Dissecting "Eratosthenes' Lament"; a collage by Mark Sanders – after a poem by Sarah Glaz.

## Eratosthenes' lament

Where to start, with Eratosthenes...?! The scantest of glances at his Wikipedia page indicates that his name should be on the tips of literally *everybody's* tongue. Is there *nothing* in the worlds of mathematics, astronomy, science and geography that he didn't have a hand in? The image bottom and centre, represents the many doors of investigation through which he entered.

The Libyan 5 Dinar bank note shows the Temple of Zeus at Cyrene, Eratosthenes' birthplace. The denomination specifically reflects the *pentapolis*, of which five cities, Cyrene was regarded as the most important.

The postage stamp overlaid on the banknote shows a bust of Zeno of Citium, the founder of the Stoic School of Philosophy, under who Eratosthenes studied.

A librarian is a guardian of scrolls.

I dwell among them happily; they are my friends.

Much harder, is dealing with people.

Resulting from the remarkable scope of his scholarly work, Ptolemy III installed the 30 year old Eratosthenes in the great Library of Alexandria in 245 BC where, within 5 years, he had risen to the role of Chief Librarian. The image bottom left shows him among his "friends".

When I was young, I could escape at will

Into the abstract calm of mathematics:

Primes were diamonds at the bottom of my sieve,

The mineral formation, top left, is representative of his precious prime numbers.

Shadows and proportions spoke to me.

Note the shadowy images in the background of the top right corner. A blur to those around him, yet discernible to his extraordinary mind.

I invented a mesolabium, which solved the Delian

Problem of doubling the cube.

Purportedly one of his proudest achievements, this largely pointless equation eluded everybody until Eratosthenes solved the problem. Thus, it eludes us now, since it is not represented among my collaged images.

On a day of the summer solstice at high noon,

I calculated the circumference of the earth.

Eratosthenes noted how shadows fell in different geographical locations at the same time of day and, by use of geometrical calculations, determined that this must mean the earth's surface was curved. By extrapolating his results, he was the first person to calculate the circumference of the earth with reasonable accuracy.

His points of reference were a pole in the ground at Alexandria and a well in Syene (now Aswan). The Syene well is shown as the modern-day Aswan dam, bottom left; below a map section showing the Nile delta upon which it stands. This, in turn, leads out to Alexandria which connects to its position on an image of the first full map of the world which he made.

Above his map of the world, representing Eratosthenes' shadow-casting pole, is an image of Pompey's Pillar, the last remaining ancient monument in Alexandria, standing adjacent to the ruins of the Serapis temple.

The figure looming above, to the top left, is the central detail from William Blake's "Ancient of Days" which itself references the Book Of Proverbs viii. 27 "when he set a compass upon the face of the earth."

The image bottom right is that of The Gaza Apollo. A statue claimed to have been discovered in the shallow waters of the sea at Gaza, believed to be well over 2000 years old. As the Greek (shadow-casting) sun god, Apollo's presence is integral here.

And yet they call me Beta to my face,

## Too many interests, they say, and poetry besides.

The 5 Dinar denomination of the banknote also references Eratosthenes' nickname, Pentathlos, after <u>the</u> Olympian athletes who were as multi-skilled physically as he was academically.

## Second at everything, never the best.

Finally, the image of The Gaza Apollo shows the eye is missing from the statue, representing Eratosthenes' failing sight and ultimate blindness. Losing the ability to read and to observe nature plagued and depressed him, leading him to voluntarily starve himself to death. He died in 194 BC at 82 in Alexandria.