AN OBSERVATIONAL STUDY OF INTERVIEW CHARACTERISTICS AND MIRANDA IN JUVENILE INTERROGATIONS

A Dissertation submitted to the Faculty of the Graduate School of Arts and Sciences of Georgetown University in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Psychology

By

Hayley Marie Daglis Cleary, M.P.P.

Washington, DC
March 30, 2010
AN OBSERVATIONAL STUDY OF INTERVIEW CHARACTERISTICS AND MIRANDA IN JUVENILE INTERROGATIONS

Hayley Marie Daglis Cleary, M.P.P.

Thesis Advisor: Jennifer L. Woolard, Ph.D.

ABSTRACT

Police interrogation is a critical yet understudied social context in which juvenile suspects must make vitally important legal decisions, often without the aid of a parent or attorney. Despite the potentially grave consequences such decisions may yield, we know surprisingly little about this unique context. Social science lacks even basic descriptive information about the interrogation setting and its participants. While empirical interest in police interrogation has indeed surged in recent years, most research examines the interrogation-related capacities that suspects bring into the interrogation room or involves adult suspects only. Given the myriad developmentally based vulnerabilities youth exhibit via laboratory- and self report-based methods, interrogation research focused on adolescent suspects is imperative. Moreover, observational methods are a critical first step in creating a descriptive foundation upon which future juvenile interrogation research may build.

The present study addresses these existing gaps by providing detailed descriptive data about juvenile interrogation procedures, participants, and outcomes. It is the first of its kind to examine electronically recorded police interrogations of
juvenile suspects from jurisdictions across the United States using digital coding technology. Fifty-seven electronic recordings from 17 police agencies were coded to yield fundamental descriptive information about officer and suspect characteristics, third party presence, situational characteristics, *Miranda* delivery and readability, *Miranda* waiver, and interrogation outcome. Results indicate that juvenile suspects waived their *Miranda* rights in 90% of cases. The average juvenile interrogation lasted approximately one hour and was conducted by one or two (typically white male) interrogators. The typical juvenile suspect was a middle-adolescent white or black male accused of a serious person or property crime. A parent was present in 20% of interrogations and a defense attorney was present in no cases. Readability of the *Miranda* warning language, as measured by two prevalent indices, fell into the “fairly easy” range or at approximately a seventh grade reading level.

This work was predicated on the notion that given the dearth of research on juvenile interrogations, a descriptive approach is paramount. It is hoped that the descriptive data presented here will provide a rich empirical foundation on which future inferential work may be structured.
The author expresses her sincere gratitude to the following individuals for their support, guidance, and constructive criticism:

Jennifer Woolard, advisor, Georgetown University
John Jarvis, advisor, Federal Bureau of Investigation
Michael Cleary, husband and friend
# TABLE OF CONTENTS

Introduction ......................................................................................................................... 1
Why Study Interrogation? ..................................................................................................... 2
Why Study Juveniles Separately? ......................................................................................... 8
Characteristics of Juvenile Interrogations .......................................................................... 14
Juveniles and *Miranda* ..................................................................................................... 19
The Advantages of Observational Methods ........................................................................ 24
Research Design and Methods ............................................................................................ 26
Recruitment .......................................................................................................................... 26
Participants ............................................................................................................................ 29
Interview Eligibility Criteria ................................................................................................. 29
Data Preparation ................................................................................................................... 32
Coding Procedures .............................................................................................................. 34
Coding Scheme .................................................................................................................... 37
Training and Reliability ....................................................................................................... 42
Special Protections ............................................................................................................... 43
Results ................................................................................................................................. 44
Characteristics of Juvenile Interrogations .......................................................................... 45
*Miranda* in Juvenile Interrogations ................................................................................... 53
Discussion ............................................................................................................................. 70
Individual Factors ............................................................................................................... 71
Contextual Factors .............................................................................................................. 79
*Miranda* Delivery ............................................................................................................. 83
*Miranda* Comprehension and Waiver .............................................................................. 90
*Miranda* Readability ......................................................................................................... 96
Limitations .................................................................................................................................100
Conclusions .............................................................................................................................102
Appendix A: Recruitment Letter to Police Agencies ............................................................105
Appendix B: Consent Form ......................................................................................................108
References ................................................................................................................................113
LIST OF TABLES

Table 1: Characteristics of Participating Agencies ....................................... 128
Table 2: Characteristics of Juvenile Suspects .................................................. 129
Table 3: Combinations of Persons Present in Juvenile Interrogations ................. 130
INTRODUCTION

The empirical study of police interrogation is an emergent science. The vast majority of work has been published in the last 25 years, with a few notable exceptions (e.g., Ferguson & Douglas, 1970; Grisso, 1981). The extant literature focuses largely on a few key elements of the interrogation process: deception (Kassin & Fong, 1999; Skolnick & Leo, 1992), lie detection (Vrij, 2008), confessions/false confessions (Drizin & Colgan, 2004; Kassin & Gudjonsson, 2004; Kassin & Kiechel, 1996; Redlich & Goodman, 2003), electronic recording of interrogations (Drizin & Colgan, 2001; Lassiter, Geers, Handley, Weiland, & Munhall, 2002; Sullivan, 2005), comprehension of the *Miranda* warnings (Abramovitch, Higgins-Biss, & Biss, 1993; Grisso, 1981), and waiver of *Miranda* rights (Feld, 2006a; Grisso, 1981).

Before proceeding any further, it may be helpful to clarify the meaning of interrogation and describe its standard procedures. In both policy and practice, the term *interrogation* is often used interchangeably with *interview* to refer to police questioning of suspects in connection with an alleged crime. However, the terms carry different legal implications for both police procedures and the rights of suspects. The Reid Technique of police interrogation, perhaps the most well known and widely used training manual for interrogators, describes interviews as non-accusatory conversations between officers and individuals that primarily serve an information gathering purpose (Inbau, Reid, Buckley, & Jayne, 2001). Interrogations, by contrast, are carefully
contrived social interactions in which officers confront suspects with accusations of guilt with the goal of inducing incriminating admissions or confessions from the suspect (Inbau et al., 2001). An interview may become an interrogation at any time, and the point at which this transition occurs is not always clear.

Largely to blame for this and other interrogation-related ambiguities is the so-called gap problem—“the gap between how law is written in the books and how it is actually practiced by legal actors in the social world” (Leo, 1996, p. 266). Though the gap problem bedevils many issues of law, police interrogation is a particularly susceptible legal context because of the privacy and exigency inherent in the process. The Supreme Court acknowledged the “innate secrecy of such proceedings” when it required police to administer pre-interrogation Miranda warnings\(^1\) regarding custodial suspects’ constitutional rights (Miranda v. Arizona, 1966). The extent to which the gap problem is manifest in police interrogation is unknown; rigorous, innovative social science research on the subject is therefore imperative.

**Why Study Interrogation?**

There are numerous legal and procedural incentives to better understand the interrogation process. First, police hold tremendous influence over the fate of a criminal or delinquency case. Officers may arrest, detain, or release individuals based

---

\(^1\) These constitutionally guaranteed rights are 1) the right to remain silent, 2) the right to avoid self-incrimination (i.e., any statements may be used against a suspect in court), 3) the right to consult with counsel before and during interrogation, and 4) the right to court-appointed counsel if indigent.
(among other things) on the information they provide during questioning. Police decide whom to question about a crime as well as where, when, and how to conduct questioning in order to obtain accurate and complete information. Police discretion, as termed by the literature, is a catch-all phrase used to describe “two proximate elements: the degree and the ways in which characteristics of people (both officer and citizen) and situations influence police actions” as well as more distal but also influential elements of police infrastructure (e.g., department policies; leadership hierarchies) that impact police decision making (Skogan & Frydl, 2003, p. 110). The bulk of police discretion literature focuses on the decision to arrest; no known study to date has examined discretion within the interrogation context (J. Shafer, personal communication, December 14, 2009). More research is needed to understand how the state-vested police powers of arrest and apprehension manifest in the interrogation context.

Second, research demonstrates that confession evidence is extremely powerful (Drizin & Leo, 2004; Kassin & Gudjonsson, 2004; Kassin & Wrightsman, 1980; Leo & Ofshe, 1998). Drizin and Leo (2004) characterized confession evidence as “inherently prejudicial and highly damaging to a defendant, even if it is the product of coercive interrogation, even if it is supported by no other evidence, and even if it is ultimately proven false beyond any reasonable doubt” (p. 959). Laboratory studies report a stronger impact of confession evidence on mock jurors’ guilty verdicts relative
to eyewitness and character testimony (Kassin & Neumann, 1997), regardless of whether the confession is perceived as voluntary or coerced (Kassin & Sukel, 1997). Mock jurors appear simply unable to discount confession evidence, even when explicitly instructed to do so (Kassin & Wrightsman, 1980, 1981). Moreover, confessions are typically introduced into evidence via police officials’ testimony in court, and police—indeed, people in general—are often quite confident in their abilities to accurately evaluate confessions. Studies comparing police officers to mock-juror college students found that police exhibit consistently higher confidence in their assessments of the truthfulness of observed confessions; this result held true not only for laboratory-generated confessions but also confessions from prison inmates (Kassin, Meissner, & Norwick, 2005).

The power of confession evidence is not relegated to juror verdicts, however; a suspect’s confession or incriminating admission may introduce bias throughout the duration of his legal case. Kassin and Gudjonsson (2004) observed that “confessions tend to overwhelm other information, such as alibis and other evidence of innocence, resulting in a chain of adverse legal consequences—from arrest through guilty pleas, prosecution, conviction, and incarceration” (p. 57). Since police are trained to presume interrogation suspects’ guilt (Inbau et al., 2001; otherwise it would be an interview), confirmation biases may induce them to overlook or discount exculpatory information and continue the interrogation until a suspect has confessed. Suspects’ statements in
the interrogation room can even affect the specific charges the prosecuting attorney will file. For example, if a suspect is charged with murder but confesses that the incident was actually a robbery gone wrong, the prosecutor may add robbery charges in addition to the murder charge (W. Jarvis, personal communication, May 7, 2009). In short, the decision to confess during interrogation may be the single most consequential legal decision a suspect will make.

Third, because of the aforementioned “gap problem,” interrogation is a legal context that may inadvertently give rise to due process violations or other procedural justice concerns. Due to the “innate secrecy of such proceedings” (Miranda v. Arizona, 1966, p. 532), the Supreme Court has historically acknowledged the impossibility of transparency in police interrogations and has accordingly imposed restrictions on police behavior and interrogation procedures. For example, police are not allowed to make explicit threats or promises (Bram v. United States, 1897), and physical force has long been prohibited (Brown v. Mississippi, 1936). Though the incidence of such behaviors cannot be determined, it is unlikely that overt police misconduct is a serious concern. Instead, the question of potential due process violations may be more relevant to routine interrogation procedures that are ill-defined in case law and policy.

For example, the Miranda decision stipulated that police must administer pre-interrogation warnings before custodial questioning may commence (Miranda v.
However, an officer’s act of taking a suspect into custody, as well as suspects’ perceptions of being in custody, are not always clear. Police custody is not equivalent to questioning occurring at the police station; both interviews and interrogations can occur on the street, at the scene of the incident, in the suspect’s home, or at the police station. Nor is custody always equivalent to handcuffs or even arrest; whether an interviewee is in police custody for the purposes of Miranda is determined by circumstances surrounding the questioning. In *Thompson v. Keohane* (1995) the Supreme Court articulated an objective test for custody determinations that evaluates 1) the circumstances surrounding the interrogation and 2) whether a reasonable person in such circumstances would have felt at liberty to leave. Thus, custodial questioning can occur before arrest if the interviewee perceives that his freedom of action is restrained in a considerable manner and his perception is confirmed by a later legal determination. The Court buttressed the objective nature of custody tests in *Yarborough v. Alvarado* (2004) when it ruled that officers need not consider suspects’ age or prior law enforcement experience when determining custody for Miranda purposes, as these are individual characteristics whose influence on perceived custody are subjective. In short, the custodial context in which a suspect chooses to answer an officer’s questions is one example of a procedural gray area resulting from inadequate knowledge about routine interrogations. By learning more
about ordinary interrogation procedures, we can guard against potential due process violations that may inadvertently arise as a function of those procedures.

Social science also stands to gain much from the empirical study of police interrogation. Cognitive psychologists, for example, have long heralded the role of context in human judgment and decision making (Kahneman, 1991). The effects on judgment of environmental and individual factors such as stress (Hammond, 2000), time pressure (Svenson & Maule, 1993), affect (Loewenstein & Lerner, 2003), fatigue (Baranski, 2007), and mental illness (Kazdin, 2000)—as well as their interaction effects—are well explored. Researchers have already applied psychological concepts to legal settings, exploring the role of cognition in legal decision making among jurors (e.g., Weinstock & Flaton, 2004) and judges (Bursztajn, Hamm, & Gutheil, 1997). However, cognitive psychology has yet to investigate decision making in the interrogation context—a notable gap in the literature, given the legally consequential nature of interrogation decisions.

Social psychologists, by contrast, may approach police interrogation as a social interaction in which two or more individuals with conflicting goals and disparate information vie for ascendancy in an environment (presumably) controlled by one party: the interrogator. Interrogation has been described as “a process of social influence…a theory-driven social interaction led by an authority figure who holds a strong a priori belief about the target and who measures success by the ability to
extract an admission from that target” (Kassin & Gudjonsson, 2004, p. 41).

Interrogation strategies, procedures, and environments are structured so as to maximize the imbalance of power between interrogator and suspect (Inbau et al., 2001). Interrogators are trained to exploit the power of their position and of the situation to obtain information from even the most recalcitrant suspects. The Miranda Court observed that “the very fact of custodial interrogation exacts a heavy toll on individual liberty and trades on the weakness of individuals” (Miranda v. Arizona, 1966, p. 455).

Social science has yet to fully explore the mechanisms by which police obtain information from suspects, particularly to identify which strategies are more coercive, benign, and/or successful than others. Were such strategies ascertained, researchers and law enforcement could collaborate to develop best practices for interrogations that elicit accurate, complete information while simultaneously observing suspects’ constitutional rights.

Why Study Juveniles Separately?

Several important variations in legal and procedural interrogation requirements suggest that juveniles experience the interrogation process differently from adults. Police jurisdictions at the state and local level may vary substantially with regard to booking, intake2, Miranda warning language, and parental notification, presence or

---

2 Intake refers to the juvenile justice system’s decision to proceed with formal prosecution or divert the youth’s case to a program outside the juvenile justice system.
consent during interrogation (Feld, 2006a). For example, several states use a simplified form of the *Miranda* warnings with underage suspects. Others require an interested adult’s presence for interrogation of younger juveniles (McGuire, 2000). Such variations reflect the larger panoply of state juvenile justice policies governing routine handling of youth in the system. In fact, commentators have eschewed comparisons of “the” juvenile justice system to the criminal justice system, noting more accurately that there are “51 separate juvenile justice systems in this country” with which to contend (King, 2006, p. 1; see also Steinberg & Schwartz, 2000).

States also differ on the constitutional measures used to determine the validity of juveniles’ *Miranda* waivers. The Supreme Court has not mandated any special procedural protections for juvenile suspects during this process (Feld, 2006a), and most states use the adult “totality of the circumstances” standard (*Fare v. Michael C.*, 1979) in which judges are required to consider all material circumstances, including the suspect’s age, intelligence, background, and capacity to understand his constitutional rights as well as situational factors such as length and method of interrogation (Feld, 2000). A select few states, however, have imposed more rigorous standards for waiver assessments that require certain conditions to be met, usually involving the presence of an interested adult. “Per se” rules presume that a juvenile’s waiver is invalid unless an

---

3 Parameters for who qualifies as an “interested adult” vary by state and are partially delineated by case law (Oberlander, Goldstein, & Goldstein, 2003), but in general, state policies stipulate that the party be *interested* (i.e., vested in the youth’s legal best interest) and an *adult* (i.e., not a legal minor; *Commonwealth v. Guyton*, 1989). Interested adults are usually parents, guardians, or adult relatives.
interested adult is present and active in the juvenile’s decision to waive his *Miranda* rights (Feld, 2000). In some states per se rules are tiered, holding different presumptions of waiver validity for younger versus older youth (Krzewinski, 2002). In short, youth in different localities most likely experience different interrogation procedures due to states’ variable juvenile justice policies, whereas the policies governing adult interrogations are generally similar across jurisdictions.

Procedural variations aside, perhaps the most compelling reasons to study juvenile interrogations separately from adult interrogations are the well-documented developmental differences that differentiate youth from adults intellectually, psychosocially, and emotionally as a matter of normative developmental patterns. Adolescents, for example, are less risk-averse than adults. They engage in risky behaviors more frequently than adults (Eaton et al., 2006; Reyna & Farley, 2006; Steinberg, 2005), including unprotected sex (Hoff, Greene, & Davis, 2003), illicit drug experimentation (Chambers, Taylor, & Potenza, 2003), and criminal conduct (Snyder & Sickmund, 2006). When making choices about risks they orient more toward opportunities for gains than toward protection against losses (Gardner & Herman, 1990). Additionally, adolescents place more emphasis than adults on the negative consequences of *not* engaging in risky behaviors (Beyth-Marom, Austin, Fischhoff, Palmgren, & Jacobs-Quadrel, 1993), such that the social risk of peer disapproval
associated with desisting from a delinquent act may outweigh the legal risk associated with getting caught.

More recent work emphasizes the role of context in adolescents’ decision making about risk. In essence, under highly controlled laboratory conditions, adolescents are equally capable as adults of making rational choices about risk (Steinberg, 2004). However, “in practice, much depends on the particular situation in which a decision is made….on the spur of the moment, in unfamiliar situations, when trading off risks and benefits favors bad long-term outcomes, and when behavioral inhibition is required for good outcomes, adolescents are likely to reason more poorly than adults do” (Reyna & Farley, 2006, p. 1). A host of factors have been implicated for this contextual effect, from biologically driven novelty-seeking behavior (Spear, 2000) to incomplete capacities for self-regulation (Steinberg, 2004). These situational circumstances are precisely the sort that adolescents face during interrogation. Juvenile suspects likely find themselves in an unfamiliar environment in which short-term benefits (e.g., getting to “go home”) appear extremely appealing, even if they result in poor decisions (e.g., waiving Miranda rights, confession) that disserve the youth’s long-term legal best interest.

A second developmental difference between youth and adults concerns youths’ foreshortened time perspective. It is well established that adolescents are more present-oriented than adults (Steinberg & Scott, 2003). They accord more weight to
the short-term consequences of decisions (both risks and rewards) and are more likely to discount the future (Gardner & Herman, 1990; Reyna & Farley, 2006). For example, adolescents in one decision making study were less likely than adults to consider options for medical treatment, risks related to medical treatment, and long term consequences associated with medical decisions (Halpern-Felsher & Cauffman, 2001). It has been suggested that foreshortened time perspective may be domain specific (Grisso, 2000), such that research on youths’ time perspective in particular legal contexts such as interrogation is advised.

Adolescents in the interrogation room may be disproportionately influenced by foreshortened time perspective, particularly with regard to *Miranda* waiver and confession. They may comply with interrogators’ requests to whatever extent necessary for them to be released, even to their legal detriment. Grisso (1981) empirically demonstrated this tendency when he asked a delinquent youth sample to describe the consequences of waiving one’s right to silence when questioned by police. The consequence mentioned most frequently was the police’s immediate response (i.e., police will let youth “go home” if they talk). Moreover, the study reported an age by intelligence interaction, such that among youth with IQ scores below 80, those ages 14 and younger were especially likely to focus on short-term consequences (Grisso, 1981). A more recent study also reported less awareness of long-term consequences for youth under 14 (Grisso et al., 2003).
Extreme examples of this phenomenon have been cited anecdotally in documented false confession cases. In 1998, twelve-year-old Anthony Harris was implicated in the disappearance and murder of his five-year-old neighbor because of his proximity to the location where the girl’s body was discovered (Drizin & Colgan, 2004). After mounting pressure from police, Anthony (falsely) confessed to stabbing the child seven times. When later asked why he confessed, Anthony stated, “I just felt like I was in a maze. I couldn’t find my way out….if I said I did it, I’ll go home. That’s what I thought” (Drizin & Colgan, 2004, p. 137). While cases like Anthony’s are typically discussed in reference to improper police interrogation techniques and coerced confessions, it is important to consider how developmental factors endogenous to adolescence can also contribute to inaccurate interrogation outcomes. In fact, given that the base rate of false confessions as a percentage of all police-youth questioning is probably extremely low, the more pressing question may be whether and how time perspective impacts youth decision making in routine police interrogations and whether or not the effects are greater for youth compared to adults.

A third distinguishing feature of adolescence involves a greater propensity to comply with requests from authority figures. Though data are limited, several studies report age-based differences in interrogation-related compliance. In a recent large-scale study with both incarcerated and community populations, youth ages 15 and younger were more likely to comply with vignette requests from police and attorneys
than older adolescents and young adults (Grisso et al., 2003). When presented with a specific interrogation scenario including options to a) confess to the offense, b) deny the offense or c) refuse to talk, nearly 60% of youth in the youngest age category (11-13 years) chose confession as the “best choice,” compared to only 20% of young adults (18-24 years) (Grisso et al., 2003). Results did not vary across ethnicity, gender, or detained/community status. Redlich and Goodman (2003) employed the famed alt-key paradigm (Kassin & Kiechel, 1996) in the first and only laboratory study of juvenile false confessions. All participants were accused of pressing the alt-key and asked to sign a confession; half were presented with “false evidence” of their guilt (a computer printout showing all keys pressed). The authors reported that compliance rates for signing the (untrue) statement decreased with age and were as high as 78% for 12- to 13-year-olds (Redlich & Goodman, 2003). While the experiment hardly approximates the tangible pressures of actual interrogations—ethically and practically unavailable in field studies or laboratories—it does corroborate Grisso and colleagues’ (2003) findings that youth are more likely to comply with requests from authority and that compliant legal decision making is not relegated to particular ethnicities or social classes.

**Characteristics of Juvenile Interrogations**

Despite increasing empirical attention to this issue, we still know remarkably little about what actually occurs when police question suspects (Feld, 2006b; Redlich
et al., 2004). Leo (1996) noted, “law professors, lawyers, and law students have created a formidable law review literature that focuses almost entirely on the doctrinal and ethical aspects of interrogation and confession case law, rather than on the routine activities of legal actors and institutions” (p. 267). Social science has been equally remiss in studying routine police interrogations. Though we have learned a great deal about interrogation-related capacities as well as interrogation decision making in laboratory settings, we lack fundamental descriptive data about routine police questioning of adults or juveniles. In the four decades since the Miranda decision was handed down, only a handful of studies in the United States\(^4\) have employed observational methods to document actual interrogations and only two of those are contemporary.

Leo (1996) observed 122 live interrogations and 60 videotaped interrogations for his descriptive study of adult suspects in several California police departments. His analysis reported, for the first time in the literature, key descriptive variables about the interrogation context and its participants: race, class, gender, prior record, Miranda waiver/invocation, and interrogation length and outcome, among others. He reported that a white male primary detective conducted most interrogations at the police station,

\(^4\) Researchers in Great Britain have made tremendous strides in documenting interrogation phenomena in the last 25 years, as Great Britain passed the Police and Criminal Evidence (PACE) Act of 1984 that required police to record all interrogations. However, British studies are not discussed here because of the substantial differences between U.S. and English law as well as presumed differences in policing procedures, public perceptions of police, and population characteristics.
sometimes accompanied by a second detective (31% of cases, also typically a white male; Leo, 1996). The typical suspect was a young, black, working-class male accused of a person crime (81% of cases) or property crime (19%). More than three-fourths of the suspects in his samples waived their *Miranda* rights and agreed to speak with police. Notably, he also recorded the frequency and type of interrogation techniques detectives used to elicit confessions.

Leo’s (1996) study greatly advanced the interrogation literature because it employed observational methods to illuminate what has traditionally been a highly veiled social context. His work correctly underscores the need to examine routine police procedures—as opposed to “leading cases…which are unrepresentative of the larger universe of court cases and thus may depict atypical police practices as the norm” (p. 267)—in order to better understand everyday interrogation practices.

Despite its considerable contribution to the field, the study does raise concerns about observer bias since the interrogators were aware of the researcher’s presence, though the author addresses this with care (Leo, 1996). A second disadvantage is that by observing interrogations contemporaneously, the researcher gets only a single pass at coding an extensive array of variables. Interrogations are rarely unambiguous in every respect, and making extemporaneous judgments about highly complex social interactions is challenging. Nonetheless, Leo’s remarkable (1996) work begs replication in other jurisdictions.
Feld’s (2006a) observational study identified the 66 juvenile cases from the pool of all juvenile cases in one Minnesota jurisdiction during a seven-year period that contained either videotaped interrogations or interrogation transcripts. His sample included 16- to 18-year-old felony suspects, just over half of which (52%) were accused of person crimes. In addition to many of the variables Leo (1996) examined, this study also coded interrogators’ strategies to predispose youth to waive *Miranda* as well as youths’ positive or negative responses to interrogation. Like Leo’s (1996) sample, most of these suspects were minority males whom Feld (2006a) characterized as a “criminally sophisticated group of delinquents” due to the substantial proportion with prior felony arrests or juvenile court referrals (p. 69). Eighty percent of juvenile suspects waived their *Miranda* rights and consented to police questioning. Most (88%) were arrested prior to questioning and nearly all (95%) of interrogations occurred in a custodial physical setting (e.g., detention center or police station).

To date, Feld’s (2006a) sample of 66 juvenile felony cases provides the only existing data drawn from actual juvenile interrogations. Its sampling strategy attenuates selection bias by drawing a complete sample from a single jurisdiction over a substantial time period. However, in any given jurisdiction, a host of variables (measured or unmeasured) may be particular to that community, including suspect demographic characteristics, youth orientation toward law enforcement, police

---

5 Transcripts and videotaped interrogations were not analyzed separately.
attitudes, law enforcement interviewer training, and state or local juvenile justice policies. Moreover, much of Feld’s (2006b) extensive reporting on youth attitudes, demeanor, and behavior during interrogation is secondhand, drawn largely from interviewer notes accompanying interrogation transcripts. Noting the necessity of using subjective judgment, he writes:

Fortunately, police write detailed notes, and about half their reports included officers’ impressions and comments about juveniles’ demeanor and behavior. Officers reported whether they believed suspects told the truth or lied; indicated whether they cooperated or resisted; and described youths’ behavior during questioning. (Feld, 2006b, p. 286).

Certainly, any form of naturalistic study requires the researcher to make impressionistic judgments about the target of investigation. Vicariously reporting others’ impressionistic judgments, however, particularly those of nonneutral parties, raises serious concerns about data quality. This is especially pertinent given that a) police (and individuals in general) are notoriously inaccurate at detecting deception (Vrij, 2008), b) no reliability coding was conducted for these (or any) analyses, and c) nearly half of his data were derived from transcripts only. Though Feld’s (2006b) study is momentous step forward in the empirical study of juvenile interrogations, much more research is needed to examine whether its conclusions hold true in other jurisdictions using other methods.
Juveniles and Miranda

A growing body of empirical evidence suggests that adolescents as a group inadequately comprehend the *Miranda* warnings to a degree that may compromise the validity of their *Miranda* waiver. Younger adolescents are more likely than older adolescents and adults to demonstrate significant knowledge deficits about the components of the *Miranda* warning (Abramovitch, Peterson-Badali, & Rohan, 1995; Goldstein, Condie, Kalbeitzer, Osman, & Geier, 2003; Grisso, 1981; Grisso et al., 2003; Viljoen & Roesch, 2005; Woolard et al., 2008), although determinations of what constitutes “sufficient” *Miranda* understanding vary according to the legal standard being applied (Viljoen et al., 2007). Youth younger than 15 are significantly more impaired than older youth in their understanding and appreciation of the four specific *Miranda* warnings (Abramovitch et al., 1995; Grisso, 1980; Redlich et al., 2003; Viljoen et al., 2007). Grisso (1981) reported that more than half of juveniles demonstrated inadequate comprehension of at least one of the four *Miranda* warnings (compared to 23% of adults) and age, race, and IQ were related to *Miranda* comprehension.

These age patterns in impaired *Miranda* comprehension are not simply a function of lower IQ or lack of justice system experience. Studies generally report that prior justice system experience, typically measured by police contact, arrests, court experience, or convictions, is not a reliable predictor of *Miranda* comprehension.
Grisso (1981) reported that juveniles with prior court experience were no more or less likely to understand the words and phrases *Miranda* warnings than non-justice involved youth, though they better understood the functional significance of the rights to silence and counsel. Viljoen and Roesch (2005) found that arrests predicted functional understanding of the right to counsel and general understanding of the legal process, but arrest experience was not related to any other psycholegal capacities examined. Individuals with lower IQ tend to perform more poorly on *Miranda* comprehension tests regardless of age, but effects are greater for youth than adults (Grisso, 1981).

As many have previously speculated (e.g., Feld, 2006a; Redlich & Goodman, 2003), if age-based deficits in *Miranda* comprehension are apparent in an innocuous laboratory environment, then the stresses and pressures of real interrogation may further amplify youths’ deficits. Perhaps the most accessible method of evaluating suspects’ *Miranda* comprehension would involve observing any behavioral indications of comprehension they may exhibit, such as verbal or behavioral affirmations of understanding (e.g., “mm-hmm” utterances or nodding head in agreement), failure to ask questions or request clarification, or failure to exhibit outward signs of cognitive struggle (Feld, 2006a). Though such behavioral indicators are clearly insufficient for determining actual comprehension from a clinical standpoint, the law relies heavily on these “objective” indicators when determining the validity of youth waivers because
police cannot be expected to assess suspects’ *Miranda* comprehension (Feld, 2006a).

Indeed, the Supreme Court has consistently protected police officers’ lack of obligation to judge suspects’ capacities, knowledge, or mental states (*Berkemer v. McCarty*, 1984; *Stansbury v. California*, 1994). Feld (2006a) suggested that even the slightest affirmation (verbal or nonverbal) is typically enough to find a waiver knowing and intelligent in a juvenile waiver hearing.

Because we cannot experimentally uncouple *Miranda* comprehension from waiver in actual interrogations, we must use both laboratory paradigms and naturalistic observations to understand more about these constructs. Laboratory studies can use carefully developed forensic measures to evaluate individuals’ subjective comprehension of *Miranda* vocabulary and content, but they can only associate comprehension with waiver by using hypothetical vignettes or retrospective self-report of past interrogations. Naturalistic studies, by contrast, can document waiver rates and other interrogation decision making in practice but cannot assess suspects’ subjective *Miranda* comprehension. It has been suggested that juvenile suspects’ outward indicators of comprehension may in fact reflect compliance with authority instead of actual comprehension (Feld, 2006a). For this reason, it is important to examine both comprehension and waiver using multiple, converging methods and data sources.

Studies using data from actual police interrogations (Grisso, 1981; Grisso & Pomicter, 1977; Pearse, Gudjonsson, Clare, & Rutter, 1998) and vignettes
(Abramovitch et al., 1993; Abramovitch et al., 1995; Ferguson & Douglas, 1970; Grisso et al., 2003) indicate that younger adolescents are more likely to waive the right to silence, although waiver rates may remain high throughout adolescence. For example, the most recent interrogation study (Feld, 2006a) documented an 80% waiver rate among 16- and 17-year-old felony suspects. This is on par with Grisso and Pomicter’s (1977) archival review of 707 felony cases, of which approximately 90% of juveniles chose to talk to police. In a recent self-report study, 87% of detained youth who were interrogated self-reported speaking with police and not remaining silent (Viljoen, Klaver, & Roesch, 2005). Regrettably, these few studies represent the entirety of our institutional knowledge about juvenile Miranda waiver rates, yet they incur substantial limitations. Vignette studies’ ecological validity is contentious, and the studies using actual interrogation data are either outdated or use non-American samples, casting doubt on their generalizability to the U.S. judicial system.

A related program of research examines variations in the length, vocabulary, and orientation of Miranda warnings and procedures. In mandating that police advise suspects of their constitutional protections against self-incrimination, the Miranda Court did not delineate explicit language to be used, stating only that “the person in custody must, prior to interrogation, be clearly informed that he has the right to remain silent, and that anything he says will be used against him in court; he must be clearly informed that he has the right to consult with a lawyer and to have the lawyer with him
during interrogation, and that, if he is indigent, a lawyer will be appointed to represent him” (Miranda v. Arizona, 1966, p. 437). Police departments are free to formulate their own verbal and/or written Miranda warnings as long as they adequately communicate these constitutional protections. Not surprisingly, modern versions of Miranda warnings vary widely in form, language, and complexity (Rogers, Harrison, Shuman, Sewell, & Hazelwood, 2007).

Such dramatic Miranda variation begs the question of whether the typical criminal suspect is able to sufficiently comprehend the warnings in order to waive them knowingly, intelligently, and voluntarily as the law requires (Miranda v. Arizona, 1966). This question—ignored by social science for the better part of four decades—has spurred recent research on the readability of police departments’ standard Miranda forms. Researchers have employed measures from the Flesch system (1948) to examine various Miranda forms’ average readability scores and grade levels using both general (i.e., specific neither to adult nor juvenile suspects) and juvenile versions of Miranda forms. The Flesch Reading Ease measure generates a readability score from 0-100 indicating what proportion of the adult population could comprehend the given passage, with higher scores indicating easier reading material. The Flesch-Kincaid Grade Level measure estimates a grade-equivalent reading level necessary to comprehend at least 75% of the passage.
Indeed, research on the readability of police departments’ written *Miranda* templates consistently documents wide variation in readability across jurisdictions (Rogers et al., 2007; Rogers, Hazelwood, Sewell, Shuman, & Blackwood, 2008). Samples drawn from jurisdictions/counties within a single state (Greenfield, Dougherty, Jackson, Podboy, & Zimmermann, 2001; Kahn, Zapf, & Cooper, 2006) as well as jurisdictions across the nation (Helms, 2003, 2007; Rogers et al., 2007) report Flesch-Kincaid scores from the elementary to postgraduate level. Moreover, comparisons of general and juvenile *Miranda* versions reveal that juvenile *Miranda* forms may actually be more difficult to comprehend than general versions; several studies reported lower reading ease scores and higher grade level estimates for juvenile forms as compared to general forms (Helms, 2007; Kahn et al., 2006; Rogers et al., 2008). This is cause for concern not only for youth in general but for juvenile offenders in particular, given that this population is typically less educated and has lower IQs than same-aged community youth (Moffitt, Lynam, & Silva, 1994). In fact, some data suggest that the average juvenile detainee reads below the fourth-grade level, the functional equivalent of illiteracy (Leone, Krezmien, Mason, & Meisel, 2005; Hodges, Giuliani, & Porpotage, 1994; Brunner, 1993).

*The Advantages of Observational Methods*

Despite (or perhaps because of) the paucity of available observational data, some scholars are quick to speculate about the nature of interrogation and its
participants’ capacities, behavior, and decision making. They have liberally interpreted laboratory-derived conclusions and extrapolated from other, related literatures (e.g., child witness/victim research). Commentators have even commenced to call for policy changes and legal recommendations for juvenile interrogations. For example, authors have advocated a *per se* approach to *Miranda* waiver requiring the presence of a parent or attorney (Owen-Kostelnik, Reppucci, & Meyer, 2006; Drizin & Colgan, 2004), more elaborate police procedures to judge *Miranda* rights comprehension (Drizin & Colgan, 2004), and mandatory videotaping of juvenile interviews (Feld, 2006a; Owen-Kostelnik et al., 2006; Leo et al., 2006). While such recommendations may be entirely reasonable given existing research findings, we should exercise caution when extending laboratory-derived or case study data on adolescent decision making to other (highly specific) contexts. Though we have learned a great deal about the capacities and goals that both youth and police *bring into* the interrogation room, social science lacks even basic descriptive data about the context itself. It is imperative that we first answer some of the fundamental questions about what transpires when police question youth.

Observational data are by far the best feasible option for addressing these fundamental questions. The present study’s sample of electronically recorded interrogations attenuates the limitations of self-report and vignette methods because it documents actual behavior and decision making. The sample provides insight into
juvenile interrogation characteristics, procedures, and outcomes with a depth and clarity unattainable using other methods. Access to juvenile records is an enormous barrier to this type of research, and Feld’s (2006a) reports are the only existing observational study of this kind. The present study replicates key elements of that work and also expands upon the number and type of variables measured. It is also the first observational study of juvenile interrogation to employ a diverse multi-jurisdictional sample of electronically recorded juvenile interrogations.

This dissertation represents the first stage in a carefully designed, multiphase program of research on police interrogation of juveniles using data derived from electronically recorded juvenile interviews. It is predicated on the notion that given the dearth of observational research on this topic, a descriptive approach is paramount. The descriptive elements presented below provide a foundation for later inferential work on observed juvenile interrogations.

**RESEARCH DESIGN AND METHODS**

**Recruitment**

Anticipated barriers to police departments’ participation, including state confidentiality statutes, lack of departmental resources, and bureaucratic requirements necessitated a broad and prolonged recruitment strategy. To begin, we identified states, jurisdictions, and local departments that were presumed to record juvenile interviews due to state legislative mandate, state supreme court decision, or voluntary
department policy. At the time of this writing, eight states\(^6\) have enacted legislation requiring police departments to record custodial interrogations and another six states\(^7\) received recording mandates from state supreme court decisions (NACDL, 2009). Additionally, criminal defense attorney and mandatory recording advocate Thomas Sullivan (2004) identified 238 individual law enforcement agencies in 38 states that record interrogations, most of which do so voluntarily.

We used this information to create a database of every police department in the mandatory recording states as well as the Sullivan report (2004) agencies \((n = 3,230)\). Agency addresses and phone numbers were added to the database using publicly available contact information from the agencies’ websites. Phase I of database recruitment (July 2006-07) consisted of letters via postal mail informing these agencies of the study and requesting voluntary participation (see Appendix A). The letter included contact information for both FBI and GU project staff, and a project-dedicated FBI email address was established to facilitate communication with police departments and lend legitimacy to the FBI-GU partnership. The Phase I response rate was extremely low (less than 1%) so Phase II was implemented to increase participation.

\(^6\) Illinois, Maine, Maryland, Nebraska, New Mexico, North Carolina, Wisconsin, and the District of Columbia.

\(^7\) Alaska, Massachusetts, Minnesota, New Hampshire, Wisconsin, and New Jersey.
Phase II consisted of follow-up phone calls to agencies in the database and was conducted from July-December 2008. Phase II goals were fourfold: 1) reintroduce the project, 2) establish direct contact by having phone conversations with an actual staff member, 3) provide additional information about the study and answer questions, and 4) assist interested departments in overcoming practical barriers to participation (e.g., obtaining the appropriate permissions, receiving regular reminders, etc.). Agencies appeared in the database ordered alphabetically by state; every third state was selected for follow-up phone calls (approximately 700 agencies in total). Georgetown University undergraduate research assistants conducted all follow-up phone calls.

Additional recruitment strategies were implemented concurrently with database recruitment. Two of the project members who are faculty at the FBI National Academy, a training program for mid-career police officers, made announcements about the project in their classes. Because police officers attend the National Academy from all 50 states and even overseas, these announcements had the potential to reach a diverse audience from many department sizes and geographic locations. We also invited submissions from public defenders, private defense attorneys, and prosecutors’ offices by distributing project information via colleagues, legal training events, and approved email distribution lists. Recruitment officially began in 2005 and concluded in May 2009.
Participants

The participants in this study are the police departments and legal officials who submitted electronically recorded interrogations. Because the recording is the unit of analysis in this study, a representative from the participating agency was authorized to sign the consent form required to release all recordings that agency chose to submit (see Appendix B). Nineteen police agencies and one county prosecutors’ office contributed a total of 85 electronically recorded interrogations to the project. Data came from agencies in all four U.S. Census Bureau geographic regions: Northeast (two agencies), South (twelve), Midwest (one), and West (five) (U.S. Census Bureau, 2009). Table 1 shows the range of city populations served by participating police agencies for both the original sample and the final sample (after data exclusions). More than half of participating agencies came from small communities with fewer than 50,000 residents. All other descriptive statistics are reported below for the electronic recordings, not the police agencies, because the recordings are the units of analysis and because a nontrivial number of electronic recordings were excluded from analyses.

Interview Eligibility Criteria

The eligibility criteria for submitted recordings were as follows: a) adjudication of the case is closed and no appeals are pending regarding the charge discussed on the recording, b) the interview is relative to a felony or other serious charge, c) the interview is with a suspect or person of interest (i.e., not a victim or witness), and d)
the interviewee is a juvenile (defined here as under age 18). We explore the rationale behind each criterion in turn.

Only recordings from closed cases were permitted because investigators did not wish to interfere with an ongoing legal matter. Though we did not foresee any way in which our use of interview recordings for research purposes in a restricted environment could impact an individual youth’s case, out of concern for the youth, their families, and participating agencies we accepted only closed case interviews. If participating agencies had reason to suspect that an adjudicated case would be appealed, the interview from that case was not accepted.

The second criterion stipulated that the interview concerned a felony or other serious charge; several theoretical rationales underlie this requirement. First, because some departments record interviews voluntarily (and therefore, perhaps, selectively) while others are required to record all interviews, we hypothesized that mandatorily recording agencies would have a broader range of case types on record. For example, the voluntarily recording agencies may not consider every shoplifting case to be worth the effort and expense of electronic recording and may reserve that practice only for homicides, armed robberies, et cetera. Mandatorily recording agencies, however, would in theory have even the shoplifting cases on record. By soliciting felony-level cases we hoped to obtain similar types of cases from mandatorily and voluntarily recording agencies. Second, we hypothesized that officers reserved the full spectrum
of interrogation techniques for the more serious cases where stakes were highest. Analysis of interrogation strategies police use with youth is a key component of our broader program of research using these data. It seemed unlikely that officers would expend their valuable time and energy to mount an offensive against a juvenile accused of, for example, petty theft.

The third criterion stipulated that the interviewee was considered a suspect or “person of interest” and not a victim or witness. This is because the interrogation techniques of interest to our research program are designed to elicit confessions from guilty suspects (e.g., Inbau et al., 2001). Police routinely interview victims and witnesses as a part of their investigations, but these interviews are typically for information gathering purposes and are not adversarial. Police are also trained to interview victims and witnesses differently from suspects (Inbau et al., 2001). Although “person of interest” has no specific legal definition, it is commonly used in law enforcement parlance to refer to a person who has not been formally accused of a crime but whom police would like to interview in connection with a crime.\footnote{Strictly speaking, a “person of interest” could also be a witness; had we received any interviews of this nature they would have been discarded from the study, but we received none.} The distinction between suspect and person of interest is often unclear, but if the

---

\footnote{Strictly speaking, a “person of interest” could also be a witness; had we received any interviews of this nature they would have been discarded from the study, but we received none.}
investigation has reached the interrogation stage, officers would presumably question both types of individuals in a similar manner.9

The final criterion required that interviewees be younger than 18 years old at the time of the interview. For reasons discussed above, developmental research suggests that youth as a class differ from adults in functionally significant ways. We hypothesized that such developmental differences result in juvenile interrogations that are categorically different from adult interrogations. Police also process juvenile suspects differently from adults from the intake point onward and may have different procedures for questioning juveniles (e.g., notifying parents that youth is in police custody, using a juvenile version of the *Miranda* warnings). As such, we are only interested in juvenile suspects’ experiences with police interrogation.10 Though the upper boundary for juvenile court jurisdiction varies by state, most states set the age of majority at eighteen (Griffin, 2008) so that is the age distinction we adopted.

*Data Preparation*

Recordings were submitted to the study in VHS, DVD, and digital formats. Several steps were required to convert original materials into a format compatible with Noldus Observer, the software program used to code the interviews (see next section).

---

9 Recall that the Reid Technique (Inbau et al., 2001) distinguishes between interviews, which are for information gathering purposes, and interrogations, which are designed to elicit confessions. Once questioning has proceeded to the interrogation stage, the officer presumes the interviewee’s guilt or at least involvement in the incident.

10 Future projects in this program of research will draw a comparison sample of interrogations with adult suspects.
First, VHS tapes and DVDs were converted to digital format using an external converter box and accompanying software. At this stage in the data preparation process there was one digital media file for every hard disc we received. Next, a video editing program was used to refine the digital files. Some of the tapes and discs we received contained multiple interviews, so those files were split into a separate media file for each interview. Also, “empty” footage (e.g., white noise, footage of empty room) was trimmed from the beginning and end of the media files to provide an accurate assessment of interview length. Any footage of an empty interview room that occurred in the middle of an interview (i.e., if officer and suspect left then returned) was left intact.

Once a separate media file was created, named, and trimmed for each interview, the faces of all individuals on camera were pixelated to prevent visual identification. Georgetown University’s Institutional Review Board required pixelation in order to protect the confidentiality of juveniles, officers, and agencies. FBI technicians and staff performed this task for all media files using video editing software. Pixelated files were renamed using the same conventions described above. Duplicate copies of pixelated media files were saved on two separate external hard drives and stored in the laboratory safe when not in use. The pixelated files on these two drives were used for all data coding. Unpixelated media files, as well as the tapes and discs from which they were derived, were stored securely on FBI premises.
Coding Procedures

This is the first juvenile interrogation study to code data using digital video coding software. We employed the Observer XT (Noldus Information Technology, 2009), an elaborate proprietary software program designed for coding and analyzing observational data. Though commonly used for infant/child behavior research or animal behavior research, Observer was adapted to the present study because of its significant advantages over traditional observational methods. Digital video coding can be superior to other observational methods because it enables precise, time-stamped documentation of behaviors to the hundredth of the second when they occur. This is highly useful for documenting not only frequency but also duration of certain behaviors; such precision is virtually impossible with traditional coding methods. For example, while a traditional coding scheme might contain a dichotomous variable for whether or not a juvenile suspect was left alone in the interrogation room, Observer enables coders to timestamp each interviewer exit and reentry, which automatically a) records the number of times the interviewer left the room as well as b) sums the total duration, to the second, for which the youth was alone. Observer also enables easy pause and playback to ensure coding accuracy and completeness.

The Observer program creates a single project file that integrates all observations, event logs, and associated media files. An event log is a single file that contains the individual codes entered by a coder. Each coder created a separate event
log for each interview that contained the behavior codes for which she was responsible. For example, the coder responsible for demographic variables created her own event log in which she coded all demographic variables; likewise, the *Miranda* coder created her own event log in which she coded the *Miranda* variables. All event logs within a single observation are “mapped onto” each other to create one continuous record of all codes. An *observation* is a collection of event logs associated with one particular media file. For example, Observation 100-700 would be linked to the interview of juvenile #700, which arrived on tape #100. Observation 100-700 would read in this media file and make it available to coders. Observation 100-700 would contain two event logs: coder 1’s demographic variables codes and coder 2’s *Miranda* codes. The observation reads all event logs as a single continuous event, layering each event log’s codes on top of each other at the appropriate timestamps.

Coding in Observer requires the researcher to input a coding scheme composed of three elements: Subjects, Behaviors, and Modifiers. A *subject* is anyone who performs a codable action. Our subjects included Primary Interrogator (PI), Secondary Interrogator (SI; if more than one interviewer was present and conducting questioning), Juvenile Suspect #1, Juvenile Suspect #2 (if two juveniles were interviewed simultaneously), Non-Interviewing Officer, Attorney, Parent #1, Parent #2, Interested Adult, District Attorney (or a representative from that office), and Adult Relative. “Attorney” was defined as any legal representation, public defender or otherwise,
present on behalf of the juvenile suspect. “Interested Adult” was defined as any adult present in a professional capacity on the juvenile suspect’s behalf (e.g., guardian ad litem or social worker). “Non-Interviewing Officer” was defined as a police officer who was present during the interview but did not participate in questioning. At minimum, all interviews must contain a juvenile suspect and primary interrogator.

Once the coder has indicated who has performed an action, she must then record the action itself. A behavior is any codable content element of interest to the researcher. Behaviors are the heart of an Observer coding scheme. Behaviors could indicate an action, movement, speech, or even the absence of these (e.g., “juvenile does not answer officer’s question”). Examples include “juvenile waives *Miranda* rights,” “officer exits room,” and “juvenile confesses.” Each behavior code is marked with a timestamp indicating the hour, minute, and second in the video where the code was recorded. Behaviors can be further categorized with modifiers. A modifier is an additional set of coding options attached to a behavior in order to provide more information. For example, the behavior “juvenile waives *Miranda* rights” is followed by the modifier “waiver type” which includes the items “verbally,” “in writing”, or “both verbally and in writing.” Not every behavior contains a modifier, but when modifiers are present they must be coded.
Coding Scheme

The coding scheme was designed to capture two key elements of juvenile interrogations: 1) the common features of this context, including demographic and situational factors, and 2) *Miranda* in juvenile interrogations, including *Miranda* delivery, waiver, and readability. The full coding scheme (on file with the author) comprises the entire program of research using these data; the present study employs the first two sections.

Characteristics of juvenile interrogations: Individual Factors. This section of the coding scheme captured important descriptive information about the interrogation context and the persons involved. Select variables included race\(^{11}\), gender, and English proficiency\(^{12}\) for all persons present as well as the suspect’s age\(^{13}\). We also coded the suspect’s custody status at the time of the interrogation (i.e., whether he had just been arrested or was present voluntarily) and the alleged offense for which he was being questioned. This section also captured not only whether any third parties are present (e.g., parents, attorneys, co-defendants), but also for how long they are present.

---

\(^{11}\) Race/ethnicity was coded only when race was stated explicitly (e.g., during routine booking questions) or could reasonably be deduced by observation.

\(^{12}\) *English proficiency* was operationally defined as sufficiently conversant in English that the interview could proceed without a translator.

\(^{13}\) Because we did not have access to accompanying case files, all data (demographic and otherwise) were gleaned directly from video observations. The juvenile’s age was not stated on film for seventeen of the 57 juvenile interviewees. We are confident that these seventeen suspects are juveniles, however, because of other clues in the video. For example, the suspect states that he is in ninth grade, the officer reads the suspect a juvenile version of the *Miranda* warnings, or the officer states that the youth’s case will be handled differently in court “because he is a juvenile.”
Traditional coding schemes (e.g., Feld, 2006a) have included a dichotomous present/not present variable to capture third party presence; Observer, by contrast, is able to record the duration of each individual’s presence and layer those data to present a more complete picture of the interrogation.

These variables are important because publicly available interrogation recordings (e.g., from high-profile cases in the media) and project training recordings suggest variability in third party presence and involvement. For example, parents may arrive in the room midway through the interview, or co-defendants may be brought in and out of an interrogation room repeatedly in a single session. It was expected that the interviewer himself may routinely come and go throughout an interview. Data of this sort have never before been published, so these variables could greatly impact the direction of interrogation discourse. For example, legal presumptions (e.g., in Gallegos v. Colorado, 1962) that parental presence can serve a protective role may be undermined if observational data show that parents are unable or unwilling to protect their children from accusatory questioning.

*Characteristics of juvenile interrogations: Contextual Factors.* This section captured key elements of the interrogation process from beginning to end, including interview duration, interview location, and the camera angle from which the
interrogation was filmed.\textsuperscript{14} It captured whether the suspect was physically restrained throughout the interview, whether there was any indication that the suspect and officer conversed before the camera was turned on, and the eventual outcome of the interrogation (i.e., denial, partial admission of wrongdoing, full confession, or no resolution). These variables truly showcase the advantages of both observational research in general and digital video coding in particular when examining the topic of juvenile interrogations. By observing interrogations in real time instead of merely coding transcripts, we are able to characterize the global interrogation context in a way that complements traditional experimental or self-report data.

Miranda in juvenile interrogations: Delivery. The Miranda section is designed to capture variation in the form and delivery of police administration of the Miranda warnings. Though Miranda is constitutionally required prior to any accusatory custodial questioning, police are legally permitted to ask routine booking questions before warnings are administered and questioning commences. This section captures any delay in Miranda administration and subsequent pre-Miranda strategies to encourage waiver. For example, Leo (1996) and Feld (2006a) reported descriptive

\textsuperscript{14} Social psychologist Daniel Lassiter and his colleagues have authored an extensive body of work on the importance of camera angle on observers’ judgments of suspect guilt and confession voluntariness. In short, research demonstrates that observers who watch a videotaped interview where the camera is trained directly on the suspect (i.e., suspect-focus) are more likely to judge the suspect as guilty or his confession as voluntarily than observers who watch the same video from a camera angle trained on the interviewer (here, officer-focus) or both persons equally (equal-focus; Lassiter et al., 2002; Lassiter, Geers, Munhall, Ploutz-Snyder & Breitenbecher, 2002; Ratcliff, Lassiter, Schmidt, & Snyder, 2006). Though camera angle is not a predominant research question in the current study, we are eager for this opportunity to report descriptive data on the camera angles used in actual police interrogations.
statistics for specific strategies interrogators use to “predispose” youth to waive their rights, many of which were drawn from interrogation training manuals (e.g., Inbau et al., 2001). Examples include using booking questions to build rapport with the suspect, dismissing warnings as a “bureaucratic ritual” to dispense with before the two may “really talk,” or emphasizing the benefits of waiving one’s rights (Feld, 2006a). This section also permits coders to characterize the manner in which officers administer the warnings, such as downplaying the significance of rights waiver or, conversely, strongly communicating both positive and negative potential consequences of waiver.

We also recorded whether *Miranda* was presented in oral or written form and whether the interrogating officer modified the warnings or explained them in greater detail for the juvenile’s benefit. We hypothesized that because the suspects in our sample were minors, interrogators may take extra precautions to ensure that youth understand *Miranda*. We coded whether the officer paraphrased a warning, asked the suspect to repeat in his own words, asked the suspect to follow along while he reads a written form, or asked the suspect to read the form aloud.

*Miranda in juvenile interrogations: Comprehension and Waiver*. Youths’ capacities to knowingly waive *Miranda* raise considerable controversy in law, policy, and practice. Interrogating officers are not required to assess *Miranda* comprehension in the way a forensic clinician would (i.e., in an outside examination for waiver
competency), and absent any claim of coercion, a simple verbal affirmation or signature on a waiver form is generally considered a valid *Miranda* waiver (Feld, 2006a). Because courts rely on these “objective” indicators of *Miranda* comprehension in waiver hearings (Feld, 2006a), we intended to capture several verbal and behavioral indicators of *Miranda* (non)comprehension suggested elsewhere in the literature: verbally affirming understanding, nodding head in agreement, exhibiting signs of confusion or cognitive struggle, or asking the officer for clarification (Feld, 2006b). Finally, we recorded whether, at what point, and in what form (verbal and/or written) the suspect invoked his right to silence or attorney.

*Miranda in juvenile interrogations: Readability.* The *Miranda* Readability section is the only study component to be executed outside of the Observer program. Research assistants transcribed the portions of each recording where police administered *Miranda* to suspects. Transcripts were cleaned and any extraneous vocalizations (e.g., “um” or stuttering) were deleted so as to generate more accurate estimates. The language police used in the *Miranda* warnings was assessed using the Flesch-Kincaid Grade Level Test, which estimates the grade level of a passage, and the Flesch-Kincaid Reading Ease score, which generates a readability index for the passage (Flesch, 1948). The Flesch indices are highly reliable (Paasche-Orlow, Taylor, & Brancati, 2003; Klare, 1963) and have become the standard tool used in *Miranda* readability research (Rogers et al., 2008; Rogers et al., 2007). Both measures use a
formula that includes sentence length and average syllables per word to generate estimates. The Flesch Reading Ease score is based on a 0-100 scale with higher scores denoting material that is easier to read.\textsuperscript{15} The Flesch-Kincaid Grade Level estimate indicates a grade-equivalent reading level necessary to comprehend at least 75% of the passage (Flesch, 1948). For example, a Flesch-Kincaid Grade Level estimate of 5.5 indicates that an individual approximately halfway through the fifth grade should be able to comprehend three-quarters of the passage.

\textit{Training and Reliability}

The training process included teaching, practice, and reliability components. First, the project’s two coders (one graduate, one undergraduate) watched five web-based example videos of interrogations to gain a sense of what interrogations look like (e.g., which individuals are present, how the room is arranged, how questioning is administered). Second, each coder reviewed her assigned coding section in detail with the project director, identifying examples of each behavior in the example videos and clarifying any outstanding questions about specific codes. Third, the coders watched three training videos in their entirety, without coding, to learn how videos operate within the Noldus Observer framework. Fourth, the coders practice-coded one video, allowing them to manipulate codes within Observer and gain expertise in the actual

\textsuperscript{15} FRE scores correspond to the following readability classifications: 0-29 is considered very difficult; 30-49 is difficult; 50-59 is fairly difficult; 60-69 is standard; 70-79 is fairly easy; 80-89 is easy; 90-100 is very easy.
coding process. Finally, the assistants coded a minimum of three training videos for reliability purposes.

Reliability analyses were executed by hand using a confusion matrix that compares each coder’s log to the reliability coder’s log (the project director). Cohen’s kappa (Cohen, 1960) between each coder and the project director was calculated a) for each recording and b) for the training recordings overall. Each coder’s overall kappa value was required to meet the 0.7 level, an acceptable standard given the data’s exploratory nature and Cohen’s kappa’s general conservativeness as a measure of intercoder reliability (Hsu & Field, 2003). Both coders achieved the required kappa value after one round of training.

To ensure continued reliability throughout data collection, every fourth interview was double coded for reliability purposes (fourteen interviews or approximately 25% of the total sample). Due to the small number of behaviors assigned to each coder, behaviors were collapsed across all fourteen reliability recordings and a single overall kappa (Cohen, 1960) was calculated for each coder. Intercoder reliability ratings for coder 1 (kappa = .77) and coder 2 (kappa = .87) met the required threshold.

Special Protections

Though the agency submitting electronic recordings was considered the participant in this study, the assurance of confidentiality for all persons on the
recordings was our utmost priority. First, each recording was assigned an identification number immediately upon receipt that was not associated with the source agency. Next, the faces of all individuals appearing on the recording (including officers, suspects, and parents) were pixelated to prevent visual identification. The original recordings were then stored in a secure location on FBI premises and only the pixelated recordings were used for coding. All data management files were password protected and stored on secure hardware. Because eligibility was restricted to adjudicated cases only, viewing these recordings for research purposes in no way affected a juvenile suspect’s case. IRB approval was secured from both Georgetown University and the FBI.

RESULTS

Eighty-five interrogations were submitted to the study. Two interrogations were excluded because the discs contained only audio files, 16 due to technological difficulties and 10 because the interviewee was 18 years or older, yielding a final \( N = 57 \) interviews. Two juveniles were interviewed simultaneously during one interrogation, so demographic data are reported for 58 juvenile interviewees.\(^{16}\)

\(^{16}\) This recording was treated as a single interrogation for variables in the Contextual Factors section with the exception of interrogation outcome. The interrogation outcome variable, along with demographic data and other Individual Factors variables, was coded for the two youth individually. In other words, for the purposes of individual-level variables such as age, custody status, etc. we treated the recording as having two separate suspects, but for the purposes of capturing the interrogation context we treated it as one continuous interaction.
Characteristics of Juvenile Interrogations

Individual Factors. Results show a pattern of individual characteristics consistent with previous reports of justice-involved youth (Feld, 2006a, 2006b; see Table 2). Fifty-two of the 58 juvenile interviewees (90%) were male. The average age was about fifteen and a half years old ($M = 15.44$, $SD = 1.14$) for the 41 juvenile interviewees for which age could be determined. The youngest interviewees were 13 years old (two youth) and the oldest were 17 (eight youth). Of the 58 juvenile interviewees, 41.4% were white, 41.4% were black, and 5.2% were Latino/a. Race could not be definitively determined for seven interviewees (12.1%). Only one interviewee was not fluent in English; for this interview, a secondary interrogator bilingual in English and Spanish translated for the primary interrogator. We also coded as much information as possible about the juvenile’s custody status at the time of the interview. Of the 35 (60%) interrogations for which custody status could be determined, 16 juveniles had just been arrested, 18 were present voluntarily, and one was brought to the interrogation room from detention. As

---

17 We acknowledge the challenges of determining race/ethnicity based on visual observation and the biases inherent within such judgments. Although skin color is not necessarily an indicator of racial identity, we use this proxy because self-report data are not available. In effort to be as conservative as possible, we defaulted to the “cannot be determined” code whenever race/ethnicity (as measured by skin color) was even remotely unclear.

18 Because very few of our codes were dependent on juvenile suspects’ vocalizations, we are confident that this youth’s lack of English fluency did not affect our codes. The majority of our codes involved observing situational characteristics and interrogators’ vocalizations. The only exception is the Miranda Content section; Miranda was administered to this youth in Spanish. We could not translate the Miranda statement so this observation was treated as missing data in Miranda content analyses.
expected, most (93%) of the interrogations involved serious and/or violent offenses; 41 juveniles were interrogated in regard to person crimes\textsuperscript{19} and 12 in regard to property crimes\textsuperscript{20}.

Law enforcement officials’ involvement in interrogations occurs in several forms. All interrogations must involve at minimum one primary interrogator (PI; $n = 57$). Most of the primary interrogators were white males (84%). The remaining interrogation recordings contained a black male PI (one recording), white female PI (four recordings), and four PIs (one female, three male) whose race could not be determined. Secondary interrogators (SIs), according to our coding criteria, are police officers who participate in an interrogation by asking questions but are involved to a lesser degree than PIs. Secondary interrogators were present in 21 interrogations (36.8%). As with PIs, the majority (71.4%) of SIs were white males. Three SIs were white females and two were males of an undetermined race. Finally, Non-Interviewing Officers (NIOs) are police officers who are present for some or all of an interrogation but do not participate in questioning. For example, they may enter the room to handcuff/uncuff the juvenile suspect, deliver paperwork to the PI, or supervise the

\textsuperscript{19}A person offense is defined as “a crime against the body of another human being, including threats” (Garner, 2004). Examples include assault, murder, or various sexual offenses.

\textsuperscript{20}A property offense is defined as “a crime against another's property” (Garner, 2004). Examples include theft, embezzlement, or trespassing.
juvenile suspect when the PI leaves the room. NIOs were present in five of the 57 interrogations (8.8%). Four NIOs were white males and one was a white female.

Participation in juvenile interrogations is not limited to adolescent suspects and police. Third parties may be present and active in the interrogation process, either voluntarily or because state law or department policy requires a parent or interested adult to be present. Though we do not know whether these third parties were voluntarily or mandatorily present because data confidentiality procedures prohibited associating data files with source agencies, we record here whether and which third parties were present in our sample of interrogations. The most common third party present in our sample was a parent (12 interrogations, or 21.1%). Eight of these were mothers and four were fathers. A second parent (the father, in all cases) was present in three interrogations (5.3%)22. Three recordings, all from the same police department, contained an Interested Adult—a white female who worked for social services. Finally, one recording contained an adult relative (the suspect’s aunt) and another two contained a representative from the district attorney’s office. Interestingly, an attorney was not present on behalf of the juvenile in any of the 57 interrogations. Future studies using these data will investigate the extent and nature of third party involvement in these juvenile interrogations.

---

21 These behaviors, while descriptively interesting, were not coded in this iteration of data collection because they were deemed less germane to the primary research questions.
22 If two parents were present, the parent most involved in the interview was designated as Parent 1 and the other as Parent 2.
**Contextual Factors.** These variables were intended to describe characteristics of the juvenile interrogation process and environment. Social science lacks even basic descriptive information about what occurs inside the interrogation room. Detailing the parameters of typical interrogations using observational data is a critical first step to learning more about this developmental and social context. Moreover, researchers have hypothesized that contextual variables such as interview duration may influence suspects’ interrogation decision-making and judgments (Leo, 1996). Our primary goal in this section was to characterize observable characteristics of the interrogation context that may influence youths’ subjective experiences of the process.

To begin, we coded where and when these interrogations took place. Two-thirds of our interrogations with known interview dates ($n = 25$) occurred within the last five years. The earliest known interview was conducted in 1995 and the most recent in December 2008. Over half our sample of interrogations (36 cases, or 63.2%) took place at the police station. Location could not be determined for 20 cases and the remaining one interrogation occurred in the office of the school resource officer at the juvenile’s school. Fifty-one of our 57 interrogations (89%) were filmed from a suspect-focus camera angle. Five interrogations used an equal-focus

---

23 Though less relevant for the present study, this information will be useful for future studies using these videos to examine interrogation strategies used with youth. A sample of current interrogations raises confidence that the interviewing strategies demonstrated in the videos are still being employed with juvenile suspects today.
perspective and one used a combination of camera angles within the same interrogation recording.

We also recorded interrogation duration and whether the juvenile suspect was physically restrained during this time. The median interrogation lasted 46 minutes ($M = 65.6$ minutes, $SD = 59.0$ minutes)$^{24}$, though the range of interrogation lengths was quite extensive. The shortest interrogation lasted only six minutes and the longest was four hours and 48 minutes. Overall, 68% percent of interrogations concluded in less than one hour and 84% in less than two hours. Nine juvenile suspects (15.5%) were physically restrained in handcuffs or leg shackles during the interrogation.

Perhaps our most important question concerns how juvenile interrogations are resolved. Results indicate that interrogation outcomes are varied. In our sample of 58 juvenile suspects, 21 youth (36.2%) fully confessed to the offense in question. Eighteen youth (31.0%) made incriminating admissions (i.e., they admitted only partial involvement in the offense or admitted to some charges but not others). Another 15 juvenile suspects (25.8%) denied culpability completely. Finally, four youths’ interrogations (6.9%) were not resolved, either because the suspect invoked his

Miranda rights or because the recording ended before the interview concluded.$^{25}$

$^{24}$ Seconds were rounded to the nearest minute.
$^{25}$ We collapsed the Miranda invocation outcome code with the no resolution due to technical difficulties outcome code due to the small number of cases in these cells. The no resolution category reported in text captures both of these scenarios.
Cross-tabular analyses comparing interrogation duration (split at the median duration of 46 minutes) with interrogation outcome indicate no meaningful overall relationship between these variables. Juvenile suspects who fully confessed to their interrogators were distributed equally among shorter and longer interrogations (10 confessors from interrogations shorter than 46 minutes; 11 confessors from interrogations longer than 46 minutes). Juvenile suspects who denied the allegations were approximately equally distributed (6 from shorter interrogations; 8 from longer interrogations). However, twice as many (12) juvenile suspects made incriminating admissions in shorter interrogations than youth in longer interrogations (6). Chi-squared analyses were not conducted due to the small number of youth in the no resolution cell of interrogation outcome.26

Finally, a substantial portion of our contextual analyses examined the movement or “flow” of people in and out of the room during interrogations. Given that little is known about the tempo of routine police interrogations, we examined the frequency and duration of entrances and exits for interrogating officers and any third parties present. Our goal was to characterize the interrogation process as youth experience it and report any objective process characteristics (e.g., disruptions, time spent alone) that may impact youths’ subjective experiences.

26 Small sample size precluded any meaningful regression models of interrogation outcome, but modeling will be conducted when more data are collected.
Forty-four percent of interrogations involved a single PI and juvenile suspect and another 30% involved both a PI and SI questioning the juvenile suspect. The remainder of interrogations displayed various combinations of parents, relatives, interested adults, and/or prosecutors (see Table 3). The number of individuals present during an interrogation ranged from two (PI and juvenile suspect only; 29 cases) to six (PI, SI, Parent 1, Relative, NIO, and juvenile suspect; one case). Note that these figures indicate whether an officer or third party was ever present during the interrogation; continuous presence is not implied.

In fact, results indicate that juvenile interrogations infrequently occur in a single continuous sitting; interrogators and third parties commonly come and go while an interrogation is underway. In only one-fourth (26.3%) of cases did all individuals present at the start of the interrogation remain present throughout the entire event. Examining PIs first, we found that primary interrogators \((n = 57)\) entered and then exited (or exited then entered) the room on average 2.7 times \((SD = 2.9)\) during an ongoing interrogation. \(^{28}\) One PI came and went as many as 19 times during the interrogation. When we included all individuals present in any given interrogation, participants (not including the juvenile suspect) came and went on average 3.7 times \((SD = 3.8)\) with the number of disruptions ranging from zero to 24. This is a

\(^{27}\) Presence was defined as visible inside the interrogation room for at least 60 seconds.

\(^{28}\) Subject must be absent for at least five seconds to be coded.
conservative estimate of disruptions because we only coded when an individual came and went during an ongoing interrogation. In other words, if a parent entered halfway through the interrogation and remained until its conclusion, the parent’s “disruption” score for that observation was coded zero.

Analyses indicate that when parents are present during their child’s interrogation, they are not necessarily present for the entire session. A parent was present for the entire duration in half of the 12 interrogations involving parents. For the remaining six interrogations, a parent was present in the room for approximately 41% of the questioning period on average. Inconsistent parental presence typically resulted from a juvenile’s or interrogator’s request. For example, one PI asked a juvenile whether he would like his father to stay with him during questioning, and another interrogator asked one mother’s permission to speak with the juvenile alone for a while. The cases involving parents did not differ appreciably from cases not involving parents; parental presence was distributed among youth of various ages, races, custody statuses, and offense types.

One result of frequent disruptions and inconsistent parental presence is that juvenile suspects are often alone in the interrogation room, sometimes for extended periods of time. Youth in our sample spent on average just over 13 minutes alone in
the interrogation room in total\(^{29}\) \((M = 13.2, SD = 27.2)\), or 15.2\% of the total interrogation duration on average, though again the range was quite extensive (zero to 131 minutes). When the one-fourth of uninterrupted interrogations were excluded such that analyses examined only those youth who were left unaccompanied at least once \((n = 34)\), these youth spent just over 22 minutes alone \((M = 22.1, SD = 32.4)\) or 25.5\% of the total interrogation duration on average. While a few youth paced the room or peered out of the holding room window, most youth simply sat in their chairs, rested their heads on the table, or slept when left alone. Two youth wept quietly and another youth exhibited extreme distress, sobbing loudly, striking his head against a wall and audibly chastising himself. Finally, officers in the interrogation containing two juvenile suspects left the suspects alone for a while, during which time they discussed the incident and joked with one another.

**Miranda in Juvenile Interrogations**

*Miranda* warnings were administered on film for nearly half our sample \((n = 28)\). Three additional recordings indicated that police administered *Miranda* prior to the recorded interview, either before the juvenile suspect entered the interrogation room or when s/he was initially arrested. The remaining 26 interrogations did not contain a *Miranda* component, so we could not determine whether or when *Miranda* was administered. However, based on other information gathered from the recordings,

\(^{29}\) Figures represent total time spent alone and do not necessarily connote one single time period.
it is likely that *Miranda* was never administered at all in most of these cases. For example, we coded the occurrence of any indication that the juvenile suspect and interrogating officer had a conversation prior to the electronic recording. Over half of the recordings showed no indication of prior contact or conversation, suggesting that these juveniles were not simply Mirandized prior to filming.\(^30\) Also, recall that almost a third of juvenile suspects were present voluntarily. *Miranda* warnings are not required for non-custodial questioning, and indeed 11 of the 17 youth present voluntarily were not Mirandized on film. The remaining 6 of 17 youth were Mirandized on film; in most of these cases the officer stated that although the juvenile suspect was not under arrest, he intended to administer the warnings as a precautionary measure.

*Delivery.* Though *Miranda* warnings are required prior to any accusatory or custodial questioning, police are legally permitted to ask routine booking questions (e.g., age, address, level of education) before administering the warnings (*Pennsylvania v. Muniz*, 1990). We coded when and in what manner *Miranda* warnings were administered in the context of the recorded interrogation using existing

---

\(^30\) That is, the recordings showed no indication of prior contact or conversation with the interrogating officer. It is possible that another officer may have Mirandized the youth prior to this meeting. However, from a qualitative perspective, it is clear in many of these recordings that prior Mirandizing is unlikely because an arrest has not been made; there were indications that the legal process was just beginning. For example, the officer may thank the youth for coming down to speak with him or explain the questioning procedure. Overall, though, we cannot verify whether or not these youth received *Miranda* warnings.
criteria in the literature. Thirty-one (31.2% of cases containing Miranda) interrogating officers administered Miranda warnings immediately, before conducting questioning of any kind. Eleven officers (or 39.3% of cases containing Miranda) administered Miranda after a brief delay to ask booking-related questions:

Officer: All right. All right, [interviewee’s nickname]. You go by [interviewee’s full name]? What do you go by?

Interviewee: Mm…you mean street name?

Officer: What do you go by?

Interviewee: [street name]

Officer: [street name]??

Interviewee: [spells street name]

Officer: Where’d that come from?

Interviewee: Just a name.

Officer: Who gave you that name?

Interviewee: My brother…older brother.

Officer: Oh. What’s his name?

Interviewee: [inaudible]. He stay in [name of county].

Officer: Okay. What about [male name]?

---

31 We are extremely grateful to Dr. Barry Feld for sharing his coding scheme, elements of which we adapted for the present study.
Interviewee: [a different male name]?

Officer: [repeats name].

Interviewee: That’s my brother too.

Officer: Your brother is [name]?

Interviewee: Yeah.

Officer: [full name]?

Interviewee: Yeah.

Officer: Does he stay with you at your mom’s?

Interviewee: Yeah.

Officer: Okay. Okay. Before I talk to you today, I’m gonna read you your *Miranda* warning. You ever been read your *Miranda* warning before?

Interviewee: [shakes head]

Officer: You have the right to remain silent.

Interviewee: Oh, yeah yeah.

Officer: [continues with *Miranda* warnings]

Booking questions usually pertain to the suspect’s contact information or family situation. As long as the officer does not ask accusatory questions during this period he is operating fully within the confines of *Miranda*. Two interrogating officers used a strategy in which *Miranda* warnings are dismissed as a *bureaucratic ritual* (Feld,
2006a; Leo & White, 1999) – a formality that must be dispensed with before officers and suspects can talk to one another. Another two used a strategy that casts *Miranda* waiver as a *benefit* to the juvenile suspect – an opportunity to tell one’s side of the story or clear one’s name. Finally, only one interrogating officer administered *Miranda* after an attempt to *build rapport* with the juvenile suspect, ostensibly to put the juvenile at ease and facilitate conversation.

Next we coded whether interrogating officers advised juvenile suspects of their *Miranda* rights orally, in writing, or both orally and in writing. Of the 28 interrogations in our sample containing *Miranda* warnings, exactly half (50.0%) of interrogating officers presented *Miranda* both orally and in writing. In these cases, the officer verbally administered *Miranda* and showed, either simultaneously or subsequently, the written words to the juvenile suspect. Interrogating officers presented *Miranda* in verbal form only in ten recordings (35.7% of cases including *Miranda*). In these cases, the interrogating officer verbally administered *Miranda* and the juvenile suspect did not have a written form to follow. Finally, interrogating officers in four recordings (14.3%) gave the juvenile suspect a written *Miranda* form and instructed the juvenile suspect to read it on his own; *Miranda* was never spoken verbally in these cases. In all cases where *Miranda* was presented in written form the juvenile suspect did appear to read the form, though we cannot access actual reading or comprehension.
We also assessed the manner in which interrogating officers actually delivered *Miranda* warnings using existing criteria in the literature (Feld, 2006a; Leo & White, 1999). Most interrogating officers (84%) administered *Miranda* warnings in a neutral manner, presenting them as a legal obligation without any overt attempts to influence the juvenile suspect. An example of one officer’s neutral *Miranda* delivery:

Officer: Before asking you any other questions, it’s my duty to advise you of your rights. You have the right to remain silent. If you choose to speak, anything you say may be used against you in a court of law. You have the right to consult with a lawyer before answering any other questions, and you may have a lawyer present with you during questioning. If you cannot afford one and want one, a lawyer will be provided at no cost before any questioning. If you decide to answer questions now, you may stop at any time. You understand what I was [inaudible]?

Interviewee: Mm-hmm.

Two interrogating officers deemphasized *Miranda*’s legal significance, conveying an assumption that juvenile suspects would waive *Miranda* due to its trivial nature. *Miranda* de-emphasis was characterized by a casual, even careless approach to the warnings, usually indicated by spoken content preceding or following the warnings themselves. For example:
Officer: First off, just so you know before we begin or say anything, we have to give the *Miranda* rights. It doesn’t mean anything like you’re guilty. It’s just a formality we have to do.

Mother: Yeah, I’ve seen them before.

Officer: Okay, I’m gonna read them word for word.

Mother: Yeah.

Officer: Before asking you any questions, it is my duty to advise you of your rights. You have the right to remain silent. If you choose to speak, anything you say may be used against you in a court of law. You have the right to consult a lawyer before answering any questions. You may have a lawyer with you during questioning. If you cannot afford a lawyer and want one, a lawyer will be provided at no cost before any questioning. If you decide to answer questions, you may stop at any time. Do you understand these rights I’ve read to you?

Note that the warnings themselves are identical in the neutral delivery and de-emphasis examples; however, in the latter, the officer couches *Miranda* in a different context with his preamble. In this example, the phrases “just a formality we have to do” and “the *Miranda* rights” (as opposed to “your *Miranda* rights”) serve to downplay *Miranda*’s significance and distance the suspect from any interrogative threat. These
tactics are not necessarily malicious on the part of the officer or even intentional; they simply characterize one manner in which officers deliver *Miranda* warnings to suspects.

By contrast, two other officers emphasized the consequentiality of one’s decision to waive *Miranda* rights. This could be in the form of legal significance (e.g., “your statements here could hurt you later”) or personal significance (e.g., “waiving your rights is a big decision, especially without your mother or a lawyer here”). An example of one interrogator’s exchange with a 15-year-old female suspected of sexually assaulting a babysitting charge:

Officer: One of the reports that I got involves, um, [victim’s name]. Um, I believe you used to babysit her. Is that right?

Interviewee: (nods)

Officer: Okay. So I’m going to be asking some questions about that. Um, but before I ask you any questions, I’m going to read you your rights. Okay? And when I read them to you, I’ll explain exactly what each of these means. Okay? Before I read your rights, I want to make sure that, um, I have all your information down correctly. [continues with a series of booking-related questions]
Officer: Okay. Now I’m going to read you your rights, okay? And these are any time that I talk to anyone about something that has occurred, I have to read them their rights. Okay? Because everyone who we talk to have certain rights. Okay?

Interviewee: (nods)

Officer: You have the right to remain silent. This means that you don’t have to talk to me or answer any of my questions about this crime, okay? Because what’s contained in this report is someone saying that a crime has occurred. Okay? But I know there is always two sides to the story. So…but because this person is saying the crime occurred, and I need to ask you about what happened, that’s why I’m reading you your rights. Okay? So basically you have the right to remain silent. Anything that you, um, this means that you don’t have to talk to me or answer my questions about this crime. You can be quiet if you want. Do you understand this?

Interviewee: Yeah.

Officer: Okay. Anything you say can and will be used against you in a court of law. This means that anything that you tell me I can use later against you in a court of law. A court of law is a place
where a person or a judge will decide whether you committed a crime. A judge is like an umpire in a baseball game. He decides whether you have acted in a right or wrong way. If you did something wrong, you may be punished. Do you understand this right?

Interviewee: Yeah.

Officer: Okay. You have the right to have an attorney present prior to and during questioning. This means that if you want one, you are allowed to have a lawyer here before and during my questions to you. An attorney is a lawyer or a person who will speak for you and help you concerning the crime which we think you have done. Do you understand this right?

Interviewee: (nods)

Officer: Okay. If you can’t afford an attorney, you have the right to have one appointed for you prior to questioning. This means that if you don’t have money to give a lawyer, if you wish, one will be given to you free of charge before you are questioned. Do you understand this right?

Interviewee: (nods)
Officer: Okay. If you want to answer questions now without a lawyer present, you may. You will still have the right to stop answering the questions at any time. This means that if you want to answer my questions without having a lawyer here in the, here in the room, um, you can. But you have the right to stop answering my questions any time that you want to. You understand that?

Interviewee: Yeah.

Officer: Okay. Do you agree to give up these rights and talk to me? This means like I am asking you, “Do you agree to talk to me and not have a lawyer here?”

Interviewee: (nods)

Officer: Okay. Knowing that anything you say I can use against you.

Interviewee: Mm-hmm.

Officer: Okay. Do you want to have your parent or your guardian here in the room with us during questioning?

Interviewee: (nods)

Officer: Okay. So you want your mom with you in here?

Interviewee: Mm-hmm.

Officer: Okay. The possibility exists that your case may be handled by an adult court. If you are taken to adult court, you may get more
punishment than you would receive in juvenile court. Do you understand this?

In this example, the interrogator’s detailed, modified explanation of each prong, as well as her reiteration of the potential for self-incrimination after the youth agreed to speak with her, qualified this exchange as an emphasis of *Miranda* significance.

Given that all suspects in our sample of recordings were legal minors, we attempted to capture any officers’ attempts to modify conventional *Miranda* language or ensure that juvenile suspects understood the warnings. Specifically, we coded whether the interrogating officer paraphrased any or all of the warnings, whether he asked the juvenile suspect to repeat *Miranda* content in his own words, whether he provided the juvenile suspect a written *Miranda* form and asked him to follow along, and whether the interrogating officer asked the juvenile suspect to read the warnings aloud. Results indicate that *Miranda* modifications were uncommon. Officers in two of the 28 recordings containing *Miranda* (7%) asked the juvenile suspect to follow along as the interrogator delivered *Miranda* verbally. Officers in another two recordings asked the juvenile suspect to read the warnings aloud from a written form. In only one of the recordings was a juvenile suspect asked to repeat the warnings in his own words; this process occurred five times within the *Miranda* conversation (one request to repeat/paraphrase after each of the five prongs). Finally, interrogating officers paraphrased *Miranda* warnings in nine recordings (32%), either by
reading/stating a conventional warning then providing his own “translation” or by reading directly from a departmental *Miranda* form that has been modified for use with juveniles.

*Comprehension and Waiver.* Since police are neither legally required nor clinically trained to assess suspects’ *Miranda* comprehension in the way a forensic psychologist might, courts typically rely on observable indicators of comprehension; a verbal affirmation or signed *Miranda* form is typically a sufficient measure of comprehension from a judge’s perspective (Feld, 2006a). We intended to capture several behavioral indicators of (non)comprehension we hypothesized that suspects may exhibit. Specifically, we coded verbal expressions of affirmative understanding (e.g., “yeah”, “mm-hmm”, or “I understand”), head nods indicating understanding/agreement, outward signs of confusion or cognitive struggle, and requests for clarification of one or more components of the *Miranda* warnings.

We first coded whether the interrogator directly asked the suspect if he understood the *Miranda* warnings. Officers in 23 of the 28 interrogations containing *Miranda* assessed comprehension in this manner. Although a few interrogators paused after each of the four (or five) prongs to ask whether the youth understood that prong, most asked “Do you understand?” (or some variant) once after all the prongs were conveyed. No direct attempts at assessing comprehension were made in the remaining five cases.
We next coded whether juvenile suspects exhibited observable verbal or behavioral indications of *Miranda* comprehension or lack of comprehension. Youth in 20 of the 28 interrogations containing *Miranda* (71.4%) expressed at least one verbal affirmation of understanding, either spontaneously or in response to an interrogator’s inquiry. Youth in these 20 interrogations verbally affirmed *Miranda* understanding an average of 3.8 times per interrogation (SD = 3.4). Youth overall (n = 57) verbally affirmed understanding on average 1.3 times per interrogation (SD = 2.7). Head nods were far less common in the overall sample (M = 0.3, SD = 0.8); only seven youth visibly nodded their heads in an affirmative response to an officer’s inquiry. Finally, asking for clarification was the least common indicator of *Miranda* (lack of) comprehension; only one juvenile suspect stated to his interrogator (twice) that he did not understand the words and asked the interrogator to explain. The fourth and final behavioral indicator for which we intended to code, signs of confusion or cognitive struggle, could not be reliably assessed due to suspects’ face pixelation so those data were discarded.

Waiving one’s constitutional rights to silence and counsel during police interrogation is one of the most consequential legal decisions facing any suspect. We coded whether juvenile suspects waived their *Miranda* rights at the outset, invoked at the outset, waived initially but later invoked, or invoked initially but later waived. For the 31 interviews in our sample for which *Miranda* administration occurred (28 on
film, 3 prior to recording), 90% of juvenile suspects waived their rights to silence and counsel. Two juveniles invoked at the outset and one waived initially but later invoked. For the 90% of suspects who waived their *Miranda* rights, we recorded the official manner in which they waived (verbal and/or written). Sixteen youth who waived *Miranda* (or 57.1% of Mirandized suspects) did so both verbally and in writing. Six youth (21.4%) waived verbally only and were not asked to sign a form. Three youth (10.7%) signed a written form but never indicated waiver verbally. Finally, waiver form could not be determined for the three juvenile suspects who waived their *Miranda* rights prior to the electronically recorded interview.

Once a suspect invokes his constitutional right to silence or counsel, interrogators are legally obligated to discontinue questioning until a defense attorney is present. Given our hypotheses about youthful suspects’ myriad potential vulnerabilities in this context, we investigated how interrogating officers responded to juveniles’ *Miranda* invocations. Only three juveniles in our sample ultimately invoked *Miranda* (two at the outset of interrogation, one after initially waiving). Only one of the three interrogators in these interviews immediately terminated the interview. Two of the three interrogators attempted to persuade the juvenile suspect to talk or keep talking. For example, one officer attempted to capitalize on a suspect’s uncertainty about *Miranda* and the parameters of police questioning:
Officer: [Instructs youth to read the *Miranda* form aloud; points to form] Start from there. Read out loud so I can hear for you…

Interviewee: Before we ask you any questions, you must understand you have the right to remain silent. Anything you say can be used against you in court. You have the right to talk to a lawyer for advice before we ask you any questions and have a…and to have a lawyer with you during questioning. If you cannot afford a lawyer, one will be appointed for you before any questioning.

Do you understand. [to officer] What is this all about?

Officer: You wanna talk to me?

Interviewee: No because I don’t understand…

Officer: Can I ask you a few…well, we’re gonna talk about it. We’re gonna talk about the, uh, petitions I got against you…I got on you. Real simple questions and answers, man. Just me and you this time.

Interviewee: But I don’t understand…what is it about?

Officer: Okay, we’ll talk about that. It’s about…a couple robbery charges. You willing to talk to me about it?

Interviewee: I’ll answer some.

Officer: You’ll answer some?
Interviewee: …I don’t know…

Officer: Okay. Good enough. Can I get your signature right there?

Interviewee: No…I’m not…

Officer: I need your signature.

Interviewee: I’m not answering no questions.

Officer: You’re not answering no questions?

Interviewee: Cause I don’t…nn-hmm [negative].

Officer: Okay. Well, let me tell you what I got on you, okay?

Interviewee: Mm-hmm [affirmative].

Officer: I’ll go page for page.

In this example, the youth attempts twice to invoke *Miranda* and both times the interrogator attempts to override this request, first by asking for the youth’s signature after the youth said no, and then by reading a list of charges against the youth after he refused to answer questions.

*Readability.* Flesch Reading Ease scores and Flesch-Kincaid Grade Level estimates were generated for the 25 recordings containing audible *Miranda* warnings using Microsoft Word 2008. Analyses examined the *Miranda* warning prongs only and did not include any waiver requests, as prior research suggests waiver requests influence Flesch Reading Ease and Flesch-Kincaid Grade Level scores (Rogers et al., 2007). A waiver request is any comment or question following the warning prongs.
intended to elicit or confirm the suspect’s decision to waive his *Miranda* rights (e.g., “With these rights in mind, do you wish to talk to me today?”). Analyses also excluded any language following the warning prongs that queried youths’ comprehension (e.g., “Do you understand these rights as I’ve read them to you?”) since such language is not constitutionally mandated.

Results indicate only moderate variation in interrogating officers’ *Miranda* language. Flesch Reading Ease scores fell largely in the “fairly easy” range ($M = 74.1$, $SD = 3.9$), where the most difficult *Miranda* passage scored 64.4 (readability level “standard”; an $8^{th}-9^{th}$ grader should comprehend 75%) and the easiest passage scored 83.3 (readability level “easy”; a $6^{th}$ grader should comprehend 75%). The corresponding Flesch-Kincaid Grade Level estimate suggests the average *Miranda* warning is communicated at approximately a $7^{th}$ grade level ($M = 7.0$, $SD = 0.8$; range: grade 5.1 – grade 8.9).

**Discussion**

The goal of this study was to provide fundamental descriptive data about the participants and context of routine police interrogation of juvenile suspects. Our data paint a portrait of white or black middle-adolescent males accused of serious person or property crimes, including murder, sexual assault, robbery, and arson. These youth are typically questioned by one or two white male interrogators in a session lasting about an hour on average, though the range of interview durations can be quite extensive.
Youth waive their *Miranda* rights at extremely high rates and often speak with police alone; parents were present in 20% of cases and defense attorneys in zero cases. When police administer *Miranda* warnings they are usually administered immediately or almost immediately and in a neutral manner, though more subversive tactics enumerated elsewhere in the literature were occasionally present. Interrogation outcomes were varied, and many of the youth who eventually confessed to their interrogators may not have ever been in custody or Mirandized. When *Miranda* warnings were administered the language tended to be readable at about a 7th grade level.

*Individual Factors*

Consistent with previous reports of justice-involved youth (e.g., Grisso, 1981; Feld, 2006a; Goldstein et al., 2003), our sample was predominantly male. The racial distribution of our sample somewhat differed from Feld’s (2006a) sample, probably due to population differences in the cities from which the tapes originated. Given minority groups’ well known overrepresentation in all facets of the justice system (Piquero, 2008), our sample contained more white youth and fewer Latino/a youth than a truly representative sample may have contained. Our sample contained equal numbers of white and black youth most likely because more than half of our recordings came from small towns and cities (under 50,000 residents) as opposed to larger urban
areas. Moreover, the fact that we were not able to confidently code race for seven juvenile suspects certainly affected the racial composition of our sample.

The mean age (15.4 years) and range of our juvenile suspects suggest that older youth may be more likely to find themselves in the interrogation room. Whether this is because older youth commit more serious crimes or because police interrogate older and younger youth at different rates is unknown. In 2008, the FBI’s annual Uniform Crime Report attributed 11.9% of all arrests for violent crimes to 15-17 year olds compared to 4.3% of arrests for youth under 15 (Federal Bureau of Investigation, 2009). Feld (2006a), whose study had access to all case records from the sample jurisdiction, noted that charges in his interrogation cases were more serious than the jurisdiction’s typical juvenile felony cases. Over 90% of our sample was interrogated in connection to a person crime or serious property crime, and only nine of the 58 juvenile suspects were known to be under age 15 at the time of the interrogation. Our overall sample was younger than Feld’s (2006a) sample because his study intentionally restricted cases to 16- and 17-year-old interviewees due to data availability.

Contrary to the stereotyped scenario where police officers arrest uncooperative youth and transport them to the police station for questioning, nearly a third of our juvenile suspects were actually present voluntarily, at least from a legal standpoint.\textsuperscript{32}

\textsuperscript{32} Whether their presence truly reflects their free will or they felt compelled to answer questions, of course, remains unknown.
This casts doubt on the commonsense notion that youth, innocent or guilty, would resist police questioning given the choice and also raises concerns that youth may misunderstand their constitutional rights to silence, counsel, and protection against self-incrimination. Indeed, 28% of the voluntarily present youth fully confessed to their interrogators and another 28% made incriminating admissions; all of these voluntarily present youth, of course, had already waived their *Miranda* rights. Why are youth who possess every right to walk out the door not only consenting to interrogation but even admitting their guilt? Several interpretations are plausible. Perhaps these youth have no desire to conceal their criminal involvement and simply wish to tell the truth. This explanation seems quite untenable, however, since no juvenile in our sample admitted guilt immediately upon questioning; if guilty suspects readily intended to disclose their crimes then interrogation would hardly be necessary. Instead, perhaps youth either a) do not fully understand their right to decline police questioning when not in custody, b) do not yet possess the wherewithal, due to transient developmental features, to assert themselves when asked to consent to questioning, or c) deliberately change their minds in favor of confession during the course of police interrogation.

The first scenario speaks to the widespread confusion regarding the definition of police custody. Recall that the *Thompson v. Keohane* (1995) test declared a person in custody if a reasonable person in his or her place would not have felt at liberty to
leave. This test does not differentiate between adult persons and youthful persons and certainly does not account for developmental and societal norms that may impact youths’ interactions with adults and authority figures. If a police officer visits a youth’s home and politely asks him to answer a few questions at the police station, the youth may comply because he does not fully understand that he has a choice. His “choice” may be further confounded if parents encourage his compliance or do not themselves understand that compliance is not compulsory. Though the hypothesis cannot be supported without empirical evidence, this may be particularly true for youth with little or no justice system experience.

The second scenario speaks to the small but significant body of literature on youth compliance with authority. Though research on interrogation-specific compliance is limited, vignette methods as well as laboratory deception paradigms have demonstrated age-based differences in propensity to comply with authority figures, including legal authorities; these developmental propensities were reported for both community and justice-involved youth (Grisso et al., 2003; Redlich & Goodman, 2003). The juvenile who is visited by a police officer may consent to questioning because he is unable or unwilling to avow his true preferences. Developmental psychologist Gerald Koocher (1992) once noted, “Adults’ interactions with children are often framed as requests, yet children are seldom fooled into thinking that they have a real option to decline….this does not suggest unfettered voluntariness in
children’s decision-making” (p. 715). It is entirely possible that a confluence of factors, including developmental tendencies toward compliance, social norms dictating youth obedience, and incomplete or inaccurate understanding of interrogation parameters, converge in youths’ decisions to voluntarily consent to interrogation.

The third scenario is ideal from a law enforcement perspective, as the goal of interrogation is to persuade a presumably guilty suspect to admit his or her guilt (Inbau et al., 2001). Assuming the confessing youth is actually guilty, the interrogator who convinces the suspect to admit the truth has conducted a successful interrogation. The suspect in this case presumably has not acted in his legal best interest, but this does not necessarily mean he has made a wrong or poor decision. An individual’s liberty interest presumes that freedom from prosecution or incarceration is preferable to deprivation of liberty, and thus decisions that may result in deprivation of liberty (e.g., confessing to a crime) are undesirable. However, we cannot assume that suspects act in their liberty interest above all other interests, and the reasons people confess to crimes are surely diverse. Moreover, it is possible that the convicted suspect who confesses may be sentenced more leniently than the convicted suspect who remains silent, though that outcome could not be predicted at the time of the interrogation.

A fourth possibility pertains to the foreshortened time perspective and inability to anticipate future consequences that typifies developmentally normative youth. We have learned from both case studies and empirical research on youth decision making
in other (e.g., medical) contexts that youth focus on short-term consequences—both positive and negative—of their decisions and are sometimes unable to reason about future events (Gardner & Herman, 1990; Halpern-Felsher & Cauffman, 2001; Reyna & Farley, 2006). Grisso’s (1981) study and numerous case studies of juvenile false confessors demonstrate that these developmental tendencies do manifest in police interrogations specifically. It is possible that the 52% of suspects in our sample thought they could fool the police and escape prosecution with deceit or clever misdirection, failing to consider an alternative scenario in which they eventually confess to their involvement. It is also possible that youth believed they could “explain away” the situation by making police understand why they committed the act in question. Former juvenile offender R. Dwayne Betts, now an author and youth justice advocate, writes in his prison memoir:

What did I know about lawyers? This was my first time arrested, my first time talking to a police officer. I wanted to talk to the police officer….why wouldn’t I have thought I could talk my way out of it? Why wouldn’t I have been ready to say anything to get me out of the room that was musty and hot and leaving me shook? What I learned is that Miranda rights mean nothing when you don’t understand what it means to talk with the police….the police wanted to lock me up and they wanted to get me to confess to committing a crime. I didn’t understand that; I thought there was a gray area where it
became about resolving the situation in the best possible way. (Betts, 2009, p. 48)

However, those youth who voluntarily consent but do not make incriminating admissions should not be overlooked; a nontrivial one-third of our sample for which custody status could be determined falls into this category. As with youth who confess, we do not know why these juvenile suspects consent to interrogation but may presuppose similar reasons. Though non-confessing youth like their confessing counterparts have put themselves at legal risk by consenting to interrogation (irrespective of whether the youth were innocent or guilty), the non-confessing youth at least avoided self-incrimination without the assistance of an attorney or other interested adult.

We now turn to the adults in our recordings and their characteristics. Like the two previous observational interrogation studies (Feld, 2006a; Leo, 1996), we found that most primary and secondary interrogators were white males. These data are consistent with national data from the Bureau of Justice Statistics (Hickman & Reaves, 2006) reporting that approximately 88% of sworn officers are male, 76% are white and 21% are black or Latino/a. More than a third of our recordings involved a secondary interrogator, either concurrently or sequentially. Our study also recorded all other individuals present and their role or relationship to the juvenile suspect; interested adults, adult relatives, and prosecutors were less frequently present but did
occasionally appear in the recordings. Perhaps most importantly, none of the interrogations in our sample contained a defense attorney present on the juvenile suspect’s behalf. Though attorney presence is not required, this nonetheless suggests the widespread occurrence that juvenile suspects are making interrogation decisions without the knowledge or advice of counsel. While all suspects are constitutionally entitled to waive that right, the notion that juvenile suspects so frequently decline legal representation during police questioning raises concerns about their lack of understanding of the protection attorneys provide in that context.

Unlike Feld’s (2006a) sample, in which a parent was present in only one of 66 interrogations, over one-fifth of our sample involved at least one parent, usually a mother. The difference is likely due to state and local policy variations requiring or permitting parental presence in minors’ interrogations. Our finding is a significant departure from previous research and suggests that parental presence may be more common than previously assumed. Addressing the question of whether parents are at least in the interrogation room is a critical first step in addressing the broader question of how parents are involved and whether their involvement serves or disserves the youth’s legal best interest. Future analyses using these data will explore the nature and extent of parental involvement in our recordings; for now, we may conclude that parental presence is prevalent enough to warrant further empirical investigation.
Contextual Factors

We now turn to the characteristics of the interrogation context. Not surprisingly, most of our electronically recorded interrogations took place at a police station, while one occurred at the youth’s school and location of the remaining was undetermined. Though we cannot infer that most interrogations generally occur at a police station because the proportion of interrogations conducted off-site and off-camera is unknown, these data do allow us to observe the cadence of juvenile interrogations that take place in a controlled environment. Our goal was to report observable process characteristics that may impact juvenile suspects’ subjective experiences in this context.

This study is the first to report data on juvenile interrogation length. The median interrogation in our sample was 46 minutes and mean interrogation length was approximately 66 minutes. Just over two-thirds concluded in less than one hour and 84% fewer than two hours. This is relatively consistent with what little previous research exists on adult interrogation lengths; Leo (1996) reported that 71% of his adult sample concluded in under one hour and 92% in under two hours, though he did not report median or mean interrogation length. Additionally, two studies asked police officers to estimate mean interrogation lengths. Cassell and Hayman (1996) asked investigators to estimate length for 86 specific interrogations and reported that the vast majority lasted fewer than 30 minutes. However, our data are inconsistent with their
conclusion that “extended incommunicado questioning is exceedingly rare, if it exists at all” (p. 892) as nearly one-fifth of the youth in our sample were interrogated for between two and five hours. Kassin and colleagues’ (2007) police-generated estimates were for interrogations in general “based on their own experience” (p. 392) and not for any particular interrogation; these 601 officers estimated mean interrogation length to be 1.6 hours. Additional observational studies drawing different samples would shed more light on how juvenile interrogation lengths compare to those of adult suspects, but our data suggest the durations are somewhat similar.

We were also interested in characterizing the “flow” of routine juvenile interrogations, including the types of persons present and whether and how frequently they came and went when the interrogation was underway. We found that three-fourths of interrogations involved only the juvenile suspect and a primary interrogator or PI/SI, while the remaining one-fourth contained a combination of various parents, relatives, prosecutors, and interested adults and involved as many as six individuals at one time. This suggests that juvenile suspects are likely to be interrogated alone, particularly those youth living in police jurisdictions without parental notification or access policies. A recent statute and case law examination suggests that that states vary widely in their parent-directed expansions of Miranda; Cruise and colleagues (2008) reported that ten states afford parents some rights to interrogation access and twelve actually require parental presence (five states for all youth, seven for only youth
of certain ages). Overall, states are trending toward recognizing youths’ vulnerabilities in the interrogation context by attempting to involve parents or interested adults, though implementation may lag behind policy decisions.

We were interested to find that the majority of juvenile interrogations do not occur in a single continuous sitting; disruptions by both interrogators and third parties were frequent. Interrogators exited and reentered (or entered then exited) the room 2.68 times per interrogation on average, and total disruptions (including all persons present) occurred 3.74 times per interrogation on average. Whether and how these disruptions impact juvenile suspects is unknown. Perhaps frequent disruptions heighten youths’ fear and anxiety, interfere with their cognitive ability to process legal information, and/or influence their perceptions of situational control. Interaction effects by third party role may also be possible; for example, a parent entering or leaving may have differential effects on youth versus an interrogator. Our data suggest that parental presence, while more prevalent than expected, was not consistent. From a practical standpoint, when a parent is present for only 41% of the interrogation period (as was the case in 50% of our interrogations involving parents), he or she by definition misses out on a portion of the conversation between child and officer. Any conversations, negotiations, or decisions between parent and child may be impacted by the information available to each individual. Future inferential analyses using these
data will explore the impact (if any) of interrogator and parent disruptions on youths’
decisions to confess.

Finally, perhaps our most important descriptive research question about
juvenile interrogations involves the distribution of various interrogation outcomes.
Several studies have documented extremely high Miranda waiver rates for juvenile
suspects—between 80-90%—and our video data demonstrate similarly high rates.
Existing research, though limited, converges on the notion that juvenile suspects
overwhelmingly decide to talk to police. This begs the question, what do they say?
Data on typical juvenile interrogation outcomes would give rise to a host of research
and practice implications, from mandatory presence of interrogation advocates to
research on false confession base rates.

Our study grouped interrogation outcomes into four categories based primarily
on existing literature: full confession, incriminating admission, denial, and no
resolution. In our sample of 57 interrogations, 37% of youth fully confessed to the
allegations, 31% made incriminating admissions, 24% denied the charges, and 7%
were not resolved. Our confession rates were higher than those in the only existing
observational study of juvenile interrogations (17% confessions; Feld, 2006b), while
our incriminating admission and denial rates were somewhat lower (53% and 30%,

33 Previous studies did not include a no resolution category; however, we felt this category was
necessary to capture those interrogations which could not be justifiably coded as confessions,
incriminating admissions, or denials.
respectively). Variations in outcome distribution between our study and Feld’s (2006b) may be due partially to our inclusion of a _no resolution_ category and partially to both studies’ small sample sizes. Replicating these studies with the same methods but using larger samples would likely stabilize these percentages somewhat. For now, we may conclude that youths’ interrogation decision making in context is quite variable. Future analyses will explore “profiles” of juvenile confessors versus deniers in attempt to determine which factors influence the decision to confess, deny, incriminate oneself, or invoke _Miranda_. Leo (1996) reported that demographic variables were not related to interrogation outcome in his sample; only interrogation duration and the number of interrogation techniques used had an effect on outcome. We will use regression analyses in forthcoming studies to examine whether the same holds true for juvenile suspects.

_Miranda Delivery_

The Supreme Court has consistently declined to prescribe specific language or procedures for police to use when Mirandizing custodial suspects, requiring only that suspects be advised of their constitutionally guaranteed rights. Our observational data provide valuable insight into _Miranda_ in practice—the language, form, and nuances that juvenile suspects experience during this critically important process. Our goal was to delve beyond a mere waive/invoke delineation to capture key elements of the _Miranda_ exchange.
We first coded the form in which *Miranda* warnings were administered to youth. The officers in half of our interrogations presented the warnings both verbally and in writing, 36% verbally only, and 14% in writing only. Given delinquent youths’ age-based interrogation vulnerabilities (Grisso, 1981) and potential literacy deficits (Hodges et al., 1994), a dual approach may yield better understanding than either verbal or written delivery alone. However, to our knowledge no study has evaluated comprehension differences in visual versus auditory stimulus materials as specifically related to interrogation. We were surprised to find that a notable 14% of *Miranda* cases contained written warnings only. Youth in two of these four cases were instructed to read the warnings aloud, while the other two read the warnings silently to themselves. Again, to our knowledge no interrogation-specific reading comprehension studies exist to provide insight into whether one method yields greater comprehension than another. We may conclude from this study that presenting *Miranda* both orally and in writing is the more common practice.

Given the absence of rigid statutory or case law requirements, the timing and manner in which police administer *Miranda* and extent of police maneuvering to obtain waivers are the subject of much speculation. Our results suggest that most interrogating officers deliver the *Miranda* warnings in a manner that is consistent with their stated purpose—to notify suspects of the rights constitutionally bestowed to all individuals in their position. According to our analyses, 82% of officers delivered the
*Miranda* warnings immediately or after a delay to collect booking-related information. From a legal perspective, these cases are maximally compliant with the spirit of *Miranda* because they include little or no conversation outside of “official” information that could be interpreted as manipulative or legally dubious. From a developmental perspective, the effects of immediate *Miranda* delivery on youthful suspects remain unknown. One may argue that immediate delivery, even if accusatory questioning has not yet commenced, would minimize youths’ confusion, preclude officers from exploiting the situation to encourage waiver, or protect officers from allegations of misconduct. On the other hand, one may argue that given youths’ substantial *Miranda* comprehension deficits demonstrated in (presumably) innocuous laboratory settings (e.g., Abramovitch et al., 1995; Goldstein et al., 2003; Grisso, 1981; Grisso et al., 2003; Viljoen & Roesch, 2005), a delay in *Miranda* delivery is no worse than immediate delivery if delivery is not accompanied by additional measures to ensure youths’ understanding. Future studies combining *Miranda* delivery with real-time comprehension assessment would greatly clarify this issue.

Despite immediate or booking-related delay of *Miranda* delivery in most of our interrogation recordings, the near one-fifth of officers delaying *Miranda* for other reasons should not be overlooked. Using criteria first reported in the only existing observational study of juvenile interrogations (Feld, 2006a), we found that seven percent of interrogating officers used a delaying tactic in which *Miranda* warnings are
presented as a bureaucratic ritual—a standard procedure, unimportant to the situation at hand. The interrogator in one recording presents *Miranda* as one of several mundane but required activities:

[as he collects a gunshot residue evidence from the suspect’s hands] Okay, the same check will be done on your grandma actually. So, um, in addition we’ve got, we’ve got some paperwork that will be taken care of…[officer’s beeper goes off; slight delay]… uh, we’ve got some paperwork that needs to be taken care of and such. With a case like this we like to do the interviews one-on-one so that when we do catch this guy eventually or, or what have you, we can say that nothing was, um, that the interview was just a good one-on-one interview. That I ask you the information and you were able to tell me the information, that kind of thing…because your under 18, um, and I’m gonna be in a room alone with you, even though I don’t look it at the moment, I actually am a deputy for the sheriff’s office. You have to be advised of your rights and you also have to sign a waiver, a juvenile waiver.

Language such as “paperwork that needs to be taken care of” hardly communicates the implications of waiving one’s rights to silence and counsel. Introducing the *Miranda* concept while simultaneously performing a gunshot residue collection—a procedure harmless enough even for the suspect’s grandmother—portrays *Miranda* as routine, necessary, and benign. Moreover, language such as “you also have to sign a waiver”
conveys a lack of choice in the matter. Though these subtleties may appear pedantic, their effects are hardly inconsequential; the 15-year-old from the example above fully confessed to murder. It should be noted here that this strategy is not overtly taught in the Reid Technique training materials; the Reid handbook carefully and explicitly summarizes *Miranda* case law and the interrogative circumstances in which *Miranda* is required. However, the same routinization and unimportance can be found in Reid’s instructional language (Inbau et al., 2001):

> Before proceeding to apply any of the nine steps, the *Miranda* warnings must be given to a custodial suspect and a waiver must be obtained...the investigator should give the warnings and obtain the waiver [if no one has done so already]. It is preferable, however, that the investigator be spared this responsibility so that he may immediately proceed with the behavioral analysis interview and interrogation without the diversion occasioned by the warning procedure. (p. 216)

In a sense, the *Miranda* process *is* a diversion for interrogators because their job is to solve crimes—a difficult and often dangerous job that involves piecing together disparate clues, unmasking deceit, and endangering their own lives in the name of public safety. However, if empirical research points to the notion that suspects, particularly juvenile suspects, are deliberately duped into waiving their constitutional rights in order to solve crimes, then serious due process concerns arise. The same
principle prevails in another seven percent of our interrogations in which *Miranda* waiver is cast as a benefit to suspects—an opportunity to tell one’s own side of the story. Dwayne Betts’ memoir again illustrates the concept that youth may in fact want to talk with police, either to “explain away” the situation or for a host of other reasons. To do so, for any reason, is a suspect’s unquestionable right. However, if youthful suspects are led to believe that waiving *Miranda* is in their best interest, their waiver may not be knowing and intelligent as the law requires.

Closely related to the timing of *Miranda* delivery is the matter of the style or context in which warnings are administered. Again replicating coding criteria from existing literature (Feld, 2006a), we found that most (84%) of officers administered warnings in a neutral manner. Half of the remaining 16% understated *Miranda*’s legal significance, while the other half conversely emphasized the consequentiality of waiving one’s rights. This latter group is of particular interest. The two cases suggest there is a minority of officers who take steps to ensure that waiver is truly knowing, intelligent, and voluntary. Additional verbiage about the significance of waiving one’s rights is not constitutionally required, and strictly speaking, such verbiage theoretically undermines the officer’s goal of obtaining waiver (although in both of these cases the suspect waived). Whether these two officers took these additional precautions because of departmental policy, the suspect’s age, a personal threshold for waiver validity, or some other reason is unknown. From a legal perspective, all of these strategies are
equally permissible as long as the four *Miranda* components are conveyed to the suspect. From a developmental perspective, as with *Miranda* timing we do not know whether neutral versus “couched” delivery influences youths’ *Miranda* comprehension or their waiver decisions. We do know that neutral delivery is the most common, so perhaps future research could use this as a reference for exploring the impact of different delivery styles on comprehension or decision making.

The final set of data pertaining to *Miranda* delivery involves instances of modifying conventional *Miranda* language for the suspect’s benefit, presumably because he or she was a youth. Though modifications were uncommon overall, a sizable 32% of officers either used a *Miranda* form specific to juvenile suspects or verbally adapted the standard language to ensure the suspect understood the content. Some departments do use juvenile-specific warnings; though recent content analyses (e.g., Helms, 2007; Rogers et al., 2008) suggest that juvenile forms may in fact be more difficult to comprehend than adult forms, this practice at least exhibits a trend toward recognizing youthful suspects’ special needs. Two officers asked suspects to read along as warnings were delivered verbally, another two asked suspects to read aloud, and one officer asked the suspect to repeat the warnings in his own words.

Although we cannot claim that modifications were triggered by suspects’ age, it appears that a subset of interrogators do take extra precautions to verify comprehension before proceeding with interrogation. Future studies will compare these results to the
frequency of *Miranda* modifications in adult interrogations to examine whether suspect age is a factor.

**Miranda Comprehension and Waiver**

As discussed previously, the Court has not required interrogators to assess *Miranda* comprehension when obtaining a waiver; indeed, numerous clinical and practical barriers would render such a requirement extremely challenging to fulfill. Instead, courts often rely on observable indicators of comprehension in waiver validity hearings (Feld, 2006a; *People v. Ferran*, 1978; *People v. Williams*, 1984). The most straightforward method of assessing comprehension is to simply ask the suspect whether or not he understood. Officers in 40% of our interrogations containing *Miranda* warnings directly asked this of suspects. While an affirmative answer to this question is not necessarily clinically meaningful, it may be more than sufficient in a juvenile waiver hearing. Verbal or behavioral indicators of comprehension provide additional, though perhaps superficial, evidence of youths’ understanding. The majority of youth in our sample (71%) verbally indicated comprehension (e.g., “uh-huh” or “yeah I understand”) multiple times per interview, seven youth nodded their heads in understanding, and only one asked for additional explanation.

On the surface, then, it may appear that *Miranda* comprehension is not a particularly troubling issue. However, we already know from research in laboratory and detention settings (e.g., Abramovitch et al., 1995; Goldstein et al., 2003; Grisso,
1981; Grisso et al., 2003; Viljoen & Roesch, 2005), that youth demonstrate substantial comprehension deficits, particularly delinquent youth and younger youth. Juvenile suspects bring these deficits into the interrogation room, and there is no theoretical reason to believe that comprehension would improve in this context. In fact, we may speculate that some combination of stress, fatigue, intoxication, or anxiety that some youth may experience might actually decrease cognitive performance. Moreover, Feld (2006a) suggested that these indicators actually reflect compliance with authority instead of true understanding; that is, youths’ head nods and verbal affirmations are expressions of cooperation and conciliation more than any cognitive measure. In short, it is important to document these behaviors because the courts rely on them in legal decision making about youths’ cases. Our results suggest that most youth do indeed exhibit one or more outward indicator of Miranda comprehension. However, we simply cannot infer understanding from these verbal and behavioral indicators without additional empirical investigation. It is critical that future research take the next steps to evaluate the courts’ assumption that such indicators are diagnostic.

One of our study’s greatest assets is its contribution of observational data to the literature on actual juvenile Miranda waiver rates. Similar to existing observational juvenile (Feld, 2006a) and adult (Leo, 1996) studies as well as archival (Grisso & Pomicter, 1977) and self-report (Viljoen et al., 2005) research, our data suggest that youth in real police interrogations waive their Miranda rights at astonishingly high
rates. Ninety percent of youth in our interrogation recordings agreed to speak with police without an attorney. We interpret this result above all else as a clarion call for additional research on juvenile interrogations. It is clear that most youth whom police intend to question agree to be questioned, usually without a parent and virtually always—if we may extrapolate from our study and those previous (Feld, 2006a)—without legal defense. Now that we have gained this vital descriptive information we can ask more pointed research questions about other legally consequential decisions youth make in this context.

The observational nature of our data also allows us to document what occurs in those infrequent instances of rights invocation. Three of our youth who were administered *Miranda* on film declined to speak with police, two immediately upon questioning and the third after initially waiving. This study is the first to report interrogators’ responses to youths’ rights invocation. Only one of the interrogators in these three cases terminated the interview; the other two attempted to persuade the youth to continue the conversation. It is important to note here, however, that the circumstances of rights invocation and interview termination are far from clear. The Supreme Court requires interrogators to cease questioning only when the suspect unambiguously requests counsel (*Davis v. United States*, 1994). The majority opinion in *Davis* upheld the sanctity of the interrogation process as a critical investigative tool; Justice O’Connor writes, “in considering how a suspect must invoke the right to
counsel, we must consider the other side of the *Miranda* equation: the need for effective law enforcement” (*Davis v. United States*, 1994, p. 461). A transcript excerpt reported above provides a useful example here:

**Officer:** [Instructs youth to read the *Miranda* form aloud; points to form]  
Start from there. Read out loud so I can hear for you…  

**Interviewee:** Before we ask you any questions, you must understand you have the right to remain silent. Anything you say can be used against you in court. You have the right to talk to a lawyer for advice before we ask you any questions and have an…to have a lawyer with you during questioning. If you cannot afford a lawyer, one will be appointed for you before any questioning.  
Do you understand. [to officer] What is this all about?  

**Officer:** You wanna talk to me?  

Here the officer, in effect, requests a *Miranda* waiver.  

**Interviewee:** No because I don’t understand…  

Here the youth invokes *Miranda* but does so equivocally. The qualifier “because I don’t understand” implies that the youth may be willing to talk if he had more or better information.  

**Officer:** Can I ask you a few…well, we’re gonna talk about it. We’re gonna talk about the, uh, petitions I got against you…I got on
you. Real simple questions and answers, man. Just me and you this time.

Interviewee: But I don’t understand...what is it about?

Officer: Okay, we’ll talk about that. It’s about...a couple robbery charges. You willing to talk to me about it?

Interviewee: I’ll answer some.

Here *Miranda* remains ambiguous. The statement “I’ll answer some” implies that the youth is indeed willing to waive and will simply censor the questioning as needed. However, his previous equivocations raise questions about his true willingness to waive, which the officer attempts to clarify with his next statement.

Officer: You’ll answer some?

Interviewee: ...I don’t know...

Here the youth equivocates again. The officer has still not clarified the youth’s wishes to waive or invoke.

Officer: Okay. Good enough. Can I get your signature right there?

Here, for the first time, the officer appears to overtly take advantage of the youth’s hesitation. Instead of clarifying the youth’s statement “I don’t know....” the officer assumes waiver and tries to compel a signed waiver.

Interviewee: No...I’m not...

Officer: I need your signature.
Here the attempt at compelling waiver is even clearer. Because the youth has not clearly, unambiguously, and unequivocally invoked his rights, however, the officer would probably not be found guilty of any misconduct.

Interviewee: I’m not answering no questions.

Here, for the first time, the youth issues a clear intention to invoke Miranda. The interview should be terminated at this point.

Officer: You’re not answering no questions?

Interviewee: Cause I don’t…nn-hmm [negative].

Officer: Okay. Well, let me tell you what I got on you, okay?

Interviewee: Mm-hmm [affirmative].

Officer: I’ll go page for page. [reads list of charges]

Our data confirm that Miranda invocation among juveniles is indeed a legal and procedural gray area. The issue of unambiguous invocation has come before the courts numerous times with adult suspects (e.g., Edwards v. Arizona, 1981; Smith v. Illinois, 1984; Clark v. Murphy, 2003; State v. Payne, 2002) and our data suggest that juvenile invocations may be equally unclear. In fact, age-specific tendencies such as deference to authority or unassertive linguistic patterns (among others; see Feld, 2006a for a discussion) may further complicate juvenile suspects’ invocations. Future research comparing these data to an adult suspect sample will compare interrogators’ responses to juvenile versus adult Miranda invocations.
Finally, our observational data revealed another ambiguous procedural matter. After observing 57 interrogations it became quite apparent that *Miranda* paperwork procedures vary considerably. Some departments require suspects to sign a form confirming that they were *read* the *Miranda* warnings. Others require suspects to sign that they *understand* the warnings, and still others require a signature to *waive* their rights. Some departments require a combination of two or even all three, and the signature boxes may even be on the same paper form. The procedure may be sufficiently confusing that even an adult of average intelligence may be unclear—particularly if he is nervous or agitated—about what exactly he is signing.

These observations raise questions about how juvenile suspects experience the *Miranda* process and warrant further empirical attention. *Miranda* research to date has presumed a certain level of homogeneity in suspects’ *Miranda* experience—reasonably so, given the lack of observational data to suggest otherwise. Our data as well as the few other naturalistic observations (Leo, 1996; Feld, 2006a) suggest that in fact many differences exist in suspects’ *Miranda* experiences. These differences range from subtle to substantial and should be empirically tested to observe what, if any, effects they may impose on either comprehension or waiver.

*Miranda Readability*

The *Miranda* Readability analyses permitted us to step outside the Observer system and examine the actual language used in juvenile interrogations. While recent
years have witnessed noteworthy new work using standardized *Miranda* warnings (e.g., Rogers et al., 2008), the language police use in real interrogations may or may not differ from their departments’ official forms. This is the first *Miranda* readability analysis to our knowledge that draws data from actual interrogation transcripts. To maintain consistency with the existing *Miranda* readability literature we adopted the Flesch Reading Ease (FRE) and Flesch-Kincaid Grade Level (FKGL) readability estimators for our 25 *Miranda* transcript excerpts.

The present study’s *Miranda* language was more readable on average than those reported in previous studies. The mean FRE score ($M = 74.1$, $SD = 3.9$) fell into the “fairly easy” range, and even the lowest FRE score’s corresponding difficulty level was considered “standard”. The corresponding FKGL index estimated a mean 7th grade reading level for transcripts on average. Prior studies have reported far greater variation and complexity, even for juvenile-specific warnings (e.g., Rogers et al., 2008).

There are at least two possible explanations for these differences. First, the few existing *Miranda* readability studies were able to draw far larger samples since the only unit of analysis was police departments’ standard-issue *Miranda* form. For example, Rogers and colleagues (2007) collected 560 warnings from jurisdictions across the United States. Other studies focused on specific jurisdictions; Kahn and colleagues (2006) sampled 47 Alabama counties while Greenfield and colleagues
(2001) sampled 21 New Jersey counties. Not only would the larger sample sizes alone increase variation, but since several of our participating agencies submitted multiple videos, our *Miranda* language may exhibit even less variability since the 57 interrogations are not from 57 different locales.

Second, it is possible that the differences in data sources between our study and existing readability studies explains the differing average readability levels. Existing studies’ readability estimates are based on each jurisdiction’s official *Miranda* language, often printed on cards or forms for officers to bring into the interrogation room. To assume that the *Miranda* readability levels they reported reflect the actual language suspects receive is to assume that every officer reads verbatim from the form during each interrogation. Our data, by contrast, were generated by transcribing officers’ actual words during interrogation. While we did not record how many of our interrogators read forms versus spoke from memory, at least some interrogators in our sample did not refer to preprinted forms. It is possible, then, that some of the complex or legally specific words commonly found in written *Miranda* forms (e.g., *afford*, *guardian*, *remain*, *rights*, *means*; see Rogers et al., 2008 for top 50 words) are less common in conversational speech. Perhaps in the future we might collaborate with *Miranda* readability authors to match data and examine discrepancies between police agencies’ official *Miranda* language and the language used in actual interrogations.
Of course, even if our results were considered the more “accurate”
representation of *Miranda* language, juvenile suspects may still face worrisome
comprehension deficits. The FRE measures general comprehension of at least 75% of
the material, but the question remains as to whether anything less than complete
understanding adequately serves the purposes of *Miranda*. Each warning prong alerts
suspects to a specific, vitally important constitutional right, and inadequate
comprehension of even one prong raises serious concerns about whether the suspect is
able to knowingly and intelligently waive his rights. Grisso’s (1981) seminal Miranda
Rights Instruments have repeatedly shown age-based differences in comprehension of
the four primary *Miranda* prongs (Grisso, 1981; Viljoen et al., 2007; Woolard et al.,
2008). Grisso (1981) reported that lower IQ negatively impacted *Miranda*
comprehension even more for youth than for adults. Moreover, it is well known that
delinquent youth tend to have lower IQs (Moffitt et al., 1994) and lower literacy levels
(Hodges et al., 1994) than the community samples from which the Flesch indices were
undoubtedly derived. In other words, even if our 7<sup>th</sup> grade FKGL average truly reflects
easier *Miranda* language than forms-based analyses, the result may have little practical
significance for the typical juvenile delinquent whose IQ is at least one standard
deviation below the mean (Grisso et al., 2003; Viljoen et al., 2007).
Limitations

Our sample is without question one of convenience; sampling and selection bias may therefore limit the generalizability of study results. It was impossible to randomly select potential participants from a known universe of agencies that record interviews because no such universe exists. Even for states that require electronic recording at a statewide level, recording policies may not be universally observed because of technological limitations, insufficient resources, or insufficient need.\footnote{For example, we contacted one agency in Alaska (a state that has required electronic recording for over 20 years) that did not observe this practice because its town population consisted of only several hundred residents. In fact, the officer with whom we spoke constituted the entire police department.} Given the lack of an existing population from which to sample as well as the aforementioned numerous barriers to participation, we solicited participation using every avenue available.

By attempting to increase our sample size we subjected the sample to selection bias in several ways. First, our database recruitment strategy targeted states and jurisdictions that were presumed to follow electronic recording procedures resulting from case law or legislation. Aside from the voluntarily recording agencies listed in the Sullivan report that we contacted, our database recruitment strategy could not capture other jurisdictions nationwide that may also voluntarily record interviews. Sullivan’s (2004) report is now several years old; it is likely that additional jurisdictions have adopted recording policies in the years since its publication. Second,
among the agencies we contacted, those that chose to participate may differ in important ways (both measurable and immeasurable) from the agencies that declined. For example, participating agencies may have more human resources to devote to identifying, selecting, duplicating, and submitting interview recordings. Perhaps they are positively oriented toward research, have a preexisting relationship with the FBI, or have a personal interest in developing successful interview strategies. It is impossible to discern the precise ways in which participating agencies differ from declining agencies, though we may assume with confidence that some differences exist.

Finally, selection bias may also exist at the interview level. During recruitment we requested from agencies as many recordings as they were able and willing to submit. The number of interviews received from a single agency ranged from one to 15; it is unlikely that these figures represent a department’s entire collection of interview recordings. Even after considering the project’s interview eligibility criteria (see next section), officers presumably selected only a portion of eligible interviews to submit. We do not know what decision criteria were applied to these selections, and it is possible that chosen interviews differ from those not chosen. For example, even though recruiters reiterated that we did not request any specific type of case (e.g., murder, robbery), it is possible that agencies selected interviews from more serious or atypical cases, interviews in which officers used particular interrogation strategies, all interviews conducted by a particular officer, or the most recent interviews on file. It is
not possible to compare submitted recordings to the larger pool of all recordings within a given department, though such a comparison would certainly be fruitful.

Conclusions

The data presented here comprise the first ever observational study of juvenile interrogations to be derived entirely from electronic recordings. The study draws data from jurisdictions in multiple locations across the nation and is the first to employ digital coding technology to obtain precise and thorough measurements of observed behaviors. In addition to reporting key descriptive information about the participants, circumstances, procedures, and outcomes of juvenile interrogations, the study also explores Miranda’s role in this context and explores how police and youth alike negotiate this important exchange.

We believe the present study’s principal asset is its descriptive approach to an understudied phenomenon. Juvenile interrogation is at once a legal, social, and developmental context in which suspects likely experience a range of emotions under a variety of circumstances. The decisions suspects make—to confess, to cooperate, to resist, even to speak at all—may very well have lasting consequences that extend far beyond the span of that single conversation. The proliferation of theoretical and empirical attention to interrogation in recent years leaves little doubt that this is a context worth investigating. While laboratory-based and survey research continues to provide invaluable insight into the capacities, beliefs, and perspectives that both police
and youth bring into the interrogation room, we have proposed here that 1) existing
developmental research dictates that youth should be considered separately in
interrogation research and 2) observational methods must precede inferential work so
that the literature may have a solid descriptive foundation on which to grow.

Finally, we must underscore here the importance of obtaining the law
enforcement perspective on the interrogation process and retaining that perspective as
part of a framework for researching juvenile interrogations. Policing can be an
extraordinarily difficult and dangerous endeavor, and interviewing and interrogation is
a constitutionally protected and integral component of solving crimes. As long as
police interrogation occurs behind closed doors it will be subject to speculation from
researchers and the public alike. As researchers we must take care not to presume what
we have not observed. We must form researchable hypotheses, not circulate untested
assumptions. We must also position our findings within the current legal landscape.
The *Miranda* delivery and timing techniques from our results are an illustrative
tactic. Despite how tactics such as building rapport with suspects prior to *Miranda*
or framing the warnings as a mere bureaucratic ritual may appear to outside observers,
as researchers we have no evidence that these *Miranda* strategies are a result of
malicious trickery or deceit. Moreover, the strategies are perfectly legal. While the
authors as developmental psychologists are concerned—as academics, parents, and as
citizens—about how youths’ developmental vulnerabilities may impact due process of
law, we also acknowledge the critical role interrogation plays in the conservation of public safety. The present research endeavor is proof positive that academics and law enforcement professionals can collaborate to address real social issues and hopefully develop accurate, efficient, and developmentally appropriate juvenile interrogation strategies.
Appendix A

Recruitment Letter to Police Agencies

Behavioral Science Unit
FBI Academy
Quantico, VA  22135

September 2008

Dear Police Agency,

Within the context of law enforcement, interviewing and interrogation play a vital role in the aid and expediency of criminal justice. Due to the dramatic increase in recent years of the number of juveniles being arrested, the development of effective techniques for interviewing and interrogating juveniles has become an issue of critical value for law enforcement personnel. Therefore, the FBI’s Behavioral Science Unit, along with Georgetown University, has begun conducting research in an effort to determine the most effective techniques for interviewing or interrogating juveniles.

There are three main objectives of this research. The first is to analyze relationships between the behavioral characteristics of participants in juvenile interviews as displayed in videotapes submitted by participating law enforcement agencies. These relationships will be examined in an effort to determine best practices for securing successful interviews with juveniles while preserving the legal rights of the subject. The second objective is to analyze technologies, environmental factors, and behavioral dynamics used by interviewers while interviewing juvenile subjects. The final objective is to analyze relationships among the law enforcement officer, the juvenile subject, and the parent/guardian during these interviews to determine which dynamics lead to the most successful interviews. The primary and most important benefit of this study is the potential to further inform the law enforcement community about the best practices for interviewing juveniles.

We invite your agency to consider participating voluntarily in this joint project between the FBI’s Behavioral Science Unit and Georgetown University. If you decide to participate, it is requested that your agency supply as many interview/interrogation videotapes as possible which meet the following criteria:
• Adjudication of case is now closed and no appeals are pending regarding charge discussed on videotape;
• Subject’s interview is relative to a felony or other serious charge;
• Videotapes refer to questioning of a suspect or “party of interest”;
• Suspect or party of interest is a juvenile (defined as under age 18).

All videotapes obtained for the purposes of this research will be voluntarily submitted by the participating law enforcement agency. Please note that state laws vary in terms of the accessibility of law enforcement case materials by another law enforcement agency such as the FBI. In order to participate in the study, your agency must follow whatever legal requirements exist for the sharing of this information with the FBI.

We are extremely aware that these videotapes and associated paperwork contain personal and sensitive information, and we recognize the need to protect the confidentiality of all officers, agencies, and interviewees involved. Great lengths will be taken to ensure that all identifying information will be kept confidential upon receipt of materials, and all project personnel are trained in the receipt, classification, transport, and storage procedures for securing both the source videotapes and any data files emanating from the coding of these tapes. Immediately upon receipt, FBI technicians will blur the faces of all individuals (including law enforcement officers, interviewees, and third parties) appearing on all videotapes so that no individuals are identifiable by viewing the videotape. The videotapes will be used strictly for the research purpose of determining the most effective practices for interviewing juveniles.

Attached is a consent form to be signed by an agency official indicating their consent for submitted videotapes to be used exclusively for this research purpose. Please sign and date on the line marked “Subject’s consent” on page 4. A signed consent form must accompany every videotape submission in order for the videotapes to be eligible for this research project. All law enforcement agencies canvassed will have the opportunity to voluntarily choose to participate in this project and may withdraw videotapes at any time.

Thank you for your time and attention to this letter. If there are any questions or comments, or if there is any assistance the FBI, Behavioral Science Unit, or I myself can offer, please do not hesitate to contact me by phone at (703) 632-1131 or by email at troyster@fbiacademy.edu.
Please mail videotapes and signed consent form (enclosed) to:

Terri Royster – Behavioral Science Unit
FBI Academy
Quantico, VA  22135

Respectfully,

Terri Royster

Supervisory Special Agent
Behavioral Science Unit
FBI
CONSENT TO PARTICIPATE IN RESEARCH

Project Title: Interviewing Strategies with Juvenile Suspects

Project Director: Jennifer Woolard, Ph.D.

Principal Investigators: Jennifer Woolard, Ph.D., Georgetown University
John Jarvis, Ph.D., Federal Bureau of Investigation

The Federal Bureau of Investigation Institutional Review Board (IRB) and the Georgetown University Institutional Review Board have approved this research project. For information on your rights as a research subject, call the Georgetown University Institutional Review Board office at 202-687-6553.

Introduction:

Your agency has been invited to consider participating voluntarily in a joint research study conducted by the Federal Bureau of Investigation (FBI), Behavioral Science Unit and Georgetown University to investigate techniques and best practices when interviewing or interrogating juveniles.

Why is this research study being done?

Due to the dramatic increase in recent years of juvenile arrests, interviewing techniques for use with juveniles has become an important issue. However, there are few studies of actual interrogations (see Leo, 1996, other cites) and virtually no data on juveniles. Some psychology research with hypothetical scenarios suggest that youth may be more likely to confess than adults, know less about their legal rights, and think differently about the reasons for confessing but it is unclear whether the findings generalize to actual interrogation situations.

There are three main objectives of this research. The first is to analyze relationships between the behavioral characteristics of participants in juvenile interviews as
contained in videotapes submitted by participating law enforcement agencies. These relationships will be examined in an effort to determine best practices for securing successful interviews with juveniles while preserving the legal rights of the subject. The second is to analyze technologies, environmental factors, and behavioral dynamics used by interviewers in interviewing juvenile subjects. The final objective is to analyze relationships between the law enforcement officer, the juvenile subject, and the parent/guardian in these interviews to evaluate how interview dynamics affect the success of interview strategies.

**How many people will take part in the study?**

We are asking law enforcement agencies from across the country if they would be willing to participate. We plan to review a total of 50 videotapes of juvenile and adult interviews or interrogations. We consider all persons appearing on the videotape to be research subjects in the study.

**What is involved in the study?**

If you volunteer to participate in this study, your agency will be asked to submit videotape copies of juvenile interviews conducted by your staff. Once you submit the videotape materials, your participation is complete.

**How long will I be in the study?**

We expect that you will be in the study only for the length of time that it takes to identify, copy, and send the videotape materials to the FBI.

Your agency may request that these tapes be withdrawn from the study at anytime without any consequences. Similarly, the investigators may stop your participation at any time if they feel it is necessary on in your best interests. They may also remove you for the study for various other reasons. They can do this without your consent.

**What are the risks of the study?**

This study involves the following risks.

If your agency is not legally authorized to provide a copy of the materials to the FBI, you may incur legal liability. You should confirm that you have the legal authority to provide a copy of the materials for research purposes prior to participating.
**Are there benefits to taking part in the study?**

There are no direct benefits to individuals participating in this study. Others may benefit in the future from the information we obtain in this study. Specifically, we believe that the information could benefit law enforcement by providing information about conducting effective and efficient interviews with juvenile suspects while preserving legal, ethical, and policy mandates of the law enforcement agency. Such information may lessen law enforcement resources utilized during the course of investigations by identifying behavioral characteristics, methods, and technology which may be particularly appropriate in conducting interviews with juveniles. Such information may in turn inform training of law enforcement officers in investigative techniques.

**Who can participate in the study?**

Law enforcement agencies may participate in this study if the law enforcement agency videotapes interviews and/or interrogations of juveniles and the agency is legally authorized to provide a copy of the tape to the FBI for research purposes if it voluntarily chooses to do so. Videotapes are eligible for this study if they meet the following criteria:

- Adjudication of case is now closed with no pending appeals regarding the incident discussed in interview tape
- Represent felony-level incident
- Refer to questioning of a suspect or “party of interest”
- Suspect or party is a juvenile (defined as under age 18).

**What about confidentiality?**

Your name and your agency’s name will not be used when data from this study are published. Every effort will be made to keep your research records and other personal information confidential. However, we cannot guarantee absolute confidentiality.

Individuals from the Georgetown University IRB, other Georgetown University offices, or Federal regulatory agencies may look at records related to this study, both to assure quality control to analyze data. Your name and any material that could identify you will remain confidential except as may be required by law.
We will take the following steps to keep information confidential.

Because the tapes and associated paperwork contain personal and sensitive information, we are extremely cognizant of the need to protect the confidentiality of all officers, agencies, and interviewees involved. Great lengths will be taken to ensure that all identifying information will be removed immediately upon receipt of the materials by FBI research team members and additional protections are in place once the tapes are ready to be coded.

Upon receipt of tapes at the FBI, all tapes will be newly labeled with a random identification number assigned by the research team. The paperwork that contains both the original identification and the randomly assigned number will be kept by FBI personnel. Any previous labeling will be removed and destroyed. The entire video and computer system, including computer access, file access, and any format transfer capabilities, is password-protected and is accessible only by approved research team members.

The only reason that we would tell someone about your agency’s participation in this study is if, in the course of viewing the videotape, we obtain information that suggests someone is hurting or abusing a child. In that situation, we would notify the appropriate child protection authorities.

What are my rights as a research participant?

Participation in this study is entirely voluntary at all times. You and your agency have the right not to participate at all, or to leave the study at any time. Choosing not to participate or choosing to leave the study will not result in any penalty or loss of benefits to which you are entitled. It will not harm your relationship with the FBI or Georgetown University.

Should you decide to leave the study, please contact SSA Terri Royster during business hours at 703-632-1131 or Dr. Jennifer Woolard at 202-687-9258.

Whom do I contact if I have questions or problems?

Please contact SSA Terri Royster during business hours at 703-632-1131 or Dr. Jennifer Woolard at 202-687-9258 if you have questions about the study, any problems, or think that something unusual or unexpected is happening.
Call the Georgetown University IRB Office at 202-687-6553 with any questions about your rights as a research participant.

**Statement of Person Obtaining Informed Consent**

I have fully explained this study to the subject. I have invited the subject to ask questions and have answered any questions that the subject has asked.

________________________________________
Signature of Person Obtaining Informed Consent

______________________________
Date

**Subject’s Consent**

I have read the information provided in this Informed Consent Form (or it was read to me by ______________). My questions were answered to my satisfaction. I voluntarily agree to participate in this study.

______________________________
Subject’s Signature

______________________________
Date

**Statement of Witness**

I have personally witnessed (check as applicable)

__ the subject’s signature on this informed consent document
__ the informed consent process involving both the subject and the person obtaining consent

________________________________________
Witness Signature

______________________________
Date
References


Bram v. United States, 168 U.S. 532 (1897).


Clark v. Murphy, WL 187215 7837 (2003).


developmental perspective on juvenile justice (pp. 105-138). Chicago:
University of Chicago Press.


Feld, B. C. (2006b). Police interrogation of juveniles: an empirical study of policy and

Review, 7, 39-54.

221-233.


perspective. New Directions for Child Development, 50, 17-34.


Juvenile offenders' Miranda rights comprehension and self-reported likelihood
of offering false confessions. Assessment, 10(4), 359-369.

Greenfield, D. P., Dougherty, E. J., Jackson, R. M., Podboy, J. W., & Zimmermann,
M. L. (2001). Retrospective evaluation of Miranda reading levels and waiver


#fact


Table 1

Characteristics of Participating Agencies

<table>
<thead>
<tr>
<th></th>
<th>Number of agencies</th>
<th>Number of tapes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total sample (n=20)</td>
<td>Final sample (n=17)</td>
</tr>
<tr>
<td><strong>City population</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-50,000</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>50-100,000</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>100-250,000</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>250-500,000</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>500k -1 million</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1 million +</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Geographic region</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>West</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Northeast</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Midwest</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 2

_Characteristics of Juvenile Suspects_

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>52</td>
<td>89.7</td>
</tr>
<tr>
<td>female</td>
<td>6</td>
<td>10.3</td>
</tr>
<tr>
<td><strong>Age</strong> ((M = 15.44, SD = 1.14))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>14</td>
<td>7</td>
<td>12.1</td>
</tr>
<tr>
<td>15</td>
<td>11</td>
<td>19.0</td>
</tr>
<tr>
<td>16</td>
<td>13</td>
<td>22.4</td>
</tr>
<tr>
<td>17</td>
<td>8</td>
<td>13.8</td>
</tr>
<tr>
<td>unknown</td>
<td>17</td>
<td>29.3</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>24</td>
<td>41.4</td>
</tr>
<tr>
<td>Black</td>
<td>24</td>
<td>41.4</td>
</tr>
<tr>
<td>Latino/a</td>
<td>3</td>
<td>5.2</td>
</tr>
<tr>
<td>unknown</td>
<td>7</td>
<td>12.1</td>
</tr>
<tr>
<td><strong>Charge category</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>person</td>
<td>42</td>
<td>72.4</td>
</tr>
<tr>
<td>property</td>
<td>12</td>
<td>20.7</td>
</tr>
<tr>
<td>status</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>public order/public safety</td>
<td>3</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Custody status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>brought from secure custody</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>just arrested</td>
<td>16</td>
<td>27.6</td>
</tr>
<tr>
<td>present voluntarily</td>
<td>18</td>
<td>31.0</td>
</tr>
<tr>
<td>unknown</td>
<td>23</td>
<td>39.7</td>
</tr>
</tbody>
</table>
Table 3

*Combinations of Persons Present in Juvenile Interrogations*

<table>
<thead>
<tr>
<th>Combination</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI only</td>
<td>25</td>
<td>43.9</td>
</tr>
<tr>
<td>PI and SI</td>
<td>17</td>
<td>29.8</td>
</tr>
<tr>
<td>PI and Parent 1</td>
<td>6</td>
<td>10.5</td>
</tr>
<tr>
<td>PI, SI, Parent 1, and Parent 2</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>PI and IA</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>PI and DA</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>PI, SI, and IA</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>PI, Parent 1, Parent 2</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>PI, SI, Parent 1, Relative</td>
<td>1</td>
<td>1.8</td>
</tr>
</tbody>
</table>

*Note.* All interviews included a single juvenile suspect except one interview, which included two juvenile suspects questioned simultaneously. PI=primary interrogator. SI=secondary interrogator. Parent 1 = juvenile suspect’s parent. If two parents were present, the parent most involved in the interview was designated as Parent 1 and the other as Parent 2. IA=interested adult. DA=representative from district attorney’s office. NIO (non-interviewing officer) presence not included due to their non-involvement, by our definition, in interrogations.