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Investigating Predictors of True and False Guilty Pleas

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Citation Details

Henderson, K. S., & Levett, L. M. (2018). Investigating predictors of true and false guilty pleas. *Law And Human Behavior*, 42(5), 427–441. <https://doi.org/10.1037/lhb0000297>

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Abstract

An estimated 90-95% of convictions are obtained via guilty pleas, and roughly 11% of individuals exonerated with the help of the Innocence Project falsely pleaded guilty (innocenceproject.org). Despite the prevalence of guilty pleas (and existence of false guilty pleas), relatively little scholarship has examined what influences whether a defendant will plead guilty (Redlich, 2010). In this study, we investigated factors that affected whether guilty and innocent students who were accused of cheating pleaded guilty or took their case before the Student Conduct Committee in a hearing (analogous to a trial). Using social psychological literature on social influence (Cialdini & Goldstein, 2004), we manipulated two legally and theoretically relevant factors: the attorney's recommendation and the guilt of the defendant. Overall, guilty individuals were more likely to accept a guilty plea than innocent individuals. Advocate recommendation affected innocent and guilty participants' plea decisions; however, the effect was stronger for innocent individuals. Innocent participants advised to go to trial were less likely to falsely plead guilty ($M = 4\%$) compared to those without an advocate ($M = 35\%$), given educational information ($M = 47\%$), or advised to plead guilty ($M = 58\%$). Overall, findings suggest that innocent individuals may be more vulnerable to the effects of social influence when considering advice from an advocate compared to guilty individuals.

Keywords: plea bargaining, defense attorneys, guilty pleas, attorney influence, social influence

Public Significance Statement: An examination of whether attorney/advocate recommendations in plea decision-making affect defendant decision-making. Attorney recommendations affected innocent and guilty participants' plea decisions, however the effect was stronger for innocent participants. Main findings indicate that innocent participants were less likely to falsely plead

2PRE-PRINT Henderson, K. S., & Levett, L. M. (2018). Investigating Predictors of True and False Guilty Pleas. *Law and Human Behavior*, 42(5), 427-441.

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guilty if the advocate recommended to go to trial compared to if the advocate made other recommendations or was absent.

In 1997, Danial Williams was charged with the rape and murder of Michelle Moore-Bosko, a neighbor in his Norfolk, Virginia apartment complex (Wells & Leo, 2008). Despite DNA evidence excluding Williams, he pleaded guilty to the crime. Williams's lawyers conveyed to him that accepting the guilty plea might be his best chance to avoid the death penalty; according to Williams, "They [his attorneys] pushed me really hard to take the plea...I pretty much gave up" (Wells & Leo, 2008, p. 185). Williams was one of four men convicted of the 1997 crime. He and the others were exonerated and officially pardoned in 2017 (National Registry of Exonerations, n.d.). At the time, Williams asserted his innocence and was reluctant to accept a guilty plea (Wells & Leo, 2008, p. 47). However, his attorneys were able to convince him accepting a guilty plea was his best option.

The issues of wrongful conviction go beyond individual cases; wrongful conviction is about system failure. One system failure is that innocent individuals, like Williams, might be incentivized to plead guilty because of their perceptions of the risks of going to trial versus the costs of accepting a plea bargain. Like Williams, those perceptions may be largely shaped through advice given by well-intentioned attorneys. While much psychology-law literature is devoted to examining factors contributing to wrongful conviction and jury decision-making, relatively less scholarship has examined what influences whether a defendant will plead guilty to a crime or take his or her case to trial (Redlich, 2010). The majority of cases never see a trial. Therefore, understanding the factors, such as an attorney's recommendation, that influence plea decision-making is an important contribution to our understanding of plea bargaining, true and false guilty pleas, and wrongful conviction.

In 1963, the United State Supreme Court (USSC) interpreted a defendant's right to counsel as fundamental to fairness under the due process clause of the 14th Amendment (*Gideon*

v. Wainwright). Years later, the court addressed what constituted ineffective assistance of counsel in the *Strickland v. Washington* decision, which established a two-prong test to establish ineffective assistance: the attorney's performance fell below a reasonable standard and (2) that performance prejudiced the outcome (1984). What exactly does effective assistance of counsel look like in plea bargaining? Recently, the court has concluded that ineffective assistance of counsel in plea bargaining is failing to advise the client of immigration and deportation risks (*Padilla v. Kentucky*, 2010), failing to advise the client of a plea offer (*Missouri v. Frye*, 2012), or giving flawed advice as to the rule of law (*Lafler v. Cooper*, 2012). These decisions suggest the USSC is shifting towards addressing the attorney's role in plea bargaining, and these cases focus on counsel's advice. For the criminal defendant, the attorney serves as an influential source of information and their advice carries considerable weight. A recent publication focusing on the psychology of defendant decision-making highlights the role of social influence and calls for more work to be done examining the biases, heuristics, and social influences that affect plea decisions (Redlich, Bibas, Edkins, Madon, 2017). The goal of this study is to explore how the type of recommendations given by an attorney affects defendants' plea decisions.

In this study, we used a paradigm that allowed us to measure actual behavior rather than measuring intentions based on participants' perceptions of a scenario (Russano, Narchet, & Meissner, Kassin, & 2005). We manipulated whether participants were guilty or innocent of cheating (analogous to committing a crime). Using social psychological literature on social influence to inform the research (Cialdini, & Goldstein, 2004), we manipulated the recommendation an advocate (analogous to an attorney) gave the student. This study considers two primary questions: what are the overall rates of innocent and guilty individuals accepting guilty pleas in a simulated plea bargaining situation; and, how does an attorney's presence and

variations in recommendation (either to go to trial, accept a guilty plea, or attempt to educate the defendant about both options) affect innocent and guilty individuals' decisions to plead guilty or go to trial? This research contributes to the growing body of research on plea decision-making by examining how an advocate's recommendation influences true and false guilty pleas.

True and False Guilty Pleas

An estimated 90-95% of criminal convictions are comprised of guilty pleas (Cohen & Reaves, 2006). In 2004, 95% of felony defendants convicted in state courts pleaded guilty (Durose & Langan, 2007); in 2013, 97% of felony defendants convicted in U.S. District Courts pleaded guilty (U.S. Department of Justice Executive Office for United States Attorneys, 2013). Plea bargaining encompasses the majority of criminal convictions, and the possibility of false guilty pleas must be acknowledged. Roughly 11% of individuals exonerated with help from the Innocence Project falsely pleaded guilty (innocenceproject.org), and the USSC has ruled that proclaiming innocence does not preclude an individual from accepting a guilty plea (*North Carolina v. Alford*, 1970). Thus, we know both innocent and guilty individuals engage in plea bargaining. Unfortunately, calculating the precise number of false guilty pleas is difficult because if legal actors knew what false guilty pleas looked and sounded like, they would not lead to a wrongful conviction (Redlich, Summers, & Hoover, 2010). In this project, we sought to explore true and false guilty pleas in a simulated plea bargaining situation.

The decision to plead guilty or go to trial is primarily motivated by one's factual innocence or guilt (Dervan & Edkins, 2013; Gregory, Mowen, & Linder, 1978; Tor, Gazal-Ayal, Garcia, 2010). That is, while both innocent and guilty individuals accept pleas, guilty individuals are more likely to accept a guilty plea than innocent individuals (Bordens, 1984; Dervan & Edkins, 2013; Gregory et al., 1978; Tor et al., 2010). In a recent experimental study, students

accused of academic dishonesty were offered a punishment to avoid having a cheating incident go before the Academic Review Board (analogous to trial; Dervan & Edkins, 2013). Overall, 89.2% of guilty participants and 56.4% of innocent participants accepted the “guilty plea”; guilty participants were 6.83 times more likely to plead guilty (Dervan & Edkins, 2013).

In another study, participants read a vignette involving an incident of academic cheating and were instructed to reach decisions as if they were innocent or guilty (Tor et al., 2010). Among guilty participants, 67% accepted the plea offer versus 20% of innocent participants (Tor et al., 2010). In the second part of this study, researchers offered a guilty plea equal to the expected punishment if convicted at trial to examine the risk-seeking behavior of innocent and guilty participants. Innocent participants were more risk-seeking than guilty participants and more likely to want to go to trial where they believed their innocence would be discovered (Tor et al., 2010). Similar results have been reported for why innocent individuals are more likely than guilty individuals to waive their Miranda rights – they believe their innocence will protect them (Kassin, 2005). In this study, we expected that guilty participants would be more likely to admit guilt and accept the guilty plea than innocent participants.

Similarities: False Confessions & False Guilty Pleas

False guilty plea research is often coupled with false confession research because there exist many similarities between the two (e.g., an individual accepting culpability for an act they did not commit, underlying motivations for decision-making, dispositional characteristics of the individual; Redlich, 2010). For the false confessor, a confession is often motivated by the desire to make a proximate decision to extradite himself from the situation (i.e., have the interrogation end; Kassin, Drizin, Grisso, Gudjonsson, Leo, & Redlich, 2010). This tendency to place the value of an immediate need (e.g., leaving the interrogation) over long term consequences is often

most pronounced among members of susceptible populations (e.g., juveniles and individuals with mental illness; Owen-Kostelnik, Reppucci, & Meyer, 2006). Further, the use of accusatorial interrogation methods that rely on exerting pressure on individuals to confess has been shown to increase rates of false confessions (conclusion based on meta-analysis of experimental studies; Meissner, Redlich, Michael, Evans, Camilletti, Bhatt, & Brandon, 2014).

Similarly, those who falsely plead guilty are often trying to extricate themselves from a situation by accepting a known, often quicker, outcome (e.g., the ability to receive ‘time served’ and to avoid spending time in jail pre-trial) compared to the unknown, and possibly harsher outcome associated with going to trial and a guilty verdict. Research on false guilty pleas point to the influence of these instrumental factors on plea decision-making (Malloy, Shulman, Cauffman, 2014; Redlich et al., 2010). For example, in a sample of over 1,200 adults with mental illness, of those who self-reported that they gave a false guilty plea, two-thirds (61%) indicated that they falsely pleaded guilty because they wanted to end the questioning, get out of jail, or go home (Redlich et al., 2010). Additionally, dispositional characteristics that put individuals at risk of falsely confessing are also relevant when considering false guilty pleas (Redlich, 2010). False guilty pleas are more likely to occur with members of susceptible populations, such as juveniles (Redlich & Shteynberg, 2016) and adults with mental illness (Redlich et al., 2010). Considering the similarities, it is possible to use what we know about false confessions to help guide our hypotheses concerning false guilty pleas.

False confession researchers hypothesize that innocent individuals may be more influenced by external pressures (and guilty individuals by internal pressures; Houston, Meissner, & Evans, 2014), and may be differentially susceptible to social pressure during the plea bargaining process. That is, another likely similarity between false confessions and false

guilty pleas is that they both are at least partially dependent on social influence. For example, feeling pressured by an attorney (the DA, police officer and/or judge; Redlich et al., 2010) and the perception of high-pressure lawyering tactics were associated with self-reported false guilty pleas (Malloy et al., 2014). In this study, we examined the social influence associated with possible variations in the attorney's plea recommendation.

The attorney serves as an important source of information in informing defendant plea decisions because the attorney has more knowledge about the process, other decision makers and parties in the case (e.g., judge, jury, opposing counsel), potential outcomes and consequences, and the criminal justice system generally. Understanding how attorney recommendation affects defendant plea decisions may help us understand more about the social dynamic between attorney and defendant. In this study, we addressed the question of whether an attorney's presence and recommendation affects innocent and guilty individuals' plea decisions.

Attorney Influence and Plea Decisions

While the choice of whether to accept a guilty plea is the defendant's decision, the attorney is charged with assisting, advising, and defending the defendant throughout the plea and trial processes. According to the American Bar Association, defense attorneys should advise their client on all aspects of the case, aid the defendant in deciding on the best course of action, and the defendant should enter into a plea agreement after full consultation with their attorney (additional standards included; 2015). Early research has suggested that the defendant's own counsel is likely the first to suggest a guilty plea and is most influential in the defendant's final decision to accept that guilty plea (Blumberg, 1967). In one study, juvenile defendants (aged 11-17) were questioned pretrial regarding their legal decisions (interrogation/police questioning, adjudication, and possible appeal; Viljoen, Klaver, Roesch, 2005). Juvenile defendants who

planned to accept a guilty plea were more likely to have been advised to do so by their attorney, compared to those who did not plan to accept a guilty plea (Viljoen et al., 2005).

If the defendant doesn't plan to follow the attorney's recommendation, it's possible the attorney will try to persuade the defendant that a specific option is in his/her best interests (Amsterdam, 1988, p. 362). As innocent individuals may be more influenced by external pressures, these tactics may be more persuasive to innocent defendants than guilty defendants. In a sample of individuals with mental illnesses, individuals self-reported feeling pressured by one's attorney as a motivating factor for having falsely pleaded guilty (Redlich et al., 2010). In another study, juveniles were asked about their experiences with their attorney; those who reported that their attorney befriended, deceived, or threatened them were more likely to report having falsely pleaded guilty than juveniles who did not report such treatment from their attorneys (Malloy et al., 2014). These high-pressure lawyering tactics were associated with self-reported false guilty pleas, but not true guilty pleas (Malloy et al., 2014). Defendants consistently point to their attorney as an influencing factor in their decision to accept a guilty plea (Malloy et al., 2014; Redlich et al., 2010; Viljoen et al., 2005). However, it does not address conditions under which an attorney is likely to recommend accepting a guilty plea.

Generally, attorneys are likely to recommend plea bargaining (Kramer, Wolbransky, & Heilbrun, 2007), which is logical given the proportion of convictions resulting from guilty pleas. Much of the research suggests defense attorneys are more concerned with the effect of legal variables than extra-legal variables. This is in line with a commonly applied theoretical model for how defendants make decisions, termed the shadow of a trial framework. The shadow of trial framework suggests that the decision to accept a guilty plea is motivated by the likelihood of conviction based on the strength of the evidence, and possible sentence if convicted at trial

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(Mnookin & Kornhauser, 1979). Experimental research supports this framework. Participants acting as defendants were more likely to accept a guilty plea if they perceived their chances at trial to be too risky (i.e., the likelihood of conviction was high; Bordens, 1984), and as the probability of conviction and sentence severity increases, participants became more willing to accept a guilty plea (McAllister & Bregman, 1986b). As it is one of the defense attorney's responsibilities to keep defendants informed about the strength of evidence, and how that likely affects their chances of conviction at trial (Bibas, 2004), it's expected that these factors influence defense attorneys' plea recommendations as well.

In one study examining the effect of legal factors on plea recommendations, defense attorneys were given a hypothetical scenario varying the defendant's probability of conviction and severity of the possible sentence (McAllister & Bregman, 1986). Defense attorneys were increasingly more willing to advise accepting a guilty plea as the severity of the sentence and defendant's probability of conviction at trial increased. Attorneys are also cognizant of what contributes to the strength of evidence and use this information in determining whether a guilty plea is appropriate; defense attorneys were more willing to accept a guilty plea when confession evidence, scientific evidence, and a positive eyewitness identification were present (Redlich, Bushway, & Norris, 2016). This attention to legal factors embodies the role of the attorney, to help the defendant make the most informed and educated decision possible.

But what if the defense attorney's recommendation and defendant's opinion do not align? In a study examining attorney recommendations, defense attorneys were given a hypothetical case varying details of the defendant's likelihood of conviction, possible sentence if convicted at trial, and preference of going to trial or accepting a guilty plea (Kramer et al., 2007). Overall, findings suggest a tendency for defense attorneys to more strongly recommend accepting a guilty

plea even against the client's wishes, especially when there existed strong evidence against the defendant (Kramer et al., 2007). Issues might arise when defense attorneys and their client's preferences do not match, in spite of information provided by the attorney. Ultimately, the defendant may conform to the recommendation of their attorney, such as in the Williams case discussed earlier. This research demonstrates that various factors affect defense attorneys' recommendations, but *how* do those recommendations affect defendants' plea decisions?

The Effect of Social Influence

Social influence may help explain why defendants follow their attorney's recommendation (Cialdini & Goldstein, 2004). Social influence occurs when explicit social forces, or perceptions of others' behaviors and cognitions, change one's own behaviors or cognitions (Cialdini & Goldstein, 2004; Hogg, 2010). In the case of the criminal defendant, many social forces may factor into the decision of whether to plead guilty or go to trial, including the opinion or advice from their attorney. We can look to the principles of conformity and compliance (Cialdini & Goldstein, 2004) to help elucidate why defendants might follow the advice of their attorney.

The principle of compliance is demonstrated through explicit (e.g., directly soliciting for your vote for a particular candidate) or implicit (e.g., political advertisements endorsing a particular candidate) requests in which the individual recognizes she/he is expected to respond in a particular manner (Cialdini & Goldstein, 2004). For example, in Milgram's classic obedience study, authority figures asked participants to administer shocks to others (no shocks were actually given) and the results suggest individuals tend to comply with requests from authority figures, even when it goes against their better judgment or beliefs (Milgram, 1974; a more recent partial replication suggests similar compliance rates, Burger, 2009). In the case of plea decision-

making, the attorney's recommendation could be met with compliance from defendants in that they might feel compelled to follow the attorney's advice.

The principle of compliance differs from conformity, in that conformity refers to an individual changing his/her behavior to match the responses from others (Cialdini & Goldstein, 2004). For example, in Asch's classical social psychological line experiment, participants conformed to the incorrect judgments made by fellow participants (actual confederates of the lab) when making judgments about the length of line drawings (Asch, 1956). In a laboratory setting, research on accuracy as a motivation for conformity has shown that study participants look to the confederates to supply information in reconstructing memories (Meade & Roediger, 2002). In the case of the criminal defendant, the defendant might change his or her opinion on the best course of action after meeting and discussing options with his or her attorney. Given the attorney and defendant may have different opinions on the best course of action (Kramer, et al., 2007), the defendant could conform to the opinion of his/her attorney, especially if the defendant is considering the attorney's expertise in his or her decision-making and is highly motivated to make a decision that maximizes the best outcome based on the perceived risks.

Study Overview

Research collectively suggests that attorneys are likely to recommend plea bargaining and that this advice influences plea decisions. However, from the research discussed thus far, it is unclear how variations in an attorney's recommendation affect the defendant's decision-making about plea bargaining. To date, research has been correlational in nature. We sought to causally explore the role of attorneys using an experimental paradigm to address the question of how variations in attorney recommendation influences plea decisions.

Our key research questions were: What is the rate of innocent and guilty individuals accepting a guilty plea in a simulated plea bargaining situation; and, how does an attorney's presence and variations in recommendation affect both innocent and guilty individuals' decisions to plead guilty or go to trial? Our goal was to manipulate the content of the recommendation of the attorney/advocate in an interaction between the defendant and advocate in an experimental paradigm designed to mimic a plea bargaining situation. Specifically, we wanted to examine how an attorney's recommendation to go to trial would affect plea decision-making differently than a recommendation to accept the guilty plea, or how both of these recommendations would differ from a more neutral, educational recommendation designed to educate the defendant about both options. The recommendations were designed in such a way to maximize realism, with the recommendation to go to trial containing several reasons to go to trial, the recommendation to accept the guilty plea containing several reasons to accept the plea, and the educational condition containing a more balanced perspective. Thus, the advice in each condition differed regarding the attorney/advocate's explanation of the quality of the offer, probability of conviction, and possible severity of the trial punishment, and each recommendation was designed to support the overall recommendation – to go to trial, accept a guilty plea, or provide a balanced, educational perspective. We also included a control condition in which the attorney/advocate was absent. To test our research questions, we adapted a paradigm in which students were accused of cheating (Russano et al., 2005) and manipulated whether students were innocent or guilty. Students in pertinent conditions had contact with an advocate after the initial accusation. We collected information from the participant on whether they would plead guilty or proceed to trial. We also collected information on participants' perceptions of their probability of conviction at trial, the strength of the evidence against them, and their perceptions of the influence of the advocate.

Hypotheses

1. Final Decision (plead guilty versus go to trial)

- a. **Influence of guilt on final plea decision.** We expected that plea decisions would be informed by the participant's guilt (guilty individuals would perceive the strength of evidence and their probability of conviction higher, see below). Consistent with prior research suggesting guilty individuals plead guilty at higher rates than innocent individuals (Bordens, 1984; Dervan & Edkins, 2013; Gregory et al., 1978; Tor et al., 2010), we expected a main effect of guilt, such that guilty participants would be more likely to admit guilt and accept the guilty plea than innocent participants.
- b. **Influence of advocate recommendation.** Following the psychological framework of false confessions (Houston et al., 2014), we expected that advocate recommendations would produce significant (or larger) effects on innocent participants' plea decisions, but not on guilty participants' plea decisions.

2. Probability of Conviction and Strength of Evidence ratings

- a. **Influence of guilt on probability of conviction and strength of evidence ratings.** As guilty individuals are likely knowledgeable of possible incriminating evidence against them, comparably innocent individuals have little knowledge (Bibas, 2004), we expected a main effect of participant guilt on ratings of strength of evidence and probability of conviction, such that guilty participants would perceive the strength of evidence and their probability of conviction higher than innocent participants.

- b. **Influence of advocate recommendation on probability of conviction and strength of evidence ratings.** As attorneys use legal factors (i.e., strength of the evidence and probability of conviction) to inform plea decisions and recommendations (McAllister & Bregman, 1986), and that information should be conveyed to the client (Bibas, 2004), we expected that participants advised to accept the guilty plea would perceive their probability of conviction and the strength of evidence against them higher than participants who were advised to go to trial, given educational information, or had no advocate.

3. Influence of the Advocate ratings

- a. **Influence of advocate recommendation.** Based on hypotheses regarding external social pressure (Houston et al., 2014), we expected that the influence of the advocate would be greater for innocent participants compared to guilty participants. That is, we expected advocate recommendation would produce significant (or larger) effects on innocent participants' evaluation of the influence of the advocate compared to guilty participants.

Method

Participants and Power

We first determined sample size by conducting a power analysis using G*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007). We used a small effect size for ANOVA analyses ($f = .20$), with $\alpha = .05$ and power = .80 (recommended by Cohen, 1988). Using these criteria, we needed at least 199 participants (roughly 25 per cell). Data collection was stopped when we reached 199 participants who passed manipulation checks who did not have suspicions about the true nature of the study. 227 undergraduates participated in the study prior to reaching the 199

needed for analysis. In total, 28 participants were excluded from final analyses. Participants were excluded if they were randomly assigned to guilty conditions and failed to engage in cheating behavior with the confederate ($N = 9$), failed to correctly identify the guilty plea offer manipulation ($N = 2$), had a past history of cheating ($N = 4$), had suspicions regarding the true purpose of the experiment ($N = 8$), experimenter error ($N = 2$), or the experimenter ending the session early because the student appeared stressed ($N = 3$).

The final sample was 71.4% female, 28.1% male, and 0.5% transgender. 52.3% of participants reported their race as White, 13.6% Black/non-Hispanic, 20.6% Hispanic, 11.1% Asian, and 2% reported “other” (1 participant failed to report their race). The average age was 19 years old ($min = 18$ years old and $max = 30$ years old).

Design

Participants were randomly assigned to condition in a 2 (student cheating: innocent vs. guilty) X 4 (advocate presence/recommendation: present/go to trial vs. present/accept the guilty plea vs. present/educational information vs. absent/no advocate) between subjects factorial design.

Pilot Study

In creating the study materials, we conducted a pilot study to investigate students' perceptions of possible punishments for academic dishonesty. The goal of the pilot study was to ensure that the plea offered would be perceived as somewhat ambiguous in severity. That is, if the plea was too harsh, participants might perceive the risk of accepting the plea greater than the risk of going to trial, regardless of recommendation condition. Similarly, if the plea was too lenient, participants might perceive the risk of going to trial as too great given the leniency of the known punishment. These data were then used to formulate the plea offer for the current study.

Thirty-six undergraduate students participated in the pilot study in exchange for course extra-credit. Participants read a vignette about a student who cheated during a research study and was accused of academic dishonesty. Following the vignette, participants rated the severity and appropriateness of punishment options on a 6-point Likert scale with 1 indicating not at all severe [or appropriate] and 6 indicating very severe [or appropriate].

The punishment options were taken from the University's Academic Review Board website and a question and answer session with undergraduate research assistants. For a full list of options and their corresponding means see supplemental materials. Examples include: [the target] is asked to leave the lab, will receive no participation points, and will not be allowed to participate in research studies in the future; [the target] will have to enroll in 3 credit hours of Ethical Behavior next semester at full cost; [the target] will be dropped from his course and receive an "Incomplete" and a note will be filed on his university record. Based on this data, we chose an option that ranked towards the middle in severity and that was most plausible in the context of our lab and research participation. The guilty plea offer remained constant in all conditions in the study: [the target] will receive a zero for the research percentage of his final grade in class and will have to attend a 4 weekend session of a class on Ethical Behavior.

Procedure

The University of Florida Institutional Review Board approved all materials and procedures prior to data collection. Informed consent was obtained from all participants.

Manipulation of guilt. To study guilty pleas, we adopted a paradigm used in confession research in which student participants were accused of cheating (Russano et al., 2005). After consenting, the participant and a confederate acting as a participant were given a difficult quiz, including group and individual sections. They were given instructions emphasizing the

importance of not working together on the individual section. The experimenter stepped out of the room, and in guilty conditions, the confederate asked the participant to cheat on the individual section by asking for answers to specific test questions. 91% of participants assigned to guilty conditions cheated by responding with test answers (those who did not cheat in guilty conditions were not included in analyses). In innocent conditions, no cheating behavior occurred.

Accusation and plea information. After grading the exams, the experimenter accused both participants of cheating, citing the low likelihood the tests would be so similar. The experimenter stated, “There appears to be a serious issue because according to our analysis of your responses, both students responded with the same incorrect answer for multiple questions and the chances of that happening by chance are very small- like 4%.” The accusation was adapted from previous research; explaining the statistical probability of both students answering incorrectly helps students understand how that is indicative of guilt, not merely coincidence (Dervan & Edkins, 2013). The experimenter then informed the participants that they were required to report the incident to the professor in charge, who would determine the repercussions.

The experimenter stepped out of the room and participants were led to believe the professor in charge was being called (no call was placed). After the fictitious call, the experimenter returned to the lab and informed participants that the professor had given authorization to handle the incident in the lab rather than referring to the Dean of Students Office. Participants were told the professor in charge of the lab stated the incident could be dealt with in one of two ways: the participant could admit they cheated and accept the lab punishment (analogous to a plea bargain), or the participant could take the issue before the Student Conduct Committee in a hearing (analogous to a trial). To be analogous to a plea situation, participants were told that accepting the lab punishment also meant accepting guilt for the incident. The lab

punishment was receiving a zero for the research participation and attending 4 weekend sessions of a class on Ethical Behavior. After relaying the options, participants were separated (ostensibly to make independent decisions), and the confederate's role in the experiment concluded.

Manipulation of advocate recommendation. Next, in conditions containing an advocate, the experimenter, with the participant present, called a fictitious 'Student Conduct Committee hotline' under the guise that prior to making a decision, the student needed to speak to a university student advocate who served as an advisor and advocate for students who were accused of cheating. The participant was told that the advocate would maintain confidentiality and was there to serve as a sounding board to help students in these types of situations. A second confederate playing the role of the advocate spoke with the student. The participant was given an opportunity to explain the incident, and then the advocate advised the student according to condition. Participants in conditions containing an advocate were advised to accept the guilty plea, go to trial, or were educated about both options and not advised that one option was better than another. This part of the procedure was omitted in conditions without an advocate.

Because research suggests attorneys may give specific recommendations about whether to accept a guilty plea, we included two explicit recommendation conditions—a recommendation to accept the guilty plea and a recommendation to go to trial. The manipulations were designed considering what advice an attorney or advocate might give in the real world with the goal of recommending a particular outcome or educating the client (for specific wording see Table 1). That is, the information included in each condition was designed to be consistent with the overall recommendation (e.g., noting that trial can be unpredictable when giving the recommendation to accept the guilty plea).

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In conditions in which the advocate recommended accepting the guilty plea, the advocate highlighted that the plea was a good option because the outcome at trial is unpredictable and the value of the plea offer was good. This was informed by research suggesting that defense attorney recommendations involve a calculation of the risks of trial (Hollander-Blumoff, 1997). That is, the plea offer is known and the outcome at trial is unpredictable. Therefore, attorneys must weigh the potential risks at trial against the value of the plea. Research suggests attorneys are attuned to factors that inform the value of the plea offer in making recommendations. In two studies, the top two factors that influenced defense attorneys' willingness to recommend accepting a guilty plea were the likelihood of the defendant's conviction based on the strength of the evidence and value of the plea based on the potential sentence if convicted at trial (i.e., severity of sentence differential between the two outcomes; Edkins, 2011; Kramer et al., 2007). When the defendant's probability of guilt was high, attorneys were more likely to recommend pleading guilty (McAllister & Bregman, 1986). Similarly, as the expected trial sentence increased, the consistent plea offer became more desirable to attorneys (McAllister & Bregman, 1986). Attorneys are attuned to the value of the plea, and if it is perceived as a good offer, they will try to convince their client to accept it (Smith, 2007). In these conditions in this study, the advocate recommended accepting the guilty plea because it was the best option considering the Student Conduct Committee can be unpredictable, the outcome unknown, and the plea was a "good offer".

In conditions in which the advocate recommended going to trial, the advocate highlighted that the plea was not a good option, because trial comes with the potential of acquittal and opportunity to tell one's side of the story, and the value of the plea offer was not good. This was informed by research suggesting that when the severity of the punishment and possible sentence

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<http://dx.doi.org/10.1037/lhb0000297>

if convicted at trial were low, defense attorneys were less willing to plea bargain (i.e., attorneys were least willing to advise accepting a plea when the possible sentence was 2 years with a 20% probability of conviction compared to more severe sentences and a higher probability of conviction; McAllister & Bregman, 1986b). Using the counterfactual of the research presented above (when defense attorneys are more likely to recommend accepting a guilty plea), defense attorneys are more likely to want to go to trial when they believe the chance of acquittal is higher and the value of the plea offer is not good. The reminder that it's the participant's right to go before the Student Conduct Committee mirrored that within the criminal justice system, it's the defendant's right to have their day in court and could potentially be acquitted (i.e., pleading guilty is a waiver of this right). In these conditions, the advocate recommended going before the Student Conduct Committee hearing because it was the best option considering they could tell their version of events, potentially be found not guilty, and the plea was "not a good offer".

In addition, given that one of the responsibilities of the defense attorney is to advise the defendant of all aspects of the case, discuss potential costs and benefits of a negotiated disposition, and not intentionally under or overstate the risks or prospects of the case to unduly influence the defendant's decision (American Bar Association, 2015), we included a condition in which the advocate did not explicitly attempt to persuade the participant (i.e., not attempt to unduly influence the client). In the educational conditions, the advocate said that one option was no better than the other, reminded the participant that it was their decision to make and they would be supported regardless of choice, and gave the benefits and drawbacks of going to trial versus accepting a guilty plea. Specifically, the advocate reminded the participant they have an opportunity to share their side of the story and could be found not guilty at trial (benefit), but if they are found guilty at trial, the punishments are often harsher than the plea offer (drawback).

This was designed to mirror the “trial penalty”, which suggests that defendants who are convicted at trial often receive more severe penalties than plea bargaining (Ulmer & Bradley, 2006). Based on ABA suggestions, the goal of the educational condition was to remind participants of potential benefits and drawbacks of accepting a guilty plea or going to trial.

Final plea decision. After hearing a recommendation from the advocate in pertinent conditions, participants gave their final plea decision, self-reported, verbal response regarding their guilt, motivation for their decision, and answered manipulation check questions. After these measures were collected, participants were partially debriefed to alleviate the stress of being accused of cheating, as required by IRB. The partial debriefing included explicitly stating that the scenario was an artificial situation designed to test a specific research question, and in all actuality, the participant was not being accused of academic dishonesty, would not need to go before the Student Conduct Committee, and was not in trouble with the lab. Participants were asked if they were willing to answer a questionnaire (no participants disagreed) and told they would be fully debriefed after the questionnaire. Participants then completed the remainder of dependent measures (i.e., probability of conviction, strength of evidence, and influence of the advocate ratings) and were fully debriefed.

Dependent Measures

Final plea decision, innocence, and motivation for decision. The experimenter verbally asked participants for their final plea decision (plead guilty or go before the Conduct Committee), whether they were guilty of cheating¹, and what motivated their plea decision (qualitative responses to the latter question are summarized in supplemental materials).

¹ We compared participants’ self-report guilt statement (collected prior to debriefing) to their factual guilt. Results from these analyses and a discussion of their implications can be found in supplemental materials.

Probability of conviction. Participants rated their probability of being found guilty by the Conduct Committee on a 20-point interval scale ranging from 0% to 100% (5-point intervals).

Perception of strength of evidence and influence of the advocate ratings. For all remaining measures, participants indicated agreement with statements on 6-point Likert-type scales with 1 indicating strongly disagree and 6 indicating strongly agree. Groups of items were first analyzed using exploratory factor analysis with maximum likelihood extraction and varimax rotation and then combined into scales by averaging item scores. The following scales were created: strength of evidence, and social influence, level of care/involvement, and helpfulness of the advocate. Scales, items, and their corresponding alpha reliability values can be found in Table 2. Other measures were also included, but not analyzed to limit the scope of analyses to those relevant to the research question; those items are included in supplemental materials.

Manipulation/accuracy check information

Participants verbally responded to manipulation/accuracy check questions prior to the debriefing to ensure participants understood the guilty plea offer and noticed the advocate manipulation. To measure the guilty plea offer information, participants were verbally asked by the experimenter: “Do you remember what our laboratory punishment was? What was it?” Participants who failed to report the correct laboratory punishment were excluded ($N = 2$). To measure the strength of the advocate manipulation, participants were asked by the experimenter: (a) “Did you talk to someone at the Dean of Students Office?” (yes or no); and if yes, (b) “What did they tell you? (The lab punishment is a good option and I should take the offer; the lab punishment is a bad option and I should take my chances in front of the board; they informed me of my options, but that it’s my decision to make; or other). No participants answered this

question incorrectly. After the study, the confederate confirmed whether participants were factually guilty or innocent; 9 participants were excluded for failing to cheat in guilty conditions. Only participants who passed the manipulation/accuracy checks were included in final analyses.

Results

What is the rate of innocent and guilty individuals accepting a guilty plea?

We first ran a logistic regression examining the effect of guilt, advocate recommendation, and the interaction between these variables on participants' plea decisions. The overall model was significant, $\chi^2(7, 199) = 53.55, p < .001$. There was a main effect of guilt on participants' plea decisions, which we interpreted in spite of a significant interaction because it addresses one of our main hypotheses. Guilty participants were more likely to accept the guilty plea/lab punishment ($M = 71\%$) than innocent participants ($M = 37\%$), $B = 1.67, S.E = 0.63, Wald's \chi^2(1, 199) = 7.12, p = .008, Exp(B) = 5.35, 95\% CI [1.56, 18.36]$.

How does an attorney's presence and variations in the attorney's recommendation affect innocent and guilty individuals' decisions to plead guilty or go to trial?

In this same model, the effect of the interaction between guilt and advocate recommendation on participants' plea decisions was significant, $Wald's \chi^2(3, 199) = 8.87, p = .031$. We ran a series of post hoc logistic regression models stratified by guilt to determine what was driving the significant interaction between guilt and advocate recommendation. Guilty plea probabilities are graphed in Figure 1. To address our research question, we compared each of the four differing conditions to tease apart *how* variations in attorney recommendation influences plea decisions.

For innocent participants, the effect of advocate recommendation on plea decisions was significant, $Wald's \chi^2(3, 199) = 10.93, p = .012$. The advocate's recommendation to go to trial

significantly affected plea decisions in innocent conditions. Innocent participants whose advocate recommended going to trial were less likely to falsely plead guilty ($M = 4\%$) compared to participants without an advocate ($M = 35\%$), $B = 2.50$, $SE = 1.10$, $Wald's \chi^2 = 5.15$, $p = .023$, $Exp(B) = 12.18$, 95% $CI [1.41, 105.48]$, if they received educational information ($M = 47\%$), $B = 3.00$, $SE = 1.09$, $Wald's \chi^2 = 7.65$, $p = .006$, $Exp(B) = 20.12$, 95% $CI [2.40, 168.80]$, and if the advocate recommended accepting the guilty plea ($M = 58\%$), $B = 3.45$, $SE = 1.10$, $Wald's \chi^2 = 9.89$, $p = .002$, $Exp(B) = 31.36$, 95% $CI [3.66, 268.71]$. No other pairwise differences were significant, all $ps > .098$; full results are available in supplemental materials.

For guilty participants, the effect of advocate recommendation on plea decisions approached significance, $Wald's \chi^2 (3, 199) = 6.99$, $p = .072$. Guilty participants whose advocate recommended accepting the guilty plea were more likely to plead guilty ($M = 91\%$) compared to those whose advocate recommended going to trial ($M = 64\%$), $B = -1.78$, $SE = 0.85$, $Wald's \chi^2 = 4.37$, $p = .037$, $Exp(B) = 0.17$, 95% $CI [0.03, 0.89]$, and those who received educational information ($M = 55\%$), $B = -2.17$, $SE = 0.85$, $Wald's \chi^2 = 6.44$, $p = .011$, $Exp(B) = 0.11$, 95% $CI [0.02, 0.61]$, although again, this result only approached significance. No other pairwise differences were significant, all $ps > .136$; full results are available in supplemental materials.

Thus, the effect of advocate recommendation was stronger for innocent participants than for guilty participants as predicted, although only slightly ($p = .012$ vs. $p = .072$). For diagnosticity ratios for plea decisions as a function of advocate recommendation, see Table 3. Diagnosticity was highest in conditions in which the advocate recommended the participant go to trial; it was lowest in conditions in which the advocate attempted to educate the participant about both options.

There was also a significant main effect of advocate recommendation that we did not interpret because it was qualified by the interaction, *Wald's* $\chi^2(3, 199) = 10.93, p = .012$.

Probability of Conviction and Strength of Evidence Ratings

We ran a correlational analysis assessing the relationship between the probability of guilt and strength of evidence scale measures. These measures were moderately correlated, $r_s = .464, p < .001$. Because of this correlation, we ran a MANOVA to test the effect of guilt, advocate recommendation, and the interaction between these variables on participants' perception of the probability of conviction at a Student Conduct Committee hearing and the scale measuring participants' perception of the strength of evidence. At the multivariate level, there was a significant main effect of guilt on the DVs, $\lambda = .92, F(2, 186) = 7.94, p < .001, \eta^2 = .08$. Other multivariate effects were not significant (main effect of advocate recommendation, $\lambda = .98, F(6, 372) = .51, p = .800, \eta^2 < .01$; and the effect of the interaction between the IVs, $\lambda = 0.99, F(6, 372) = 0.45, p = .842, \eta^2 < .01$).

At the univariate level, there was a main effect of guilt on participants' perception of the probability of conviction, $F(1, 187) = 14.41, p < .001, \eta^2 = .07$. Guilty participants rated their probability of conviction higher than innocent participants, $p < .001, d = 0.55, 95\% CI [0.26, 0.84]$ (see Table 4). Guilty participants did not rate the strength of evidence differently than innocent participants, $F(1, 187) = 0.29, p = .588, \eta^2 < .01$.

Influence of the Advocate Ratings

To explore participants' ratings of the advocate, we excluded participants in the advocate absent conditions. We then ran a correlational analysis of the three advocate scales (social influence, level of care/involvement, and helpfulness). Overall, there were weak to moderate correlations between these scales (ranging from $r_s = .263$ to $r_s = .708$), with the exception of a

strong correlation between helpfulness and level of care/involvement, $r_s = .708, p < .001$.

Because these scales were not consistently correlated between each other, we ran three separate ANOVAs to analyze the data. All ANOVAs included guilt, advocate recommendation (accept the guilty plea, go to trial, educational information), and the interaction between these two variables as the IVs and each of the scales representing participants' perceptions of the influence of the advocate as the DV (social influence, level of care/involvement, and helpfulness). We present findings from each of these ANOVAs below (using LSD post-hoc, when appropriate).

Social influence. The main effect of advocate recommendation on participants' ratings of the social influence of the advocate approached significance, $F(2, 142) = 2.99, p = .053, \eta^2 = .04$. However, this main effect of advocate recommendation was qualified by a significant interaction between guilt and advocate recommendation, $F(2, 142) = 5.23, p = .006, \eta^2 = .07$. Innocent participants whose advocate recommended going to trial rated the social influence of the advocate higher than those whose advocate recommended accepting the guilty plea ($p = .015, d = 0.70, 95\% CI [0.13, 1.27]$), and those given educational information ($p < .001, d = 1.22, 95\% CI [0.63, 1.81]$); see Table 6). Participants whose advocate recommended accepting the guilty plea did not rate the social influence of the advocate differently than those given educational information, $p = .151$. Guilty participants did not rate the social influence of the advocate differently as a function of advocate recommendation, all $ps > .214$. The main effect of guilt on participants' social influence ratings was not significant, $F(1, 142) = 2.41, p = .123, \eta^2 = .02$.

Level of care/involvement. There was a significant main effect of guilt on participants' ratings of the advocate's level of care and involvement, $F(1, 142) = 4.09, p = .045, \eta^2 = .03$. Innocent participants rated the advocate's level of care and involvement higher than guilty participants, $p = .045, d = 0.34, 95\% CI [0.01, 0.66]$ (see Table 4). All other effects were not

significant (main effect of advocate recommendation, $F(2, 142) = 1.71, p = .184, \eta^2 = .02$; and the effect of the interaction between the IVs, $F(2, 142) = 0.78, p = .463, \eta^2 = .01$).

Helpfulness. There was a significant main effect of advocate recommendation on participants' ratings of the helpfulness of the advocate, $F(2, 143) = 4.57, p = .012, \eta^2 = .06$. Participants whose advocate recommended going to trial rated the helpfulness of the advocate higher than those whose advocate recommended accepting the guilty plea ($p = .014, d = 0.55, 95\% CI [0.14, 0.96]$), and those given educational information ($p = .007, d = 0.54, 95\% CI [0.14, 0.94]$; see Table 5). Participants whose advocate recommended accepting the guilty plea did not rate the helpfulness of the advocate differently than those given educational information, $p = .820$. All other effects were not significant (main effect of guilt, $F(1, 143) = 1.68, p = .197, \eta^2 = .01$; and the effect of the interaction between the IVs, $F(2, 143) = 0.39, p = .681, \eta^2 < .01$).²

Discussion

The goal of this study was to examine plea rates in an experimental paradigm and explore how attorney recommendation affects defendant plea decision-making using a paradigm in which some participants engaged in a 'crime' of academic dishonesty. In the past, plea bargaining research has largely relied on self-reports from those who pleaded guilty, and while many studies have pointed to the influence of an attorney on plea decisions, these studies have all been correlational. To our knowledge, this was the first non-correlational study to explore how variations in attorney recommendations affects plea decisions, and if that influence differs for innocent and guilty individuals. Past research suggests guilty individuals are more likely to accept a guilty plea than innocent individuals (Bordens, 1984; Dervan & Edkins, 2013; Gregory

² We conducted the analyses for this study a second time including those who had failed the guilt and lab punishment manipulation check questions ($N = 11$). The results from these analyses can be found in supplemental materials.

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<http://dx.doi.org/10.1037/lhb0000297>

et al., 1978) and that the attorney plays an important role in defendants' decisions (Malloy et al., 2014; Viljoen et al., 2005); this was supported by our research.

What was the rate of innocent and guilty individuals accepting a guilty plea?

In this study, guilty participants were more likely to admit guilt and accept the lab punishment (71%) than innocent participants (37%). These findings are supportive of our hypotheses and consistent with a body of research suggesting guilty individuals are more likely to plead guilty than innocent individuals. We expected that these plea decisions would be informed by participants' perception of their probability of conviction at trial, based on calculations of the strength of the evidence (under the shadow of trial framework, Mnookin, & Kornhauser, 1979). In this study, guilty participants were more likely to plead guilty and rated their probability of conviction higher than innocent participants (35.77% vs. 21.13% respectively). In conjunction with the lower false guilty plea rate (compared to true guilty pleas), this suggests innocent individuals are more likely to want to take their case to trial, where they perceive their chance of conviction to be lower than guilty individuals. Innocent individuals are more risk-seeking and view trial as an opportunity for their innocence to become evident (Tor et al., 2010). It's likely that innocent individuals perceive their innocence to be a protective factor and are therefore more willing to take their case to trial than guilty individuals.

We did not see the expected effect of guilt on participants' ratings of the strength of evidence against them. It's possible due to the paradigm we used, participants did not feel that the test administrator/experimenter would be able to prove they cheated (i.e., circumstantial evidence of similar answers, etc.). While guilty participants rated their likelihood of being convicted at the Student Conduct Committee higher than innocent individuals, there were no differences in strength of evidence ratings.

How did an attorney's presence and variations in the attorney's recommendation affect innocent and guilty individuals' decisions to plead guilty or go to trial?

In this study, advocate recommendation affected both innocent and guilty individuals' plea decisions. Innocent participants were less likely to falsely plead guilty when the advocate recommended going to trial ($M = 4\%$) compared to when the advocate recommended accepting the guilty plea ($M = 58\%$). Innocent participants whose advocate recommended going to trial plead guilty at significantly lower rates than all other recommendation conditions: those given no advice, $M = 35\%$; educational information, $M = 47\%$; and those advised to accept the guilty plea, $M = 58\%$. Guilty participants whose advocate recommended accepting the guilty plea were more likely to plead guilty ($M = 91\%$) compared to those whose advocate recommended going to trial ($M = 64\%$) and those given educational information ($M = 55\%$; again, the overall effect of advocate recommendation for guilty participants approached significance, $p = .072$). Overall, these findings are in line with research suggesting that attorneys affect plea decisions (Malloy et al., 2014; Viljoen et al., 2005). Further, these effects are somewhat different for guilty and innocent individuals.

In line with our hypotheses, the effect of advocate recommendation was stronger for innocent participants than guilty participants. Innocent participants whose advocate recommended accepting a guilty plea were 14.5 times more likely to falsely plead guilty than those whose advocate recommended going to trial. Further, compared to participants whose advocate recommended going to trial, innocent participants whose advocate gave educational information were 11.75 times more likely to falsely plead guilty and those without an advocate, 8.75 times more likely to falsely plead guilty. We calculated diagnosticity ratios for plea rates as a function of advocate recommendation (i.e., the ratio of true guilty pleas to false guilty pleas;

similar to Russano et al., 2005). With plea-bargaining, the goal would be to maximize the likelihood of true guilty pleas, while decreasing the number of false guilty pleas. In this study, diagnosticity was highest when advocates recommended the participant go to trial and lowest when educational, non-biased information was given (see Table 3).

We further expected that advocate presence and recommendation would have a main effect on participants' probability of conviction and strength of evidence ratings; such that, participants whose advocate recommended accepting the guilty plea would rate their probability of conviction and strength of evidence higher than all other advocate conditions. While being advised to accept the guilty plea did significantly affect plea decisions for both innocent and guilty participants, advocate recommendation did not influence probability of guilt or strength of evidence ratings (only a main effect of guilt was evidenced).

For an attorney's recommendation to affect plea decisions, that attorney would need to influence the defendant. We expected the effect of the influence of the advocate would be stronger for innocent participants than guilty participants. We created three different scales assessing participants' ratings of the different aspects measuring influence of the advocate (social influence, level of care/involvement, and helpfulness). Participants rated the social influence and helpfulness of the advocate higher when the advocate recommended going to trial compared to when they recommended accepting a guilty plea or gave educational information, although this effect was only significant for innocent participants in rating the social influence of the advocate. Thus, we observed higher ratings of social influence for advocates who recommended going to trial (for innocent participants), and advocates were seen as the more helpful when they recommended going to trial (for both innocent and guilty participants). Innocent participants also rated the advocate's level of care and involvement higher than guilty individuals (i.e., reported

that the advocate listened to them, didn't have their own agenda, cared about their situation, etc.).

It's possible that because innocent individuals may be more influenced by external pressures in making decisions (Houston et al., 2014), they might have seen the advocate as being more involved (and caring). Overall, we found partial support for our hypothesis that innocent participants would perceive the influence of the advocate as stronger than guilty participants.

Limitations

One limitation of this project is that our advocate recommendation manipulation was compounded in that each condition contained several reasons to either go to trial, accept a guilty plea, or attempts to educate the participant. While this was intentional in design, the results from this study must be interpreted cautiously in light of the multifaceted nature of the content of each manipulation. That is, because we designed the advocate recommendation conditions considering advice an attorney might give a client in the criminal justice system, recommendation manipulations included multiple arguments that differed across the three conditions, confounding the elements of the quality of the plea offer, the probability of conviction at trial, and the severity of the trial punishment. Thus, for these conditions to be ecologically valid, the motivation for making one decision or another should ultimately lead up to the final recommendation.

For example, in the educational information conditions, the degree of personal responsibility was highlighted and the attorney went to greater lengths to list the pros (i.e., possibility of acquittal) and cons (i.e., trial penalty) more so than other conditions. Additionally, elements such as the value of the plea offer (i.e., it was listed as a "good offer" when advised to accept the guilty plea and "not a good offer" when advised to go to trial), and likelihood of conviction were compounded within recommendation conditions (i.e., "unsure" about defendant's chances before the committee when advised to accept the guilty plea and "good

chance” that the committee could find no involvement when advised to go to trial). These recommendations were not designed be equivalent across conditions; instead, they were designed to include information supportive of the overall recommendation (based on research of the factors that influence defense attorneys’ plea recommendations). This is a limitation of our study, and therefore results should be interpreted carefully. In the future, research could parcel out some of the content included in these recommendations to disentangle what types of attorney statements are most persuasive.

Other possible limitations of this project concern some of the language used in the advocate conditions. That is, there were differences in the length of each of the three advocate present conditions; 55 words when recommending accepting the guilty plea, 104 words when recommending going to trial, and 180 words when giving educational information. Participants whose advocate recommended accepting a guilty plea might have felt the advocate was less engaged because the advocate talked to them less compared to other conditions. Additionally, we included the educational condition to examine plea decisions if the advocate gave balanced, non-biased information and the explicit recommendations to examine plea decisions if the advocate attempted to persuade the participant with a specific recommendation. We did manipulation checks to ensure participants correctly remembered the content of the recommendation but did not measure perceptions of that advice (e.g., whether the educational condition was perceived as neutral, or not persuasive or that the explicit recommendations were perceived as persuasive). Future research could test these types of questions.

In this project, we sought to simulate defendant plea decision-making. We explored this process by creating an artificial situation with undergraduate students in which they were accused of a crime of academic dishonesty and chose between various academic sanctions and

consequences. The use of the paradigm allowed us to manipulate the guilt of the participant.

Further, students generally consider cheating to be a serious offense (although high estimates of academic dishonesty on campus suggest it is somewhat normalized behavior; Bowers, 1964; McCabe, & Treviño, 1997; McCabe, Treviño, & Butterfield, 2001). While using this experimental paradigm improves some aspects of ecological validity (e.g., measuring actual behavior rather than perceptions or intentions based on a vignette), it lacks ecological validity in that there are large differences between academic dishonesty and being accused a real crime. Further, in this study, participants were told a “student advocate” would advise them on how to best handle the situation. Again, this relationship lacks realism compared to the relationship between an attorney and client in the criminal justice system.

Our sample does not demonstrate an accurate portrait of the typical offender in the criminal justice system. Roughly 70% of our final sample was female and females account for roughly a quarter of all arrests; <https://ucr.fbi.gov/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/persons-arrested/persons-arrested>). Further, this project retained participants who had no past record of cheating behavior. We did this to avoid unduly harming participants with a previous history of cheating by accusing them of cheating a second time, which carries a much more severe punishment at our university. While this limited the generalizability of the study, it should be noted that only 4 participants were excluded, a small percentage of the total number of those in this study. Therefore, results from this study might not directly generalize to real-world interactions but offer some insight into how attorney recommendations influence defendant decision-making and provide a direction for future studies.

A possible limitation of the procedure in this study is that the participant and confederate were not separated immediately after the cheating accusation by the experimenter. Rather, both

the participant and the confederate waited in the laboratory together while the experimenter stepped out, ostensibly to call the professor in charge. It is possible the participant interacted with the confederate at this point. This interaction could have influenced participants' willingness to accept a guilty plea (e.g., feel the confederate might be an "alibi"). While running the experiment, these interactions did not strike us as significant, so we did not record these interactions or take session notes (the experimenter stepped out of the room in all conditions). We asked research assistants who played the role of the confederate to provide more information as to what occurred during this time period. A small number of RAs anecdotally remembered rare occasions that might be considered "collusion" between the participant and confederate. The RAs' responses were to try to change the subject, and in one encounter, the confederate agreed to the participant's request to deny cheating occurred. The opportunity for this interaction was consistent across conditions, but some participants might have taken this opportunity to try to formulate a strategy for handling the accusation. Future research could attempt to control, manipulate, or capture this interaction.

A last limitation of the procedure is that we did not record the interaction between the advocate and the student; thus, we are unable to investigate whether the participants' account of the situation as relayed to the advocate differed between conditions. In addition, participants in conditions with no advocate did not relay their account to anyone; future research could induce this control group to relay their account to a neutral party to ensure all participants have that opportunity before proceeding through the rest of the paradigm.

Despite these limitations, this project is the first to explore the influence of attorneys on plea decisions using an experimental paradigm. From this project, we can gain some insight into *how* variations in attorney recommendations influence plea decisions, not simply that they *do*.

Conclusion

For criminal defendants, the decision to waive versus invoke his or her right to trial is one of great importance, and likely carries considerable consequences. Defendants are to make this decision voluntarily, knowingly, and intelligently (*Boykin v. Alabama*, 1969), and defense attorneys can assist defendants in making an *intelligent* decision. The attorney is in a good position with their understanding of the law, jurisdiction, and likely sentencing options to help the defendant make an informed and rational decision. Defendants likely look to their attorney for their expertise and recommendation on how to best resolve the case. Exploring how attorney recommendations influence plea decisions is an important contribution to our understanding of true and false guilty pleas. In this study, we found that advocate recommendation influenced both innocent and guilty individuals' plea decisions (although the effect was stronger for innocent individuals). This study contributes to our knowledge of attorney recommendations in plea decision-making by showing that attorneys who advocate for their client to go to trial may lower false guilty plea rates. That is, in this study, innocent participants advised to go to trial had the lowest false guilty plea rate compared to other conditions. Overall, this study provides support for the defense attorney as a source of social influence in defendants' plea decision-making.

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Table 1

Attorney Recommendation Manipulation

| Attorney Recommendation Condition | Wording of Manipulation |
|-----------------------------------|---|
| Recommended trial | “I am unsure about your chances at a Conduct Committee hearing, but I don’t think what they are offering you is a good outcome for you. There’s a good chance that the Conduct Committee could find that you had nothing to do with this incident, and I don’t think what they are offering you is a good offer. Plus, at the Conduct Committee hearing you would get the chance to make your side of the story known, and they are pretty sympathetic to students who have been in these types of situations. I would take your chances at going in front of the board.” |
| Recommended plea | “I am unsure about your chances at trial, but this is a good option. You don’t know what would happen in front of the Conduct Committee – it can be pretty unpredictable in situations like this. I think this a good offer. I would just take what they are offering you and put this behind you.” |
| Educational information | “I am unsure about your chances at a Conduct Committee hearing, but it is your right to take your case before them. The benefit of going in front of them is that you could be found not guilty, and you’ll have a chance to present your side of the story. The drawback is that if you’re found guilty, the punishments are typically harsher than the punishments offered in a lab setting like this, so you also have the option of accepting the laboratory punishment and not taking your case before the Conduct Committee, too. It is my duty to inform you of both of your options and to help you, whichever path you take. Honestly, I don’t think there really is a right answer here – I will support whatever you would like to do, and I don’t think either way is a better option at this point – it is really 100% up to you. You should weigh the possible benefits and drawbacks carefully and decide which route is the best for you. Again, it is ultimately your decision to make.” |

Note. In conditions without an advocate (absent), no phone call/discussion took place.

Table 2

Scale Items and Alpha Internal Consistency Scores

| Scale | Items | α |
|---|--|----------|
| Strength of evidence | The evidence against me was damaging. The evidence against me was not damaging (R). | 0.73 |
| Social influence of the advocate | This person's advice influenced my decision. This person's advice had no influence over my decision (R). This person's advice is the reason for my decision. I made my decision because I felt pressured by this person. I disagree with this person's recommendation (R). I agree with this person's recommendation. | 0.76 |
| Level of care/involvement of the advocate | This person did not offer advice in my best interest (R). I believe this person was biased (R). This person did not listen to me (R). This person seemed to have his own agenda (R). This person seemed to be most interested in a quick resolution (R). This person's advice was in my best interest. This person cared about my situation. | 0.87 |
| Level of helpfulness of the advocate | This person was not helpful (R). This person was helpful. Receiving advice from this person helped ease the pressure I was under. | 0.87 |

Note. (R) denotes that item was reverse coded.

Table 3

Rates of True and False Guilty Pleas and Diagnosticity by Advocate Presence/Recommendation Condition

| Advocate Presence/Recommendation Condition | True Guilty Pleas | False Guilty Pleas | Diagnosticity |
|--|-------------------|--------------------|---------------|
| No advocate | 74% | 35% | 2.11 |
| Recommended Trial | 64% | 4% | 16 |
| Recommended Plea | 91% | 58% | 1.57 |
| Educational, non-biased information | 55% | 47% | 1.17 |

Note. Diagnosticity is ratio of true guilty pleas to false guilty pleas.

Table 4

Means, (Standard Deviations), Standard Errors, and [95% Confidence Intervals], for Dependent Measures as a Function of the Effect of Guilt

| Measure | Innocent | Guilty |
|--------------------------------------|----------------|----------------|
| Probability of Conviction | 21.13* (23.89) | 35.77* (29.40) |
| | 2.64 | 2.81 |
| | [15.93, 26.33] | [30.22, 41.31] |
| Strength of Evidence | 2.89 (1.26) | 2.99 (1.28) |
| | 0.13 | 0.13 |
| | [2.64, 3.14] | [2.73, 3.26] |
| Social Influence (Advocate) | 3.56 (0.94) | 3.33 (0.89) |
| | 0.10 | 0.11 |
| | [3.37, 3.76] | [3.12, 3.55] |
| Level of Care/Involvement (Advocate) | 4.21* (0.91) | 3.90* (0.94) |
| | 0.10 | 0.11 |
| | [4.01, 4.42] | [3.68, 4.13] |
| Helpfulness (Advocate) | 3.76 (1.13) | 3.50 (1.35) |
| | 0.14 | 0.15 |
| | [3.49, 4.03] | [3.22, 3.79] |

Note. *p < .05. Probability of conviction scale, 0-100%. All others, 6-point Likert-type scales with 1 indicating strongly disagree and 6 indicating strongly agree. Only participants in advocate present conditions responded to items assessing the advocate.

Table 5

Means, (Standard Deviations), Standard Errors, and [95% Confidence Intervals], for Dependent Measures as a Function of the Effect of Advocate Recommendation

| Measure | No Advocate | Recommended Plea | Recommended Trial | Educational |
|--------------------------------------|---|--|---|--|
| Probability of Conviction | 29.44 (26.96) 3.84 [21.87, 37.00] | 32.63 (29.37) 3.84 [25.06, 40.20] | 25.92 (26.02) 3.91 [18.21, 33.64] | 25.80 (27.86) 3.84 [18.23, 33.37] |
| Strength of Evidence | 2.93 (1.25) 0.18 [2.57, 3.29] | 3.16 (1.18) 0.18 [2.80, 3.52] | 2.81 (1.22) 0.19 [2.44, 3.18] | 2.86 (1.42) 0.18 [2.50, 3.23] |
| Social Influence (Advocate) | | 3.49 (0.90) 0.13 [3.24, 3.74] | 3.64 (0.95) 0.13 [3.39, 3.89] | 3.21 (0.88) 0.13 [2.96, 3.46] |
| Level of Care/Involvement (Advocate) | | 3.87 (0.91) 0.13 [3.61, 4.13] | 4.21 (0.92) 0.13 [3.94, 4.47] | 4.10 (0.97) 0.13 [3.84, 4.36] |
| Helpfulness (Advocate) | | 3.45 _a (1.15) 0.17 [3.10, 3.79] | 4.06 _{ab} (1.06) 0.18 [3.72, 4.41] | 3.39 _b (1.39) 0.17 [3.06, 3.73] |

Note. Means in a row sharing subscripts are significantly different from each other, $p < .05$.

Probability of conviction scale, 0-100%. All others, 6-point Likert-type scales with 1 indicating

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<http://dx.doi.org/10.1037/lhb0000297>

strongly disagree and 6 indicating strongly agree. Only participants in advocate present conditions responded to items assessing the advocate.

Table 6

Means, (Standard Deviations), Standard Errors, and [95% Confidence Intervals], for Dependent Measures as a Function of the Interaction of Guilt and Advocate Recommendation

| Guilty Participants | | | | |
|--------------------------------------|---|---|---|---|
| Measure | No Advocate | Recommended Plea | Recommended Trial | Educational |
| Probability of Conviction | 40.22 (29.75) 5.59 [29.20, 51.24] | 38.91 (32.09) 5.59 [27.89, 49.94] | 32.50 (29.56) 5.47 [21.71, 43.29] | 31.43 (26.70) 5.85 [19.89, 42.96] |
| Strength of Evidence | 2.89 (1.27) 0.27 [2.37, 3.42] | 3.30 (1.30) 0.27 [2.78, 3.83] | 2.81 (1.22) 0.26 [2.30, 3.33] | 2.95 (1.38) 0.28 [2.40, 3.50] |
| Social Influence (Advocate) | | 3.51 (0.75) 0.18 [3.15, 3.88] | 3.19 (0.99) 0.18 [2.84, 3.55] | 3.29 (0.94) 0.19 [2.92, 3.67] |
| Level of Care/Involvement (Advocate) | | 3.84 (0.92) 0.19 [3.46, 4.22] | 3.95 (0.85) 0.19 [3.57, 4.32] | 3.93 (1.10) 0.20 [3.53, 4.32] |
| Helpfulness (Advocate) | | 3.42 (1.30) 0.25 [2.92, 3.92] | 3.82 (1.27) 0.25 [3.33, 4.31] | 3.27 (1.48) 0.26 [2.76, 3.79] |
| Innocent Participants | | | | |

| Measure | No Advocate | Recommended Plea | Recommended Trial | Educational |
|--------------------------------------|--|--|---|--|
| Probability of Conviction | 18.65 (19.73) 5.26 [8.29, 29.02] | 26.35 (25.94) 5.26 [15.98, 36.71] | 19.35 (20.24) 5.59 [8.33, 30.37] | 20.17 (28.17) 4.98 [10.36, 29.99] |
| Strength of Evidence | 2.96 (1.25) 0.25 [2.47, 3.46] | 3.02 (1.07) 0.25 [2.52, 3.52] | 2.80 (1.24) 0.27 [2.28, 3.33] | 2.78 (1.46) 0.24 [2.31, 3.25] |
| Social Influence (Advocate) | | 3.47 _a (1.02) 0.17 [3.13, 3.81] | 4.08 _{ab} (0.67) 0.18 [3.73, 4.44] | 3.13 _b (0.85) 0.16 [2.81, 3.45] |
| Level of Care/Involvement (Advocate) | | 3.90 (0.91) 0.18 [3.54, 4.25] | 4.46 (0.92) 0.19 [4.09, 4.84] | 4.28 (0.85) 0.17 [3.94, 4.61] |
| Helpfulness (Advocate) | | 3.47 (1.01) 0.24 [3.00, 3.95] | 4.31 (0.74) 0.25 [3.82, 4.80] | 3.51 (1.34) 0.22 [3.07, 3.95] |

Note. Means in a row sharing subscripts are significantly different from each other, $p < .05$.

Probability of conviction scale, 0-100%. All others, 6-point Likert-type scales with 1 indicating strongly disagree and 6 indicating strongly agree. Only participants in advocate present conditions responded to items assessing the advocate.

Figure 1. Probability of Pleading Guilty within Guilt Condition

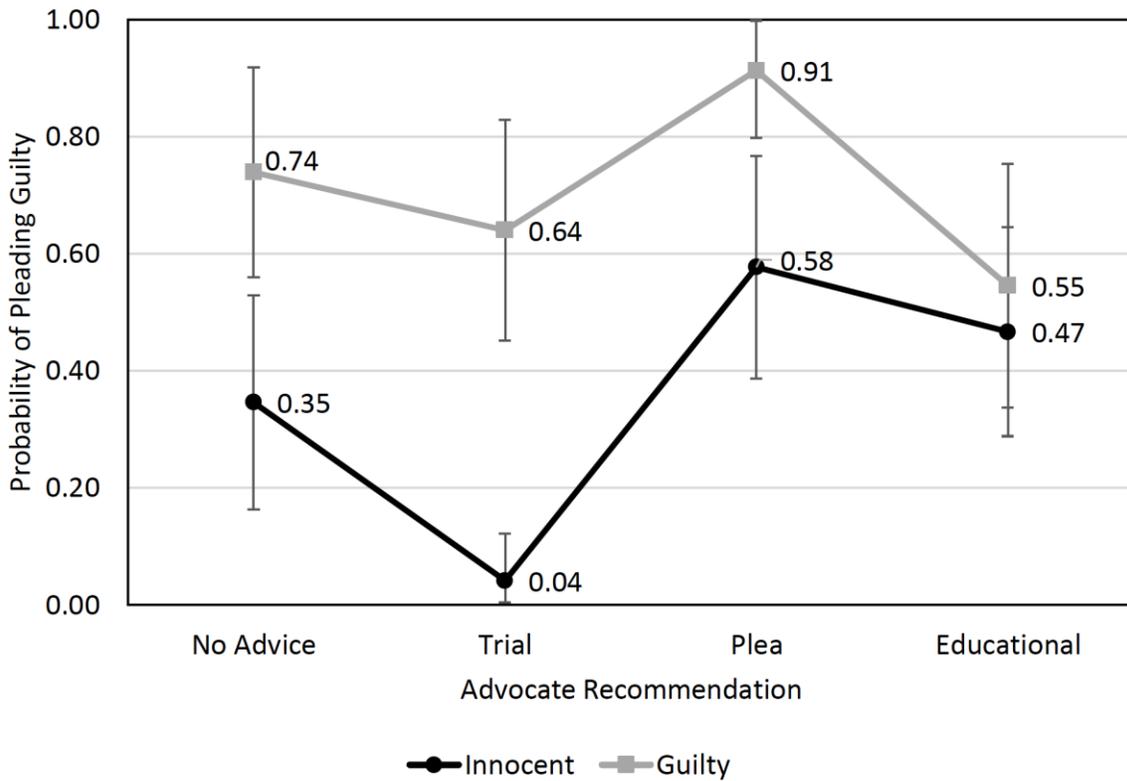


Figure 1. Error bars indicate 95% confidence intervals. Confidence intervals are cut off at 0 and 1 as probabilities cannot exceed these bounds.