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USDA Outlook Forum 2005

Balancing Science and Risk Management

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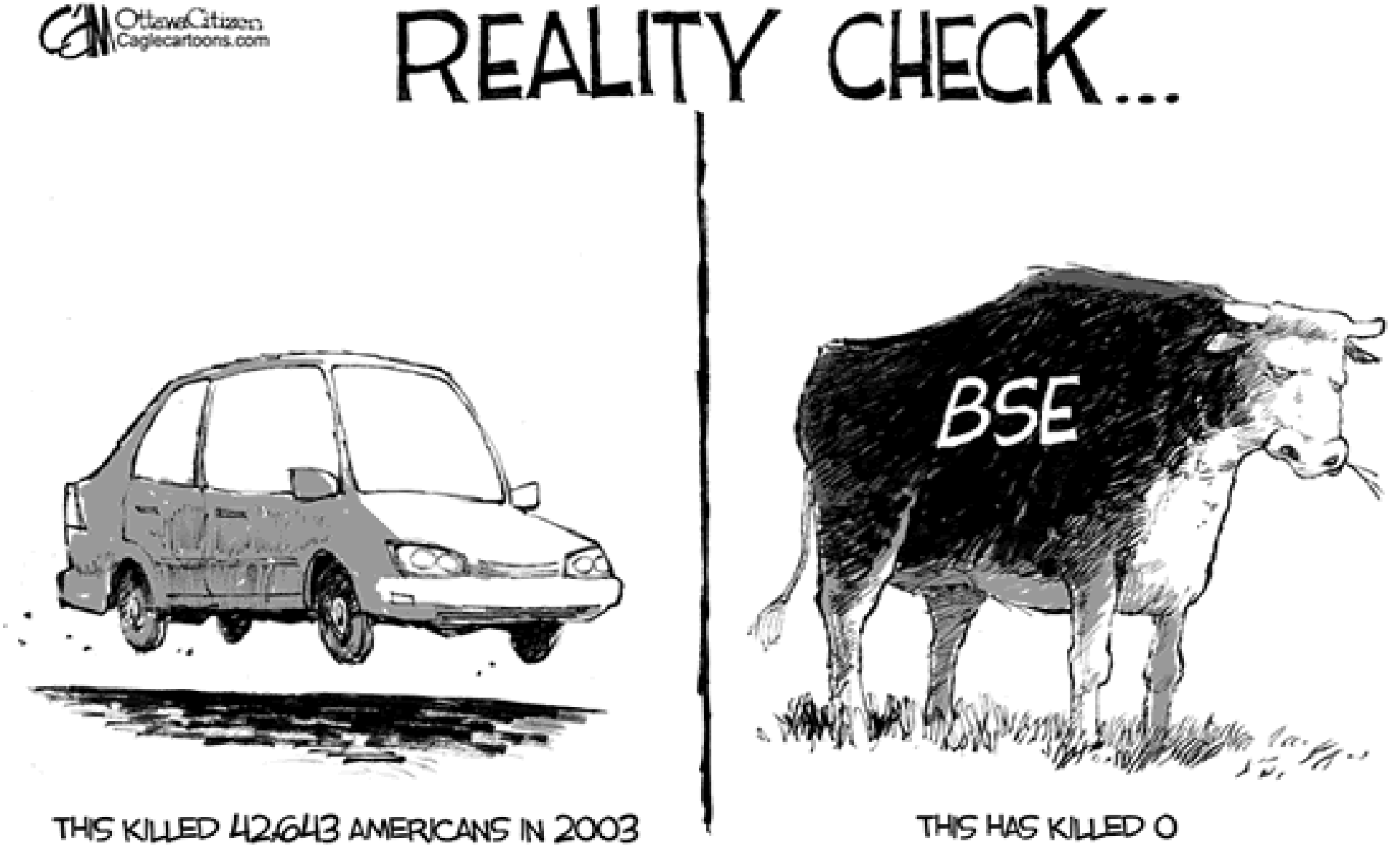

BSE as the Scientist sees it…

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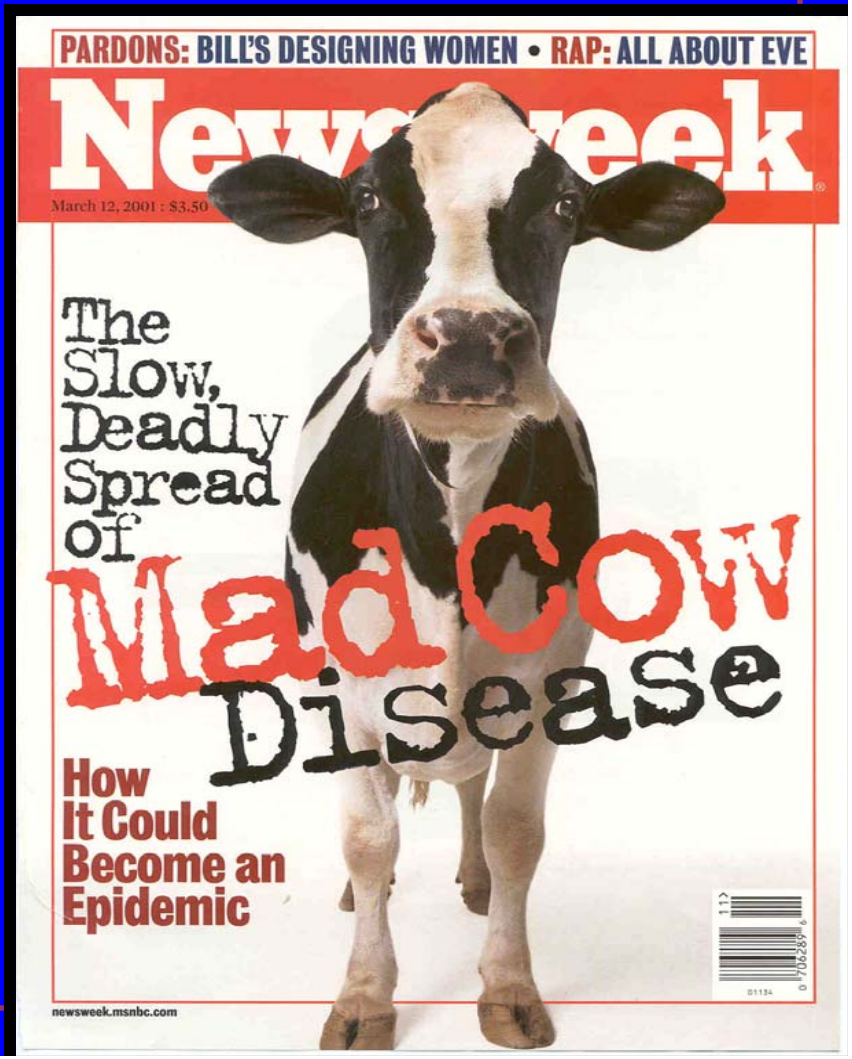
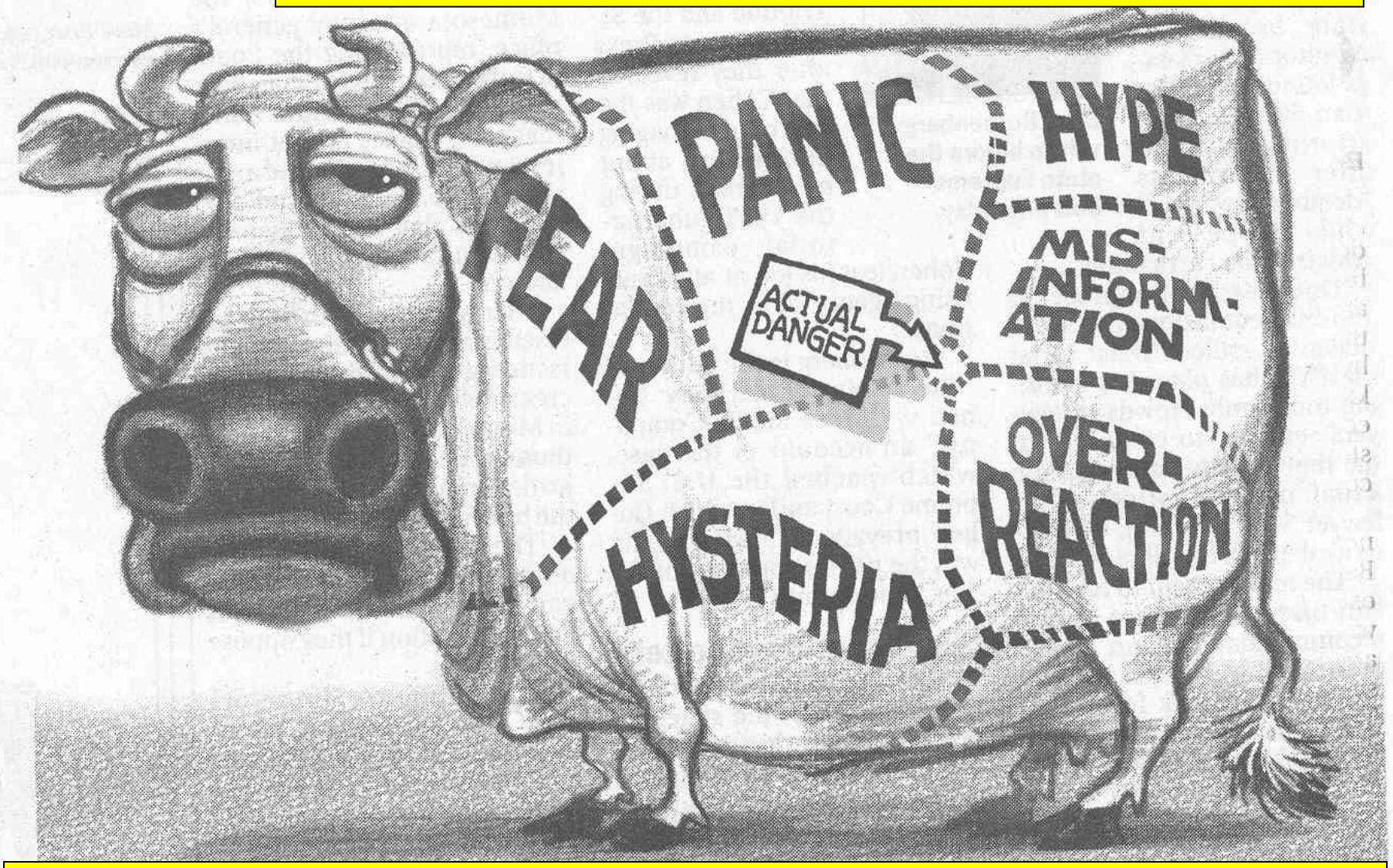
BSE as the public sees it…

- New and unusual
- Horrible progression
- No treatment or cure
- Affects young people
- Tests imperfect
- Transmitted by feeding practices driven by economics



Warning: BSE Risk = danger + fear



Effective risk management must address both!

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The Balancing Act

- Science informs risk management
- Risk management targets reducing the likelihood of the hazard and the consequences if it occurs (the dangers)
- Effective risk management also involves addressing fears through proactive risk communication…

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Prevailing myths affecting the balance between science and risk management

- Science has all the answers
- Public health = zoonoses only
- Zero risk is achievable
- Physical and biological sciences are REAL science
- Public fear can be addressed by providing more information

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Science is a method, not an absolute

- Our understanding of all diseases is incomplete
- Science moves forward through conjecture and refutation
  - The prevailing understanding of “facts” is the theory that can’t be disproven yet
- Current scientific thought is constantly evolving… new findings occur daily

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Risk Management recognizes that public health is more than zoonoses

- Direct transmission of disease between animals and humans is a real concern
- Public health consequences also include
  - Public fear and the psychological aftermath
  - Economic losses and social disruption
- All interventions carry consequences
  - Must assure that unintended consequences do not exceed the threat itself!

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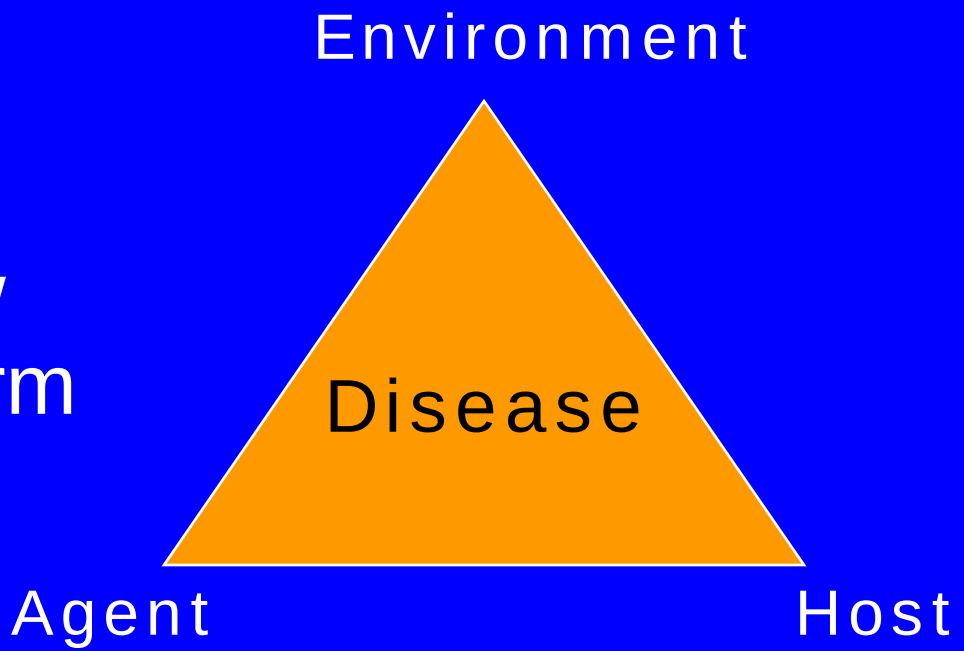
Risk management acknowledges that everything carries risk

- Agents, hosts and environment all change!
- Emergence of new diseases is the norm rather than the exception
- Zero risk is unachievable



The epidemiological triad

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Biological and social sciences both contribute to risk management

- The ideal scientific solution is meaningless if it can't be implemented
- Optimizing risk management requires broad support of all the affected parties and high levels of voluntary compliance
- Must consider the people factors as well as the biological factors

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Addressing "fear" involves more than just information

- Effective risk communication is built on trust and credibility
- Active engagement of all those potentially affected provides the foundation for effective risk communication
- "Listening" is critically important in order to understand the concerns and fears

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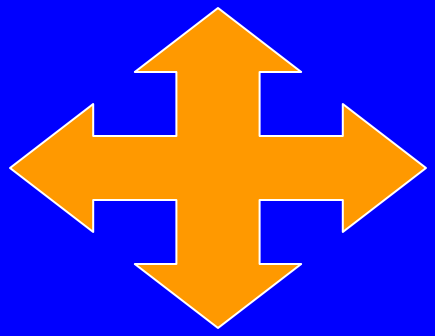
Risk Analysis: Tools for balancing biological and social sciences

Hazard Identification

Risk Communication



Risk Assessment

Risk Management

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The Science and Art of Effective Risk Management

- Active engagement
- Amassing all relevant science
- Comparing support for different risk management strategies in terms of acceptance and compliance
- Clearly articulating the underlying science and strategy for safeguards
- Flexibility to accommodate new findings