

No.004 THE ILLUMINATED EARTH ▾

# A New Map for a New World

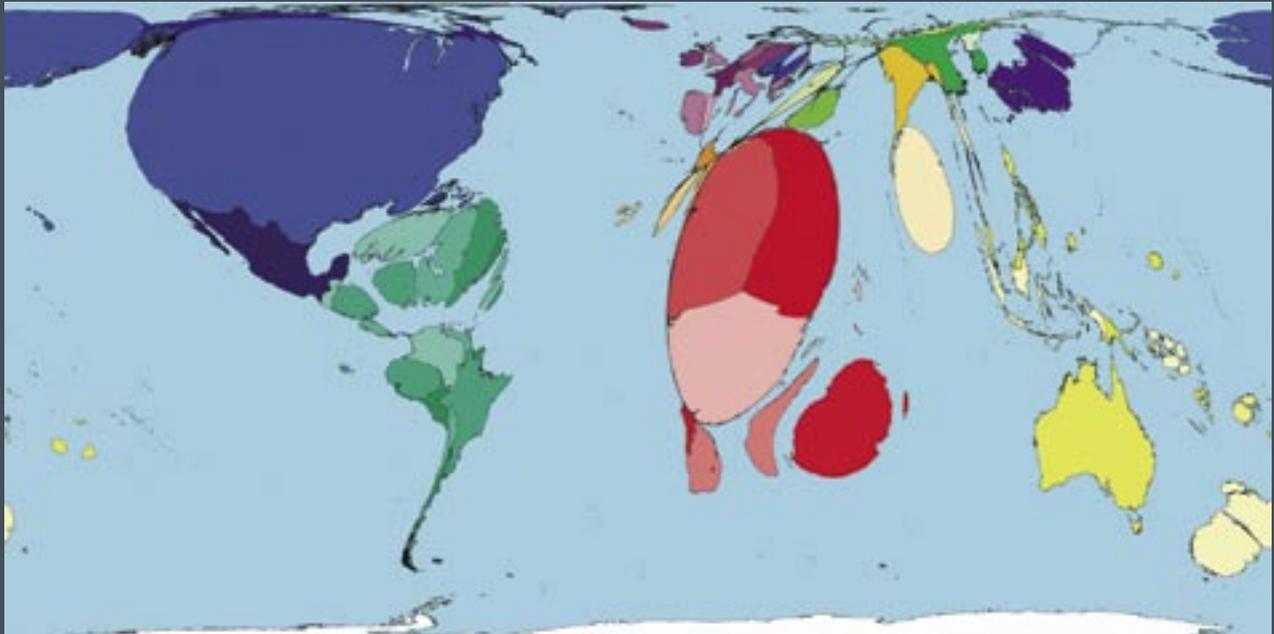
In recent years, projection and satellite cartography have improved our understanding of the political and commercial geography of the earth. Yet even the most modern maps offer little more than a two-dimensional representation of the world, the location of borders and mountains and roads. What's missing is information about the world beyond the topography: the way people and nations function in relation to one another.

Building upon an algorithm originally designed in 2004 by physicists Michael Gastner and Mark Newman at the University of Michigan to measure gas diffusion and heat transfer (for another application of their mapping technique, see page 213), the Worldmapper Project at the University of Sheffield, England, has begun to fill this void. Through a dazzling marriage of statistics, geography, and spherical geometry, their cartograms treat nations as if they were inflatable balloons: The more weapons or people or toys in a country, the bigger it appears on the map. The resulting images offer a new way to understand a world with fewer and fewer borders.

—TYLER CABOT



KEY

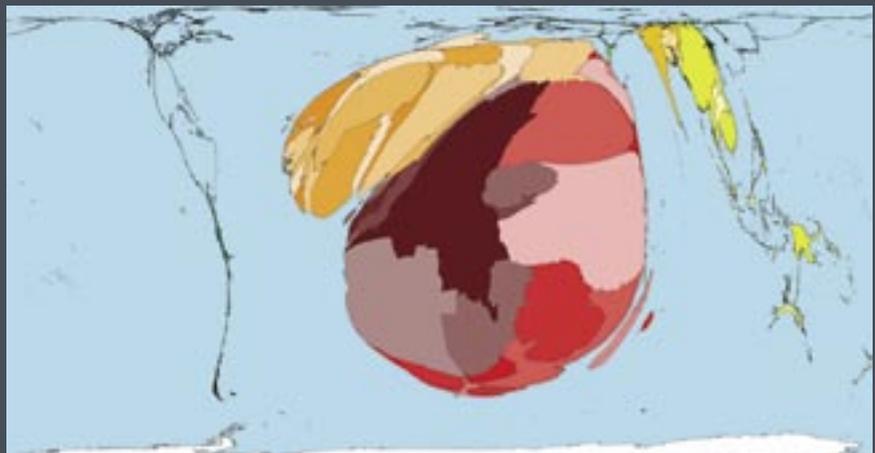


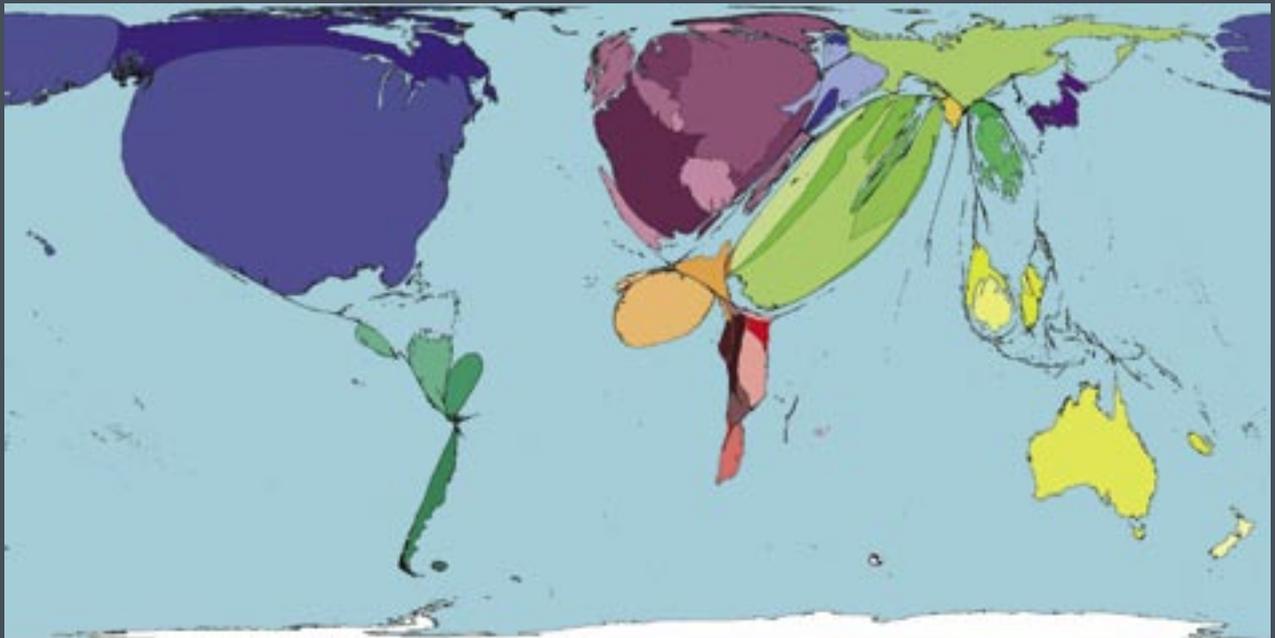
## ▲ EXTINCT SPECIES

Of the seven-hundred-plus animal and plant species recorded as extinct worldwide, more than one third were once native to the United States. The only two nations with higher extinction rates (per one thousand species) are the Cook Islands (east of Australia) and Mauritius (east of South Africa).

## MALARIA DEATHS >

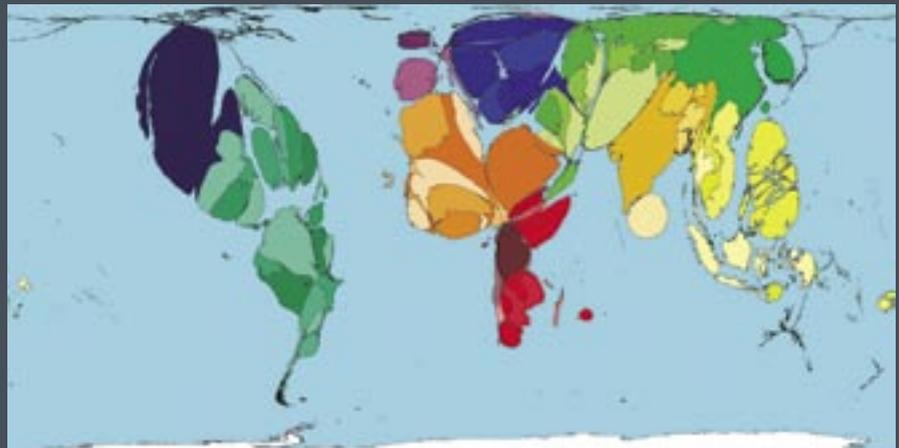
More than a hundred thousand people die from malaria every year. More than half of these deaths occur in just five countries in Africa: Democratic Republic of the Congo, Tanzania, Angola, Uganda, and Malawi.





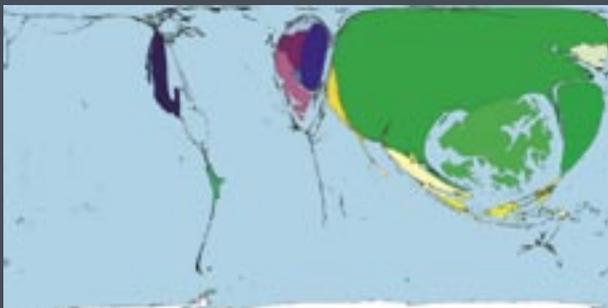
### ▲ NET IMMIGRATION

While the U.S. receives 37.1 percent of all new immigrants in the world, they make up only 11 percent of the U.S. population. Many nations with the highest proportion of immigrants are in the Middle East, including the United Arab Emirates, Qatar, Israel, and Kuwait.



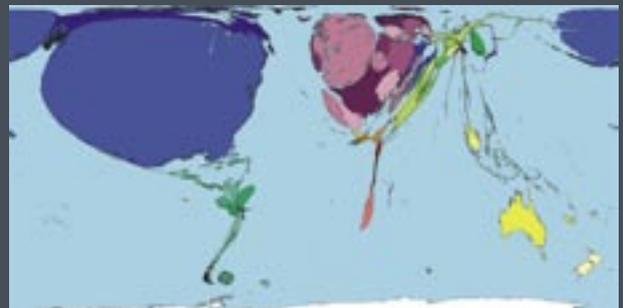
### NET EMIGRATION >

Mexico, with the world's highest net emigration, loses an average of nine million citizens every year, nearly all to the U.S.



### ▲ TOY EXPORTS

The price for toys fluctuates greatly depending upon where they are produced. Toy makers in Hong Kong make ten times as much per toy than exporters in Taiwan, who make a hundred times as much per toy as exporters in China.



### ▲ TOY IMPORTS

Aside from Tajikistan, the countries that import the least toys are all in Africa: Somalia, Liberia, Burundi, Togo, Rwanda, and Chad.

SOURCES: INTERNATIONAL UNION FOR CONSERVATION OF NATURE AND NATURAL RESOURCES; WORLD HEALTH ORGANIZATION; WORLD BANK WORLD DEVELOPMENT INDICATORS; U.N. CONFERENCE ON TRADE AND DEVELOPMENT.