

# Give six monkeys a computer, and what do you get? Certainly not the Bard

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Bard in training: a Sulawesi macaque

It is a favourite question of pub philosophers everywhere. If you gave an infinite number of monkeys an infinite number of typewriters, would they eventually produce the complete works of Shakespeare?

The answer to this, mathematicians assure us, is yes. But now someone has attempted to put the theory to the test. Admittedly the British academics involved in this unusual project did not have an infinite number of typewriters, nor monkeys, nor time, but they did have six Sulawesi crested macaque monkeys, and one computer, and four weeks for them to get creative.

The results of this trial at Paignton zoo in Devon were more Mothercare than Macbeth. The macaques - Elmo, Gum, Heather, Holly, Mistletoe and Rowan - produced just five pages of text between them, primarily filled with the letter S.

There were greater signs of creativity towards the end, with the letters A, J, L and M making fleeting appearances, but they wrote nothing even close to a word of human language.

"It was a hopeless failure in terms of science but that's not really the point," said Geoff Cox, of Plymouth University's MediaLab, who designed the test. So what were the academics trying to achieve? "It wasn't actually an experiment as such, it was more like a little performance," said Mr Cox.

The project - which was paid for with £2,000 of Arts Council money - was intended to emphasise differences between animals and machines, he went on. "The monkeys aren't reducible to a random process. They get bored and they shit on the keyboard rather than type." The computer was protected with a perspex box, with holes for the monkeys to poke fingers through to hit the keys.

Vicky Melfi, a biologist at Paignton zoo, said that the macaques were ideal animals to use.

"They are very intentional, deliberate and very dexterous, so they do want to interact with stuff you give them," she said. "They would sit on the computer and some of the younger ones would press the keys." Ultimately the monkeys may have fallen victim to the distractions which plague many budding novelists.

"There's loads of stuff for them to do in there, they've got climbing frames, ropes and toys," Ms Melfi said. The researchers did consider rewarding the monkeys with food when they pressed a key, but worried they would become fixated and so do little else.

The macaques should not feel too bad about their lack of productivity, however. Assuming each monkey typed a steady 120 characters a minute, mathematicians have calculated it would take 10 <+>813 (10 followed by 813 zeros) monkeys about five years to knock out a decent version of Shakespeare's Sonnet 3, which begins: "Look in thy glass and tell the face thou viewest, Now is the time that face should form another." And that's if they had a computer each.

The Paignton six's literary efforts have now been printed in a limited edition book entitled Notes towards the Complete Works of Shakespeare. Just £25.