

**ON**  
THE  
**MAP**

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Simon Garfield

ON  
THE  
MAP

Why the world looks  
the way it does

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PROFILE BOOKS

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# Chapter 1

## What Great Minds Knew

**Maps began as a challenge** of the imagination and they still perform that role. So imagine yourself in your bedroom. How good would you be at mapping it? Given a pencil and pad, could you draw the room well enough so that someone who's never been there would get a fair picture? Would the size of the bed be in proportion to the door and the bedside table? Would the scale be right in relation to the height of the ceiling? Would your kitchen be harder or easier to map than the bedroom?

This shouldn't be too hard really, because these are places you know well. But what about the living room of a friend? That would be partly a test of memory – would you get it right or would you be struggling? But what about your first school: would you remember where your classroom was in relation to others? Or the world? Could you draw that? Could you correlate the relative size – and geographic relationship – of Mongolia and Switzerland? Would you get the oceans even half right in the southern hemisphere? And what if you'd never seen another map before, or a globe, and you'd never been to any of these places yourself? Could you construct a map of the world based purely on what people

had told you, and what people had written down? And if you did manage this, would you be happy for it still to be used as the principal map of the world some 1350 years after you had drawn it?

Only, I imagine, if your name was Claudius Ptolemy.

Considering his impact on the world, and beyond the fact that we should regard the P in his surname as silent, we know curiously little about Ptolemy. But we do know where he worked – at one of the greatest buildings in ancient Egypt, lying just a little way inland on a small cloak-shaped port on the banks of the Mediterranean.



The story of the vanished Great Library of Alexandria is one of the most romantic of the ancient world, and it appeals partly because we are unable to imagine a modern equivalent. Today's British Library is a library of record, receiving a copy of each new work in the English language, but it has no ambitions to house a complete collection of the world's manuscripts, nor to contain the sum of human knowledge. The same with the Bodleian in Oxford, and the New York Public Library. But the Great Library of Alexandria did aspire to such ambitions, and it existed at a time when such a thing was broadly achievable.

From its inception in around 330 BC, the Library was intended as a place where every scrap of useful information found a home. Other private libraries were commandeered for the common good; manuscripts arriving in the city by sea would be transcribed or translated, and only some were returned; often the ships would sail away again with the originals replaced by copies. At the same time, Alexandria became Europe's principal supplier of papyrus, from which the majority of its Library scrolls were made. And

suddenly the supply of papyrus for export dried up: some claimed that all the papyrus was required to supply the Great Library, though others detected a plot designed to inhibit the growth of rival collections – an elitism, passion and quest that all obsessive book and map collectors will recognise.

The Great Library was the legacy – like the city itself – of Alexander the Great. During a journey along the western reaches of the Nile Delta, Alexander had come across a site that, according to the Roman historian Arrian, he predicted would be ‘the very best in which to found a city.’ Its subsequent foundation signalled the shift of governmental and cultural power from Athens.

Alexander had been tutored by Aristotle in the ways of morality, poetry, biology, drama, logic and aesthetics, and it was through Aristotle that he became devoted to Homer, taking the *Iliad* into battle and living by its teachings. His conquest of the Persian Empire was followed by the destruction of Tyre and the rapid capitulation of Egypt, and it was here that he became afflicted with immortal ambitions: he wanted his legacy to be a symbol of learning rather than destruction, a place from where the Hellenistic worldview would be spread through the empire and beyond. And so he laid plans for a city marked by a devotion to scholarship, high ideals and good governance, and its vast Library was to be its pantheon.

The Library, completed several decades after Alexander’s death in 323 BC, was in effect the world’s first university, a place of research and colloquy, whose scholars included the mathematician Archimedes and the poet Apollonius. They discussed scientific and medical principles as well as philosophy, literature and political administration. And they were responsible for drawing up the first accomplished maps of the world: a role for which, living in a port city at the heart of both western and eastern trade routes, and with

first-hand testimonies from travellers and sailors, they were ideally placed.



If we stumbled across a map of ancient Alexandria today, we would see an orderly place, a grid system of boulevards and thoroughfares. A heavily populated Jewish Quarter lies to the east, while the Library and Museum stand in the Royal Quarter in the centre. The city is surrounded by water, with the Great Harbour (home of the royal palaces) on small islands in the north. At the city's northern harbour rises the Pharos lighthouse, one of the Seven Wonders of the World, more than a hundred metres tall, with a flame at its top reflected by a mirror and visible some thirty miles out to sea. It would be difficult to miss the metaphor: Alexandria was a beacon city, a landmark both liberated and liberating in a city pulsing with illuminated thinking.

But the world beyond Alexandria – how did that look at the beginning of the third century BC?

Despite the Great Library's accomplishments in science and mathematics, the study of geography was still in its infancy. Its first scholars constructed an important proto-map of the world, based largely on the writings of the Greek historian Herodotus. His nine-volume *Researches* had been completed a century and a half earlier but his description of the rise and fall of the Persian empire and the Greco-Persian wars remained the most detailed source on the known world. Homer, too, was regarded as an important source for geographical knowledge, not least through the travels depicted in the *Odyssey*.

It is thought that this Alexandrian map depicted the world as round, or at least roundish, which by the fourth century BC was commonly accepted. It is possible that Herodotus shared this view, though he may have seen it as a flat disc floating on

water. Homer, certainly, was a flat-earther, back in the eighth century BC, believing the earth was a place where if you continued sailing you would eventually fall off the end. But by the fifth century BC, Pythagoras had argued persuasively that the earth was a sphere. (The myth that the earth was still considered flat until the time of Columbus is an oddly enduring one. Why should this be? A combination of general ignorance and our love of a good story: the image of Columbus returning home with the news that his fleet did not in fact topple into a great abyss is madly appealing.)

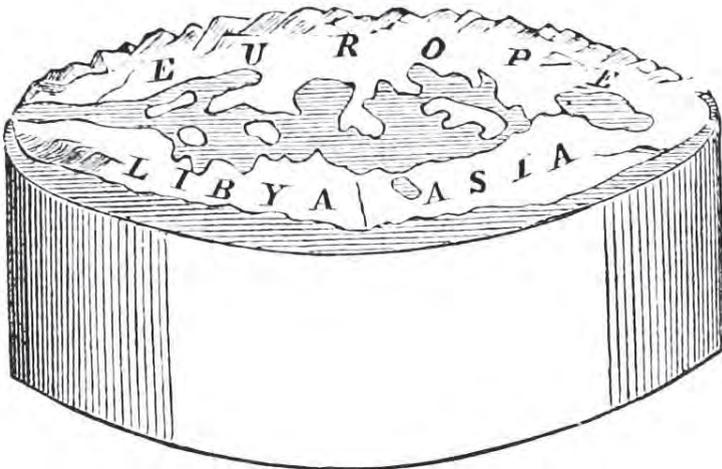
Herodotus upheld the common wisdom that the world was divided into three sections – Europa, Asia and Libya (Africa) – but argued against a widespread belief that they were the same size and made up the whole of the earth. Neither Britain nor Scandinavia featured in his accounts, and the Nile ran throughout Africa to Morocco’s Atlas Mountains. Only a small section of Asia was examined, and it was dominated by India. Herodotus admitted to uncertainty over whether Europe was surrounded wholly by water, but he suggested Africa might be. He also saw the Caspian Sea – accurately – as a vast inlet, unlike many of his successors.

As the Great Library developed its collections, the variety and reliability of its sources yielded a vast collection of fragmentary information about the world – and the possibilities of creating maps to reflect this. Eratosthenes of Cyrene (in modern-day Libya) was one of the first scholars able to marshall the city’s new geographical knowledge into the art of cartography. Born in 276 BC, he studied mathematics and astronomy in Athens, combining the disciplines to form the first primitive armillary sphere (or astrolabe), a series of metal rings arranged as a globe that showed celestial positions with the earth at its centre.

At the age of forty, Eratosthenes became the third Librarian at Alexandria and began his great treatise *Geographica* shortly afterwards. There was no study of geography comparable

to that of medicine or philosophy (indeed, Eratosthenes is believed to have coined the word ‘geography’ from the Greek words *Geo*/Earth and *graphien*/writing) but at the Great Library he would have encountered an abstract map created in the sixth century BC by Anaximander of Miletus for his treatise *On Nature*. This map, long extinct, showed the world as a flat disc with named parts for the Mediterranean, Italy and Sicily. He may also have benefitted from an inventory of countries and tribes – a ‘Circuit of the Earth’, but in truth more a circuit around the Mediterranean – provided in the same period by Hecataeus of Miletus. (Miletus, in modern-day Turkey, was something of a Classical geographical hothouse. In the fifth century BC it was also home to Hippodamus, a forefather of urban planning responsible for some of the earliest civic maps).

But Eratosthenes’ own geographic study was to be on an altogether grander scale, making fullest use of the Library scrolls, the accounts of those who had swept through Europe



Three continents in a fountain: Anaximander imagines a disc-like earth surrounded by water in sixth century BC.