

# Shadow-Boxing with Science

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**QMAC 2003**

Maximising Trade – Minimising Risk

# Take-up vs Attitudes

- The US National Agricultural Statistics Service expects that 38% of the 79 m acres of corn planted in 2003 will include biotechnology, a 4% increase over 2002. Farmers signified their intention to plant more insect resistant (Bt) corn. For soybean, NASS estimates 80% of the crop will be biotech, or a 5% increase over 2002.
- Meanwhile, the Discovery Channel commissioned a 2003 a global poll to assess how people were informed and perceived the impact of genetics on their lives. The survey was conducted in 8 countries: UK, Denmark, Poland, Mexico, Brazil, Taiwan, Turkey, and the US. 58% of the respondents polled are unwilling to eat genetically modified (GM) food, and 55% believe that it is acceptable to send GM food to countries in need. 66% support GM crop developments if they will result to cheaper medicines.

# The Evidence vs The Balance Sheet

## Perceived Risks

- Environment: genes can end up in unexpected places or mutate; 'sleeper' genes could be accidentally switched on and active genes could become 'silent'; interaction with wild and native populations; and impact on birds, insects and soil biota
- Potential negative effects on human health and potential socio-economic effects
- Reduced consumer choice
- Equity for poor farmers; loss of farmers' access to plant material

## Perceived Benefits

- Solution to world hunger
- Reduces pesticide use
- Reduces cost and/or price of food
- Health benefits
- Cleaner production of non-food products
- Raises agricultural productivity
  
- **Who wears these risks and benefits???**
- **Who believes them???**

# Master chef Guillaume Brahim Bennelong's



# Edelman: Credible Sources

Experts, outside authorities, and those who are seen as having no vested interest in the company, are among the most trusted spokespersons.

- Across all regions, this includes academics, doctors, and representatives of NGOs.

Those **perceived to be in the pay of companies are the least credible spokespersons.**

- Across all regions, this includes corporate public relations representatives, entertainers/athletes, and union reps.

Multiple stories in the media generate higher levels of trust than single sources.

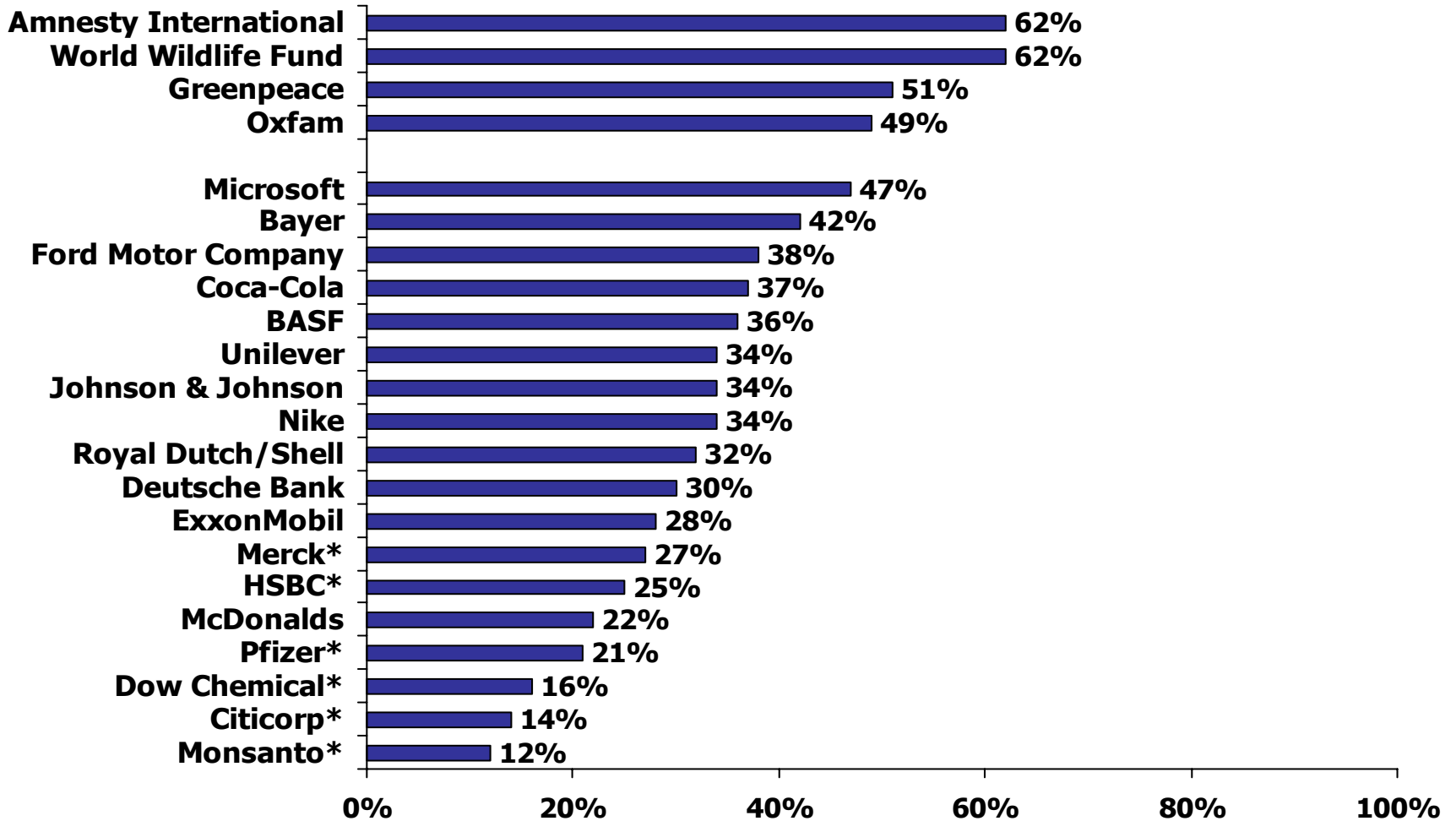
Primary players in the web of trust are friends, family and independents.

# Edelman: Big Picture 2003

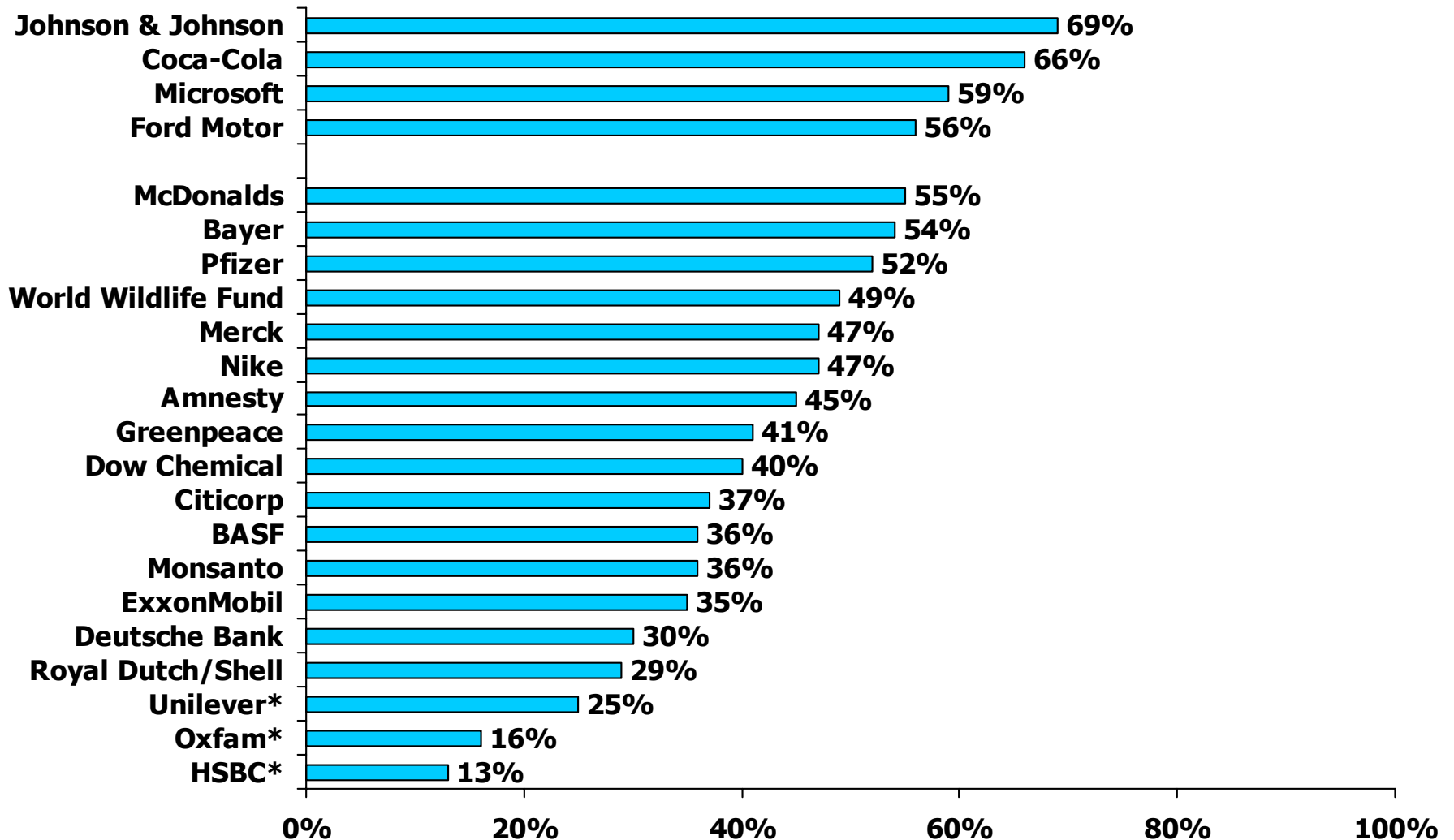
Views on trust differ between the US and Europe.

- In the US trust in business has gone up, while government trust has declined off its 9/11 peak.
- In Europe, trust in business has dropped.
- **In both regions, NGOs are now the most trusted institutions.**
- Consistent with last year, the most trusted brands in the US are major corporations, while in Europe they continue to be NGOs.
- Opinion leaders find third-party authorities most trustworthy, especially academics and doctors.
- Stories in the media are more credible than advertising by a margin of eight to one.

# Brand Evaluator: EU



# Brand Evaluator: US



# A Legitimate Debate

## **Public Health Association of Australia: no surveillance system looks for any ill health effects of GM foods**

- existing disease surveillance systems rarely connect information on hospitalisations, new diseases and detailed epidemiological; investigation;
- no-one is examining existing data bases to determine whether increases in an given diseases that might be linked to GM food;
- there have never been any human feeding trials to determine the safety of GM foods (although regulators claim that the processes used are the same sort as are used for new drugs);
- where GM foods have been tested on animals, which is not in every case, it is not tested for long enough to determine whether or not it has the potential to create diseases such as cancer; and,

# A Legitimate Debate

**Consumers' Union:** we've benefited from hundreds of advances in science and technology. Some new technologies turned out to have risks and costs that were unanticipated, not understood until long after the inventions were economically entrenched:

- Who would have imagined that versatile, inert chemicals like chlorofluorocarbons could diffuse into the stratosphere and there deplete the ozone layer?
- That burning fossil fuels could change the earth's climate?
- That pesticides sprayed on Texas cotton fields to control boll weevils could accumulate in human breast milk and in the tissues of Antarctic penguins?
- Scientific predictions of adverse public-health and environmental effects have often greeted new technologies. **Usually, they were brushed aside, even if they later proved accurate.** There are cases where the risks were substantial enough to suggest seriously that "progress" in that instance was a costly mistake.

# Science Moving ahead of Public Views?

## **1999 Consensus Conference findings:**

- Formation of statutory authority – public focus
- Ensure cross-sector dialogue
- No new commercial releases or unlabelled imports without GTO in place and: clear biosafety protocol position; all-encompassing labelling; consultative process in place; independent academic peer review for research; evaluation of field trials.
- Integrate Environment/Health departments, monitor adverse impacts register
- Ensure alternatives to GMOs are protected
- Involve Ethicist in policy formulation
- ACCC to monitor monopolistic competition
- Information and education programs
- Comprehensive labelling (not substantial equivalence)