Name That Author

If you’re a casual reader who has trouble telling your Updike from your elbow, a team of physicists may be able to help you. Sebastian Bernhardsson and colleagues at Umeå University in Sweden say they can distinguish one author from another by analyzing their writings statistically. They tracked how the number of different words in a sample of text grows with the total number of words in the sample for three authors: Herman Melville, D. H. Lawrence, and Thomas Hardy. Each writer has his own distinctive curve describing that increase, the physicists recently reported in the New Journal of Physics.

In a short sample, the number of different words increases almost as fast as the total does; it increases more gradually as the sample becomes longer. So the curves start out steep and eventually level out. Melville, who uses the biggest vocabulary, has the steepest curve. Hardy adds new words at a slower rate, followed by Lawrence.

If the method works, “that would be interesting because it’s such a simple statistic,” says Daniel Rockmore, a mathematician at Dartmouth College. But he says the researchers would have to compare many more authors to prove it. R. Harald Baayen, a quantitative linguist at the University of Alberta in Edmonton, Canada, says others have been working on such statistical methods for decades and that the physicists’ method may be too simple.

Variations among one author’s books, he notes, often exceed the variations between authors.

Myopia Out of Control

Americans are getting ever more nearsighted, according to scientists at the National Eye Institute in Bethesda, Maryland. In the early 1970s, about 25% of the population qualified as myopic. In the early 2000s, that proportion had leapt to almost 42%, says a team led by epidemiologist Susan Vitale.

The report, in the Archives of Ophthalmology, created a buzz last week about the dangers of computers and texting. Similar increases have been happening around the world. Oddly, the condition is highly heritable yet malleable by the environment. But what environment? "The suspicion has always been centered around ‘near work,’ “ says vision scientist Donald Mutti of Ohio State University in Columbus. But recent studies of schoolchildren in both the United States and Singapore have failed to show an association between near work and an increase in myopia. Mutti says research instead is increasingly pointing to lack of outdoor exposure as the culprit. "We’re kind of a dim indoors people nowadays," he observes. "If you ask me, I would say modern society is missing the protective effect of being outdoors”—although whether it’s the light or the distance that does it is still not known.

Mammoths’ Last Stand

Most of North America’s large mammals are thought to have gone extinct some 13,000 to 15,000 years ago. But a new study of ancient DNA suggests that woolly mammoths and horses hung on until 10,000 years ago or later.

A multinational team headed by geneticist Eske Willerslev of the University of Copenhagen reached that conclusion by analyzing soil samples for ancient DNA from animals’ urine and feces.

The team picked a site on the banks of the Yukon River in central Alaska, a likely mammoth stomping ground where the permafrost has never melted and the stratigraphy is well dated. They took core samples from seven permafrost layers ranging from about 12,000 to about 7500 years old. The scientists reported last week in the Proceedings of the National Academy of Sciences that they found mitochondrial DNA from mammoth, bison, moose, horse, and snowshoe hare. Mammoth and horse DNA was dated to between 10,500 and 7600 years ago—postdating the most recent fossils by at least 3000 years. The results show that some survived in the interior for several thousand years after the arrival of their human predators, the researchers say.

Paul Koch, a paleoecologist at the University of California, Santa Cruz, says that obtaining “sedimentary” ancient DNA is relatively new and that the results put “another nail in the coffin” of the idea that large North American mammals went extinct suddenly.