The Storybook Image of the Scientist

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The storybook image of the scientist: research questions

Do lay people indeed believe in this image?

Do scientists themselves believe in this image?

Are some scientists believed to fit the storybook image better than other scientists?

The storybook image of the scientist: study 1
*Scientists versus other highly-educated people*

Hypothesis
The storybook image of the scientist: study 1

*Scientists versus other highly-educated people*

**Methods:**

Online survey among:
- 1088 scientists from across the globe (**331** from the USA)
- **312** highly-educated non-scientists from the USA
- 36 science Nobel Prize laureates (extra, descriptive only)

Random assignment to one of two conditions:
- Statements about scientists
- Statements about highly-educated people

**Examples:**
- A [scientist] / [highly-educated person] does not commit fraud in his/her work
- A [scientist] / [highly-educated person] exhibits little emotionality with respect to his/her beliefs
The storybook image of the scientist: study 2

Scientists versus other highly-educated professionals

Methods:

Online survey among:
• 404 scientists from across the globe (111 from the USA)
• 75 highly-educated non-scientists from the USA

Rating
• Scientists
• 9 other highly-educated professions
  (lawyers, politicians, journalists, medical doctors, accountants, army-lieutenants, bankers, judges, and detectives)

(9 non-scientist professions pooled in analyses: 2 x 2 mixed design)
Objectivity

Rationality

Open-mindedness

Intelligence

Integrity

Competitiveness

Target

Other professions

Scientists
The storybook image of the scientist

Question that remains after studies 1 and 2:

Some scientists better than other scientists?
The storybook image of the scientist: study 3

professional level

Hypothesis
Online survey among:
• 515 early-career scientists (PhD < 10 years & no tenure)
• 903 established scientists (PhD ≥ 10 years & tenure)

Random assignment to statements about:
• PhD-students
• Early-career scientists
• Established scientists

→ 2 x 3 between-subjects design (originally 3x3 but too few PhD students in sample)
The storybook image of the scientist: study 4

gender

Hypothesis based on the stereotype of the male scientist
The storybook image of the scientist: study 4

**gender**

**Method:**

Online survey among:
- 186 female scientists
- 711 male scientists

Random assignment to:
- Statements about female scientists
- Statements about male scientists

→ 2 x 2 between-subjects design
Objectivity

Rationality *

Open-mindedness *

Intelligence

Integrity *

Communality *

Target

Female Scientists
Male Scientists
Belief in stereotypical image seems quite strong

Most ideal scientist: established & female

Established scientists have a more positive image of PhD students than of early-career scientists

Denial of own human fallibility? ➔ Willingness to adopt practices /policy aimed at reducing human factors in science?
Study 1 international

Objectivity

Rationality

Target
- A Highly-Educated person
- A scientist

Open-mindedness

Intelligence

Integrity

Communality
Study 2 international
Study 2 all professions

Objectivity

Rationality

Open-mindedness

Integrity

Intelligence

Competitiveness

Respondent group
- Educated
- Scientists