## Three

The first wondrous number mankind discovered was *three*. Not that *three* is the simplest wondrous number, or the most wondrous simple number, it just happens to be the first wondrous number that humans discovered. Of course *one* and *two* are wondrous numbers, but they are so wondrous that it took humankind years to realize that they are numbers. *Zero* is an even simpler wondrous number, but its simplicity is so great that it took humankind years to realize that it *is*. *Minus one* is even more wondrous, but much of humankind has yet to realize that it *isn't*.

In the simplest human languages the only numbers that have names are one and two; three is already called many. In these cultures anyone who has more than two sheep is already rich beyond imagination and the exact number is of little interest; just as the difference between the wealth of two billionaires is beyond the comprehension of most of us. Vestiges of this three-many connection remain in slightly more advanced languages, for example trois-trés.

When asked to pick a number between *one* and *four* nine out of ten people will pick *three*, since it is not too small nor too large nor too even. When an author writes a series of books it is universally a trilogy, bilogies and quadrilogies are so rare that the words have not yet been invented. I wonder why.

Three is indeed a wondrous number, since all numbers are wondrous. The great Indian mathematician Ramanujan claimed that all numbers were his friends and would produce, seemingly without exertion, special characteristics for every number he saw. When the great British mathematician tried to refute his claim by saying that he had taken a taxi with the dull license number 1729, Ramanujan countered that 1729 was smallest number expressible as the sum of two cubes in two different ways.

There is no end of wondrous numbers; were there a greatest wondrous number, the next number, being the smallest unwondrous number, would be truly wondrous. In fact, all numbers are wondrous, as can be proven by wonderful proof by induction. One is wondrous. If a number is wondrous, then the next number, being the number immediately following a wondrous number, is itself wondrous. We have already mentioned in passing that the negative integer -1 is quite wondrous. Not all wondrous numbers are integers;  $\pi$  and e are certainly wondrous, and many a schoolchild still wonders what they mean. Wondrous numbers don't even have to be real; the most unreal of all being  $i = \sqrt{-1}$ . Wonderfully wondrous is the fact that a single relation relates these four wondrous numbers.

$$e^{i\pi} = -1$$

We have certainly wandered far from our original premise. So if all numbers, integers, fractions, irrationals, imaginaries, in short the whole lot, are wondrous, what is so special about *three*? Well, we live in three dimensions, which is good since it can be proven that two dimensional creatures can't exist, and four dimensional ones can be shown to get lost easily. Three legged chairs are the most stable, even if seeing three legged animals is a proof that you aren't. No-one goes to a four-ringed circus or likes the two-stooges; and of course *three* is the only number precisely half way between *one* and *five*.

After all that has been said, *three* remains a truly wondrous number. *Three* is in fact quite unique, or at least as unique as every other number.