

Supplemental Materials

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Demographic Information

Study 1: 92 females, 40 males, and 1 person who reported “other”; Study 2: 103 females, 87 males; Study 3 = 98 females, 149 males, 1 person who omitted the question, and 2 people who reported “other”; Study 4 = 130 females, 70 males; Study 5 = 93 females, 65 males, and 2 who did not complete the question; Study 6 = 159 females, 69 males, 1 non-binary individual, 1 participant who wrote that they would “prefer not to say”, and 1 participant who did not answer the question) and age composition (Study 1: $M_{\text{age}} = 19.41$, $SD_{\text{age}} = 3.26$; Study 2: $M_{\text{age}} = 38.37$, $SD_{\text{age}} = 12.45$; Study 3: $M_{\text{age}} = 36.79$, $SD_{\text{age}} = 11.95$; Study 4: $M_{\text{age}} = 18.72$, $SD_{\text{age}} = 1.17$; Study 5: $M_{\text{age}} = 37.30$, $SD_{\text{age}} = 14.09$; Study 6: $M_{\text{age}} = 28.19$, $SD_{\text{age}} = 7.94$).

Complete Item Wordings

Attitudes Measures

Please rate _____ on the following scales (-4 to +4):

Bad-Good

Dislike-Like

Negative-Positive

Internal reliability: (Study 1: $\alpha = .97$; Study 2 + 3: $\alpha = .98$; Study 4: $\alpha = .98$; Study 6: $\alpha = .99$).

Moral Basis Measures

To what extent do you feel that your opinion about _____ is morally correct?

(1 = Not at all; 9 = Very much)

To what extent do you feel that your position about _____ is based on strong moral principles?

(1 = Not at all; 9 = Very much)

To what extent do you feel that your position on _____ is a moral stance?

(1 = Not at all; 9 = Very much)

(Study 5 and 6 only): How much are your feelings about _____ connected to your core moral beliefs or convictions?

(1 = Not at all; 9 = Very much)

Internal reliability: (Study 1: $\alpha = .94$; Study 2 + 3: $\alpha = .94$; Study 4: $\alpha = .94$; Study 5: $\alpha = .89$; Study 6: $\alpha = .91$)

Values Basis Measures

How frequently does the issue of _____ bring to mind important values?

(1 = Not at all; 9 = Very much)

To what degree is your view about _____ based on basic values?

(1 = Not at all; 9 = Very much)

To what degree is your view about _____ based on your core values?

(1 = Not at all; 9 = Very much)

Internal reliability: (Study 1: $\alpha = .83$; Study 2 + 3: $\alpha = .92$; Study 4: $\alpha = .89$; Study 5: $\alpha = .91$; Study 6: $\alpha = .89$)

Subjective Ambivalence Measures

How mixed are your thoughts and feelings about the _____?

(1 = I feel completely one-sided reactions; 9 = I feel completely mixed reactions)

How conflicted are your thoughts and feelings about the _____?

(1 = I feel no conflict at all; 9 = I feel maximum conflict)

How undecided are you about the _____?

(1 = I feel no indecision at all; 9 = I feel maximum indecision)

Internal reliability: (Study 1: $\alpha = .85$; Study 2 + 3: $\alpha = .92$; Study 4: $\alpha = .87$; Study 5: $\alpha = .93$; Study 6: $\alpha = .90$)

Attitude Correctness Measures

How certain are you that your attitude towards _____ is the correct attitude to have?

(1 = Not certain at all; 9 = Very certain)

To what extent do you think other people should have the same attitude as you on this issue?

(1 = Not at all; 9 = Very much)

How certain are you that of all the possible attitudes one might have towards _____, your attitude reflects the right way to think and feel about the issue?

(1 = Not certain at all; 9 = Very certain)

Internal reliability: (Study 1: $\alpha = .87$; Study 2 + 3: $\alpha = .88$; Study 4: $\alpha = .85$)

Attitude Clarity Measures

How certain are you that you know what your true attitude on _____ really is?

(1 = Not certain at all; 9 = Very certain)

How certain are you that the attitude you expressed toward _____ really reflects your true thoughts and feelings?

(1 = Not certain at all; 9 = Very certain)

To what extent is your true attitude toward _____ clear in your mind?

(1 = Not clear at all; 9 = Very clear)

How certain are you that the attitude you just expressed toward _____ is really the attitude you have?

(1 = Not certain at all; 9 = Very certain)

Internal reliability: (Study 1: $\alpha = .90$; Study 2 + 3: $\alpha = .94$; Study 4: $\alpha = .88$)

Attitude Certainty Measures

How sure are you about your opinion toward _____?

(1 = Not at all; 9 = Very much)

How confident are you that your opinion about _____ is correct?

(1 = Not at all; 9 = Very much)

How certain are you of your position on _____?

(1 – Very Uncertain; 9 – Very Certain)

Internal reliability: (Study 5: $\alpha = .79$; Study 6: $\alpha = .92$)

Subjective Attitude Relevant Knowledge

In thinking about what I know about the _____, I feel that

(1 = I know essentially everything about it; 9 = I know essentially nothing about it)

To what extent do you feel informed about _____?

(1 = Not at all informed; 9 = Very informed)

How much do you feel like you know about _____?

(1 = Nothing; 9 = A lot)

Internal reliability: (Study 4: $\alpha = .84$; Study 5: $\alpha = .85$; Study 6: $\alpha = .19$)

Issue Importance Measures

How personally important to you is your attitude about _____?

(1 = Not at all; 9 = Very much)

How concerned are you about _____?

(1 = Not at all; 9 = Very much)

How much do you care about _____?

(1 = Not at all; 9 = Very much)

Internal reliability: (Study 4: $\alpha = .80$; Study 5: $\alpha = .85$; Study 6: $\alpha = .91$)

Cognitive Meta-Basis Measure

To what extent do you think your attitudes toward _____ are driven by your beliefs?

(1 = Not at all; 9 = Very much)

Affective Meta-Basis Measure

To what extent do you think your attitudes toward _____ are driven by your emotions?

(1 = Not at all; 9 = Very much)

Attitude Extremity Measure

How strongly do you feel about _____?

(1 = Not at all; 5 = Very much)

Attitude Centrality Measures

How much is _____ related to how you see yourself as a person?

(1 = Not at all; 9 = Very much)

How much is _____ central to your identity?

(1 = Not at all; 9 = Very much)

Internal reliability: (Study 6: $\alpha = .94$)

Advocacy Measures

(1 = Not at all; 9 = Very much)

How much would you be willing to advocate for a policy that reflected your stance on _____?

How much would you be willing to sign a petition in favor of a policy enforcing your position on _____?

How much would you be willing to write to your senator endorsing a policy that reflected your stance on _____?

(In Study 1 only): I would be willing to wear a pin in support of my position on _____.

I would be willing to place a sign on my lawn in support of my position on _____.

I would be willing to wear clothing or apparel in support of my position on _____.

I would be willing to support a program that would try and change people's attitudes on _____ to be more like my own.

I would be willing to support teaching children about _____.

I would be willing to go to a demonstration regarding _____.

I would be willing to go door-to-door, canvassing, or cold calling strangers regarding _____.

I am likely to post about _____ on social media.

I am likely to share articles or other materials about _____ on social media.

I would be willing to vote regarding _____ or in support of a candidate that supports my position on this issue.

I would be willing to donate a portion of my time to support causes relating to my attitude on _____.

Liking of Agreeable/Disagreeable Other Measures

(1 = Not at all; 9 = Very much)

When I meet someone that agrees with my attitude on $\{q://QID7/ChoiceTextEntryValue\}$, I feel attracted to them romantically.

When I meet someone that agrees with my attitude on $\{q://QID7/ChoiceTextEntryValue\}$, I want them to be a part of my social circle.

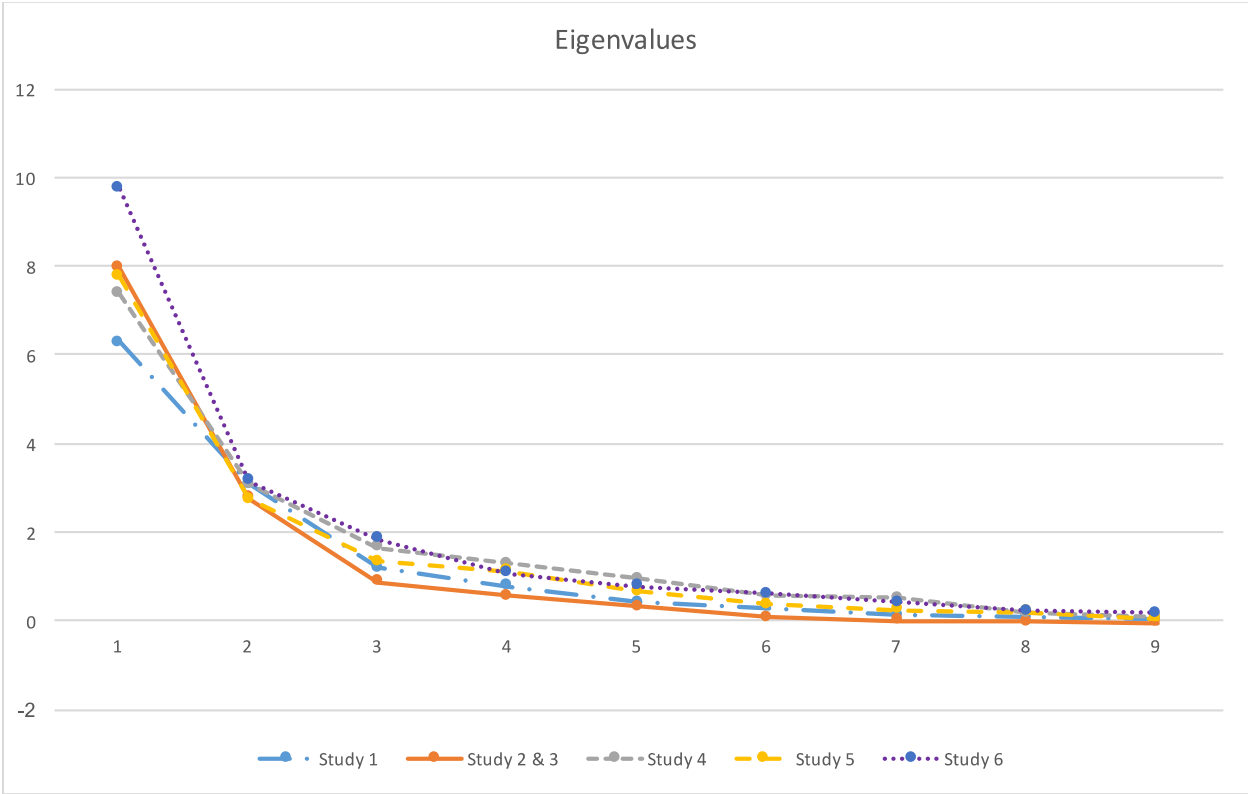
When I meet someone that agrees with my attitude on $\{q://QID7/ChoiceTextEntryValue\}$, I want to associate myself with them.

When I meet someone that agrees with my attitude on $\{q://QID7/ChoiceTextEntryValue\}$, I think positively of them.

Regression Outcomes

		<i>B</i>	<i>t</i>	df	<i>p</i>	95% CI
Study 3	Embeddedness	.26	4.21	222	< .001	[.14, .38]
	Consistency	.12	1.42	222	.16	[-.05, .29]
Study 4	Embeddedness	.07	1.25	197	.21	[-.04, .19]
	Consistency	.46	4.98	197	< .001	[.28, .64]

Scree Plot for Studies 1-6



EFA Factor Loadings for Studies 1 – 3 and 5 – 6

Study 1

	Factor Loadings	
	Factor 1	Factor 2
Moral Basis 1	.93	.08
Moral Basis 2	.93	.08
Moral Basis 3	.90	< .001
Values Basis 1	.52	.23
Values Basis 2	.61	.21
Values Basis 3	.64	.21
Subjective Ambivalence 1	.11	.70
Subjective Ambivalence 2	.07	.71
Subjective Ambivalence 3	.05	.71
Correctness 1	.18	.61
Correctness 2	.02	.57
Correctness 3	.15	.61
Clarity 1	.03	.89
Clarity 2	.03	.70
Clarity 3	.05	.89
Clarity 4	.03	.64

Table 1. Factor loadings for two-factor solution examining moral basis, values basis, subjective ambivalence, correctness, and clarity.

This two-factor model had moderately good fit, with an RMSEA of .20, 90% CI [.18, .21]. The two factors were also moderately correlated, $r = .24$.

Study 2 and 3

	Factor Loadings	
	Factor 1	Factor 2
Moral Basis 1	.94	.09
Moral Basis 2	.94	.12
Moral Basis 3	.93	.03
Values Basis 1	.70	.25
Values Basis 2	.65	.30
Values Basis 3	.67	.29
Subjective Ambivalence 1	.10	.68
Subjective Ambivalence 2	.10	.77
Subjective Ambivalence 3	.08	.70
Correctness 1	.11	.69
Correctness 2	.14	.52
Correctness 3	.06	.68
Clarity 1	< .001	.92
Clarity 2	.01	.87

Clarity 3	.01	.90
Clarity 4	.08	.80

Table 2. Factor loadings for two-factor solution examining moral basis, values basis, subjective ambivalence, correctness, and clarity.

This two-factor model had moderately good fit, with an RMSEA of .18, 90% CI [.17, .19]. The two factors were also moderately correlated, $r = .39$.

Study 2

	Factor Loadings	
	Factor 1	Factor 2
Moral Basis 1	.78	.11
Moral Basis 2	.66	.27
Moral Basis 3	.71	.27
Values Basis 1	.89	.07
Values Basis 2	.90	.15
Values Basis 3	.93	.02
Subjective Ambivalence 1	.12	.62
Subjective Ambivalence 2	.11	.78
Subjective Ambivalence 3	.08	.71
Correctness 1	.22	.55
Correctness 2	.18	.47
Correctness 3	.19	.61
Clarity 1	< .001	.95
Clarity 2	<.001	.87
Clarity 3	.02	.92
Clarity 4	.15	.72

This two-factor model had moderately good fit, with an RMSEA of .19, 90% CI [.18, .20]. The two factors were also moderately correlated, $r = .37$.

Study 3

	Factor Loadings	
	Factor 1	Factor 2
Moral Basis 1	.97	.08
Moral Basis 2	.96	.09
Moral Basis 3	.94	.05
Values Basis 1	.63	.34
Values Basis 2	.63	.30
Values Basis 3	.65	.33
Subjective Ambivalence 1	.06	.76
Subjective Ambivalence 2	.08	.75
Subjective Ambivalence 3	.03	.72
Correctness 1	.09	.76

Correctness 2	.15	.56
Correctness 3	.04	.72
Clarity 1	< .001	.89
Clarity 2	.01	.88
Clarity 3	<.001	.87
Clarity 4	<.001	.89

This two-factor model had moderately good fit, with an RMSEA of .18, 90% CI [.17, .19]. The two factors were also moderately correlated, $r = .38$.

Study 4

	Factor Loadings	
	Factor 1	Factor 2
Moral Basis 1	.90	.01
Moral Basis 2	.93	.05
Moral Basis 3	.93	.09
Values Basis 1	.51	.25
Values Basis 2	.60	.16
Values Basis 3	.62	.21
Importance 1	.05	.28
Importance 2	.21	.36
Importance 3	.32	.28
Subjective Ambivalence 1	.04	.67
Subjective Ambivalence 2	.01	.71
Subjective Ambivalence 3	.02	.66
Correctness 1	.15	.62
Correctness 2	.08	.53
Correctness 3	.13	.57
Clarity 1	.10	.76
Clarity 2	.06	.64
Clarity 3	.06	.87
Clarity 4	.06	.84
Knowledge 1	.07	.39
Knowledge 2	.01	.51
Knowledge 3	.02	.48

Table 3. Factor loadings for two-factor solution examining moral basis, values basis, subjective ambivalence, correctness, clarity, knowledge, importance.

This two-factor model had moderately good fit, with an RMSEA of .17 90% CI [.16, .18]. The factors were only loosely correlated, $r = .27$.

Study 5

	Factor Loadings	
	Factor 1	Factor 2
Moral Basis 1	.50	.17
Moral Basis 2	.81	.08
Moral Basis 3	.86	.07
Moral Basis 4	.87	.06
Values Basis 1	.87	.14
Values Basis 2	.77	.06
Values Basis 3	.78	.01
Importance 1	.58	.15
Importance 2	.52	.01
Importance 3	.66	.02
Affective Basis	.13	.04
Cognitive Basis	.70	.14
Subjective Ambivalence 1	.04	.86
Subjective Ambivalence 2	.04	.96
Subjective Ambivalence 3	.01	.91
Certainty 1	.21	.50
Certainty 2	.39	.49
Knowledge 1	.03	.60
Knowledge 2	.22	.26
Knowledge 3	.23	.28

Table 4. Factor loadings for a two-factor solution examining moral basis, values basis, importance, affective and cognitive meta-bases, subjective ambivalence, certainty, and knowledge.

The two-factor model had moderately good fit, with a root mean square error of approximation (RMSEA) of .17 90% CI [.15, .18]. The factors were only loosely correlated, $r = .34$.

Study 6

	Factor Loadings	
	Factor 1	Factor 2
Moral Basis 1	.52	.24
Moral Basis 2	.89	.01
Moral Basis 3	.95	.11
Moral Basis 4	.95	.12
Values Basis 1	.72	.04
Values Basis 2	.66	.16
Values Basis 3	.82	.04
Importance 1	.44	.42
Importance 2	.53	.26
Importance 3	.49	.29
Affective Basis	.39	.07

Cognitive Basis	.76	.03
Extremity	.48	.26
Centrality 1	.36	.17
Centrality 2	.30	.19
Subjective Ambivalence 1	.07	.69
Subjective Ambivalence 2	.10	.70
Subjective Ambivalence 3	.01	.66
Certainty 1	.02	.91
Certainty 2	< .001	.84
Certainty 3	.06	.85
Knowledge 1	.10	.11
Knowledge 2	.12	.49
Knowledge 3	.13	.50

Table 5. Factor loadings for two-factor solution examining moral basis, values basis, importance, affective and cognitive meta-bases, extremity, centrality, subjective ambivalence, certainty, and knowledge.

The two-factor model had moderately good fit, with a root mean square error of approximation (RMSEA) of .17 90% CI [.16, .18]. The factors were only loosely correlated, $r = |.41|$.

Advocacy Outcomes

Major Factors as Predictors of Advocacy

Study 3

RMSEA: .09

Tucker-Lewis Index: .94

Study 4

RMSEA: .07

Tucker-Lewis Index: .93

Study 5

RMSEA: .07

Tucker-Lewis Index: .93

Study 6

RMSEA: .07

Tucker-Lewis Index: .92

Minor Factors as Predictors of Advocacy

		RMSEA	Tucker-Lewis
Study 3	Embeddedness	.09	.96
	Correctness		
	Embeddedness	.10	.95
	Clarity		
	Embeddedness	.13	.93
	Ambivalence		
	Consistency	.09	.95
	Moral Basis		
	Consistency	.08	.95

Values Basis			
Study 4	Embeddedness	.07	.96
	Correctness		
	Embeddedness	.06	.96
	Clarity		
	Embeddedness	.07	.96
	Ambivalence		
	Embeddedness	.07	.95
	Knowledge		
	Consistency	.07	.93
	Importance		
	Consistency	.07	.95
	Moral Basis		
	Consistency	.06	.96
	Values Basis		
Study 5	Embeddedness	.09	.92
	Certainty		
	Embeddedness	.05	.97
	Ambivalence		
	Embeddedness	.06	.96
	Knowledge		
	Consistency	.08	.94
	Importance		

	Consistency	.09	.93
	Moral Basis		
	Consistency	.07	.96
	Values Basis		
	Consistency	.08	.95
	Affective Meta-basis		
	Consistency	.09	.94
	Cognitive Meta-basis		
Study 6	Embeddedness	.09	.92
	Certainty		
	Embeddedness	.07	.94
	Ambivalence		
	Embeddedness	.08	.93
	Knowledge		
	Consistency	.08	.94
	Importance		
	Consistency	.09	.94
	Moral Basis		
	Consistency	.07	.96
	Values Basis		
	Consistency	.08	.94
	Affective		

Meta-basis		
Consistency	.07	.96
Cognitive Meta-basis		
Consistency	.08	.95
Extremity		
Consistency	.07	.96
Centrality		

Summary of model fit indices from regression analyses predicting advocacy outcomes from each minor factor, controlling for the other major factor, across studies 3-6.

Goodness of Fit

Study 1

Factor Solution	χ^2 Difference
1	959.194
2	504.023
3	348.294
4	214.483
5	135.48

Factor Solution Difference	χ^2 Difference	df difference	<i>p</i>
1-2	455.171	15	< .001
2-3	155.729	14	< .001
3-4	133.811	13	< .001
4-5	79.003	12	< .001

Study 2 and 3

Factor Solution	χ^2 Difference
1	2938.58
2	1207.117
3	701.997
4	390.281
5	128.22

Factor Solution Difference	χ^2 Difference	df difference	<i>p</i>
1-2	1731.463	15	< .001
2-3	505.12	14	< .001
3-4	311.716	13	< .001
4-5	262.061	12	< .001

Study 4

Factor Solution	χ^2 Difference
1	1990.55
2	1234.16
3	930.83
4	669.26

5	482.28
6	285.227
7	128.687

Factor Solution Difference	χ^2 Difference	df difference	<i>p</i>
1-2	756.39	21	< .001
2-3	303.33	20	< .001
3-4	261.57	19	< .001
4-5	186.98	18	< .001
5-6	197.053	17	< .001
6-7	156.54	16	< .001

Study 5

Factor Solution	χ^2 Difference
1	1349.875
2	800.722
3	610.849
4	379.689
5	189.448
6	122.37
7	78.92
8	55.11

Factor Solution Difference	χ^2 Difference	df difference	<i>p</i>
1-2	549.153	19	< .001
2-3	189.873	18	< .001
3-4	231.16	17	< .001
4-5	190.241	16	< .001
5-6	67.078	15	< .001
6-7	43.45	14	< .001
7-8	23.81	13	.03

Study 6

Factor Solution	χ^2 Difference
1	2615.575
2	1752.015
3	1165.262
4	881.53
5	678.578

6	395.43
7	238.38
8	166.44
9	128.396
10	99.676

Factor Solution Difference	χ^2 Difference	df difference	<i>p</i>
1-2	863.56	23	< .001
2-3	586.753	22	< .001
3-4	283.732	21	< .001
4-5	202.952	20	< .001
5-6	283.148	19	< .001
6-7	157.05	18	< .001
7-8	71.94	17	< .001
8-9	38.044	16	.001
9-10	28.72	15	.02

CFA Factor Loadings for Studies 1-5

Study 1

Optimization method	NLMINB
Number of free parameters	51
Number of observations	121
Estimator	ML
Model Fit Test Statistic	130.214
Degrees of freedom	85
P-value (Chi-square)	0.001

Model test baseline model:

Minimum Function Test Statistic	1649.791
Degrees of freedom	120
P-value	0.000

User model versus baseline model:

Comparative Fit Index (CFI)	0.970
Tucker-Lewis Index (TLI)	0.958

Loglikelihood and Information Criteria:

Loglikelihood user model (H0)	-3584.248
Loglikelihood unrestricted model (H1)	-3519.141
Number of free parameters	51
Akaike (AIC)	7270.495
Bayesian (BIC)	7413.081
Sample-size adjusted Bayesian (BIC)	7251.836

Root Mean Square Error of Approximation:

RMSEA	0.066
90 Percent Confidence Interval	0.042 0.088
P-value RMSEA <= 0.05	0.122

Standardized Root Mean Square Residual:

SRMR	0.058
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Parameter Estimates:

Information	Expected
Information saturated (h1) model	Structured
Standard Errors	Standard

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
embed =~					

M1	1.000				1.000
M2	0.995	0.076	13.024	0.000	0.846
M3	1.164	0.103	11.344	0.000	0.963
V1	1.432	0.471	3.038	0.002	0.508
V2	1.444	0.459	3.144	0.002	0.544
V3	1.539	0.483	3.189	0.001	0.593
commit =~					
AS_SA1	1.000				1.000
AS_SA2	1.069	0.107	10.018	0.000	0.860
AS_SA3	1.128	0.148	7.621	0.000	0.838
AS_CL1	-1.231	0.196	-6.296	0.000	-1.614
AS_CL2	-0.723	0.147	-4.908	0.000	-1.012
AS_CL3	-1.408	0.208	-6.756	0.000	-1.816
AS_CL4	-0.672	0.142	-4.746	0.000	-0.950
AS_CO1	-0.791	0.138	-5.747	0.000	-1.061
AS_CO2	-0.769	0.146	-5.275	0.000	-1.055
AS_CO3	-0.808	0.144	-5.615	0.000	-1.091

ci.upper

1.000
1.145
1.365
2.356
2.344
2.485

1.000
1.278
1.418
-0.848
-0.434
-0.999
-0.394
-0.522
-0.483
-0.526

Covariances:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
.M1 ~~					
.M2	3.321	0.662	5.014	0.000	2.023
.M2 ~~					
.M3	2.733	0.691	3.956	0.000	1.379
.M1 ~~					
.M3	2.518	0.679	3.707	0.000	1.187
.V1 ~~					
.V2	-1.000	1.032	-0.969	0.333	-3.023
.V2 ~~					
.V3	-1.015	1.073	-0.946	0.344	-3.117
.V1 ~~					
.V3	-1.178	1.083	-1.087	0.277	-3.301
.AS_SA1 ~~					
.AS_SA2	2.329	0.495	4.700	0.000	1.358
.AS_SA2 ~~					
.AS_SA3	0.531	0.430	1.234	0.217	-0.312
.AS_SA1 ~~					
.AS_SA3	1.146	0.462	2.480	0.013	0.240

.AS_CL1 ~					
.AS_CL2	0.963	0.374	2.579	0.010	0.231
.AS_CL2 ~					
.AS_CL3	0.259	0.341	0.758	0.448	-0.410
.AS_CL1 ~					
.AS_CL3	0.463	0.438	1.058	0.290	-0.395
.AS_CL4	0.718	0.353	2.036	0.042	0.027
.AS_CL2 ~					
.AS_CL4	2.090	0.378	5.524	0.000	1.348
.AS_CL3 ~					
.AS_CL4	0.234	0.329	0.711	0.477	-0.411
.AS_CO1 ~					
.AS_CO2	1.482	0.354	4.184	0.000	0.788
.AS_CO2 ~					
.AS_CO3	1.353	0.368	3.680	0.000	0.632
.AS_CO1 ~					
.AS_CO3	2.356	0.384	6.138	0.000	1.604
embed ~					
commit	-0.760	0.347	-2.192	0.028	-1.439
ci.upper					

4.619

4.087

3.850

1.023

1.088

0.945

3.300

1.374

2.051

1.695

0.928

1.321

1.410

2.832

0.879

2.176

2.074

3.108

-0.080

Variances:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
.M1	3.833	0.675	5.679	0.000	2.510
.M2	4.280	0.712	6.012	0.000	2.884
.M3	3.311	0.773	4.285	0.000	1.796
.V1	1.618	1.143	1.415	0.157	-0.623
.V2	0.236	1.054	0.224	0.823	-1.829
.V3	-0.352	1.155	-0.305	0.761	-2.615
.AS_SA1	4.177	0.613	6.819	0.000	2.976
.AS_SA2	3.478	0.543	6.409	0.000	2.415
.AS_SA3	3.567	0.568	6.279	0.000	2.454
.AS_CL1	1.919	0.500	3.836	0.000	0.939
.AS_CL2	2.674	0.421	6.347	0.000	1.848
.AS_CL3	0.956	0.481	1.987	0.047	0.013
.AS_CL4	2.616	0.403	6.496	0.000	1.827
.AS_CO1	2.797	0.396	7.058	0.000	2.021
.AS_CO2	3.617	0.497	7.270	0.000	2.642
.AS_CO3	3.194	0.448	7.127	0.000	2.316
embed	1.699	0.690	2.463	0.014	0.347
commit	2.711	0.763	3.552	0.000	1.215
ci.upper					
	5.155				
	5.675				
	4.825				
	3.859				
	2.301				
	1.911				
	5.377				
	4.542				
	4.681				
	2.900				
	3.500				
	1.899				
	3.405				
	3.574				
	4.591				
	4.073				
	3.050				
	4.207				

Study 2 + 3

Optimization method	NLMINB
Number of free parameters	51
Number of observations	402
Estimator	ML
Model Fit Test Statistic	178.201
Degrees of freedom	85
P-value (Chi-square)	0.000

Model test baseline model:

Minimum Function Test Statistic	6337.156
Degrees of freedom	120
P-value	0.000

User model versus baseline model:

Comparative Fit Index (CFI)	0.985
Tucker-Lewis Index (TLI)	0.979

Loglikelihood and Information Criteria:

Loglikelihood user model (H0)	-9591.877
Loglikelihood unrestricted model (H1)	-9502.777
Number of free parameters	51
Akaike (AIC)	19285.754
Bayesian (BIC)	19489.573
Sample-size adjusted Bayesian (BIC)	19327.745

Root Mean Square Error of Approximation:

RMSEA		0.052
90 Percent Confidence Interval	0.041	0.063
P-value RMSEA <= 0.05		0.353

Standardized Root Mean Square Residual:

SRMR	0.037
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Parameter Estimates:

Information	Expected
Information saturated (h1) model	Structured
Standard Errors	Standard

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
embed =~					
M1	1.000				1.000
M2	1.035	0.037	27.809	0.000	0.962
M3	1.040	0.040	25.922	0.000	0.961
V1	1.408	0.145	9.691	0.000	1.123

V2	1.311	0.137	9.603	0.000	1.043
V3	1.351	0.140	9.666	0.000	1.077
commit =~					
AS_SA1	1.000				1.000
AS_SA2	1.170	0.057	20.641	0.000	1.059
AS_SA3	0.938	0.056	16.741	0.000	0.829
AS_CL1	-1.136	0.093	-12.178	0.000	-1.318
AS_CL2	-1.092	0.092	-11.843	0.000	-1.272
AS_CL3	-1.106	0.092	-11.961	0.000	-1.287
AS_CL4	-1.042	0.090	-11.551	0.000	-1.219
AS_CO1	-1.069	0.094	-11.387	0.000	-1.253
AS_CO2	-0.884	0.095	-9.346	0.000	-1.069
AS_CO3	-0.996	0.091	-10.955	0.000	-1.174

ci.upper

1.000
1.108
1.119
1.693
1.578
1.624

1.000
1.281
1.048
-0.953
-0.911
-0.925
-0.865
-0.885
-0.698
-0.818

Covariances:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
.M1 ~~					
.M2	2.706	0.263	10.274	0.000	2.190
.M2 ~~					
.M3	2.202	0.250	8.811	0.000	1.712
.M1 ~~					
.M3	2.045	0.236	8.648	0.000	1.581
.V1 ~~					
.V2	-1.052	0.298	-3.532	0.000	-1.636
.V2 ~~					
.V3	-0.807	0.290	-2.787	0.005	-1.375
.V1 ~~					
.V3	-1.127	0.305	-3.697	0.000	-1.725
.AS_SA1 ~~					
.AS_SA2	1.513	0.140	10.768	0.000	1.237
.AS_SA2 ~~					
.AS_SA3	0.983	0.113	8.688	0.000	0.761
.AS_SA1 ~~					
.AS_SA3	1.249	0.128	9.784	0.000	0.999
.AS_CL1 ~~					
.AS_CL2	0.068	0.061	1.109	0.267	-0.052
.AS_CL2 ~~					
.AS_CL3	0.074	0.062	1.191	0.233	-0.048

.AS_CL1 ~					
.AS_CL3	0.074	0.061	1.218	0.223	-0.045
.AS_CL4	0.032	0.060	0.523	0.601	-0.087
.AS_CL2 ~					
.AS_CL4	0.015	0.061	0.248	0.805	-0.105
.AS_CL3 ~					
.AS_CL4	0.088	0.062	1.406	0.160	-0.035
.AS_CO1 ~					
.AS_CO2	0.839	0.105	7.953	0.000	0.632
.AS_CO2 ~					
.AS_CO3	0.837	0.107	7.813	0.000	0.627
.AS_CO1 ~					
.AS_CO3	0.788	0.092	8.563	0.000	0.608
embed ~					
commit	-0.801	0.140	-5.734	0.000	-1.075

ci.upper

3.223

2.692

2.508

-0.468

-0.240

-0.530

1.788

1.204

1.499

0.188

0.195

0.194

0.150

0.135

0.210

1.045

1.047

0.969

-0.527

Variances:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
.M1	3.105	0.261	11.877	0.000	2.593

.M2	3.699	0.299	12.358	0.000	3.112
.M3	2.548	0.245	10.389	0.000	2.068
.V1	-0.435	0.331	-1.315	0.189	-1.084
.V2	-0.235	0.293	-0.800	0.424	-0.809
.V3	-0.358	0.307	-1.168	0.243	-0.959
.AS_SA1	2.342	0.175	13.355	0.000	1.998
.AS_SA2	1.786	0.143	12.518	0.000	1.506
.AS_SA3	1.702	0.130	13.143	0.000	1.449
.AS_CL1	0.316	0.068	4.668	0.000	0.183
.AS_CL2	0.460	0.073	6.267	0.000	0.316
.AS_CL3	0.409	0.071	5.748	0.000	0.270
.AS_CL4	0.563	0.076	7.372	0.000	0.414
.AS_CO1	1.285	0.106	12.124	0.000	1.077
.AS_CO2	2.196	0.163	13.494	0.000	1.877
.AS_CO3	1.394	0.111	12.603	0.000	1.177
embed	1.952	0.316	6.184	0.000	1.333
commit	1.220	0.198	6.154	0.000	0.832
ci.upper					
3.618					
4.286					
3.029					
0.214					
0.340					
0.243					
2.686					
2.066					
1.956					
0.448					
0.603					
0.549					
0.713					
1.492					
2.515					
1.610					
2.571					
1.609					

Study 4

Optimization method	NLMINB		
Number of free parameters	69		
	Used	Total	
Number of observations	199	201	
Estimator	ML		
Model Fit Test Statistic	312.908		
Degrees of freedom	184		
P-value (Chi-square)	0.000		

Model test baseline model:

Minimum Function Test Statistic	3299.579
Degrees of freedom	231
P-value	0.000

User model versus baseline model:

Comparative Fit Index (CFI)	0.958
Tucker-Lewis Index (TLI)	0.947

Loglikelihood and Information Criteria:

Loglikelihood user model (H0)	-7224.583
Loglikelihood unrestricted model (H1)	-7068.129
Number of free parameters	69
Akaike (AIC)	14587.165
Bayesian (BIC)	14814.403
Sample-size adjusted Bayesian (BIC)	14595.808

Root Mean Square Error of Approximation:

RMSEA		0.059
90 Percent Confidence Interval	0.048	0.070
P-value RMSEA <= 0.05		0.088

Standardized Root Mean Square Residual:

SRMR	0.085
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Parameter Estimates:

Information	Expected
Information saturated (h1) model	Structured
Standard Errors	Standard

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
embed =~					
M1	1.000				1.000
M2	0.990	0.062	16.011	0.000	0.869
M3	0.956	0.068	14.061	0.000	0.823
V1	0.709	0.113	6.282	0.000	0.488

V2	0.832	0.125	6.658	0.000	0.587
V3	0.887	0.129	6.904	0.000	0.635
AS_I1	0.183	0.101	1.808	0.071	-0.015
AS_I2	0.395	0.090	4.365	0.000	0.218
AS_I3	0.434	0.094	4.616	0.000	0.250
commit =~					
AS_SA1	1.000				1.000
AS_SA2	0.987	0.075	13.180	0.000	0.840
AS_SA3	0.699	0.067	10.435	0.000	0.568
AS_CL1	-0.595	0.084	-7.072	0.000	-0.760
AS_CL2	-0.494	0.086	-5.765	0.000	-0.662
AS_CL3	-0.603	0.078	-7.771	0.000	-0.755
AS_CL4	-0.528	0.071	-7.469	0.000	-0.666
AS_CO1	-0.977	0.121	-8.047	0.000	-1.215
AS_CO2	-1.004	0.149	-6.741	0.000	-1.296
AS_CO3	-0.915	0.125	-7.301	0.000	-1.161
AS_K1	-0.502	0.127	-3.965	0.000	-0.750
AS_K2	-0.594	0.106	-5.577	0.000	-0.803
AS_K3	-0.555	0.106	-5.243	0.000	-0.763
ci.upper					

1.000
1.112
1.090
0.930
1.077
1.139
0.380
0.572
0.618

1.000
1.134
0.830
-0.430
-0.326
-0.451
-0.389
-0.739
-0.712
-0.670
-0.254
-0.385
-0.348

Covariances:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
.M1 ~~					
.M2	1.914	0.423	4.528	0.000	1.086
.M2 ~~					
.M3	2.064	0.426	4.842	0.000	1.229
.M1 ~~					
.M3	1.398	0.385	3.634	0.000	0.644
.V1 ~~					
.V2	0.379	0.238	1.592	0.111	-0.088
.V2 ~~					
.V3	0.583	0.275	2.123	0.034	0.045

.V1 ~					
.V3	0.601	0.249	2.410	0.016	0.112
.AS_SA1 ~					
.AS_SA2	0.948	0.205	4.626	0.000	0.546
.AS_SA2 ~					
.AS_SA3	0.568	0.148	3.851	0.000	0.279
.AS_SA1 ~					
.AS_SA3	0.638	0.160	3.977	0.000	0.324
.AS_CL1 ~					
.AS_CL2	0.352	0.105	3.343	0.001	0.146
.AS_CL2 ~					
.AS_CL3	0.505	0.098	5.133	0.000	0.312
.AS_CL1 ~					
.AS_CL3	0.410	0.089	4.578	0.000	0.234
.AS_CL4	0.385	0.083	4.630	0.000	0.222
.AS_CL2 ~					
.AS_CL4	0.520	0.093	5.577	0.000	0.337
.AS_CL3 ~					
.AS_CL4	0.491	0.080	6.165	0.000	0.335
.AS_CO1 ~					
.AS_CO2	0.935	0.238	3.933	0.000	0.469
.AS_CO2 ~					
.AS_CO3	0.900	0.255	3.526	0.000	0.400
.AS_CO1 ~					
.AS_CO3	1.132	0.209	5.430	0.000	0.724
.AS_I1 ~					
.AS_I2	1.934	0.302	6.402	0.000	1.342
.AS_I2 ~					
.AS_I3	2.162	0.285	7.577	0.000	1.603
.AS_I1 ~					
.AS_I3	1.727	0.303	5.696	0.000	1.133
.AS_K1 ~					
.AS_K2	1.605	0.260	6.179	0.000	1.096
.AS_K2 ~					
.AS_K3	1.827	0.230	7.945	0.000	1.377
.AS_K1 ~					
.AS_K3	1.648	0.263	6.264	0.000	1.132
embed ~					
commit	-1.032	0.244	-4.230	0.000	-1.510

2.742

2.900

2.153

0.845

1.122

1.089

1.349

0.857

0.953
 0.559
 0.698
 0.585
 0.548
 0.703
 0.646
 1.401
 1.399
 1.541
 2.526
 2.721
 2.321
 2.114
 2.278
 2.163
 -0.554

Variances:

	Estimate	Std.Err	z-value	P(> z)	ci.lower
.M1	2.188	0.416	5.263	0.000	1.373
.M2	3.203	0.494	6.490	0.000	2.236
.M3	2.557	0.424	6.027	0.000	1.726
.V1	1.494	0.258	5.802	0.000	0.989
.V2	1.371	0.296	4.627	0.000	0.790
.V3	1.113	0.301	3.694	0.000	0.523
.AS_I1	4.406	0.444	9.923	0.000	3.535
.AS_I2	3.103	0.322	9.633	0.000	2.472
.AS_I3	3.282	0.342	9.585	0.000	2.611
.AS_SA1	1.908	0.260	7.339	0.000	1.399
.AS_SA2	1.494	0.218	6.868	0.000	1.068
.AS_SA3	1.145	0.148	7.737	0.000	0.855
.AS_CL1	1.048	0.126	8.327	0.000	0.801
.AS_CL2	1.397	0.154	9.067	0.000	1.095
.AS_CL3	0.736	0.096	7.702	0.000	0.549
.AS_CL4	0.667	0.083	7.999	0.000	0.503
.AS_CO1	1.554	0.217	7.153	0.000	1.128
.AS_CO2	3.423	0.406	8.439	0.000	2.628
.AS_CO3	2.113	0.265	7.990	0.000	1.595
.AS_K1	3.972	0.409	9.699	0.000	3.169
.AS_K2	2.386	0.255	9.349	0.000	1.885
.AS_K3	2.461	0.261	9.440	0.000	1.950

embed	2.774	0.569	4.874	0.000	1.659
commit	1.798	0.364	4.940	0.000	1.084
ci.upper					
3.002					
4.170					
3.389					
1.999					
1.952					
1.704					
5.276					
3.735					
3.954					
2.418					
1.920					
1.435					
1.294					
1.700					
0.924					
0.830					
1.980					
4.218					
2.632					
4.774					
2.886					
2.972					
3.890					
2.511					

Study 5

Optimization method	NLMINB		
Number of free parameters	80		
	Used	Total	
Number of observations	160	161	
Number of missing patterns	1		
Estimator	ML		
Model Fit Test Statistic	279.090		
Degrees of freedom	150		
P-value (Chi-square)	0.000		

Model test baseline model:

Minimum Function Test Statistic	2604.046
Degrees of freedom	190
P-value	0.000

User model versus baseline model:

Comparative Fit Index (CFI)	0.947
Tucker-Lewis Index (TLI)	0.932

Loglikelihood and Information Criteria:

Loglikelihood user model (H0)	-5768.101
Loglikelihood unrestricted model (H1)	-5628.556
Number of free parameters	80
Akaike (AIC)	11696.201
Bayesian (BIC)	11942.215
Sample-size adjusted Bayesian (BIC)	11688.965

Root Mean Square Error of Approximation:

RMSEA		0.073
90 Percent Confidence Interval	0.060	0.087
P-value RMSEA <= 0.05		0.003

Standardized Root Mean Square Residual:

SRMR	0.097
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Parameter Estimates:

Standard Errors	Bootstrap
Number of requested bootstrap draws	50
Number of successful bootstrap draws	50

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	ci.lower	ci.upper
embed =~						
mora11	1.000				1.000	1.000
mora12	1.584	0.269	5.888	0.000	1.153	2.449
mora13	1.741	0.390	4.463	0.000	1.213	3.063

moral4	1.836	0.471	3.896	0.000	1.233	3.449
value1	1.895	0.550	3.443	0.001	1.211	3.881
value2	1.541	0.468	3.293	0.001	1.038	3.355
value3	1.670	0.527	3.168	0.002	1.064	3.687
important1	1.301	0.349	3.728	0.000	0.802	2.435
important2	1.099	0.381	2.883	0.004	0.538	2.010
important3	1.297	0.337	3.852	0.000	0.818	2.271
affect	0.292	0.249	1.172	0.241	-0.315	0.898
cognition	1.518	0.538	2.822	0.005	0.898	3.625
commit =~						
subamb1	1.000				1.000	1.000
subamb2	1.194	0.156	7.666	0.000	0.943	1.683
subamb3	1.134	0.137	8.308	0.000	0.883	1.524
certain1	-0.540	0.148	-3.650	0.000	-0.958	-0.202
certain2	-0.797	0.262	-3.048	0.002	-1.438	-0.333
know1	0.965	0.271	3.554	0.000	0.540	1.800
know2	-0.456	0.178	-2.560	0.010	-0.901	-0.113
know3	-0.476	0.166	-2.876	0.004	-0.937	-0.124

Covariances:

	Estimate	Std.Err	z-value	P(> z)	ci.lower	ci.upper
.moral1 ~~						
.moral2	1.423	0.549	2.593	0.010	0.288	3.004
.moral2 ~~						
.moral3	1.543	0.483	3.193	0.001	0.560	2.997
.moral1 ~~						
.moral3	1.085	0.481	2.257	0.024	0.200	2.434
.moral4	0.397	0.295	1.345	0.179	-0.180	1.125
.moral2 ~~						
.moral4	0.734	0.311	2.358	0.018	0.037	1.508
.moral3 ~~						
.moral4	0.913	0.315	2.898	0.004	0.313	1.814
.value1 ~~						
.value2	0.144	0.214	0.676	0.499	-0.388	0.639
.value2 ~~						
.value3	0.872	0.406	2.147	0.032	-0.035	1.737
.value1 ~~						
.value3	0.232	0.221	1.050	0.294	-0.270	0.738
.subamb1 ~~						
.subamb2	1.278	0.849	1.505	0.132	-1.211	2.632
.subamb2 ~~						
.subamb3	0.646	0.985	0.656	0.512	-2.847	2.219
.subamb1 ~~						
.subamb3	1.150	0.839	1.372	0.170	-1.114	2.412
.certain1 ~~						
.certain2	0.722	0.399	1.809	0.070	-0.110	1.625
.important1 ~~						
.important2	1.259	0.286	4.399	0.000	0.658	1.851
.important2 ~~						
.important3	1.949	0.433	4.506	0.000	0.987	2.844
.important1 ~~						
.important3	1.024	0.274	3.743	0.000	0.424	1.567
.know1 ~~						
.know2	-1.714	0.529	-3.240	0.001	-2.971	-0.801
.know2 ~~						
.know3	2.778	0.491	5.653	0.000	1.781	3.854
.know1 ~~						

.know3	-1.723	0.490	-3.519	0.000	-2.899	-0.940
embed ~						
commit	-0.585	0.319	-1.833	0.067	-1.370	0.066

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	ci.lower	ci.upper
.moral1	7.100	0.187	37.977	0.000	6.692	7.488
.moral2	6.969	0.182	38.357	0.000	6.600	7.343
.moral3	6.831	0.201	33.915	0.000	6.453	7.325
.moral4	6.819	0.211	32.275	0.000	6.380	7.267
.value1	6.469	0.195	33.161	0.000	6.080	6.878
.value2	7.019	0.171	41.024	0.000	6.706	7.458
.value3	7.013	0.176	39.836	0.000	6.725	7.439
.important1	6.975	0.184	37.967	0.000	6.481	7.437
.important2	6.556	0.167	39.191	0.000	6.164	6.924
.important3	7.069	0.166	42.617	0.000	6.741	7.482
.affect	5.594	0.183	30.518	0.000	5.300	6.017
.cognition	6.763	0.180	37.488	0.000	6.392	7.173
.subamb1	3.569	0.204	17.452	0.000	3.166	4.167
.subamb2	3.081	0.208	14.800	0.000	2.734	3.710
.subamb3	2.888	0.201	14.355	0.000	2.531	3.475
.certain1	7.912	0.111	71.585	0.000	7.620	8.129
.certain2	7.475	0.168	44.556	0.000	6.974	7.830
.know1	4.312	0.240	17.979	0.000	3.887	4.889
.know2	6.237	0.174	35.904	0.000	5.784	6.679
.know3	6.388	0.165	38.663	0.000	6.057	6.803
embed	0.000				0.000	0.000
commit	0.000				0.000	0.000

Variances:

	Estimate	Std.Err	z-value	P(> z)	ci.lower	ci.upper
.moral1	3.718	0.797	4.666	0.000	2.079	5.696
.moral2	2.260	0.600	3.768	0.000	0.984	4.056
.moral3	1.920	0.513	3.742	0.000	0.840	3.406
.moral4	1.747	0.313	5.586	0.000	1.067	2.527
.value1	1.150	0.313	3.678	0.000	0.546	1.878
.value2	1.434	0.380	3.778	0.000	0.607	2.228
.value3	1.599	0.414	3.863	0.000	0.645	2.355
.important1	2.591	0.438	5.910	0.000	1.601	3.358
.important2	3.879	0.623	6.227	0.000	2.414	5.061
.important3	2.367	0.413	5.734	0.000	1.461	3.435
.affect	5.830	0.566	10.293	0.000	4.545	6.637
.cognition	2.606	0.444	5.868	0.000	1.765	3.546
.subamb1	3.086	0.880	3.508	0.000	0.847	4.498
.subamb2	1.352	1.041	1.298	0.194	-2.313	3.264
.subamb3	1.225	0.963	1.272	0.203	-2.069	2.708
.certain1	1.250	0.318	3.936	0.000	0.572	1.949
.certain2	1.950	0.710	2.745	0.006	0.479	3.591
.know1	3.229	0.703	4.592	0.000	1.932	4.975
.know2	3.775	0.536	7.039	0.000	2.418	4.567
.know3	3.245	0.456	7.122	0.000	2.364	4.168
embed	1.009	0.406	2.488	0.013	0.279	2.210
commit		2.497	0.911	2.742	0.006	0.993

4.886

