

Supplemental material

**Equivalence of Narcissistic Personality Inventory constructs and correlates across
scoring approaches and response formats**

Supplemental material S1

Annotated Mplus syntax for exploratory structural equation model (ESEM) based on the Thurstonian item response model

TITLE: ESEM model 3 factors
NPI forced-choice items

DATA:
FILE IS npidata_fc.dat;

VARIABLE:
NAMES ARE fc01 fc02 fc03 fc04 fc05 fc06 fc07 fc08 fc09 fc10 fc11 fc12 fc13
fc14 fc15 fc16 fc17 fc18 fc19 fc20 fc21 fc22 fc23 fc24 fc25 fc26 fc27 fc28
fc29 fc30 fc31 fc32 fc33 fc34 fc35 fc36 fc37 fc38 fc39 fc40;

USEVARIABLES ARE ALL;
MISSING ARE ALL (9); !this is optional
CATEGORICAL ARE ALL;

ANALYSIS:
!unweighted least squares with mean- and variance-corrected
!Satorra–Bentler goodness-of-fit tests
ESTIMATOR=ULSMV;
!parameterization with unstandardized observed variables (“THETA”)
PARAMETERIZATION=THETA;

MODEL:
!ESEM with 3 factors (F1 to F3) for all forced-choice items (fc01 to fc40)
!(*1) denotes that F1 to F3 are a set of EFA factors
F1 - F3 BY fc01 - fc40 (*1);

!in order to make unstandardized factor loadings comparable across
!response formats, the residual variance of each item pair in the
!forced-choice format has to be fixed to 2 because $\text{var}(e_1e_2) = \text{var}(e_1) + \text{var}(e_2)$
fc01-fc40@2;

OUTPUT: stdy; !parameters standardized on observed variables (Y)

Supplemental material S2

Annotated Mplus syntax for Thurstonian item response model applied to the forced-choice NPI data

This model models the three NPI facets leadership, vanity, and entitlement. It assumes unidimensionality, i.e., each item measures one trait. Brown and Maydeu-Olivares (2012) describe in detail how to fit the Thurstonian item response model in Mplus. Tutorials and an Excel macro for constructing Mplus syntaxes for the Thurstonian item response model can be downloaded from <http://annabrown.name/software>.

TITLE: TIRT for NPI facets

!in this datafile all forced-choice items are recoded so 1 = narcissistic response option
!chosen and 0 = non-narcissistic response option chosen

DATA: FILE IS 'lve_fc_tirt.dat';

VARIABLE:

NAMES ARE fc01 fc02 fc03 fc04 fc05 fc06 fc07 fc08 fc09 fc10 fc11 fc12 fc13
fc14 fc15 fc16 fc17 fc18 fc19 fc20 fc21 fc22 fc23 fc24 fc25 fc26 fc27 fc28
fc29 fc30 fc31 fc32 fc33 fc34 fc35 fc36 fc37 fc38 fc39 fc40;

USEVARIABLES ARE

fc01 fc04 fc05 fc06 fc07 fc08 fc09 fc10 fc11 fc12 fc13 fc14
fc15 fc16 fc17 fc19 fc20 fc21 fc23 fc24 fc25 fc26 fc27 fc28
fc29 fc30 fc32 fc33 fc34 fc35 fc36 fc37 fc38 fc39 fc40;

MISSING ARE ALL (9); !this is optional

CATEGORICAL ARE ALL;

ANALYSIS:

ESTIMATOR = ULSMV;

PARAMETERIZATION = THETA;

MODEL:

!Leadership facet

Lead BY

fc01*1 fc05*1 fc08*1 fc10*1 fc11*1 fc12*1 fc13*1 fc16*1 fc17*1
fc21*1 fc23*1 fc27*1 fc32*1 fc33*1 fc34*1 fc35*1 fc36*1
fc39*1 fc40*1;

!Vanity facet

Van BY

fc04*1 fc07*1 fc09*1 fc15*1 fc19*1 fc20*1 fc26*1 fc28*1 fc29*1
fc30*1 fc37*1 fc38*1;

!Entitlement facet

Ent BY

fc06*1 fc14*1 fc24*1 fc25*1;

! variances for all traits are set to 1

Lead@1 Van@1 Ent@1;

! fix residual variances to 1 for all item pairs for identification

fc01@1 fc05@1 fc08@1 fc10@1 fc11@1 fc12@1 fc13@1 fc16@1
fc17@1 fc21@1 fc23@1 fc27@1 fc32@1 fc33@1 fc34@1
fc35@1 fc36@1 fc39@1 fc40@1 fc04@1 fc07@1 fc09@1 fc15@1
fc19@1 fc20@1 fc26@1 fc28@1 fc29@1 fc30@1 fc37@1 fc38@1
fc06@1 fc14@1 fc24@1 fc25@1;

SAVEDATA:

! trait scores (maximum a posteriori estimates) for individuals are estimated

!and saved in a file

FILE IS 'lve_fc_tirt_uni_map.dat';

SAVE = FSCORES;

OUTPUT:

standardized stdyx;

Supplemental Table S3

Fit Indices for Exploratory Structural Equation Models

Model	Fit indices					
	χ^2	df	CFI	TLI	RMSEA	90% CI
Forced-choice						
1 factor	15610.01	740	0.75	0.74	0.06	[.05, .06]
2 factors	9745.31	701	0.85	0.83	0.04	[.04, .05]
3 factors	6927.23	663	0.90	0.88	0.04	[.04, .04]
4 factors	5230.28	626	0.92	0.90	0.03	[.03, .03]
5 factors	3833.80	590	0.95	0.93	0.03	[.03, .03]
6 factors	3133.83	555	0.96	0.94	0.03	[.03, .03]
True/false						
1 factor	34986.41	3080	0.65	0.64	0.04	[.04, .04]
2 factors	25426.50	3001	0.75	0.74	0.04	[.04, .04]
3 factors	20728.98	2923	0.80	0.79	0.03	[.03, .03]
4 factors	17053.70	2846	0.84	0.83	0.03	[.03, .03]
5 factors	14300.81	2770	0.87	0.86	0.03	[.03, .03]
6 factors	11416.75	2695	0.90	0.89	0.02	[.02, .03]
Rating scale						
1 factor	83233.78	3080	0.56	0.55	0.07	[.07, .07]
2 factors	60627.15	3001	0.68	0.67	0.06	[.06, .06]
3 factors	50487.43	2923	0.74	0.72	0.06	[.06, .06]
4 factors	41612.50	2846	0.79	0.76	0.05	[.05, .05]
5 factors	34988.73	2770	0.82	0.80	0.05	[.05, .05]
6 factors	27414.07	2695	0.86	0.84	0.04	[.04, .04]

Note. CFI = comparative fit index, TLI = Tucker-Lewis index, RMSEA = root mean square error of approximation.

Supplemental Table S4

Comparison of Factor Structures Between Ackerman et al. (2015) and the Present Study

Nr.	Item content	Forced-choice	Ackerman True/false	Rating scale	Forced-choice	Present study True/false	Rating scale
1A	I have a natural talent for influencing people.	Leadership	Manipulat.	Manipulat.	Leadership	Leadership	Leadership
1B	I am not good at influencing people.		Superiority	Leadership		Leadership	Leadership
2A	Modesty doesn't become me.	-	-	-	-	-	-
2B	I am essentially a modest person.		Exhibition.	-		Entitlement	Vanity
3A	I would do almost anything on a dare.	-	-	-	-	-	-
3B	I tend to be a fairly cautious person.		-	-		-	-
4A	When people compliment me I sometimes get embarrassed.	Vanity	Superiority	-	Vanity	Vanity	Vanity
4B	I know that I am good because everybody keeps telling me so.		-	-		-	-
5A	The thought of ruling the world frightens the hell out of me.		Exhibition.	-	Leadership	Leadership	Leadership
5B	If I ruled the world it would be a much better place.	-	-	-		-	Leadership
6A	I can usually talk my way out of anything.	Exhibition.	Manipulat.	Manipulat.	Entitlement	Leadership	Leadership
6B	I try to accept the consequences of my behavior.		Exhibition.	-		Entitlement	Vanity
7A	I prefer to blend in with the crowd.	Exhibition.	Exhibition.	-	Vanity	-	Vanity
7B	I like to be the center of attention.		Exhibition.	Exhibition.		Vanity	Vanity
8A	I will be a success.	-	Leadership	Leadership	Leadership	Leadership	Leadership
8B	I am not too concerned about success.		-	-		-	-
9A	I am no better or worse than most people.	Vanity	-	-	Vanity	Entitlement	-
9B	I think I am a special person.		Leadership	-		Vanity	Entitlement
10A	I am not sure if I would make a good leader.	Leadership	Superiority	Leadership	Leadership	Leadership	Leadership
10B	I see myself as a good leader.		Leadership	Leadership		Leadership	Leadership
11A	I am assertive.	Leadership	Superiority	Leadership	Leadership	Leadership	Leadership
11B	I wish I were more assertive.		Superiority	Leadership		Leadership	Leadership

(continued)

Nr.	Item content	Ackerman		Present study			
		Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale
12A	I like having authority over people.	Exhibition.	Exhibition.	-	Leadership	Leadership	Leadership
12B	I don't mind following orders.		-	-		Entitlement	-
13A	I find it easy to manipulate people.	Exhibition.	Manipulat.	Manipulat.	Leadership	Entitlement	Leadership
13B	I don't like it when I find myself manipulating people.		Exhibition.	Manipulat.		Entitlement	-
14A	I insist upon getting the respect that is due me.	Exhibition.	-	-	Entitlement	-	-
14B	I usually get the respect that I deserve.		-	Leadership		Leadership	Leadership
15A	I don't particularly like to show off my body.	Vanity	Vanity	Vanity	Vanity	Vanity	Vanity
15B	I like to display my body.		Vanity	Vanity		Vanity	Vanity
16A	I can read people like a book.	Leadership	Manipulat.	Manipulat.	Leadership	Leadership	Leadership
16B	People are sometimes hard to understand.		-	-		-	-
17A	If I feel competent I am willing to take responsibility for making decisions.	Leadership	Leadership	Leadership	Leadership	Leadership	Leadership
17B	I like to take responsibility for making decisions.		Leadership	Leadership		Leadership	Leadership
18A	I just want to be reasonably happy.	-	-	-	-	-	-
18B	I want to amount to something in the eyes of the world.		Exhibition.	Superiority		-	-
19A	My body is nothing special.	Vanity	Vanity	Vanity	Vanity	Vanity	-
19B	I like to look at my body.		Vanity	Vanity		Vanity	Vanity
20A	I try not to be a show off.	Exhibition.	Exhibition.	Exhibition.	Vanity	Entitlement	Vanity
20B	I am apt to show off if I get the chance.		Exhibition.	Exhibition.		Vanity	Vanity
21A	I always know what I am doing.	Leadership	Leadership	-	Leadership	Leadership	Leadership
21B	Sometimes I am not sure of what I am doing.		Leadership	Leadership		Leadership	Leadership
22A	I sometimes depend on people to get things done.	-	Manipulat.	-	-	-	-
22B	I rarely depend on anyone else to get things done.		-	-		-	-
23A	Sometimes I tell good stories.	Leadership	-	-	Leadership	Leadership	-
23B	Everybody likes to hear my stories.		-	-		Leadership	Leadership

(continued)

Nr.	Item content	Ackerman			Present study		
		Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale
24A	I expect a great deal from other people.	-	-	-	Entitlement	-	-
24B	I like to do things for other people.	-	-	-	Entitlement	Entitlement	-
25A	I will never be satisfied until I get all that I deserve.	Exhibition.	Exhibition.	Manipulat.	Entitlement	Entitlement	Vanity
25B	I take my satisfactions as they come.	-	-	-	-	-	-
26A	Compliments embarrass me.	Vanity	Superiority	-	Vanity	Vanity	Vanity
26B	I like to be complimented.	-	Manipulat.	-	-	Vanity	Entitlement
27A	I have a strong will to power.	Leadership	Leadership	Leadership	Leadership	Leadership	Leadership
27B	Power for its own sake doesn't interest me.	-	Exhibition.	-	Leadership	Entitlement	Vanity
28A	I don't very much care about new fads and fashions.	Vanity	-	-	Vanity	Vanity	Vanity
28B	I like to start new fads and fashions.	-	-	-	-	Vanity	Vanity
29A	I like to look at myself in the mirror.	-	Vanity	Vanity	-	Vanity	Vanity
29B	I am not particularly interested in looking at myself in the mirror.	Vanity	Vanity	Vanity	Vanity	Vanity	Vanity
30A	I really like to be the center of attention.	-	Exhibition.	Exhibition.	-	Vanity	Vanity
30B	It makes me uncomfortable to be the center of attention.	Exhibition.	Exhibition.	Exhibition.	Vanity	Vanity	Vanity
31A	I can live my life in any way I want to.	-	-	-	-	-	-
31B	People can't always live their lives in terms of what they want.	-	-	-	-	-	-
32A	Being an authority doesn't mean that much to me.	Leadership	Exhibition.	-	Leadership	Leadership	-
32B	People always seem to recognize my authority.	-	Leadership	Leadership	Leadership	Leadership	Leadership
33A	I would prefer to be a leader.	-	Leadership	Leadership	-	Leadership	Leadership
33B	It makes little difference to me whether I am a leader or not.	Leadership	Exhibition.	Leadership	Leadership	Leadership	-
34A	I am going to be a great person.	Leadership	Leadership	Superiority	Leadership	Leadership	Entitlement
34B	I hope I am going to be successful.	-	-	Superiority	Leadership	-	Entitlement

(continued)

Nr.	Item content	Forced-choice	Ackerman	Rating	Forced-choice	Present study	Rating
			True/false	scale		True/false	scale
35A	People sometimes believe what I tell them.		-	-		-	-
35B	I can make anybody believe anything I want them to.	Leadership	Manipulat.	Manipulat.	Leadership	Leadership	Leadership
36A	I am a born leader.		Leadership	Leadership		Leadership	Leadership
36B	Leadership is a quality that takes a long time to develop.	Leadership			Leadership		
37A	I wish somebody would someday write my biography.	-	Exhibition.	-	Vanity	-	-
37B	I don't like people to pry into my life for any reason.		-	-		-	-
38A	I get upset when people don't notice how I look when I go out in public.		Exhibition.	Exhibition.	Vanity	Vanity	Vanity
38B	I don't mind blending into the crowd when I go out in public.	Exhibition.	Exhibition.	-		-	Vanity
39A	I am more capable than other people.		Leadership	-	Leadership	Leadership	Leadership
39B	There is a lot that I can learn from other people.	-	-	-		Entitlement	Entitlement
40A	I am much like everybody else.		-	-	Leadership	Entitlement	-
40B	I am an extraordinary person.	-	Leadership	Leadership		Leadership	Leadership

Note. Exhibition. = Exhibitionism, Manipulat. = Manipulativeness, - = loading below |.35| in Ackerman et al. and true/false and rating scale of present study. For force-choice in the present study “-“ indicates that the factor loading was below |.25|. For items with loadings above the cut-off for more than one factor, only the factor with the highest loading is noted. In Ackerman et al., 3 factors fit best for the forced-choice format and 5 factors fit best for the true/false and rating scale format.

Supplemental Table S5

Correlations Between Facets in Ackerman et al. (2015) and the Present Study

Forced-choice		Leadership	Present study	
			Vanity	Entitlement
Ackerman	Leadership	.95	.41	.19
	Vanity	.41	.90	.19
	Exhibition.	.46	.32	.73

True/false		Leadership	Present study	
			Vanity	Entitlement
Ackerman	Leadership	.84	.46	.22
	Vanity	.31	.77	.16
	Exhibition.	.65	.73	.50
	Superiority	.68	.47	.08
	Manipulat.	.58	.22	.34

Rating scale		Leadership	Present study	
			Vanity	Entitlement
Ackerman	Leadership	.90	.48	.17
	Vanity	.36	.79	.19
	Exhibition.	.44	.80	.36
	Superiority	.38	.37	.17
	Manipulat.	.71	.44	.49

Note. Correlations were computed with mean scores. Mean scores in the present study are based on item allocation according to the factor loadings for the forced-choice format for all response formats (see description in main article). Mean scores for Ackerman et al. (2015) are based on item allocation for each response format separately as shown in Table S4. $N = 6,690$ for forced-choice, $N = 5,510$ for true/false, and $N = 5,234$ for rating scale.

Supplemental Table S6

Unstandardized Factor Loadings from Exploratory Structural Equation Models of all NPI Items across Three Response Formats

Item	Item content	Factor loading								
		Leadership			Vanity			Entitlement		
		Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale
1A	I have a natural talent for influencing people.	0.92	0.98	0.95	0.00	-0.02	-0.04	-0.16	-0.14	-0.02
1B	I am not good at influencing people.		-0.83	-0.80		-0.01	-0.03		-0.02	0.04
2A	Modesty doesn't become me.	0.01	0.03	0.03	-0.22	0.12	-0.34	0.36	-0.24	-0.16
2B	I am essentially a modest person.		0.01	0.01		-0.22	0.52		0.53	0.29
3A	I would do almost anything on a dare.	0.20	0.20	0.22	-0.17	0.18	-0.29	0.21	-0.23	-0.05
3B	I tend to be a fairly cautious person.		-0.11	-0.13		-0.11	0.32		0.22	0.28
4A	When people compliment me I sometimes get embarrassed.	-0.28	-0.20	-0.26	0.60	-0.41	0.41	0.01	0.09	-0.07
4B	I know that I am good because everybody keeps telling me so.		0.25	0.25		0.26	-0.09		0.08	0.24
5A	The thought of ruling the world frightens the hell out of me.	-0.50	-0.48	-0.49	0.09	0.01	0.27	-0.11	0.45	0.14
5B	If I ruled the world it would be a much better place.		0.33	0.39		0.05	-0.08		-0.16	0.06
6A	I can usually talk my way out of anything.	0.31	0.54	0.57	-0.01	0.01	-0.15	0.44	-0.30	-0.09
6B	I try to accept the consequences of my behavior.		0.34	0.34		-0.11	0.51		0.75	0.37
7A	I prefer to blend in with the crowd.	-0.31	-0.19	-0.25	0.77	-0.36	0.42	-0.54	0.25	0.01
7B	I like to be the center of attention.		0.17	0.27		0.81	-0.86		-0.41	0.08
8A	I will be a success.	0.43	0.97	0.78	-0.28	0.46	0.01	0.01	0.43	0.61
8B	I am not too concerned about success.		-0.19	-0.20		-0.27	0.15		0.08	-0.27
9A	I am no better or worse than most people.	-0.30	-0.14	-0.10	0.42	-0.07	0.28	-0.03	0.43	0.18
9B	I think I am a special person.		0.45	0.46		0.52	-0.18		0.18	0.51

(continued)

Item	Item content	Factor loading								
		Leadership			Vanity			Entitlement		
		Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale
10A	I am not sure if I would make a good leader.	-1.38	-1.30	-1.06	0.01	0.15	-0.07	0.42	-0.02	0.07
10B	I see myself as a good leader.		1.67	1.23		-0.05	0.10		0.25	0.15
11A	I am assertive.	0.75	0.84	0.76	0.03	-0.01	-0.01	-0.12	0.05	-0.03
11B	I wish I were more assertive.		-0.58	-0.53		0.16	-0.01		0.07	0.30
12A	I like having authority over people.	0.70	0.55	0.57	0.00	0.14	-0.42	0.58	-0.47	-0.04
12B	I don't mind following orders.		-0.05	-0.07		0.03	0.32		0.49	0.26
13A	I find it easy to manipulate people.		0.51	0.47		-0.07	-0.29		-0.57	-0.24
13B	I don't like it when I find myself manipulating people.	0.50			0.04			0.49		
			-0.17	-0.18		-0.02	0.39		0.63	0.30
14A	I insist upon getting the respect that is due me.	-0.09	0.24	0.22	-0.13	0.29	-0.25	0.43	-0.17	0.21
14B	I usually get the respect that I deserve.		0.55	0.53		0.11	0.15		0.38	0.18
15A	I don't particularly like to show off my body.	0.08	0.07	0.03	0.80	-0.83	0.63	0.00	0.12	-0.21
15B	I like to display my body.		-0.12	-0.02		0.99	-0.73		-0.13	0.29
16A	I can read people like a book.	0.51	0.44	0.42	0.09	-0.09	0.07	-0.02	-0.14	0.04
16B	People are sometimes hard to understand.		-0.35	-0.30		0.10	0.06		0.12	0.18
17A	If I feel competent I am willing to take responsibility for making decisions.	-0.46	0.60	0.54	0.05	0.04	0.26	0.13	0.43	0.26
17B	I like to take responsibility for making decisions.		0.82	0.71		-0.01	0.25		0.25	0.22
18A	I just want to be reasonably happy.		-0.21	-0.12		-0.08	0.21		0.15	0.24
18B	I want to amount to something in the eyes of the world.	-0.23			0.21			-0.20		
			0.12	0.16		0.29	-0.17		-0.07	0.31
19A	My body is nothing special.	-0.01	-0.19	-0.20	1.10	-0.69	0.38	0.33	-0.05	-0.36
19B	I like to look at my body.		0.02	0.07		1.00	-0.58		0.01	0.53

(continued)

Item	Item content	Factor loading								
		Leadership			Vanity			Entitlement		
		Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale
20A	I try not to be a show off.		-0.01	0.00		-0.44	0.73		0.50	0.19
20B	I am apt to show off if I get the chance.	0.02	-0.02	0.05	0.53	0.65	-0.70	-0.50	-0.43	0.03
21A	I always know what I am doing.		0.51	0.51		-0.06	0.04		-0.09	-0.02
21B	Sometimes I am not sure of what I am doing.	0.57			0.03			-0.13		
22A	I sometimes depend on people to get things done.		-0.23	-0.17		0.19	-0.08		0.09	0.07
22B	I rarely depend on anyone else to get things done.	-0.32			-0.13			0.16		
23A	Sometimes I tell good stories.		0.37	0.36		0.17	-0.01		0.19	0.17
23B	Everybody likes to hear my stories.	-0.43	0.60	0.53	0.13	0.14	-0.09	0.01	0.01	0.11
24A	I expect a great deal from other people.		0.17	0.14		0.10	-0.15		-0.15	0.10
24B	I like to do things for other people.	0.07	0.22	0.15	0.04	0.13	0.36	0.42	0.65	0.34
25A	I will never be satisfied until I get all that I deserve.	0.16	0.11	0.14	-0.22	0.28	-0.40	0.55	-0.44	0.12
25B	I take my satisfactions as they come.		0.09	0.18		0.00	0.22		0.32	0.24
26A	Compliments embarrass me.		-0.18	-0.23		-0.50	0.41		0.00	-0.18
26B	I like to be complimented.	-0.06	-0.05	-0.04	0.75	0.67	-0.40	0.06	0.13	0.42
27A	I have a strong will to power.		0.69	0.67		0.10	-0.13		-0.27	0.07
27B	Power for its own sake doesn't interest me.	0.55	-0.17	-0.12	-0.19	-0.20	0.46	0.24	0.49	0.10
28A	I don't very much care about new fads and fashions.	0.00	0.13	0.10	0.61	-0.54	0.38	-0.12	0.04	-0.16
28B	I like to start new fads and fashions.		0.15	0.19		0.54	-0.45		-0.11	0.21
29A	I like to look at myself in the mirror.		-0.02	-0.01		1.08	-0.68		0.02	0.61
29B	I am not particularly interested in looking at myself in the mirror.	-0.18			-1.09			-0.04		
			0.10	0.05		-0.95	0.60		0.01	-0.44

(continued)

Item	Item content	Factor loading								
		Leadership			Vanity			Entitlement		
		Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale
30A	I really like to be the center of attention.		0.17	0.27		0.79	-0.88		-0.46	0.09
30B	It makes me uncomfortable to be the center of attention.	0.35			-0.71			0.47		
31A	I can live my life in any way I want to.		0.27	0.35		0.09	0.00		0.01	0.14
31B	People can't always live their lives in terms of what they want.	0.30			-0.16			-0.04		
32A	Being an authority doesn't mean that much to me.		-0.41	-0.37		-0.12	0.34		0.28	0.04
32B	People always seem to recognize my authority.	-0.88			-0.04			-0.12		
33A	I would prefer to be a leader.		0.99	0.88		0.08	-0.18		-0.22	0.12
33B	It makes little difference to me whether I am a leader or not.	0.82			-0.06			0.18		
34A	I am going to be a great person.		0.57	0.56		0.53	-0.03		0.28	0.67
34B	I hope I am going to be successful.	0.47			-0.24			-0.28		0.56
35A	People sometimes believe what I tell them.		0.10	0.26		0.02	0.04		0.07	0.15
35B	I can make anybody believe anything I want them to.	-0.49			0.00			-0.10		
36A	I am a born leader.		0.53	0.57		0.00	-0.20		-0.48	-0.08
36B	Leadership is a quality that takes a long time to develop.	1.08			0.07			-0.03		
37A	I wish somebody would someday write my biography.		1.35	1.17		-0.08	-0.03		-0.05	-0.01
37B	I don't like people to pry into my life for any reason.	0.14			-0.39			0.11		0.22
			0.02	0.00		-0.22	0.16		-0.19	0.02

(continued)

Item	Item content	Factor loading								
		Leadership			Vanity			Entitlement		
		Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale	Forced-choice	True/false	Rating scale
38A	I get upset when people don't notice how I look when I go out in public.	-0.19	-0.32	-0.21	-0.63	0.57	-0.65	0.59	-0.46	0.07
38B	I don't mind blending into the crowd when I go out in public.		0.01	-0.11		-0.31	0.50		0.36	0.08
39A	I am more capable than other people.		0.57	0.51		0.01	-0.08		-0.10	0.09
39B	There is a lot that I can learn from other people.	0.43			0.09			0.24		
40A	I am much like everybody else.		0.04	0.13		0.23	0.32		0.71	0.46
40B	I am an extraordinary person.	-0.41	-0.12	-0.14	0.30	-0.05	0.18	-0.03	0.39	0.03
			0.54	0.61		0.33	-0.13		0.07	0.42

Note. The unstandardized factor loadings are shown in this table because only they are directly comparable across the three response formats. In the forced-choice and rating scale format, the factor loadings reflect lack of vanity rather than vanity. In the true/false and rating scale formats the factor loadings reflect lack of entitlement rather than entitlement. Prior to the analyses, items were recoded to ensure that all items were coded in the same direction reflecting leadership, vanity, or entitlement, respectively.

Supplemental Table S7

Correlations between Narcissistic Personality Inventory Facets based on Ackerman et al.'s (2015) Factor Structure and Criteria

	Forced-choice			True/false					Rating scale				
	Lead	Van	Exh	Lead	Van	Exh	Sup	Man	Lead	Van	Exh	Sup	Man
Age	.02	-.12	-.17	-.01	-.13	-.19	.09	-.06	.04	-.11	-.09	-.31	-.15
Sex	.09	.02	.10	.11	-.01	.14	.05	.10	.13	.03	.09	.04	.15
SES	.14	.13	.04	.18	.11	.09	.16	.08	.18	.12	.11	.06	.09
Edu	.01	-.01	.00	.00	-.02	-.01	.01	.00	.00	-.01	-.01	-.06	-.03

Note. Lead = leadership, Van = vanity, Exh = exhibitionism, Sup = superiority, Man = manipulativeness, SES = socioeconomic status, Edu = education. Correlations are based on mean scores for Ackerman et al.'s (2015) facets. The coding for sex was 0 = women, 1 = men. Education level was assessed with a 9-point rating scale from *some high school* to *completed graduate/professional degree*. SES was assessed with a 10-point rating scale depicted as a ladder. $N = 6,690$ for forced-choice, $N = 5,510$ for true/false, and $N = 5,234$ for rating scale.

References

- Ackerman, R. A., Donnellan, M. B., Roberts, B. W., & Fraley, R. C. (2015). The effect of response format on the psychometric properties of the Narcissistic Personality Inventory: Consequences for item meaning and factor structure. *Assessment*. doi: 10.1177/1073191114568113
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