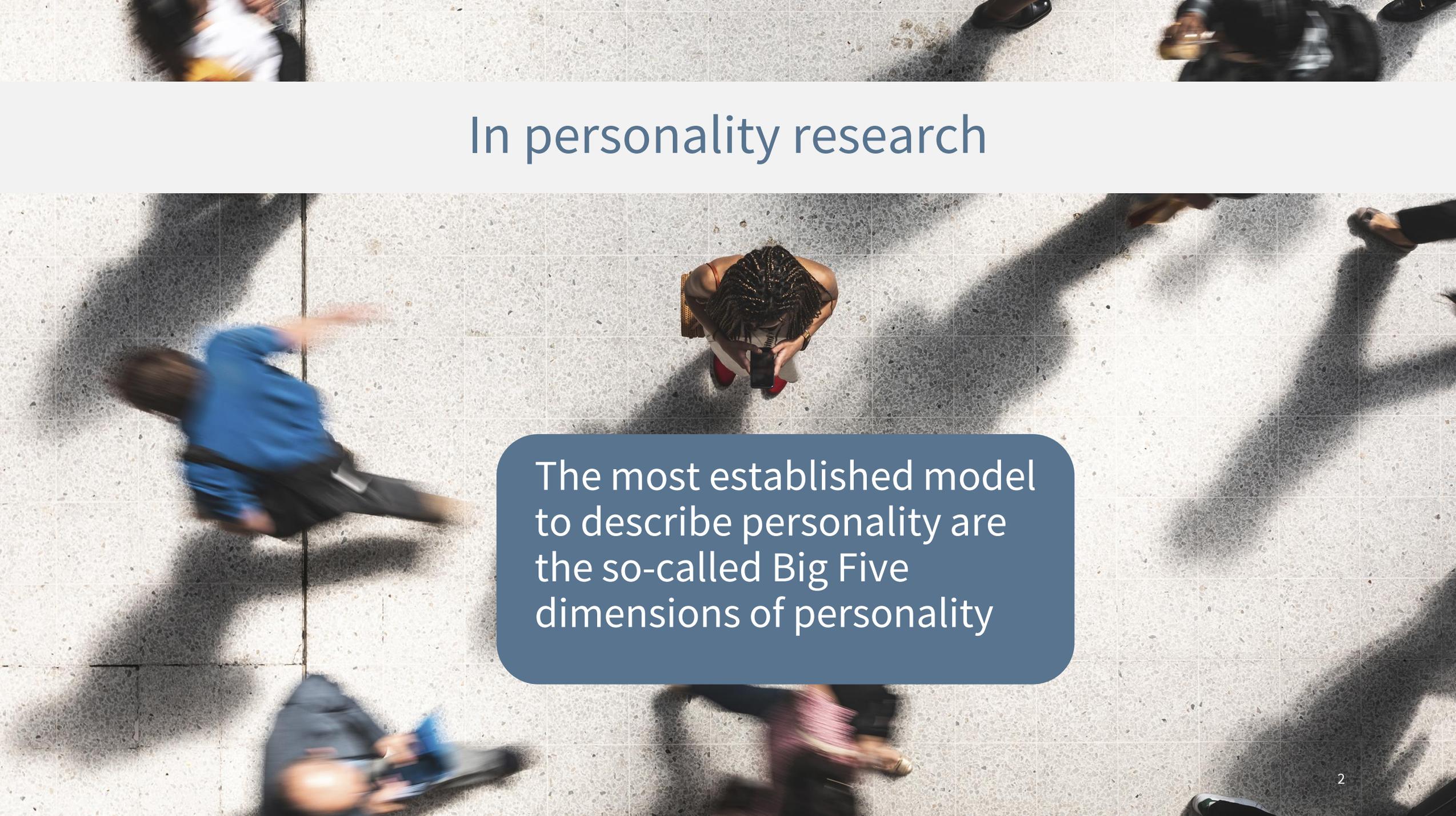




Quality of survey responses – the biasing effect of acquiescence

Beatrice Rammstedt

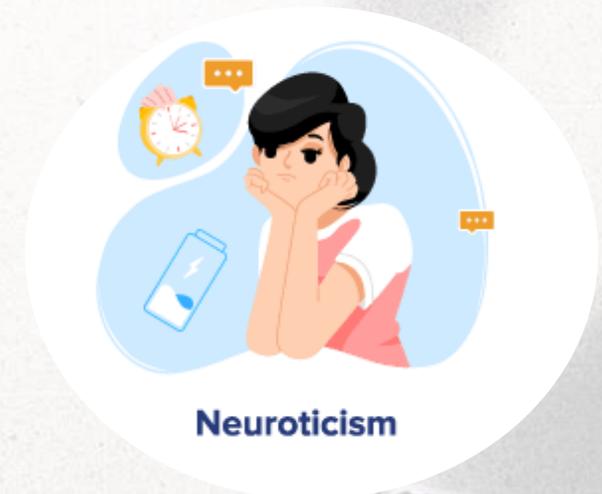
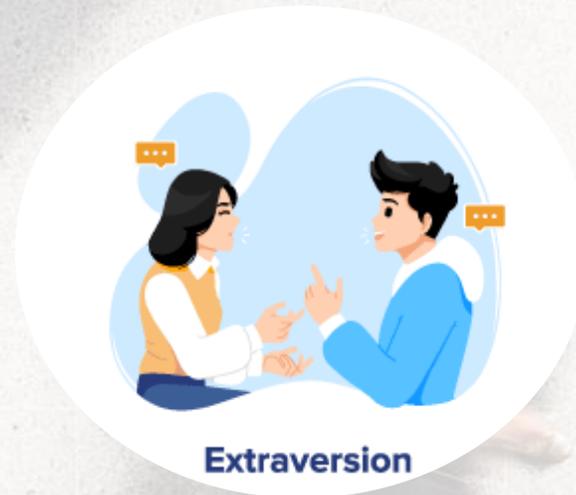
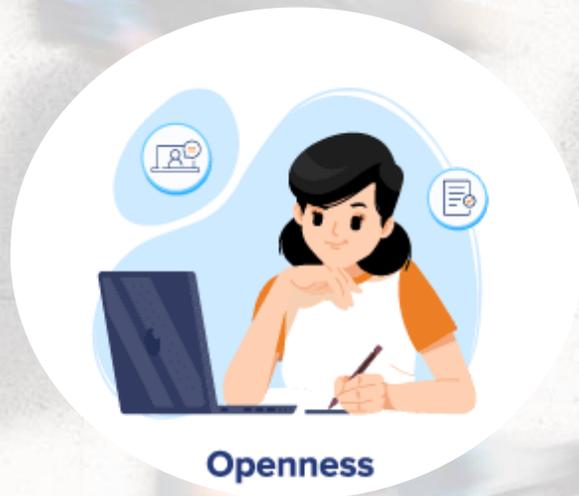
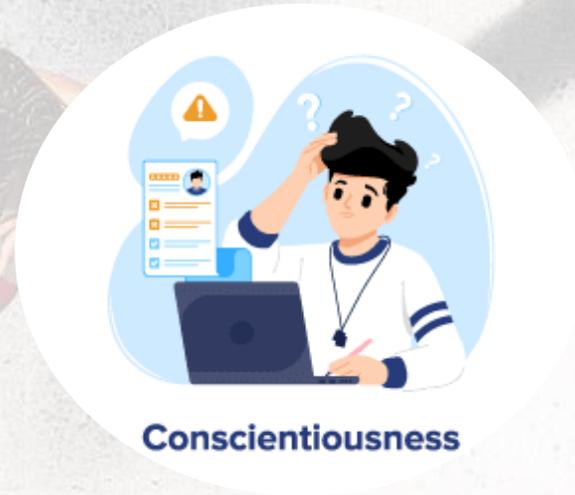
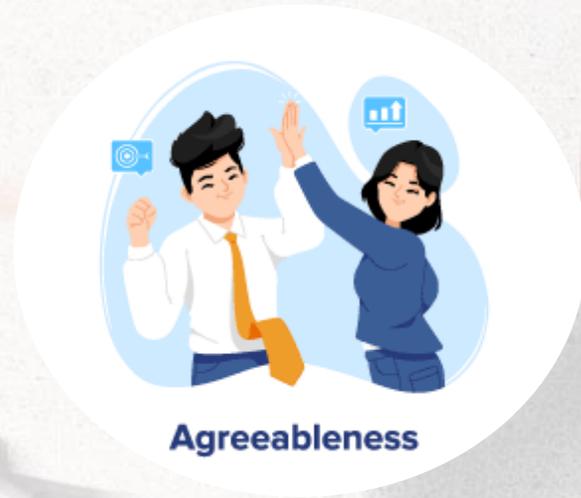
GESIS - Leibniz Institut für Sozialwissenschaften,
Mannheim



In personality research

The most established model to describe personality are the so-called Big Five dimensions of personality

The Big Five Dimensions of Personality



Are the Big Five indeed appropriate
measures for everyone?

Are they measurement equivalent?

The Big Five is the most widely used
model for describing personality.

However, the data basis of most studies is highly
specific: mostly student samples

Authors	Measurement	Sample
Körner, Geyer, & Brähler	Poor fit of varimax solution	N = 1908; population representative
Lang, Lüdtke, & A	Poor fit of varimax solution	N = 480; quoted with regard to age
Möttus, Allik, & Rea	Differences in congruence with simple structure among five educational groups	N = 1342; population representative
Rolland, Parker, &	Weaker fit of the varimax solution in the military sample for both instruments	N = 447 college students and N = 268 military recruits
Toomela	weaker fit of varimax solution than in the normative sample	members

➔ Are the Big Five measurement equivalent across different educational levels?

Study 1:

Measurement equivalence of the Big Five
personality dimensions

Sample

- German data from the International Social Survey Program (ISSP) 2003/2004 and 2005/2006
- representative of the population, paper-pencil/CASI

	ISSP 2003/2004	ISSP 2005/2006
Sample	N = 2.567	N = 3.421
Gender	50% ♀	52% ♀
Age: M (SD)	48 (17)	49 (17)

Measures

Big Five: BFI-10 (Rammstedt & John, 2007)

- Two items per dimension
- one positive/one negative coded

I see myself as someone who...	Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
...is outgoing, sociable.	0	0	0	0	0
...is reserved.	0	0	0	0	0

Validation samples of the BFI-10

	Sample 1 (457 students)					Sample 2 (376 students)				
I see myself as someone who is...										
...is outgoing, sociable.	-.89	-.01	-.03	.02	-.07	-.87	-.05	-.08	-.07	.02
...is reserved.	.84	.10	.01	-.13	.09	.86	-.02	.05	.07	.14
...is generally trusting	.29	.74	.08	.05	.09	.32	.54	-.23	-.22	-.13
...tends to find fault with others.	.13	-.83	-.05	.13	.05	.11	-.84	-.16	-.15	-.07
...does a thorough job.	-.15	-.05	.83	-.10	-.03	-.01	-.17	.79	.06	.05
...tends to be lazy.	-.20	-.07	-.80	-.07	-.09	-.16	-.28	-.75	.06	.06
...is relaxed, handles stress well.	-.36	.04	-.08	.78	-.07	-.23	.02	-.19	.83	.00
...gets nervous easily.	-.10	.12	-.03	-.89	-.05	-.06	.04	.15	-.85	-.09
...has an active imagination	.16	-.04	-.04	-.10	.79	.09	-.08	.12	-.06	.80
...has few artistic interests.	.01	-.07	-.09	-.09	-.82	-.01	-.07	.10	.01	-.82

Results

Based on the ISSP 2003/2004 and
2005/2006

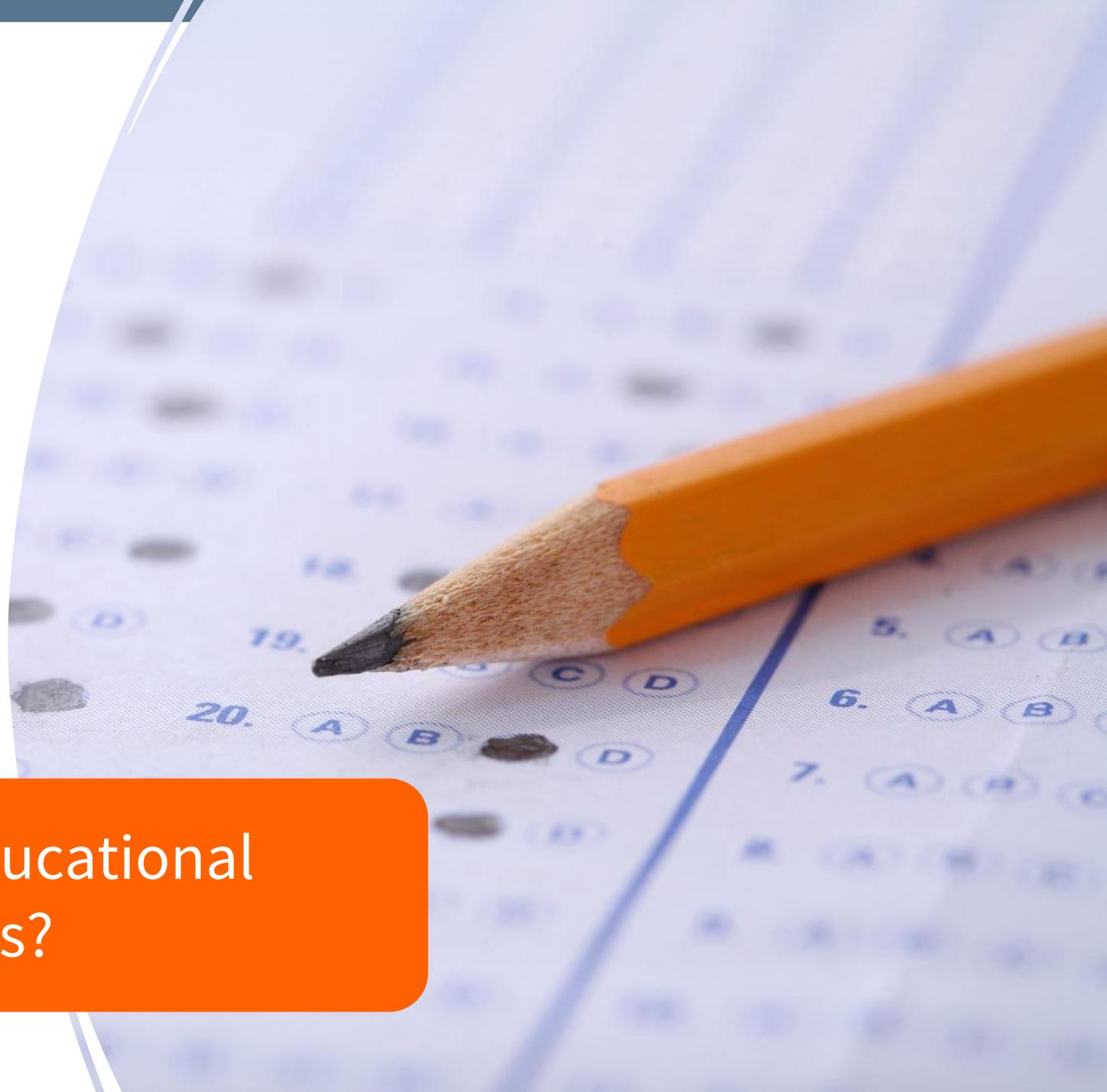
	ISSP 2003/2004					ISSP 2005/2006				
I see myself as someone who is...										
...is outgoing, sociable.	.73	.08	.10	.18	.04	.84	-.09	-.21	.07	.05
...is reserved.	-.70	.27	.17	-.05	.24	-.49	.63	.18	.34	-.23
...is generally trusting.	.08	.87	.00	.02	-.20	-.01	.16	.16	.03	.90
...tends to find fault with others.	.01	-.21	-.03	-.03	.84	-.13	-.89	.12	.07	-.09
...does a thorough job.	.14	.17	.78	.15	.21	.57	.13	-.47	.30	-.11
...tends to be lazy.	-.03	.19	-.77	.04	.34	-.19	.16	.74	.21	-.09
...is relaxed, handles stress well.	.05	.13	.05	.86	.05	.07	-.05	.01	.96	.07
...gets nervous easiliy.	-.22	.31	-.17	-.62	.37	-.23	.69	.21	-.05	.31
...has an active imagination.	.71	.19	.18	.07	.23	.68	-.13	.29	-.12	-.52
...has few artistic interests.	-.49	-.04	-.14	.34	.18	-.02	-.02	.74	-.11	.18

1. Result

→ There is no satisfactory replication of the Big Five for population-representative samples!



Is this due to educational differences?



Education

- **Level 1:** no school certificate or lower secondary school
- **Level 2:** Secondary school certificate or entrance qualification for universities of applied sciences
- **Level 3:** Abitur or university degree

Level 1: no school certificate or
lower secondary school

	ISSP 2003/2004					ISSP 2005/2006				
I see myself as someone who is...										
...is outgoing, sociable.	.74	.17	-.07	.22	.10	.75	.25	-.18	.17	-.08
...is reserved.	-.70	.26	-.11	.03	.28	-.72	.38	.05	.00	-.11
...is generally trusting	.06	.88	-.03	.00	-.18	.02	.81	-.11	-.02	.06
...tends to find fault with others.	.01	-.20	.05	-.05	.86	.52	.02	.43	-.25	-.13
...does a thorough job.	.20	.29	-.67	.24	.19	.15	.33	-.61	.12	-.09
...tends to be lazy.	.00	.13	.85	.06	.19	-.02	.04	.87	.05	.08
...is relaxed, handles stress well.	.05	.09	.01	.88	.04	.00	.18	.11	.86	-.05
...gets nervous easiliy.	-.16	.34	.22	-.60	.40	-.13	.32	.28	-.72	.05
...has an active imagination	.69	.16	-.12	.18	.30	.50	.21	-.10	.20	-.52
...has few artistic interests.	-.43	.02	.19	.20	.18	.03	.11	.08	.00	.92

Level 2: Secondary school
certificate or entrance qualification
for universities of applied sciences

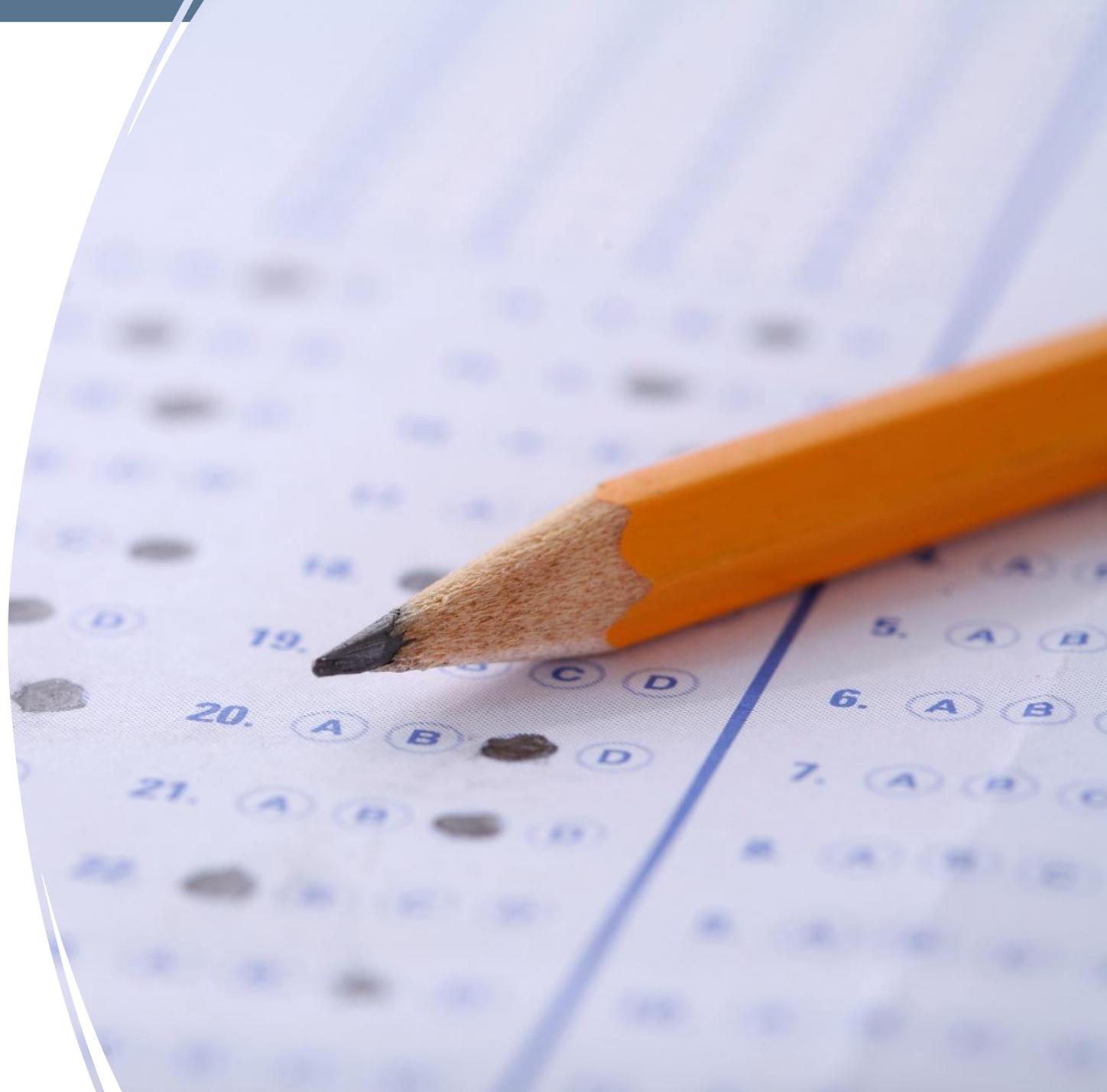
	ISSP 2003/2004					ISSP 2005/2006				
I see myself as someone who is...										
...is outgoing, sociable.	-.76	.09	-.03	.08	.12	-.51	.14	.26	.23	.42
...is reserved.	.79	.10	.15	-.06	.25	.80	.19	.01	-.06	-.07
...is generally trusting	-.07	.85	.11	.03	.10	.12	.80	.02	-.01	-.09
...tends to find fault with others.	.02	-.57	.55	.04	.32	-.02	-.19	-.12	-.12	.82
...does a thorough job.	.00	-.01	-.20	.10	.82	.08	.10	.81	.14	.20
...tends to be lazy.	.04	.08	.82	.03	-.30	.19	.05	-.79	.00	.32
...is relaxed, handles stress well.	-.06	.11	.05	.84	.17	.07	.10	.00	.90	.04
...gets nervous easiliy.	.29	.09	.47	-.59	.02	.34	.15	-.22	-.68	.12
...has an active imagination	-.59	.19	.16	-.06	.46	-.31	.40	.27	.23	.44
...has few artistic interests.	.37	-.14	.13	.43	-.26	.03	.11	.08	.00	.92

Level 3: Abitur or university degree

	ISSP 2003/2004					ISSP 2005/2006				
I see myself as someone who is...										
...is outgoing, sociable.	-.84	-.02	-.10	.10	.18	-.73	.02	.05	.21	.29
...is reserved.	.89	.01	.01	-.02	-.03	.88	.08	.08	.08	.02
...is generally trusting	-.01	-.73	.22	.05	.14	-.05	.84	.14	.00	.18
...tends to find fault with others.	.02	.78	.27	-.04	.05	-.15	-.69	.31	-.11	.19
...does a thorough job.	-.04	.09	-.73	.16	.09	.16	-.05	-.67	.10	.31
...tends to be lazy.	.08	.13	.81	.04	-.13	.19	-.10	.84	-.09	.04
...is relaxed, handles stress well.	.03	-.08	.09	.88	.11	.12	.05	.00	.89	.03
...gets nervous easiliy.	.20	.02	.31	-.74	.07	.28	-.05	.24	-.69	-.04
...has an active imagination	-.30	.03	-.16	.24	.71	-.18	-.01	.00	.21	.76
...has few artistic interests.	.00	.11	.09	.10	-.86	.03	-.05	.15	.11	-.75

2. Result

- The Big Five can be replicated in samples with a high level of education
- But not in samples with a medium or low level of education!



Possible explanations

Low-educated people are more susceptible to acquiescence

What is acquiescence?

- Tendency to agree to an item independent from the item content
- „yea“-saying tendency



Acquiescence has been found to distort the psychometric quality of questionnaire data.

Possible explanations

Low-educated people are more susceptible to acquiescence

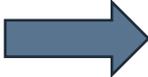
➡ lower psychometric quality
(Krosnick et al., 1996; Soto et al., 2008)

➡ Can this effect also be shown in the ISSP?

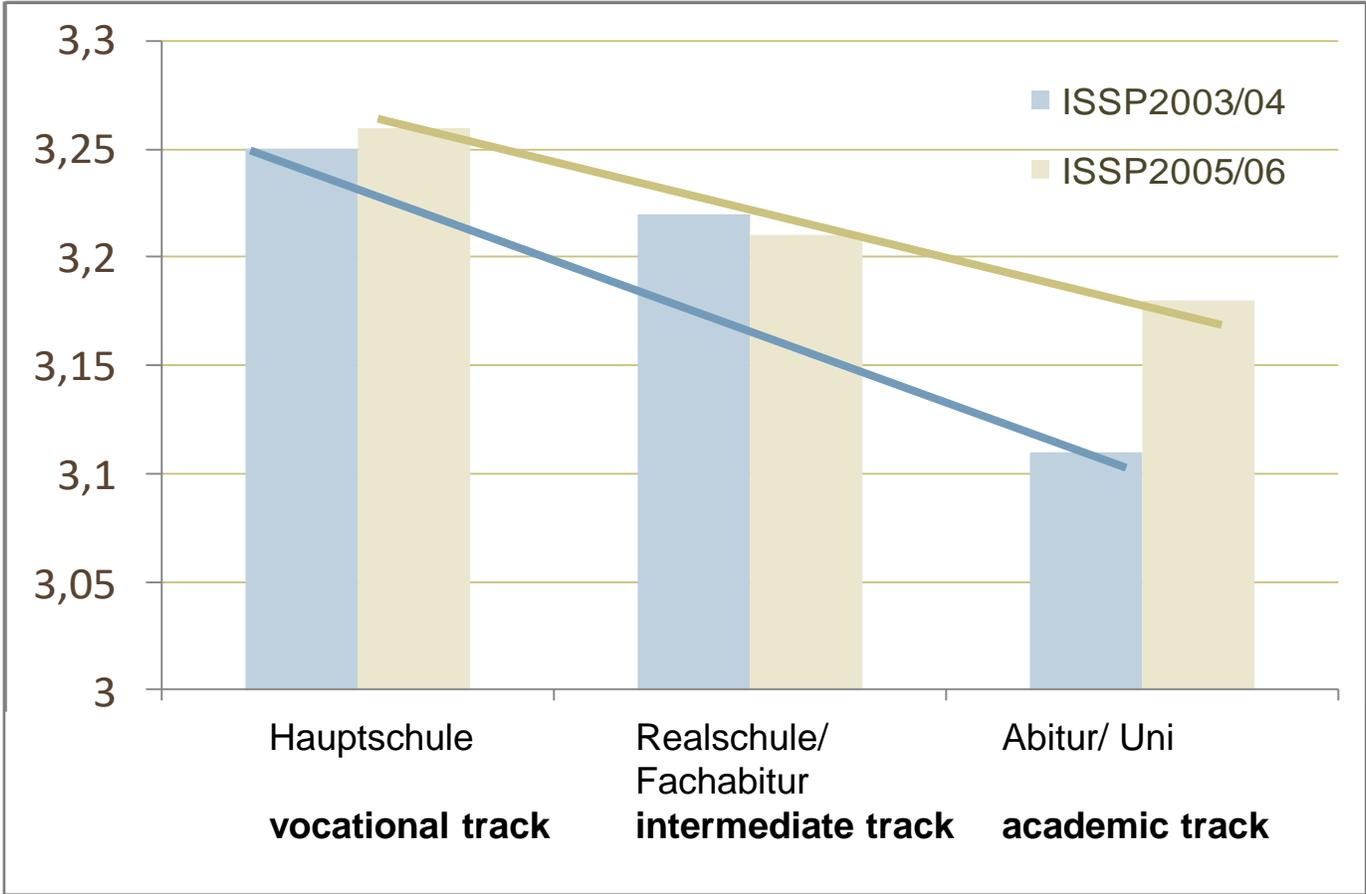
Acquiescence Measure

BFI-10:

- one positive/one negative coded

 individual mean

Low-educated people have a higher tendency for acquiescence than higher-educated people



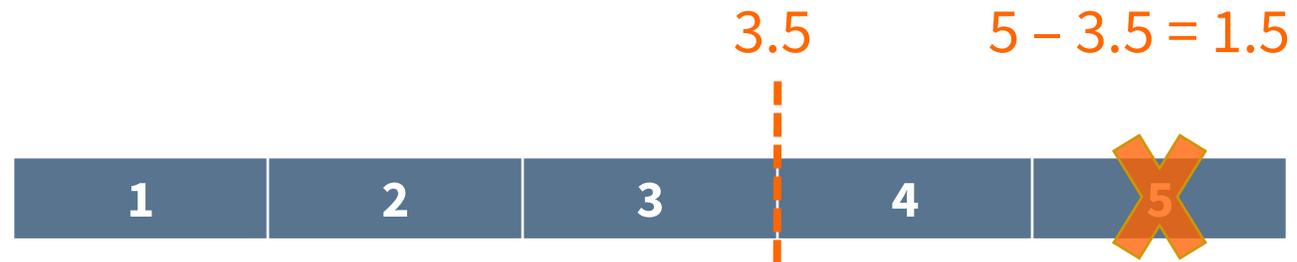
Can the differences found in the tendency for acquiescent responding explain the differences in the factor structures?

 **Correction for acquiescence**

Method

Corrected values:

→ Difference from the individual mean value



Corrected values:

Level 1: no school certificate or lower
secondary school

	ISSP 2003/2004					ISSP 2005/2006				
I see myself as someone who is...										
...is outgoing, sociable.	.76	.09	.21	.14	.15	.75	.03	.27	.14	.19
...is reserved.	-.89	.00	.09	-.01	.07	-.87	.08	.15	.00	.03
...is generally trusting	.01	.81	.13	-.17	.09	.09	.90	.01	-.14	.10
...tends to find fault with others.	-.04	-.83	.01	-.22	.06	.30	-.63	-.16	-.31	.17
...does a thorough job.	.11	.12	.70	.18	.16	-.05	-.07	.82	.13	.09
...tends to be lazy.	-.03	.00	-.90	.01	.07	-.13	-.21	-.83	.03	-.03
...is relaxed, handles stress well.	-.01	.05	.02	.88	.08	-.08	-.01	-.02	.87	.09
...gets nervous easiliy.	-.20	.01	-.16	-.79	.02	-.29	-.03	-.13	-.78	-.05
...has an active imagination	.54	-.08	.18	.14	.54	.39	-.04	.22	.19	.60
...has few artistic interests.	-.02	-.05	.00	.00	-.97	.04	-.02	.00	-.01	-.96

Corrected values

Level 2: Secondary school certificate or
entrance qualification for universities
of applied sciences

	ISSP 2003/2004					ISSP 2005/2006				
I see myself as someone who is...										
...is outgoing, sociable.	.80	.12	.23	.05	.15	.74	.02	.27	.16	.21
...is reserved.	-.89	.02	.11	-.10	-.01	-.91	-.04	.06	-.07	-.02
...is generally trusting	.07	.79	-.02	-.02	.19	.12	-.86	-.01	-.15	.18
...tends to find fault with others.	-.03	-.84	-.06	-.05	.11	.22	.72	-.14	-.22	.16
...does a thorough job.	.07	-.04	.81	.05	.15	.09	.01	.79	.09	.10
...tends to be lazy.	-.03	-.08	-.85	-.11	.04	-.03	.12	-.85	-.07	-.04
...is relaxed, handles stress well.	-.03	.04	.03	.89	.03	.01	-.08	.01	.90	.07
...gets nervous easiliy.	-.20	.01	-.14	-.81	.01	-.23	-.05	-.18	-.75	-.09
...has an active imagination	.41	.07	.19	.09	.63	.24	.10	.30	.18	.65
...has few artistic interests.	-.03	-.03	.01	.03	-.96	-.01	-.02	.04	.00	-.96

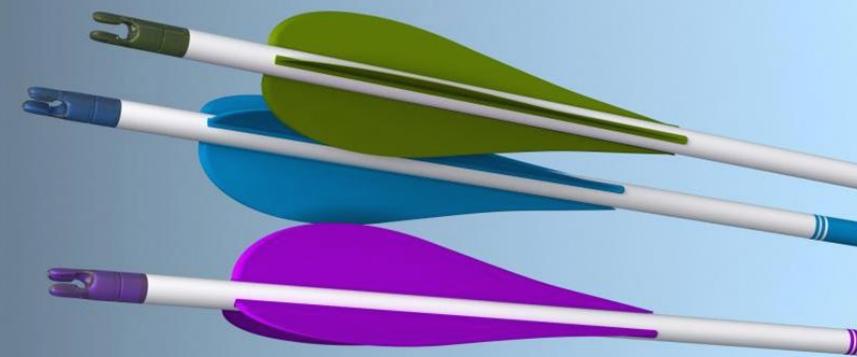
Corrected values

Level 3: Abitur or university degree

	ISSP 2003/2004					ISSP 2005/2006				
I see myself as someone who is...										
...is outgoing, sociable.	.83	.06	.23	.06	.18	.81	-.02	.14	-.15	.19
...is reserved.	-.92	.01	.08	-.08	.00	-.90	-.07	.04	-.02	.01
...is generally trusting	.06	.81	-.06	-.08	.13	.14	-.88	-.02	.06	.14
...tends to find fault with others.	.02	-.81	-.14	-.16	.04	.25	.72	-.14	.19	.14
...does a thorough job.	.07	-.01	.83	.06	.06	-.03	.03	.84	.00	.18
...tends to be lazy.	-.04	-.08	-.84	-.06	-.10	-.13	.14	-.84	.17	.04
...is relaxed, handles stress well.	-.02	.11	-.02	.89	.16	-.08	-.04	.11	-.88	.00
...gets nervous easiliy.	-.18	.03	-.16	-.82	.08	-.21	.06	-.05	.81	-.11
...has an active imagination	.34	.03	.33	.17	.66	.28	.03	.21	-.15	.69
...has few artistic interests.	.01	-.07	.00	.03	-.95	.04	.04	.01	-.01	-.94

Study 1: Conclusion

- The Big Five structure is sensitive to educational effects
- These seem to be caused by a higher tendency for acquiescence among lower educated people



Research question

- Is the effect specific for the measurement instrument used?
- The BFI-10 is an ultra-short measure
- Is the effect also replicable based on the full-scale BFI?



Study 2: Generalizability across personality instruments

Design: Instrument and Sample

- Full scale BFI-44
 - 16 pairs of items (32 items)
- $N = 1,427$ representative of the German adult population
- Paper-pencil



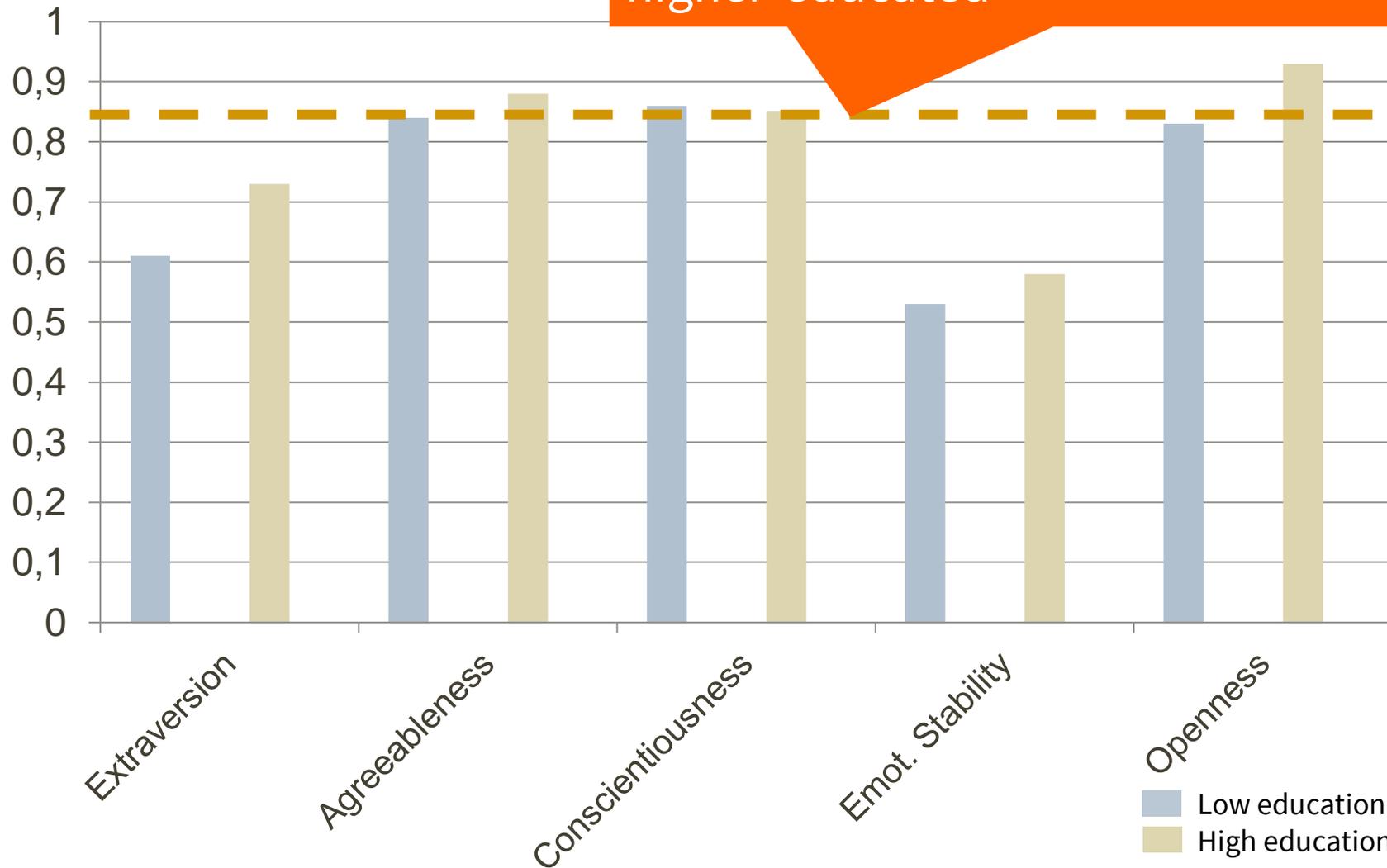
Assessing quality of the factor structure

- Congruence with an idealized matrix
- Criterion of factor congruence $\geq .85$ (*Lorenzo-Seva and Ten Berge (2006)*)

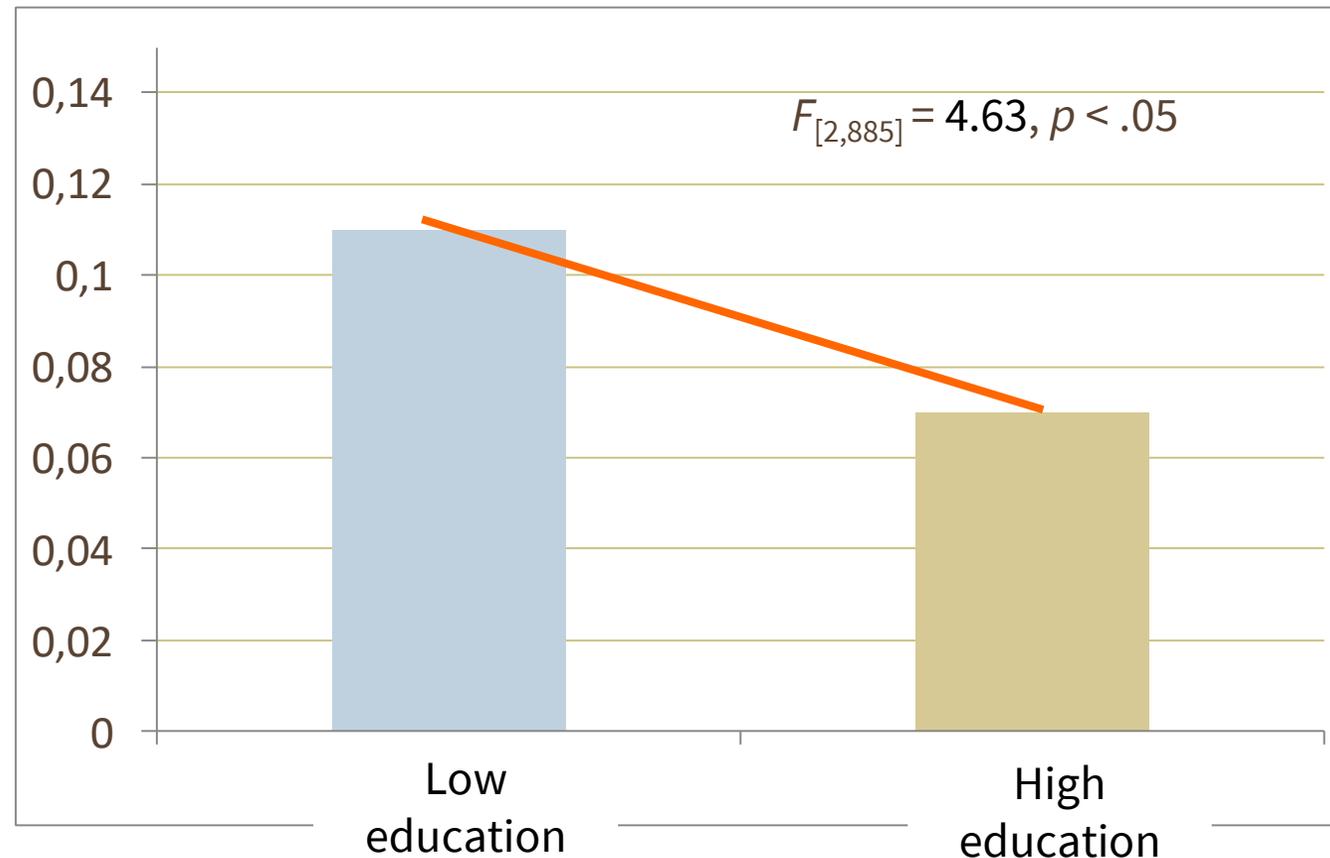
The congruence values are almost exclusively below the benchmark

Worse values for lower-educated than for higher-educated

Factor congruence of the

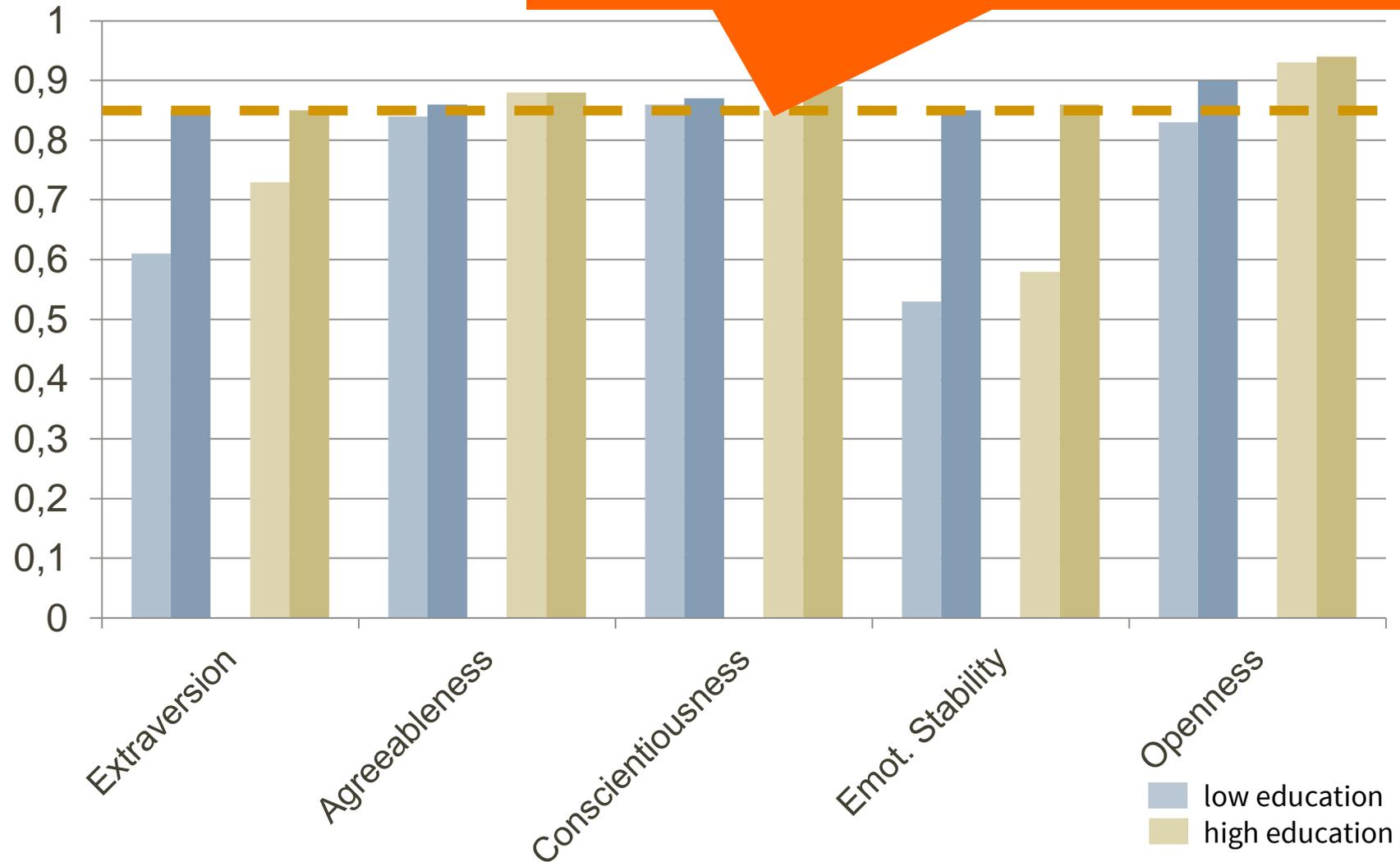


Differences in the tendency for acquiescent responding



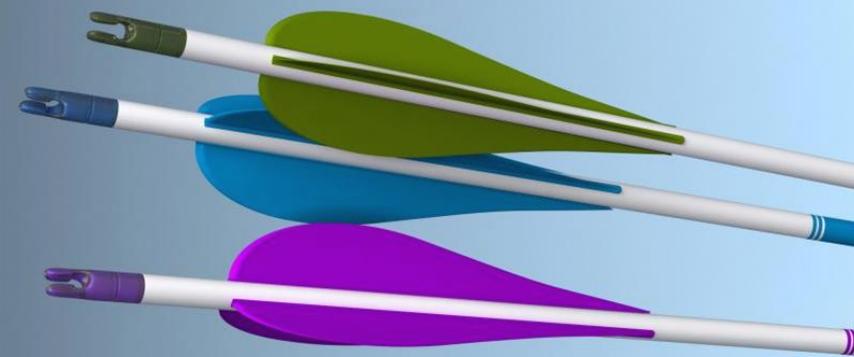
Factor congruence of

After controlling for acquiescence, the congruence coefficients for each dimension and for both education groups reach the benchmark



Conclusions

- ➔ The effect of acquiescence can also be replicated for the long BFI version
- Blurred factor structure
 - Educational differences in acquiescence
 - Better fit after controlling for acquiescence



Our first studies indicate

- the Big Five structure does not hold in a non-representative population
- the factorial bias can be attributed to a general tendency for acquiescence
- especially lower educated and less educated are more likely to respond

→ after controlling for acquiescence, the five-factor structure is replicable for all educational levels

This research, however, is based on German data only.

Is the effect, indeed, universal? Is it replicable across different cultures?

	ISSP 2003/2004					ISSP 2005/2006				
Ich...										
...gehe aus mir heraus, bin gesellig	.80	.12	.23	.05	.15	.74	.02	.27	.16	.21
...bin reserviert, eher zurückhaltend	-.89	.02	.11	-.10	-.01	-.91	-.04	.06	-.07	-.02
...schenke anderen leicht Vertrauen	.07	.79	.02	-.02	.19	.12	-.86	-.01	-.15	.18
...neige dazu, andere zu kritisieren	-.03	-.84	.06	-.05	.11	.22	.72	-.14	-.22	.16
...erledige Aufgaben gründlich	.07	-.04	.81	.05	.15	.09	.01	.79	.09	.10
...neige zur Faulheit	-.03	-.08	-.85	-.11	.04	-.03	.12	-.85	-.07	-.04
...bin entspannt, lasse mich durch Stress nicht aus der Ruhe bringen	-.03	.04	.03	.89	.03	.01	-.08	.01	.90	.07
...werde leicht nervös	-.20	.01	-.14	-.81	.01	-.23	-.05	-.16	.75	-.09
...habe eine aktive Vorstellungskraft	.41	.07	.19	.09	.63	.24	.10	.30	.18	.65
...habe nur wenig künstlerisches Interesse	-.03	-.03	.01	.03	-.96	-.01	-.02	.04	.00	-.96

Study 3

Testing the cross-cultural generalizability
(Rammstedt, Kemper, & Borg, 2013)

Hypotheses

1. Respondents in *all* countries show a tendency for acquiescence
2. This tendency blurs the Big Five factor structure
3. Controlling for acquiescence should markedly increase fit of the Big Five factor structure

Data base

- International Social Survey Programme (ISSP)
- 18 countries

United States	Russia
Germany	Czech Republic
Ireland	Israel
New Zealand	Japan
France	Philippines
Denmark	Mexico
Switzerland	Taiwan
Belgium (Flanders)	South Korea
Latvia	Dominican Republic

**Population
representative data**
N = 1,001 – 1,956
→ N = 25,509

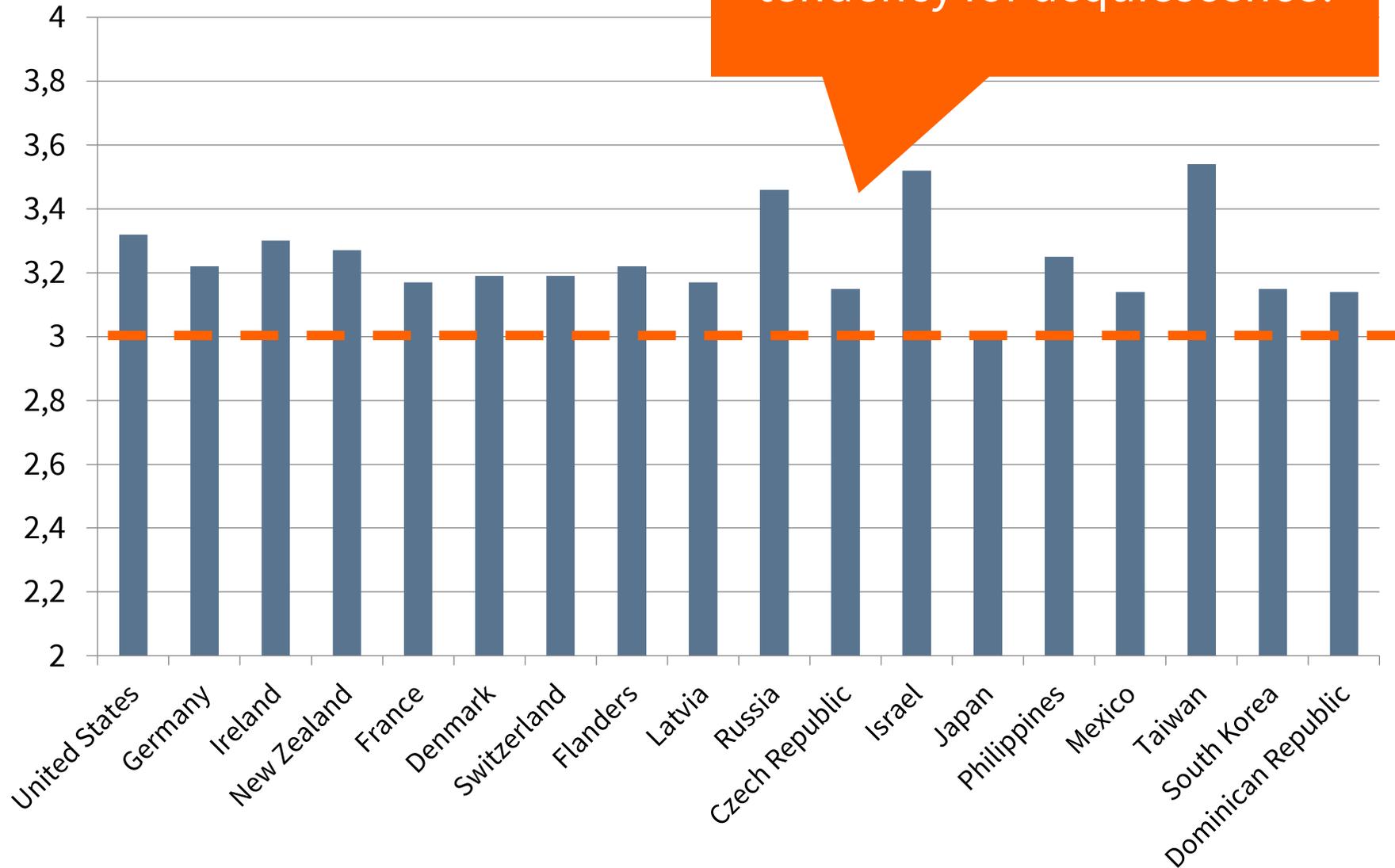
Measures

- Big Five: BFI-10 (*Rammstedt & John, 2007*)
 - 2 items per dimension
 - one positively/negatively coded

→ Indicator of acquiescence

H1:
Respondents in *all* countries show a
tendency for acquiescence

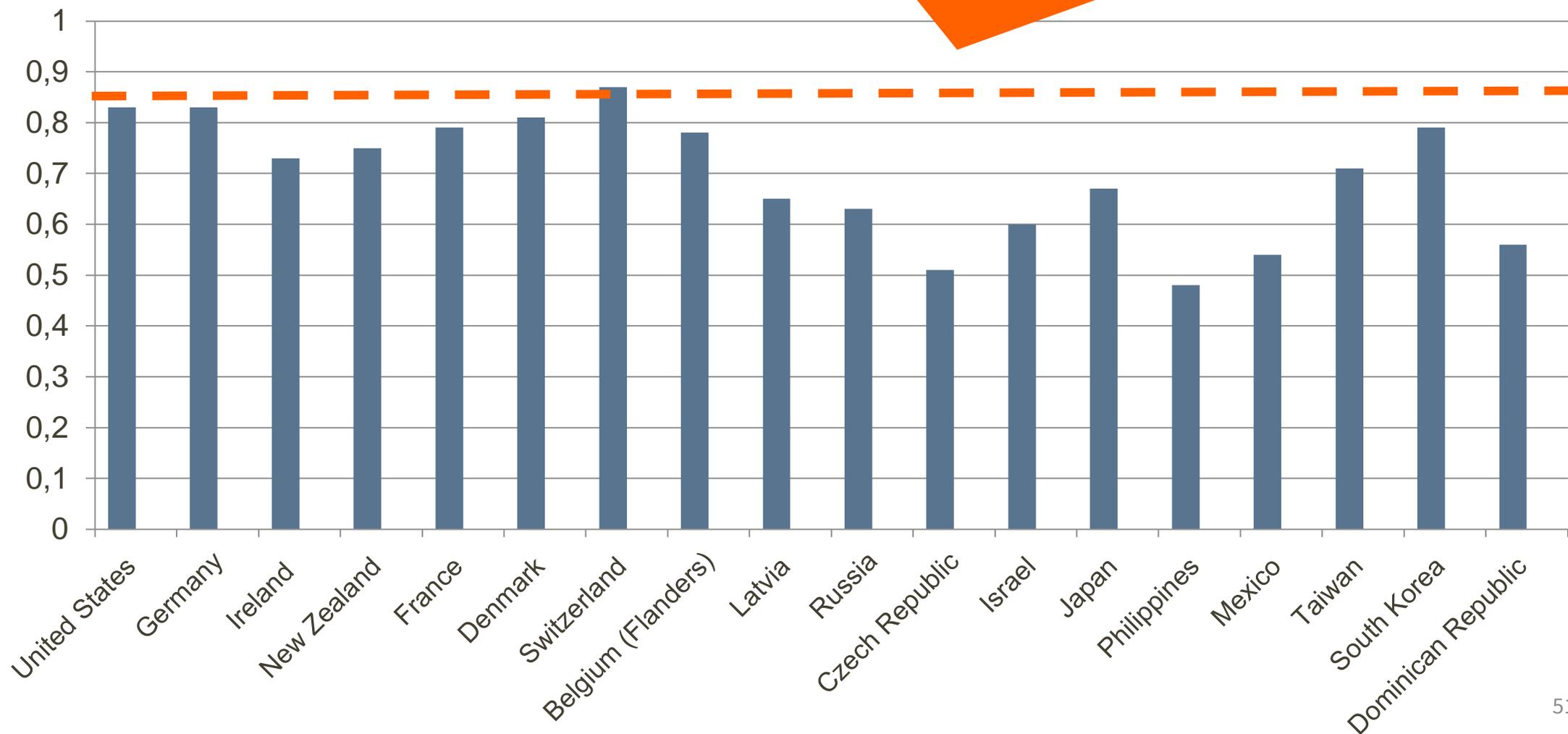
In all countries, there is a
tendency for acquiescence!



H2: The tendency for acquiescence blurs the Big Five factor structure

Congruence of the factor

In 17 out of 18 countries factor congruence is below the criterion of .85

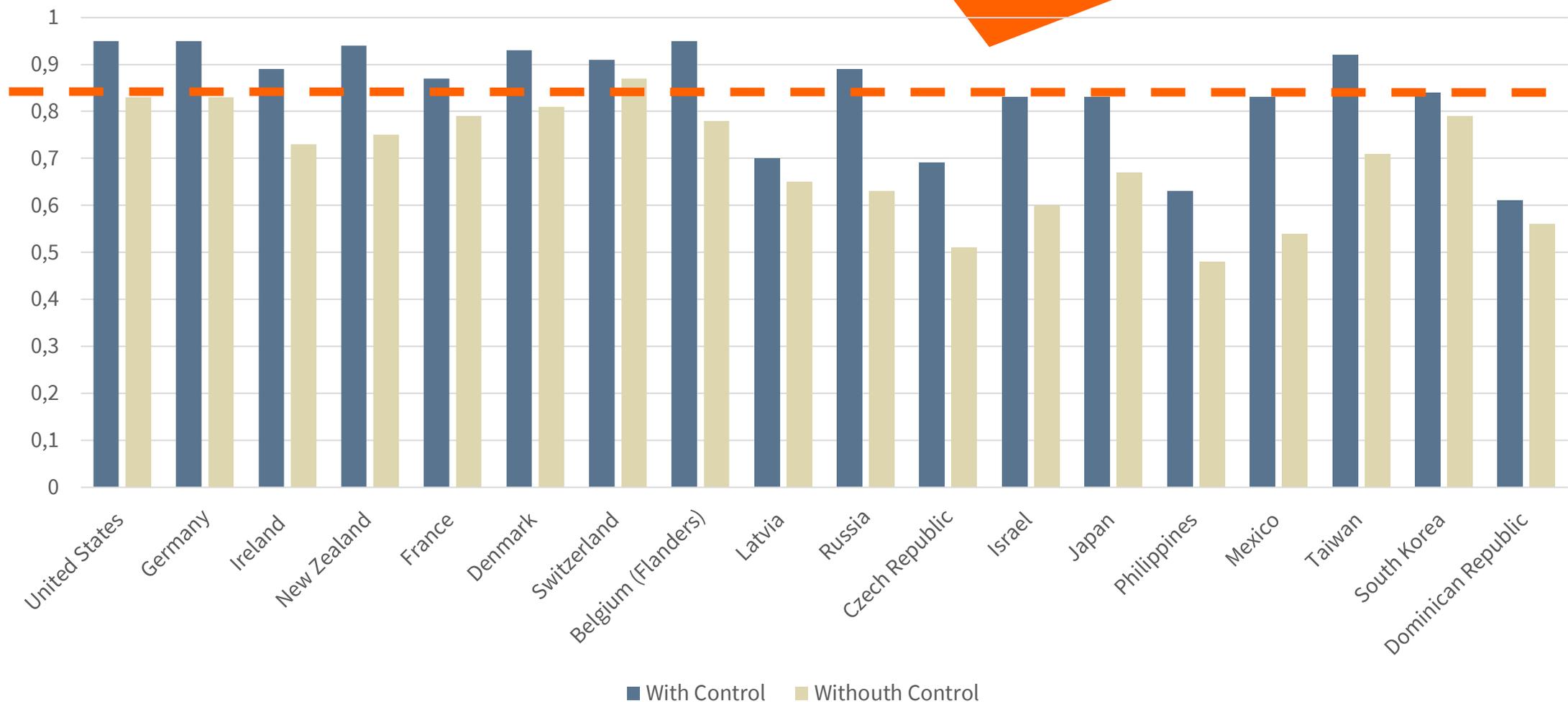


H3:

Controlling for acquiescence should markedly increase fit of the Big Five factor structure

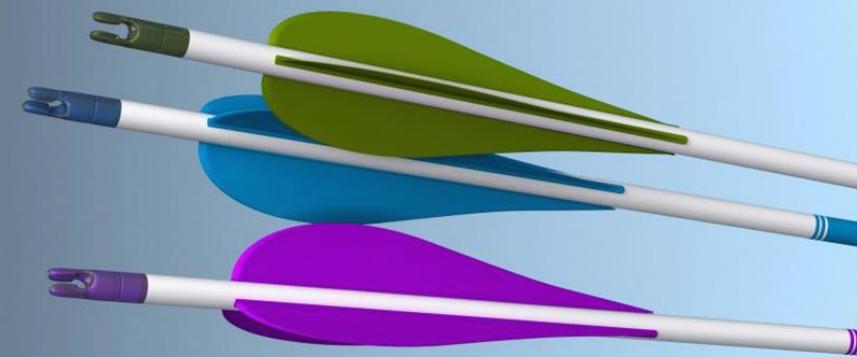
Congruence of the factor

In 10 out of 18 countries factor congruence exceeds .85 after controlling for acquiescence



Study 3: Conclusions

- There is a general, cross-culturally replicable tendency blurring the Big Five factor structure in non-student populations
- This blurredness seems to be caused by the tendency for acquiescence



!! Effect is stable for personality measures!

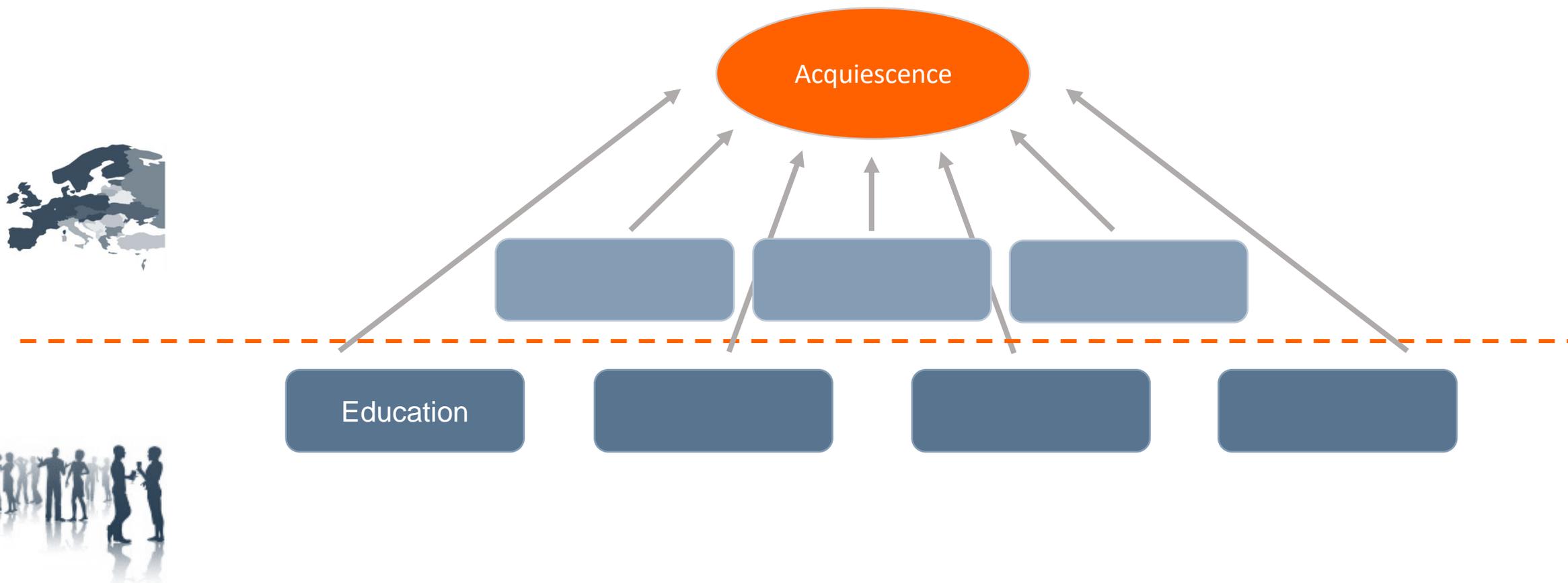
- ➔ Are personality measures particularly vulnerable to acquisition?
- ➔ Can the effect be replicated with other survey instruments?
- ➔ Are there other individual determinants next to education?
- ➔ Are there systematic cultural differences in the tendency for acquiescence?



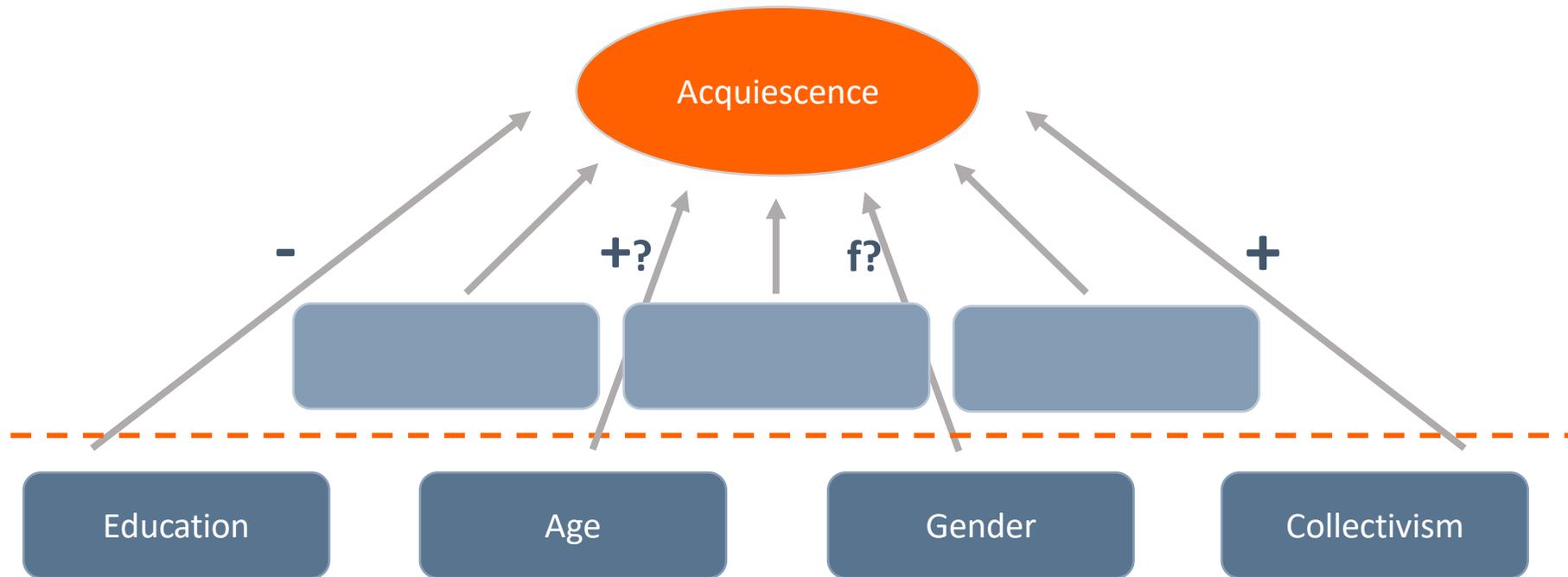
Study 4

- Survey instead of personality items used as indicator for acquiescence
- Systematic investigation of individual and cultural effects on acquiescence

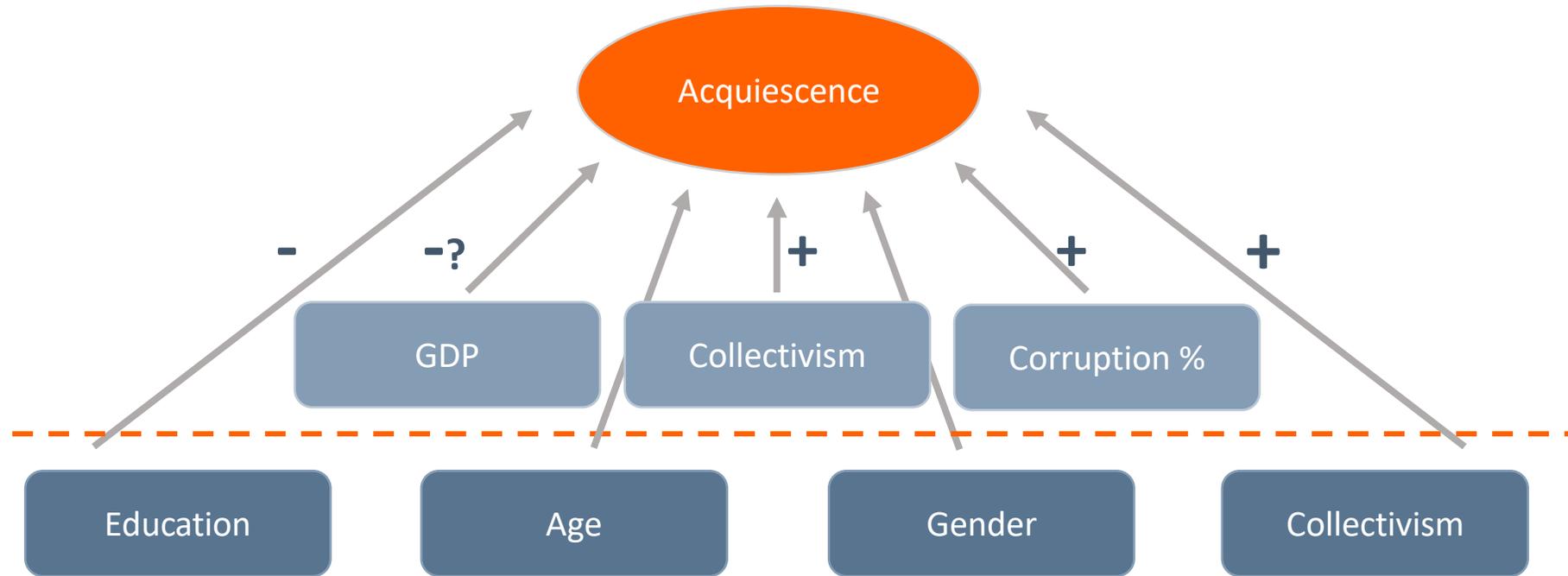
Determinants of acquiescence at the individual and the country level



Previous research has identified various determinants of acquiescence at the individual and the country level



Previous research has identified various determinants of acquiescence at the individual and the country level



- Synthesize the scattered body of knowledge.
- Concurrently testing all the presumed predictors of acquiescence.

Method

Data

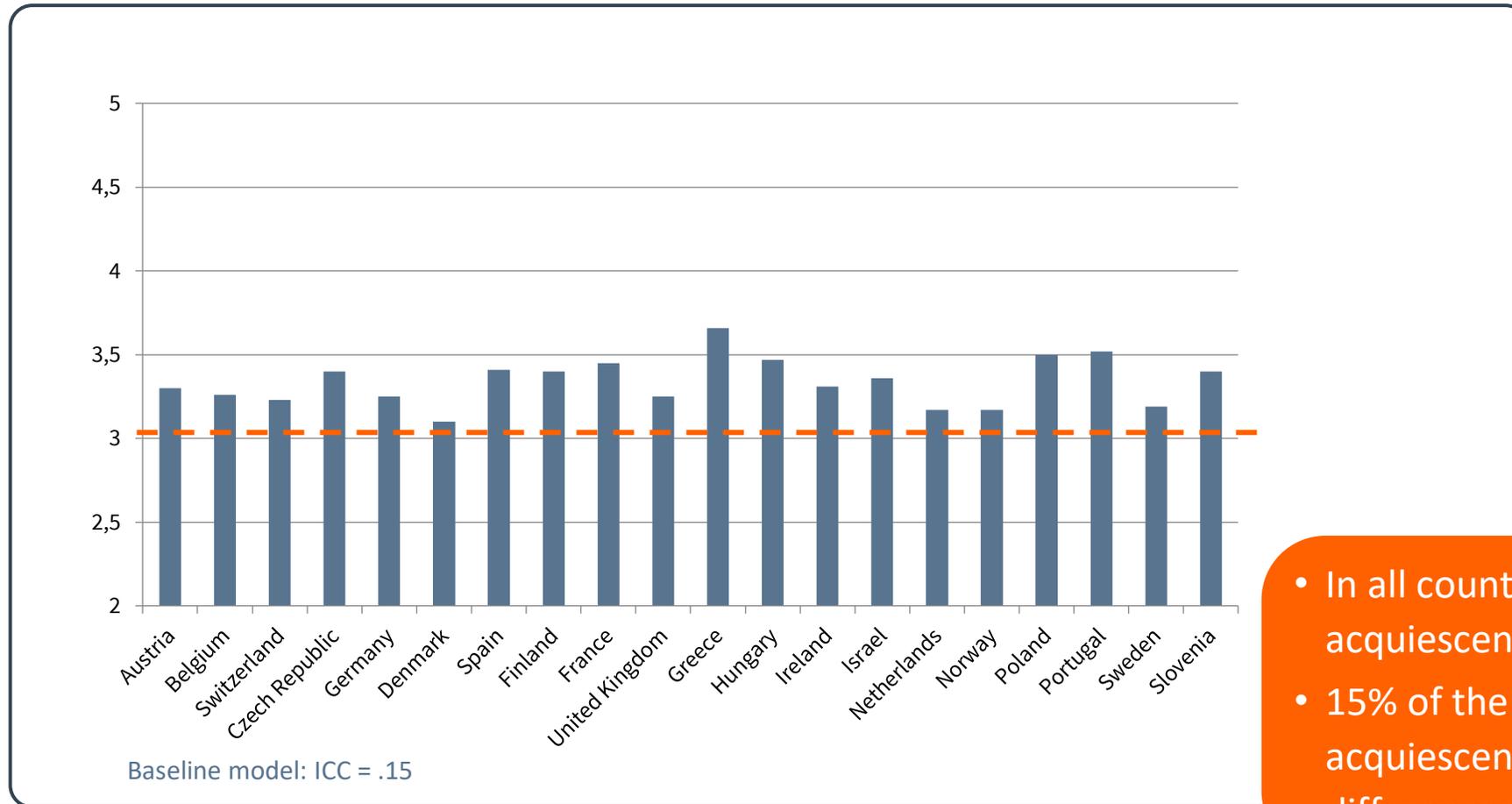
- European Social Survey (ESS2002)
- 22 countries
- Representative sample
- ≈ 40,000 respondents



Measures

- Acquiescence indicator → mean across 6 bipolar item pairs
 - “It is better for a country, if almost everyone shares the same customs and traditions”
 - “It is better for a country, if there are a variety of different religions”
- Individual Level
 - educational attainment
 - age
 - gender
 - conservatism
- Country-level
 - economic wealth
 - corruption level
 - collectivism

Differences in Acquiescence among Countries

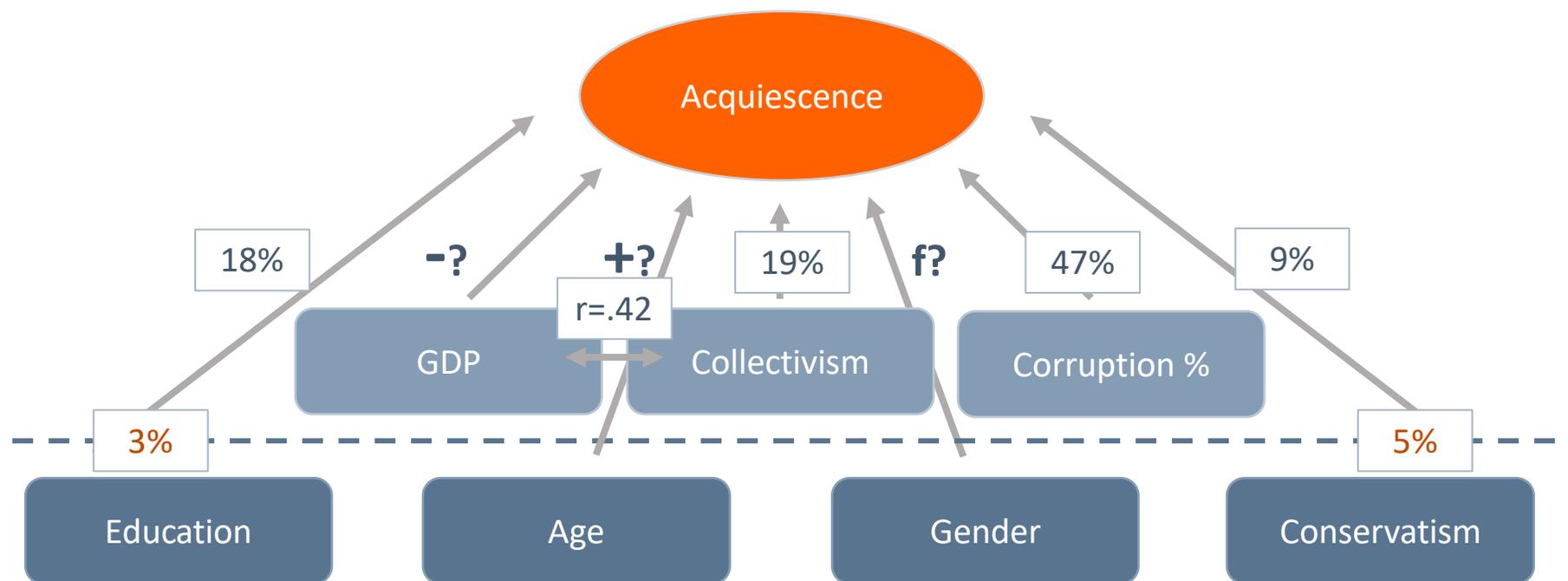


- In all countries a tendency for acquiescence.
- 15% of the variance in acquiescence due to country differences.

Determinants of Acquiescence

Predictor	Regression Coefficient (b)	Partial Variance explained at	
		Country level	Respondent level
Country			
GDP	.013	.000	.000
Collectivism	.002*	.187	.000
Corruption	.039**	.473	.000
Respondent			
Education	-.043***	.176	.029
Age	.001***	.000	.004
Gender	-.010**	.000	.000
Conservatism	.073***	.085	.045
Complete Model		.737	.097

Determinants of Acquiescence



Differences and Determinants of Acquiescence

- 15% of the variance in acquiescence due to **country differences**

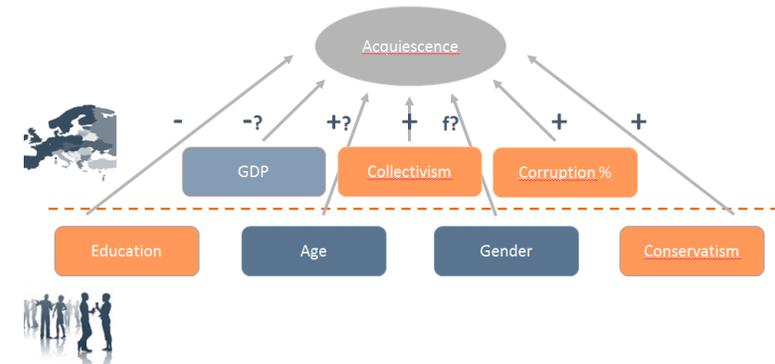
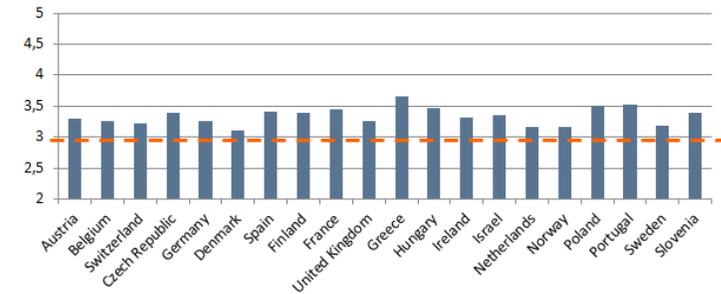


- 74% explained by
 - corruption rate,
 - cultural value orientation,
 - and educational differences

- 85% due to **individual differences**



- 10% explained by
 - educational attainment
 - and value orientation



Interim Summary

- Acquiescence reduces the measurement quality of survey items
 - Personality questionnaires in Germany
 - Study 1: BFI-10, Germany
 - Study 2: full length personality questionnaire, Germany
 - Generalisation of the effect across countries and content
 - Study 3: BFI-10, international study
 - Study 4: different attitude questions, international study



2

What causes
acquiescent
responding?

Responding to a survey item



Study 5:

Initial examination of the underlying process
(*Rammstedt & Kemper, 2010*)

Sample & Instrument

- BFI-10
- N = 926 (46.8% male)
- Assessment mode: telephone interviews
- Representing all adult age groups and all educational levels

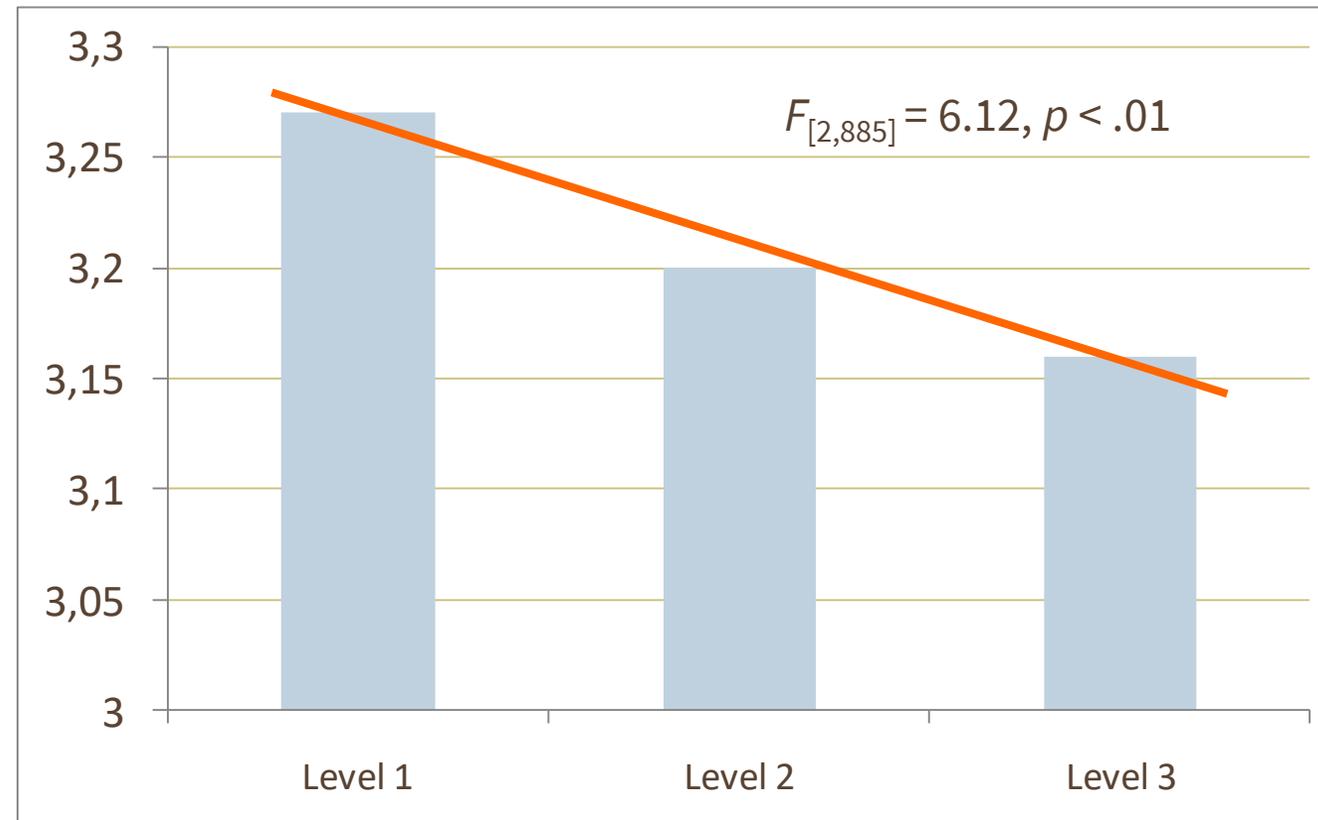


Standardized administration of items
and alternative answers

	Lower Education Level					Middle Education Level				
I see myself as someone who is...										
...is outgoing, sociable.	.63	-.11	.33	-.14	-.06	-.49	.58	.15	.04	.27
...is reserved.	-.70	.32	.13	.08	.04	.89	.06	.06	.02	.09
...is generally trusting	-.07	-.56	.33	.50	.08	-.20	-.12	.08	.76	.19
...tends to find fault with others.	.61	.37	.15	.24	.21	.12	.83	-.04	-.07	-.10
...does a thorough job.	-.04	.13	.79	-.04	-.17	.08	.23	.72	.10	.17
...tends to be lazy.	.01	.02	-.10	.06	.95	.05	.16	-.80	.19	.09
...is relaxed, handles stress well.	-.09	-.10	.40	-.70	.26	-.14	.16	.03	-.44	.50
...gets nervous easiliy.	-.10	.06	-.02	.79	.18	.31	.14	-.26	.68	-.22
...has an active imagination	.31	-.15	.68	-.10	.06	.02	.40	.26	-.05	.61
...has few artistic interests.	-.18	.71	.04	.12	.02	-.07	.22	.06	-.11	-.76

High Education Level					
I see myself as someone who is...					
...is outgoing, sociable.	.83	.02	-.01	-.05	.16
...is reserved.	-.76	-.10	.16	.01	-.02
...is generally trusting	.21	.83	.19	.04	-.03
...tends to find fault with others.	.39	-.49	.43	-.03	-.23
...does a thorough job.	.02	-.12	-.66	.11	.07
...tends to be lazy.	-.17	-.01	.77	.16	.07
...is relaxed, handles stress well.	-.01	.14	.15	-.82	.09
...gets nervous easiliy.	-.08	.22	.20	.77	-.08
...has an active imagination	.22	-.19	.09	-.07	.81
...has few artistic interests.	.02	-.19	.11	.10	-.76

Differences in the tendency for acquiescence



Corrected Values

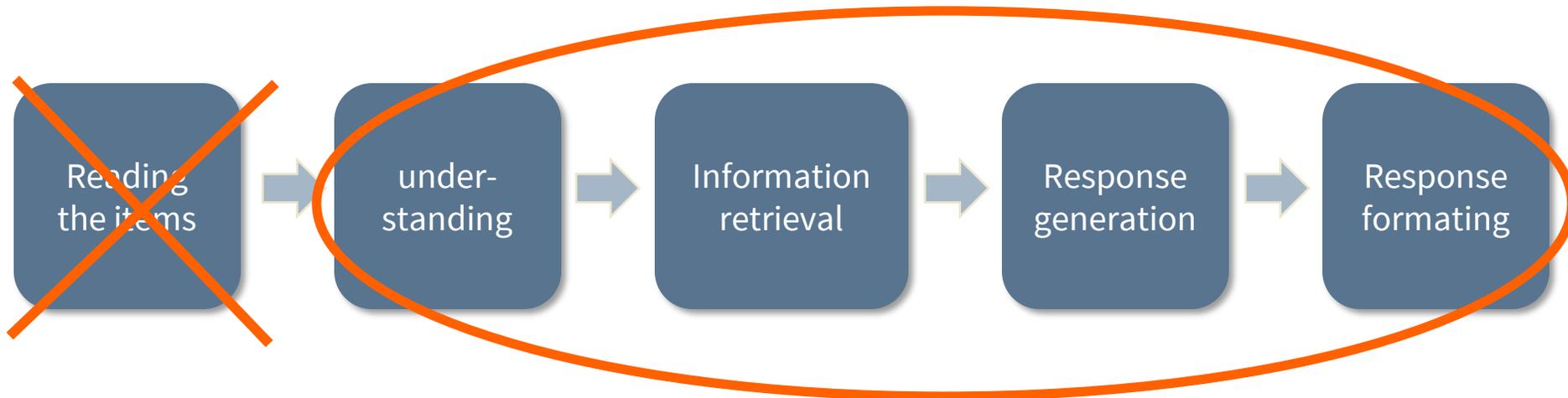
	Lower Education Level					Middle Education Level				
I see myself as someone who is...										
...is outgoing, sociable.	.81	-.01	.14	.20	-.06	.72	.16	.17	.11	.25
...is reserved.	-.75	-.09	.11	.04	-.22	-.89	.11	.10	-.08	.11
...is generally trusting	.19	-.71	.01	-.39	.28	.18	-.79	.01	-.27	.04
...tends to find fault with others.	.26	.77	-.01	-.30	.16	.20	.80	-.01	-.19	.04
...does a thorough job.	-.17	.17	.71	.20	.35	-.01	-.11	.75	.09	.06
...tends to be lazy.	-.15	.14	-.86	.06	.22	-.05	-.10	-.85	-.04	-.04
...is relaxed, handles stress well.	.00	-.08	-.01	.84	.13	.02	-.08	-.03	.90	.09
...gets nervous easiliy.	-.23	-.06	-.12	-.74	.04	-.18	-.14	-.22	-.75	-.04
...has an active imagination	.39	-.02	.34	.27	.36	.12	.15	.29	.22	.66
...has few artistic interests.	-.12	.03	.02	-.03	-.90	.01	.11	.09	.03	-.93

Corrected Values

	High Education Level				
I see myself as someone who is...					
...is outgoing, sociable.	.79	.03	.20	-.06	.21
...is reserved.	-.85	.07	.04	-.01	-.02
...is generally trusting	.24	-.87	-.10	.02	-.07
...tends to find fault with others.	.37	.62	-.21	-.06	-.21
...does a thorough job.	-.09	.06	.83	.07	.12
...tends to be lazy.	-.23	.09	-.79	.15	.11
...is relaxed, handles stress well.	-.07	-.13	.03	-.86	.12
...gets nervous easiliy.	-.12	-.19	-.02	.81	-.05
...has an active imagination	.14	.16	.13	-.10	.83
...has few artistic interests.	-.06	.23	.10	.08	-.81

Study 5: Conclusion

- Replication of Study 1
- Control for reading the items has no effect on differences in the tendency for acquiescence



Study 6

- Is the complexity of items relevant for the tendency for acquiescence?



Study 6: Rationale & Design

Does reducing the complexity of personality items and response scales reduce the tendency for acquiescence?

Measure and Design

BFI-2

- 60 items
- Measuring the B5 and 3 facets per domain

Experimental design

- Comparison of
 - original BFI-2 with a simplified version
 - 4 vs 5 point response scale

Original	Simplified
Is outgoing, sociable.	Is outgoing
Is compassionate, has a soft heart.	Is caring
Tends to be disorganized. (R)	Is disorganized (R)
Is relaxed, handles stress well. (R)	Handles stress well (R)
Has few artistic interests. (R)	Has few artistic interests. (R)
Has an assertive personality.	Is assertive
Is respectful, treats others with respect.	Treats others with respect
Tends to be lazy. (R)	Does not like to work hard (R)
Stays optimistic after experiencing a setback. (R)	Has a positive attitude (R)
...	...

Measures: The simplified BFI-2

Simplified version = optimized for readability

- Linguistically simplified phrases and/or phrases reduced to a single stimulus only

Flesch Reading Ease Score (Flesch, 1949)

- Builds on average sentence length (in words) and average word length (in syllables)

Original	Simplified
Is outgoing, sociable.	Is outgoing
Is compassionate, has a soft heart.	Is caring
Tends to be disorganized. (R)	Is disorganized (R)
Is relaxed, handles stress well. (R)	Handles stress well (R)
Has few artistic interests. (R)	Has few artistic interests. (R)
Has an assertive personality.	Is assertive
Is respectful, treats others with respect.	Treats others with respect
Tends to be lazy. (R)	Does not like to work hard (R)
Stays optimistic after experiencing a setback. (R)	Has a positive attitude (R)
...	...

Original	Simplified
Md = 59.75	Md = 76.89
“fairly difficult”	„fairly easy to read“

Experimental Design

Sample



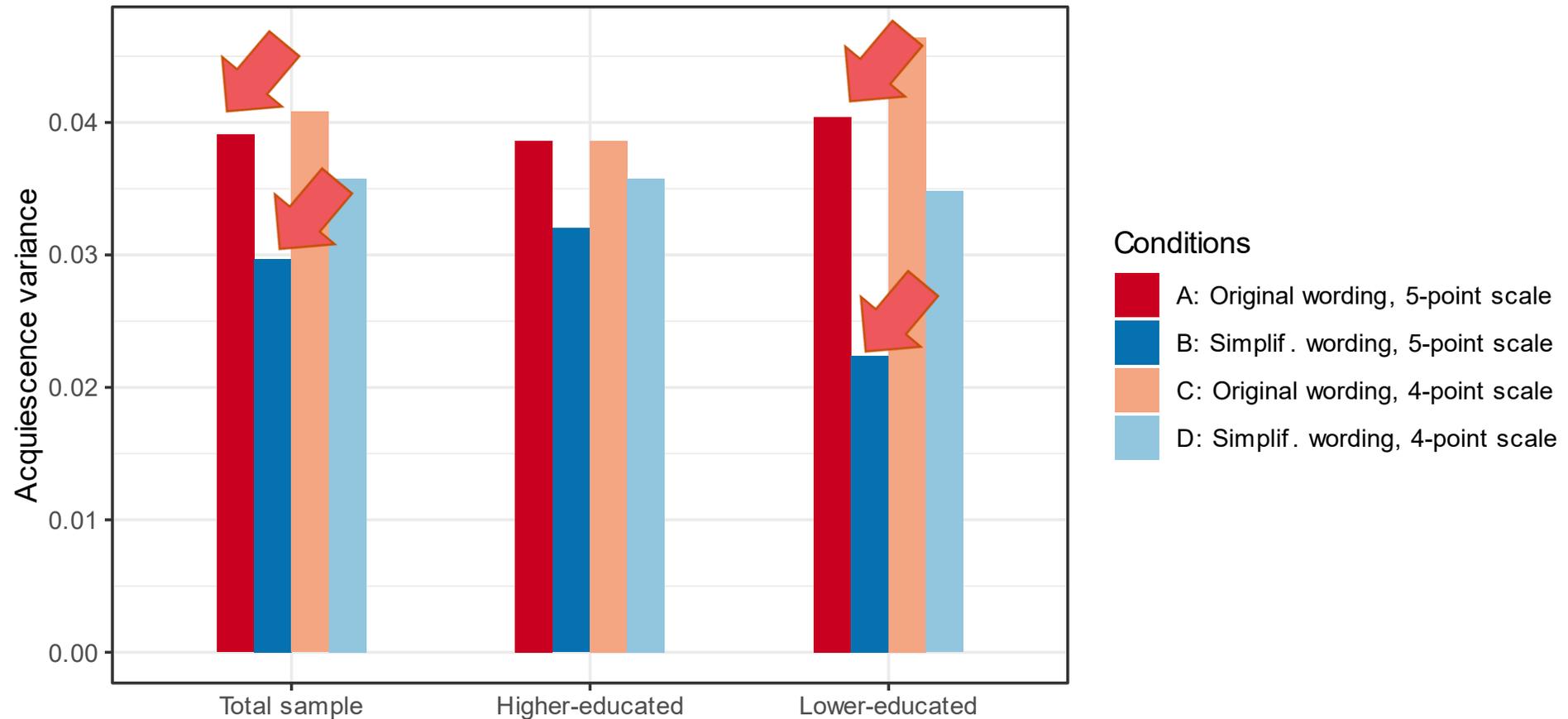
- Online in US/UK
- $N = 2,234$ respondents (57.9 % female)
- Data collected as part of the Programme for the Assessment of Adult Competencies (PIAAC) Pilot by the OECD

Instrument



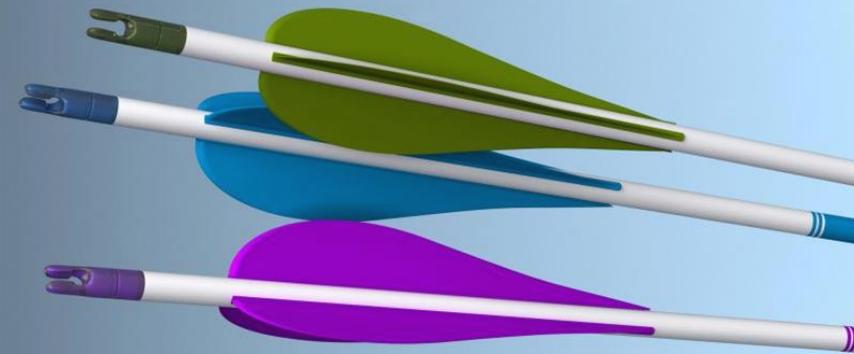
- BFI-2/simplified BFI-2
- Criterion variables
 - satisfaction with life
 - self-rated health
 - current household income
 - sex, age, and educational attainment

Variance of the acquiescence factor

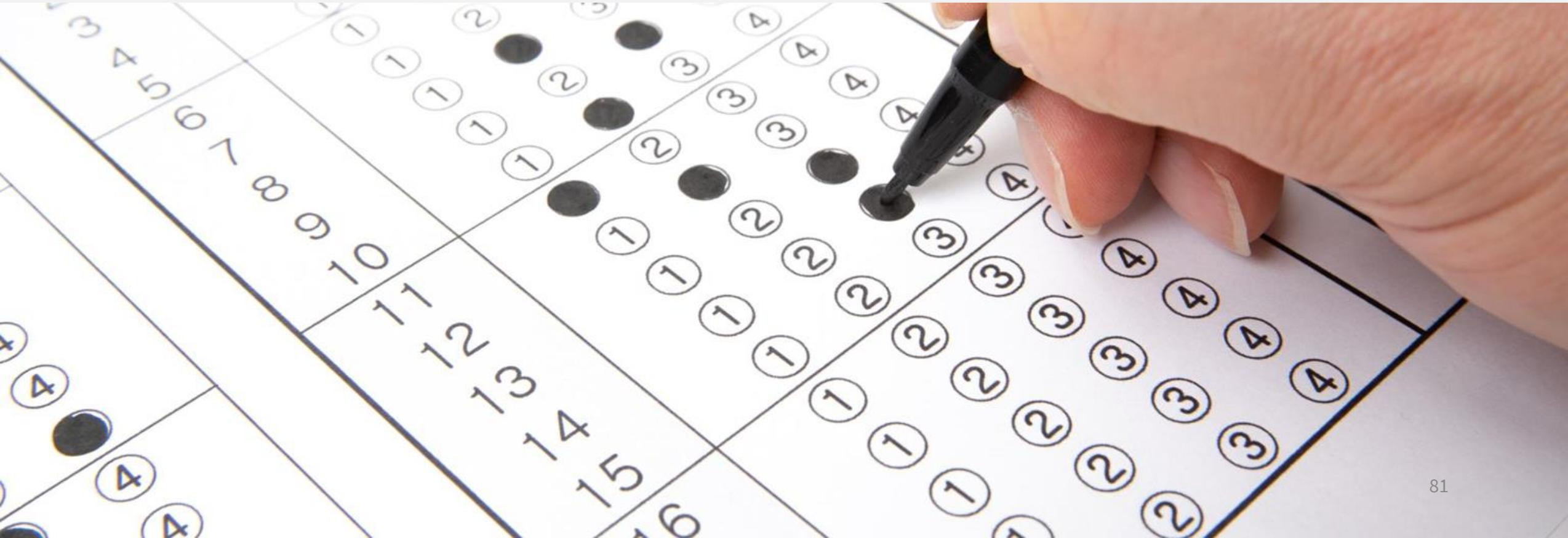


Study 6: Conclusion

- Simpler items reduce acquiescents
- Simpler response formats do not have an effect on acquiescent responding



Overall Conclusion



Overall Conclusion

- Acquiescence is a **general tendency** that reduces response quality
 - Across instruments
 - Across constructs
 - Across countries
- **Individual level:** Lower educated and more conservative respondents are more prone to acquiescent responding
- **Country level:** acquiescence is higher in countries with higher corruption rates
- **Simpler item** phrasings help to reduce acquiescence



Thank you for your interest

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