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The visual-oral conditional reasoning test : predicting scholastic misconduct and deception

Philip Dwayne Green

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To the Graduate Council:

I am submitting herewith a dissertation written by Philip Dwayne Green entitled "The visual-oral conditional reasoning test : predicting scholastic misconduct and deception." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Lawrence R. James, Major Professor

We have read this dissertation and recommend its acceptance:

Alvin G. Burstein, Wesley Morgan, Deborah Baldwin

Accepted for the Council:

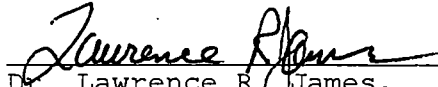
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)


To the Graduate Council:

I am submitting herewith a dissertation written by Philip Dwayne Green entitled "The Visual-Oral Conditional Reasoning Test: Predicting Scholastic Misconduct and Deception." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.



Dr. Lawrence R. James,
Major Professor

We have read this dissertation
and recommend its acceptance:



Dr. Alvin G. Burstein




Dr. Wesley Morgan



Dr. Deborah Baldwin

Accepted for the Council:



Associate Vice Chancellor
and Dean of The Graduate
School

THE VISUAL-ORAL CONDITIONAL REASONING TEST:
PREDICTING SCHOLASTIC MISCONDUCT AND DECEPTION

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Philip Dwayne Green

May 1999

DEDICATION

This work is dedicated to my parents

Mrs. Frances M. Green

and

in memory of

Mr. James R. Green

for providing me with unlimited opportunities
and resources to achieve my goals.

ACKNOWLEDGEMENTS

A large group of individuals are graciously thanked for helping me complete this dissertation. I am grateful to Dr. Larry James and the members of his lab for their work in developing the theory and measurement system for the Conditional Reasoning Test. Special thanks to Dr. Michael McIntyre for his constant encouragement, motivation and support. This project could not have been completed without his assistance in data collection and his enthusiastic help with revisions. Al Burstein, Wes Morgan, and Deborah Baldwin offered creative ideas and were always available for much needed advice. Larry Stiles, Dana Kelly, and Don Broach were extremely helpful with data collection and statistical analyses.

I would like to thank all of the members of my family for their help and sacrifice, especially my daughter Emily, who has certainly waited long enough to see me finish this task. Thanks to Chris Rose for numerous brainstorming sessions, even though he must have exhausted his interest in this dissertation long ago. Finally, I express my appreciation to Joan Miller for being my friend and my inspiration.

ABSTRACT

A student misconduct study and a deception experiment were conducted to establish the validity of the Visual-Oral Conditional Reasoning Test (VCRT). In the misconduct study, students' VCRT scores ($n = 225$) were compared to university records of scholastic misconduct. Results indicate that VCRT scores were significantly correlated with misconduct ($r = .55, p < .05$). In the deception experiment, students' VCRT scores ($n = 60$) were compared to whether or not they engaged in deceptive behavior to get a higher grade on an extra credit project. Results indicate that VCRT scores were significantly correlated with engaging in deceptive behavior ($r = .49, p < .05$). Implications for future research are discussed.

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CHAPTER 1

INTRODUCTION

Most working individuals can be relied upon to arrive at work on time, to be absent infrequently, to be considerate and friendly toward their coworkers, and to abide by the rules and regulations of the organization. These people tend to accept legitimate requests from authority and attempt to be productive in their work. These are individuals who, at least in work settings, can be described as prosocial (Wright & Mischel, 1987). In contrast to prosocial individuals, a small minority of working individuals are characterized by Hogan and Hogan (1989) as organizational delinquents. These are individuals who manifest aggressive and/or antisocial behaviors at work.

Behaviors which characterize most instances of organizational delinquency involve such things as habitual absenteeism and/or tardiness, malingering, and allowing a correctable problem to go unremedied. More serious behaviors include insubordination, triggering interpersonal

conflicts, intentional rule infractions, vandalism, and verbal aggression toward coworkers or customers (Averill, 1993; Borofsky, 1992; Greenberg, 1990; Lehman & Simpson, 1992; Martocchio & Judge, 1994; O'Leary-Kelly, Griffin, & Glew, 1996; Shepperd, 1993). At the most extreme end of the organizational delinquency continuum reside extremely destructive behaviors such as arson, attacks on coworkers or customers, espionage, criminal fraud, sabotage, and theft (cf. Buss, 1961; Buss & Perry, 1992; Gay, 1993).

Students in university settings also engage in behaviors that can be characterized as prosocial or delinquent. Prosocial students can be expected to attend classes regularly, to arrive on time, to turn in assignments on time, and to follow the rules and regulations of the university. These individuals are also likely to show respect for professors and instructors, and to be helpful and friendly to other students. While most students can be expected to behave prosocially, some manifest delinquent behaviors at school.

The most common forms of school delinquency include behaviors such as tardiness, absenteeism, and procrastination. More serious examples of organizational

delinquency in university settings include cheating, plagiarism, and forgery (Payne & Nantz, 1994). At the extreme end of the school delinquency continuum reside behaviors such as bomb threats, vandalism, arson, felonious assault, theft, and the possession of drugs and/or weapons (Brown, 1997).

The need for a measurement device that might predict these types of delinquent and destructive behaviors has lead to the development of modern day integrity tests. Paper and pencil integrity tests are perhaps the most popular screening devices used by organizations. It has been estimated that from 5,000 to 6,000 businesses give approximately 5 million integrity tests each year (Camara & Schneider, 1994; U.S. Congressional Office of Technology Assessment, 1990; Sackett & Harris, 1984). For organizations, the use of some sort of screening device is crucial given estimates of losses due to employee theft have been placed anywhere from \$15 to \$25 billion in 1987 (Shephard & Dunston, 1987) and from \$6 to \$200 billion in 1993 (Murphy, 1993). Coupled with the fact that organizations can be held liable for hiring dangerous workers (Jones & Terris, 1991), there is an increasing

motivation for organizations to identify problematic employees.

Integrity test questions are essentially self-descriptions of attitudes regarding theft and other delinquent behaviors. Test questions include, "Should a person be fired if caught stealing \$5?" and "What percentage of employee thieves are ever caught?" According to a meta-analysis by Ones et al. (1993) there is an average correlation of .41 between integrity test scores and supervisors' performance ratings. However, validities for behavioral criteria such as detected theft and termination due to theft tend to be a bit lower with correlations ranging from .2 to .3 (Sackett & Harris, 1989; Bernardin & Cooke, 1993). In fact, a review of six studies by Guastello and Rieke (1991) found that theft attitudes (as measured by integrity tests) accounted for less than 1% of the variance in detected theft.

The major problem with measurement systems based on this type of self-report is that subjects are able to distort their responses to make themselves look better (Hough et al., 1990; Zalinsky & Abrams, 1979). To solve this problem inherent in self-report tests, James (1998)

suggested an innovative measurement system designed to measure latent motives. This measurement system is based on the theory that underlying dispositions to rationalize and justify prosocial versus delinquent acts might be associated with framing and reasoning. For example, behaviors that are viewed by prosocial individuals as harmful (such as lying, stealing, and cheating) might be rationalized by delinquent individuals as acts of retribution and revenge for perceived mistreatment. In the next section, this theory is described in detail along with an explanation of a sample test item.

The Conditional Reasoning Measurement System

James (1998) described a new measurement technique designed to predict delinquent acts based on individuals' dispositions. This measurement system is based on the notion that people want to believe that their behavioral choices are justified, which is to say rational or sensible, as opposed to irrational or foolish. In their attempts to justify their behaviors, people rely on reasoning processes intended to enhance the logical appeal of their behavioral choices. These processes are referred

to as "justification mechanisms" (James, 1998). People engage in certain types of behaviors and develop justification mechanisms to support them, thus expressing underlying dispositions.

The following justification mechanisms were found in the literature and used to develop conditional reasoning test items: (a) the Hostile Attribution Bias, which is the tendency to see malevolent intent in the actions of others; (b) the Derogation of Target Bias, which consists of an implicit tendency to characterize the target of hostile behavior as deserving of attack because he/she/it is evil, immoral, untrustworthy, or exploitative; (c) the Implicit Harmful Intent Bias, which involves a tacit prejudice to favor vengeance, retribution, and retaliation over reconciliation, cooperation, or compromise; (d) the Victimization Bias, which is the tendency to frame oneself as a victim, exploited by powerful others; (e) the Potency Bias, which is a propensity to frame confrontations with peers and supervisors as contests to establish dominance versus submissiveness and as signs of strength that garner respect in the eyes of others; and (f) the Antisocial Reasoning Bias, which connotes lack of self-restraint due

to the endorsement of socially unorthodox and often corrupt implicit theories and beliefs (cf. Bandura, 1973; Baron & Richardson, 1994; Berkowitz, 1993; Gay, 1993; Huesmann, 1988; Laursen & Collins, 1994; Millon, 1990; O'Leary-Kelly et al., 1996; Wright & Mischel, 1987).

People with different dispositions enact different behaviors, and therefore develop different sets of justification mechanisms. The correlation of justification mechanisms with dispositions implies that dispositions are central, although implicit, elements in reasoning. This dependency or conditionality of justifications on underlying dispositions has been termed "conditional reasoning" (James, 1998). Simply stated, a person's judgment of whether a behavior is justified is conditional on the strength of his or her disposition to engage in that behavior.

Basically, conditional reasoning suggests that people who have broken rules, or intend to commit delinquent acts, are prone to reason in ways that justify their actions. Their actions are consistently supported by implicit justification mechanisms. Conversely, people who have not broken rules, and have neither a manifest nor a latent

intent to do so, are prone to reason in ways that dispute justifications for delinquent behavior. Prosocial individuals harbor no implicit bias to see malevolent intentions in the actions of others. They favor cooperation and harmony over vengeance and retribution.

Consider the following example of a conditional reasoning test item:

Scientific management analyzes each job and finds the most efficient and simple way to perform it. Time and motion studies are conducted to see how workers can assemble things with the least effort at the quickest rate.

What is the major weakness in this strategy?

- A. Jobs are designed so that while being more efficient they can also be somewhat boring to the worker.*
- B. Jobs are designed to take advantage of workers and make them work very hard for the whole day.*
- C. The average production worker is getting taller.*

Alternative B is based on the justification mechanism that employees are victimized by powerful others. This is indicative of a cognitive system that is inclined to make hostile attributions and reinforce the expression of retaliatory behavior. People who consistently select biased responses such as this one across a series of conditional reasoning problems are considered to have an underlying motive to retaliate. James (1998) suggested that the consistent use of this type of reasoning might precede and/or accompany acts of retribution or vengeance. These types of behaviors might be deemed justified by people who feel that they have been intentionally frustrated or treated unfairly in the past. In contrast, consistent selection of solutions such as alternative A indicates a cognitive system with no vested interest in justifying retaliation. People who consistently select responses such as alternative A are considered to have an underlying motive to cooperate, even if a task is viewed as boring.

Alternative C is an illogical alternative included to reinforce the view that the items are true reasoning problems. People do not express opinions or give self-

descriptions on conditional reasoning problems. Instead, they attempt to choose the most accurate conclusion based on the information given in the item stem. While empirical studies show that on average only 15% of respondents choose alternative B, respondents choosing this alternative believe it to be reasonable, accurate, and acceptable to all respondents.

The results of initial validation studies of the Conditional Reasoning Test of Aggression (CRT) have been extremely positive. In a field study involving 144 patrol officers (McIntyre, 1995), CRT scores showed significant correlations ranging from .36 to .55 with performance ratings. In a field study involving 100 nuclear power plant operators (Patton, 1998), CRT scores correlated significantly ($r = .38$) with total number of days missed from work over a 30-month period. In a field study involving 105 temporary workers (Miget et al., 1999), CRT scores correlated significantly ($r = .40$) with a composite variable that included failing to show up for an assignment and failing to finish an assignment. These results suggest that the CRT is effectively measuring individuals' dispositions to manifest various forms of aggression at

work, in the form of unreliable behaviors.

A New Format for the CRT

In its original format, the CRT is essentially a written 41-item multiple choice problem solving test. It requires respondents to read a paragraph of information and then select the most reasonable alternative from a set of four responses. The CRT requires that respondents be able to read, and can take as long as one hour to complete. Both of these factors could potentially limit the audience for the CRT.

To address these issues, a new format for the CRT has been developed. In this format, pictures are presented with each reasoning problem, and the problems are presented orally. Each solution is read aloud as the subjects visually follow the words. The number of words composing the item stems are reduced by an average of 50% from the original CRT. While the original CRT uses two illogical alternatives per item, only one illogical alternative is used in the new format.

In order to decrease the amount of time needed to administer the CRT, only fourteen items are used from the

original 41-item CRT. The entire test can be administered to a large group of subjects in approximately 15 minutes. This form of the CRT is referred to as the Visual-Oral Conditional Reasoning Test (VCRT). An example of a VCRT item and an accompanying photograph is presented in the Appendix.

The following sections describe initial attempts to validate the VCRT. Results are reported for two separate studies involving college students. In study 1, VCRT scores were compared to incidents of scholastic misconduct as defined by the university. In study 2, students were intentionally aggravated and then given the opportunity to lie about the number of points they deserved for participation in an extra credit project. In general, it was hypothesized that individuals with high VCRT scores would be more likely to engage in delinquent or destructive behaviors (i.e., scholastic misconduct and deception).

CHAPTER 2

MISCONDUCT STUDY

Students' VCRT scores and self-reported aggression scores were compared to university records of misconduct. It was hypothesized that students with high VCRT scores and high self-reported aggression scores would have a higher incidence of misconduct than students with low VCRT scores and low self-reported aggression scores.

Subjects and Instruments

The sample consisted of 225 upper-level undergraduate business administration students enrolled in a career planning course. One hundred-fourteen men and one hundred-eleven women with a mean age of 21.5 years were included. Ninety-two percent of the subjects were white.

The 14-item version of the VCRT was administered. A subject's VCRT score was computed by summing the total number of delinquent alternatives selected out of a possible 14. Also administered were the 8-item NEO-PI-R true/false Angry Hostility (e.g., It takes a lot to get me

mad) and Dutifulness (e.g., I sometimes cheat when I play solitaire) scales (Costa & McCrae, 1992).

Administration

The investigator narrated the VCRT and an overhead projector was used to show the accompanying pictures. Following the administration of the VCRT, the two scales from the NEO-PI-R were administered in the same manner. The VCRT was administered to the subjects at the end of a regular class session. The total presentation lasted approximately 15 minutes.

Reliability Analysis of the VCRT

The test-retest reliability of the VCRT was established in a previous study. A preliminary version of the VCRT (12 items) was administered two months after an administration of the written CRT to 276 subjects. Participants' responses to a single item were considered reliable if they chose the prosocial alternative in both administrations, or if they failed to choose the prosocial alternative both times. Percent agreement ranged from

64.6% to 94.6%, with a mean percent agreement of 81.4% across the 12 items.

Criterion

One measure of delinquent behavior in a university setting is the number of conduct violations a student receives. Conduct violations are recorded in university records. Although the university does not disclose the specific nature of a student's misconduct, in general, conduct violations include cheating, plagiarism, forgery, vandalism, physical violence, theft, possession of drugs, public drunkenness, bomb threats, failure to comply with university authorities, and the misuse of computer accounts. The criterion in this study was simply whether or not a student's record indicated a conduct violation. The misconduct criterion was a dichotomous variable coded 0 (for no conduct violation) and 1 (if one conduct violation was found).

Results

The average 14-item VCRT score for the sample of 225 was 2.42 (SD = 1.83). Men scored significantly higher with

an average score of 2.74 (SD = 1.96) compared to a score of 2.04 (SD = 1.55) for women ($t = 2.09, p < .05$).

The review of university records revealed that there were 6 males and 1 female with one conduct violation. To establish the relationship between the total VCRT score (summed across all 14 items) and the dichotomous misconduct variable, a point-biserial correlation was computed. This computation resulted in a correlation of .21 ($p < .05$). Item p values and correlations with misconduct are presented in Table 1.*

To better estimate the correlation between the VCRT and the misconduct criterion, a biserial correlation was computed. This computation yielded a correlation of .55 ($p < .05$). The biserial correlation was higher than the Pearson correlation because the distribution of the criterion was heavily skewed, with only 7 of 225 subjects having committed a conduct violation. This skewed distribution is consistent with the notion that delinquent behavior is not normally distributed in the general population. The average VCRT score for a student with a conduct violation was 4.57 (SD = 3.36) while the average

* All tables may be found in the Appendix.

score for the 218 subjects without a conduct violation was 2.35 (SD = 1.72).

The correlations between the self-report scales and misconduct are presented in Table 2. The Angry Hostility and Dutifulness scales had nonsignificant correlations of .10 and $-.07$ respectively with the criterion (corrected biserial correlations were .26 and $-.18$). In Table 3, a logistic regression (Agresti, 1989) and dominance analysis (Budescu, 1993) were performed to consider the combined effect of the predictor variables. Based on a multiple regression analysis performed on the corrected correlation matrix, the VCRT, Angry Hostility scale, and Dutifulness scale collectively accounted for 37.6% of the variance in the misconduct criterion. The VCRT had the highest proportional contribution to the prediction of misconduct at 77.57%.

CHAPTER 3

DECEPTION EXPERIMENT

In the deception experiment, students were initially aggravated during an extra credit project and then asked to report how much credit they deserved for their participation in the project. It was hypothesized that students with higher VCRT scores and higher self-reported aggression scores would over-report the amount of time spent on the project in order to receive more extra credit points than they deserved. Students with lower scores were expected to accurately report the amount of time spent on the project.

Subjects

The sample consisted of 62 college students, enrolled in an introductory psychology course. Twenty-five men and thirty-seven women with a mean age of 18.6 years were included. Information regarding race was not collected because so few minorities were present. Of these sixty-two individuals, two chose two or more illogical alternatives

on the VCRT, and were excluded from further analysis. Choosing illogical alternatives is considered indicative of a lack of attention, understanding or cooperation.

Procedure and Administration

This experiment was conducted as an extra credit project, outside of class. The VCRT was presented on videotape, and the presentation lasted approximately 15 minutes. Following the videotape, students were given Personality Research Form (PRF) booklets and asked to answer the 300 true/false questions (Jackson, 1974).

Manipulation

The aggravation manipulation involved the following three steps. First, students may have entered the project feeling frustrated by the university extra credit system. In the weeks preceding the project, students had attempted to sign up for extra credit projects and found that none were available. Students had complained that there were not enough opportunities to earn the maximum number of extra credit points. The second part of the manipulation occurred at the beginning of the experiment when students

were intentionally made to wait for any latecomers. The third part of the manipulation occurred near the end of the experiment, when an unexpected time limit was imposed on the students during a lengthy task (completing the 300-item PRF).

Subjects were allowed to come into the room at 1:00 p.m. At 5 minutes past the hour it was announced that we would wait 5 more minutes for any late comers. At 10 minutes past the hour, the VCRT was administered, which lasted approximately 15 minutes. Subjects began the 300 item PRF at approximately 1:30 p.m. Previous experience has shown that 20-25 minutes is sufficient time for subjects to complete the 300 item PRF. At 1:45, it was announced that the room was scheduled for another group at 2:00 p.m. Again, at 1:55 p.m., it was announced that there were 5 minutes left to finish. At 2:00 p.m. subjects were told that time had expired and asked to hand in all materials.

Criterion

The criterion in this experiment was whether or not students' reported more participation time than they deserved in order to receive a higher grade. Students involved in the study received extra credit for an introductory psychology class. This credit was assigned based on the self-reported time of participation. Five points were given for participation of one hour or less, and 10 points were given for participation of more than one hour. To receive credit, an extra credit form was filled out by the subjects and returned to their various instructors by the principal investigator of the project. The extra credit form included blanks for the amount of time spent (in hours and minutes) and for the principal investigator's signature to make the form official. To assure the students that their self-reported time would not be questioned, all extra credit forms were signed beforehand. A collection box was placed thirty feet away from the examiner, out of direct vision.

The self-reported time variable was artificially dichotomized based on whether or not the subjects indicated more than one hour on the extra credit form. Failure to

fill in the time or reporting less than one hour were both considered reliable behaviors.

Scoring Key Development

A scoring key was developed for the deception experiment based on results from the misconduct study. Nine items that had positive validity coefficients in the misconduct study (see Table 1) were used as an a priori scale in the deception experiment.

Results

The average VCRT score for the 9-item scale was 1.43 (SD = 1.32). While men had a higher average VCRT score (1.73, SD = 1.39) than women (1.32, SD = 1.28), the difference was not significant ($t = 1.12, p = .53$).

The distribution of the criterion variable is presented in Table 4. Seven males and two females (15%) indicated a time of more than one hour on the extra credit form. Reported times ranged from 30 minutes to 75 minutes while one third of the subjects failed to report the amount of time spent. A point-biserial correlation was computed between the continuous VCRT score and the dichotomous time

variable. This computation resulted in a correlation of .33 ($p < .05$). To better estimate the correlation between the VCRT and this deceptive behavior, a biserial correlation was also computed. This computation resulted in a correlation of .49 ($p < .05$). VCRT item p values and correlations with deception are presented in Table 6. Point-biserial correlations between PRF scales and the criterion are presented in Table 5. None of the PRF scales correlated significantly with the criterion.

To assess the relationship between the predictor variables, a logistic regression (Agresti, 1989) and dominance analysis (Budescu, 1993) are presented in Table 7. The results indicate that VCRT score, mental ability (ACT), PRF Aggression, PRF Dominance, and PRF Impulsivity collectively accounted for 30.3% of the variance in the deception criterion. The VCRT had a proportional contribution of 82.23% to the prediction of deception. PRF scales and ACT scores were not indicative of whether or not a person misrepresented the amount of time spent during the extra credit session.

CHAPTER 4

CONCLUSIONS

Conditional reasoning seems to be a valid approach to the identification and measurement of the justification mechanisms examined in these two studies. CRT items based on 6 different justification mechanisms were highly correlated with problematic behaviors such as misconduct and deception. The conditional reasoning measurement test appears to be a viable alternative to self-report tests that are easily faked.

Initial findings indicate that the visual-oral format of the CRT seems to be a viable alternative to the original written format. Even though each item had only 3 alternatives rather than 4, item p-values were similar to those found in previous studies. In these two studies, the measurement of delinquency via the VCRT appears to be a valid and reliable predictor of scholastic misconduct and deception. Self-reported indicators of aggression, dominance and impulsivity did not correlate highly or significantly with deceptive behavior.

Future Research

A gender difference in VCRT score was obtained in the misconduct study. Men had a higher mean score than women. This finding differs from prior research that suggests no gender differences in latent aggression (Miget et al, 1999). Further attention needs to be paid to gender differences in VCRT scores.

In light of the VCRT's success in an academic setting, it should be validated in other settings (e.g., business, domestic, and military) to predict behaviors such as theft, absenteeism, insubordination, interpersonal conflict, and physical abuse. The VCRT needs to be refined by eliminating items that have low correlations with behavioral criteria and adding new items that might predict problematic behaviors. Future research should also focus on the development of alternate forms of conditional reasoning tests. These formats might include structured interviews, sentence or story completion, or reading comprehension tests.

Conditional reasoning research should also attempt to measure personality constructs not yet addressed.

Conditional reasoning has unlimited potential in areas of assessment where traditional self-report and projective instruments have been used in the past. In particular, personality disorders might be measured more effectively with conditional reasoning techniques.

One limitation of this research is that the self-report items regarding aggression, impulsivity, and dutifulness are quite different in content than conditional reasoning test items. The performance of the CRT should be compared with self-report scales designed to measure hostile attributions, vengeance and retaliation. These types of scales might predict the delinquent behaviors examined in these studies.

The VCRT uses pictures that have both a negative and positive interpretation. For example, a revolver might be viewed as negative, while a bullseye in the background might be considered socially appropriate. Future research might test the effect of photographs both extremely negative and extremely positive in nature. The VCRT might also evolve to include video clips in addition to still photographs.

The question of intervention inevitably arises when

destructive behaviors such as misconduct and deception are examined. The extent to which behavioral patterns can be altered is open to debate. However, if framing and reasoning patterns change, a change in behavior is likely to follow. Future research in conditional reasoning should first focus on the extent to which people can be made aware of their framing and reasoning patterns (i.e., the justification mechanisms they are using), then proceed to teach prosocial reasoning with the hope of preventing future delinquent behavior.

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APPENDIX

Table 1

Item p Values and Correlations with Misconduct

Misconduct study

Item	p Value	Correlation
1.	.11	.10*
2.	.15	.07
3.	.18	.19*
4.	.10	.11*
5.	.07	.06
6.	.18	.18*
7.	.15	.14*
8.	.15	.00
9.	.15	.14*
10.	.12	.17*
11.	.18	.12*
12.	.34	-.02
13.	.38	-.09
14.	.17	-.01

n=225, *p<.10, one-tailed

Table 2

Intercorrelations Between Variables

Misconduct study

Variable	1	2	3	4	5
1. Misconduct	-				
2. VCRT	.21* (.55)	-			
3. NEO-PI-R Angry Hostility	.10 (.26)	.04	-		
4. NEO-PI-R Dutifulness	-.07 (-.18)	-.07	-.06	-	
5. ACT	.04 (.10)	.08	.08	-.08	-

n=225, *p<.05 (Note: Corrected biserial correlations are in parentheses)

Table 3

Logistic Regression and Dominance Analysis

Misconduct Study

A. Correlations Among Variables

Variable	1	2	3	4
1. Misconduct	-			
2. VCRT	.55*	-		
3. NEO-PI-R Angry Hostility	.26	.04	-	
4. NEO-PI-R Dutifulness	-.18	-.07	-.06	-

Note: Corrected biserial correlations in **bold**.

B. Logistic Regression Analysis Predicting Misconduct

Predictor	Odds Ratio
VCRT	1.43
NEO-PI-R Angry Hostility	1.23
NEO-PI-R Dutifulness	.78

C. Estimate of Importance Based on Dominance Analysis (Budescu, 1993)

R² from correlation matrix = .376*

Variable	Relative Contribution to Prediction
VCRT	77.57%
NEO-PI-R Angry Hostility	16.00%
NEO-PI-R Dutifulness	6.43%

n=223, *p<.05

Table 4

Frequency Distribution of Self-reported Time

Deception Experiment

Minutes Reported	<u>n</u>
No Response	19
30	1
50	1
55	1
60*	29
65	2
70	6
75	1

* Actual duration of extra credit session.

Table 5

Intercorrelations Between VariablesDeception Experiment

Variable	1	2	3
1. Deception	-		
2. VCRT	.33* (.49)	-	
3. ACT	.05 (.07)	-.10	-
4. PRF Achievement	.03 (.04)	-.03	.27
5. PRF Affiliation	.14 (.20)	.01	-.14
6. PRF Aggression	.11 (.16)	-.04	.05
7. PRF Autonomy	-.21 (-.31)	-.01	.06
8. PRF Dominance	.03 (.05)	-.10	.10
9. PRF Endurance	.17 (.25)	.10	.25
10. PRF Exhibition	-.07 (-.10)	-.07	.02
11. PRF Harm Avoidance	-.16 (-.22)	-.02	-.25
12. PRF Impulsivity	.09 (.13)	-.03	.01
13. PRF Nurturance	-.08 (-.11)	-.03	.08
14. PRF Order	-.06 (-.08)	-.08	-.03
15. PRF Play	.21 (.31)	-.21	.15
16. PRF Social Recognition	.04 (.06)	.07	.06
17. PRF Understanding	-.20 (-.29)	-.03	.34*
18. PRF Infrequency	-.08 (-.11)	-.03	-.22

n=60, *p<.05 (Note: Corrected biserial correlations are in parentheses)

Table 6

Item p Values and Correlations with Deception

Deception Experiment

Item	p Value	Correlation
1.	.10	.48*
2.	.05	.33*
3.	.28	.25*
4.	.23	.21*
5.	.25	.19*
6.	.18	.16
7.	.20	.14
8.	.40	.13
9.	.05	.12
10.	.58	.07
11.	.20	.02
12.	.45	-.01
13.	.12	-.01
14.	.02	-.06
15.	.14	-.06
16.	.20	-.09
17.	.05	-.10
18.	.48	-.13

n=60, *p<.10, one-tailed

Table 7

Logistic Regression and Dominance AnalysisDeception Experiment

A. Correlations Among Variables

Variable	1	2	3	4	5	6
1. Deception	-					
2. VCRT	.49*	-				
3. PFF Aggression	.16	-.04	-			
4. PRF Impulsivity	.14	-.03	.15	-		
5. PRF Dominance	.05	-.10	.43*	.40*	-	
6. ACT	.07	-.10	.05	.01	.10	-

Note: Corrected biserial correlations in **bold**.

B. Logistic Regression Analysis Predicting Deception

Predictor	Odds Ratio
VCRT	2.73
PRF Aggression	1.16
ACT	1.10
PRF Impulsivity	1.08
PRF Dominance	.98

C. Estimate of Importance Based on Dominance Analysis (Budesu, 1993)

R² from correlation matrix = .303*

Variables	Relative Contribution to Prediction
VCRT	82.23%
PRF Aggression	8.11%
PRF Impulsivity	6.05%
ACT	2.89%
PRF Dominance	0.72%

n=60, *p<.05

Appendix

Example VCRT Item



Angry people are more likely to attack other people if a weapon like a gun or a knife is easily reached.

This says that:

- A. If guns were kept in locked cabinets there would be fewer attacks.
- B. Children handle guns better than men.
- C. When really angry, most people will attack if a weapon is visible.

Note: The item stem is narrated (but not shown) with the accompanying photograph. Alternatives A, B, and C are narrated and presented visually.

VITA

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