2013 survey of expert opinion on intelligence
Outline

1 Aims of the 2013 survey of expert opinion on intelligence ...... 3
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   *Confirmation?*
   Is there *any change* in opinions among experts?

2. **Update** of questions: 
   Inclusion of in the last decades developed research agendas: 
   *FLynn effect,*  
   *student assessment studies,*  
   *international differences.*
Purpose

1. What do experts think?
   To know what is the mean/median/mode/majority opinion on important and frequently hotly disputed research topics.

2. Increase epistemic rationality in the media and public.
   To counter a tradition in the media and sometimes in research of citing unknown, marginal, or questionable studies or researchers as the experts for research on intelligence (“Gould-Harvard-effect” or the “Double G-Harvard-effect”). We present the mean/median/mode/majority expert opinion.

3. Come closer to truth.
   To have an indirect (majority based) indicator for truth.
Two problems

1. We need an *unbiased selection of experts*. (From emails: Both “lefties” and “righties” rejected to participate in our survey because questions were not good, expert selection would not be good or truth could not be found by majority decisions.) We do not need all experts, but an unbiased sample.

2. *One empirical study* (and logic) can *overrule any majority opinion*. However, in a (partially) open society with (partially) free debate and (partially) rational approach to epistemic-scientific questions the majority opinion of experts, based on individual judgements, is at least one indicator for truth.

→ Galton (1907): Vox populi (average of different judges) in estimating the weight of a “fat ox” was correct within 1 per cent of the real value.
2 Method

Experts

1. Authors of papers published in
   - *Intelligence*
   - *Cognitive Psychology*
   - *Biological Psychology* (if article addressed intelligence or a related topic)
   - *Journal of Mathematical Psychology* (i a i)
   - *Contemporary Educational Psychology* (i a i)
   - *Journal of School-Psychology* (i a i)
   - *New Ideas in Psychology* (i a i)
   - *Journal of Applied Developmental Psychology* (i a i)
2. For the subject well known scientists or journalists writing on it.

3. Scientists emailed by ISIR member list
   (thanks to ISIR and David Lubinski!).

4. Scientists informed by ISSID website (thanks to ISSID,
   Don Saklofske & Michael Houlihan).

5. Scientists and interested students ($N_{st} \leq 3$) informed by colleagues.
   Participation only after invitation
   (to prevent any seizing by interest groups).

**Web based survey**

- Questionnaire with 62 main questions.
- LimeSurvey.
- Anonymous. We only know who has never reacted and who has ever reacted, but we cannot identify persons: how many questions a person has answered and what a person has answered.
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>49 questions</td>
<td>62 questions</td>
</tr>
<tr>
<td>1020 questionnaires</td>
<td>emailed to 1237 persons</td>
</tr>
<tr>
<td>661 (65 %) participants</td>
<td>228 (18 %) participants (70 completed + 158 partially)</td>
</tr>
<tr>
<td>1984</td>
<td>Spring and summer 2013</td>
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</tbody>
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[Are there so many experts for intelligence research?]
3 Major results

Terms and attributes

Difference between “cognitive ability” and “cognitive competence”?

- Yes: 54.30%
- No: 45.70%

Difference between “cognitive ability” and “intelligence”?

- Yes: 54.2%
- No: 45.8%
Important elements of “intelligence” and “cognitive ability” (compared to Snyderman & Rothman, order according to relevance)

- Reasoning
- Abstract thinking
- Problem solving ability
- "g"
- Applying logic
- Understanding, Comprehension

Intelligence
Cognitive ability
The use of knowledge
Spatial ability
Mental Speed
Adaption to one's environment
Science ability/knowledge
Memory

Intelligence
Cognitive ability
Personality as achievement motivation

- Rationality
- Creativity
- Knowledge
- Sensory acuity

Intelligence
Cognitive ability
Heredity and environment

Sources of reasonable evidence for a significant nonzero heritability of cognitive ability/intelligence.

- Studies of MZT rear. ap.
- Comparisons of MZT to DZT
- Adoption studies
- Kinship correl. among relatives
- Molecular genetic studies
- Patchwork family studies

R, C & B (2013)
S & R (1984) [white pop.]
Sufficient evidence to arrive at a reasonable estimate of the heritability of cognitive ability/intelligence in populations of developed countries?

- Yes: 72.6%
- No: 23.8%
- Other: 3.6%
Sources of U.S. black-white differences in IQ

Snyderman & Rothman (1984)

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Percentage of Differences Due to Genes</th>
<th>Proportion of Experts</th>
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<tbody>
<tr>
<td>0%</td>
<td>(17% of our experts)</td>
<td></td>
</tr>
<tr>
<td>0-40%</td>
<td></td>
<td>42% of our experts</td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td>18% of our experts</td>
</tr>
<tr>
<td>60-100%</td>
<td></td>
<td>39% of our experts</td>
</tr>
<tr>
<td>100%</td>
<td></td>
<td>(5% of our experts)</td>
</tr>
<tr>
<td>M=47%</td>
<td>of differences due to genes (SD=31%)</td>
<td></td>
</tr>
</tbody>
</table>

(74% of experts having an opinion)

- Environ.
- Genetic
- Both
- Insuff. data
- No answer
Intelligence effects

Influence of **average cognitive ability level** and highly cognitive competent persons on positive development of...

- ...society in general
- ...economic growth and wealth
- ...scientific development
- ...technological development
- ...political development
- ...status of democracy
- ...cultural development

![Bar chart showing influence of average cognitive ability level and high cognitive competent persons on various aspects of development.](chart.png)

- **Average level**
- **High c.c.p.**
Measurement

Bias?

(1 = Insignificant bias; 9 = Large bias)

- Test taker motivation
- Test taker anxiety
- Attitude of the examiner toward the group in question
- Language or dialect of the examiner
- Race/Ethnicity of the examiner

Rindermann, Coyle & Becker, ISIR13, 14-XII-13, Expert survey
Racial/ethnic content bias in cognitive ability/intelligence tests? (1 = Insignificant amount; 4 = Large amount)
Bias against groups (1 = Insignificant bias; 9 = Large bias)?

- Immigrants
- Lower SES-groups
- Africans in Western world

Rindermann, Coyle & Becker, ISIR13, 14-XII-13, Expert survey
Separate test norms for different subgroups?

- Poorer and richer groups (generally): Yes
- Natives and immigrants (generally): Yes
- Social groups (generally): Yes
- Ethnic groups (generally): Yes
- White, Blacks, Hispanics, Jews, East-Asian (USA): Yes
- White and Blacks (USA): Yes
Media and public

Accuracy of news sources relating intelligence testing
(1 = Very inaccurate; 9 = Very accurate)

- Steve Sailer Blog
- Anatoly Karlin Blog
- Die Zeit
- FAZ
- Die Welt
- NZZ
- Times
- SZ
- Wallstreet Journal

R, C & B (2013)
Public debates: More science or ideology?

- Science: 3.09
- Ideology: 6.91
Secular rise (FLynn effect)

Most plausible scientific theories about FLynn-Effect
(1 = Not important; 9 = Important)

- Longer and freer edu.
- Better health
- Better nutrition
- Better edu. and schools
- Wealth
- Better edu. in families
- Better edu. of parents
- More intell. soc. envir.
Genetic changes

Immigration

Decline of group-inequ.

TV and media

Smaller families

Computers etc.

More test-experience
Most plausible scientific theories about possible retrograde of FLynn-Effect (1 = Not important; 9 = Important)

- Fertility (genetic)
- Fertility (social)
- Decl. in educ. values
- Worse edu. in schools
- Migration
- TV and media
- Worse edu. in families
- Worse nutrition
- Worse health
Increase or decrease of IQ points in regions up to 2100

-2 -1 0 1 2 3 4 5 6 7

USA
Southern Euro.
Western (general)
Scandinavia
Israel
Canada
Australia
Eastern Euro.
Arab.-Musl. World
Latin America
Western (general)
East Asia
India
Africa

Rindermann, Coyle & Becker, ISIR13, 14-XII-13, Expert survey
International differences

Most important factors for international cognitive ability differences:

Education-sum: 20.6 % (quantity: 9.8%, quality: 11.0%)

Genes: 15.3%

See poster.
4 Missing, to improve

Questions on social intelligence/competence
Questions on emotional intelligence/competence
Questions on successful intelligence/competence
Questions on further multiple intelligences

Among media and blogs: James Thompson’s blog
(Psychological comments, http://drjamesthompson.blogspot.de)

Participation rate of experts + further experts

Subgroup analyses.
References