To Plead or Not to Plead: A Comparison of Juvenile and Adult True and False Plea Decisions

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In a criminal justice system in which almost every adjudicated defendant, regardless of age, pleads guilty, it becomes important to understand the decision-making process underlying this choice. In the present research, we examined how age (juvenile vs. young adult), guilt versus innocence, and plea comprehension influenced the decision to plead guilty and the underlying plea rationale. We found that whereas age did not affect willingness to plead guilty when participants were asked to assume guilt in a hypothetical scenario, juveniles were more than twice as likely as young adults to plead guilty when asked to assume innocence. In addition, consistent with past research and developmental theory, juveniles were significantly less likely than adults to consider the short- and long-term consequences of the decision, and to understand and appreciate plea-related information. We also found that legal knowledge, after controlling for age, was positively (albeit weakly) related to plea decisions, but only for guilty participants. Implications for juveniles and adults involved in the criminal justice system, as well as wrongful convictions, are discussed.

Keywords: guilty pleas, defendant decision-making, juvenile and adult plea comprehension

As the 20th century grew to a close, two patterns in the criminal justice system emerged. First was that the number of defendants pleading guilty increased to all-time high levels, a trend which has continued through today (Oppel, 2011). In 1980, for example, 19% of federal criminal cases went to trial; by 2010, less than 3% went to trial (Rakoff, 2014). In state courts as well, about 95% or more of all convictions—in juvenile and criminal courts—are the result of guilty pleas (Bureau of Justice Statistics, 2013). Almost all convicted defendants plead guilty, thereby waiving many of their constitutional rights and trial safeguards in exchange for what most often is a reduction in sentences or charges (Redlich, 2010a). The second pattern to emerge was an increase in the number of identified wrongful convictions, in large part due to the application of DNA testing to forensic settings (see generally Cutler, 2011). As of April 2016, the National Registry of Exonerations recognizes 1,777 wrongful convictions since 1989. False admissions, which include false confessions and false guilty pleas, are a leading contributing factor, accounting for up to 27% of exonerations (see http://www.innocenceproject.org/causes-wrongful-conviction).

An examination of the wrongful conviction cases involving false (police-induced) confessions reveals that juveniles are at especial risk (Kassin et al., 2010). For example, 33% of Drizin and Leo’s (2004) sample of 125 proven false confessors were juveniles. A relatively unexplored question is whether youthful status is also a risk factor for false guilty pleas—that is, pleading guilty to crimes when factually innocent. Indeed, the question of whether juveniles are more likely than adults to plead guilty when factually innocent has not been sufficiently addressed. In the present study, we examine, first, whether juveniles are more or less likely to plead guilty when asked to assume they are guilty and innocent, and second, the rationales underlying plea decision making for juveniles and adults. We also assess comprehension of plea-relevant materials to determine whether this influences willingness to plead guilty.

Plea Decision Making

Every day, thousands of juvenile and adult defendants must decide whether to plead guilty (Lynch, 2003). Classic decision-making theories (e.g., rational choice, expected utility) predict that the decision to plead is driven by a desire to maximize benefits and reduce costs (see Landes, 1971; Weimer, 1978). To this end, there is some evidence that the plea decision depends on the perceived strength of evidence, the probability of conviction at trial (Landes, 1971; Rhodes, 1979; Smith, 1986), and the value of the plea offer (the distance between the sentence if convicted at trial and the plea sentence).

Defendants facing the plea decision often have a Hobson’s choice: plead guilty and get out of jail, or risk a harsher fate at trial (Gross, Jacoby, Matheson, Montgomery, & Patil, 2005; Redlich,
Age and Plea Decisions

The U.S. legal system has maintained segregated systems for juveniles and adults for more than 100 years. In large part, the reasoning behind this segregation is the recognition that juveniles are developmentally less mature (cognitively, socially, emotionally, and neurologically) than adults, which mitigates their culpability, and affects their ability to understand and appreciate legally relevant information and meaningfully participate in their own defense (e.g., Cauffman & Steinberg, 2012). Research has consistently demonstrated that juveniles are less active participants in legal cases (e.g., Tobey, Grisso, & Schwartz, 2000) and possess inadequate legal knowledge and understanding (Grisso et al., 2003; Steinberg & Scott, 2003). In comparison to adults, juveniles aged 15 and younger have deficits in their legal understanding, knowledge, and decision-making capabilities. These deficits have been shown for Miranda rights’ understanding and other interrogation-related matters (Grisso, 1981; Redlich & Goodman, 2003; Viljoen, Klaver & Roesch, 2005), adjudicative competence (e.g., Grisso et al., 2003), legal terminology comprehen- sion (Kaban & Shulman, 2004; Saywitz, Jaenicke, & Camparo, 2014), and other legal decision making (Grisso et al., 2003; Schmidt, Reppucci, & Woolard, 2003; Singleton, 2007).

These age- and competence-related differences can be expected to influence plea decision making and comprehension. More specifically, a valid plea decision requires an understanding of the plea, the rights one is waiving, and the collateral consequences, weighed against the alternatives (Redlich, in press). Concrete thinking deficits and immature development limit these abilities in some juveniles (Cauffman & Steinberg, 2012). Moreover, tender-of-plea forms and judicial plea colloquies—the mechanisms used to inform defendants of their rights and consequences of guilty pleas—may not sufficiently address the rights, consequences, and alternatives associated with guilty pleas because they are incomplete and/or incomprehensible. The forms use complex legal terminology and are written, on average, at reading levels three to six grades higher than the capabilities of most offenders (Redlich & Bonventre, 2015). One study found that juvenile court judges and attorneys believed that fewer than half of juvenile defendants understood most or all of the plea colloquy (Sanborn, 1992).

Deficiencies in legal understanding and appreciation can be theorized to affect plea decisions, and certainly the rationales underlying the decision. Specifically, defendants may be more willing to accept plea offers because they do not have the relevant information and/or do not understand the information provided (Bibas, 2011). In interviewing juvenile defendants preplea, Viljoen and colleagues (2005) found that those with less legal understanding were more likely to state they were unsure as to how they would plead than those with more understanding. In the present research, we examine how deficiencies in general legal knowledge and specific plea knowledge relate to plea decision making, and whether patterns change when individuals assume guilt or innocence. Overall, we expect juveniles’ plea comprehension to be lower than adults’ and that decreased comprehension will result in a higher willingness to plead guilty (particularly when assuming innocence; see Norris & Redlich, 2011).
than older ones to consider evidence in their (hypothetical) plea decision making. For example, within one of the scenarios provided, when the evidence was weak, 50% of 5th graders pleaded guilty, compared with 17%, 13%, and 8% of 7th graders, 9th graders, and adults, respectively. When the evidence was strong, however, plea rates approached ceiling levels for all age groups (and across differing scenarios).

Finally, within a sample of adult defendants who had pleaded guilty, Bordens and Bassett (1985) found that younger defendants were more likely than older ones to plead guilty to minimize suffering (in contrast to other reasons, including avoidance of felony convictions or lawyer’s advice). Indeed, age was “the only variable that showed any relationship at all with reason for [plea] acceptance” (Bordens and Bassett, 1985, p. 102). Factors found to not influence plea decision making included crime severity (ranging from thefts to DWIs to murders), education level, presence of a prior record, attorney type, and knowledge concerning the likelihood of conviction and sentences associated with plea and trial convictions.

Overall, the extant research is inconsistent regarding the relationship between age and plea decisions. However, with few exceptions, much of the research has been within a framework of presumed guilt. That is, the studies tend to employ methodologies asking mock or actual juvenile defendants what they would do when guilty, but not when innocent.

Innocence and Plea Decisions

Pleading guilty to crimes you did not commit—or false guilty pleas—undoubtedly exist (Garrett, 2008; Gross et al., 2005). Of the few studies that have been conducted with regard to culpability, it is clear that mock innocent defendants are much less likely to plead guilty than mock guilty defendants (Bordens, 1984; Gregory, Mowen, & Linder, 1978), but still as many as 56% of innocents in the laboratory have been induced to plead guilty (Dervan & Edkins, 2013). This comparative lack of innocents’ willingness to falsely plead guilty has been construed as a systematic and overly optimistic bias toward the odds of acquittal as well as a perceived unfairness of being wrongly accused (see Tor, Gazal-Ayal, & Garcia, 2010). Across four studies, Tor and colleagues (2010) found that participants who were asked to imagine they were innocent of a mock crime demonstrated increased risk-seeking (in that they were willing to take their chances at trial and not accept pleas) than those asked to imagine they were guilty. Tor et al. (2010) reasoned that innocents prefer risking an unfavorable disposition at trial because they perceive the choice between plea and trial (two negative outcomes) to be substantively unfair.

False guilty pleas are essentially false confessions, though there are important differences (Redlich, 2010a). As stated by Tepfer, Nirider, and Tricarico (2010), “The similarities between the two are unmistakable, as a false guilty plea can be thought of as nothing more than a specific type of false confession” (p. 913). With regard to age and false guilty pleas, to our knowledge, there have been three investigations addressing this relationship. All three revealed nonsignificant differences between juveniles and adults in rates of false guilty pleas. First, among the exonerations in the National Registry of Exonerations, the correlation between age at time of conviction and false guilty pleas is not significant (see www.exonerationregistry.org/). Second, Tepfer et al. (2010) examined a sample of 103 youths aged 20 years and younger who were wrongly convicted and later exonerated. They found that 6.8% had allegedly falsely pled guilty, whereas a comparison sample of adult exonerees had a false guilty plea rate of 7.9%, a nonappreciable difference. Third, Malloy and her colleagues (2014) did not find age (within a limited age-range sample of 14- to 17-year-old juvenile offenders) to influence self-reported false (or true) guilty plea rates.

In hypothesizing relations between age group (juveniles vs. adults) and pleading guilty, there are three possibilities (see also Redlich, 2010b). First, juveniles could be predicted to be more likely to plead guilty—truly and falsely—than adults. As reviewed above, there is some evidence indicating that juveniles are more likely than adults to plead guilty when guilty (Grisso et al., 2003). Further, a leading risk factor for false confessions is youth (Gross et al., 2005; Owen-Kostelnik, Reppucci, & Meyers, 2006). As mentioned, juveniles are overrepresented in proven false confession cases (Drizin & Leo, 2004; Kassin et al., 2010). And in the laboratory, preteens and teens have been found to be more likely to falsely take responsibility for a mock crime in comparison to adults (Redlich & Goodman, 2003). Thus, because of an increased susceptibility to true guilty pleas and to false confessions, one could hypothesize that age and likelihood of guilty pleas are negatively related (see also Drizin & Luloff, 2007).

Another reason why age and likelihood of pleading guilty may be expected to be negatively associated relates to the rationales underlying the decision and the concept of comparative fairness; in this instance, “evaluations of plea offers vis-à-vis offers made in similar cases” (Tor et al., 2010, p. 107). To examine this notion in relation to plea decisions, Tor and colleagues (2010) manipulated whether the sentence associated with a plea was described as shorter than, similar to, or longer than sentences typically offered by the prosecutor. They found that, despite the value of the sentence being fixed, adults who were offered the comparatively “worse” and “similar” deals were significantly less likely to plead guilty than those offered the “better” deal, a pattern that emerged for both guilty and innocent participants. Because juveniles may be particularly likely to base decisions on comparative evaluations, in the present research we investigate whether manipulations of comparative fairness explain potentially differential plea rates among juveniles and young adults. Social influence and conformity to norms become very important in adolescents’ decision making (Steinberg, 2005), and thus, juveniles are expected to be impacted more than adults by manipulations of comparative sentences.

The second hypothesis concerning age and plea decision making is that juveniles will be significantly less likely to plead guilty than adults. The same developmental limitations that place juveniles at risk for not being competent (e.g., in assisting in their own defense) may also place them at risk for not recognizing, and therefore not acting in, their own best interest. As discussed, going to trial is a riskier option than accepting a plea; trial acquittals account for only 1% of all criminal justice outcomes and 25% of trial outcomes (Cohen & Reaves, 2006). Given that juveniles as a group are characterized as risk-seekers (e.g., Steinberg, 2005), it is possible that juveniles will be less likely to accept plea offers compared with adults. This sentiment is expressed in an article titled I Ain’t Taking No Plea: The Challenges in Counseling Young People Facing Serious Time (Smith, 2007).
Regarding false guilty pleas specifically, another reason to suspect that juveniles will be significantly less likely than adults to plead guilty when innocent relates to the rationales underlying the decision. Peterson-Badali and Abramovitch (1993) examined children’s and adult’s reasons behind guilty plea decisions. They found that children in grades five, seven, and sometimes nine (mean ages 10.7, 13.0, and 14.7 years, respectively) were more likely than adults to refer to a person’s actual guilt as a reason for pleading guilty. The authors suggested that the younger participants had “not made the distinction between legal and moral domains of reasoning” (p. 549). Thus, for false guilty pleas, but not true guilty pleas, younger (and innocent) persons may rely on a presumption of innocence as a defense and refuse to plead guilty based on moral reasons; that is, only the guilty should plead guilty.

Finally, a third hypothesis is that the likelihood of pleading guilty will not be affected by age group status, as found by the research on age and guilty pleas reviewed above (i.e., Malloy et al., 2014; Tepfer et al., 2010; Viljoen et al., 2005). In the present study, we examine which of these three alternate hypotheses between age and guilty pleas (positive, negative, or no significant relations) will find support.

Method

Participants

Participants included 189 individuals, split into two age groups: 89 juveniles (aged 13–17 years), and 100 young adults (aged 18–24 years). As shown in Table 1, juveniles and young adults were similar in most respects, including gender, percent ever arrested, average grades in school, level of mother’s education, and self-reported impulsivity. (Father’s education was also asked about, but a significant minority [20%] did not know their father’s education.) However, a higher proportion of the juveniles were minorities than the young adults (see Table 1).

Measures

Hypothetical scenario. The hypothetical scenario concerned a robbery in a jewelry store (see Appendix), involving three randomly assigned manipulations. First, for the guilt–innocence manipulation, half of the participants were asked to imagine they were innocent and half that they were guilty. Second, for the plea deal manipulation, participants were informed that the plea offer either included jail (i.e., 5 years’ probation and two years in jail or juvenile detention) or did not include jail (i.e., 5 years’ probation). Third, for the plea label manipulation, participants were either told that the deal is “really good” or that the deal is “fair but not great” “compared with what others charged with the same crime are typically offered.” All participants were told that their chance of being found guilty at trial was high (75%) and that their sentence would be 5–7 years in prison if convicted at trial.

Demographics. Participants were asked demographic questions, including items about age, gender, race/ethnicity, educational attainment of participant/parent, school grades, and previous legal experience. For race, participants were presented with a laminated card listing six races (e.g., Caucasian/White; African American/Black), plus an “other” race to specify. Participants were read the race options aloud and asked to indicate all which applied to them. For ethnicity, participants were asked whether or not they were Hispanic/Latino(a). For analysis, race/ethnicity was dichotomized into majority (White and non-Hispanic) versus minority (non-White and/or Hispanic). For educational attainment, participants were asked questions regarding the highest grade they completed in school and the highest level of education attained by their mother and father, respectively (with nine options ranging from 0–11th grade to postgraduate degree). They were also asked whether they mostly get/got A’s, B’s, C’s, D’s, or F’s in school.

Plea decision, tender of plea, and judicial oral plea colloquy. Participants entered both a written and an oral plea of Guilty or Not Guilty by either (a) waiving their rights and pleading guilty or (b) invoking their right to a trial and pleading not guilty. After the hypothetical scenario, participants read a tender of plea form, which discussed the rights and consequences associated with accepting a plea offer, and entered a written plea decision. The oral plea colloquy was verbatim the same as the tender of plea form except for minor changes made so it could be read aloud. The form/colloquy had a Flesch-Kincaid reading level of 9th grade, was 2.5 pages, and 970 words (copies can be obtained upon request to the first author). There were three main headings: (a) “Waiver of Constitutional Rights” (ending with the statement: “I know and understand that by pleading guilty I would be waiving and giving up all the constitutional rights as explained above”); (b) “Consequences of Entering a Guilty Plea”; and (c) “Defendant’s Certification of Voluntariness.” The form/colloquy ended with the statement, “With knowledge of the above facts and considerations, I wish to 1) Waive my rights and plead guilty; or 2) Invoke my

Table 1

Demographic Characteristics of Participants by Age Group

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Juveniles (n = 89)</th>
<th>Young adults (n = 100)</th>
<th>Significance test</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>% male</td>
<td>51.7%</td>
<td>51.0%</td>
<td>χ²(1) = 0.01</td>
<td>Φ = .01</td>
</tr>
<tr>
<td>% minority</td>
<td>73.0%</td>
<td>59.0%</td>
<td>χ²(1) = 4.11*</td>
<td>Φ = .15</td>
</tr>
<tr>
<td>% ever arrested</td>
<td>28.1%</td>
<td>32.0%</td>
<td>χ²(1) = 0.34</td>
<td>Φ = .04</td>
</tr>
<tr>
<td>Average grades in school (SD)</td>
<td>1.90 (0.71)</td>
<td>1.89 (0.76)</td>
<td>F(1) = 0.001</td>
<td>d = .01, 95% CI [-0.27, 0.30]</td>
</tr>
<tr>
<td>Average level of mother’s education (SD)</td>
<td>4.38 (2.43)</td>
<td>4.54 (2.48)</td>
<td>F(1) = 0.19</td>
<td>d = -.06, 95% CI [-0.35, 0.66]</td>
</tr>
<tr>
<td>Average impulsivity (SD)</td>
<td>22.51 (4.54)</td>
<td>21.48 (4.69)</td>
<td>F(1) = 2.33</td>
<td>d = .22, 95% CI [-0.06, 0.51]</td>
</tr>
</tbody>
</table>

Note. Average grades in school: 1 (Mostly As) to 5 (Mostly Fs). Average level of mother’s education: 1 (less than high school) to 9 (postgraduate). Impulsivity: higher scores indicate more impulsivity. CI = confidence interval.

*p < .05.
right to a trial and plead not guilty.” For the written plea, participants were prompted to circle one of the two plea options, and then sign and date the written form. For the oral plea, participants provided an answer aloud. Later, in the interview phase, participants’ perceived voluntariness and confidence of their decision were measured on 20-point scales (1 = not at all voluntary/confident to 20 = extremely voluntary/confident).

Plea rationale. Participants were first given two opportunities to explain in their own words why they did or did not plead guilty, which was then followed up with more specific closed-ended questions about their plea reasoning. Participants were asked to rate the degree to which several statements reflected their plea decision making on a scale of 1 (not true at all) to 5 (extremely true). There were seven closed-ended statements, which differed based on whether they chose to plead guilty or not guilty, but were matched for consistency and content. For example, “I thought the plea offer was a good deal” and “I was thinking about the long-term benefits of pleading guilty” were statements for those who pled guilty, in contrast to “I did not think the plea offer was that good of a deal” and “I was thinking about the long-term consequences of pleading guilty” for those who pled not guilty.

Plea knowledge. Plea knowledge consisted of separate measures, which included assessments of (a) vocabulary words used in the tender-of-plea form and oral plea colloquy, (b) plea comprehension, and (c) adjudicative competence. The vocabulary measure was a list of 19 words directly from the tender-of-plea form/colloquy that participants were read and asked to define. Example words included liable, impartial, sentence, self-incrimination, and right. Participants were instructed to define words as they “relate to court procedures, the legal system, or pleading guilty.” Participants were also told that they could say “I don’t know” if they did not know what the word meant. Definitions were scored as 2 for correct, “1” for partially correct, or “0” for incorrect responses. “I don’t know” answers were scored as incorrect. To determine whether definitions were correct, we used Black’s Law Dictionary (Garner, 2014), TheFreeDictionary online legal dictionary, and The Living Word Vocabulary: A 44,000 Word Vocabulary Inventory (Dale & O’Rourke, 1981), which defines words and phrases as well as assigns grade-level and difficulty ratings to each. This method for defining and coding legal terms and phrases has been used in past research (Kaban & Quinlan, 2004). An example of an incorrect definition of liable would be “to rely on,” a partially correct definition would be “whether it’s your fault,” and a correct definition would be “held accountable” or “legally responsible.” A total vocabulary score was created by summing up scores; possible range is 0 to 38. The Cronbach’s alpha for this summary score is .90.

Plea comprehension was measured with 16-True–False-I-Do-Not-Know statements assessing participants’ accuracy in understanding the plea process, requirements, and consequences (e.g., “guilty pleas do not have to be the voluntary choice of the defendant”). These questions were a subset of those used by Redlich and Summers (2012), which have demonstrated sufficient internal consistency. Answers to the questions could be found in the tender-of-plea form/colloquy. Answers were scored as incorrect (0) or correct (1); “I don’t know” answers were scored as incorrect. A summary score was created by summing the 16 correct–incorrect scores; scores in the present study ranged from 4 to 16.

The MacArthur Competence Assessment Tool–Criminal Adjudication (MacCAT-CA; Poythress et al., 1999) was used to measure adjudicative competence. The MacCAT-CA evaluates (a) understanding, (b) reasoning, and (c) appreciation as it pertains to the Dusky v. US (1960) standard of adjudicative competence (see Bonnie, 1992). The MacCAT-CA was developed as a two-part research instrument for use with adult defendants with and without mental health problems. In the first section, participants are read a brief story about two men who get into a fight at a bar and are then asked questions pertaining to their Understanding (e.g., what are the roles of the judge, jury, and attorneys) and Reasoning (e.g., what information defendant should tell his lawyer) based on this story. The second section asks Appreciation questions related to the defendant’s own pending criminal case. The questions in the latter section were not appropriate for the present study because participants had already made their (hypothetical) plea decision, so participants in this sample were not asked these questions. The MacCAT-CA, which has been used with juveniles (e.g., Grisso et al., 2003), has well-established psychometric properties. Understanding and Reasoning have strong intrarater reliability correlations, ranging from very good to excellent (i.e., from .85 to .90), and internal consistency, with alphas of .85 and .81, respectively (see Otto et al., 1998).

Impulsivity. To measure impulsivity, participants rated 10 impulsivity-related statements on a scale of 1 to 4, where 1 = Rarely or Never, 2 = Occasionally, 3 = Often, and 4 = Almost Always or Always. Redundancy was built into these statements to assess the same construct (e.g., “I act ‘on impulse’,” “I act on the spur of the moment,” “I find it hard to sit for long periods of time”). This impulsivity measure was taken from the MacArthur Foundation’s Clinically Useful Actuarial Measure of Risk developed for a study on Violence Risk Assessment (Monahan et al., 2000), which they adapted from the 30-item Barratt Impulsiveness Scale (BIS-11; Barratt, 1994; Patton, Stanford, & Barratt, 1995).

Manipulation checks. Participants were asked four True–False-I-Do-Not-Know manipulation check questions about the hypothetical robbery scenario. Participants were asked questions regarding their guilt-innocence (“I was asked to pretend I was innocent of the crime”), plea deal (“the plea deal I was offered was 5 years on probation and 2 years in jail”), and comparative fairness (“My lawyer told me that in comparison to others charged with this crime, my plea offer was really good”). “I don’t know” answers were scored as incorrect.

Procedures

The University human subject review board approved all study procedures and instruments. Juvenile and adult participants were recruited from the nearby community of the authors’ university. Thirteen community organizations for at-risk youth and young adults served as places of recruitment. Efforts involved posting flyers, handing out information sheets, and making 3-min speeches about the study and how to contact researchers if interested. A minority of participants were also recruited from Craigslist.

Interested participants came into the lab for a one-time session. Informed consent/assent was administered and obtained from participants and parents; there was no deception and all were told that the study was examining how teens and young adults make decisions whether to go to trial or plead guilty. Participants were
randomly assigned into one of eight conditions by varying guilt–innocence, the plea deal (some jail–no jail), and plea label (really-good–fair–plea offer), with roughly equal numbers assigned across age group and gender.

First, participants were asked demographic questions. Second, the interviewer read the hypothetical case aloud to the participant while they read along (see Appendix). Third, participants read the written tender-of-plea form, were asked if they had any questions after reading the form, and were then asked to enter a written plea of Guilty or Not Guilty. Then, a judge (a female confederate wearing a black robe and holding a gavel) entered the room and conducted the oral plea colloquy. Participants were asked to rise and answer the judge’s questions, including the final question about whether they wanted to waive their rights and plead guilty or invoke their rights and plead not guilty. At three separate times, judges asked participants if they had any questions about their rights or consequences of pleading guilty (in addition to specific points of understanding; e.g., “Do you understand that you will only be allowed to withdraw your plea if you show that it was not knowingly and voluntarily made?”).

Next, participants were interviewed. They were asked about the rationales underlying their plea decision and about their perceived voluntariness of, and confidence in, their plea decision. Participants were also asked the manipulation check questions, interviewed about their plea understanding via the plea knowledge measures described above, and assessed on their adjudicative competence using the MacCAT-CA. Upon completion, participants were debriefed and paid $15 for their participation. The entire session lasted 73 min (SD = 13), on average.

Results

As noted above, four manipulation check questions were asked. In regard to the guilt–innocence manipulation, 79% of the sample responded correctly. For the comparative fairness manipulation, 85% of the sample was correct. For the jail–no jail manipulation, two questions were asked, and 84% to 91% of respondents were correct. The main analyses are conducted only with participants who correctly answered all four manipulation questions (n = 115). However, accuracy on the manipulation checks was significantly correlated with self-reported grades, r = −.34, p < .0001 and with all of the knowledge based measures (plea comprehension, vocabulary, and MacCAT-CA scores), rs ≥ .43, ps ≤ .0001. Thus, so as not to exclude participants with potentially lower intellect (and perhaps those who generalize the most to actual offender samples), analyses were also conducted with the entire sample. When findings diverge from those conducted with the subsample who accurately answered all manipulation checks, differences are noted.

For the entire sample, juveniles and young adults differed significantly by minority status (see Table 1); in the subsample of those who correctly answered the manipulation checks, minority status did not differ by age group, χ²(1, N = 115) = 2.63, p = .11, Φ = .15. (The other demographic characteristics listed in Table 1 remained nonsignificant by age group in the subsample of those who answered all manipulation check questions correctly.) Nonetheless, we examined the relationship between minority status and willingness to plea, the main dependent measure. Minority status did not influence the dichotomous plea decision. χ²(1, N = 115) = 0.00, p = 1.00; Φ = .00; 40% of minorities and nonminorities each

plea guilty. Thus, minority status is not considered further. In addition, we examined the relationship between impulsivity scores and willingness to plea and found it to be nonsignificant, Spearman’s r = −.01, p = .94 (when guilty, r = −.10, p = .34; when innocent, r = .09, p = .38).

Participants entered both a written (on the tender-of-plea form) and an oral (to the judge) plea decision. In the full sample, only 11 participants (5.8%; seven of whom were adults) changed their decision (in the analysis subsample of 115 participants, four of these 11 participants remained). Eight participants who pled guilty on the written form changed their plea to not guilty when in front of the judge, whereas three people did the opposite. Because so few people changed their decision and because the oral plea was the final decision, the oral plea was used in the analyses below. Overall, 47.8% of participants (55 of 115) pled guilty when in front of the judge. However, there were several factors that served to increase or decrease this overall rate.

Plea Decision and Age Group

We first conducted a chi-square analysis between age group and plea decision. The difference between juveniles and young adults was not significant (see Table 2). Our next step was to examine plea decision differences by age group and the manipulated conditions. We note here that the same jail–no jail (plea offer) and the really-good–fair (plea label) manipulations did not directly influence the plea decision, χ² ≤ 2.40, ps ≥ .12, Φs ≤ .14 (i.e., when age group and guilt–innocence were not considered). However, the guilt–innocence manipulation strongly influenced willingness to plea, χ²(1, N = 115) = 28.87, p < .0001, Φ = .50. Whereas 71.0% of participants in the guilty condition pled guilty, 20.8% of participants in the innocent condition did so. With the full sample, results remained the same with a threelfold difference between plea rates for the guilty and the innocent.

Guilt–innocence conditions. When the guilt–innocence manipulation was added as a level to the chi-square analysis with age group, an interaction emerged (see Table 2). Specifically, when participants were asked to assume guilt, the difference in decisions to plead guilty remained nonsignificant between juveniles and young adults, χ²(1) = 0.07, p = .79. When asked to assume innocence, however, juveniles were 2.47 times more likely to plead...
guilty than adults, $\chi^2(1) = 2.80, p = .09, \Phi = .23$. Results remained the same when rerun with the entire sample (see Table 2).

**Some jail–no jail conditions.** We next added the plea deal manipulation as a level of the chi-square analyses with age group. In the no-jail condition, juveniles and young adults did not significantly differ in their likelihood to plead guilty, $\chi^2(1) = 0.71, p = .40, \Phi = .12$. In the same-jail condition, however, juveniles were significantly more likely to plead guilty than adults, $\chi^2(1) = 5.04, p = .025, \Phi = .28$ (see Table 2); an effect which remained significant when all participants were included.

We also conducted a chi-square analysis with the guilt and the jail manipulations and plea decision, revealing that willingness to plead guilty was affected by these two manipulations. Specifically, when guilty, participants were more likely to plead guilty when the plea offer did not include jail time (86.2%) than when the plea offer included jail time (57.6%), $\chi^2(1) = 6.14, p = .013, \Phi = .32$. However, when innocent, participants were not significantly more or less likely to plead guilty both when there was jail time (23.3%) and was not jail time (17.4%), $\chi^2(1) = 0.28, p = .60, \Phi = .07$. Because age group interacted with both the plea offer and the guilt–innocence conditions to influence plea rates, we conducted chi-squares of the plea offer and guilt manipulations separately for juveniles and young adults. For young adults, the same pattern was found. Specifically, when guilty (but not when innocent), young adults were significantly more likely to plead guilty when the plea offer did not include jail time (90.9%) than when the offer did include jail time (42.9%), $\chi^2(1, N = 67) = 9.85, p = .002, \Phi = .52$. For juveniles, the amount of jail time, when either guilty or innocent, did not significantly influence plea rates, $\chi^2(1, n = 48) \leq 0.27, p_s \leq .60$. Results remained the same when the entire sample was analyzed.

**Really-good–fair plea offer manipulation.** Next, we conducted chi-square analyses with age group and plea decision, adding the plea label manipulation as a level. No significant effects of age group were found for this manipulation (see Table 2). $\chi^2$s (1) $\leq 0.59, p_s \geq .44$. Plea decisions were also examined by comparative fairness for guilty and innocent subjects separately, and no significant results emerged, $\chi^2(1) \leq 0.89, p_s \geq .34$. Results did not change when the entire sample was included.

**Plea decision confidence and voluntariness.** Participants were asked to rate the confidence and voluntariness of their plea decision on a scale of 1 (not at all confident/voluntary) to 20 (extremely confident/voluntary). Separate 2 (age group) $\times$ 2 (guilt–innocence) $\times$ 2 (plea offer) $\times$ 2 (plea label) analyses of variance (ANOVAs) were conducted, using these two scales as dependent measures.

For the confidence in decision analysis, the only significant effect to emerge was a three-way interaction between age group, guilt manipulation, and plea label manipulation, $F(1, 99) = 6.14, p = .015$, partial $\eta^2 = .06$. In examining these interactions via ANOVAs isolating age group within conditions, only one significant difference emerged by age group. Specifically, adults, $M = 16.76 (SD = 3.09)$, were significantly more confident than juveniles, $M = 14.20 (SD = 4.04)$, $F(1, 30) = 4.12, p = .05, d = .72$ (95% confidence interval CI [0.02, 1.42]) when innocent and the plea offer was labeled as “really good.” When guilty, regardless of the plea label, juvenile and young adults did not differ in their confidence levels. Similarly, when innocent and the plea was described as a fair offer, confidence was unaffected by age group (all $p_s \geq .12$). When this ANOVA concerning confidence scores was rerun using the entire sample, the only significant effect to emerge was a main effect of age group. Juveniles, $M = 14.76 (SD = 4.43)$ were significantly less confidence in their plea decisions than adults, $M = 16.40 (SD = 3.33), F(1, 173) = 8.55, p = .004, d = .42$ (95% CI [0.13, 0.71]).

For the voluntariness analysis, again, only one significant effect emerged. Specifically, the interaction between age group and the jail manipulation was significant, $F(1, 99) = 5.43, p = .022$, partial $\eta^2 = .05$. In the same-jail condition, adults, $M = 18.17 (SD = 4.15)$ perceived their plea decision as more voluntary than juveniles, $M = 14.73 (SD = 5.46), F(1, 61) = 7.81, p = .007, d = .70$ (95% CI [0.19, 1.21]). In the no-jail condition, perceived voluntariness did not significantly differ between juveniles, $M = 17.27 (SD = 3.35)$ and adults, $M = 16.92 (SD = 4.57), F(1, 50) = 0.07, p = .79, d = .08$ (95% CI [−0.52, 0.68]). When the ANOVA was rerun with the entire sample, this interaction effect remained significant ($p = .022$), in addition to the main effect of age group reaching significance (juveniles $M = 15.89 (SD = 4.83)$; adults $M = 17.37 (SD = 4.22), d = .33$ (95% CI [0.04, 0.61]). There were no other significant main or interaction effects.

**Plea Knowledge.** There were a total of four measures relevant to knowledge: vocabulary, plea comprehension, and the MacCAT Reasoning scores. These four measures were significantly correlated, $r_s$ ranged from .22 to .61, $p_s \leq .02$. Thus, they were entered in a multivariate analysis of variance (MANOVA) with age group and the three manipulations as independent factors. Significant multivariate effects were found for age group only, $F(4, 96) = 3.94, p = .005$, partial $\eta^2 = .14$. No other significant multivariate main or interaction effects emerged.

Three of the four univariate effects of age group were significant. Means, standard deviations, and effect sizes are presented in Table 3. With the exception of MacCAT Reasoning scores, juveniles scored significantly lower on plea and legal knowledge than adults. When the same MANOVA was rerun with the entire sample, again only the multivariate effect of age group was significant. However, all univariate effects were significant, including the effect of age group on MacCAT Reasoning scores: juveniles, $M = 12.50 (SD = 2.89)$, young adults, $M = 13.41 (SD = 2.12), F(1, 172) = 5.62, p = .019, d = .36$ (95% CI [0.07, 0.65]).

It was also of interest to determine if knowledge was related to the plea decision itself. Because there were clear age differences in knowledge, partial correlations, controlling for participant age, were conducted to examine relations between the four knowledge scores and the plea decision. None of the correlations were significant, $r_s \leq .14, p_s \geq .13$. As shown in Figure 1, when the same correlations were recomputed for guilty and innocent participants separately, divergent patterns emerged. None, however, reached significance, as the sample sizes decreased when separate by the guilt–innocence manipulation. When the entire sample was included, however, higher scores on the MacCAT Understanding, $r = .30, p = .005$ and Reasoning scores, $r = .32, p = .002$, and vocabulary scores, $r = .24, p = .02$ were significantly correlated with the decision to plead guilty, but only when participants were asked to assume guilt. When asked to assume innocence, all
knowledge scores were negatively correlated with the plea decision, but none reached significance ($rs \leq -0.09, ps \geq .36$).

### Plea Rationales

As described above, participants who pled guilty and who pled not guilty were asked separately about seven different possible reasons for their decision. Because the primary focus of this paper is on differences between juveniles and adults, and guilt–innocence, we conducted a series of separate 2 (age group) $\times$ 2 (guilt–innocence manipulation) ANOVAs. It was not possible to include the jail and diversion manipulation in these analyses because the split samples (i.e., those who pled guilty vs. not guilty) Responses to the seven reasons were generally not significantly correlated with one another (e.g., among 21 possible correlations for reasons for pleading not guilty, only two significant correlations were found, $rs \leq .40$). As a result, MANOVAs were not appropriate.

#### Reasons for pleading not guilty.

Among the seven reasons supplied for pleading not guilty, ANOVAs revealed significant main effects for three. Means and standard deviations for juveniles and adults, and the guilt–innocent manipulation are shown in Table 4. There were no significant interaction effects. Results generally remained the same when the entire sample was analyzed (also shown in Table 4).

For age group, there was only one significant main effect (for pleading not guilty), pertaining to the rationale, “I was thinking about the long-term consequences of pleading guilty,” $F(1, 56) = 6.38, p = .014, d = .73$ (95% CI [0.19, 1.26]). In comparison to juveniles, young adults were more likely to endorse pleading not guilty because of this reason. There was also a nonsignificant trend (i.e., $p \leq .10$) for the rationale, “I thought if I did not accept the offer, the DA would offer a better deal”; juveniles tended to be more likely than adults to endorse this rationale, $d = .52$, 95% CI [−0.02, 1.04]. In addition, when the entire sample was included and the analyses rerun, juveniles tended to be less likely than adults to endorse these two rationales: “I was thinking about what would happen in the near future” ($d = .48$, 95% CI [0.10, 0.86]) and “I did not think the plea offer was that good of a deal” ($d = .29$, 95% CI [−0.09, 0.67]; see Table 4).

For the guilt-innocent manipulation, two significant main effects emerged (see Table 4). Guilty participants, in comparison to innocent ones, were more likely to endorse pleading not guilty because “I thought if I did not accept the plea offer, the DA would offer a better deal,” $F(1, 56) = 8.00, p = .006, d = .84$ (95% CI [0.25, 1.40]). In contrast, innocent participants were more likely than guilty participants to think “the truth would come out at trial,” $F(1, 56) = 27.02, p < .0001, d = 1.52$ (95% CI [0.88, 2.11]). These findings remained significant when rerun with the entire sample.

#### Reasons for pleading guilty.

Among the seven reasons supplied for pleading guilty, when only the subsample of those who correctly answered the manipulations were included, ANOVAs revealed no significant main effects of age group (Table 4, nonbolded rows). However, there was a significant interaction between age group and the guilt manipulation, as well as one significant main effect of the guilt-innocent manipulation. Participants in the guilty condition were more likely to endorse the rationale, “It was the right thing to do” than those in the innocent condition, $F(1, 51) = 9.95, p = .003, d = 1.14$ (95% CI [0.43, 1.81]).

The significant interaction concerned “I did not think my public defender lawyer would do a good job,” $F(1, 51) = 4.84, p = .032$, partial $\eta^2 = .07$. When innocent, the difference between juveniles, $M = 3.00$ (SD = 1.41) and adults, $M = 2.00$ (SD = 0.00) was not significant, $F(1, 11) = 1.91, p = .20$. When guilty, adults, $M = 3.08$ (SD = 1.57) were significantly more likely than juveniles, $M = 1.89$ (SD = 1.32) to plead guilty because they thought their lawyer would not do a good job at trial, $F(1, 42) = 6.88, p = .012, d = .81$ (95% CI [0.17, 1.42]).

When the ANOVAs were rerun with the entire sample, several differences were noted (see Table 4), particularly for age group. Specifically, four significant main effects of age group emerged...
Table 4
Means and Standard Deviations by Age Group and Guilty–Innocent Manipulation for Plea Rationales for Subsample and Entire Sample

<table>
<thead>
<tr>
<th>Plea rationale</th>
<th>Answered all manipulation checks correctly</th>
<th></th>
<th>Entire sample</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Juveniles (n = 23)</td>
<td>Adults (n = 37)</td>
<td>Guilty (n = 18)</td>
<td>Innocent (n = 42)</td>
</tr>
<tr>
<td>I chose to plead Not Guilty because...</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I thought my chances to be found guilty at trial were not good</td>
<td>3.48 (1.12)</td>
<td>3.76 (0.86)</td>
<td>3.67 (0.97)</td>
<td>3.64 (0.98)</td>
</tr>
<tr>
<td>I thought the truth would come out at trial</td>
<td>3.87 (1.22)</td>
<td>3.70 (1.39)</td>
<td>2.61 (1.58)</td>
<td>4.26 (0.80)</td>
</tr>
<tr>
<td>I was thinking about what would happen in the near future</td>
<td>2.74 (1.14)</td>
<td>3.35 (1.38)</td>
<td>3.00 (1.28)</td>
<td>3.17 (1.34)</td>
</tr>
<tr>
<td>I did not think the plea offer was that good of a deal</td>
<td>3.09 (1.35)</td>
<td>3.19 (1.49)</td>
<td>3.44 (1.42)</td>
<td>3.02 (1.42)</td>
</tr>
<tr>
<td>I thought if I did not accept the plea offer, the DA would offer a better deal</td>
<td>2.09 (1.16)</td>
<td>1.57 (0.90)</td>
<td>2.33 (1.14)</td>
<td>1.52 (0.89)</td>
</tr>
<tr>
<td>I was thinking about the long-term consequences of pleading guilty</td>
<td>3.65 (1.19)</td>
<td>4.41 (0.93)</td>
<td>3.83 (1.15)</td>
<td>4.24 (1.06)</td>
</tr>
<tr>
<td>I did not want to admit guilt</td>
<td>3.13 (1.55)</td>
<td>3.43 (1.83)</td>
<td>2.84 (1.80)</td>
<td>3.48 (1.69)</td>
</tr>
<tr>
<td>I chose to plead Guilty because...</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I did not want to risk losing at trial</td>
<td>4.00 (1.29)</td>
<td>4.40 (1.16)</td>
<td>4.23 (1.26)</td>
<td>4.18 (1.17)</td>
</tr>
<tr>
<td>I thought the plea offer was a good deal</td>
<td>4.04 (1.14)</td>
<td>4.20 (0.86)</td>
<td>4.23 (0.96)</td>
<td>3.73 (1.01)</td>
</tr>
<tr>
<td>I was thinking about what would happen in the near future</td>
<td>3.56 (1.45)</td>
<td>4.10 (0.89)</td>
<td>3.86 (1.17)</td>
<td>3.82 (1.33)</td>
</tr>
<tr>
<td>It was the right thing to do</td>
<td>2.56 (1.53)</td>
<td>3.30 (1.37)</td>
<td>3.27 (1.44)</td>
<td>1.73 (0.91)</td>
</tr>
<tr>
<td>I did not think my (public defender) lawyer would do a good job at trial</td>
<td>2.20 (1.41)</td>
<td>2.93 (1.51)</td>
<td>2.59 (1.58)</td>
<td>2.64 (1.21)</td>
</tr>
<tr>
<td>I was thinking about the long-term benefits of pleading guilty</td>
<td>3.72 (1.28)</td>
<td>4.43 (0.82)</td>
<td>4.09 (1.14)</td>
<td>4.18 (0.98)</td>
</tr>
<tr>
<td>I thought the judge would go easier on me</td>
<td>2.40 (1.44)</td>
<td>2.70 (1.42)</td>
<td>2.66 (1.45)</td>
<td>2.18 (1.17)</td>
</tr>
</tbody>
</table>

Note. All questions used scale of 1 (not true at all) to 5 (extremely true). The means that are bolded within rows indicate a significant difference by age group or the guilt–innocent manipulation at \( p < .05 \). Italicized means indicate a difference at \( p < .10 \). Statistics, with effect sizes, are presented in the text.
for the plea rationales, “I was thinking about what would happen in the near future,” $F(1, 75) = 7.91, p = .006, d = .48$ (95% CI [0.03, 0.92]), “I was thinking about the long-term benefits of pleading guilty,” $F(1, 75) = 12.01, p = .001, d = .79$ (95% CI [0.33, 1.24]), “I thought that the judge would go easier on me,” $F(1, 75) = 4.42, p = .039, d = .40$ (95% CI [0.04, 0.84]), and “I did not think my public defender lawyer would do a good job at trial,” $F(1, 75) = 6.35, p = .014, d = .79$ (95% CI [0.33, 1.24]). For this latter rationale, the interaction between age group and the guilt manipulation was not significant ($p = .15$) as it was in the subsample analyses. For all four significant main effects, young adults were more likely to endorse the rationales than juveniles.

**Discussion**

In the present study, our main foci were determining how age (juvenile vs. young adult) and guilt versus innocence influenced decisions to plead guilty and the rationales underlying these decisions. We were also interested in examining factors that interacted with age and guilt status, including aspects of the plea offer and plea label (i.e., comparative fairness), as well as general and specific (plea) legal knowledge.

**Age and Plea Decision Making**

Based on developmental aspects of youth and previous research on legal decision making and understanding, we posited three alternate hypotheses about relations between age and the willingness to plead guilty (see also Redlich, 2010b). First, it was possible that juveniles would be more likely to plead guilty than adults. Some prior research has shown that juveniles have higher admission rates than adults when guilty (Grasso et al., 2003), and when innocent (e.g., Drizin & Leo, 2004; Redlich & Goodman, 2003). Second, it was also possible that the opposite trend would present itself (i.e., adults would have higher plea rates than juveniles) because of known youthful characteristics related to risk-taking, impulsivity, and deficient legal knowledge. Finally, a third possibility was that no significant differences would be found by age, a result found in previous research (Malloy et al., 2014; Tepfer et al., 2010; Viljoen et al., 2005). Support for two of the three hypotheses was found but depended on guilt status. Specifically, when juveniles and young adults in the present study were asked to imagine they were guilty of the crime, willingness to plead guilty did not significantly differ (in support of the third null hypothesis). When asked to imagine innocence, however, juveniles were about 2.5 times more likely to plead guilty than adults (in support of the first hypothesis). Although this effect was only significant at $p < .10$, the effect size of .23 is considered small to medium (i.e., .10 is small, .30 is medium, Cohen, 1988). Thus, as it has been shown for false confessions in the interrogation room (see Drizin & Leo, 2004; Redlich & Goodman, 2003), this research preliminarily supports that youth are also more likely than adults to make false admissions in the form of guilty pleas.

Our results lead to the question, “Why are juveniles more susceptible to false guilty pleas than adults?” As discussed above, juveniles are less mature—cognitively, socially, neurologically, and emotionally—than adults (Caufman & Steinberg, 2012; Steinberg, 2005). This immaturity is known to associate with poor and sometimes rash decision making, which can be construed as pleading guilty when innocent (but see Bowers, 2008). Although we did not find a significant relationship between impulsivity and the plea decision (when either guilty or innocent), it may be that our measure of this construct was not valid. To wit, we did not find a significant difference by age group on this measure in contrast to most other studies examining impulsivity in adolescents and adults (e.g., see Steinberg et al., 2008).

Further, juveniles’ higher false guilty plea rates may be due to legal knowledge, which juveniles in this study (and many others; e.g., Grasso et al., 2003) were found to be lower on than adults. Specifically, juveniles scored lower than young adults when tested on plea comprehension, competency, and vocabulary. As discussed by Drizin and Luloff (2007), false guilty pleas in juvenile court may occur because “there is a good chance that children will simply not understand that they are waiving their right to trial and admitting guilt” (p. 293). Adjudicative competence, in particular, relates directly to one’s ability to understand the conditions and consequences of the plea decision, and to participate meaningfully in one’s defense. Insofar as the ability to differentiate between viable defenses is linked to legal knowledge, it may be that juveniles are less likely than young adults to identify potentially viable legal defenses stemming from their innocence (e.g., forensic evidence, witnesses, and alibis), thereby increasing the likelihood for youth to falsely plead guilty. Among those asked to assume innocence and who pled guilty, juveniles and adults did not differ in their endorsement of the rationale, “I did not think my public defender would do a good job.” When asked to assume guilt, however, adults were more likely than juveniles to endorse this as a reason to accept the plea. Although this interaction effect (which was not significant when rerun with the entire sample) does not explain why juveniles were found to be more likely to falsely plead guilty in comparison to adults, it does serve to demonstrate the age group influences the rationales underlying the plea decision, when guilty and when innocent. Our analyses concerning plea/legal knowledge and the plea decision (which controlled for age) are discussed in greater depth below.

Juveniles in the present study were also more likely to plead guilty than adults when the plea offer included jail time, a pattern which did not emerge when the plea offer did not include jail time. More pointedly, whereas adults’ guilty plea rates went from 27% when the plea offer included jail to 60% when it did not, juveniles’ plea rates remained somewhat steady across these conditions (55% to 47%). This pattern of results suggests that youth are less likely than adults to consider the consequences of their plea decisions, which is consistent with findings from our plea rationale results (see Table 4). Specifically, in comparison to the young adults, youth were less likely to consider both short- and long-term consequences/benefits, regardless of the plea decision itself (that is, whether they pled not guilty or guilty). This is not to say, however, that youth are not thinking about the future at all. For example, Griso and colleagues (2003) found that whereas young adults in their sample considered the plea sentence length and the chance of acquittal, youth tended to only consider the sentence length, but nonetheless still weighed this factor. Further, in interviewing juveniles transferred to criminal court, Daftary-Kapur and Zottoli (2014) found that juveniles’ plea acceptances were “overly influenced by short-term outcomes” (p. 333). In the present research, juveniles were also significantly less likely than adults to see their plea decision as voluntary when jail time was present (a
pattern that did not emerge when jail time was absent), suggesting that the consequences of the plea decision are affecting juveniles’ perceptions, if not the decision itself.

Our hypothesis concerning age and comparative fairness was not supported. The comparative fairness manipulation, however, did influence the perceived confidence of the plea decision by age group. Juveniles, compared with adults, were signiﬁcantly less conﬁdent about their plea decision but only under certain conditions (i.e., when innocent and the plea offer was described as really good).2 Additionally, regardless of age, the comparative fairness manipulation did not influence plea acceptance rates, a finding at odds with Tor et al. (2010). Tor and colleagues found plea acceptance rates of 59%, 44%, and 27% when the offers were described as better than, similar to, or worse than typical offers, respectively (Study 5, guilty condition). Why the present study did not replicate this effect of comparative fairness needs further exploration. It may be that the labels we used (i.e., “fair but not great”/“really good” in comparison to what others get) were not salient or meaningful enough to our participants. The labels are also ambiguous, in that, fair can mean “just” as well as “so-so,” which is a limitation that should be avoided in future examinations.

Guilt–Innocence Status and Plea Decision Making

Research on what has been dubbed the “innocence effect” (Gazal-Ayal & Tor, 2012) suggests that innocents may be more conﬁdent and optimistic about their chance of a favorable outcome rather than being wrongfully convicted, thereby leading defendants to maintain their innocence because of a strong belief that the truth of their innocence will come out at trial (see also, Kassin, 2005). The present study finds support for this effect among both juveniles and adults, further supporting the notion that innocence can inﬂuence defendant’s risk-perceptions of a trial conviction. Specificallly, as anticipated, guilty participants were much more willing (2.2 more times for juveniles, and 5.6 times for adults) to plead guilty than innocent ones. This is a pattern consistently found in previous research examining true and false guilty pleas (e.g., Bordens, 1984; Dervan & Edkins, 2013; Gregory et al., 1978).

We also presume that the pattern of guilty people pleading guilty more than innocent people plays out in the real world, though base rates of guilt and innocence for actual defendants is unknown and perhaps unknowable. Covey (2013) compared groups of guilty pleas in the scandalized Rampart, CA, case, which is often referred to as a “mass exoneration case” (see Gross et al., 2005). Within this case, Covey identiﬁed three groups: (a) innocent (n = 38); (b) guilty (n = 27); and (c) “may be innocent” (n = 22). Guilty plea rates were 77%, 88%, and 89%, respectively for the innocent, guilty, and “may be innocent” groups. Covey concludes,

It thus appears from the data that actual innocence does induce some defendants to refuse a guilty plea and hold out for trial, but that the incentive has only a marginal effect, leading the innocent to contest their cases at trial at an approximately 10% greater rate than those who are actually guilty. (p. 1174)

Thus, although preliminary and in need of more research, there is amassing evidence from social science and the real world that the innocent plead guilty, and likely more often than is presently known, but not as often as the guilty.

We had also expected that the magnitude of the difference between guilty and innocent participants’ plea rates would be especially large when the plea offer did not include jail time. When the plea offer did not include jail time, plea acceptance rates between guilty and innocent participants bridged a 68.8 percentage point difference. When the plea offer did include jail, the differential remained signiﬁcant, but was only a 34.4 percentage point difference. More telling, however, was that the manipulation of jail time inﬂuenced guilty participants’ plea decisions (though only adults’ and not juveniles’), but did not inﬂuence innocent participants’ decisions—a ﬁnding which supports the notion that innocent and guilty defendants use different rationales for their decision making. Thus, unlike previous research, we found an interaction between guilt–innocence status and plea offer. For example, Gregory and colleagues (1978), in one of the ﬁrst studies examining false guilty pleas, did not ﬁnd guilt–innocence to interact with manipulations concerning the number of the charges or the severity of the sentence if convicted at trial (see also, Dervan & Edkins, 2013 for a similar null interaction effect). Bordens (1984) found a marginally signiﬁcant interaction between guilt status and probability of conviction. In his study, guilty subjects were just as willing to plead guilty if the probability of conviction at trial was 50% or 90%, but signiﬁcantly less willing when it was 10%. In contrast, innocent subjects showed an opposite pattern; when the probability of conviction was 10% or 50%, innocents were equally likely to refuse the plea offer, but when the probability was 90%, plea acceptance rates signiﬁcantly increased. In the present study, probability of conviction was not manipulated but held constant at 75%. Whether the patterns found by Borden would hold when the plea takers are juveniles is an open question, as is whether the pattern of results found here would differ if probability of conviction was manipulated.

Guilty and innocent participants also demonstrated differences in their rationales underlying their decision to either plead guilty or not guilty. Among those who pled not guilty, innocent participants were more likely than guilty ones to do so because they thought the truth would come out at trial. As established by Tor and colleagues (2010), innocent participants are more apt to risk the uncertain outcomes of a trial because the choice to plead guilty or risk trial is seen as substantively unfair. Additionally, innocents often believe that their innocence will be readily apparent to others, and thus have been found more likely (than the guilty) to waive their Miranda rights (Kassin & Norwick, 2004) and even falsely confess in interrogations (Kassin, 2005). Guilty participants who pled not guilty were also more likely than innocent ones to think the plea offer was not that good and to think that the DA would offer a better deal (upon rejecting the first plea offer).

Among those who pled guilty, guilty participants were signiﬁcantly more likely to do so than innocent ones because “it was the right thing to do.” This line of reasoning could be construed as comparable to the moral-based criteria noted by Peterson-Badali and Abramovitch (1993). Although these authors did not investigate plea decisions when innocent, they found that the use of guilt-based (moral) justifications was not inﬂuenced by the

2 When the entire sample was analyzed, juveniles were found to be significantly less confident about their plea decision than adults regardless of other conditions (i.e., no signiﬁcant interaction effects emerged).
strength of the evidence. They also found that juveniles were more likely than adults to mention guilt as a basis for plea decisions. In the present study, however, we did not find a significant main effect of age or an age-guilt interaction effect for this rationale. This lack of an effect may be because “the right thing to do” is open to multiple interpretations, including a moral justification, as well as one meaning the “accurate” or best option.

There were also some instances in which the rationales of guilty and innocent individuals did not differ that are noteworthy as well. For example, guilty and innocent participants who pled not guilty did not differ in their endorsement of “I did not want to admit guilt.” Thus, among those who chose to plead not guilty, there was a reticence against admitting guilt. From a cost-benefit standpoint, it makes sense that neither the innocent nor the guilty would want to admit guilt, as an admission (plea) leads to a conviction and a variety of other consequences. There was also a non-significant difference by guilt-status among those who did opt for pleading guilty for “I did not want to risk losing at trial.” That is, among those who chose not to take their chances at trial, both the innocent and guilty did so because they were risk-averse. Thus, again, although innocent participants in general showed more risk proclivity (in that they more often chose the trial option), innocents who did not choose the trial option (i.e., pled guilty) demonstrated risk aversion similar to the guilty participants (Gazal-Ayal & Tor, 2012).

Plea Comprehension

Another factor examined in the present study was general legal and specific (to plea) understanding and appreciation. A consistent and robust finding in the psycho-legal literature is that juveniles, in comparison to adults, have deficiencies in legal knowledge (e.g., Grisso et al., 2003; Viljoen et al., 2005). Thus, we hypothesized—and found—similar patterns. First, adults were better able to define vocabulary words used in the tender-of-plea and judge’s colloquy than juveniles. The tender-of-plea and judge’s colloquy required a 9th grade reading level, which has been found to be the average for these forms (Redlich & Bonventre, 2015), and thus, because some of the juveniles had not yet reached this grade, these findings are perhaps unsurprising. However, it should be noted that both juveniles and adults demonstrated a lack of understanding. A perfect score on the vocabulary measure was a 38; the average for adults was about 21. It is important to note that all words were used in the tender-of-plea form and the colloquy and participants were asked multiple times if they understood or had questions. Words/phrases that proved particularly difficult (more than 50% incorrect) for juveniles and adults included: concession, restitution, motion, impartial, burden of proof, reasonable doubt, and unlawful influence (results not shown). Similar to what Kaban and Quinlan (2004) found in a sample of justice-involved juveniles, participants in our sample were also unable to define key words and phrases necessary to understand and appreciate what it means to plead guilty. Further, Kaban and Quinlan found that even after receiving instruction about plea concepts and words, juveniles’ understanding and knowledge remained poor.

Second, adults were also found to possess a better understanding of general and plea-related concepts than juveniles. Regarding plea comprehension, the assessment questions generally followed from the tender-of-plea and the judges’ colloquy. On average, juveniles were correct 64% of the time, and adults 74%. Although our participants did not have an opportunity to interact with an attorney, they were given repeated opportunities to ask questions and receive clarification on aspects they did not understand; most often, participants claimed to have no questions. Do the low scores on this measure (as well as the vocabulary measure) indicate that written tender-of-plea forms and oral colloquies are unreliable assessments of whether plea decision making is knowing and voluntary? Per Boykin v. Alabama (1969), judicial colloquies are intended to ensure valid plea decision making, but there has been little research to assess this intention (Redlich, in press). In contrast, most writings describe plea colloquies as “boilerplate” formalities (Bibas, 2011) that take “less time than it takes to get a hamburger from a McDonald’s drive-through window” (Borchowitz, Brink, & Dimino, 2009, p. 32). Findings from the present research suggest that juvenile and adult defendants alike are unlikely to appreciate much of what judges explain to them in plea colloquies (see also Redlich et al., in press).

Finally, we also examined whether general and plea-specific knowledge was associated with the plea decision. When collapsed across guilt–innocence, knowledge was unrelated to decision making. After computing the correlations separately for guilty and innocent participants (as well as controlling for age), however, divergent patterns emerged for relationships between plea knowledge and the plea decision. When the entire sample was included (which included those with potentially low intellect), significant, positive correlations were found between competence understanding and reasoning scores, vocabulary scores, and willingness to plead, but only among subjects asked to assume guilt. Thus, we found preliminary support indicating that plea knowledge and the plea decision are related, though only under certain circumstances.

Implications for Practice and Research

Almost all adjudicated adult and juvenile defendants plead guilty. Over the past 15 years, the National Juvenile Defender Center (NJDC) has conducted more than 20 assessments of state juvenile courts (see http://njdc.info/our-work/indigent-defense-assessments/). In doing so, they examined the plea process, noting common problems across sites, such as high rates of pleas, pleas occurring early in the process (leaving no time for investigation, trust-building, or education), unknowledgeable pleas, developmentally inappropriate, incomplete, and even inaccurate plea colloquies, and systemic setting problems around culture and judge-attorney interactions. For example, as noted in the Illinois NJDC report (Crawford, Dohrn, Geraghty, Moss, & Puritz, 2007), “When children enter admissions during the initial hearing, it is almost always true that the attorney and the child lacked the opportunity to engage in a meaningful discussion about the case and the consequences of pleading guilty” (p. 2). Further, observers noted that “many of the children looked bewildered or disengaged during the plea colloquy” (p. 43), and that some youth left the courthouse without awareness that they had just pled guilty. Both youth and probation officers commonly reported intense pressure to plead, which they attributed to insufficient time attorneys spent with youth, attorneys’ failure to explore and/or understand the youths’ wishes, and lack of investigation into the case. These trends noted by the NJDC assessments, in combination with results from the present research, suggest that innocent juvenile defendants pro-
cessed in juvenile court, may be especially likely to falsely plead guilty (see also Drizin & Luloff, 2007).

The present findings also have implications for the growing literature on juveniles’ capabilities and decision-making processes in the legal system. Comprehensive studies have assessed juveniles’ abilities to understand and appreciate their roles as defendants (e.g., Grissou et al., 2003) and their constitutional rights (e.g., Vljoen et al., 2005). In addition to replicating the findings that juveniles have a depreciated understanding and appreciation of legal concepts (both general and specific to pleas), our findings also demonstrate that such a decreased understanding may influence decision making over and above chronological age. Further, the present research did not only examine whether juveniles are at increased risk for true and false guilty pleas, but also examined why. Our plea rationale findings, on the one hand, indicate that juveniles are less likely than adults to consider the short- and long-term consequences in their decisions to plead guilty and not guilty. On the other hand, we did not find age to influence endorsement of other plea rationales, including ones relating to morality and risk-taking.

Conclusions and Limitations

Some limitations of the present study must be acknowledged. First, an oft-cited limitation of experimental lab studies is that asking individuals to imagine they are suspects of a crime, where either guilty or innocent, does not generalize to actually being accused. Although it is certainly true that an experiment does not take into account all of the real-world implications, it is important to note that despite the low stakes situation encountered in this study, one out of every five innocent individuals (or more depending on certain factors) falsely pled guilty instead of going to court to affirm their innocence. It was also the differences by condition that were noteworthy here, as the goal was not to establish prevalence rates of true and false guilty pleas. Further, we used an imagined situation in lieu of deceiving subjects. Most experimental studies examining willingness to plead, especially those involving juveniles, have used such methods (e.g., Griso et al., 2003; Peterson-Badali & Abramovich, 1993; Tor et al., 2010). Ultimately, this study is a starting point and further research should be conducted in the field by interviewing juveniles and adults who recently entered a plea decision (see Daftary-Kapur & Zottoli, 2014).

A second limitation of this research is that the reduced sample sizes may not have provided sufficient power to detect statistically significant differences, particularly in the main analyses when only those who answered all four manipulation check questions were included (although many findings remained the same when the entire sample was included). Significant effects may not have been detected as a result of a smaller n within cells; this was especially problematic with the closed-ended rationale questions as participants who pled guilty and not guilty were asked separate questions (thereby further reducing the n). Third, the plea offer manipulation was intended to examine plea decisions when jail time was and was not included (with probation time as a constant). However, this manipulation may have confounded sentence length. Specifically, the no-jail condition was 5 years’ probation, whereas the some-jail condition was 5 years’ probation and two years in jail. Thus, whether adults’ decreased willingness to plead guilty in the some-jail condition (vs. the no-jail condition) was due to the presence of custodial time or the sentence length itself is unclear. Although previous research has demonstrated that any amount of incarceration, regardless of length, increases willingness to plead guilty in comparison to probation (Bordens, 1984), future research should be conducted to address this potential confound.

Despite these limitations, the present study is one of few to investigate age-related differences in true and false guilty pleas, and the only, to our knowledge, to do so experimentally. Youth status has been a consistently identified risk factor for false confessions in the interrogation room (Kassin et al., 2010; Owen-Kostelnik et al., 2006). Findings from the present research indicate that youthful status may also be a risk factor for false admissions in the form of false guilty pleas. Given the extremely high rate of convictions via pleas in our criminal justice system, and the increasing identification of wrongful convictions, it is important for researchers and practitioners to better understand the complexities of the guilty plea decision among juvenile and adult defendants.

References


Redlich, A. D., & Bonventre, C. L. (2015). Content and comprehensibility of juvenile and adult tender-of-plea forms: Implications for knowing,


Appendix

Hypothetical Scenario

Instructions

Please read the following, while I read it aloud:

Imagine you are a defendant in a criminal case. You have been charged with Robbery in the 1st degree. A jewelry store in your neighborhood was broken into and the employees there were held at gunpoint. Glass cases were smashed and approximately $5,000 worth of jewelry was taken. No one was hurt.

Imagine that you are guilty [innocent] of this crime and that you did [not] rob the jewelry store. The jewelry store had a hidden video camera which captured the crime on tape. You [The perpetrator] wore a hooded sweatshirt and sunglasses, and thus it’s hard to be sure who is on the tape. There is also an eyewitness who has identified you as a person who was hanging around outside the store right before the robbery occurred. However, the police are certain that it is you, and it actually is you [but actually it is not you. This is a case of mistaken identity].

You have a public defender lawyer who has told you that you can go to trial or accept a plea offer from the District Attorney.

Your lawyer has told you that if you go to trial, there is about a 75% chance that the jury will find you guilty.

The District Attorney’s plea offer is to plead guilty to attempted Robbery in the 3rd degree. If you accept this offer, you will have to spend 5 years on probation [and 2 years in the county jail/juvenile detention]. If you are found guilty at trial, your sentence will be 5–7 years in state prison.

Your lawyer tells you that in comparison to others charged with this crime, this plea offer is really good [fair but not great].

In order to make an informed decision about whether to accept the plea offer or go to trial, you will now be handed a tender-of-plea form. This form reviews your rights and the conditions and consequences of accepting the plea offer. When you are done reviewing the form, you will be asked to make a decision about whether to accept the DA’s plea offer or go to trial.

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