

# THE TIMES

JOHN NAISH BREAKTHROUGHS, TIPS AND TRENDS

## Feeling sheepish

ROBOT fish may help to explain why we all stampede into daft economic booms and busts — and even why we feel compelled to step in front of traffic when other people do the same.

Dr Ashley Ward, a Sydney University biologist, is to start experiments in Britain to test his theory that it takes only two people in a crowd to do something — even if it's as daft as stepping into traffic — and the rest will follow.

He has just proved that higher animals follow this "rule of two", by slipping robotic fish into shoals of fish. If one robot veered off towards a predator, none of the real ones followed. But when two robots headed into danger, the shoal followed.

The same phenomenon has been seen in insects: it seems it's a good instinct to ignore one maverick, but it's unlikely that two mavericks will move together, so it's safe to follow a pair of leaders, Ward explains in the *Proceedings Of The National Academy of Sciences*.

Now he is starting to test whether the same "quorum response" effect is working higher up the evolutionary ladder — in Leeds, by getting

two people to step out into the traffic and seeing if others follow (so watch out, Yorkshire folk). "I'm guessing people will follow the same rules as fish," he says.

In fact, the human herd phenomenon was spotted 150 years ago by the Scot Charles Mackay, particularly the way it sparks investment crazes. His seminal work on crowd psychology, *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds*, is still in print.

Mackay's examples of our sheep-like ways include tulipomania in 1624, when wild speculation sent tulip bulb prices so high that they traded at higher prices than gold — until the inevitable crash. Then there was the South Sea Bubble, the shipping-line speculation that convulsed and led

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## Why we follow the masses like sheep

**LEEDS** For all that human beings are held up as the pinnacle of intellectual achievement in the animal world they have an innate capacity to behave like sheep, a study has shown (Lewis Smith writes).

People are just as capable as birds and sheep at following a crowd unthinkingly and need someone to take the lead if they are to get to their destination.

Only 5 per cent of people in a crowd need to know where they are going for all the rest of them to follow their example. When fewer

than 5 per cent of the crowd know where they want to go, everybody ends up wandering in circles. Furthermore, when they do manage to get from A to B they are often unable to explain how they got there, a study led by researchers at the University of Leeds found.

The findings are thought to have implications for crowd management at events such as the 2012 Olympics.

The study, funded by the Engineering and Physical Sciences Research Council, was reported in the journal *Animal Behaviour Journal*.

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## Crowds 'pick leaders to follow'

By Roger Highfield, Science Editor  
Published: 11:00PM GMT 14 Feb 2008

The study found that people, like sheep, can be easily led

People in crowds behave just like sheep, scientists claim, by blindly following one or two people who seem to know where they are going.

### Like ants, humans are easily led

Researchers at Leeds University believe their findings could have important applications, notably in the management of disasters.

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The team, led by Prof Jens Krause, conducted a series of experiments in which volunteers were told to walk randomly around a large hall without talking to each other. A select few were then given more detailed instructions.

The results published today show that it takes a minority of just 5 per cent of what they called "informed individuals" to influence the direction of a crowd of a minimum of 200 people. The remaining herd of 95 per cent follow without realising it.

are strong parallels with animal grouping ur," says Prof Krause, who reports the work in Dyer in the *Animal Behaviour Journal*, with es at the Universities of Oxford and Wales

we get swept along by the crowd but what's hat our participants ended up making a ct that they weren't allowed to talk or gesture

dn't realise they were being led by others."

Dr Simon Reader of Utrecht University that to play follow-my-leader, even if we are ot really know where they are going.

und that even when we are shown a faster he old one and tell others to take the long

That discovery could have lethal implications when it comes to evacuating a building or ship in an emergency, when people would likely stick to the familiar evacuation route, even if slower than an alternative.

## Leading from the front

Through a retained contract with the Faculty of Biological Sciences at the University of Leeds, we have access to hundreds of world-class scientists. It's our job to knock on doors and find the stories. And then we secure coverage. This particular story was covered across the national print media and by several national broadcasters.