

Humanity's cultural history captured in 5-minute film

Video map of births and deaths shows rise and fall of cultural centres.

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All roads lead from Rome, according to a visual history of human culture built entirely from the birth and death places of notable people. The 5-minute animation provides a fresh view of the movements of humanity over the last 2,600 years.

Maximilian Schich, an art historian at the University of Texas at Dallas, and his colleagues used the [Google-owned knowledge base, Freebase](#), to find 120,000 individuals who were notable enough in their life-times that the dates and locations of their births and deaths were recorded.

The list includes people ranging from Solon, the Greek lawmaker and poet, who was born in 637 bc in Athens, and died in 557 bc in Cyprus, to [Jett Travolta](#) — son of the actor John Travolta — who was born in 1992 in Los Angeles, California, and died in 2009 in the Bahamas.

The team used those data to create a movie that starts in 600 bc and ends in 2012. Each person's birth place appears on a map of the world as a blue dot and their death as a red dot. The result is a way to visualize cultural history — as a city becomes more important, more notable people die there. The work that the animated map is based on was reported on 31 July in *Science*¹.

The animation reflects some of what was known already. Rome gave way to Paris as a cultural centre, which was eventually overtaken by Los Angeles and New York. But it also puts figures and dates on these shifts — and allows for precise comparisons. For example, the data suggest that Paris overtook Rome as a cultural hub in 1789.

Schich's team also viewed their data in the context of data from the [Google Ngram Viewer](#), which shows how often certain phrases or words were used in the general literature at a given time, an indication of the topics that might have been on people's minds. The researchers used the Ngram data to identify events that might suggest the waxing or waning in importance of a hub.

They also did a similar experiment using data from various sources on the births and deaths of 150,000 artists. That revealed, for instance, that more architects than artists died in the French revolution.

Historians tend to focus in highly specialized areas, says Schich. “But our data allow them to see unexpected correlations between obscure events never considered historically important and shifts in migration.”

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References

1. Schich, M. *et al. Science* **345**, 558–562 (2014).