Robot Thought evaluation summary 7

Venue: Centre for Life, Newcastle

Robot experts: Edinburgh University

**Dates:** 20 October – 4 November 2007

Number of shows: Up to 8 Robot Thought shows per day
3 days drop-in sessions led by the roboticists
Daily *JitterBot* drop-in workshops

Audiences: 3237 visitors saw the show between 20 and 27 October inclusive. Shows are free to enter and run regularly, so most centre visitors see the show during a visit.
A smaller number participated in the 'make and take' JitterBot workshops which involved making a robot out of card and a simple mechanism that caused it to move. The roboticists demonstrated some research robots and invited visitors to play a robot at Connect 4.
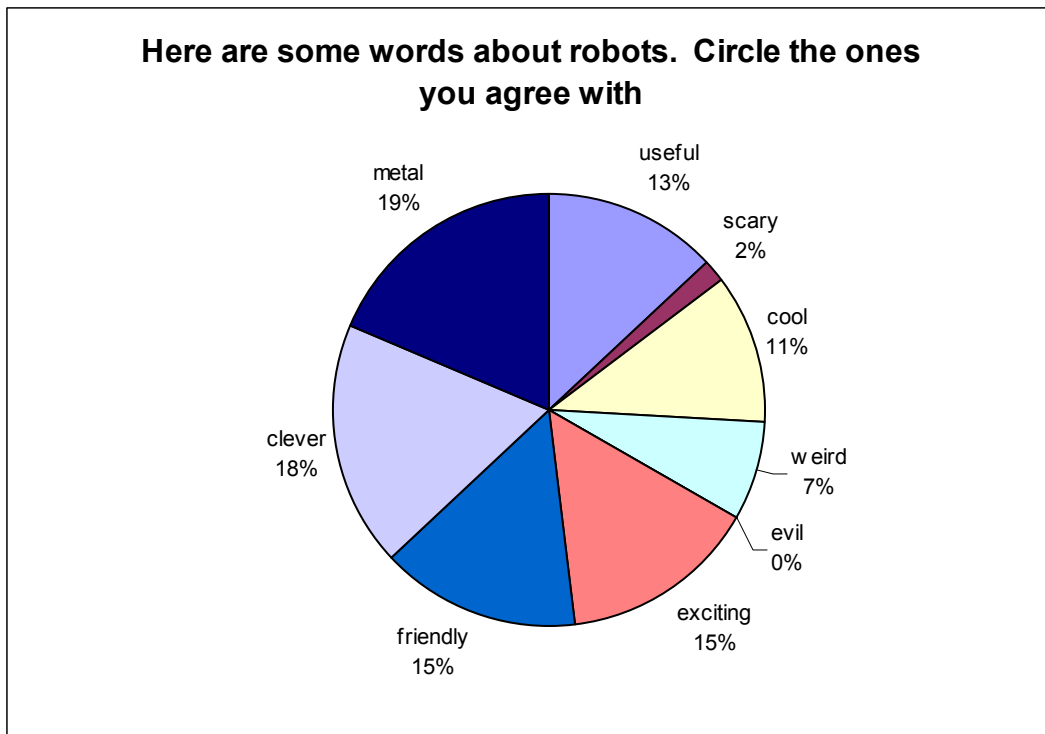
Total audience size = 3237

Respondent age distribution

The *Robot Thought* show was evaluated using a short questionnaire (n=14) for 12 and unders, and a long questionnaire (n=42) for older children and adults. This document presents the findings from the audience survey.


Audience age ranges (n=46)
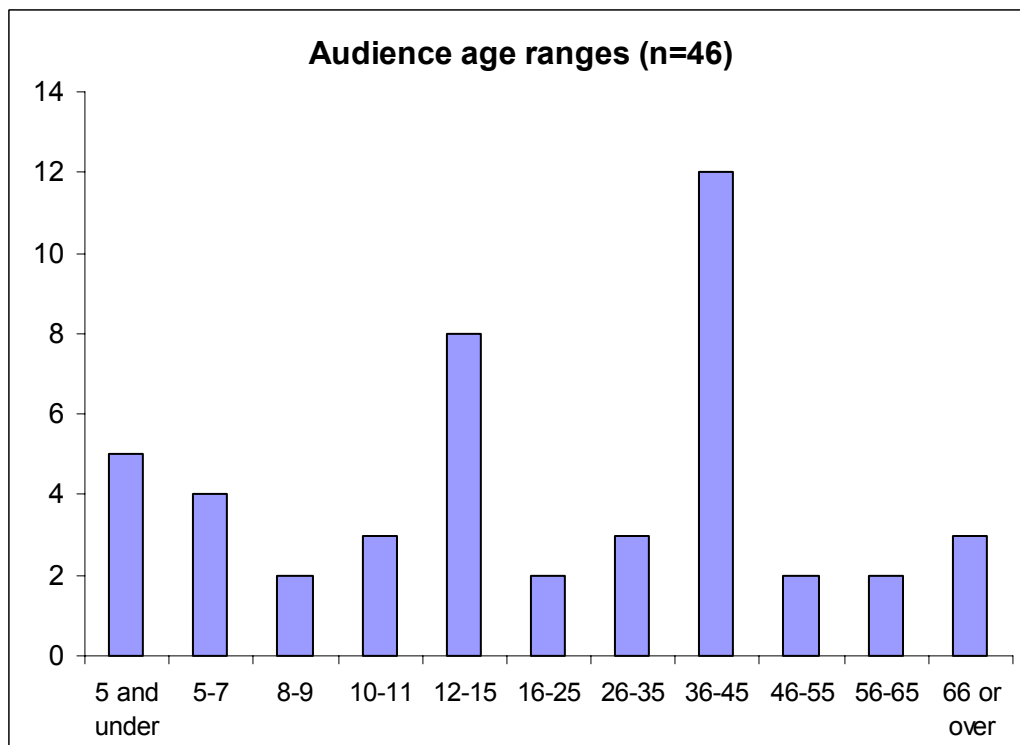
Short questionnaire summary (n=14)

The gender balance for the short questionnaire was 5 males and 8 females.

Here are some words about robots. Circle the ones you agree with

- metal 19%
- useful 13%
- scary 2%
- cool 11%
- w eird 7%
- evil 0%
- exciting 15%
- friendly 15%
- clever 18%

Short questionnaire respondents were asked to rate the show using a three point smiley-face scale. Results are presented below:

Under 12s show rating

rating	value
smile	10
indifferent	2
frown	1
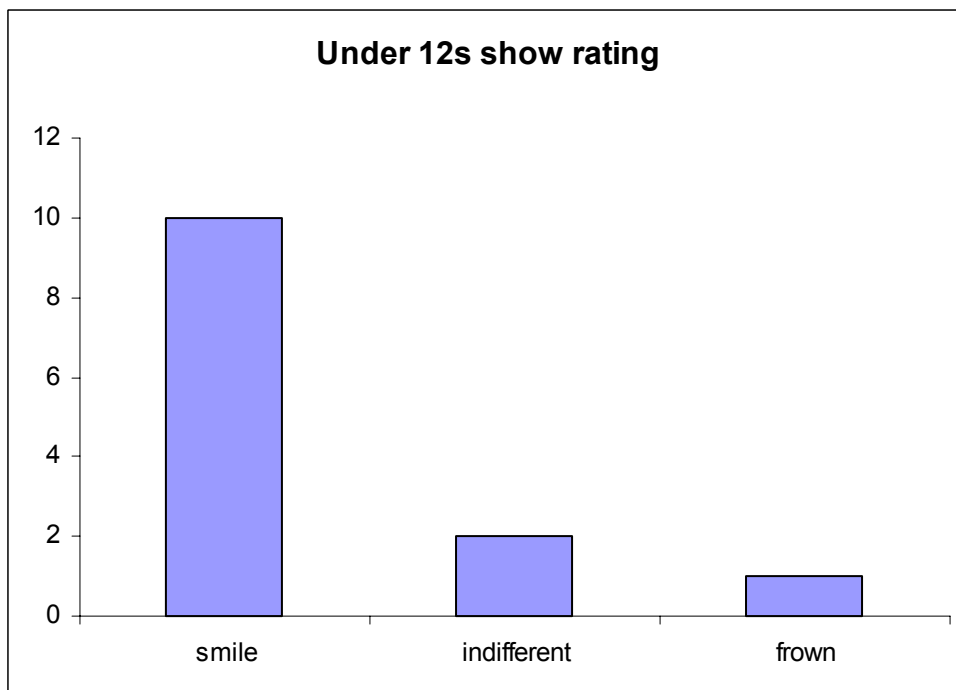
Most of the young people (10 out of 13) that completed the questionnaire liked the show, and circled the smiley face on the three-point scale.

Several young respondents and one parent commented on the show. Comments included:
"I learned a lot more about robots"

"It was very good"
"Too grown up for a 3 year old - no warning of this and no escape once it had started"

Long questionnaire summary (n=42)

Information collected on the audience is summarised here.
- Gender balance for the long questionnaire respondents was 47% male and 53% female.
- Most respondents (91%) were attending with family.
- Most respondents (90%) were White British.
- There were two Disabled respondents. One had a physical impairment, the other had a visual impairment.

Results from the evaluation are summarised here:
- Most respondents (83%) heard about the show when they arrived at the Centre for Life. Of the remainder, 3 people heard about the show through word of mouth, and the remainder through advertising/publicity in a metro station, online and in the newspaper.
- Most respondents said that they had attended out of interest or curiosity. Nine respondents commented specifically that they or their children particularly liked or were interested in robots.
- Responses to the quantitative questions are summarised in the graph below:

Older audience responses (n=39)
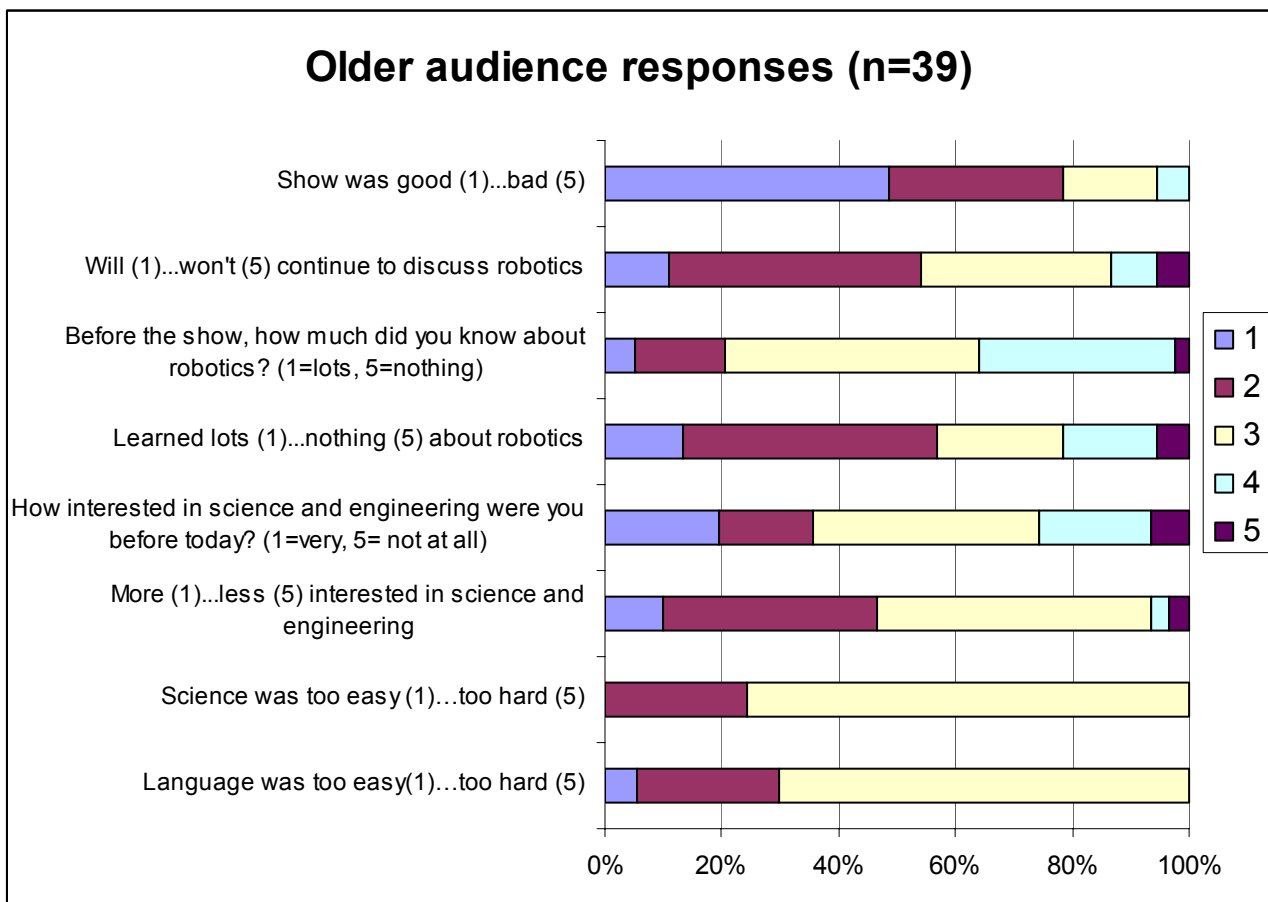
- Most (79%) rated the show as 1 or 2 on a five-point scale from good to bad.
- When asked to describe the show, all but one of the words written down was positive. Most popular were words such as 'interesting', 'informative' 'good' and 'enjoyable'. Some also described the show as 'interactive'. A single respondent said it was 'boring'.
- Three-quarters (76%) said that the science was pitched at the right level. A quarter (24%) felt it was too easy.

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- Most (70%) felt that the language was at the right level, although a quarter (29%) found it 'too easy'.
- Respondents were most likely to cite Aibo (13 times) or the other robots (6 times) as their favourite parts of the show. Other popular elements included the crisps demonstration (4 votes) and the presenter and the interactive nature of the show (3 votes each).
- Few respondents picked a least favourite part of the show, one commented on the room's poor acoustics, and another felt the slideshow was dated. One respondent felt the show was too short, while another said it was 'too lengthy'.
- Half of respondents (54%) said they were likely to continue to discuss robotics after the show.
- Respondents' prior knowledge of robotics varied. On a scale of 1 (lots) to 5 (nothing), 20% rated their knowledge as 1 or 2, 44% as 3, and 36% as 4 or 5. Very few respondents rated their prior knowledge at the extreme ends of this scale (5% as 1, 3% as 5)
- Respondents were asked to rate how much they had learned about robotics on a scale from 1 (lots) to 5 (nothing). Over half (59%) rated their learning as 1 or 2, with a fifth (22%) rating their learning as 3. Only two respondents felt they learned nothing.
- The most common learning points related to the definition of a robot and the use of sensors in robotics. Both were cited six times. Four respondents said that they had lerned about robot behaviour in some way, either about how it can be linked to insect behaviour or the different ways to categorise behaviour. Two respondents said they learned that robotics research takes place at the University of Edinburgh.
- Three quarters of the audience (74%) rated their prior interest in science as 1-3 on a scale of 1 (really interested) to 5 (not at all interested). Just two respondents rated their interest as 5.
- 47% said that the show had made them more interested in science, with the same proportion (47%) reporting no change.
- When asked if the show had changed how they felt about robotics, over half said it had (11 out of 19 responses). Many said the show had stimulated a greater interest in the field. Other comments included:

"Demystified it a little"

"Realised they impact our life more than just as toys"

"Work is ongoing to constantly improve our knowledge of outside world"

"Yes, shows you they are fun"