RUNNING HEAD: ATTRIBUTIONAL COMPLEXITY, PUNITIVENESS, AND RACISM

Attributionally more complex people show less punitiveness and racism

Number of words: 2,795
Abstract

Based on past findings that attributionally more complex people make less fundamental attribution error, it was hypothesized that they would show less punitiveness and racism. In a study of 102 undergraduates, this hypothesis received robust support. The effect of attributional complexity was significant in 2 different punitiveness measures, a rehabilitation support measure, and 2 different racism measures. Also, this effect still held when demographic variables, crime victimization history, and need for cognition were statistically controlled. Moreover, attributional complexity mediated the effect of need for cognition and gender on punitiveness and racism. Theoretical implications are discussed.

Keywords: Attributional complexity, need for cognition, gender, punitiveness, racism, prejudice
When asked "If Kitty Dukakis were raped and murdered, would you favor an irrevocable death penalty for the killer?", Democrat 1988 Presidential Election candidate Michael Dukakis replied, with no visible emotion, “No, I don't” and then explained his stance. His poll numbers immediately dropped from 49% to 42% overnight. Projecting himself as a man of reason arguably cost Dukakis the election and gave him a “soft on crime” label. Is it true that people with complex thinking are less punitive and perhaps also less prejudiced? The present study examines the role of complexity of attributional schemata in punitiveness and racism.

**Attributional Complexity**

In view of conflicting findings about complexity of people’s attributions, Fletcher and colleagues introduced the concept of attributional complexity (AC), an individual difference variable, as a compromise (Fletcher, Danilovics, Fernandez, Peterson, & Reeder, 1986). They argued that some people possess more complex attributional schemata than others. Simply put, attributionally more complex people are postulated to have stronger motivation to explain human behavior, stronger preference for complex rather than simple explanations, and stronger awareness of the power of social situation on human behavior.

Compared to attributionally simple people, complex people make less error-prone attributions. For example, Devine (1989) found that complex people are less susceptible to underestimating situational causes and overestimating internal causes (i.e., fundamental attribution error). Horhota and Blanchard-Fields (2006) recently replicated Devine’s finding in both young and older adults. Pope and Meyer (1999) extended this finding to the realm of juror decision making. They found that, when presented with a trial case, complex people would rely less heavily on internal attributions than would simple people; accordingly, they found the defendant less guilty.

**Attributional Complexity, Punitiveness, and Racism**
Some previous research showed the association between attribution and punitiveness and racism. No study, however, has ever examined the relationship between AC and punitiveness and racism (except Sargent’s (2004) report of the relationship between need for cognition and punitiveness in which AC was also studied; see below). The present study was to fill this void.

An extensive literature revealed the association between punitiveness toward offenders and attributions of offenses. For example, Carroll (1979) found that if offenders’ crimes were attributed to internal causes, the offenders were less likely to be recommended for parole than offenders whose crimes were attributed to external causes. In another study, Cullen, Clark, Cullen, and Mathers (1985) measured participants’ attribution of crimes and their sanctioning tendency. They found that participants who favored external attribution of crimes showed less support for punishment and capital punishment, and stronger support for rehabilitation.

Because attributionally complex people are less prone to fundamental attribution error than do attributionally simple people, and because internal attribution of crimes is linked to punitiveness, we predicted that attributionally more complex people would show less punitiveness (and stronger support for rehabilitation).

Some research demonstrated the role of attribution in prejudice formation and perpetuation. Pettigrew (1979) identified the “ultimate attribution error,” which refers to people’s tendency to make attributions consistent with their prejudice. This attributional process can spiral: prejudice causes particular kinds of attributions that can, in turn, intensify the prejudice. In other words, the ultimate attribution error was proposed as an attributional process through which prejudice is formed and perpetuated. According to Hewstone (1990), ultimate attribution error is a special form of fundamental attribution error in an intergroup context.
Because fundamental attribution error underlies prejudice formation and perpetuation, and because attributionally complex people are less prone to fundamental attribution error, we predicted that more complex people would show less prejudice.

**Attributional Complexity and Need for Cognition**

Research on AC often took into consideration a related but distinct construct – need for cognition (NFC; Cacioppo, Petty, & Kao, 1984). A person with high NFC are motivated to engage in various effortful and complex cognitive contemplations such as careful scrutiny of incoming information, avoidance of heuristics, and complex explanations of human behaviors. Indeed, NFC was found to be moderately correlated with AC (Fletcher et al., 1986; Sargent, 2004). Also, NFC is negatively correlated with racial prejudice (e.g., Waller, 1993) and support for punishing criminals (Sargent, 2004). In relation to this, Sargent (2004) found that AC mediates the effect of NFC on punitiveness. This suggests that AC is a mechanism through which high NFC individuals are less prejudiced and less punitive. In the present study, we examined this mediational hypothesis with various punitiveness measures (including Sargent’s measure and two new measures), and extended this hypothesis to understanding racial prejudice.

**Attributional Complexity and Gender**

The concept of AC may also shed light on research of gender differences in punitiveness and racial attitudes. Some past research showed that females are less supportive of violent law enforcement such as death penalty and more supportive of rehabilitation policies (e.g., Smith, 1984), and that females hold more positive racial attitudes (e.g., Johnson & Marini, 1998). Some researchers explained these gender differences in terms of gender-differentiated socialization process (i.e., women are socialized to be more concerned for others; e.g., Johnson & Marini, 1998), while some did in terms of personality variables such as social dominance orientation (i.e., preference for inequality among social groups; Pratto, Stallworth, & Sidanius, 1997). In fact,
males and females also differ in terms of AC; females are found to be more attributionally complex (Fletcher et al., 1986). In the present study, we examined another mediational hypothesis: AC mediates the gender effect on punitiveness and racism.

Method

Participants

One hundred two (52 males, 49 females, 1 unreported) undergraduates from a US public university participated in exchange for course credits. Their age ranged from 17 to 27 ($M = 19.25, SD = 1.35$).

Measures

Attributional Complexity

Participants indicated their agreement with 28 statements (e.g., “I don’t usually bother to analyze and explain people’s behavior”) of the Attribution Complexity Scale (Fletcher et al., 1986) on a 7-point scale (“1” strongly disagree to “7” strongly agree). Thirteen of the statements were negatively keyed and hence reversely scored. A higher score indicates higher level of AC.

Need for Cognition

Participants indicated how well each of the 18 items (e.g., “I only think as hard as I have to”) on the Need for Cognition Scale (Cacioppo et al., 1984) described themselves on a 5-point scale (“1” extremely unlike me to “5” extremely like me). Nine of the items were negatively keyed and hence reversely scored. A higher score indicates higher level of NFC.

Punitiveness 1

The first punitiveness measure comprised five items with reference to past crime attitudes studies (e.g., Orth, 2003): “In general, do you approve or disapprove of the death penalty?” “Do you generally favor or oppose the death penalty in cases where people are convicted of first-degree murder?” “Death penalty is cruel and inhumane.” (reversely scored) “Criminals should be
punished to make the criminals suffer, as the victims of the crimes suffered.” and “Criminals should be punished to make the criminals pay for their crimes.” Participants responded to each item on a 7-point scale, with a higher score indicating stronger punitiveness.

**Punitiveness 2**

The second punitiveness measure was adopted from Sargent (2004), comprising five items (e.g., “Capital punishment reduces crime in the long run.”), two of which were negatively keyed and hence reversely scored. Participants responded to each item on a 7-point scale, with a higher score indicating stronger punitiveness.

**Rehabilitation Support**

A measure of participants’ support for rehabilitating offenders comprised four items with reference to past crime attitudes studies (e.g., Orth, 2003): “Do you think rehabilitation programs (including education, vocational training, and psychological counseling, etc.) in prisons are helpful for criminals?” “In general do you approve or disapprove of expanding rehabilitation programs in prisons?” “Criminals should be punished to educate the criminals to lead a law-abiding life.” and “Criminals should be punished so as to rehabilitate them.” Participants responded to each item on a 7-point scale, with a higher score indicating stronger rehabilitation support.

**Racism 1**

The first racism measure was the Symbolic Racism 2002 Scale (Henry & Sears, 2002). Participants responded to 8 statements (e.g., “Over the past few years, blacks have gotten less than they deserve.”) on a 4-point scale. Three statements were negatively keyed and hence reversely scored. A higher score indicates stronger racism.

**Racism 2**
The second racism measure was adopted from Kleinpenning and Hagendoorn (1993) with slight modifications to suit the American context. The scale comprised 16 items, which covers biological racism (e.g., “Differences between ethnic groups are innate.”), ethnocentrism (e.g., “Ethnic minorities living in the US have to adjust to our way of life.”), symbolic racism (e.g., “Ethnic minorities meanwhile have more rights than they deserve.”) and aversive racism (e.g., “To have members of ethnic minorities as neighbors seems to me…”). Participants responded on a 9-point scale. Eight of the items were negatively keyed and hence reversely scored. A higher score indicates stronger racism.

Demographic variables

Past research showed that demographic variables such as age and crime victimization history (e.g., Orth, 2003) are related to punitiveness and racism. Therefore, participants reported their age, gender, and household annual income. A victimization history measure was adopted from Cullen et al. (1985). Participants indicated whether they had been victim of 9 crimes (e.g., “someone broke into my house”); victimization history was measured by the number of crimes of which a participant had been a victim.

Results

Table 1 shows the descriptive statistics of and the zero-order correlations among the studied variables. Consistent with our predictions, AC was negatively correlated with punitiveness and racism, and positively correlated with rehabilitation support (p’s < .001). To test the unique contribution of AC to punitiveness and racism beyond NFC and the demographic variables, we conducted hierarchical regression analyses. For each analysis, we first entered the demographic variables and NFC in Step 1, and then added AC in Step 2. We examined $R^2$ changes and the corresponding change in $F$ as our formal test (Wampold & Freund, 1987) (see Table 2).
In all analyses, the regression coefficients of AC in Step 2 were in the predicted direction. The $R^2$ change reached statistical significance for Punitiveness 1, Punitiveness 2, Rehabilitation Support, and Racism 2 ($p$’s < .05), and was marginally significant for Racism 1 ($p = .07$), in support of our predictions. AC significantly explained additional variances of the five measures.

**Mediation Analyses**

We followed Baron and Kenny’s (1986) procedures to test the mediating role of AC in the effect of NFC on punitiveness and racism. First, we examined whether NFC could predict AC (the mediator), and, as expected, the regression coefficient was significant ($\beta = .50, p < .01$). Second, we examined whether NFC could predict the punitiveness and racism measures. The regression coefficients for Punitiveness 1, Punitiveness 2, Rehabilitation Support, and Racism 2 were in the predicted direction and significant ($\beta = -.24, -.27, .26, & -.45$, respectively, $p$’s < .05); for Racism 1, the regression coefficient was marginally significant ($\beta = -.17, p = .09$). Finally, both NFC and AC were entered together to predict the five measures. The regression coefficients for AC were all in the predicted direction and significant ($|\beta|$ ranged from .32 to .50, $p$’s < .01). More importantly, the regression coefficients for NFC became non-significant in four of the models except for Racism 2 ($|\beta|$ ranged from .01 to .10, $p$’s > .30); for Racism 2, the predictive power of NFC dropped substantially but remained significant ($\beta$ dropped from -.45 to -.27, $p < .01$). Subsequently, we performed five Sobel tests. All of them suggested an indirect effect of NFC on the five measures through AC ($|Z|$’s $\geq 2.57, p$’s $\leq .01$). These findings altogether indicate the mediating role of AC in the effect of NFC on punitiveness and racism. A similar set of analyses was performed to test the mediating role of NFC in the effect of AC on punitiveness and racism. The findings ruled out this alternative mediational pathway.
Next, we performed another set of mediational analyses to examine the mediating role of AC in gender differences in punitiveness and racism. First, we examined whether gender could predict AC (the mediator), and, as expected, the regression coefficient was significant ($\beta = .51$, $p < .01$). Second, we examined whether gender could predict the punitiveness and racism measures. The regression coefficients for Punitiveness 2, Rehabilitation Support, Racism 1 and Racism 2 were in the predicted direction and significant ($\beta = -.34, .29, -.32, \& -.31$, respectively, $p$’s < .01); for Punitiveness 1, the regression coefficient was in the predicted direction but non-significant ($\beta = -.15$, $p = .13$). Finally, both gender and AC were entered together to predict Punitiveness 2, Rehabilitation Support, Racism 1 and Racism 2. The regression coefficients for AC were all in the predicted direction and significant ($|\beta|$ ranged from .25 to .46, $p$’s < .05). More importantly, the regression coefficients for gender became non-significant in all models ($|\beta|$ ranged from .07 to .19, $p$’s > .08). Subsequently, we performed four Sobel tests. All of them suggested an indirect effect of gender on the four measures through AC ($|Z|$’s $\geq 1.89$, $p$’s $\leq .05$). Taken as a whole, these findings support the mediating role of AC in gender differences in punitiveness and racism.

**Discussion**

Our predictions received strong support. First, AC has a unique association with punitiveness and racism. Although previous research showed the link between attribution and punitiveness (e.g., Carroll, 1979) and racism (e.g., Pettigrew, 1979), no research has examined the relationship of AC with punitiveness (except Sargent, 2004) and with racism. Second, AC mediates the effect of NFC on various measures of punitiveness and racism. We replicated Sargent’s (2004) finding with various punitiveness measures and extended it to understanding racism. Third, AC mediates the effect of gender on various measures of punitiveness and racism. This provides a novel explanation of gender differences (apart from in terms of socialization.
processes, e.g., Johnson & Marini, 1998; or personality variables, e.g., Pratto et al., 1997) in many social-political attitudes.

**Implications**

Social cognition research on attribution often takes a “one size fits all” approach (Molden & Dweck, 2006), typically assuming that all perceivers make attributions in much the same way. But as Fletcher et al. (1986) identified, the concept of AC facilitates understanding of individual differences in attribution accuracy and attribution error (e.g., Horhota & Blanchard-Fields, 2006) as well as in social attitudes such as punitiveness and racism, as presently demonstrated.

Some past crime attitudes studies were mainly descriptive report of public attitudes, while some focused on personality, demographic, and ideological correlates. Nevertheless, the present study echoes an emerging research focusing on the less explored role of individual differences in social cognition (e.g., NFC, Sargent, 2004). In addition, the present study extends the search for prejudiced personality by examining the under-explored role of AC. As Allport stated, “a person’s prejudice is …more likely to be a reflection of his whole habit of thinking about the world he lives in” (1954, p.170). The present study joins the past effort in showing that prejudice is related to some individually variant cognitive characteristics (e.g., NFC, Waller, 1993).

More broadly, the present study echoes the motivated social cognition approach to understanding political conservatism (Jost, Glaser, Kruglanski, & Sulloway, 2003), which contends that conservatism ideologies and attitudes (such as support for severe punishment and inequality) satisfy some psychological needs, including the need for cognitive sophistication and integrative complexity. The present study provides further empirical evidence by showing that one aspect of cognitive complexity, attributional complexity, indeed predicts punitiveness and racism attitudes.

**Future Research**
Some researchers (e.g., Sniderman & Tetlock, 1986) have questioned the concept of symbolic racism (e.g., lack of definitional clarity and consensus, item content in symbolic racism scales often relates to politically controversial issues). It is therefore worthwhile to use other operationalizations of racism (e.g., behavioral measures, implicit measures) and to extend to other forms of prejudice (e.g., sexism) in future replication of the present findings. Similarly, one should be cautious when interpreting any findings related to punitiveness attitudes. It is possible that punitiveness is not a simple one-dimensional concept, and that the context in which the questions are framed (e.g., general vs. case-specific, juvenile vs. adult offenders) affects how people respond (Sprott, 1999). It is therefore reasonable to ask for replication of the present study with other variations of the punitiveness measures (e.g., sentencing behavior, stigmatization of prisoners and released inmates).
References


Jost, J.T., Glaser, J., Kruglanski, A.W., & Sulloway, F.J. (2003). Political conservatism as


Table 1. Means, SDs, and Zero-order Correlations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attributional Complexity</td>
<td>4.92</td>
<td>0.76</td>
<td>(.91)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Need for Cognition</td>
<td>3.43</td>
<td>0.63</td>
<td>.50**</td>
<td>(.89)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Punitiveness 1</td>
<td>4.74</td>
<td>1.31</td>
<td>-.37**</td>
<td>-.24*</td>
<td>(.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Punitiveness 2</td>
<td>3.94</td>
<td>1.16</td>
<td>-.51**</td>
<td>-.27**</td>
<td>.71**</td>
<td>(.69)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Rehabilitation Support</td>
<td>5.37</td>
<td>0.98</td>
<td>.38**</td>
<td>.26**</td>
<td>-.28**</td>
<td>-.39**</td>
<td>(.68)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Racism 1</td>
<td>2.17</td>
<td>0.55</td>
<td>-.35**</td>
<td>-.17</td>
<td>.56**</td>
<td>.64**</td>
<td>-.46**</td>
<td>(.83)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Racism 2</td>
<td>3.31</td>
<td>1.10</td>
<td>-.48**</td>
<td>-.45**</td>
<td>.32**</td>
<td>.55**</td>
<td>-.32**</td>
<td>.46**</td>
<td>(.80)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Gender</td>
<td>1.49</td>
<td>0.50</td>
<td>.51**</td>
<td>.07</td>
<td>-.15</td>
<td>-.34**</td>
<td>.29**</td>
<td>-.32**</td>
<td>-.31**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Age</td>
<td>19.25</td>
<td>1.35</td>
<td>.05</td>
<td>.03</td>
<td>.03</td>
<td>-.03</td>
<td>.02</td>
<td>-.15</td>
<td>-.01</td>
<td>.03</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10. Household Income</td>
<td>4.76</td>
<td>0.80</td>
<td>-.12</td>
<td>-.10</td>
<td>.02</td>
<td>.03</td>
<td>.17</td>
<td>-.07</td>
<td>.05</td>
<td>.06</td>
<td>-.26**</td>
<td>-</td>
</tr>
<tr>
<td>11. Victimization History</td>
<td>1.43</td>
<td>1.25</td>
<td>.02</td>
<td>.03</td>
<td>-.15</td>
<td>-.13</td>
<td>-.04</td>
<td>-.05</td>
<td>.09</td>
<td>-.25*</td>
<td>.15</td>
<td>.02</td>
</tr>
</tbody>
</table>

n = 102. * p < .05, ** p < .01. Gender was coded as male = 1 and female = 2. Household income was measured on a 10-point scale in which higher values indicated higher incomes. Internal reliability, \( \alpha \), in parentheses.
Table 2. Hierarchical Regression Analyses

<table>
<thead>
<tr>
<th></th>
<th>Dependent variables</th>
<th>Punitiveness 1</th>
<th>Punitiveness 2</th>
<th>Rehabilitation Support</th>
<th>Racism 1</th>
<th>Racism 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$\beta$</td>
<td>$\Delta R^2$</td>
<td>$\Delta F$</td>
<td>$\beta$</td>
<td>$\Delta R^2$</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>.13*</td>
<td>2.70*</td>
<td></td>
<td>.21**</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>.08</td>
<td></td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td>.04</td>
<td></td>
<td>.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victimization History</td>
<td></td>
<td>-.22*</td>
<td></td>
<td>-.22*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need for Cognition</td>
<td></td>
<td>-.24*</td>
<td></td>
<td>-.24*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td>.04*</td>
<td>4.47*</td>
<td>.07**</td>
<td></td>
<td>.07**</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td>-.04</td>
<td></td>
<td>-.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>.08</td>
<td></td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td>.00</td>
<td></td>
<td>-.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victimization History</td>
<td></td>
<td>-.17</td>
<td></td>
<td>-.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need for Cognition</td>
<td></td>
<td>-.11</td>
<td></td>
<td>-.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attributional Complexity</td>
<td></td>
<td>-.29*</td>
<td></td>
<td>-.38**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$n = 102$. * $p < .05$, ** $p < .01$. 

$\Delta R^2$ refers to the change in $R^2$ when the variable is added to the model. $\Delta F$ refers to the change in $F$ when the variable is added to the model.