Innocents Who Plead Guilty: An Analysis of Patterns in DNA Exoneration Cases

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I. Introduction

Since 1989, the year of the first DNA exoneration, more than 360 people have been exonerated based on DNA evidence. The vast majority (> 98 percent) had been wrongfully convicted of serious felonies involving homicide or sexual assault. These DNA exonerations represent 15 percent of the 2,359 exonerations documented in the United States.[1] Among the many insights drawn from these wrongful convictions is the realization that a guilty plea is not an uncommon outcome for innocent people who have been charged with a crime: 11 percent of the DNA exonerees recorded by the Innocence Project pleaded guilty.[2] This paper explores demographic, crime-related, and sentencing factors associated with the decision of people to plead guilty to a crime they did not commit.

II. Background

Guilty pleas have been the subject of psychology and other social science research focusing on several different dimensions. Cognitive theory and research have considered risk-taking preferences, mental processing, and models of strategic decision-making within the context of plea bargaining.[3] The social science literature also includes studies of factors within the purview of the criminal justice system, such as pre-trial detention and collateral consequences,[4] interrogation procedures,[5] and communication and understanding of plea details.[6]

The decision-making process around plea offers has been described as "bargaining in the shadow of the trial," incorporating perceptions of the likelihood of the trial outcome (probability of conviction) and the size of the trial penalty or plea discount (the difference between a sentence received through a trial and the sentence offered in a plea).[7] In a study of people who had entered a guilty plea to a felony charge in New York City, plea discounts of 80 and 98 percent, respectively, for adults and adolescents, were seen.[8] Other studies have focused specifically on cognitive processes and factors influencing plea decision-making (the decision to offer or to accept a plea deal, and decisions regarding the acceptable size of a sentence in a plea deal). For example, Shawn Bushway and colleagues examined perceptions of 1,585 defense attorneys, prosecutors, and judges pertaining to probability of conviction at trial, the expected sentence that would be received at a trial, and the acceptable sentence offered through a plea

in a hypothetical case; the influence of varying details of criminal history and types of evidence (confession, eyewitness identification, DNA) on plea decision-making was also assessed. The three groups, (defense attorneys, prosecutors, and judges) did not differ with respect to their estimated probabilities of a conviction at trial. A defendant's criminal history had little effect on the decision to accept a plea, but the presence of each of the types of evidence (confession, DNA, and eyewitness) increased the likelihood of accepting a plea.[9]

Of particular relevance to our analysis is the question of the role guilty pleas play in wrongful convictions. Previous experimental studies with college students that examined participants' responses to written vignettes in which they role-played innocence or guilt demonstrated a sizable proportion (18–36 percent) of innocent people pleading guilty in exchange for the promise of a lenient "sentence."[10] This prevalence increased to more than 50 percent under different scenarios regarding type of advice given or amount of plea discount offered,[11] and in a study that created conditions in which participants experienced a situation in which they were innocent or guilty of a cheating offense (e.g., by receiving assistance or providing unauthorized help to someone else).[12] These figures are in line with the 27 and 19 percent, respectively, of the adolescents and adults in an alternative-to-minimum sentencing program who maintained their innocence of all charges,[13] and with the 18 percent of adolescents incarcerated for serious crimes in California who researchers classified as having submitted a false guilty plea.[14] Examples of police misconduct involving drug cases in the Rampart area of Los Angeles, California, and in Tulia, Texas, also provide evidence of a high proportion of people (81 percent, 52 out of 64) who had been falsely accused of crimes pleading guilty rather than face the uncertainties of a trial.[15]

III. Methods

The Innocence Project maintains a database of exonerations for which DNA analysis was central to establishing the innocence of wrongfully convicted persons. The database contains demographic variables pertaining to the exoneree, the victim, information about the crime (number of victims, co-defendants, and type of crime), type of evidence that contributed to the wrongful conviction (eyewitness misidentification, misapplication of forensic

Table 1. Comparison of Crime-Related and Sentencing Characteristics by Plea Status Among People Exonerated Using DNA Evidence

	Guilty Plea (N = 40)			No Guilty Plea (N = 322)	
	N	(%)		N	(%)
Crime Details					
Type of crime					
• Homicide, with or without sex crime	21	(52.5)		112	(34.8)
• Sex crime only	14	(35.0)		205	(63.7)
• Other crime	5	(12.5)		5	(1.6)
Case with co-defendant(s)[a]	7	(30.0)		20	(7.0)
Multiple victims	13	(32.5)		48	(14.9)
Evidence Used in Conviction (Contributing Factors)					
Eyewitness misidentification	22	(55.0)		232	(72.5)
Misapplication of forensic science	10	(25.0)		152	(47.2)
False confession (by self, co-defendant, or both)	24	(60.0)		78	(24.3)
Informant	10	(25.0)		51	(16.0)
Sentencing					
Life Sentence[b]	7	(17.5)		114	(40.0)
Death penalty (among homicides)					
• Threatened or charged	13	(61.9)		24	(21.4)
• Sentenced to death	0	(0.0)		20	(17.9)
• Not eligible by statute or not charged	3	(14.3)		46	(41.1)
• Missing or unknown[c]	5	(23.8)		22	(19.6)

Missing data among Guilty Plea group: N = 3 for life sentence. Missing data among No Guilty Plea Group: N = 2 for misidentification, N = 1 for false confession, N = 4 for informant, N = 37 for life sentence.
[a]Percentage based on number of cases: N = 30 for all guilty pleas, N = 285 for no guilty pleas.
[b]Includes one or more life sentence (consecutive or concurrent, with or without possibility of parole), and sentence lengths ≥ 99 years.
[c]Excluding the missing or unknown from this calculation results in 86.7% (13 out of 16) and 26.7% (24 out of 90), respectively, in the Guilty Plea and No Guilty Plea groups.

science, false confession, jailhouse or other informant), and sentencing (for homicides, this includes information on eligibility for, threatened or charged with, or received the death penalty). The variable for life sentence includes one or more consecutive or concurrent life sentences, with or without possibility of parole, and total sentence lengths ≥ 99 years.

We conducted a descriptive analysis of demographic factors, crime details, type of evidence, and sentencing variables comparing the 40 exonerees in this database who had pleaded guilty to the 322 who had not pleaded guilty. There is a relatively high percentage of false confessions among the guilty plea group, which allowed us to compare those who had not confessed (n = 16) to those whose cases involved a confession (n = 24); the confession group included confessions by the individual exoneree only (n = 8), a co-defendant only (n = 2), or both (n = 14).

IV. Results

Exonerees who pleaded guilty were similar to those who had not pleaded guilty in terms of age and racial-ethnic background: 13 and 9 percent were age < 18 years, and 63 and 61 percent were African American, respectively, in the guilty plea and no guilty plea groups. Differences between the guilty plea and no guilty plea groups were seen, however, in the variables relating to crime details (Table 1). Cases involving guilty pleas were more likely to involve homicides, co-defendants, and multiple victims compared with those who had not pleaded guilty. Differences between the guilty plea and no guilty plea group in the type of evidence reflect the differences in type of crime, with misidentification by eyewitnesses less common among the group that had pleaded guilty, reflecting the higher prevalence of homicides in this group. Differences in sentencing were also seen: as expected, no death sentences were received among people who had pleaded guilty, and life sentences were less common among this group. Among homicides, exonerees who had pleaded guilty were more likely to have been threatened or charged with the death penalty compared with those who had not pleaded guilty.

The combination of confession and guilty plea contributed to some of the patterns observed (Table 2). In particular, the association seen between guilty plea and type of crime (homicide) was limited to cases with a confession: 21 out of 24 exonerees who had confessed and pleaded guilty had been charged with homicide, compared with none of the 16 exonerees who had not confessed but had pleaded guilty. The type of evidence available among guilty plea cases also differed depending on whether there was also a confession in the case: use of informants was seen in ten cases (42 percent) with a guilty plea and a confession, but informants were not part of the guilty plea cases without a confession. In contrast, eyewitness evidence was more likely to be found in guilty plea cases without a confession

Table 2. Comparison of Crime-Related and Sentencing Characteristics by Confession Status Among Exonerees Who Plead Guilty

	Confession (N = 24)		No Confession (N = 16)	
	N	(%)	N	(%)
Crime Details				
Type of crime				
• Homicide, with or without sex crime	21	(87.5)	0	(0.0)
• Sex crime only	3	(12.5)	11	(68.6)
• Other crime	0	(0.0)	5	(31.2)
Case with co-defendant(s)[a]	7	(50.0)	0	(0.0)
Multiple victims	7	(29.2)	6	(37.5)
Evidence Used in Conviction				
Eyewitness misidentification	8	(33.3)	14	(87.5)
Misapplication of forensic science	6	(25.0)	4	(25.0)
False confession (by self, co-defendant, or both)	24	(100.0)	0	(0.0)
Informant	10	(41.7)	0	(0.0)
Sentencing				
Life Sentence[b]	7	(29.2)	0	(0.0)
Death penalty (among homicides)				
• Threatened or charged	13	(61.9)	—	—
• Sentenced to death	0	(0.0)		
• Not eligible by statute or not charged	3	(14.3)		
• Missing or unknown[c]	5	(23.8)		

Missing data among Confession group: none. Missing data among No Confession group: N = 3 for life sentence.
[a]Percentage based on number of cases: N = 14 for guilty pleas with confession, N = 16 for guilty pleas without confession.
[b]Includes one or more life sentence (consecutive or concurrent, with or without possibility of parole), and sentence lengths ≥ 99 years.
[c]Excluding the missing or unknown from this calculation results in 86.7% (13 out of 16).

(87 percent) compared to guilty plea cases with a confession (33 percent). Among the wrongful convictions involving guilty pleas, all of the cases in which a life sentence was received or that had the possibility of death sentences were cases with a confession, again reflecting the preponderance of homicide cases in this group.

V. Discussion

This analysis is based on the largest collection to date of wrongful convictions in which DNA evidence was central to the eventual exoneration. It extends previous research and focuses on decisions made in serious and consequential situations involving homicide and sexual assault, often with the potential for a death or life sentence.

Previous research has found differences in the psychosocial reasoning and weighing of consequences relating to plea deals in juveniles compared with adults.[16] Young age (< age 18, or < age 16) was not associated with the likelihood of pleading guilty among these DNA exoneration cases, but our dataset does not allow exploration of psychological factors and rationales underlying the decision-making process.

Although the number of cases is relatively small, the analysis stratifying guilty plea cases by the presence of a confession raises issues regarding the interaction between type of crime, type of evidence, and decisions to plead. Other research provides support for the idea that a confession and the availability of an eyewitness identification influences plea decisions on the part of

prosecutors and defense attorneys.[17] In this set of wrongful convictions, confessions were present in 60 percent of the guilty plea cases, compared with 24 percent of the cases without guilty pleas. Eyewitness misidentification was not more common among guilty plea cases overall, but may have influenced the decision to plead in guilty plea cases without a confession, as this type of evidence was found in almost all (14 out of 16) of these cases. Ten of the DNA exonerees who pleaded guilty had informant evidence against them; these were all complicated group cases involving multiple co-defendants and associated individuals who were incentivized (by reward money and/ or leniency) to incriminate the innocent.

The analysis of guilty pleas among DNA exoneration cases demonstrates the multifactorial nature of the steps and decisions leading to wrongful convictions. One example of a set of factors contributing to a guilty plea by an innocent person is a crime that involves co-defendants, a murder charge with death penalty on the table, and a confession by one or more co-defendants. Another set of factors is a sexual assault by a single individual with an identification by a witness (in almost all cases, the victim), with an option presented for something other than a life sentence. Other scenarios reflecting one or more of the risk factors for false guilty pleas can be found in the individual case descriptions available through the National Registry of Exonerations.[18]

Our data does not include detailed information about the interrogation practices used in the exoneration cases,

but the influence of interrogation procedures on false and on true guilty pleas has been examined in previous studies. Specific police interrogation behaviors of befriending, deceit, and threats were associated with false guilty pleas (with odds ratios greater than 3.0) but were not associated with true guilty pleas in a study of 193 incarcerated adolescents.[19] Minimalization techniques (e.g., statements that expressed sympathy and concern) increased the prevalence of false confessions, and decreased the diagnosticity of a confession from 7.67 to 2.02 in an experiment that created an actual innocence or guilt experience relating to cheating.[20] Examination of the potential differential effect of different techniques on decisions to plead guilty by people who are innocent compared with people who are guilty requires accurate information on the interrogation practices used in a case. If this information is not routinely collected, regardless of the disposition of a case, the results of such an analysis may be distorted.

Our analysis demonstrates the pressures on an innocent person produced by the possibility of a death sentence, or of a life sentence, and the role that trial penalty trade-offs can play in the decision of someone who is innocent to plead guilty. The presumptive interpretation of a guilty plea, with or without a confession, as evidence of guilt should be exercised with caution and warrants consideration of the circumstances, including sentencing options, leading to a plea.

Notes

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1   For current data, see National Registry of Exonerations website, http://www.law.umich.edu/special/exoneration/Pages/about.aspx (last visited Dec. 19, 2018). Summary reports are also available under the "Resources" tab of the website; see e.g., National Registry of Exonerations: Exonerations in 2015, http://www.law.umich.edu/special/exoneration/documents/exonerations_in_2015.pdf (last visited Dec. 19, 2018).

2   For current statistics, see Innocence Project website, https://www.innocenceproject.org/dna-exonerations-in-the-united-states/ (last visited Dec. 5, 2018). Summary analysis of data from 325 exonerations is available in Emily West & Vanessa Meterko, *Innocence Project: DNA Exonerations, 1989–2014: Review of Data and Findings from the First 25 Years*, 79 Albany L. Rev. 717–95 (2016).

3   David Bjerk, *On the role of plea bargaining and the distribution of sentences in the absence of judicial system frictions*, 28 Int'l Rev. L. & Econ. 1–7 (2008); Rebecca K. Helm & Valerie F. Reyna, *Logical but incompetent plea decisions: A new approach to plea bargaining grounded in cognitive theory*, 23 Psychol. Pub. Pol'y & L. 367–80 (2017); Alexander Lundberg, *When do the Innocent Plead Guilty?* (Jan. 12, 2018), http://dx.doi.org/10.2139/ssrn.3100845.

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6   Allison D. Redlich & Catherine L. Bonventre, *Content and comprehensibility of juvenile and adult tender-of-plea forms: Implications for knowing, intelligent, and voluntary guilty pleas*, 39 Law & Hum. Behav. 162–76 (2015); Erika N. Fountain & Jennifer L. Woolard, *How defense attorneys consult with juvenile clients about plea bargains*, Psychol. Pub. Pol'y & L. (2017), http://doi.apa.org/getdoi.cfm?doi=10.1037/law0000158 (last visited Apr. 3, 2018).

7   Bjerk, *supra* note 3; Shawn D. Bushway & Allison D. Redlich, *Is Plea Bargaining in the "Shadow of the Trial" a Mirage?*, 28 J. Quantitative Criminology 437–54 (2012).

8   Tina M. Zottoli et al., *Plea Discounts, Time Pressures, and False-Guilty Pleas in Youth and Adults Who Pleaded Guilty to Felonies in New York City*, 22 Psychol. Pub. Pol'y & L. 250–59 (2016). Adults ($n = 42$, ages 18–54) served between 0 and 240 months (mean, 34.4 months) in prison, a plea discount of 80%; more than 90% of the youths ($n = 55$, ages 13–17) received probation, with a mean of 1.4 months served, a 98% plea discount. The plea discount was based on a comparison with the penalties received to New York State sentencing guidelines for each defendant's specified charges.

9   Shawn D. Bushway, Allison D. Redlich, & Robert J. Norris, *An Explicit Test of Plea Bargaining in the "Shadow of the Trial": Bargaining in the "Shadow of the Trial"*, 52 Criminology 723–54 (2014); Allison D. Redlich, Shawn D. Bushway, & Robert J. Norris, *Plea decision-making by attorneys and judges*, 12 J. Experimental Criminology 537–61 (2016).

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11   Henderson & Levett, *supra* note 10; Tor, Gazal-Ayal, & Garcia, *supra* note 10.

12   Lucian E. Dervan & Vanessa Edkins, *The Innocent Defendant's Dilemma: An Innovative Empirical Study of Plea Bargaining's Innocence Problem*, 103 J. Crim. L. & Criminology 1–48 (2013).

13   Zottoli et al., *supra* note 8.

14   Malloy, Shulman, & Cauffman, *supra* note 5.

15   Russell Covey, *Police Misconduct as a Cause of Wrongful Convictions*, 90 Wash. U. L. Rev. 1133–89 (2013); Ressell D. Covey, *Plea-Bargaining Law after Lafler and Frye*, 51 Duq. L. Rev. 595–623 (2013).

16   Redlich & Shteynberg, *supra* note 10; Thomas Grisso et al., *Juveniles' competence to stand trial: A comparison of*

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18   National Registry of Exonerations website ("Browse Cases"), *supra* note 1: Phillip Bivens, Marcellius Bradford, Keith Brown, Knolly Brown Jr., James Dean, John Dixon, Bobby Ray Dixon, Juan Carlos Gonzales-Barboza, Kathy Gonzalez, Michael Googe, Anthony Gray, Eugene Henton, Teddy Isbell, Dwayne Jackson, Jerry Lee Jenkins, Kenneth Kagonyera, William Kelly, Michael Marshall, Edward McGinnis, Damian Mills, James Ochoa, Christopher Ochoa, Jose Pallares, Michael Phillips, Steven Phillips, RodneFy Roberts, Mandel Rogers, Shainne Sharpe, Debra Sheldon, Ada Joann Taylor, Vincent Thames, Jerry Frank Townsend, David Vasquez, Robert Lee Veal, Patrick Waller, John Kenneth Watkins, Arthur Lee Whitfield, Robert Wilcoxson, Larry Williams, Thomas Winslow.

19   Malloy, Shulman, & Cauffman, *supra* note 5.

20   Melissa B. Russano et al., *Investigating True and False Confessions Within a Novel Experimental Paradigm*, 16 Psychol. Sci. 481–86 (2005).