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**ASSESSING AGGRESSION USING CONDITIONAL REASONING**

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### **Abstract**

In a time characterized by wars, students and employees being shot at their desks, and corporate executives raiding pension funds, aggression has taken on considerable prominence in our society. Aggressive people capture our interest because they are the ones who desire to harm others. Considerable progress has been made in recent years in understanding the aggressive personality. Psychology now has a much better idea of the defensive cognitive processes that aggressive people use to create a false sense of rationality for their aggressive acts. This knowledge of defensive processes was used to design a new measurement system to identify aggressive individuals. The new measurement system is based on a “cover” task in the form of an inductive reasoning problem. The use of reasoning to cover the measurement of aggression is made possible because aggressive people use the illusion of rational analyses to create defenses for their harming of others. The measurement system builds on this process by constructing answers to inductive reasoning problems that are grounded in the same defensive, self-illusionary thinking that aggressive people use to rationalize harming others. Aggressive people tend to be drawn to these answers (the answers in the previous sentence). This is because people who habitually engage in creating falsely rational defenses find reasoning based on the same types of protective thinking to be logically compelling.

**Key Words:** aggression, conditional reasoning, justification mechanisms



Gary Gilmore was executed in Utah in 1977 for the murder of a motel operator. Gilmore allegedly killed others in cold blood and had a long history of violent, antisocial behavior that often led him to be incarcerated in some of the country's more secure prisons. Gilmore's life was described in Norman Mailer's (1979) Pulitzer Prize-winning novel *The Executioner's Song*. Mailer captures at least some of the window through which Gilmore viewed his world and reasoned about his behavior. Gilmore was a functioning member of the criminal underclass in several states (e.g., Oregon, Utah), which appeared to have a strong influence on his framing and reasoning. For example, police were oppressors, not protectors, with intent only to harm people like him. He and his peers were continuously victimized and exploited by an unfair and unjust society. Interactions with others were about showing who was potent, strong, and dominant. Violence was often needed to gain respect and to maintain one's potency. To kill a member of the adversarial and oppressive ruling class was an act of retribution; one is exacting restitution for having been demeaned and disrespected over the course of one's life.

The senior author (James, 1998) proposed that unseen biases in what aggressive people like Gilmore take to be rational and sensible explanations for behavior could be used to assess their unconscious personalities. Conditional reasoning is the name given to this new system for assessing personality. This system is based on the principle that people with a strong desire to engage in a behavior will develop biased ways of reasoning that make the behavior seem rational and sensible as opposed to irrational and foolish. These reasoning biases are referred to as justification mechanisms, to indicate that they

serve to enhance the rational appeal of behaviors that express a desire. An example of a justification mechanism is the hostile attribution bias, which consists of a proclivity to sense hostile intent and perhaps even danger in the behavior of others (Crick & Dodge, 1994). This heightened sense of threat often triggers sensations of peril and alarm in aggressive people. What follows is a concern for self-protection, which enables an aggressive person to infer that acting aggressively is justified inasmuch as one is merely protecting oneself, not initiating a hostile action. A desire to harm others through aggressive behavior is thus made to seem rational via a bias (justification mechanism) to overestimate threat.

James (1998) designed a new form of inductive reasoning problem to measure individual differences in the use of justification mechanisms. The problem shown in Box 1 illustrates how we assess the propensity to engage in hostile attributions. This problem asks respondents to choose between an answer that is reasonable for a person with a hostile attribution bias, an answer that is reasonable for someone with a prosocial orientation, and two answers that are completely unreasonable. As explained in greater detail below, individuals operating under the hostile attribution bias typically choose Alternative b because that answer fits with the bias. Nonaggressive respondents, however, tend to find reasoning based on prosocial values (Alternative c) to be the most convincing. As we will show below, individuals with a tendency to endorse Alternative a also tend to demonstrate aggressive behavior outside the testing situation. This approach to assessment is referred to as the conditional reasoning approach because how a reasoning problem is solved is dependent on the personality (i.e., motives and protective biases) of the respondent (James, 1998).

**Box 1.****Conditional Reasoning Problem**

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A large number of business partnerships break up. One reason for the large number of breakups is that dissolving a partnership is quick and easy. If the partners can agree on how to split the assets of the partnership fairly, then they can break up simply by filling out the appropriate forms. They do not need to engage lawyers.

Which of the following is the most reasonable conclusion based on the above?

- a. The longer a partnership has existed, the less likely it is to break up.
  - b. If one's partner hires a lawyer, then he/she is not planning to play fair.
  - c. Partners might resolve their differences if breaking up was harder and took longer.
  - d. The younger partner is more likely to initiate the break up.
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**An Overview of Justification Mechanisms for Aggression**

Aggressive people are seldom aware of the full extent to which they possess a motive to harm others (Westen, 1998). Possession of such knowledge would likely trigger experiences of shame, guilt, and anxiety (Cramer, 2006). People are protected from these experiences by defense mechanisms, one of which is rationalization. Rationalization both masks the true motive and engenders its expression by creating the illusion that aggressive behavior is sensible and therefore justified. For example, aggressive people may rationalize harming others not only as acts of self-defense but also as acts that right injustices, demonstrate bravery, strike against oppression, or defy unfair rules (James et al., 2005).

We have identified six biases that serve as justification mechanisms enhancing the logical appeal of these illusory defenses for aggression. The justification mechanisms are defined in Table 1 (Frost, Ko, & James, 2007). Thumbnail sketches of how each of the justification mechanisms might enable a rationalization for aggression are included in the definitions.

The justification mechanisms were identified by James (1998) via searches of aggression literatures in psychology and other social sciences, augmented by searches of the popular press. The intent of these searches was to collect a set of the primary implicit biases that define, shape, and guide the myriad specific instances of framing and implicit hypothesizing that enable aggressive individuals to build rationalizations for their aggression. (See James & Mazerolle, 2002, Chapters 1, 3, and 4 for extensive treatments of justification mechanisms.)

Table 1

Biases Serving as Justification Mechanisms for Aggression

Bias	Description
Hostile attribution	A propensity to sense hostility and perhaps even danger in the behavior of others. The alarm and feelings of peril engendered by this heightened sensitivity to threat trigger a concern for self-protection. Apprehension about self-preservation enhances the rational appeal of self-defense, thus promoting the self-deceptive illusion that aggression is justified.
Potency	A proclivity to focus thoughts about social interactions on dominance versus submissiveness. The actions of others pass through a perceptual prism primed to distinguish strength, assertiveness,

	<p>dominance, daring, fearlessness, and power from weakness, impotence, submissiveness, timidity, compliance, and cowardice. Fixations on dominance versus submissiveness promote rationalizations that aggression is an act of strength or bravery that gains respect from others. Failing to act aggressively shows weakness.</p>
Retribution	<p>A predilection to determine that retaliation is more rational than reconciliation. This bias is often stimulated by perceptions of wounded pride, challenged self-esteem, or disrespect. Aggression in response to the humiliation and anger of being demeaned is rationalized as justified restoration of honor and respect.</p>
Victimization by powerful others	<p>A bias to see inequity and exploitation in the actions of powerful others (e.g., parents, teachers, supervisors, the Internal Revenue Service). The ensuing perceptions of oppression and victimization stimulate feelings of anger and injustice. This sets the stage for rationalizing aggression as a legitimate strike against oppression and a justified correction of prejudice and injustice.</p>
Derogation of Target	<p>An unconscious tendency to characterize those one wishes to make (or has made) targets of aggression as evil, immoral, or untrustworthy. To infer or associate such traits with a target makes the target more deserving of aggression.</p>
Social discounting	<p>A proclivity to frame social norms as repressive and restrictive of free will. Perceptions of societal restrictiveness promote feelings of reactance. These feelings furnish a foundation for justifying socially deviant behaviors such as aggression as ways to liberate oneself from repressive social customs and to exercise one's lawful right to freedom of expression.</p>

### Assessment of Justification Mechanisms Using Conditional Reasoning Problems

The assessment of justification mechanisms is based on data that show that aggressive people find reasoning that conforms to their justification mechanisms to be logically compelling (James, 1998). Specifically, aggressive individuals tend to be logically attracted to reasoning if it infers hostility or threat in the actions of others, frames the actions of others in terms of dominance versus submissiveness, concludes that retaliation will be more effective than reconciliation, surmises that exploitation is the true driving force behind the decisions of powerful others, or determines that a social norm is repressive or restrictive.

A new form of inductive reasoning problem is used to measure the logical attractiveness of reasoning based on justification mechanisms. The conditional reasoning problem in Box 1 is illustrative. Respondents are asked to find the most reasonable conclusion based on the information given.

**The aggression alternative.** Alternative b proposes that hostile intent (i.e., not playing fair) provides a logical explanation for why a partner would hire a lawyer. In fact, there are many reasons as to why a business partner might hire a lawyer. To determine that this particular answer is a good, indeed the best, answer to the reasoning problem suggests an underlying propensity to engage in hostile attributions. Stated alternatively, this answer is designed to be logically compelling primarily to respondents who are already predisposed to sense hostility and malevolent intent in the behavior of others. Research results suggest that this answer is indeed compelling to aggressive respondents. People with a demonstrated history of aggressive behavior are significantly more likely than nonaggressive respondents to select Alternative b to solve the problem (James & McIntyre, 2000; James et al., 2005).

We are mindful that reasoning on a single problem, even one with demonstrated validity in predicting aggressiveness, is not an infallible indicator of a proclivity to make hostile attributions. Other causes may have stimulated thinking in this manner (e.g., a respondent has recently had difficulty with a lawyer). Thus, we determine whether a respondent consistently selects reasoning based on a hostile attribution bias across a set of conditional reasoning problems that vary in terms of premises, contexts, and conclusions. It is the consistent selection of answers that target this specific justification mechanism that most reliably reveals the presence of a proclivity to make hostile attributions.

**The nonaggression alternative.** Aggression alternatives are designed to appear logically plausible and psychologically persuasive to respondents whose reasoning is guided by justification mechanisms. An attempt is made to capture what aggressive people consider “logical analyses” as they might occur in what Kuhn (1991) refers to as “informal reasoning.” Such reasoning focuses less on the strict standards of formal inductive analyses and more on what aggressive people consider reasonable or logical in real human activity.

Nonaggressive individuals whose reasoning is not guided by aggression-related justification mechanisms tend to reject reasoning based on these justification mechanisms (James et al., 2005). Such individuals find reasoning that supports socially adaptive behaviors such as civility, politeness, friendliness, and cooperation to be more plausible (James, McIntyre, Glisson, Bowler, & Mitchell, 2004; Kuhn, 1991).

The nonaggressive answer in the illustrative problem is Alternative c. This answer builds on the socially adaptive theory that teams and partnerships can be saved if

incentives to encourage people to devote time and effort to working together and resolving conflicts are present. Nonaggressive respondents are significantly more likely than aggressive respondents to be drawn to this alternative (James et al., 2005).

**Illogical answers.** Conditional reasoning problems are meant to appear to respondents as traditional inductive reasoning problems. It is necessary to include illogical responses in the problems to accomplish this objective. Two illogical alternatives are thus included in each problem. However, we do not wish to confound measurement of conditional reasoning with measurement of critical problem-solving skills. Consequently, the conditional reasoning problems employ answers that are clearly illogical given the premise of the problem (Alternatives a & d). The intent, and usual result, is that almost no respondents attempt to solve the problems using either of the two clearly incorrect alternatives.

### **Conditional Reasoning Test for Aggression (CRT-A)**

The conditional reasoning test for aggression, referred to as the CRT-A, is composed of 22 conditional reasoning problems (James & McIntyre, 2000). Each problem is based on a justification mechanism for aggression, with a prosocial counterpart and two clearly illogical answers. Respondents are given a "+1" for every aggression alternative they select. These scores are summed to furnish a scale with a range of 0 to 22. A high score indicates that (a) justification mechanisms are instrumental in guiding reasoning and thus that (b) the respondent is implicitly prepared to justify engaging in aggressive behavior. The measurement scale is referred to as the Justification of Aggression Scale. An empirically defined standard for "high" on the Justification of

Aggression Scale is a score of “8.” Most people have scores of 0 to 4. Approximately 10% of respondents have scores of 8 or greater.

### **Tests of the CRT-A**

Scores on the Justification of Aggression Scale have been subjected to a number of scientific tests. Of initial note are findings that the scores are reliable. For example, when 276 students took two versions of the test approximately 2 months apart, their scores correlated .82. (Values above .70 are generally considered acceptable.) An estimate of internal consistency based on a diverse sample of 1,603 students and employees was .76. It has also been shown that when the CRT-A is administered under normal testing circumstances, such as during the job selection process and without prior coaching, the scores show little if any vulnerability to faking (LeBreton, Barksdale, Robin, & James, 2007). Of considerable importance is a lack of relationship with potential contaminating variables. Males and females, and members of diverse races, generally have the same ranges of scores. Moreover, the scores are not related to intelligence, which suggests that more intelligent respondents are not able to decipher the true intent of the conditional reasoning problems.

**Empirical validity.** A particular strength of conditional reasoning has been a capacity to predict actual aggressive behaviors in both field and laboratory settings. The higher the score on the CRT-A, the greater the likelihood of engaging in behavior that harms others in either a direct or indirect manner. Table 2 summarizes the results of eleven of the initial validation studies on conditional reasoning. In this table, the average validity, which is a correlation—a measure of association or relationship that ranges from  $-1.00$  (a perfect inverse relationship) to  $.00$  (no relationship) to  $+1.00$  (a perfect positive relationship)—is  $.44$ . A just-completed meta-

analysis based on a larger sample of 22 studies showed that the average validity dropped from .44 to .28. However, if the nine “best practices” studies are considered (i.e., studies that are based on predictive validation designs and objective criteria, such as aggressive fouls in basketball), then the average validity remains a high .41.

To place these validities in context, consider that both past and current reviews indicate that validities produced by predicting behavioral criteria from self-report, projective, and other, new implicit measures of personality peak out at individual correlations of approximately .40, with the vast majority of individual correlations falling below .30 (see Meyer et al., 2001). Average validities often can run as low as .12 to .14. A mean correlation of .28 that includes a distribution of correlations with many individual correlations over .40 suggests that conditional reasoning is capable of producing one of the most empirically valid systems of assessment in personality.

The enhanced validities can be traced to several likely factors. These include (a) an attempt to base conditional reasoning on a coherent theory of measurement (see James et al., 2005); (b) a focus on a single, well-delineated construct like aggression; (c) presenting participants with eliciting reasoning problems that are tied directly to specific justification mechanisms; and (4) capitalization on psychometric aggregation principles to cancel out largely random error across problems.

Table 2

Uncorrected Validities for Scores on Conditional Reasoning Tests for Aggression

Criterion	<i>n</i>	Sample	Uncorrected validity
Supervisory rating—poor performance	140	Patrol officers	.49
Absences—lack of class attendance	188	Undergraduates	.37
Lack of truthfulness about extra credit	60	Undergraduates	.49
Absences—lack of work attendance	97	Nuclear facility operators	.42
Student conduct violations	225	Undergraduates	.55
Attrition	135	Restaurant employees	.32
Absences—lack of work attendance	105	Package handlers	.34
Work unreliability	111	Temporary employees	.43
Theft	95	Undergraduates	.64
Hard fouls and fights in intramural basketball	191	Undergraduates	.38
Lying and cheating in Internet-based simulation	191	Undergraduates	.40

Note. From “A Conditional Reasoning Measure for Aggression,” by L.R. James, M.D. McIntyre, C.A. Glisson, P.D. Green, T.W. Patton, J.M. LeBreton, et al., 2005, *Organizational Research Methods*, 8, p. 88. Copyright 2005, Sage Publications, Inc. Reprinted with permission of the author.

**Channeling model.** Scores on the CRT-A typically have low and often nonsignificant correlations with scores on aggressiveness measured by self-report aggression scales (see James et al., 2005). Moreover, scores on the CRT-A tend to predict different types of aggressive behaviors than do scores from self-reports of aggression (Bing et al., 2007; Frost et al., 2007). However, we have found that it is better to think of conditional reasoning and self-beliefs about aggressiveness as operating in a complementary manner as opposed to a competitive one. The results of a recent study on 183 college intramural basketball players (70 females, 113 males) illustrate why this is so (Frost et al., 2007). The players completed a CRT-A and a self-report of aggressiveness before the basketball season. Their overt aggressiveness (e.g., fighting), passive aggressiveness (obstructiveness, such as not giving up the ball), and verbal hostility (e.g., mocking) were then tracked for the entire intramural season.

Results of the study, summarized in Table 3, suggested that students who were implicitly prepared to rationalize aggression had a strong likelihood of engaging in aggressive behavior. However, which of the three aggressive behaviors this implicit preparedness to aggress was “channeled” into was dependent on self-beliefs about aggressiveness (see Bing et al., 2007; Winter, John, Stewart, Klohnen, & Duncan, 1998). Of particular interest was that students who were implicitly prepared to rationalize harming others tended to engage in (a) overt aggression if they viewed themselves as aggressive and (b) passive aggression if they viewed themselves as nonaggressive.

### **Concluding Comments**

The test for aggression is the most widely validated of the conditional reasoning tests, which include tests for achievement motivation/fear of failure, aberrant self-promotion, adaptability, need for power, and team orientation. But even with aggression,

research is limited to establishing reliability and validity in samples from college student and adult working populations. The efficacy of the test as a general assessment instrument outside these populations remains to be explored.

With appropriate validation, we believe that conditional reasoning can be used in many contexts to identify people who are predisposed to commit physical acts of violence, mental assaults, robbery, theft, and sabotage. Aggressive people are also capable of creating toxic social environments. They criticize and demoralize peers, instigate group conflict, undermine leaders' legitimate authority, harass, sexually abuse, and bully. Passive aggression exacts a further toll. Not passing on information, ignoring emails and telephone calls, not showing up for meetings, purposeful and malevolent lateness and absenteeism, and procrastination often weaken social cultures.

In our research, we have found that conditional reasoning is highly predictive of both overt and passive aggression. Self-descriptions of aggression are often poor predictors of at least passive aggression. However, prediction of both forms of aggression appears to be best accomplished by combining conditional reasoning with self-beliefs via channeling models. Thus, we do not think of conditional reasoning as a replacement for self-descriptions of personality. Rather it is a means to enhance our understanding of personality by investigating both its conscious and unconscious components.

In sum, conditional reasoning is a work in progress. While it is some distance from Ozer's (1999) conception of an ideal personality test, it appears to have reasonably satisfied a number of the exacting standards required to build a valid and efficient indirect measurement system. Work continues on many fronts. We are especially interested in testing the theory of measurement on which conditional reasoning is based.

Is the assessment system truly indirect and are the objects of measurement (justification mechanisms) truly implicit? Are justification mechanisms actually causal in the sense that they enable the expression of a motive to harm others? Is it necessary to invoke the constructs of motive and defense mechanisms to explain the operation of justification mechanisms? By what processes do justification mechanisms influence reasoning, and are these processes similar to what is assessed by traditional projective tests? Are there boundary conditions that limit the validity of the CRT-A (e.g., is the method valid for psychopaths)? These are not easy questions; some relate to long and contentious debates in psychology, while others relate to recent concerns in areas such as the assessment of implicit attitudes. But conditional reasoning is a unique method that is based on a unique theory of measurement. Its foundation needs to be tested separately.

Table 3. Effect of justification Mechanisms as a Function of Self-Reported Aggression Based on Channeling Model

Strength of justification mechanisms	Self-reported aggression	
	Low	High
High	<ul style="list-style-type: none"> <li>• Do not see themselves as aggressive. However, because justification mechanisms are in place they are implicitly prepared to rationalize aggression.</li> <li>• Tend to channel behavior toward subtle acts of aggression, such as passive aggressiveness, that can be misrepresented as being nonaggressive.</li> <li>• Channel aggression into obstructionism in basketball.</li> </ul>	<ul style="list-style-type: none"> <li>• See themselves as aggressive (e.g, easy to anger, confrontational, and hostile).</li> <li>• Have justification mechanisms in place and thus are implicitly prepared to rationalize acts of aggression.</li> <li>• Channel aggression into overt acts of hostility such as pushing, shoving, and fighting in basketball.</li> </ul>
Low	<ul style="list-style-type: none"> <li>• See themselves as nonaggressive.</li> <li>• Do not have justification mechanisms in place and thus lack the implicit capacity to justify aggression.</li> <li>• Typically channel their behavior toward prosocial objectives. Do not engage in aggressive behaviors in basketball</li> </ul>	<ul style="list-style-type: none"> <li>• See themselves as aggressive.</li> <li>• Lack the justification mechanisms that would prepare them to rationalize engaging in aggression.</li> <li>• Manifest aggression in ways that do not need to be defended, such as loud swearing and mocking in the heat of a basketball game.</li> </ul>

Note. Table adapted from James and Mazerolle (2002).

### Notes

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### Recommended Reading

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