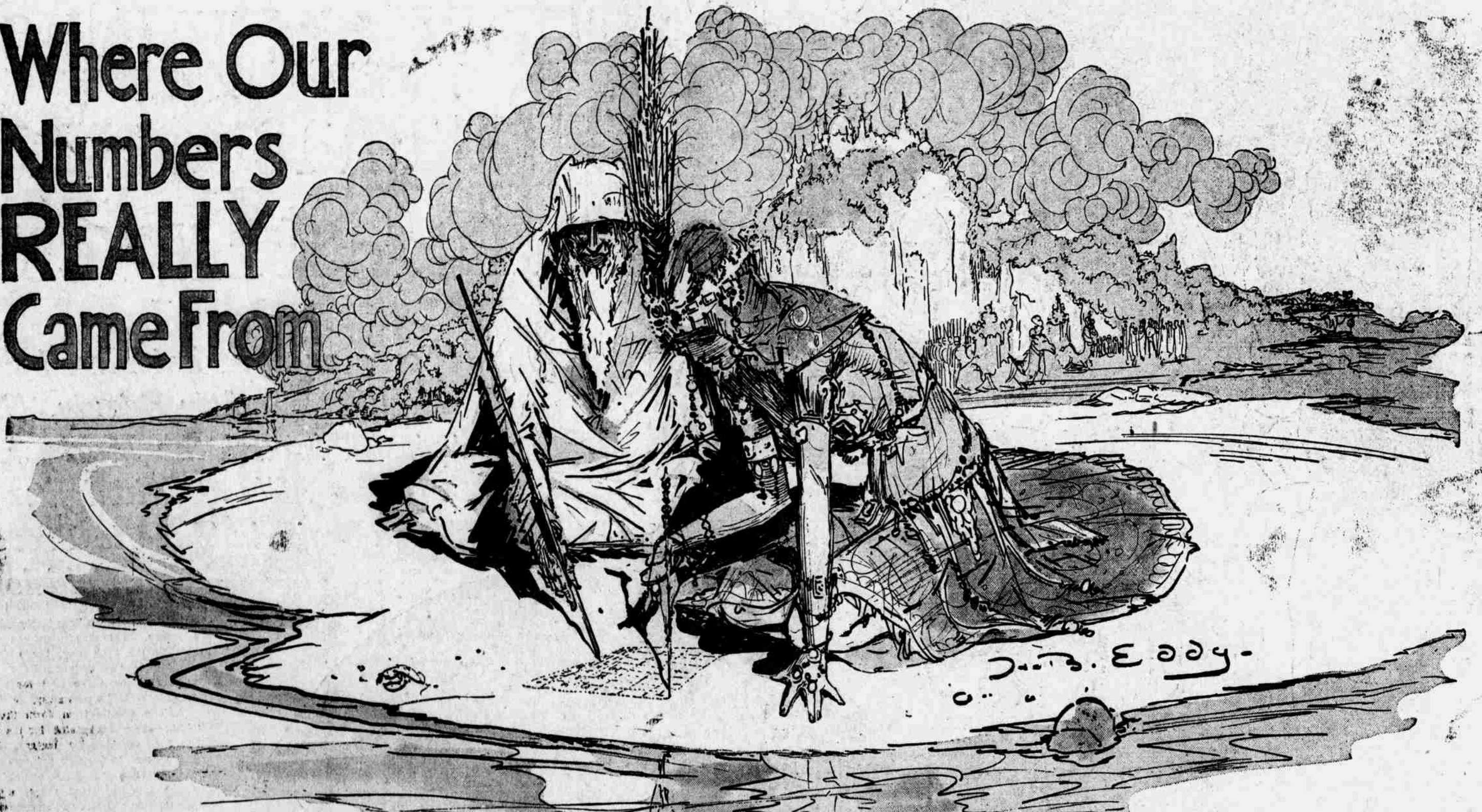


THE OMAHA SUNDAY BEE MAGAZINE PAGE

Where Our Numbers REALLY Came From



Proof that Our Familiar Numerals were First Scratched on Golden Sands for Beautiful Hindu Princesses Long Ages Ago.

WHAT could be more interesting than the origin of our common numbers, those apparently simple yet marvellously useful little marks upon which almost the whole fabric of our science and civilization depends?

We have been taught to call our numbers "Arabic," as distinguished from the cumbersome old Roman numerals. In fact, if you search the latest encyclopaedia you will find them still described without qualification as Arabic. But it is one of those half-truths, which are said to be worse than a real falsehood, for they teach us to accept what is not true, rather than search for the facts.

Dr. Eugen Loeffler, an eminent German professor and mathematician, has just announced the discovery of the real source of our numerals. They reached Europe through the Arabs, it is true, during the Middle Ages, but they actually originated with the ancient Hindus, the Aryans of very early times.

The Aryans, who made their way into India about 2000 B. C., were a branch of the Indo-Germanic race. They subdued the native inhabitants of India, reducing them to the lower castes, while the Aryans formed the castes of priests and princely warriors. The Aryans were deeply interested in science and religion.

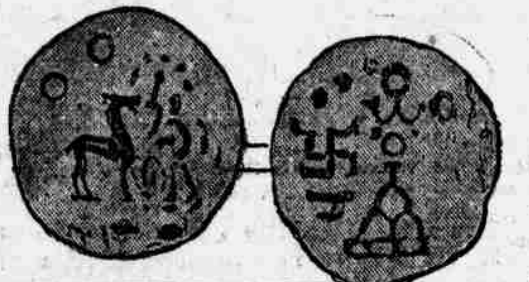
The language in which their ancient books are written

is the Sanskrit, and these books, called the Vedas, meaning "science" or "knowledge," are filled with the wisdom of this ancient race. Their language ceased to be a spoken, or living, language in the third century B. C. The spoken language that succeeded it is related to the elder tongue as French is related to Latin.

The ancient religion was Brahmanism, and in the sixth century B. C. Buddha tried to effect a reformation, but only succeeded partially. The Brahmins are still the dominant religious teachers of India.

The original Brahman mathematicians, before the discovery of paper, used the sand for making figures and "doing sums." They drew what we now call an abacus, an arrangement of columns with lines between, the first column containing the units, the next the tens and the next the hundreds, and so on. When there were more than ten in the first column one was added to the next column, and in this way the significance of "position" in numeration was established. Numbers are still called "sand figures" in Hindu.

According to legend, this system of figuring, after it had been devised by the priests, was first taught to a woman ruler. The old Brahman priest, instructing his queen in the art of figuring, took a pointed stick and drawing the columns in the sand, showed her how ten units made one ten and ten tens made one hundred. This is the very foundation of our system of calculation. It made possible the wonderful astronomical and mathematical advancement of the Hindus, which



THE WISE MEN FROM THE EAST NOW SAID TO HAVE BEEN HINDUS. - FROM THE PAINTING BY BURNE-JONES.

HINDU INSCRIPTIONS AND COINS	FROM HINDU COINS 2nd-5th CENT. A.D.	OLDEST PERSIAN INSCRIPTIONS 5th-6th CENT. A.D.	ARABIC NUMERALS 7th-8th CENT. A.D.	MODERN ARABIC	OUR NUMBERS
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9
0	0	0	0	0	0

TABLE SHOWING THE DEVELOPMENT OF OUR DIGITS FROM ANCIENT HINDU.



ANCIENT HINDU CONVENTIONAL REPRESENTATION OF THE STARS



By 900 B. C. the Hindus had a well developed science of arithmetic and algebra, as well as the geometrical problems which we now find in the first book of the Greek Euclid. They knew how to calculate fractions and how to extract the cube root. They carried their science so far as to call each position by a separate name, not as we do, skipping the tens and hundreds after we reach a thousand. For instance, we would write out the figures 86,739,325,173 as eighty-six billion, seven hundred and eighty-nine million, three hundred and twenty-five thousand, one hundred and seventy-eight, but the Hindus write out thus: 8 kharva, 6 padma, 7 vyrbuda, 8 koti, 9 prayuta, 3 laksha, 2 ayuta, 5 sahasta, 1 cata, 7 dacan, 8.

The Hindus discovered the figure 0, a cipher, unknown to the other early civilized races, yet absolutely necessary for mathematical expression

of any but the crudest kind. The three wise men from the East who came, drawn by an unfamiliar star, to the birthplace of the Saviour, were, according to legend, Hindus. Modern scientific investigation has confirmed this belief. It was the knowledge of astronomy, in which the Hindus then excelled, that led them to follow this star, and this knowledge was in turn closely bound up with their knowledge of arithmetic, which was essential to astronomical calculations.

It was from the Western Arabs that the figures passed to Europe during the tenth century. Up to that time only the Roman numerals had been in use in Europe, but the greater convenience of the Arabic numerals compelled their adoption, especially as so deep a knowledge of the mathematical sciences came with these figures.

In this way and through the introduction of Arabic scientific works translated into Latin did the figures find acceptance throughout Europe.