March 2001
Issue 14

C. J. Budd and **C. J. Sangwin** show us how to create mazes, and explain why mazes and networks have much in common. In fact the study of mazes and labyrinths takes us into the dark territory of murder, suicide, adultery, passion, intrigue, religion and conquest...

Maths and magic
Until you understand the basics of functions and algebra, the thought that a number can be predicted is a surprising one. And of course `magic' and `being surprised' are often the same thing. **Rob Eastaway** shows us how mathemagicians trade off the fact that you can usually predict precisely the outcome of doing something in mathematics, but only if you know the secret beforehand.

The mathematics of diseases
Over the past one hundred years, mathematics has been used to understand and predict the spread of diseases, relating important public−health questions to basic infection parameters. **Matthew Keeling** describes some of the mathematical developments that have improved our understanding and predictive ability.

Adam Smith and the invisible hand

Adam Smith is often thought of as the father of modern economics. In his book "An Inquiry into the Nature and Causes of the Wealth of Nations" Smith decribed the "invisible hand" mechanism by which he felt economic society operated. Modern game theory has much to add to Smith's description.

Radioactive decay and exponential laws

Arguably, the exponential function crops up more than any other when using mathematics to describe the physical world. In the second of two articles on physical phenomena which obey exponential laws, **Ian Garbett** discusses radioactive decay.

Career Interview: Actuary

Actuaries use mathematics to model the real world, finding business solutions to the perennial problems thrown up by life's uncertainties. **Kathy Byrne** tells **Plus** about life as Actuarial Director of an Insurance Company.

Plus is part of the family of activities in the Millennium Mathematics Project, which also includes the NRICH and MOTIVATE sites.