

Approaching Intelligence & Avoiding Stupidity: Self-Determination, BIS/BAS & Contingencies of Worth



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Abstract

Recent research has found that students with an academic contingency of worth are likely to adopt performance goals, students with an intellectual-approach contingency adopt mastery goals, and students with an intellectual-avoidance contingency adopt work-avoidance goals. We hypothesized that these achievement goal differences represent more general motivational orientations towards life. In support of our hypotheses, self-determination scores were positively associated with intellectual-approach and negatively correlated with intellectual-avoidance. There was no relationship with the academic contingency. In addition, a more active BAS was positively related to intellectual-approach, and negatively related to intellectual-avoidance. A more active BIS was related to intellectual-avoidance and academic contingencies.

Introduction

- Pursuing contingencies of self-worth is costly to one's well-being (Crocker & Park, 2004). Basing worth on externally judged contingencies such as appearance or academics can lead to negative outcomes such as depression, eating disorders, or academic disidentification (Crocker, 2002; Crocker et al. 2003, Crocker & Luhtanen, 2003).
- Self-determination theory makes the same argument: "The type of ego involvement in which one's 'worth' is on the line—in which one's self-esteem is contingent upon an outcome—is an example of internally controlling regulation that results from introjection" (Deci et al. 1994, p. 121). Autonomy is a basic need (Deci & Ryan, 1995). Indeed, feeling more autonomous improves daily well-being (Sheldon et al. 1996) and improves learning outcomes in academic domains (Ryan & Deci, 2000).

- Non-contingent worth, however, is arguably difficult to achieve (Crocker & Park, 2004). North American culture is saturated with explicit messages that high self-esteem is good, possibly priming frequent self-evaluation. If contingencies can be situationally primed, people in evaluation-laden atmospheres may find it difficult to avoid investing worth in relevant outcomes.
- Given the ubiquitous nature of evaluation in academics, it may be difficult to avoid investing self-esteem in academic outcomes to some extent.
- Our research compares Crocker's academic contingency to an intellectual contingency. The academic contingency focuses on grades; the intellectual contingency focuses on more internally judged general intellectual capability. The intellectual contingency has two subscales: intellectual growth (intel-approach) and minimizing evidence of unintelligence (intel-avoid; see Table 1).

- We suggest that the intel-approach contingency may be more adaptive compared to the other two contingencies because relevant behaviors are more volitional and because competence is judged by more internal standards.
- Supporting this conclusion, intel-approach was found to predict mastery goals, the academic and intel-avoidance contingencies predicted work-avoidance goals, and the academic contingency predicted performance oriented goals (Buck et al. 2004). Intel-approach was positively correlated and the intel-avoid and academic contingencies were negatively correlated with trait self-esteem. Also, a recent experiment found that an intellectual (but not academic) contingency relates to practicing for a hard task and interest in the task (Buck & Wolfe, 2006).

Hypothesis

- Our general hypothesis was that students with autonomous and approach orientations would base their worth more on the intellectual and focus toward gaining knowledge (intel-approach). Students with more avoidant, controlled orientations would focus their energy on minimizing appearance of unintelligence and bad grades (intel-avoid), and base their self-worth on more external sources (academic contingency).
- Specifically, we predicted that:
 - higher scores on the SD and BAS scales would correlate positively with intel-approach and negatively with intel-avoid and the academic contingency
 - higher scores on BIS would correlate positively with the intel-avoid and academic contingencies, but negatively with intel-approach

Method

• Participants

- Data was collected via a survey placed on the web and advertised via academic websites. As such, most of our 235 participants were students currently enrolled in college (80%).
 - 73% U.S.A; 14% Canada
 - 145 women, 61 men, and 29 no response
 - Modal age: 18 (M = 24)
 - 87% White; 4.3% Black; 3% Asian

• Procedure

- After reading an informed consent statement and clicking a button labeled "I agree; Begin survey," participants completed the questionnaires listed below. After completion, participants read a debriefing page and were given the researcher's email address.

Method- Measures

- Contingencies scales (Crocker et al., 2003 & Buck et al., 2007)
 - See Table 1
- Self-determination scale (Deci & Ryan)
 - 10 items, alpha = .71
- BIS/BAS scales (Carver & White, 1994)
 - BAS (13 items, alpha = .81)
 - Example: When I get something I want, I feel excited and energized.
 - BIS (7 items, alpha = .81)
 - Example: If I think something unpleasant is going to happen I usually get pretty "worked up."
- Demographics

Results

- See Table 2 for descriptive information. Because the contingencies were correlated with one another (Table 3), multiple regressions were utilized.
 - Outcome variable: **self-determination**
 - ✓ overall equation predicted 8.3% of variance; $F(2,233) = 6.92, p < .001$
 - intel-approach $\text{Beta} = .27; p < .001$
 - intel-avoid $\text{Beta} = -.22; p = .003$
 - academic n.s.
 - Outcome variable: **BAS**
 - ✓ overall equation predicted 9.5% of variance; $F(3,233) = 8.03, p < .001$
 - intel-approach $\text{Beta} = .32; p < .001$
 - intel-avoid $\text{Beta} = -.17; p = .02$
 - academic n.s.
 - Outcome variable: **BIS**
 - ✓ overall equation predicted 24.6% of variance; $F(3,233) = 25.04, p < .001$
 - intel-approach n.s.
 - intel-avoid $\text{Beta} = .18; p = .007$
 - academic $\text{Beta} = .42; p < .001$

Discussion

- As predicted:
 - the more strongly students endorsed an intellectual – approach contingency, the more likely they were to also score higher on the self-determination scale and the approach scale. (Intel-approach was not significantly related to BIS.)
 - the more strongly students endorsed an intellectual – avoidance contingency, the less likely they were to be self-determined or approach oriented, and the more likely they were to be avoidance oriented.
- The academic contingency was not related to either self-determination or BAS, but scores were positively correlated with BIS. The non-significant findings may be due to the fact that the academic contingency scale captures a mixture of both approach and avoidance orientations.

Limitations

- The most obvious limitations involve standard self-report measure concerns, generalizability to other ethnicities and age groups, and causality.
 - Logically one would predict that autonomy and BIS/BAS would causally shape contingencies of worth as more proximal goals. As self-determined and approach oriented students find self-worth becoming intertwined with academic endeavors, their initial autonomy and willingness to embrace challenges channels their contingency toward more “mastery oriented” outcomes (i.e., intellectual competency).
 - Students who feel less autonomous and/or are more likely to avoid challenge may learn that keeping their heads down and/or simply aiming for good grades is the best strategy to maintain their self-

Implications

- Provides initial support for the relative adaptiveness of an intellectual–approach contingency of worth.
- Highlights the potential importance of the approach/avoidance distinction for contingencies of worth. Perhaps basing worth on achieving positive academic outcomes (i.e., approach) rather than on avoiding negative academic outcomes would limit the damaging effects of an academic contingency. Generating this distinction in the contingencies literature would mirror work with both performance and mastery goals (Elliot & Church, 1997; Elliot & McGregor, 2001).
- Even those who self-report feeling autonomous still also seem to recognize the existence of a contingency of self-worth. One might interpret this finding as evidence for the situational nature and potency of contingencies of self-worth in North American culture.

Table 1

Example items and Cronbach's alpha for each contingency scale

Intel-Approach (6 items, alpha = .80)

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.

Knowing that I am intelligent gives me a sense of self-respect.

Intel-Avoid (5 items, alpha = .74)

My self-respect goes down when I can't comprehend something important.

I feel bad about myself when I don't understand something

It bothers me if I cannot intelligently argue a point.

Academic Contingency (5 items, alpha = .89)

How I perform academically is related to my sense of self-worth.

My self-esteem drops if I receive poor grades.

My self-esteem gets a boost when I get a good grade on an exam or paper.

Table 2

Means and Standard Deviations

	Mean	SD
Intel-approach	6.03	.73
Intel-avoid	4.64	1.12
Academic	5.20	1.02
self-determination	3.64	.57
BAS	3.10	.43
BIS	3.07	.62

Note. Higher numbers indicate higher endorsement of the contingency (1-7), levels of self-determination (1-5), and relative strength of the BAS/BIS systems (1-4).

Table 3

Bivariate Correlations

	intel-approach	intel-avoid	academic
intel-approach	---	.32*	.49*
intel-avoid		---	.52*
academic			---

* $p < .001$

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