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# 2013 survey of expert opinion on intelligence

# Outline

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# 1 Aims of the 2013 survey of expert opinion on intelligence

1. **Replication** of the 30 year old study from Snyderman and Rothman in the 1980s (collected 1984; published 1987 & 1988).  
*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.

<b>Snyderman and Rothman (1984)</b>	<b>Us (R, C &amp; B, 2013)</b>
49 questions	62 questions
1020 questionnaires	emailed to 1237 persons
661 (65 %) participants	228 (18 %) participants (70 completed + 158 partially)
1984	Spring and summer 2013

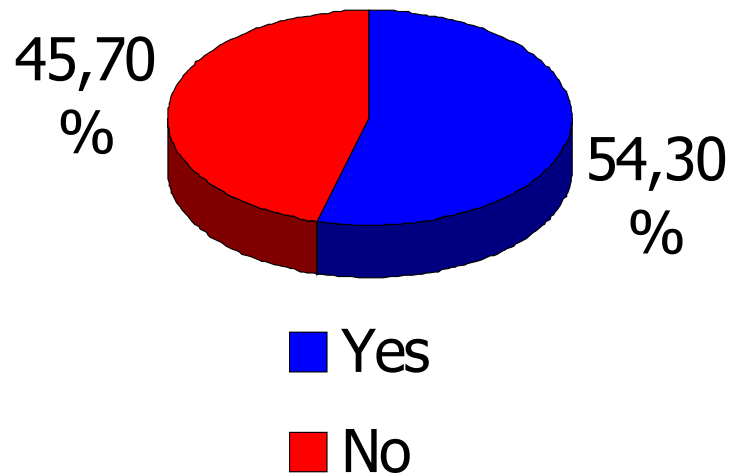
[Are there so many experts for intelligence research?]



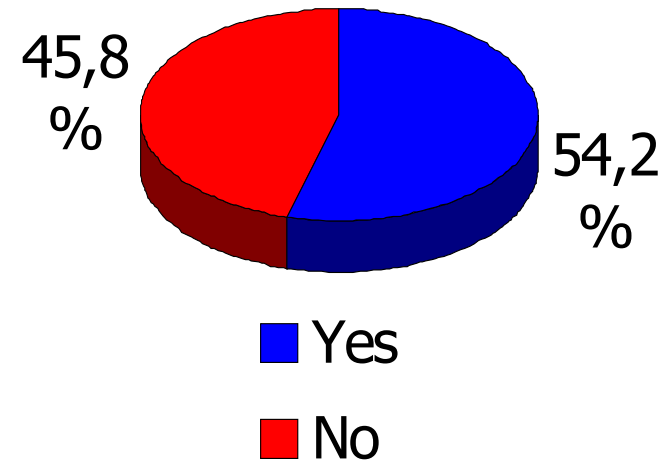
# 3 Major results

## Terms and attributes

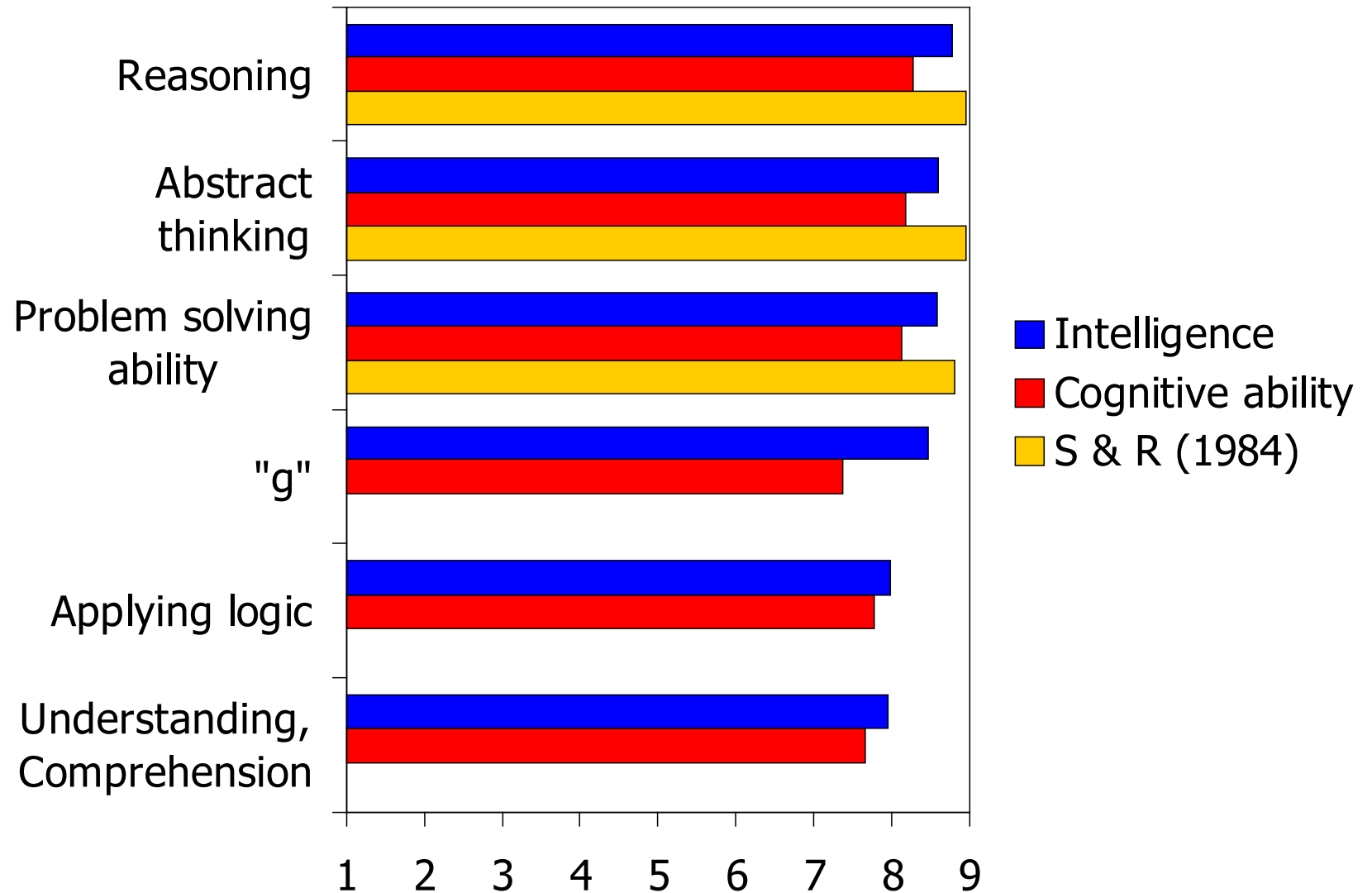
Difference between  
“cognitive ability” and  
“cognitive competence”?

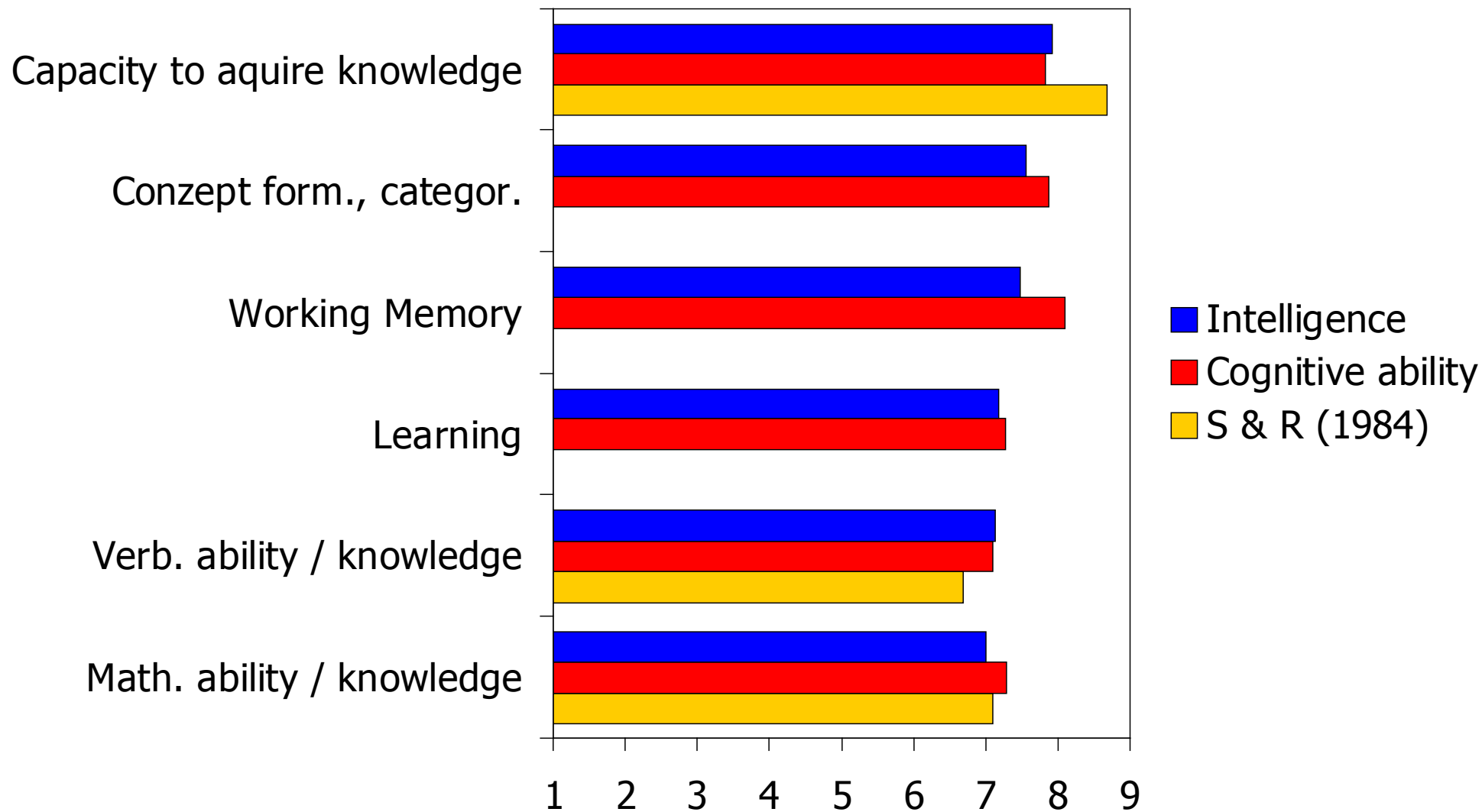


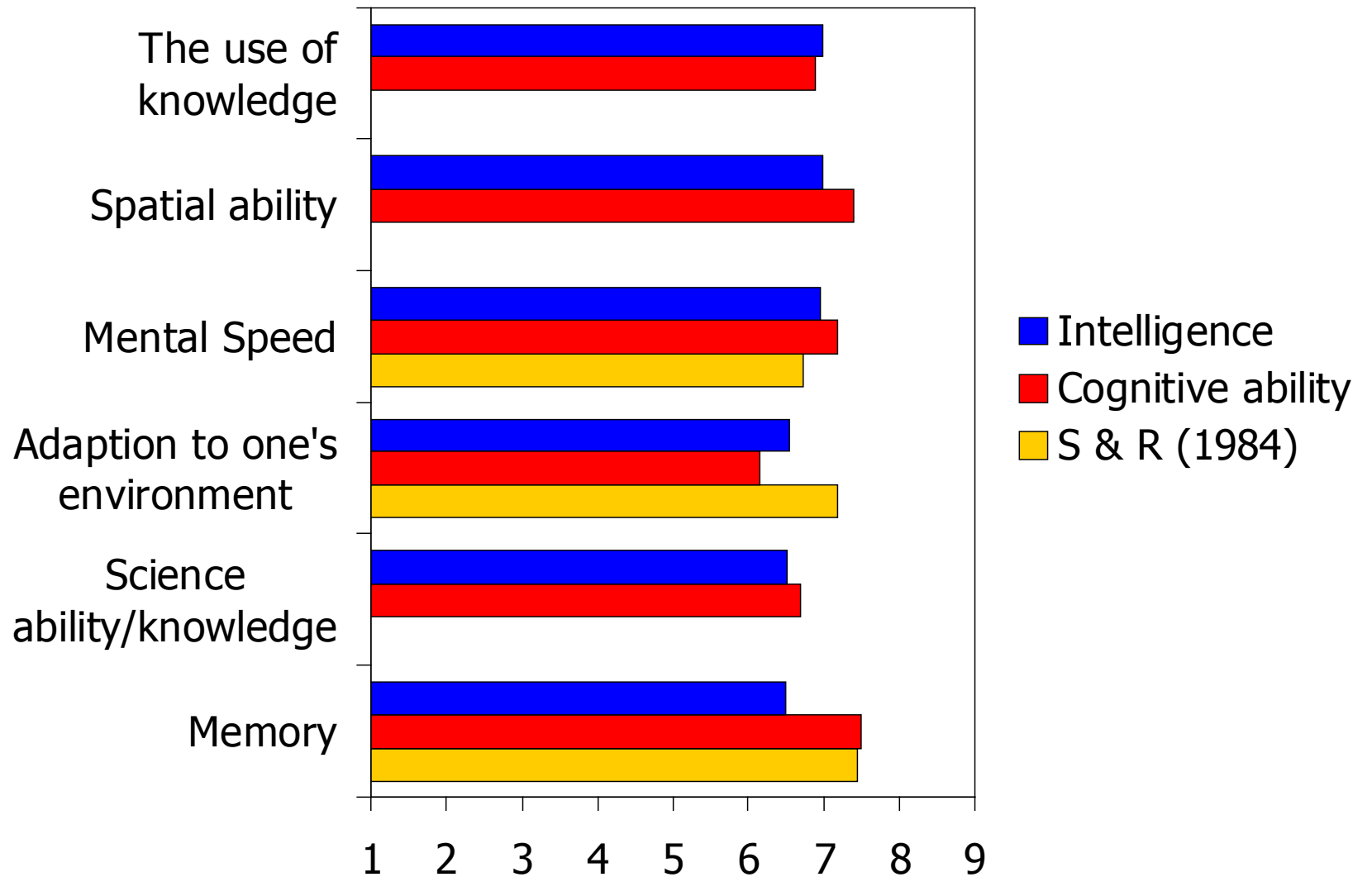
Difference between  
“cognitive ability” and  
“intelligence”?

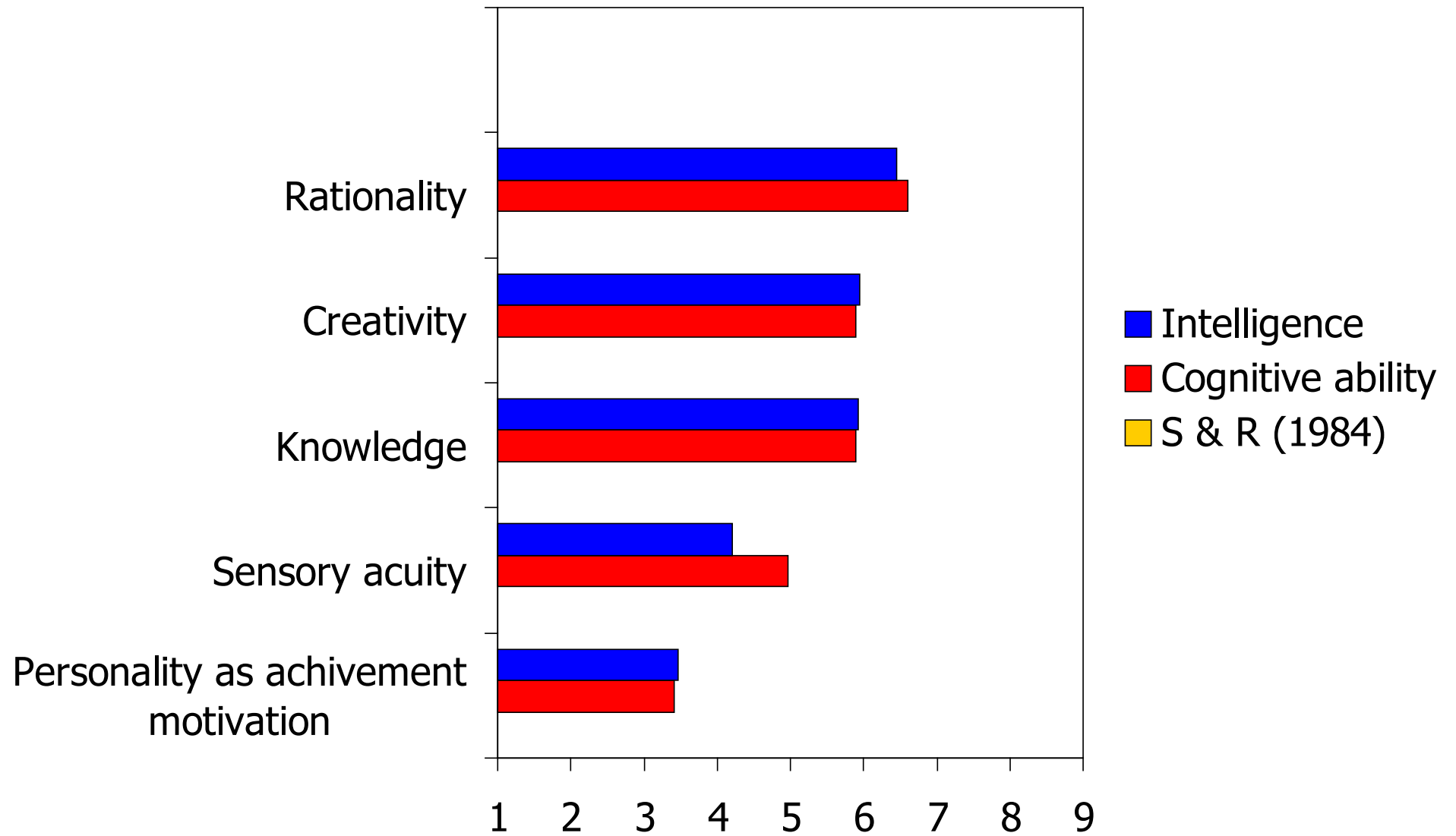


# Important elements of “intelligence” and “cognitive ability” (compared to Snyderman & Rothman, order according to relevance)



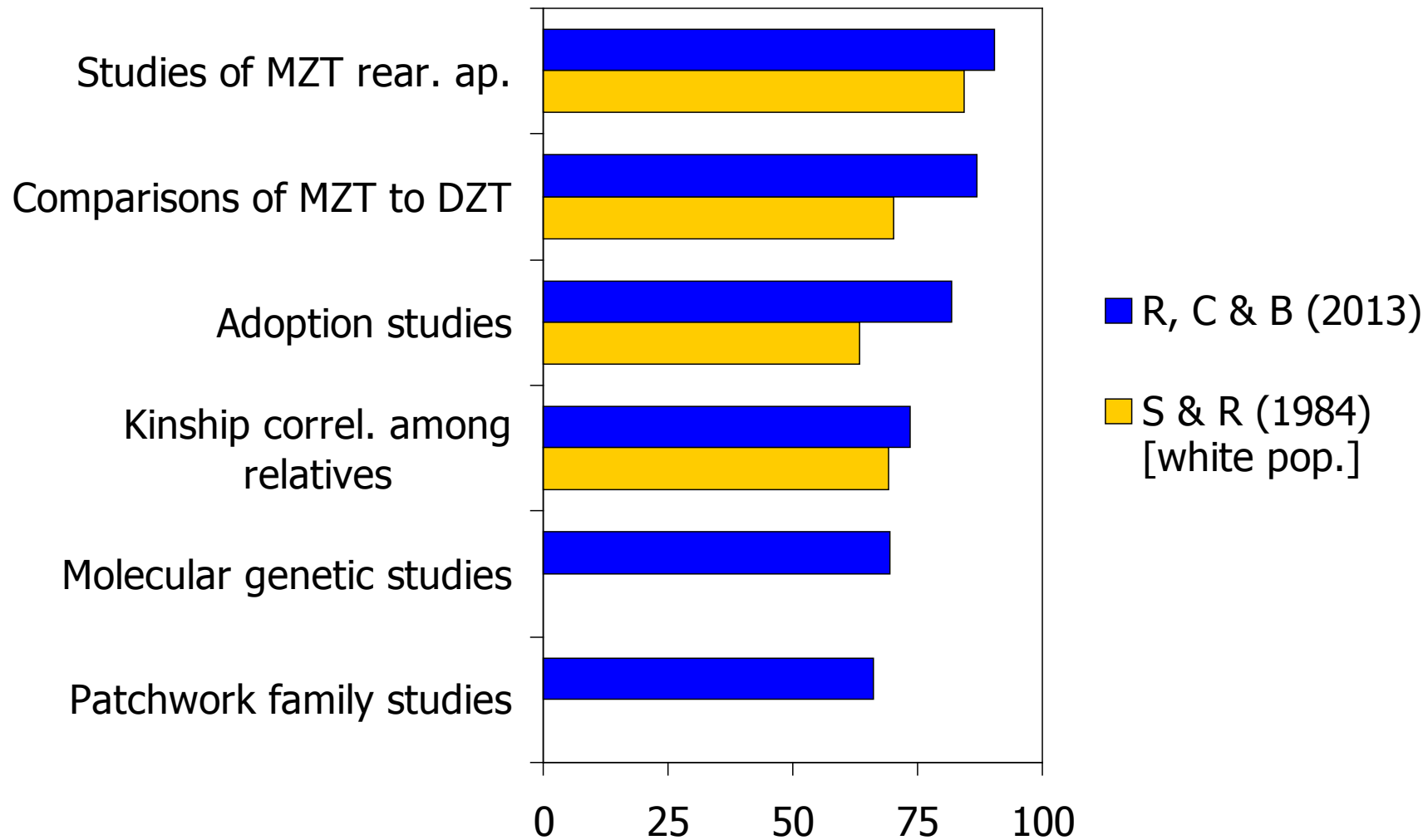




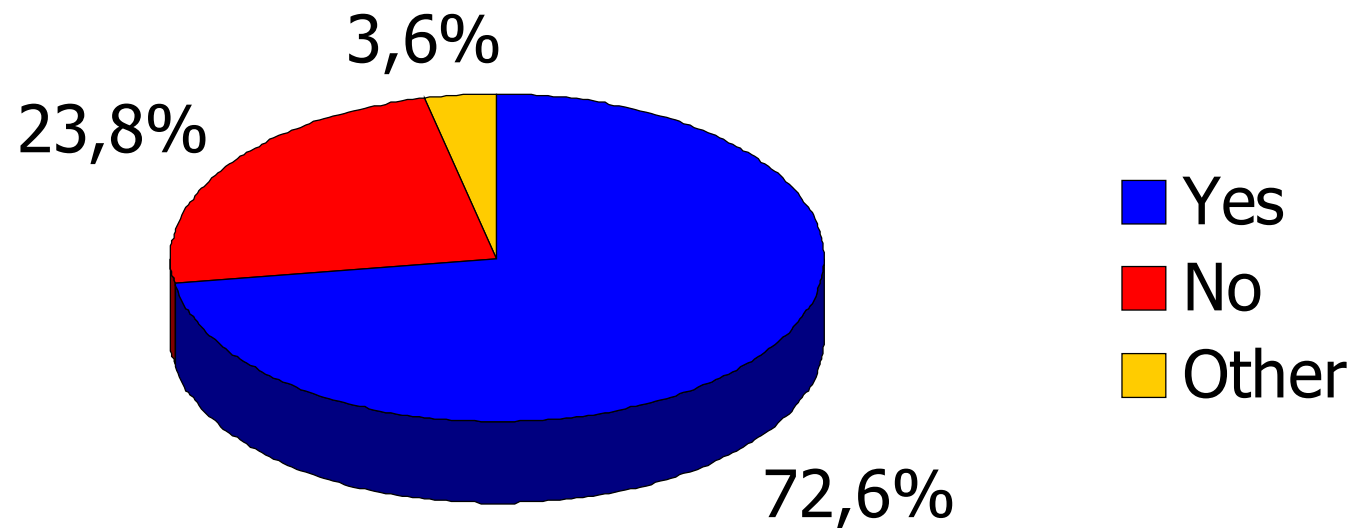


# Heredity and environment

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

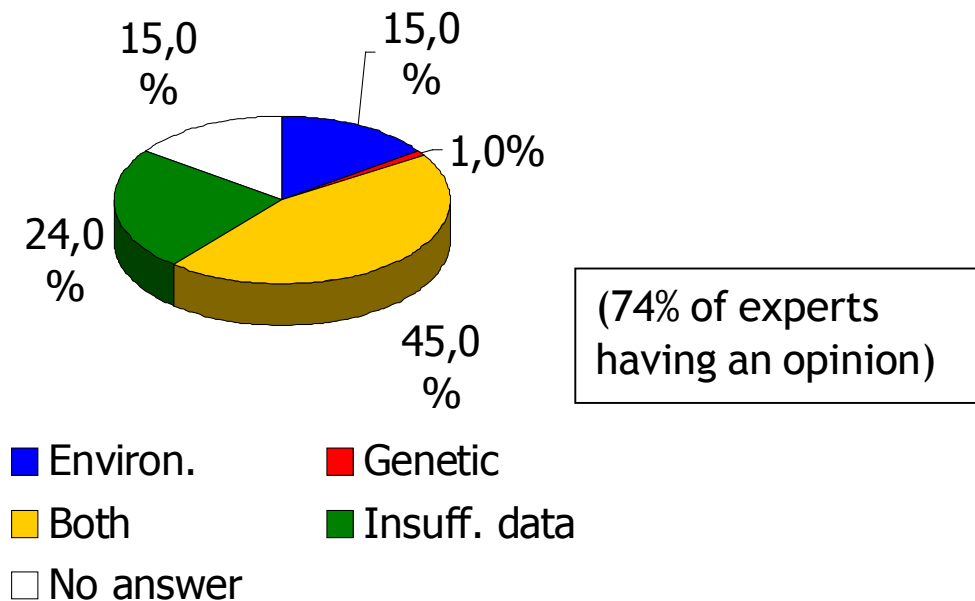


# Sufficient evidence to arrive at a reasonable estimate of the heritability of cognitive ability/intelligence in populations of developed countries?



# Sources of U.S. black-white differences in IQ

Snyderman & Rothman  
(1984)

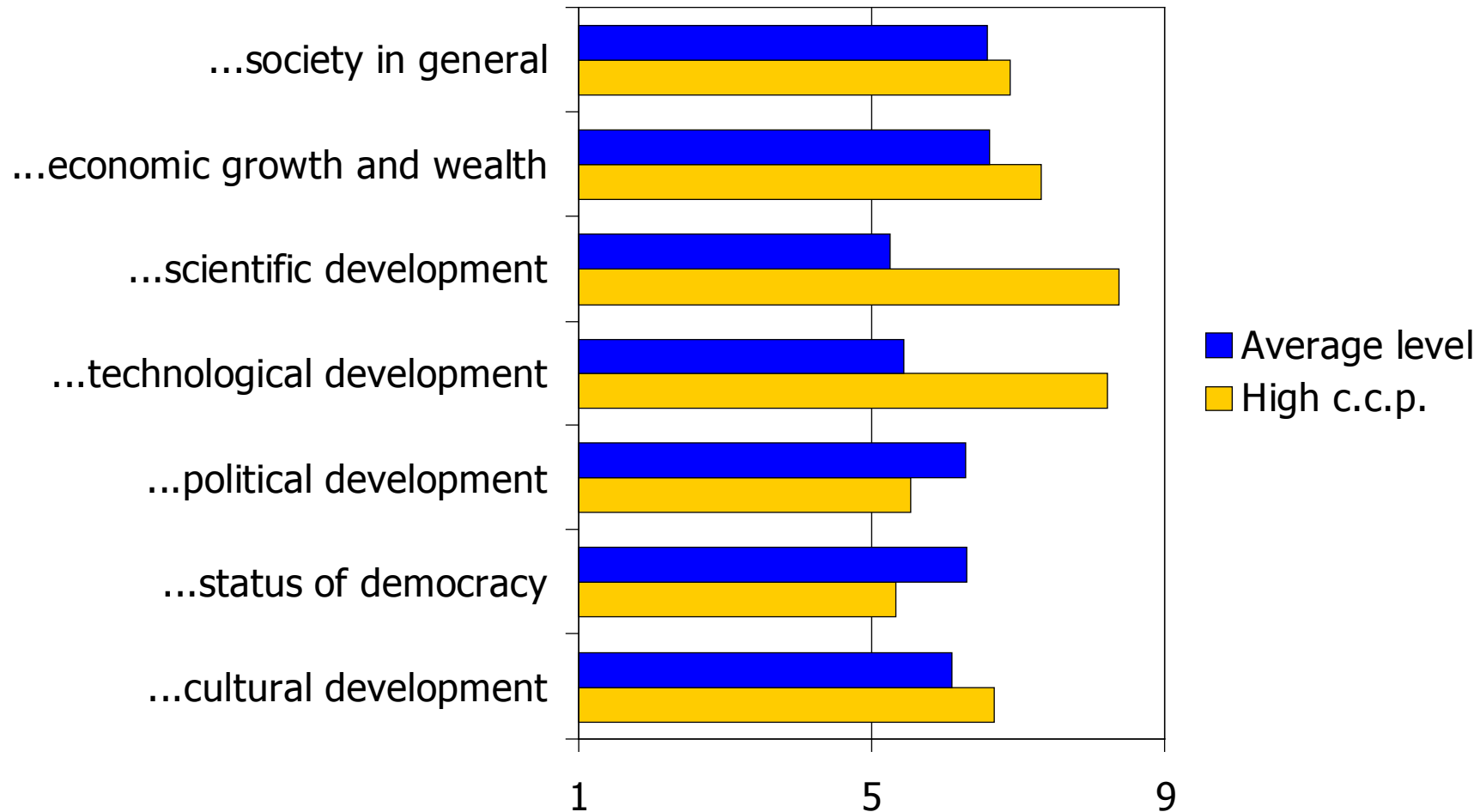


0%	of differences due to genes:	(17% of our experts)
0-40%	of differences due to genes:	42% of our experts
50%	of differences due to genes:	18% of our experts
60-100%	of differences due to genes:	39% of our experts
100%	of differences due to genes:	(5% of our experts)
<b>M=47%</b>	of differences due to genes ( $SD=31\%$ )	



# Intelligence effects

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

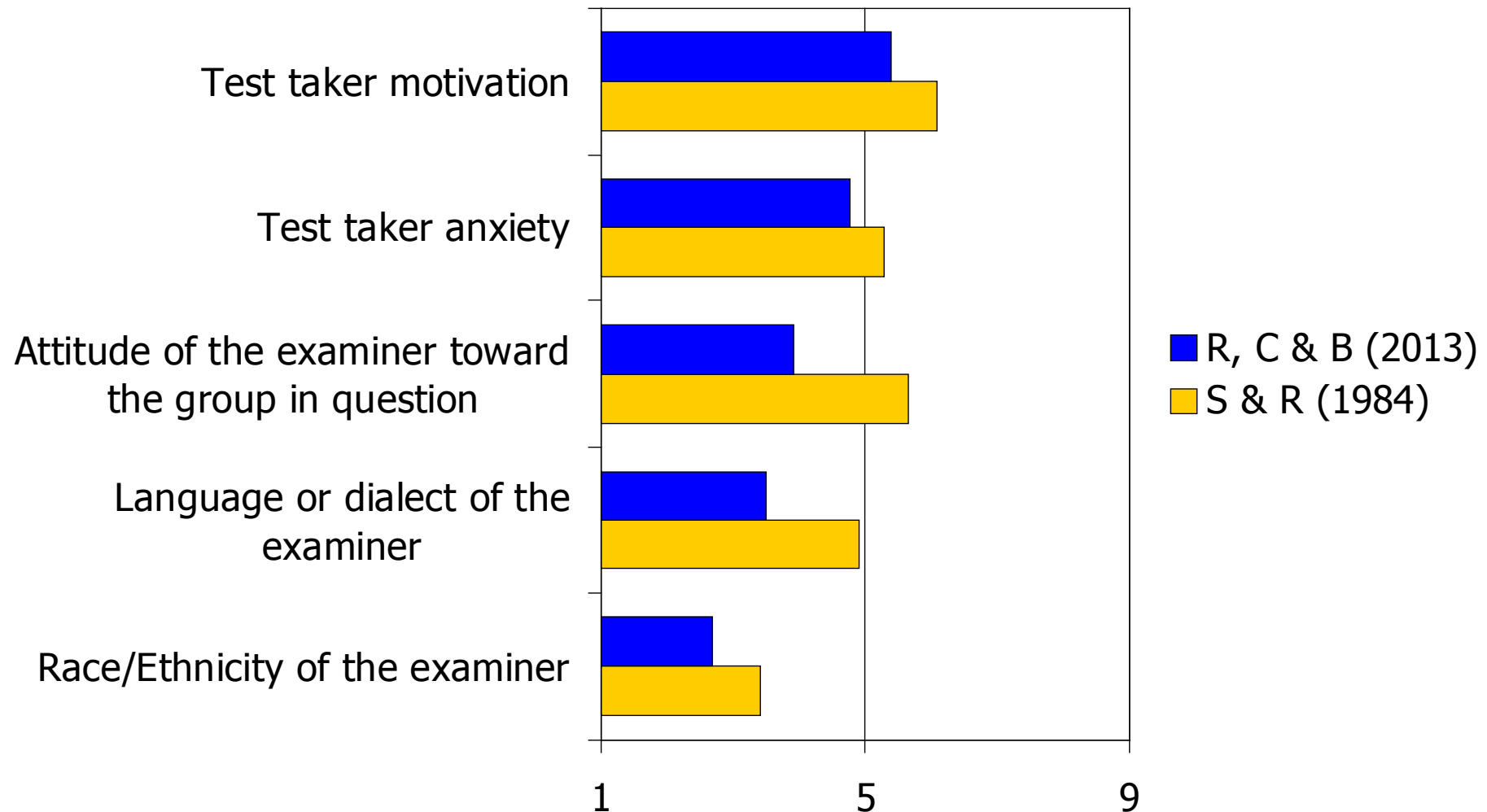


# Measurement

## Bias?

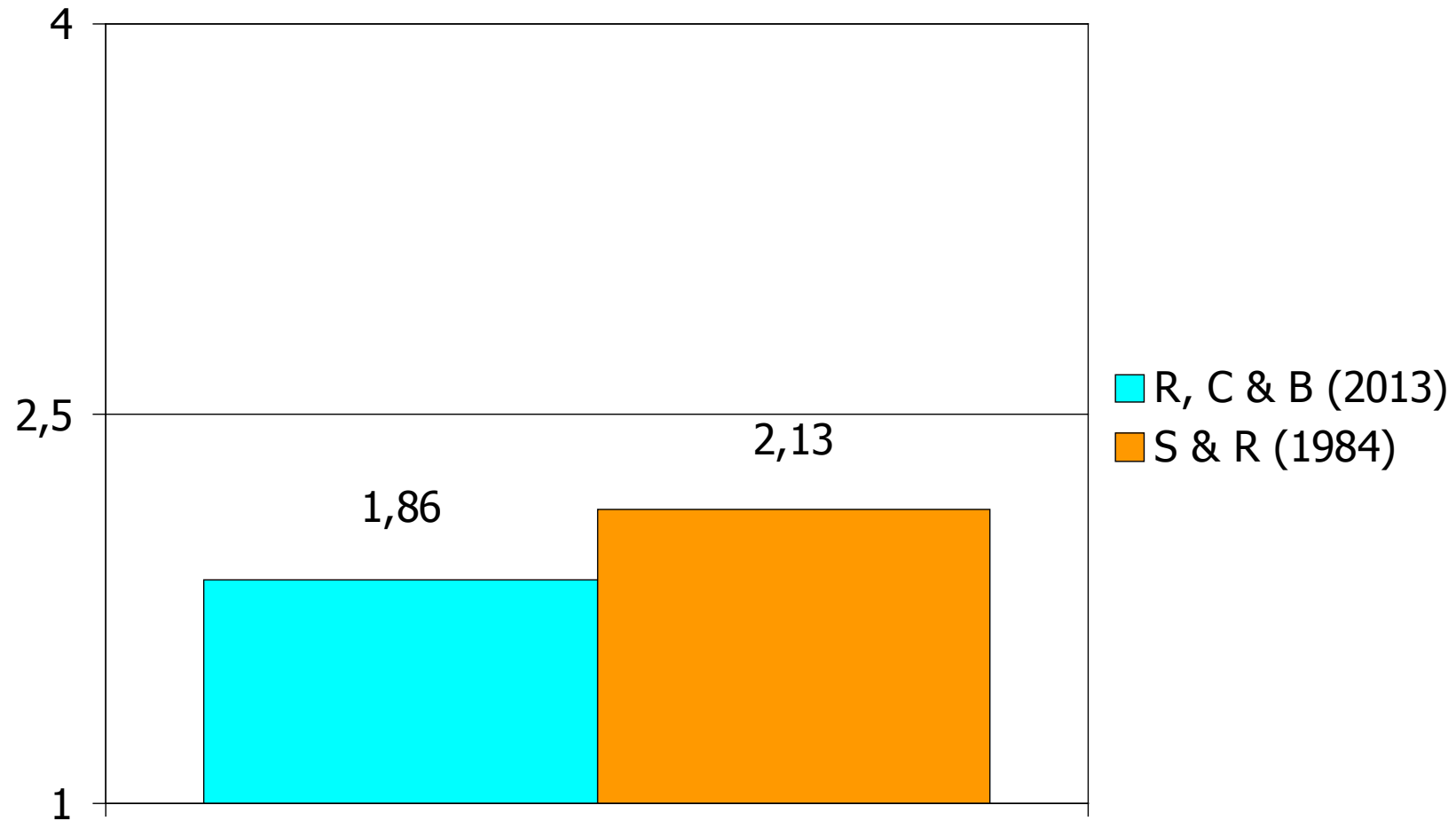
(1 = Insignificant bias;

9 = Large bias)

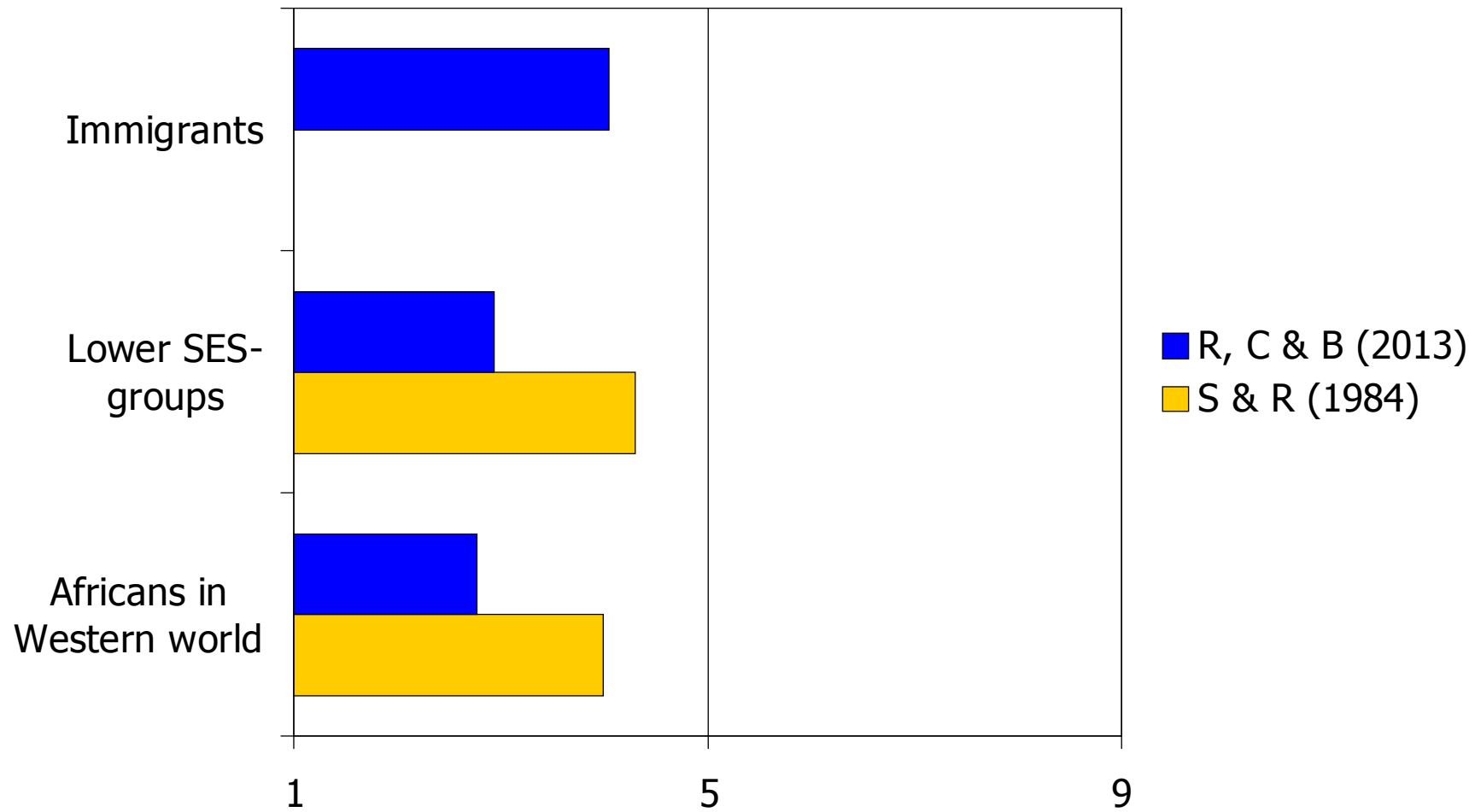


# Racial/ethnic content bias in cognitive ability/intelligence tests?

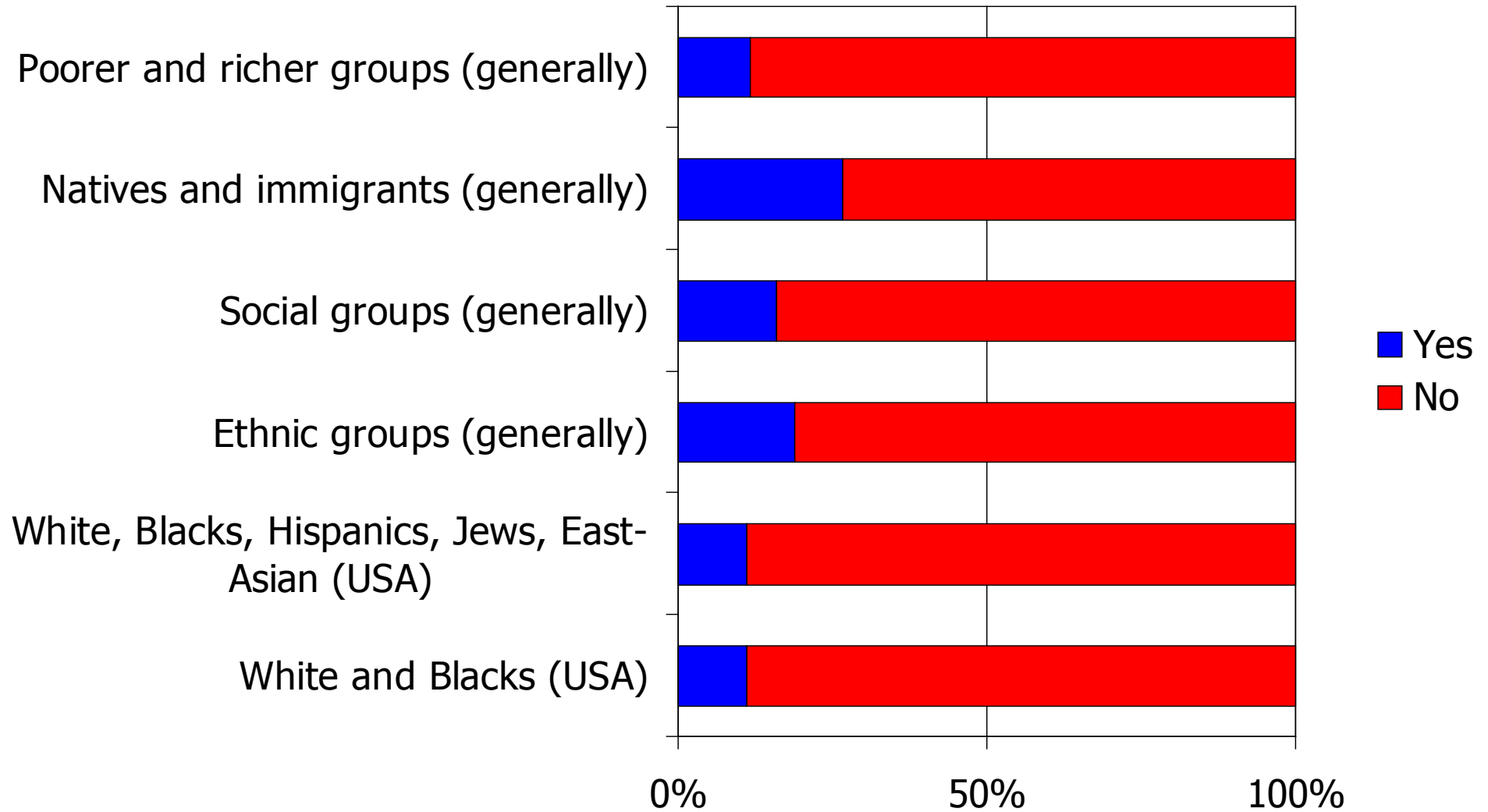
(1 = Insignificant amount; 4 = Large amount)



# Bias against groups (1 = Insignificant bias; 9 = Large bias)?



# Separate test norms for different subgroups?

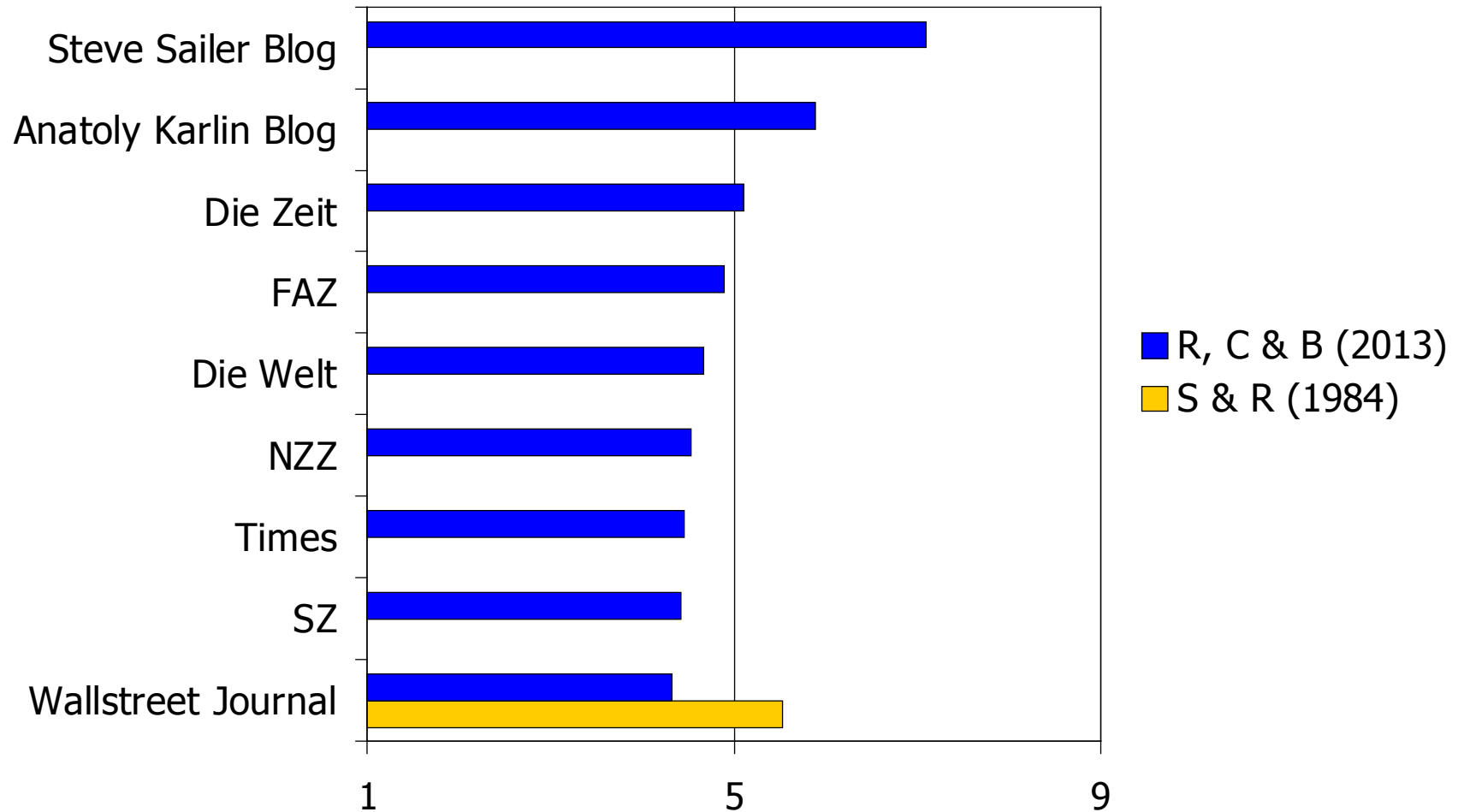


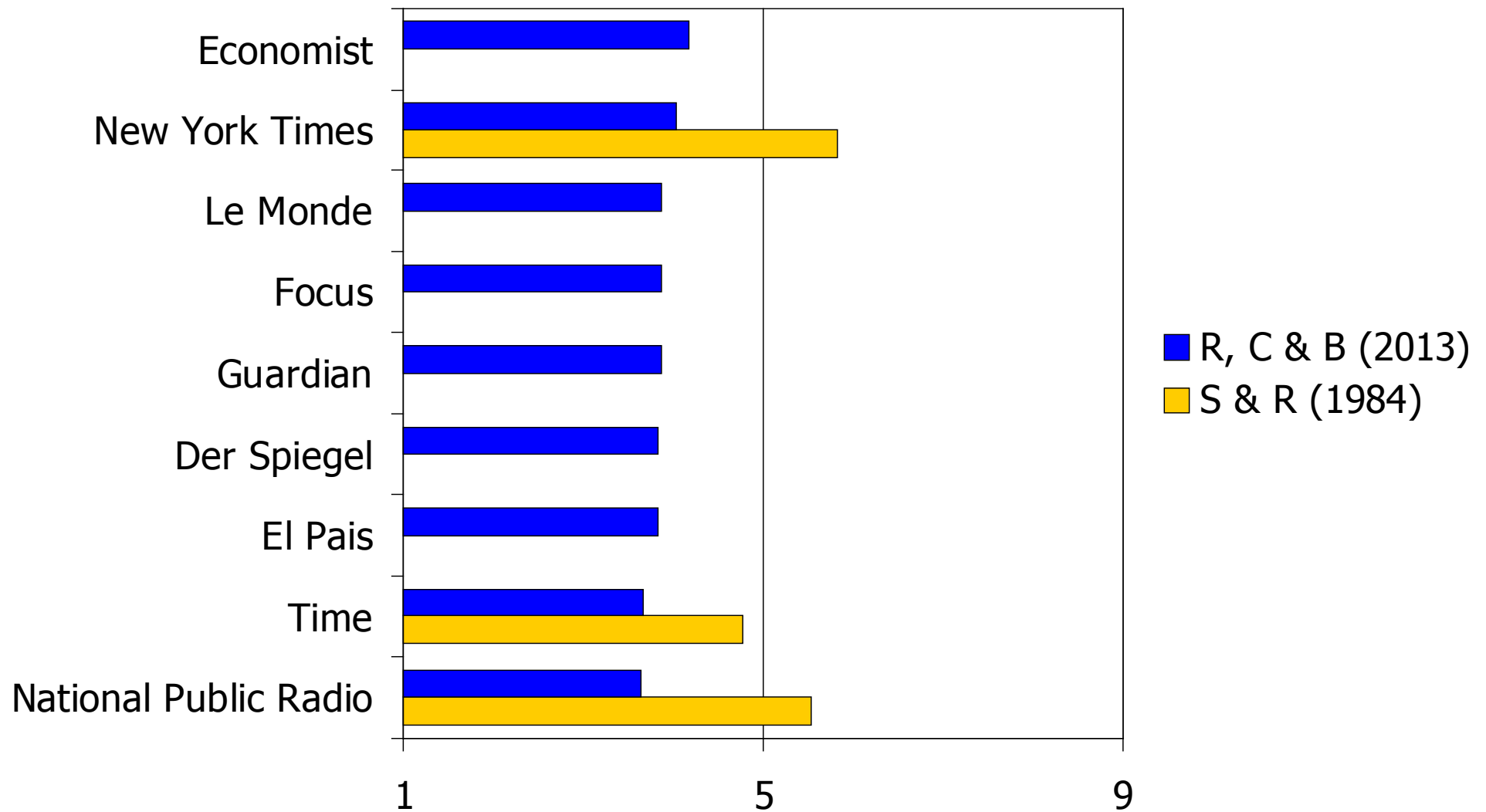
# Media and public

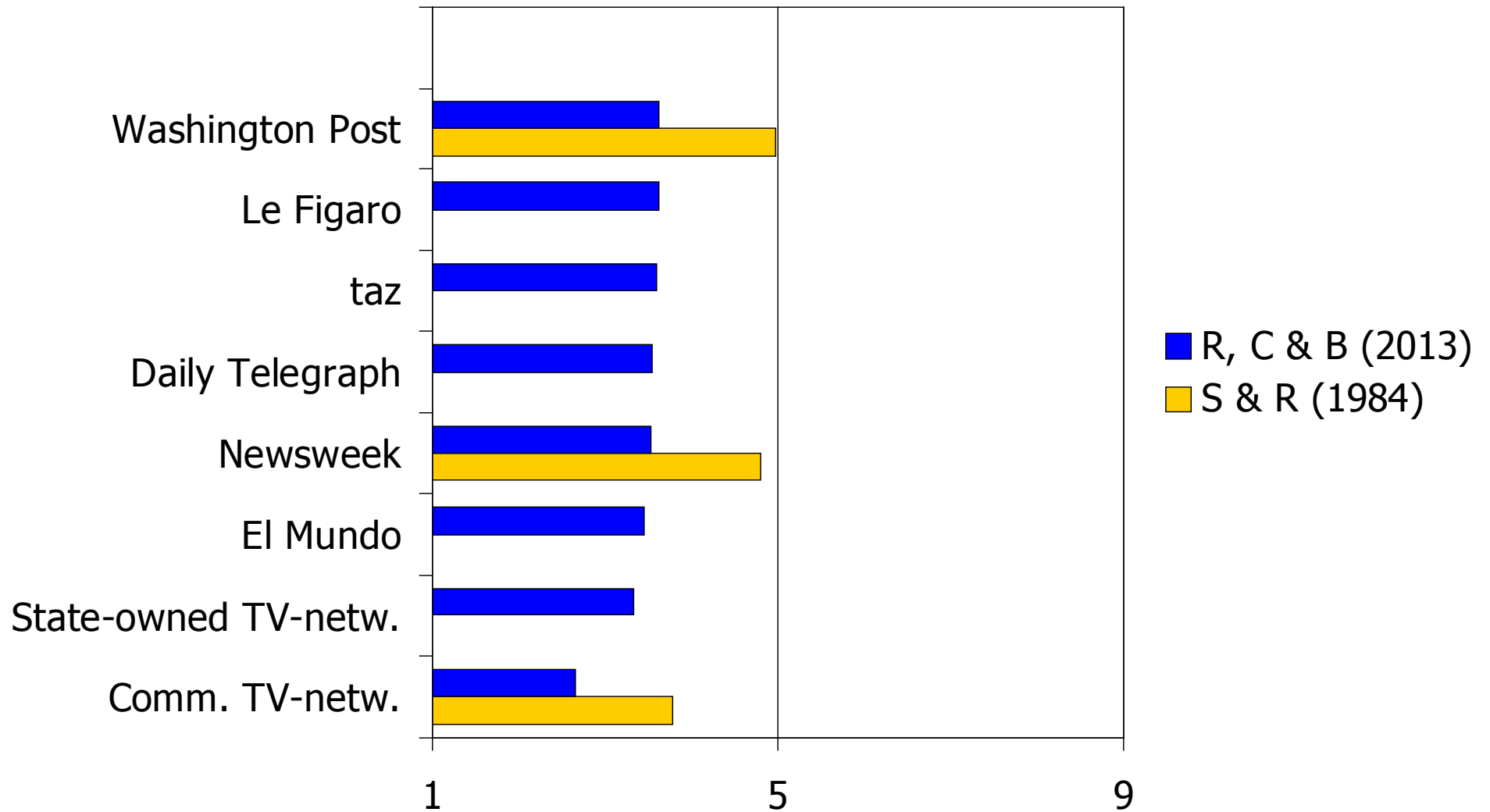
## Accuracy of news sources relating intelligence testing

(1 = Very inaccurate;

9 = Very accurate)

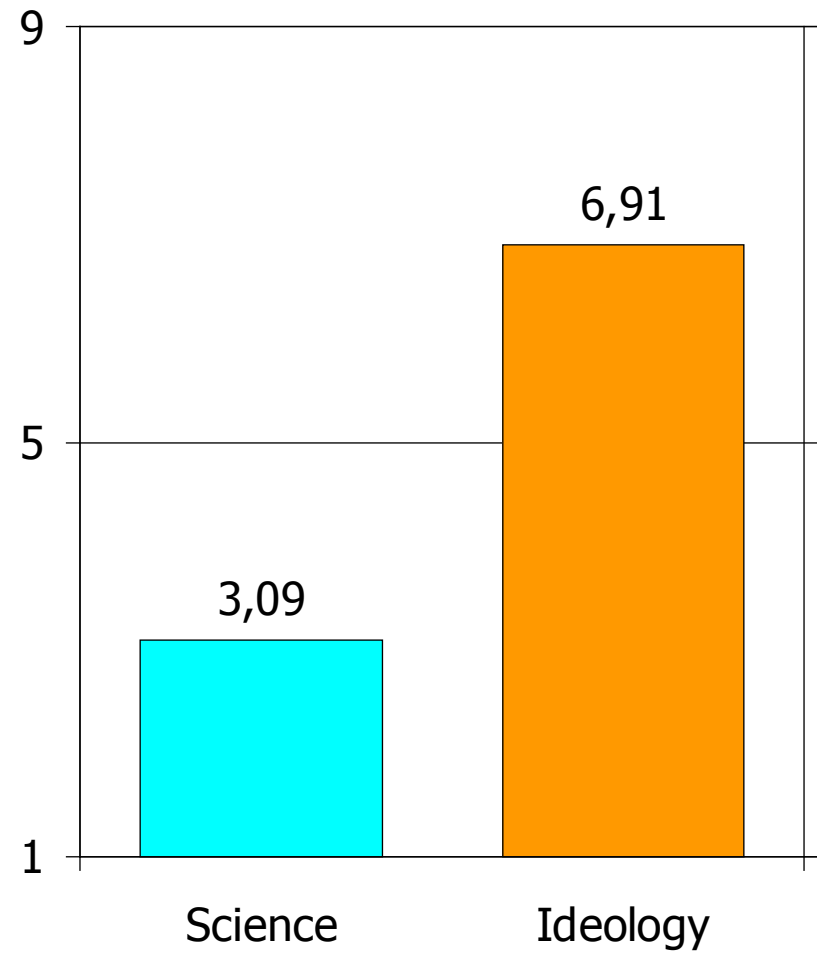








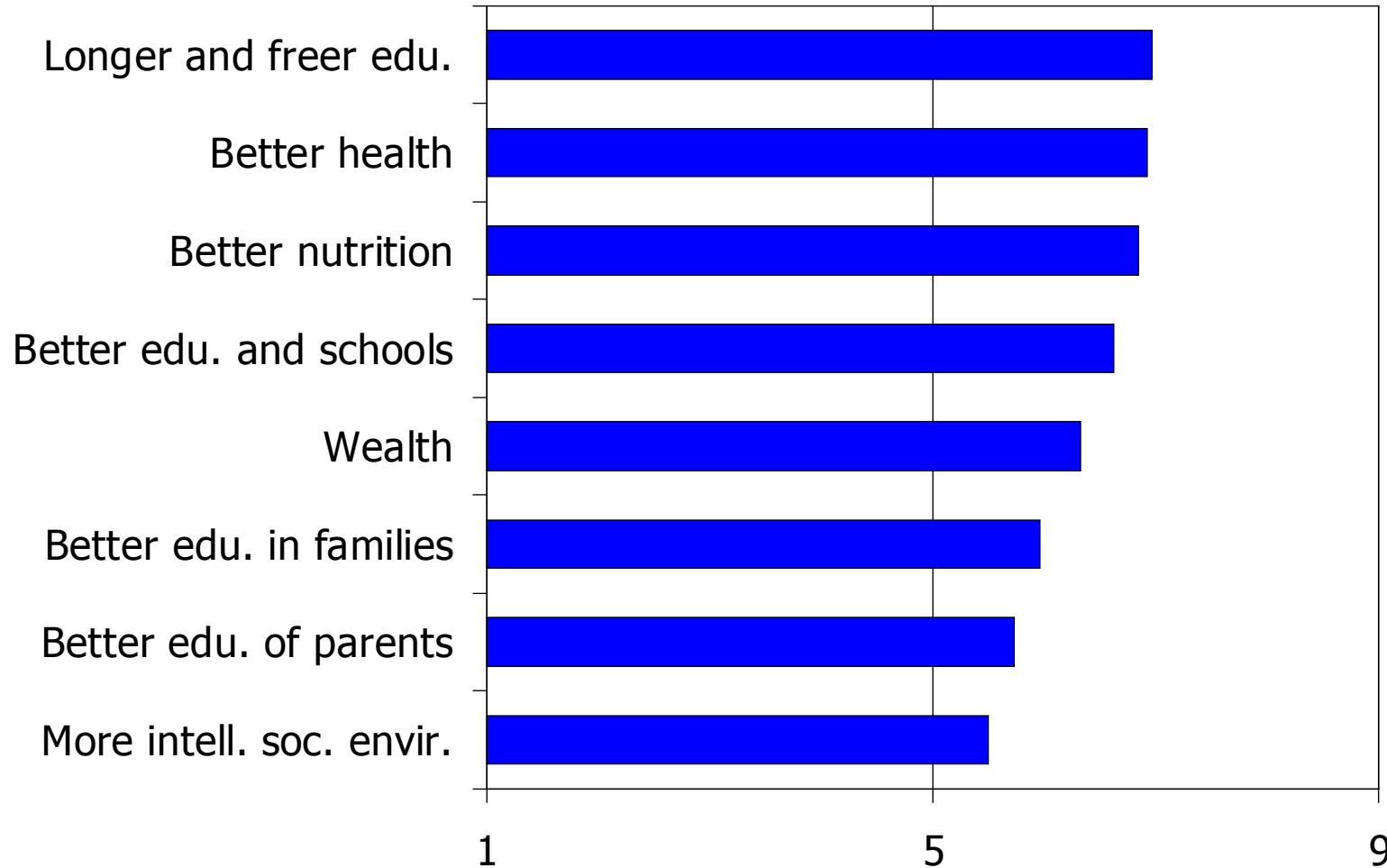
## Public debates: More science or ideology?

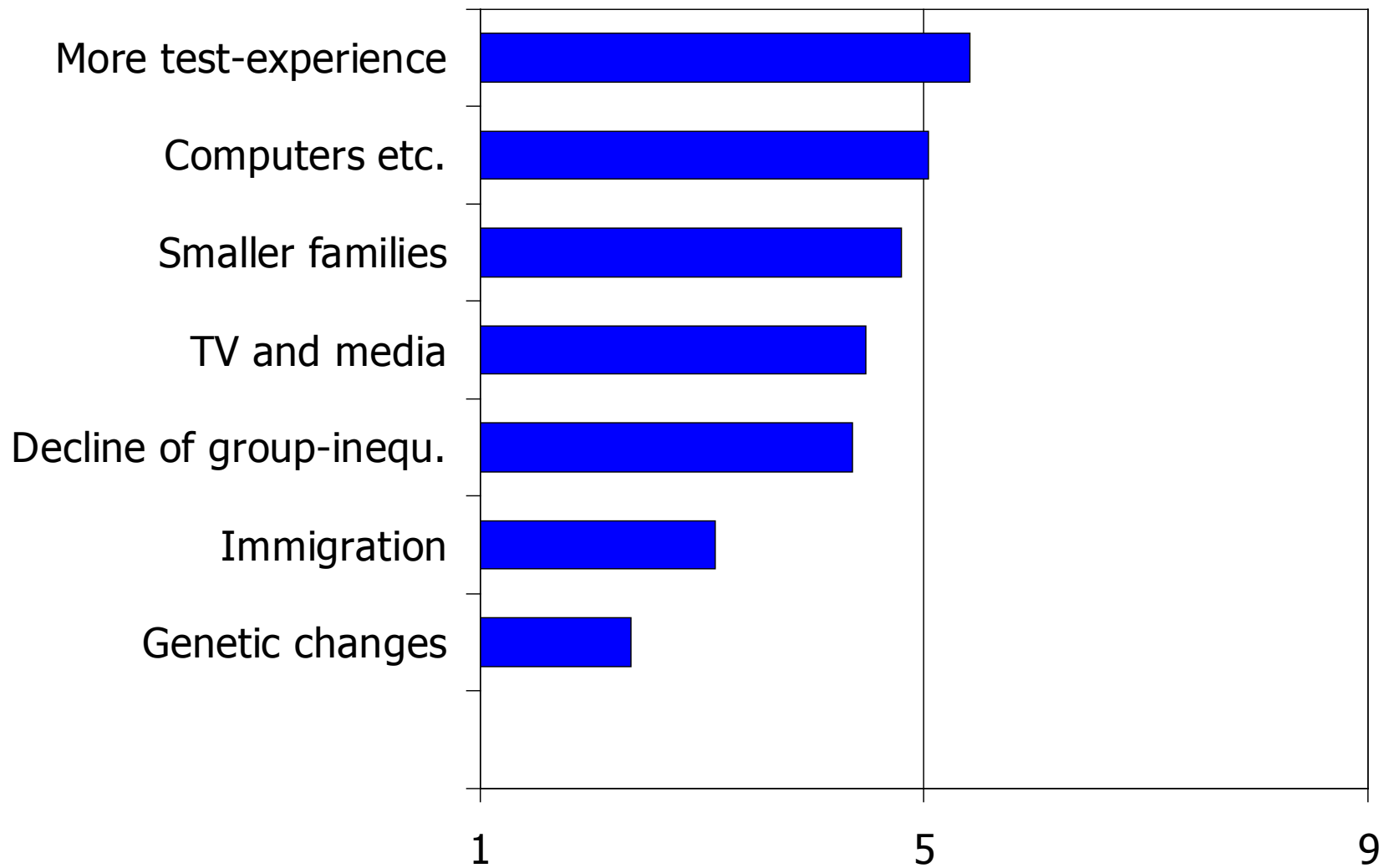


# Secular rise (FLynn effect)

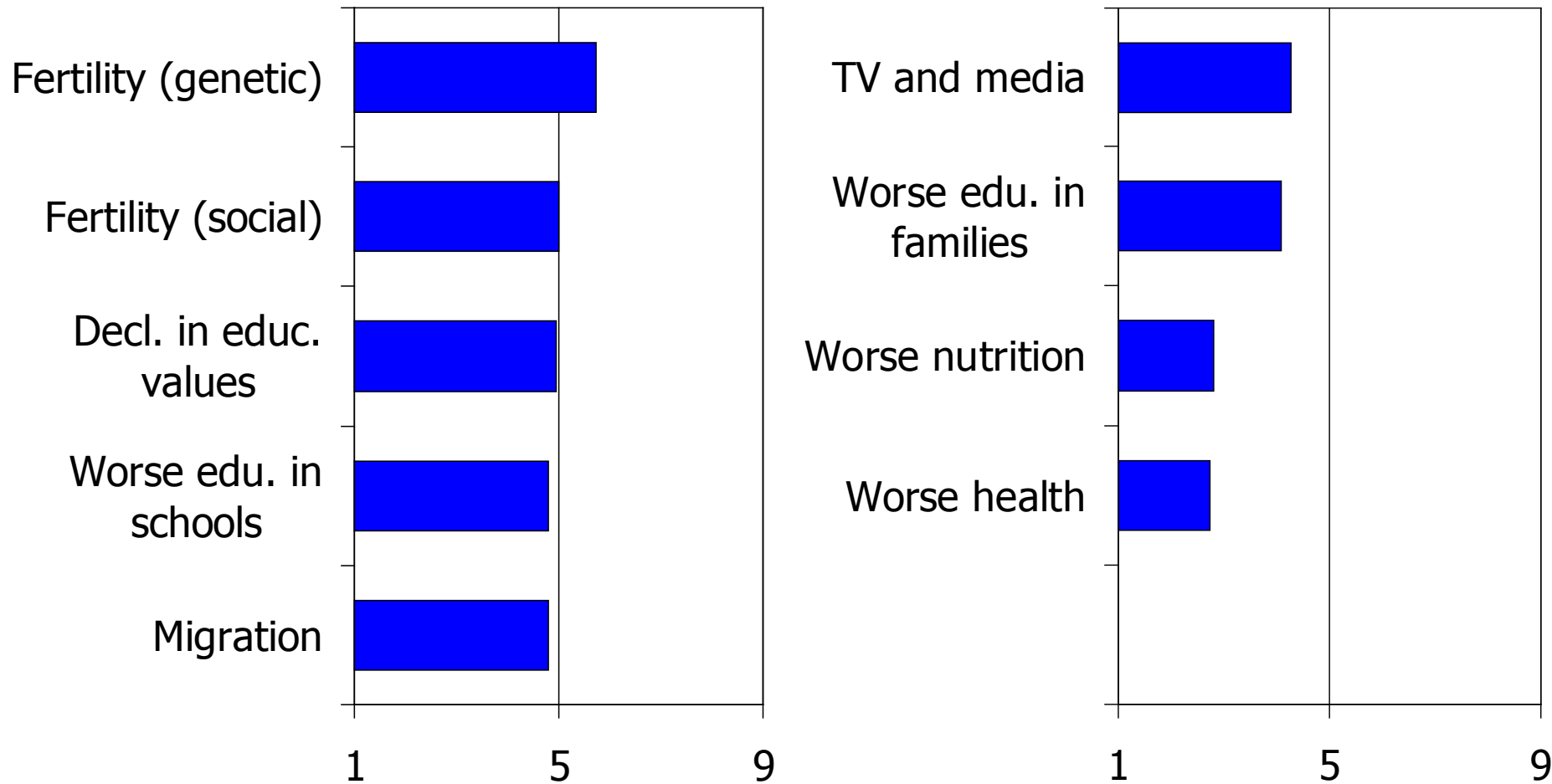
Most plausible scientific theories about FLynn-Effect

(1 = Not important; 9 = Important)

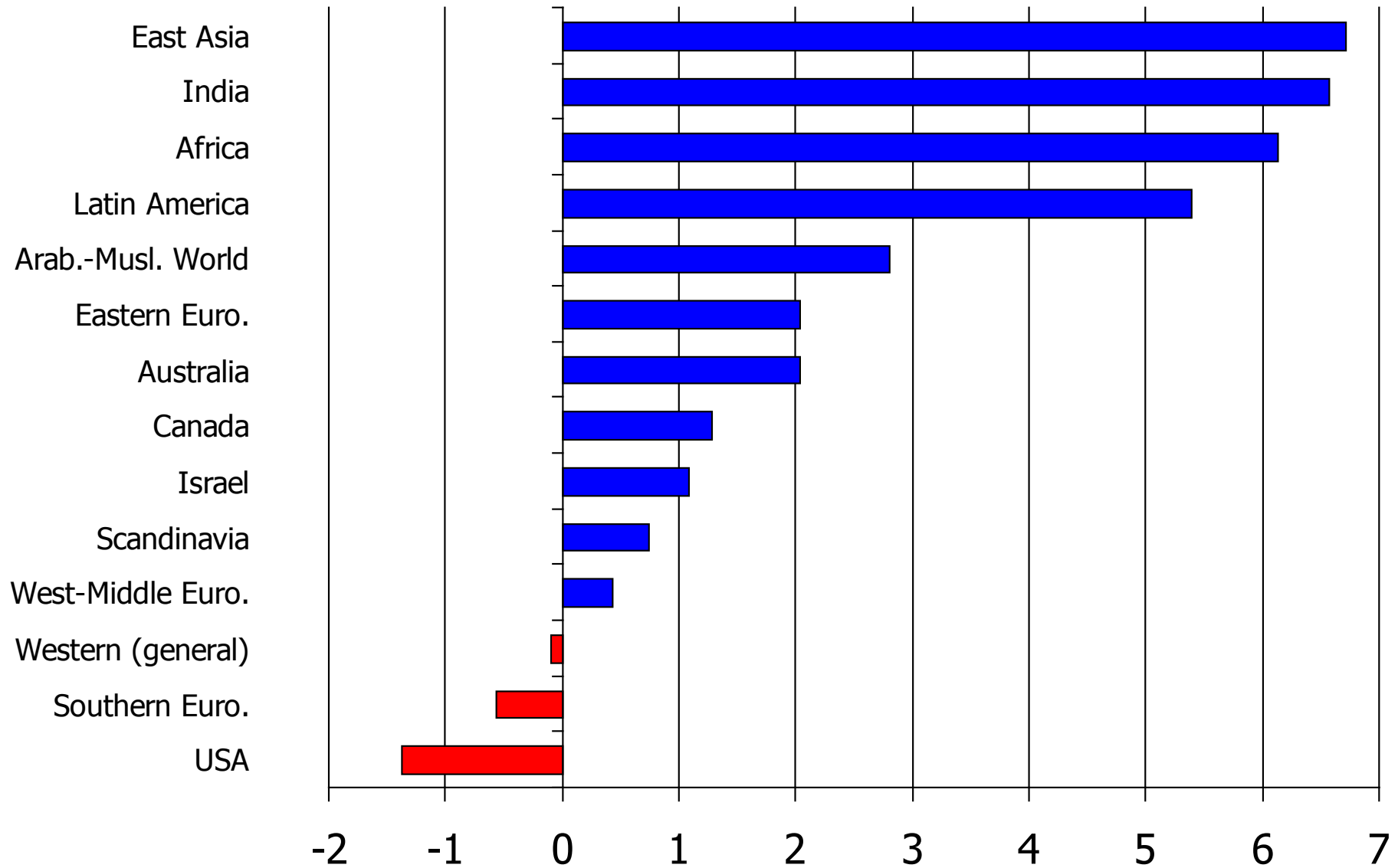




# Most plausible scientific theories about possible **retrograde** of FLynn-Effect (1 = Not important; 9 = Important)



# Increase or decrease of IQ points in regions up to 2100



# 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

Galton, F. (1907). Vox populi. *Nature*, 75(1949), 450-451.

Snyderman, M. & Rothman, S. (1987). Survey of expert opinion on intelligence and aptitude testing. *American Psychologist*, 42(2), 137-144.

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