

## Migration – Maps and Models

Waldo Tobler  
Professor Emeritus  
UCSB Geography

### Abstract:

Most change in the world is due to movement; the movement of ideas, people, materials, money, disease, genes, animals, insects, and so on. In particular the movement of people has always been very important in our dynamic world. A current estimate is that some 210 million people migrated last year. The subject is so large that it is difficult to provide a comprehensive treatment. Instead I concentrate on just a few aspects of the subject, with a short description of some of my own work, including the making of simple interactive maps, followed by a review of an important historical reference and the idea of laws of migration. Next, bringing the material closer to the present with spatial modeling in a discrete framework. I follow this with a continuous spatial model that results in displays of potential-driven vector fields. These are used to provide several illustrations including a variable depiction of the resolution of migration data.