The Science Communication story

Comunicar Ciência 2005 Workshop
IGC, 1 September 2005

Actors in science communication

- Governments and their agencies
- Education (formal and informal)
- Science museums and science centres
- Media
- Industry and private sector
- Scientific community

(EC Benchmark Report on PUS, 2002)

Why communicate

1) entice students into science & engineering
2) culturally enriching
3) better decisions
4) more support for science
5) strengthen democratic process

Bodmer (1985)
Wolfendale (1995)
EC (2002)

Timeline

- **1985 Bodmer Report (Royal Society)**
  - **Problem - “nature and extent of public understanding of science”**
  - **Solution – improved science communication**
  - **“Scientists must learn to communicate to the public, be willing to do so and consider it their duty to do so”**

- **1993 White Paper "*Realising our Potential*"** (OST)
  - **Government support – PUS became part of official government thinking**

- **1995 Wolfendale report (DTI) - *how to do it***
  - **Grant applications** - ‘how scientists will communicate to public what they do and why the work is important’
  - **Training in communication skills** needed UG & PG courses
  - Universities - recognise PUS skills in **appointments & promotions**

Huge increase in activity

Early 80s - few organisations (BA, RI, Museums, Media)

Immediately post-Bodmer – COPUS (RS, RI, BA)

- annual science book prize
- grants for PUS activities
- media training workshops for scientists

Now -

- more Science Journalists
- core science in National Curriculum
- Science Centres
- Science Festivals
- Popular Science books
- National Science Week
- Parliamentary Office of Science and Technology

‘Deficit’ model

‘If people were more informed about science, they would be more supportive’

The public:

Knows little science (surveys of scientific literacy)

Willing and eager to be told about science

One-way, top-down communication process

Rethinking the ‘deficit’ model

- The more people *know* about GM, the more suspicious/less trusting they are of it

  - between 96-99 better understanding across Europe, yet *more* concern (Eurobarometer)

  - survey in Brazil 2001:
    - 75% public rejected GM
    - 85% rejected in more educated people

Science and Society Report 2000

'A Crisis of Confidence'... House of Lords Report **2000**

'Society's relationship with science is in a critical phase... Public confidence in scientific advice has been rocked by issues like BSE...many people uneasy about rapid advance of areas eg biotech & IT'

Science and Society Report 2000

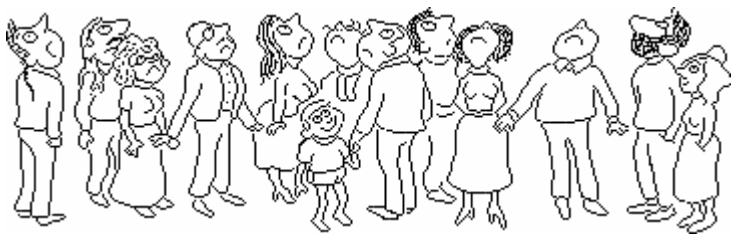
2000 House of Lords Select Committee (Jenkin)

- Public *very* positive about science
- But scientists need to *listen* to the public
- Science communication often too *top down*
- Deficit model - not valid

Science and Society Report - Dialogue

'That ***direct dialogue*** with the public should move from being an optional add-on to science-based policy-making and to the activities of research organisations & learned institutions,

- and should become a ***normal & integral part of the process***.'



(Jenkin Report 2000)

Science and Society Report - Engagement

'Science is conducted by individuals (who) must have ***morality and values***, and must be allowed, indeed expected, to ***apply them to their work***

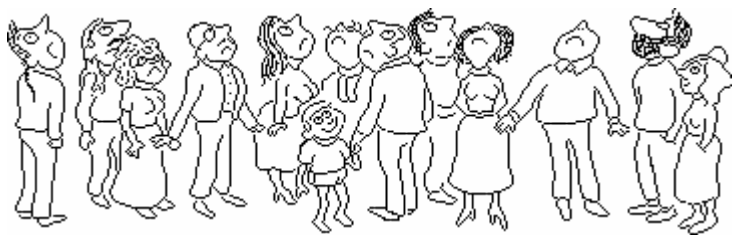
...By declaring the values which underpin their work, and by engaging with the values and attitudes of the public, they are ***far more likely to command public support.***'

(Jenkin Report 2000)

From PUS into PEST/PESE

Public Understanding of Science

Public Engagement in Science and Technology/Engineering



Dialogue and engagement - what do they really mean?

- Scientists understanding the Public
- Listening to people, working out their level, interests and needs ***before*** starting to talk
- Talking ***with*** public about ethical issues
- Being prepared to ***change your mind***
- Getting public to help define questions and evaluate solutions and ***shape policy*** - at all levels

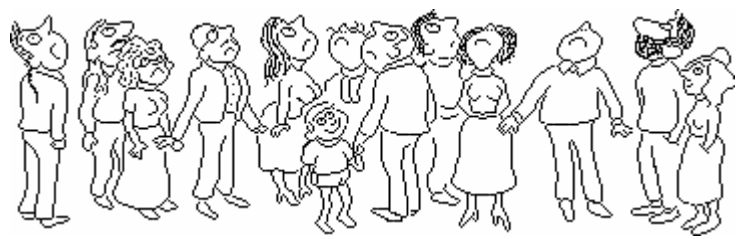
Kathy Sykes, Prof. PESE, University of Bristol

Dialogue – making it work

- **Public** - confident, enabled, motivated to discuss ethical issues around science and contribute to decision making
- **Schools** - prepare people who DON'T become scientists for society surrounded by scientific issues
- **Scientists** – with excellent communication skills, able to genuinely listen to the public

O vosso desafio: comunicação, diálogo e debate

- Objectivo
- Audiência/público alvo
- Actividade
- Equipa de trabalho
- Divulgação
- Financiamento
  - Fontes
  - Orçamento
- Avaliação



Grupos de trabalho

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- Apresentações 15min
- Painel: Greta Martins, Rosalia Vargas, Frank Burnet, Malcolm Love, António Granado, Steve Miller