Perceptions of Criminal Defendants Scale: Development and Validation

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ABSTRACT. A 10-item Perceptions of Criminal Defendants Scale (PCDS) was developed and validated in 3 studies. In Study 1, we compiled a list of 23 traits associated with criminal defendants and presented these items to 295 participants in the form of statements; participants rated the degree to which they agreed with each statement after reading 1 of 4 homicide cases. Principal components analyses of participants’ ratings yielded 10 items significantly loading on 1 primary factor measuring perceptions of the personal character of the defendant. This factor pattern was consistent across defendant gender, defendant race, and crime details. In Study 2, this 10-item scale was validated with a separate sample of 206 participants who responded to 1 of 3 biographies of publicly known defendants who had been previously pretested and ranked as being mildly, moderately, and severely negative people. The 10-item PCDS significantly distinguished between these 3 criminal defendants, $F(2, 201) = 140.48, p < .001, \eta^2 = .581$, with strong internal reliability ($\alpha = .94$). Factor analysis yielded the same factor structure as in Study 1. In Study 3, we examined the structure of the 10-item scale when applied to older and teenaged male defendants. Again, 1 primary component accounted for the variance, with factor loadings across ages replicating patterns found earlier. Confirmatory factor analysis reaffirmed the unidimensional structure of the PCDS. Based on these 3 studies, we believe that the PCDS is a useful instrument for measuring perceptions of the character of criminal defendants.
in this research, and a description of the development of a new scale to measure perceptions of defendants.

**Past Research**

Research into extralegal factors that affect the perception and treatment of criminal defendants is abundant in psychology. Examples of topics studied include the influence of the demographics and personality traits of both the defendant and the perceiver. For example, the majority of research on gender has found that adult female defendants are treated more leniently than male defendants, particularly with respect to sentencing (Gruhl & Welch, 1984; Herzog & Oreg, 2008; Kruttschnitt, 1985; Merrill et al., 2010; Steffensmeier & Demuth, 2006).

Socioeconomic status and race are also factors that have been found to play a role in the perception, and subsequent treatment, of defendants. Researchers have found that individuals coming from lower socioeconomic backgrounds are less likely to be represented effectively in legal proceedings than individuals from higher socioeconomic backgrounds (Daly & Tonry, 1997). Many studies have shown that minority defendants, particularly Black defendants, are treated more negatively in the criminal justice system and are given more severe sentences than comparable White defendants (Austin & Allen, 2000; Mustard, 2001; Stolzenberg, D’Alessio, & Eitle, 2013), although there have been inconsistent results when examining racial biases by juries (Mitchell, Haw, Pfeifer, & Meissner, 2005). In addition, an examination of the interaction of race and gender has shown that race impacts sentencing for male defendants more than for female defendants (Freiburger & Hillinksi, 2013; Steffensmeier & Demuth, 2006). Interestingly, although race differences in treatment are quite apparent in examinations of differential treatment in actual legal records including police contacts (Crutchfield, Skinner, Haggerty, McGlynn, & Catalano, 2012) and sentencing records (ACLU, 2014; Mustard, 2001), race effects do not always appear in lab studies on the impact of race when judging defendants (cf. Crawley & Suarez, 2016).

Other variables studied include the age of defendants, with findings of leniency toward older defendants (Morrow, Vickovic, & Fradella, 2014; Mueller-Johnson & Dhami, 2010; Steffensmeier & Motivans, 2000), and more complex findings with respect to juveniles. For example, juvenile offenders may be shown leniency when judges decide whether or not to incarcerate. However, there appears not to be leniency in the length of sentence if incarcerated (Jordan & McNeal, 2016). In addition to defendant age, researchers have focused on such extralegal factors as the presentation of remorse by offenders (Corwin, Kramer, Griffin, & Brodsky, 2012; Everett & Nienstedt, 1999), and the defendant’s personal appearance including physical attractiveness (Abwender & Hough, 2001; Sigall & Ostrive, 1975), smiling (Abel & Watters, 2005), style of dress (Fontaine & Kiger, 1978), and tattoos (Funk & Todorov, 2013). Pretrial publicity (Hope, Memon, & McGeorge, 2004; Kovera, 2002; Ruva & Guenther, 2015; Steblay, Besirevic, Fulero, & Jimenez-Lorente, 1999) and juror characteristics such as attitudes toward the death penalty, empathy, and type of religious beliefs (Crawley & Suarez, 2016; Fitzgerald & Ellsworth, 1984; Miller, Maskaly, Peoples, & Sigillo, 2014) have all been subjects of psychological study regarding perceptions of criminal defendants.

The literature on defendant outcomes, and the factors impacting those outcomes, is broad and complex. The instruments used to measure outcomes have been more limited, however, and tend to focus on trial outcomes, with single-item measures of verdict and sentence. Certainly the outcomes of real trials are important, but they are not the only outcomes that matter in the treatment of a criminal defendant. In addition, verdict and sentence alone may not always be sensitive to biases operating at other decision points in a criminal case.

**Common Methodologies**

Several methodologies have been used to examine perceptions and treatments of criminal defendants (see Merrill et al., 2010). Some researchers analyze archival records of criminal justice outcomes (cf. Austin & Allen, 2000; Clarke & Koch, 1976; Crutchfield et al., 2012; Martin, 2014; Mustard, 2001; Stolzenberg et al., 2013). Others present descriptions of defendants or fictional trials, in print or via video, to participants, and measure their judgments about the defendant and about the crime itself (cf. Abwender & Hough, 2001; Crawley & Suarez, 2016; Gordon, Bindrim, McNicholas, & Walden, 1988; Mueller-Johnson & Dhami, 2010; Plumm & Terrance, 2009). Such participants may respond individually or in groups, acting as mock juries. In these studies, researchers generally have used single-item dependent measurements of perceived guilt and recommended sentence when
studying how extralegal factors affect judgments of criminal defendants (cf. Abwender & Hough, 2001; Corwin et al., 2012; Fontaine & Kiger, 1978; Miller et al., 2014; Najdowski & Bottoms, 2012). Some researchers have included additional measures such as bail recommendation, ratings of crime severity, likelihood of a repeat offense, or perception of the defendant’s future (cf. Gordon et al., 1988; Loeffler & Lawson, 2002) to investigate some nuances of a verdict or sentence, but often researchers use only the summary judgments of guilt and appropriate sentence. With single-item, summary dependent measures, it is not possible to separate out attitudes about the seriousness of the crime from perceptions of the character of the defendant. These perceptions are conflated within the verdict and within the recommended sentence.

In other studies, researchers have developed more nuanced measures, using scales specific to the topics, crime scenarios, or types of defendants under examination. For example, Crosby, Britner, Jodl, and Portwood (1995) used a 6-item Questionnaire on the Culpability of Juvenile Offenders in Capital Cases in addition to a sentencing item; Magyarics, Lynch, Golding, and Lippert (2015) created a 6-item Victim Fear and Distress subscale and a 5-item Defendant Intent to Cause Fear and Distress subscale to measure reactions specific to criminal stalking in addition to a measure of guilt. Côté-Lussier (2016) examined perceptions of criminals in general, without reference to specific defendants, using a 6-item scale assessing perceptions of criminal competitiveness and social status, 10 items measuring views of criminal competence and warmth, a set of 24 items measuring emotional response toward criminals, and 3 items on societal punitiveness. Some of Côté-Lussier’s measures could be rewritten for application to a target defendant, but in current form measure general attitudes, not case-specific perceptions.

All of these scales were useful and appropriately administered, but they would not be appropriate for use across crime types or to evaluate perceptions of individual defendants varying by age or situation. Similarly, guilt ratings and recommended sentences also may be inadequate dependent measures for investigating perceptions of defendants across situations and decision points. For example, such measures are not appropriate in evaluating the impact of extralegal factors on the decision to report a criminal act (cf. Finkelhor & Wolak, 2003; Weiss, 2013) or the decision of a prosecutor regarding a charge or plea offer (cf. Tonry, 2012).

We did not find a general scale that could be used in a wide range of studies involving judgments of defendants and legal outcomes. A reliable method of capturing a more complex perception of a defendant, including views of the defendant’s character, would benefit psychological research. A method such as this would address the following problems with simple measures of perceived guilt and recommended sentence. First, perceived guilt and appropriate sentencing are often measured with single items, and as such may not be as reliable as more complex measures. Second, the measures commonly used do not assess specific aspects of how the defendant is viewed; rather, a summary judgment regarding guilt or a summary judgment of appropriate sentence is required of the participant. Such summary judgments may miss subtle differences in how various defendants are perceived, judged, and treated. In addition, summary judgments of guilt and sentence are not equivalent to perceptions of a criminal defendant’s character. Guilt may be decided based on the black letter law; perceptions of the personal character of a defendant may be more influenced by extralegal factors. Thus, a judgment about guilt should be a separate measure from a judgment of character. Finally, summary judgments of guilt or sentence conflate details of the alleged crime with judgments about the person accused of the crime. Although the details of a crime may affect how a defendant is viewed, perceptions of that defendant are not based only on the details of the crime. It would be helpful to have measures that disentangle perceptions of the criminal act from perceptions of the person allegedly committing the act.

Therefore, there is a need for a more sensitive measure, not based on a single item, to evaluate how a participant perceives a criminal defendant. Such a measure may be able to pick up on nuances of judgment that single-item measures of guilt and sentence do not. The current project was designed to develop and validate a multi-item, unidimensional scale that would measure how a criminal defendant is perceived. We were interested in a measure that would focus on the defendant as an individual within the context of the criminal case. Our goal was to develop a scale that could accurately measure fine variations in perceptions toward criminal defendants, and that was applicable across various types of defendants and crimes.

Weiss, 2013).
Study 1: Scale Development

Method
Participants. There were 295 participants in this study, solicited via Amazon Mechanical Turk (MTurk); 139 identified as men, 152 as women, and 2 as transgender. Participants ranged in age from 18 to 76 years old, with a mean age of 30.41 (SD = 10.98). Two hundred twenty-five reported their race as White, 24 identified as Asian, 18 as Hispanic, 13 as Black, and 15 as multiracial or another racial category.

Materials and procedure. After institutional review board approval (#306) was given, we created an online survey, which included four homicide scenarios, differing in the race and the gender of the defendant and crime details. Four scenarios were included to afford us the opportunity to examine principal components analysis results for these 23 items when applied to various types of people and at least two different crime scenarios. Each participant was randomly assigned to one of the four scenarios. Following the crime description, the survey included a 6-point Likert-type scale, ranging from 1 (strongly agree) to 6 (strongly disagree). Participants were asked to rate the degree to which they agreed with each of 23 statements regarding their perceptions of the criminal defendant in the scenario. A written debriefing was included at the end of the survey.

The different crime scenarios included a White man who allegedly killed another driver while texting and driving, a Black man who allegedly shot a person who had killed his son in a drunk driving accident, a Hispanic woman who allegedly killed another driver while texting and driving, and an Asian woman who allegedly shot a person who killed her son in a drunk driving accident. Fictional mug shots of the individuals were included with the written scenarios. We created the mug shots; the pictures did not depict real individuals. Any resemblance to actual persons is purely coincidental. The texts and mug shots used are included in Appendix A.

To compile the set of 23 response statements, we collected lists of traits that have been associated with criminal defendants in the forensic psychology literature. In addition, we informally interviewed personal acquaintances regarding their thoughts about criminal defendants. For the final list, we included only items that were mentioned by more than one source. The resulting list of 23 items included such concepts as the degree to which the perceiver feared the defendant, perception of cruelty in the defendant, degree of defendant’s self-centeredness, the defendant’s capability of understanding the consequences of actions, whether or not the defendant deserves mercy, and degree of defendant remorse. See Table 1 for the full list of 23 items.

The survey was posted online and adult participants could take the survey for a compensation of $1.00. Following a consent statement, each participant was randomly assigned to read one of the four crime scenarios and then anonymously responded to the 23-item survey about the defendant. The last questions asked for demographic information about the participant. Following the survey questions, participants were debriefed.

Results
A principal components analysis was performed on SPSS, with 25 iterations. Results were consistent regardless of rotations. Therefore, we used the

### Table 1
List of 23 Concepts Associated With Criminal Defendants Compiled in Study 1

<table>
<thead>
<tr>
<th>Initial Set of Scale Development Items</th>
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<tbody>
<tr>
<td>1 Degree of Fear</td>
<td></td>
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<tr>
<td>2 Perception of Cruelty</td>
<td></td>
</tr>
<tr>
<td>3 Perception of Innocence</td>
<td></td>
</tr>
<tr>
<td>4 Perception of Evil</td>
<td></td>
</tr>
<tr>
<td>5 Degree of Self-Centeredness</td>
<td></td>
</tr>
<tr>
<td>6 Perception of Emotional Coldness</td>
<td></td>
</tr>
<tr>
<td>7 Degree of Intimidation</td>
<td></td>
</tr>
<tr>
<td>8 Whether or Not the Crime Was a Violent Act</td>
<td></td>
</tr>
<tr>
<td>9 Defendant’s Ability to Understand Consequences</td>
<td></td>
</tr>
<tr>
<td>10 Ability to Forgive the Defendant</td>
<td></td>
</tr>
<tr>
<td>11 Whether or Not the Defendant Deserves Mercy</td>
<td></td>
</tr>
<tr>
<td>12 Likelihood of Committing Future Crime</td>
<td></td>
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<tr>
<td>13 Degree of Remorse</td>
<td></td>
</tr>
<tr>
<td>14 Probability of Prior Criminal Record</td>
<td></td>
</tr>
<tr>
<td>15 Perception of Trustworthiness</td>
<td></td>
</tr>
<tr>
<td>16 Whether or Not the Intent Was Malicious</td>
<td></td>
</tr>
<tr>
<td>17 Degree of Premeditation</td>
<td></td>
</tr>
<tr>
<td>18 Degree of Seriousness of the Crime</td>
<td></td>
</tr>
<tr>
<td>19 Degree of Impact on Victim’s Family</td>
<td></td>
</tr>
<tr>
<td>20 Ability to See Themselves in Defendant’s Shoes</td>
<td></td>
</tr>
<tr>
<td>21 Severity of Appropriate Bail</td>
<td></td>
</tr>
<tr>
<td>22 Likelihood of Guilt</td>
<td></td>
</tr>
<tr>
<td>23 Type of Sentence the Defendant Deserves</td>
<td></td>
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</tbody>
</table>
results without rotation. The components derived were limited to those with eigenvalues above 1. When examining how the individual items loaded on components, only loadings of .50 or higher were considered in order to facilitate the interpretation of the components. Overall, there were five components or factors. Factor 1 accounted for 28.55% of the variance and reflected perceptions of the character of the defendant as a person. Factor 2 accounted for 13.30% of the variance and dealt with aspects of the crime. Factor 3 accounted for 8.36% of the variance and dealt with aspects of the crime and impact to victim; the other two factors accounted for 10.90% of the variance together, but were not clearly interpretable. We retained the 13 items that loaded above .50 on the first principal component focusing on the defendant as a person and discarded the items loading on the other components.

We then conducted a series of follow-up principal component analyses on subsets of data in order to make sure that the factor structure for our final scale would be the same regardless of defendant race, defendant gender, type of crime, or respondent gender. Therefore, we selected the final set of items to have a similar pattern of loadings regardless of defendant race, gender, or type of crime. To be selected for the final scale, an item must have had a loading of .50 or higher on the first principal component in at least 9 out of the 10 follow-up factor analyses. In every analysis, the first component reflected perceptions of the defendant as a person. The follow-up analyses were conducted on the following subsets of data: (a) female defendant cases only; (b) male defendant cases only; (c) the Asian defendant case; (d) the Black defendant case; (e) the Hispanic defendant case; (f) the White defendant case; (g) the texting cases; (h) the shooting cases; (i) female respondents across cases; and (j) male respondents across cases.

We selected the final set of items to create a unidimensional scale that focused on perceptions of the defendant as a person, rather than perception of the crime or impact on the victim(s). The follow-up factor analyses yielded 10 items that loaded on one primary component in similar ways, resulting in a 10-item Perceptions of Criminal Defendants Scale (PCDS). The 10 items included: degree to which the defendant is feared, perception of cruelty, perception of the defendant as an evil person, perception of the defendant as emotionally cold, degree to which the defendant deserves mercy, perceived likelihood of committing future crimes, probability of prior criminal record, perception of trustworthiness, severity of appropriate bail for the defendant, and recommended type of sentence. See Table 2 for an overview of all factor analysis results.

**Study 2:**

**Scale Validation—Perceptions of Well-Known Criminal Defendants**

To validate the scale, we selected three publicly known criminal defendants (Plaxico Burress, Jeffrey Dahmer, and Bernie Madoff) who differed in how severely they seemed to be viewed by the public. To ensure that people ranked these criminals consistently, we asked 37 people in a convenience sample to rank the criminal defendants from most severe/most negative to least severe/least negative. Out of the 37 participants, 20 identified as women and 17 as men, with an age range from 18 to 78. Of the 37, 33 ranked Dahmer the worst, then Madoff, and then Burress. Four rated Madoff the worst, followed by Dahmer, and Burress. A Friedman's analysis indicated that the majority of participants ranked the criminal defendants in a consistent order, χ²(2, N = 37) = 66.86, p < .0001. Post-hoc analyses with Wilcoxon Signed Rank tests indicated that significant differences existed between all pairs of defendants: Dahmer versus Madoff, Z = - 4.77, p < .001; Dahmer versus Burress, Z = -5.82, p < .001; Madoff versus Burress, Z = -5.82, p < .001. All three defendants were used as the stimuli in this validation study.

**Method**

**Participants.** There were 206 total participants; 70 participants identified as women, 136 identified as men. They ranged in age from 19 to 67 years old, with a mean age of 32.47 (SD = 9.30). These participants were compensated $0.50 via Mturk. Among the participants, 154 identified as White, 25 as Asian, 11 as Black, 9 as Hispanic, and 7 as multiracial or another racial category.

**Materials and procedure.** An online survey was created that included biographies of the three well-known criminal defendants: Burress, Dahmer, and Madoff. The brief biographies used are presented in Appendix B. After a biography was presented, the survey included the 10-item PCDS developed in Study 1 with 6-point response scales. Participants were asked to rate the degree to which they agreed with each of the first nine statements, and to select a sentencing category for the 10th item. See Appendix C for the PCDS. A debriefing was also included at the end of the survey.
### TABLE 2

**Consistency of Item Loadings Across Development Analyses in Study 1 and Cross Validation Item Loadings in Study 2, Study 3, and Caposela et al. (2017)**

Principal Components Analysis Results for the 10 Items Loading Most Consistently on the Primary Component: Scale Development

<table>
<thead>
<tr>
<th>Items</th>
<th>Study 1 Full Data Set Across All Participants (N = 295)</th>
<th>Study 1 Subsets of Data</th>
<th>Study 2 Known Criminals Validation Study (N = 206)</th>
<th>Study 3 Subsets of Data (Males) (N = 134)</th>
<th>Study 3 Subsets of Data (Females) (N = 162)</th>
<th>Caposela, Segovia, Zhang, &amp; Crawley (2017) Male Defendants in their 50s (N = 134)</th>
<th>Caposela, Segovia, Zhang, &amp; Crawley (2017) Female Defendants (N = 438)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am fearful of this individual</td>
<td>.67</td>
<td>.63</td>
<td>.68</td>
<td>.72</td>
<td>.62</td>
<td>.78</td>
<td>.69</td>
</tr>
<tr>
<td>This individual appears to be cruel</td>
<td>.77</td>
<td>.75</td>
<td>.79</td>
<td>.81</td>
<td>.79</td>
<td>.83</td>
<td>.82</td>
</tr>
<tr>
<td>This individual is an evil person</td>
<td>.78</td>
<td>.76</td>
<td>.77</td>
<td>.79</td>
<td>.78</td>
<td>.80</td>
<td>.83</td>
</tr>
<tr>
<td>This individual is emotionally cold</td>
<td>.71</td>
<td>.66</td>
<td>.77</td>
<td>.69</td>
<td>.71</td>
<td>.80</td>
<td>.83</td>
</tr>
<tr>
<td>This individual deserves mercy (reversed)</td>
<td>.68</td>
<td>.64</td>
<td>.70</td>
<td>.59</td>
<td>.72</td>
<td>.86</td>
<td>.65</td>
</tr>
<tr>
<td>. . . likely to commit a crime in the future</td>
<td>.72</td>
<td>.71</td>
<td>.74</td>
<td>.71</td>
<td>.72</td>
<td>.73</td>
<td>.71</td>
</tr>
<tr>
<td>. . . probably has a prior record</td>
<td>.69</td>
<td>.68</td>
<td>.74</td>
<td>.71</td>
<td>.68</td>
<td>.75</td>
<td>.72</td>
</tr>
<tr>
<td>This individual seems trustworthy (reversed)</td>
<td>.56</td>
<td>.60</td>
<td>.54</td>
<td>.52</td>
<td>.54</td>
<td>.55</td>
<td>.56</td>
</tr>
<tr>
<td>I would set the bail very high . . . type of sentence . . . you recommend</td>
<td>.66</td>
<td>.65</td>
<td>.71</td>
<td>.60</td>
<td>.67</td>
<td>.70</td>
<td>.67</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>.94</td>
<td>.90</td>
<td>.92</td>
<td>.92</td>
<td>.92</td>
<td>.92</td>
<td>.93</td>
</tr>
</tbody>
</table>

### TABLE 2 (cont’d)

**Consistency of Item Loadings Across Development Analyses in Study 1 and Cross Validation Item Loadings in Study 2, Study 3, and Caposela et al. (2017)**

Validation Item Loadings on the Primary Component

<table>
<thead>
<tr>
<th>Items</th>
<th>Study 2 Known Criminals Validation Study (N = 206)</th>
<th>Study 3 Subsets of Data (Males) (N = 134)</th>
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<th>Caposela, Segovia, Zhang, &amp; Crawley (2017) Male Defendants in their 50s (N = 134)</th>
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<tbody>
<tr>
<td>I am fearful of this individual</td>
<td>.58</td>
<td>.71</td>
<td>.76</td>
<td>.67</td>
<td>.67</td>
</tr>
<tr>
<td>This individual appears to be cruel</td>
<td>.92</td>
<td>.88</td>
<td>.84</td>
<td>.89</td>
<td>.89</td>
</tr>
<tr>
<td>This individual is an evil person</td>
<td>.92</td>
<td>.82</td>
<td>.84</td>
<td>.87</td>
<td>.87</td>
</tr>
<tr>
<td>This individual is emotionally cold</td>
<td>.90</td>
<td>.79</td>
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<td>.65</td>
<td>.60</td>
<td>.75</td>
<td>.75</td>
</tr>
<tr>
<td>. . . likely to commit a crime in the future</td>
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</tr>
<tr>
<td>. . . probably has a prior record</td>
<td>.61</td>
<td>.75</td>
<td>.81</td>
<td>.70</td>
<td>.70</td>
</tr>
<tr>
<td>This individual seems trustworthy (reversed)</td>
<td>.76</td>
<td>.43</td>
<td>.48</td>
<td>.70</td>
<td>.70</td>
</tr>
<tr>
<td>I would set the bail very high . . . type of sentence . . . you recommend</td>
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<td>.74</td>
<td>.79</td>
<td>.77</td>
<td>.77</td>
</tr>
<tr>
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<td>.90</td>
<td>.92</td>
<td>.93</td>
<td>.93</td>
</tr>
</tbody>
</table>
The online survey opened with a consent statement. Each participant indicated consent, was randomly assigned to read one of the three biographies, and completed the PCDS for that one defendant. Following the survey, participants were debriefed.

Results
Mean scores on the PCDS indicated significantly different perceptions of these three defendants, \( F(2, 201) = 140.48, p < .001, \eta^2 = .581 \). The scale distinguished between these criminal defendants, with an overall Cronbach’s alpha of .94. The criminal defendants were rated comparably to their rankings in the pilot study, with Jeffrey Dahmer being rated most harshly \( (M = 5.22, SD = 0.71, N = 65) \), Bernie Madoff slightly less so \( (M = 4.50, SD = 0.62, N = 69) \), and Plaxico Burress most leniently \( (M = 3.04, SD = 0.96, N = 72) \); see Table 3. Tukey HSD post-hoc analyses indicated that all three means were significantly different from one another, \( p < .001 \).

Principal components analysis on these data indicated that the 10 items loaded on one component, which accounted for 69.49% of the variance, as presented in Table 2.

**Study 3: Scale Validation—Perceptions of Defendants by Age**

Taken together, Studies 1 and 2 provided evidence for consistent factor analysis results for the 10-item PCDS scale, regardless of the type of crime, race, or gender of the defendant, and regardless of the gender of the respondent. However, we had not demonstrated that the resulting component structure was the same for defendants of different ages, holding the crime constant. In addition, confirmatory factor analysis, across ages, would be useful to support the unidimensional nature of the scale. Finally, an indication that the PCDS measures something different from guilt would provide discriminant validity for the scale. Study 3 was designed to address these issues.

Participants were presented with a shooting scenario similar to that used in Study 1, with one of six defendants pictured: two older defendants and four teenage defendants. Given that factor analyses had already been conducted for adult defendants in Study 2, we decided to include four rather than only two teen defendants in Study 3 in order to increase the validity of the structure analyses by age. Headshots of Black and White men were selected from public websites to be comparable in pose. The men were either in their 50s or were teenagers. In a pretest of nine pictures, 24 participants provided valid ratings for all 9 pictures, using a 10-point scale from 10 (extremely attractive) to 1 (extremely unattractive). Ten participants self-identified as women and 14 as men, with ages ranging from 18 to 65 \( (M = 31.88, SD = 9.32) \); 20 of the 24 identified as White.

As a result of the pretest, three pictures were discarded because they were rated much lower than the others, \( F(1,23) = 243.63, p < .001, \eta^2 = .91 \). Six pictures were selected for use; the mean ratings for these six were not significantly different. These six included a 54-year-old Black man \( (M = 5.30, SD = 1.70, Mode = 6) \), a 50-year-old White man \( (M = 5.39, SD = 1.65, Mode = 6) \), a Black 16-year-old male teen \( (M = 5.25, SD = 2.05, Mode = 5) \), a second Black 16-year-old male teen \( (M = 5.29, SD = 2.14, Mode = 6) \), a White 18-year-old male teen \( (M = 5.04, SD = 1.88, Mode = 5) \), and a 16-year-old White male teen \( (M = 4.54, SD = 1.89, Mode = 5) \).

The dependent measures for this study included the PCDS, a rating of the likelihood that the defendant was guilty, and an estimate of defendant age.

**Method**

**Participants.** A total of 317 participants completed an online study via Mturk and were compensated $0.50; 128 identified as women and 186 as men. The mean age was 35.47 \( (SD = 11.96) \), with a range from 19 to 77. The most common racial identification was White \( (n = 241) \); other racial identities included Asian \( (n = 27) \), Black \( (n = 22) \), Hispanic \( (n = 17) \), multiracial and other identities \( (n = 10) \).

**Materials and procedure.** After reading the consent statement, participants were presented with a one-paragraph description of a male defendant who was accused of shooting and killing a drunk driver who had hit and killed the defendant’s young nephew. The defendant was described as either an “older man” or a “young man,” and a picture of

**TABLE 3**

<table>
<thead>
<tr>
<th>Defendants</th>
<th>M PCDS Score</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeffrey Dahmer</td>
<td>5.23 (SD = 0.71)</td>
<td>65</td>
</tr>
<tr>
<td>Bernie Madoff</td>
<td>4.50 (SD = 0.62)</td>
<td>69</td>
</tr>
<tr>
<td>Plaxico Burress</td>
<td>3.04 (SD = 0.96)</td>
<td>72</td>
</tr>
</tbody>
</table>

Note: All three mean scores are significantly different from one another, \( F(2, 201) = 140.48, p < .001, \eta^2 = .58 \).
the defendant was included with the paragraph to reinforce the age of the defendant. The defendant was pictured as either Black or White. Thus, there were six versions of the case.

After the case description, the 10-item PCDS was presented, followed by a 6-point rating scale asking the participant’s judgment of the likelihood that the defendant was guilty of homicide. Finally, participants were asked to estimate the age of the defendant, as a manipulation check.

The online survey opened with a consent statement. Each participant indicated consent, and was randomly assigned to one of the six versions of the survey. Following the survey, participants were debriefed.

Results
Structure. Principal components analyses were conducted separately for two subsets of the data (i.e., the older male defendants and the teenage defendants) in order to determine whether the structure was the same across age. Twenty-one participants either judged a teenage defendant to be over the age of 26 or judged the adult defendant to be younger than 30; these participants were deleted from the data set for all age-related analyses.

For the two older defendants, the factor analysis yielded one primary component with an eigenvalue significantly above 1. Nine of the 10 items loaded above .50 on that component. The 10th item (trustworthiness) loaded on a second component all by itself, with an eigenvalue of only 1.07. The primary component accounted for 53.99% of the variance, with high reliability (α = .90).

For the younger defendants, the factor analysis also yielded one primary component with an eigenvalue significantly above 1. Again nine items loaded above .50 on that component. Similar to the analysis for older defendants, the 10th item (trustworthiness) loaded on a second component all by itself, with an eigenvalue of 1.23. The primary component accounted for 57.69% of the variance, with high reliability (α = .92). These analyses indicate that the scale is structured similarly for both age groups, and has a structure similar to that found in Study 1. See Table 2.

Confirmatory Factor Analysis (CFA). We performed a CFA using AMOS SPSS with all of the data together to test the fit of a model with one latent variable, which we labeled as “criminal character,” underlying all 10 of the PCDS items. The criteria used to evaluate the model fit included the following: the chi-squared value (CMIN) and CMIN/df, which should be less than 5, and ideally less than 2; the comparative fit index (CFI), which should be greater than .90; root mean square of error approximation (RMSEA), less than .08 for a good fit and less than .05 for an excellent fit; goodness of fit (GFI), which should be greater than .90; and parsimony-adjusted goodness of fit (PGFI) larger than .50 (cf. Kämpfe & Mitte, 2009). After the first CFA, modification indices pointed to the covariance of four sets of variables: perception of the person as evil and as cold; judgment of the person deserving mercy and recommended type of sentence; estimates of future criminal behavior and assumptions of a past criminal record; perception of trustworthiness and deserving mercy. Although trustworthiness has a low loading (.37) with this model, the fit was better than when trustworthiness was taken out. The best model, therefore, has one latent variable, as presented in Figure 1. Loadings are above .50 for 9 of the 10 items. The chi-squared is significant, CMIN = 73.12, p < .001, with CMIN/df = 2.36. Other indices of fit are strong: CFI = .98, RMSEA = .07, GFI = .95, PGFI = .54.

Age and race effects on PCDS scores and guilt. Significant effects were found for age on the PCDS scores, F(1, 292) = 4.71, p = .04, η² = .015. The younger defendants were rated more harshly on the PCDS (M = 3.32, SD = .99) than the older defendants (M = 3.08, SD = .90).

No significant age or race effects were found for the ratings of guilt. Thus, the PCDS detected a difference by the age of the defendant that the single measure of guilt did not. This implies that the PCDS measures something other than just perceptions of guilt; the correlation between the PCDS score and guilt rating was small, albeit significant, r(315) = .21, p < .01.

Age and race effects on age estimation. Accuracy in age estimation was examined as a function of defendant age and race. Accuracy was defined as the estimated age minus the actual age of the defendant. There were significant effects for defendant age group; participants tended to estimate the older defendants as younger than they really were (M = 6.78, SD = 6.89), while estimating that the teens were older than they actually were (M = 4.34, SD = 2.85), F(1, 290) = 350.25, p < .001, η² = .547.

Although there was no main effect for defendant race, a significant interaction between defendant age group and race emerged, F(1, 290) = 4.92, p = .03, η² = .017. Black teens (M = 5.03, SD = 2.56) were erroneously estimated to be significantly older than were their White counterparts (M = 3.65,
$SD = 2.98)$, $t(158) = 3.13$, $p = .002$, $d = 0.50$. The accuracy for the older Black defendant ($M = 7.42$, $SD = 7.61$) and older White defendant ($M = 6.16$, $SD = 6.11$) was not significantly different, $t(132) = 1.06$, $p = .29$. See Figure 2.

**Discussion**

Numerous factors affect impressions of criminal defendants and thereby may impact the outcomes of criminal cases. There are considerations of race, gender, socioeconomic status, and age, as well as emotional presentation, past record and appearance (cf. Ruva & Guenther, 2015; Steffensmeier & Demuth, 2006) among others. In turn, characteristics of the individuals making outcome decisions are also relevant. For example, there are systematic differences in judgments by jurors who are death-qualified and jurors who are excludables (Ellsworth, 1991; Thompson, Cowan, Ellsworth, & Harrington, 1984) and various attitudinal effects based on the similarity between a juror and defendant (Taylor & Hosch, 2004). Many studies have been conducted in forensic psychology on the legal and extralegal factors affecting case outcomes. Commonly, the dependent variables in these types of studies have been judgments of guilt and/or appropriate sentence (cf. Miller et al., 2014). However, these measures do not adequately measure perceptions of defendants across situations, and are not relevant at all of the decision points affecting legal outcomes.

**Summary of Current Results**

There is a need for a valid and reliable measure of personal assessments of defendants that would be useful across types of criminal cases and for investigations of multiple decision points in a case. We addressed this need by creating a multi-item, one-dimensional scale to measure perceptions of criminal defendants—specifically perceptions of the character of the defendant. Items were selected after a series of factor analyses in Study 1 to ensure that the scale would have the same structure and utility regardless of defendant race, defendant gender, type of crime, or respondent gender. Study 2 confirmed that structure, and the results of Study 3 indicate that the structure is consistent across defendant age as well. Confirmatory Factor Analysis supported the one latent variable model for the scale.

The validity of the scale was demonstrated in Study 2; the scale significantly differentiated between criminal defendants known to be different in public opinion. Furthermore, in Study 3, the scale was sensitive to differences in perceptions based on the age of the defendant when a single
item of judgment of guilt was not. This provides evidence for the utility of the scale, and also provides some discriminant validity in distinguishing the scale measurement from simple guilt assumptions. Finally, across all three studies, the Perceptions of Criminal Defendants Scale (PCDS) had high internal reliability.

We note that the findings of Study 3 regarding age estimation for Black and White teens were similar to the results of previous research (e.g., Goff, Jackson, DiLeone, Culotta, & DiTomasso, 2014). The Black teens were judged to be older than they actually were, whereas White teens were judged more accurately. Goff et al. found racial biases in age for Black juveniles, associated with misjudgments of age and consequent attributions of maturity, lack of innocence, and responsibility for actions. Although we found differences in age estimation accuracy as a function of race for teen defendants, we did not find differences in PCDS scores for Black and White teens. This may raise a question regarding the validity of the PCDS with respect to measuring differences in perceptions of young defendants due to misinterpretations of age by race. However, one reason for the discrepancy between the perceptions of teen defendants in our study and the findings of Goff et al. is that in very few cases were the teens of either race judged as children in our study; only 6.79% of age estimates for the teens were under 17. The teen defendants in our study were perceived as young adults rather than as juveniles, which may mitigate the effects of age misjudgment.

We first studied the validity of the PCDS in Study 2; in that design, we used defendants known to be viewed differently in public opinion. Results indicated that the scale significantly differentiated the perceptions of character for these defendants. However, these three defendants had committed very different types of crimes (murder, fraud, and weapons offense), were very different from one another in public perception, were all well-known figures, and had already been adjudicated. Further validation with unknown defendants, and more similar crimes, would be a better test of the sensitivity of the PCDS.

A recent study by Caposela, Segovia, Zhang, and Crawley (2017) addressed this issue. These researchers used the PCDS to investigate the impact of criminal motive on perceptions of defendants. Participants were presented with a written description of either a violent (third-degree murder) or white-collar (securities fraud) crime. Within each crime type, one of three defendant motives was embedded in the description: prosocial (the crime was committed to aid another person), trauma (the crime resulted from a negative personal circumstance), or no extenuating motive (the crime was committed from rage or greed). After reading the description, participants completed the PCDS and were also asked to rate how guilty they thought the defendant was of the charge.

Results indicated that the PCDS was useful in measuring participants’ views of the defendants based on motive for both the violent and white-collar crime. As expected, criminal motive significantly affected perceptions of the defendants as measured by PCDS scores. Interestingly, ratings of guilt were significantly impacted by motive for the violent crime, but not for the white-collar crime. Thus, the PCDS picked up variations in perception that guilt ratings alone would have missed for the white-collar scenarios. These results are similar to those in Study 3 and support the validity and sensitivity of the scale, as well as provide more evidence that the scale is distinct from guilty judgments. Finally, a principal components analysis conducted with the Caposela et al. (2017) data resulted in the same unidimensional structure (see Table 2).

Across these studies, the utility of the PCDS in measuring perceptions of a defendant was validated across five different types of crime scenarios: serial murder, two types of financial fraud, weapons offense, and manslaughter. Furthermore, some items on the PCDS have face validity when considered in light of research findings on factors influencing legal judgments. For example, one theory to explain the greater leniency in sentencing shown to women is that, in complex cases with an overload of information, judges and prosecutors rely, in part, on preconceived attributions when making sentencing decisions. Two of these attributions are blameworthiness and dangerousness; judges tend to attribute less dangerousness to female defendants and thus may give women lighter sentences (cf. Rodriguez, Curry, & Lee, 2006). Given this effect, the PCDS items measuring fear of the defendant, the perceived attributes of cruelty and evil, and judgments of the likelihood of committing a crime in the future appear relevant and useful.

Limitations and Future Research
A key limitation of this research is the use of Mturk to solicit participants in all three studies. Mturk, a crowdsourcing platform sponsored by Amazon, has tremendous advantages. As discussed by Miller,
Crowe, Weiss, Maples-Keller, and Lynam (2017). Mturk is very efficient; large samples, with greater diversity than often available in college student samples, can be obtained quickly and at low cost. Mturk also allows for some filtering of participants and flexibility in study design; for research requiring large sample sizes such as scale creation, Mturk can be very effective.

Samples obtained via Mturk tend to be more educated and younger, to be over representative of White and Asian adults, and to have a disproportional representation of adults who are home during the day (Miller et al., 2017). Thus, Mturk samples are not representative of all adults in the United States. However, they have been found to be as reliable as samples solicited via traditional methods with respect to data quality (cf. Buhrmester, Kwang, & Gosling, 2011). In the current studies, the lack of diversity presented an obstacle to certain analyses. Given the limited racial diversity in the samples used in Studies 1, 2, and 3, it was not possible to verify that the PCDS has the same structure and utility for participants with diverse racial identities. Further research is needed with varying types of samples to ascertain the stability of the structure for different types of respondents.

Another limitation is that the PCDS needs further validation. In Study 3, we tested the structure of the scale, and examined its sensitivity in measuring differences in perception based on defendant age and race. Additional research is needed to test the sensitivity of the scale in measuring effects that might occur due to gender, economic class, racial identity, and other defendant variables. It remains to be fully demonstrated that the PCDS provides utility over and above single-item measures of guilt or recommended sentence. Study 3 suggests that the PCDS can measure effects that a judgment of guilt alone does not. Confirmation of this across a range of criminal defendant cases is needed.

We believe that the PCDS scale is useful and that it will detect perceptions of defendants that may not be captured by current methodologies, thus facilitating better understanding of case outcomes. An accurate measure of the types of attributes that a person perceives in a defendant’s character can help psychologists to predict whether or not a crime victim or observer will call the police, whether a citizen will be outraged or sympathetic toward a defendant in the news, whether a prosecutor will decide to charge a defendant with a lesser crime when there is possible discretion, and whether a juror will vote to convict or acquit.

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**References**


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**CRAWLEY, RAMOS, AND LEYVA | PERCEPTIONS OF CRIMINAL DEFENDANTS SCALE**

**WINTER 2017**

**PSI CHI JOURNAL OF PSYCHOLOGICAL RESEARCH**
Perceptions of Criminal Defendants Scale

| Crawley, Ramos, and Leyva |


APPENDIX A

Fictional Mug Shots Created by the Researchers and Crime Scenarios Used in Study 1

1. Asian Woman Shooting Son’s Killer
In Texas a mother is being charged with gunning down a suspected drunken driver who struck and killed her son. Lily XXXX, 28, is accused of taking the law into her own hands, executing the driver who authorities say killed her son, age 6, in a November 2015 crash. The accident happened near Waco, Texas. Lily’s car had run out of gas and she was outside of the car with her son waiting for AAA, when an alleged drunken driver lost control of the car and hit the son. Prosecutors say the enraged mother grabbed a gun and shot the 20-year-old in the head. Lily’s spouse stated that he was already devastated at the loss of their son and now he fears the loss of his wife, if convicted. The case features many complexities. Police never found the gun. Lily’s spouse said that she was trying to revive the son at the time of the crime. However, an eyewitness stated that he saw Lily with a gun, although he did not witness an actual shooting. These charges, at this point, are allegations and the trial is pending.

2. Black Man Shooting Son’s Killer
In Texas a father is being charged with gunning down a suspected drunken driver who struck and killed his son. Brandon XXXX, 28, is accused of taking the law into his own hands, executing the driver who authorities say killed his son, age 6, in a November 2015 crash. The accident happened near Waco, Texas. Brandon’s car had run out of gas and he was outside of the car with his son waiting for AAA, when an alleged drunken driver lost control of the car and hit the son. Prosecutors say the enraged father grabbed a gun and shot the 20-year-old in the head. Brandon’s spouse stated that they were already devastated at the loss of their son and now she fears the loss of her husband, if convicted. The case features many complexities. Police never found the gun. Brandon’s spouse said that he was trying to revive the son at the time of the crime. However, an eyewitness stated that he saw Brandon with a gun, although he did not witness an actual shooting. These charges, at this point, are allegations and the trial is pending.

3. Hispanic Woman Texting and Driving
A 22-year-old female has been charged in New Jersey with manslaughter, assault, and texting while driving in connection with a June 2013 fatality collision. It’s a moment the young driver can never take back, and one prosecutor said could have been avoided if she just put down her phone. According to the County prosecutor, Maria XXXX was texting on her cell phone when she lost control of her vehicle and collided with a car, killing the driver. Maria was allegedly looking at her cell phone and texting when she ran off the side of the road. When she returned her vehicle to the road, she struck a car heading in the opposite direction. These charges, at this point, are allegations and the trial is pending.

4. White Male Texting and Driving
A 22-year-old male has been charged in New Jersey with manslaughter, assault, and texting while driving in connection with a June 2013 fatality collision. It’s a moment the young driver can never take back, and one prosecutor said could have been avoided if he just put down his phone. According to the County prosecutor, John XXXX was allegedly texting on his cell phone when he lost control of his vehicle and collided with a car, killing the driver. John was allegedly looking at his cell phone and texting when he ran off the side of the road. When he returned his vehicle to the road, he struck a car heading in the opposite direction. These charges, at this point, are allegations and the trial is pending.

APPENDIX B

Criminal Defendant Biographies Used in Study 2 for Validation

Plaxico Burress: Plaxico Burress is a former NFL wide receiver. In 2008, during his tenure with the New York Giants, he accidentally shot himself in the right thigh at a Manhattan nightclub. Burress, 32 at the time, was charged with two felony counts of criminal possession of a weapon in the second degree. Burress pleaded not guilty.

Jeffrey Dahmer: Jeffrey Dahmer, aka the Milwaukee Cannibal, killed 17 people from 1978 to 1991. He raped, dismembered, and ate many of his victims. His method of killing was strangulation or cutting of victims’ throats. He pleaded not guilty by reason of insanity.

Bernie Madoff: Bernard “Bernie” Madoff is a former stockbroker and investment advisor. He is the admitted operator of a Ponzi scheme that is considered the largest financial fraud in U.S. history. On December 10, 2008, Madoff’s sons told authorities that their father had confessed to them that the asset management unit of his firm was a massive fraud, and quoted him as describing it as “one big lie.” In 2009, Madoff pleaded guilty to 11 federal felonies. He defrauded thousands of investors of billions of dollars; estimated actual losses to investors were $518 billion.

APPENDIX C

Perceptions of Criminal Defendants Scale (PCDS)

Please answer the next questions about the defendant in the current case. Please indicate how much you agree or disagree with each of the first nine statements using the following scale:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am fearful of this individual.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2. This individual appears to be cruel.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3. This individual is an evil person.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4. This individual is emotionally cold.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>5. This individual deserves mercy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6. I think this individual would be likely to commit a crime in the future.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7. I believe this individual probably has a prior criminal record.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8. This individual seems trustworthy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9. I would set the bail very high for this individual.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10. If guilty, what type of sentence would you recommend?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. No Sentence/No Punishment at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. No Jail Time; Probation and/or Community Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Minimum Jail or Prison Sentence With Possible Parole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Moderate Prison Sentence With Possible Parole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Maximum Prison Sentence With Possible Parole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Maximum Prison Sentence With No Possibility of Parole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To score: Reverse the scoring on items Number 5 and 8. Then, calculate the mean score across all 10 items. Higher scores indicate harsher judgments of the defendant.
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