

# Communicating Risk in a Crisis

Professor John Maule  
Centre for Decision Research  
Leeds University Business School  
[jm@lubs.leeds.ac.uk](mailto:jm@lubs.leeds.ac.uk)

# Introduction

---



- Paradox of modern life
- The 'Risk Society' (Beck)
  - Globalisation
  - Technological Threats
- Public increasingly sensitive to risk issues
- Increased demand for regulation, effective management and communication
- But communication not always effective

# Introduction

---



- Many high profile failures (MMR, BSE, Pill Scare)
- Led public to take inappropriate actions and damage to the communicating agencies
- The key to effective risk communication – understanding how people perceive and act in the face of risk information

# Objectives of presentation

---



- Outline research on how people perceive and act in the face of risk
- Consider the implications of this for developing effective risk communications
- Put in the context of crisis situations
- Identify some key facets of communication strategies

# Outline of talk

---



- An individual perspective
- Implications for effective risk communication

# Individual perspective

---



- Formal definitions of risk and risk assessment
- People neither have to thinking capacity nor knowledge to do this
- Short-cuts in thinking
- Two forms of thinking
  - System 1 ('Gut') fast, intuitive, fringes of consciousness
  - System 2 ('Brain') analytical, conscious, based on formal reasoning

# Individual perspective

---



- Formal assessments and related communications often founded on System 2
- But public interpret these by System 1 processes
- Critical that we understand these System 1 processes

# System 1 thinking

---



- Many examples so will illustrate just a few
- Definitions of risk
  - Public simplify and base judgement on factors not included in formal risk assessment
  - Dread and Uncertainty

# Qualitative risk factors

---



- **Dread** :lack of control, inequitable distribution of the benefits among those at risk, considered a threat to future generation, irreversible effects, risk increasing over time and having catastrophic potential (i.e. a large number of fatalities).
- **Unknown** is characterized by unfamiliarity, unobservable and unknown to science.

# Qualitative risk factors

---



- Threats with these factors are perceived as risky regardless of formal risk statistics
- Can explain biases in public perception

# Qualitative risk factors



	<b>Low ‘Dread’ perceptions</b>	<b>High ‘Dread’ perceptions</b>
High “Unknown”	e.g., Medical technology, Solar electric power.	e.g., Nuclear power, genetic engineering.
Low “Unknown” perceptions	e.g., Motor vehicle, Smoking, Alcohol.	e.g., Crime, Handguns.

**Table 1:** Hazard classification on two factors of risk perception

# Qualitative risk factors

---



- Threats with these factors are perceived as risky regardless of formal risk statistics
- Can explain biases in public perception
- Can summarise as a checklist to predict public reaction

**Table 2**  
**Bennett's list of 'fright factors'**

**Risks are generally more worrying (and hence less acceptable) if:**

1. They are seen as *involuntary* (e.g., exposure to pollution), in contrast to voluntary risks such as participation in dangerous sports or drinking alcohol.
2. Potential damage (and/or benefit) is seen as *inequitably distributed*.
3. *Lack of influence* over the outcome – e.g., by taking personal precautions.
4. The source of danger is *unfamiliar/novel*.
5. The risk is seen as *man-made* rather than natural.
6. The mechanism involved appears to be *poorly understood by science*.
7. Symptoms of damage may be *long delayed* – e.g., through onset of illness many years after exposure.
8. There is some particular risk to small children or pregnant women or more generally, a perceived *risk to future generations*.
9. The form of death (or illness/injury) involved arouses particular *dread*.
10. Victims of the hazard are *identifiable individuals*, rather than anonymous.
11. Credibility of risk estimates is compromised by *contradictory statements* from responsible sources (or, even worse, from the same source).

# Qualitative risk factors

---



## Implications:

- Helps predict public response better than statistical / scientific risk estimates
- Identifies factors that we may emphasise or downplay in our communications

# Processing risk information

---



- Often communicate statistical risk information
- People not good at making sense of it

You are living in an area where the risk of being burgled is 5% a year. What are the chances that you will not be burgled at least once over a five-year period?

# Processing risk information

---



- There is a formal rule (System 2 thinking) but people rarely know or use
- Either
  - Use own intuitive mathematics
  - Forget the statistics and make an intuitive judgement instead
- Thus communicating statistics is often ineffective

# Processing risk information

---



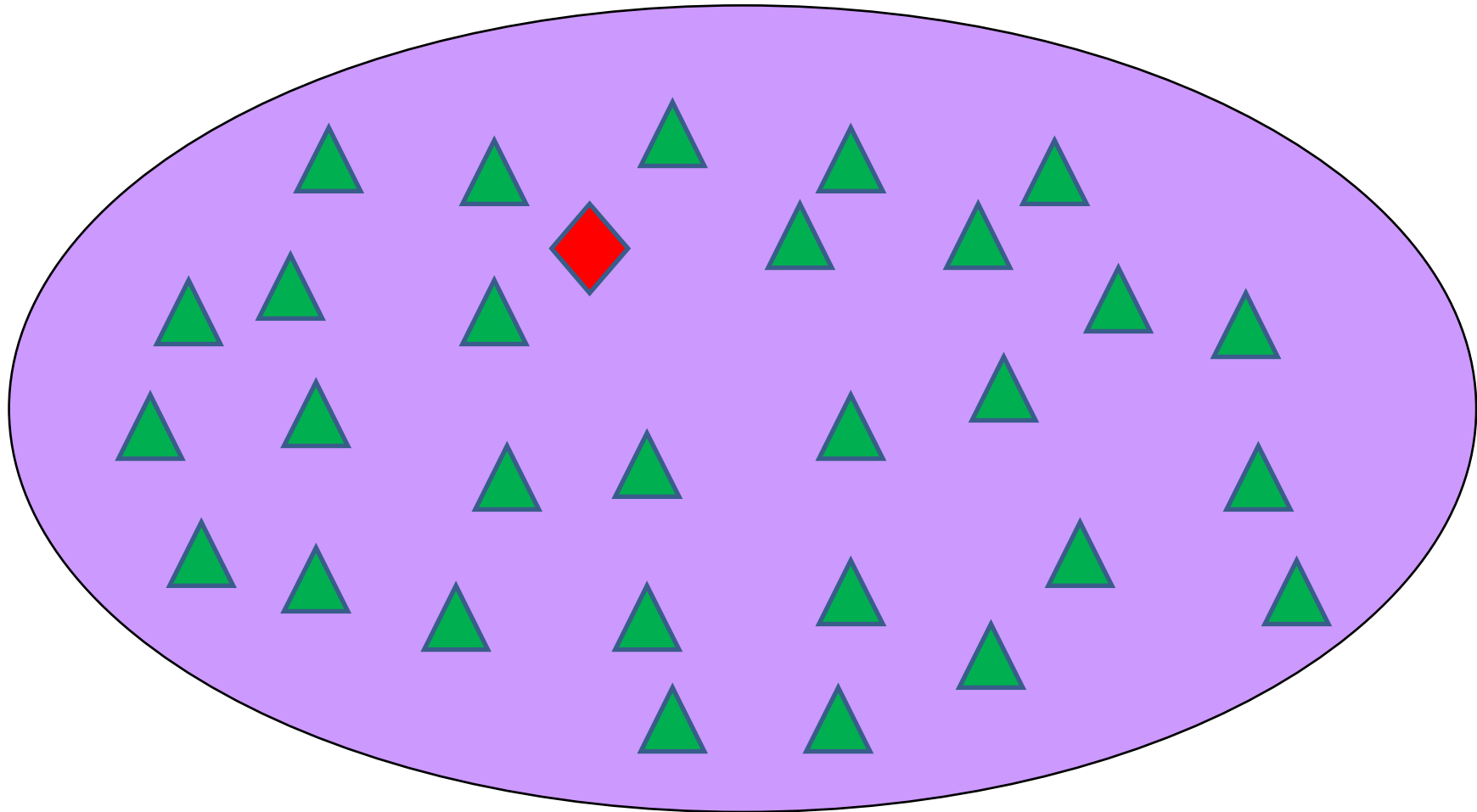
- So what forms on intuitive thinking do people use?
- Will provide two examples:
  - Availability
  - Affect

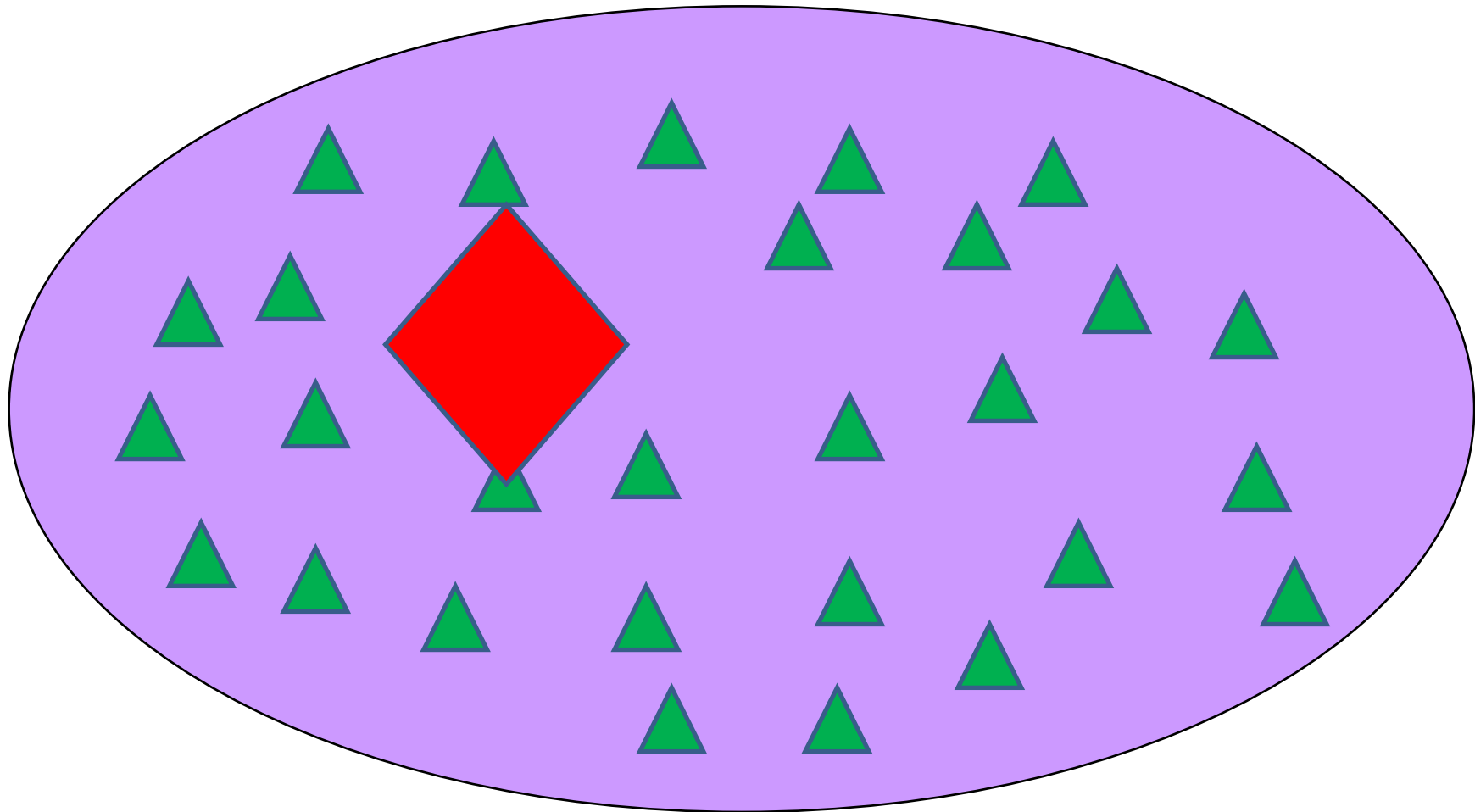
# Availability thinking

---



- Ease with which past occurrences of hazard happening can be brought to mind/ how readily events with hazard can be imagined.
- Sensible since events that have happened frequently in past are more readily remembered and more likely to occur in the future





# Availability thinking

---



- We overestimate high availability risks
- Media highlights high availability risk
- Spills over into national and organisational policy
  - Information security: hackers vs postage
  - Saving life on railways vs roads
- People ignore 'the facts' in communications and base on their own experience

# Availability thinking

---



- Simply talking about an issue primes memory and increases availability
- Unless we induce System 2 thinking, likely to be one way that people react to risk communications
- Next look at affect based thinking

# Affect based thinking

---



- Use immediate emotional response to determine perceived risk
- Quick, efficient and 'primitive'
- But many things frighten us that are not risky:
  - Biologically programmed: spiders
  - Learned (Stigmatised): nuclear power
- Overrides communications based on 'facts' and reasoned arguments

# Do what trusted people advise

---



- The simplest form of thinking – just do what ‘experts’ say
- In the past this was predominant
- Loss of trust makes this problematic and has produced a vacuum
- Highlights importance of trust building

# Conclusion

---



- Simple forms of thinking override arguments based on the facts
- Reasoned argument (S2) loses out to gut reaction (S1)
- Can explain why communications can fail
- Provides some insights about how to improve communications

# Improving risk communications

---



- Many approaches, but focus on those linked to issues identified earlier
  
- 1: Switch people from S1 to S2 so that they ‘focus on the message’
  - Mental Models Approach
  - Elicit lay and expert models and compare
  - Allay misconceptions and look for critical factors for switching them from S1 to S2

# Improving risk communications

---



- 2: Use more intuitive ways of presenting statistical risk information
  - Frequency formats
  - Ladders and scales
  
- 3: Development and maintenance of trust
  - Different facets need to be addressed

# Improving risk communications

---



4: Consider how fright factors, availability and emotion can be used to achieve objectives

5: Develop S1 sensitive communications.

6: Develop blueprint strategies in advance of a crisis

# Conclusion

---



- There is a large body of relevant theory and research
- Identifies useful and tested approaches
- Provides important insights about communicating risk in crisis situations

# Communicating Risk in a Crisis

Professor John Maule  
Centre for Decision Research  
Leeds University Business School  
[jm@lubs.leeds.ac.uk](mailto:jm@lubs.leeds.ac.uk)