

Measuring self-construals (自我建構) with random intercept item factor analysis

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What is self-construals

(自我建構)?

- Educational researchers often measure self-construals in the research and use it to predict behaviors
- **Independent self-construal (獨立我)**: Favour autonomy and distinction from others; direct communication
- **Interdependent self-construal (互依我)**: Favour maintaining harmonious relationships with others; respect authority
- Example: Feeling of embarrassment (不好意思的感覺) is positively related to interdependent self-construal and negatively related to independent self-construal.

(Markus & Kitayama, 1991; Kwan, Bond, & Singelis, 1997; Oyserman, Coon, & Kemmelmeier, 2002; Singelis, Bond, Sharkey, & Lai, 1999)

Sample items in Singelis' Self-Constraint Scale

- Independent self-construal (獨立我):
 - Speaking up during a class is not a problem for me.
 - I enjoy being unique and different from others in many respects.
- Interdependent self-construal (互依我):
 - I have respect for the authority figures with whom I interact.
 - It is important for me to maintain harmony within my group.

(Singelis, 1991)

Measurement of Self-Construals

- **Two Factors** (二因素): independent and interdependent self-construals as two separate constructs
- **One Factor** (一因素): treating independent and interdependent self-construals as a single factor:

Independence - Interdependence
(獨立我 - 互依我)

(Na & Kitayama, 2011)

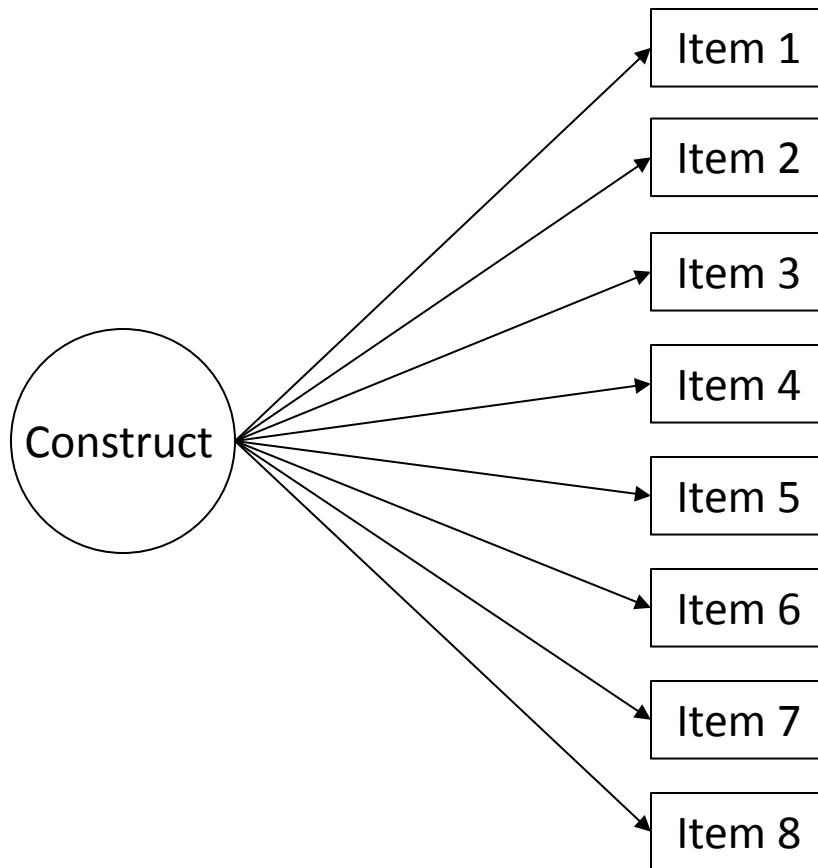
Acquiescence Response Style

(默許同意回答風格)

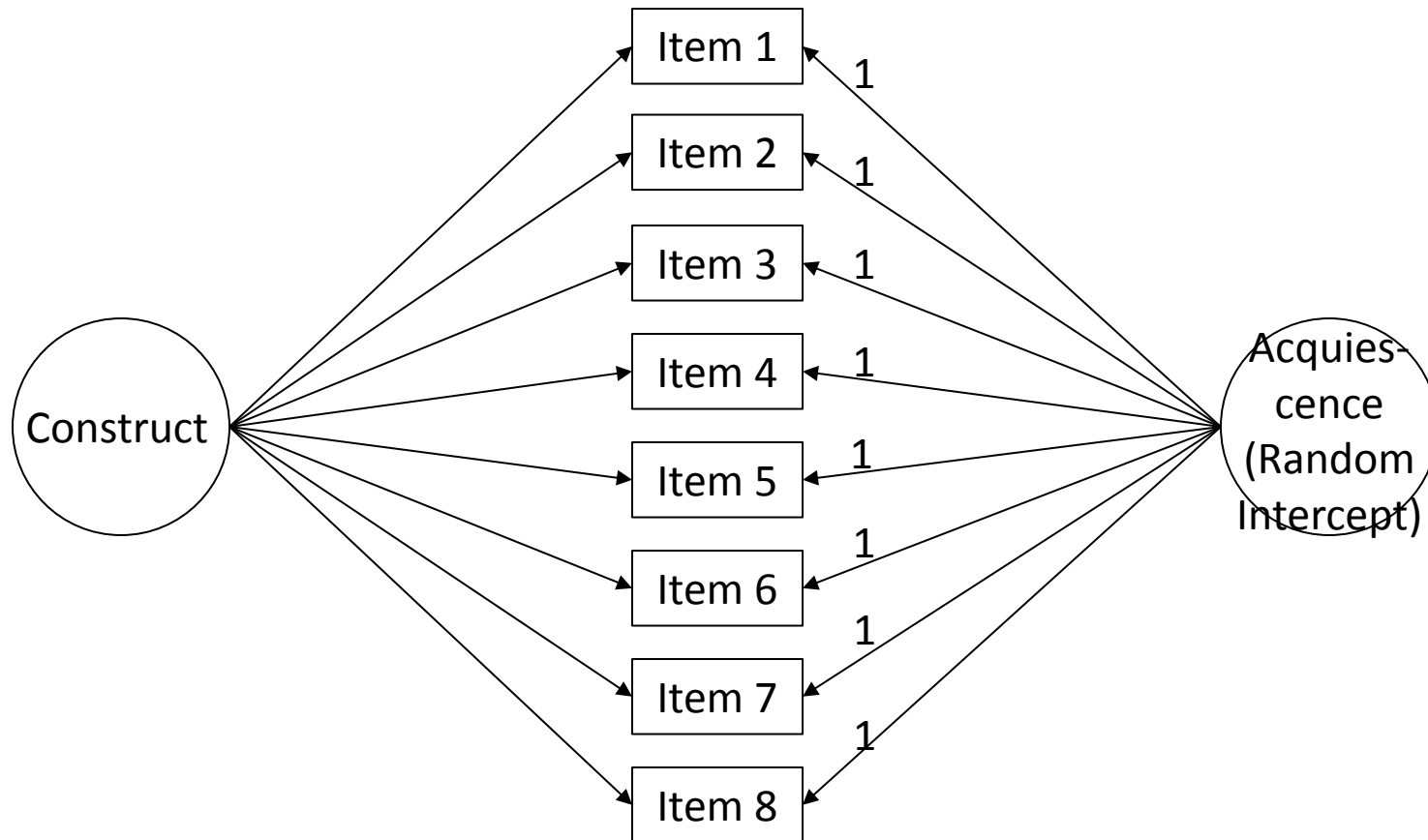
- **Participants' tendency to agree** regardless of an item's actual content
- Bias correlations in the positive direction (在正方向偏袒相關):
 - Inflate positive correlations and deflate negative correlations (令正相關加強; 令負相關變弱)
- Acquiescence response style exists in the measurement of self-construals

(Kam & Meyer, 2015; Schimmack, Oishi, & Diener, 2005)

Normal Confirmatory Factor Analysis



Random Intercept Item Factor Analysis



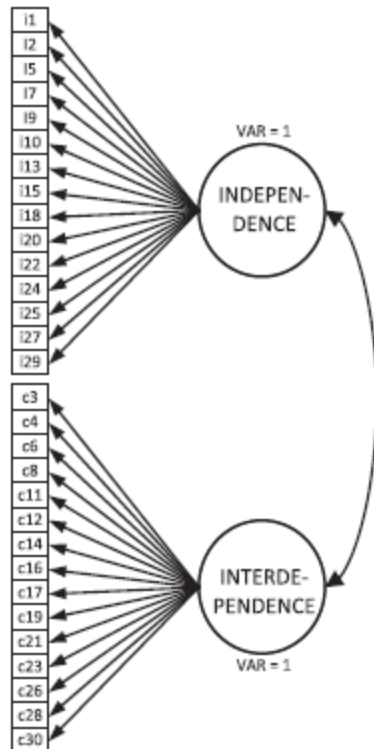
Current Study

- Question 1: Does acquiescence response style exist in data?
- Question 2: After controlling for acquiescence, does the data show one-factor model or two-factor model of self-construals?
- Question 3: After controlling for acquiescence, how do the self-construals correlated with external constructs?

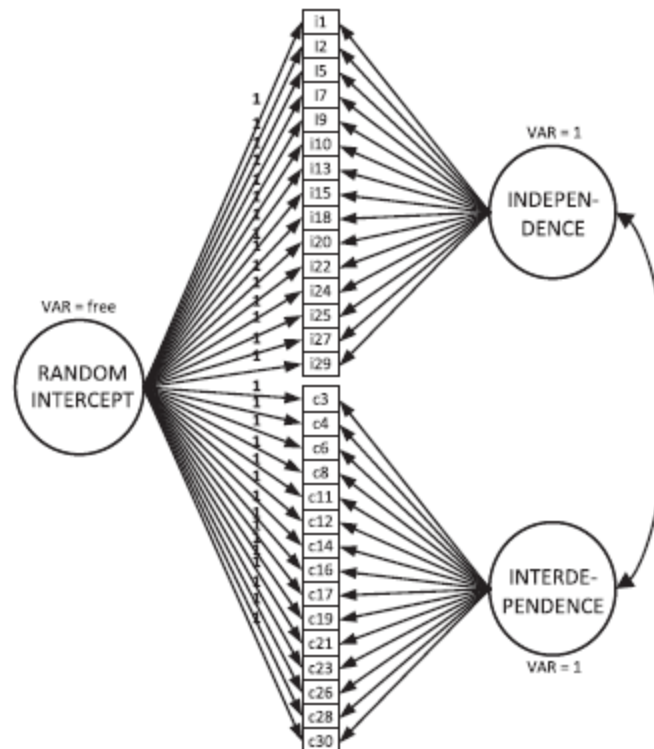
Study

- 525 undergraduate students (258 females) in Beijing
- -3 (Strong Disagree) to +3 (Strongly Agree)
- Measures
 - Singelis (1994) Self-Construal Scale
 - External measures
 - Rosenberg (1965) Self-Esteem Scale
 - Modesty subscale in IPIP NEO agreeableness (Goldberg et al., 2006)

Question 1: Does acquiescence response style exist in data?



Two-Factor Model

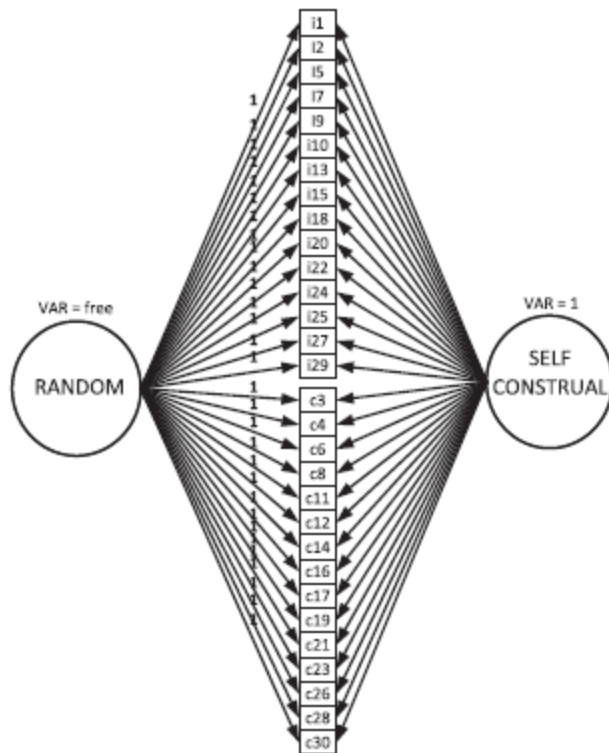


Two-Factor RIIFA Model

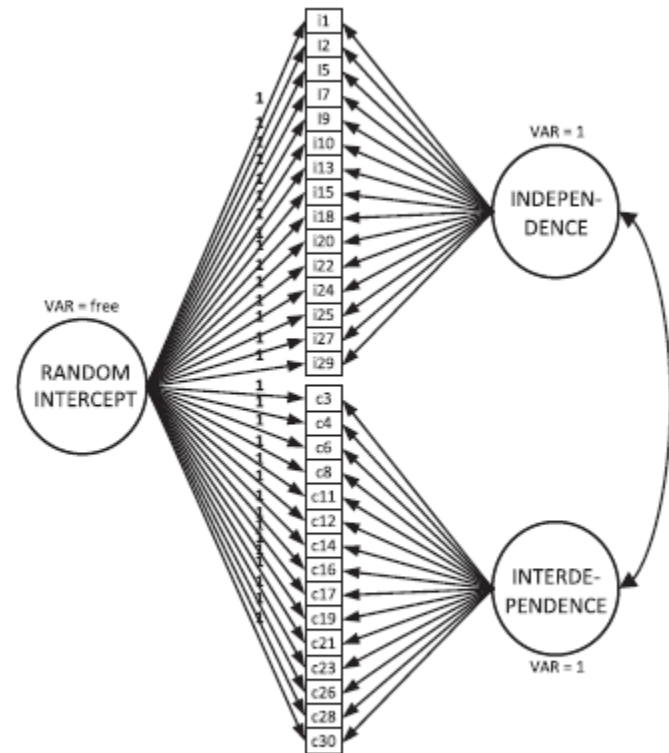
Models		Model Fit Indices					
		χ^2	df	p	TLI	CFI	RMSEA
TWO-FACTOR MODEL							
	Two-factor	1356.34	404	<.001	.53	.59	.07
	Two-factor with acquiescence	1232.81	403	<.001	.59	.65	.06

$$\Delta\chi^2 = 123.53, \Delta df = 1, p < .001$$

Question 2: After controlling for acquiescence, does the data show one-factor model or two-factor model of self-construals?



One-Factor RIIFA Model



Two-Factor RIIFA Model

Models		Model Fit Indices					
		χ^2	<i>df</i>	<i>p</i>	TLI	CFI	RMSEA
	One-factor with acquiescence	1273.54	404	<.001	.57	.63	.06
	Two-factor with acquiescence	1232.81	403	<.001	.59	.65	.06

$$\Delta\chi^2 = 40.73, \Delta df = 1, p < .001$$

Question 3: After controlling for acquiescence, how do the self-construals correlate with external constructs?

	Raw Scores		Two-factor with Acquiescence	
	Independence	Interdependence	Independence	Interdependence
Self-Esteem (自尊)	.21***	-.02	.14***	-.26***
Modesty (謙遜)	-.28***	.26***	-.39***	.33***

Discussion

- Independent self-construal and interdependent self-construal are still **two separate factors** after acquiescence response style is controlled for.
 - No evidence that “Independence – Interdependence” work
- Educational researchers interested in studying classroom behaviors may **employ random intercept item factor analysis** to control for the effect of acquiescence response style.

Limitations and Future Directions

- Examine self-construals only among Beijing students
- Compare self-construals data across cultures