Staking your worth on grades versus intelligence: Exploring intellectual competency as a contingency of self-worth

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- AND…

THIS COULD BE YOU!
Seeking structural equation modeling (AMOS) help!!
To understand self-esteem, we need to also focus on contingencies of self-esteem.

- Examples of contingencies of self-esteem:
  - power, religion, approval from others, competency, self-reliance, virtue, social identity, love from family and friends, appearance
Different people and different groups will rely on different contingencies.

What is an individual’s contingency of worth and is it being satisfied or not?
Measuring Contingencies of Worth
(Crocker, Luhtanen, Cooper, JPSP 2003)

- E.g., approval from others
  - It is important to me to be well thought of by others.

- power
  - Having power over others makes me feel good about myself.

- appearance, self-reliance, virtue, social identity, God’s love, love from friends and family
Contingencies of Worth: supporting evidence

Examples:
- Crocker, Karpinski, Quinn, & Chase, JPSP 2003
  - Academic contingency moderated self-esteem reactions to bad grades in one’s major
- Crocker, Sommers, & Luhtanen, PSPB 2002
  - Academic contingency moderated self-esteem & affective reactions to graduate school acceptances and rejections
  - Variability in self-esteem among contingent students predicted depression symptoms
Contingencies of Worth

Contingencies of worth determine what outcomes will affect us most.

Contingencies of worth are powerful motivators....

– may lead to hard work toward goals
– may lead to “escape” from persistent negative outcomes
Re-examining the academic contingency

Academic contingency

My opinion about myself isn't tied to how well I do in school.
Doing well in school gives me a sense of self-respect.
I feel better about myself when I know I'm doing well academically.
My self-esteem is influenced by my academic performance.
I feel bad about myself whenever my academic performance is lacking.
Yes, this all started as a sophomore methods project (hollaaaaaa to the undergrads)

Intellectual competency as a contingency of worth

- My self-worth is influenced by how smart I am.
- Intelligence has no bearing on my sense of self-esteem.
- Having knowledge I can teach gives my self-esteem a boost.
- I do not care if I am able to have an intellectual conversation.
- I feel good about myself when I am able to think through a problem and arrive at a clever conclusion.
- I have trouble respecting myself when I do something that is contrary to common sense.
- Proficiency in a particular subject or field gives my self-esteem a boost.
- It bothers me if I cannot intelligently argue a point.
- When I completely comprehend something I feel good about myself.
- My overall opinion of myself is not tied to how intelligent I am.
- Knowing that I am intelligent gives me a sense of self-respect.
- My self-respect goes down when I can't comprehending something important.
- I feel bad about myself when I don't understand something.
- It is important to me to be able to intellectually defend my beliefs.
Three Web Surveys

Data Set #1 Goals

- Is the intellectual contingency different from academic contingency?
- Does the intellectual contingency have sufficient internal consistency?
- Is the intellectual contingency sufficiently distinct from Perceptions of the “importance” of intelligence
  - Self-perceived intelligence
Data Set #1

Who filled out our survey?
- N = 605
- Mostly White, U.S. college students

- 480 women, 125 men
- Age $M = 24.22; \text{ Mode} = 18$
- USA = 517 (87%); Canada = 20 (3%); U.K. = 14 (2%)
- High school = 121 (20%); Some college = 371 (61%)
  College or advanced degree = 90 (15%)
- White = 494 (81%); Black/African-American = 34 (5%)
  Hispanic, Latino, Other
Data Set #1

Are the intellectual contingency & academic contingency items distinct?

Factor Analysis
- principle components, oblique (promax)
- four factor solution
Ac = academic contingency
Ic = intellectual contingency

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<thead>
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Intellectual contingency factors

Factor 1 (alpha = .82)
- I feel good about myself when I am able to think through a problem and arrive at a clever conclusion.
- When I completely comprehend something I feel good about myself.
- Having knowledge I can teach gives my self-esteem a boost.
- Knowing that I am intelligent gives me a sense of self-respect.
- It is important to me to be able to intellectually defend my beliefs.
- Proficiency in a particular subject or field gives my self-esteem a boost.

Factor 2 (alpha = .76)
- My self-respect goes down when I can't comprehend something important.
- I feel bad about myself when I don't understand something.
- My self-esteem suffers when I don't know something that I should.
- I have trouble respecting myself when I do something that is contrary to common sense.
- It bothers me if I cannot intelligently argue a point.
Are the 2 factors different?

- Factor 1 & 2  \( r = .39, p < .001 \)

- Academic competency as CSW
  - Factor 1  \( \beta = .36; p < .001 \)
  - Factor 2  \( \beta = .33; p < .001 \)

- Trait Self-Esteem (Rosenberg)
  - Factor 1  \( \beta = .19; p < .001 \)
  - Factor 2  \( \beta = -.58; p < .001 \)
Factors are different!

**INTELCSW-APPROACH**

**“Being Smart”**

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**INTELCSW-AVOID**

**“Not being dumb”**
Distinguishing from intellectual CSW from “importance”

How important is [being intelligent/your academic performance] to you? 1-7 Likert

Importance of intelligence [$R^2 = .30; p < .001$]
- intelCSW-approach  beta = .46; p < .001
- intelCSW-avoid  n.s.
- acadCSW  beta = .13; p < .01

Importance of academics [$R^2 = .33; p < .001$]
- intelCSW-approach  beta = .13; p < .01
- intelCSW-avoid  beta = -.23; p < .001
- acadCSW  beta = .57; p < .001
Distinguishing intellectual CSW from perceived intelligence

- Perceived intelligence ("IQ score if 100 is average")
  - $R^2 = .04; p < .001$
    - intelCSW-approach $\beta = .25; p < .001$
    - intelCSW-avoid n.s.
    - acadCSW $\beta = -.18; p < .01$
Intellectual CSW &
Trait Self-esteem (Rosenberg)

Trait self-esteem \([R^2 = .29; p < .001]\)
- intelCSW-approach \(\beta = .26; p < .001\)
- intelCSW-avoid \(\beta = -.54; p < .001\)
- acadCSW \(\beta = -.12; p < .05\)
Data Set #1 - Conclusions

- Intellectual CSW factored separately from academic CSW
  - 2 dimensions: intel CSW approach & avoid

- Intellectual CSW related to, but distinct from
  - trait SE
  - other CSWs
  - perceived IQ
  - importance of being intelligent.

- Intellectual CSW-Approach positively related to trait-self-esteem
Data Set #2

Web Survey; N = 230
- Intellectual CSW-approach (alpha = .81)
- Intellectual CSW-avoid (alpha = .78)
- Academic CSW (alpha = .89)
- Trait self-esteem (Rosenberg)
- Need for cognition (NCog; alpha = .87)
  - 18 items; 1-7 Likert scale
  - Learning new ways to think doesn’t excite me very much.
  - The notion of thinking abstractly is appealing to me.
Data Set #2

- Enjoyment of reading, puzzles/crosswords, studying, being in class (single items)

Harackiewicz & Elliot, 1993
- These next few questions address how you feel in a class environment.... 1-7 Likert scales
- Mastery goals – 6 items (alpha = .89)
  - I hope to have gained a broader and deeper knowledge of the material when I am done with a class.
- Performance goals – 6 items (alpha = .89)
  - My goal in classes is to get a better grade than most of the students.
- Work avoidance goals – 6 items (alpha = .82)
  - I just want to avoid doing poorly in a class.
Central hypothesis:

- Academic CSW will predict performance and work avoidance goals
- Intellectual CSW will predict mastery goals

(Intell approach)
Data Set #2

Who filled out our survey?
- N = 230
- Mostly White, U.S. (college-aged) students

- 179 women, 51 men
- Age $M = 25.7$; Mode = 18
- USA = 170 (80%); Australia = 12 (5%); Canada = 8 (3%)
- Completed High school = 152 (77%); “Some college” = 30 (15%) – [glitch: 14% of responses missing]
- White = 164 (71%); Black/African-American = 10 (4.3%)
  Hispanic/Latino = 19 (8.3%), Asian = 14 (6.1%), other
## Data Set #2

<table>
<thead>
<tr>
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<th>IC App</th>
<th>IC Avoid</th>
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<td>1. intellCSW-approach</td>
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<td>3. acadCSW</td>
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* p < .001
Need for Cognition

\[ R^2 = .18, \ p < .001 \]

- intelCSW-approach \hspace{2cm} \text{beta} = .45; \ p < .001
- intelCSW-avoid \hspace{2cm} \text{beta} = -.26; \ p < .01
- acadCSW \hspace{2cm} \text{n.s.}
Trait self-esteem

\[ R^2 = .36 ; p < .001 \]

- intellCSW-approach  beta = .38; p < .001
- intellCSW-avoid    beta = -.59; p < .001
- acadCSW            beta = -.14; p = .06
Enjoyment of...

- **Reading** $[R^2 = .029; p = .09]$
  - intellCSW-approach \( \beta = .19; p < .05 \)
  - intellCSW-avoid n.s.
  - acadCSW n.s.

- **Attending classes** $[R^2 = .10; p < .001]$
  - intellCSW-approach n.s.
  - intellCSW-avoid \( \beta = -.32; p < .001 \)
  - acadCSW \( \beta = .27, p < .01 \)
Enjoyment of…

- **Studying** \( R^2 = .07; p < .01 \)
  - intellCSW-approach \( \beta = .18; p < .05 \)
  - intellCSW-avoid \( \beta = -.26; p < .001 \)
  - acadCSW \( \text{n.s.} \)

- **Crossword/logic puzzles** \( R^2 = .04; p < .05 \)
  - intellCSW-approach \( \beta = .19; p < .05 \)
  - intellCSW-avoid \( \text{n.s.} \)
  - acadCSW \( \text{n.s.} \)
## Classroom Goal Orientations

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<td>4. Work avoidance</td>
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Controlling for acadCSW and intellCSW-avoid

*p < .05; **p < .001
# Classroom Goal Orientations

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<td>3. Performance</td>
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<td>.43**</td>
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Controlling for intellCSW-approach and intellCSW-avoid

*p < .05; **p < .001
# Classroom Goal Orientations

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<td>3. Performance</td>
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<tr>
<td>4. Work avoidance</td>
<td>.21*</td>
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<td>.41**</td>
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</table>

*Controlling for intellCSW-approach and acadCSW*

*p< .01; **p < .001
Data Set #2 - Conclusions

- Intellectual approach CSW
  - NCog +
  - Reading +
  - Games/puzzles +
  - Studying +
  - Trait self-esteem +
  - Mastery goals +
Data Set #2 - Conclusions

- Academic contingency
  - Attending classes +
  - Trait self-esteem -
  - Performance & work avoidance goals +
Data Set #2 - Conclusions

- Intellectual avoidance CSW
  - NCog -
  - Classes -
  - Studying -
  - Mastery goals -
  - Trait self-esteem -
  - Work avoidance goals +
Data Set #3

Self-determination (Deci & Ryan)
- Aware of needs and free to choose behaviors
- Elliot & McGregor, 2001 JPSP
  - Positive predictor of approach (mastery) goals
  - Negative predictor of avoidance goals

Deci & Ryan’s “Self-Determination scale”
- 10 items, our alpha = .69
- A. I always feel like I choose the things I do.
  B. I sometimes feel that it's not really me choosing the things I do.
- Likert scale (1 – only A feels true; 5 – only B feels true)
BIS/BAS

- Behavioral Inhibition/Behavioral Activation
- BIS predicts general negative affect
  (Gable et al., 2000)
- BIS moderates negative affective reactions
- BAS predicts general positive affect
- Depressed Ss had higher BIS, lower BAS
  (Rottenberg, 2002)
BIS/BAS
Carver & White, JPSP 1994

18 items (13 BAS, 7 BIS), 1-4 Likert

- When I get something I want, I feel excited and energized. (BAS)
  - Our alpha = .81

- If I think something unpleasant is going to happen I usually get pretty "worked up." (BIS)
  - alpha = .81
Data Set #3

Who filled out our survey?

- N = 235; Mostly White, U.S. (& Canadian) college students

145 women, 61 men [29 missing]
Age $M = 24$; Mode = 18
USA = 172 (73%); Canada = 33 (14%)
Currently enrolled in college = 187 (80%)
White = 205 (87%); Black/African-American= 10 (4.3%), Asian = 7 (3%), other
## Data Set #3

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* * p < .001  
ic-approach alpha = .80  
ic-avoid alpha = .74  
acad alpha = .89
Self-determination

$R^2 = .08 ; p < .001$

- intellCSW-approach  $\beta = .27; p < .001$
- intellCSW-avoid     $\beta = -.22; p < .01$
- acadCSW             n.s.
BIS/BAS

**BAS** \[R^2 = .10 ; p < .001\]
- intellCSW-approach \(\beta = .32; p < .001\)
- intellCSW-avoid \(\beta = -.17; p < .05\)
- acadCSW \(\text{n.s.}\)

**BIS** \[R^2 = .25 ; p < .001\]
- intellCSW-approach \(\text{n.s.}\)
- intellCSW-avoid \(\beta = .18; p < .01\)
- acadCSW \(\beta = .42; p < .001\)
Data Set #3 Conclusions

- **Intellectual – approach contingency**
  - Self-determination +
  - BAS +

- **Intellectual – avoidance contingency**
  - Self-determination -
  - BAS - (weak)
  - BIS + (weak)

- **Academic contingency**
  - BIS +
General Discussion

- Support for existence of this intellectual contingency of worth
  - Especially impt. given growing use of academic contingency scale.
- Initial support for the potential “adaptiveness” of the approach version of the contingency
- Next step – a laboratory study
  - Preliminary data
    - Intellectual (but not academic) CSW relates to practicing for hard task & interest in task
General Discussion

Crocker, Quinn, Karpinski & Chase 2003
- Academic CSW predicted disidentification from one’s major after receiving bad grades
- Academic CSW did NOT moderate outcomes of good grades or identifying with major
- Does academic CSW lead to an “avoidance” sort of motivation?

Elliot & McGregor (2001)
- 2 X 2
- (mastery/performance X approach/avoid)