

“We have much more representation of Western populations, mostly from Europe and the U.S.,” Erlich said. “And from the U.S. it is mostly from Caucasians rather than other ethnicities.”

He added that he hopes more nonwhite people will soon add their families to the site.

After getting a handle on their sprawling data set, the research team came up with a set of questions that only a mega family tree dating back hundreds of years could answer.

For example, after studying migration patterns in the tree they found that women leave their hometown more than men, but when men move, they tend to move much farther. This pattern has continued for a long time. It was true 300 years ago, and continues to be true today, the authors said.

In another line of inquiry, the data were used to determine when people stopped marrying close relations.

The researchers found that prior to 1750, most marriages in their data set occurred between people born about 6 miles from each other. After the start of the Industrial Revolution in 1870, however, that distance rapidly increased to about 60 miles.

You might think that as people traveled farther to find a spouse, they would marry people who were more distantly related to them. And indeed, that was true. Eventually.

The authors report that between 1650 and 1850 the average genetic relationship of married couples was on the order of fourth cousins. After 1850 it was on the order of seventh cousins.

But, the researchers found something strange in the data. Between 1800 and 1850 the distance couples traveled to marry each other doubled — probably because rapid transportation made railroad travel possible in most of Europe and the United States. However, that increase in distance traveled to marry someone was accompanied by an increase in genetic relatedness between marriage partners.

In other words, during this 50-year period, people traveled farther to marry closer relations.

“Families dispersed, and people started taking the train to marry their cousin,” Erlich said.

This observation implies that it was changing social norms, rather than access to rapid transit, that was the primary trigger for people to search genetically further afield than fourth cousins when it came to finding a spouse, Erlich said.

The authors also addressed an ongoing debate about the inheritability of longevity. According to their data set, previous studies have probably overestimated the heritability of this particular trait.

“We should lower our expectations about our ability to predict longevity from genomic data,” they wrote.