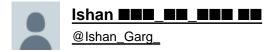
# Twitter Thread by Ishan





# THREAD!

You very cleverly picked the facts according to your narrative. And distorted them to subtly establish your false narrative that India is not the originator of Zero. So let me tell you the remaining unlooked facts that you "forgot" and show you the full history of zero.

[THREAD: ZERO]

# 1/51

Once upon a time in the land of Mesopotamia, there lived a people who engaged in commerce, had a system of weights and measures, paid in currency, and most importantly, kept written records of all of this in clay tablets. These were the Sumerians.

- Amit Schandillia (@Schandillia) December 2, 2020

# 2/13

Egyptian 'nfr' was more like a reference point. They had a concept for the "base" or "ground-level," for their architectural plans. For ex. "1 cubit above nfr". And all the nos. would b made by combining multiples of the symbols, so they hd no use for 0 even as a placeholder

#### 3/13

The Incas had the decimal system but so did the Harappan people in 3500 B.C.E. Also, the Incas neither had the Idea of zero as an integer nor did they have a symbol for its representation.

# 4/13

Coming to the Babylonians, their placeholder was not a true zero bcoz it was not used alone, nor was it used at the end of a number. Thus nos. like 2 & 120 (2×60) looked same bcoz the larger nos. lacked a final sexagesimal placeholder. Only context could differentiate them.

# 5/13

And for Greeks, they had no symbol for zero ( $\mu\eta\delta$ **I** $\mathbf{v}$ ) and did not use a digit placeholder for it. They seemed unsure about the status of zero as a number. They asked themselves, "How can nothing be something?"

#### 6/13

Ptolemy, influenced by Hipparchus & Babylonians, we using a symbol for zero(as shown in pic.) bt again the symbol he we using we used by two continuous mathematical functions, one within another, so it meant zero position (minutes of immersion at 1st & last contact), nt none



#### 7/13

The Symbol used by Ptolemy changed over time. In the 2nd century was a very small circle with a long overbar. Later, the overbar shortened to only one diameter, similar to the modern o-macron (■). The overbar was omitted in Byzantine manuscripts, leaving a bare o (omicron).

#### 8/13

This gradual change from an invented symbol to o disproves the hypothesis that the Omicron was the initial of  $o \blacksquare \delta \blacksquare v$  meaning "nothing". [Neugebauer, otto].

Also, the omicron was being used by the Greeks to represent 70.

#### 9/13

Cheers 2 Mayans & Babylonians fr invnting wht is oftn calld as "Placeholders". Bt they were nothing more the blank spaces or at times two wedge shapes. Wht they did ws solv a practical problem of distinguishing nos. like 89 and 809. They didn't thought of 0 as a concpt or num

#### 10/13

No one even dared to think about concept of zero. Until a Rishi from India named Pingal gave the world the first recorded concept of Zero(Shunya). Which is later adopted by other civilisations. Around 250 A.D. India gives first recorded usage of Shunya in the Decimal system

#### 11/13

And, then in mid 6th century, an INDIAN named Brahmagupt defined the first recorded rules of modern zero. Wherein Zero is an integer and is an average of -1 and +1.

#### 12/13

So, now you decide that who gets the credit of inventing the zero, both as a concept and integer.

Babylonians & Mayans, who solved a practical problem of distinguishing b/w nos. like 89 and 809?

Egyptians, who just defined a reference point and nothing else?

#### 13/13

Greeks, who didn't even dare to think about the concept of Zero?

Or Indians who first gave the concept of zero and then later were the first to even define the rules of true Zero.

The answer is clear.

The history is not so blurred if we choose to look at it unbiasedly.