

THE JUVENILE JUDAS—THEY KNOW NOT WHAT THEY DO: NEUROSCIENCE AND THE JUVENILE INFORMANT

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American criminal jurisprudence relies on confidential informants: those individuals who agree to assist police in exchange for leniency. Facing little regulation by legislatures, law enforcement has raised an informant system premised on the exploitation of vulnerabilities and free from basic safeguards that would help to mitigate the moral, mental, and physical harm informants face in the field. While this is generally problematic, the issue becomes more pronounced when considering law enforcement's use of juveniles to combat crimes perpetrated against and among children.

A juvenile's brain is developmentally distinct from an adult's. During late adolescence, the brain goes through major maturation processes that significantly affect a juvenile's ability to assess risk, make forward-thinking decisions, override emotions with logic, and resist social pressures. In other words, the juvenile brain is predisposed to act adverse to self-interests. Within the context of the modern informant system, juveniles engage with police on seriously disadvantaged ground; and because agreeing to assist police has proven to be a death sentence for some, the urgency with which this must be addressed cannot be overstated. America's tolerance of police discretion with respect to the use of juvenile informants must end. Legislatures can facilitate change by implementing safeguards aimed at mitigating the risks posed by a juvenile's physiological predispositions. Namely, legislatures should consider implementing mandatory cooling-off periods, a statutory right to counsel, mandatory parental and judicial consent, prescribed documentation and recordkeeping requirements, and enforced training regimens. Absent empirical data that youth at large are better protected by the abolition of the use of juvenile informants, legislatures looking to implement these suggestions or

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otherwise restrict the practice should be careful to balance proposed legislation with the needs of law enforcement.

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INTRODUCTION

In 33 A.D., a confidential informant handed his friend over to the authorities in exchange for 30 pieces of silver.¹ “To this day his name—Judas Iscariot—remains a synonym for betrayal.”² With a kiss, Judas sent Jesus to the

1. See *Matthew* 26:14–16 (New International Version) (“Then one of the Twelve—the one called Judas Iscariot—went to the chief priests and asked, ‘What are you willing to give me if I deliver [Jesus] over to you?’ So they counted out for him thirty pieces of silver. From then on Judas watched for an opportunity to hand him over.”); see also ROBERT M. BLOOM, *RATTING: THE USE AND ABUSE OF INFORMANTS IN THE AMERICAN JUSTICE SYSTEM* 4 (2005).

2. Larry B. Stammer, *New Look at Ancient Betrayer*, L.A. TIMES (Apr. 21, 2000, 12:00 AM), <https://www.latimes.com/archives/la-xpm-2000-apr-21-mn-22024-story.html> [<https://perma.cc/PU3N-2EHH>].

cross³ and, as Dante describes it, sealed his fate to be skinned by Satan's claws.⁴ Indeed, to Dante, betrayal incurred the most severe of punishments: torture in the ninth and final circle of Hell.⁵

Dante's take on betrayal is not unique. It parallels a well-known street maxim of American crime—*snitches get stitches*.⁶ In other words, criminals have a way of dealing with individuals who agree to assist the police as confidential informants.⁷

LeBron Gaither was one such individual: recruited at the age of 16, LeBron agreed to serve as a confidential informant in exchange for leniency on assault charges after he hit his school's assistant principal in the jaw.⁸ A lucrative recruit, LeBron participated in several successful sting operations and agreed to testify against drug dealer Jason Noel at a grand jury hearing. The day after the hearing, police sent LeBron back into the field to help facilitate Noel's arrest.⁹ Unbeknownst to police, however, a grand juror tipped Noel off to LeBron's status as a *snitch*, and Noel drove off with LeBron shortly after the sting operation commenced.¹⁰ Outside the reach of police, LeBron was "tortured, beaten by a bat, shot with a pistol and a

3. See Mark 14:43–50 (King James) ("And as soon as [Judas] was come, he goeth straightway to [Jesus], and saith Master, master; and kissed him. And they laid their hands on him, and took him."); Luke 23:33–35 (King James) ("[T]here they crucified [Jesus] . . . Then said Jesus, Father, forgive them; for they know not what they do.").

4. DANTE ALIGHIERI, *THE DIVINE COMEDY OF DANTE ALIGHIERI: INFERNO*, Canto 34 (Allen Mandelbaum ed., 1980) (n.d.).

5. See *id.* (noting the famous traitors Brutus and Cassius were devoured alongside Judas).

6. *Snitches Get Stitches*, URB. DICTIONARY, <https://www.urbandictionary.com/define.php?term=Snitches%20Get%20Stitches> [<https://perma.cc/Y276-YBJ7>] (last visited Oct. 26, 2022).

7. See generally Press Release, U.S. Att'y's Office Dist. of N.J., Three Members of Newark Drug Enterprise Admit Racketeering and Murder Charges (Sept. 7, 2022), <https://www.justice.gov/usao-nj/pr/three-members-newark-drug-enterprise-admit-racketeering-and-murder-charges> [<https://perma.cc/5232-J577>] (describing how an arrested gang member commissioned three other members to kill an informant that aided in his arrest); Sarah Stillman, *The Throwaways*, THE NEW YORKER (Aug. 27, 2012), <https://www.newyorker.com/magazine/2012/09/03/the-throwaways> [<https://perma.cc/8QKF-DJBW>] (discussing the violent murders of informants Rachel Hoffman, LeBron Gaither, Shelly Hillard, and Jeremy McLean); Scott Martelle & Bonnie Hayes, *Chad MacDonald's Short, Tragic Life*, L.A. TIMES (Apr. 5, 1998, 12:00 AM PT), <https://www.latimes.com/archives/la-xpm-1998-apr-05-mn-36322-story.html> [<https://perma.cc/GR54-8ZFP>] (reporting on the slaying of informant Chad MacDonald); LISA PEEBLE & JOHN O'BRIEN, *SCRAPPED: JUSTICE AND A TEEN INFORMANT* (2021) (describing the disappearance and presumed murder of informant Heidi Allen); Daniel Schorn, *The Fight Against MS-13*, CBS NEWS (Dec. 1, 2005, 11:55 AM), <https://www.cbsnews.com/news/the-fight-against-ms-13> [<https://perma.cc/TRZ4-XTEJ>] (detailing the heinous murder of 16-year-old informant Brenda Paz).

8. Stillman, *supra* note 7.

9. *Id.*

10. *Id.*

shotgun, run over by a car, and dragged by a chain through the woods.”¹¹ He did not survive.¹²

Under the guise of public safety, American law enforcement has faced little regulation of its use of criminal informants in the war on drugs, crime, and gangs.¹³ Both legislatures and the courts generally look the other way when forced to confront the investigatory tactic¹⁴ that aids police in evading the restrictions imposed by the Fourth¹⁵ and Sixth amendments.¹⁶ The result? An informant system that operates in the same extra-legal shadows of America it seeks to eradicate.

Generally speaking, a confidential informant is an individual who agrees to assist police in exchange for leniency.¹⁷ To police, informants are a critical investigatory tool—American jurisprudence depends on them.¹⁸ The confidential

11. *Id.*

12. *Id.*

13. See Michael L. Rich, *Brass Rings and Red-Headed Stepchildren: Protecting Active Criminal Informants*, 61 AM. U. L. REV. 1433, 1435 (2012) [hereinafter Rich, *Brass Rings*]. The only major judicial restriction on police use of informants seems to lie within the Due Process Clause of the Fifth Amendment and serves to protect the defendant (not the informant). See *United States v. Twigg*, 588 F.2d 373, 382 (3d Cir. 1978) (holding that the Due Process Clause of the Fifth Amendment bars prosecution of a crime plotted by law enforcement and initiated on command by their confidential informant).

14. Paige Fernandez & Carl Takei, *The Use of ‘Confidential Informants’ Can Lead to Unnecessary and Excessive Police Violence*, ACLU (Feb. 25, 2019), <https://www.aclu.org/issues/criminal-law-reform/reforming-police/use-confidential-informants-can-lead-unnecessary-and> [<https://perma.cc/625Y-ZXCK>]; Alexandra Natapoff, *Snitching: The Institutional and Communal Consequences*, 73 U. CIN. L. REV. 645, 656 (2004) [hereinafter Natapoff, *Institutional and Communal Consequences*].

15. The Fourth Amendment protects individuals from unlawful searches and seizures by the government and specifically describes lawful searches and seizures as those prescribed by a warrant based on probable cause. U.S. CONST. amend. IV. Under the Court’s interpretation of this language, an individual exhibiting a reasonable expectation of privacy in their person, houses, papers, or effects is generally protected from police searches unless police have obtained a warrant sufficient to conduct said search. See generally *Katz v. United States*, 389 U.S. 347 (1967). There is a significant exception to the Reasonable Expectation of Privacy test, however—the Third-Party Doctrine. *Smith v. Maryland*, 442 U.S. 735, 744–45 (1979). In essence, the Third-Party Doctrine provides that what one knowingly exposes to the public is not protected under the Fourth Amendment. *Id.* Thus, information voluntarily provided to or observed by an informant is not protected against police searches under the Fourth Amendment. *United States v. White*, 401 U.S. 745, 749 (1971).

16. The Sixth Amendment, among other things, provides for an individual’s right to assistance of counsel in a criminal prosecution. U.S. CONST. amend. VI. The right to assistance of counsel does not attach until formal charges are brought against an individual. See *infra* note 27.

17. Mary Dodge, *Juvenile Police Informants: Friendship, Persuasion, and Pretense*, 4 YOUTH VIOLENCE & JUV. JUST. 234, 234 (2006).

18. After the Supreme Court of the United States ratified the practice in *Hoffa v. United States*, 385 U.S. 293, 311 (1966), the use of criminal informants exploded. See Natapoff, *Institutional and Communal Consequences*, *supra* note 14, at 656. The practice is so pervasive that some criticize law enforcement’s ability to function without them. Stillman, *supra* note 7. Indeed, informants appear to play a role in a majority of police pursuits.

informant can go where police cannot, both socially¹⁹ and legally.²⁰ To the informant, the system functions as a “clandestine, black-market version” of the American criminal justice system.²¹ It provides a low-level offender the opportunity to resolve their “guilt” off the record.²² On its face, this arrangement appears to be a win-win. Police are enabled to infiltrate an otherwise impenetrable criminal underworld while the informant has the opportunity to “work off” liability for crimes committed.²³ This isolated view, however, relies on the inherently wrong assumption that informants and law enforcement strike their deals on equal footing.²⁴

Recruitment of an informant involves the exploitation of an individual’s vulnerabilities by law enforcement.²⁵ Police strategically prey on the emotionally charged moments immediately following an arrest in hopes of diminishing rational thinking²⁶ and to escape the purview of an individual’s Sixth Amendment protections.²⁷ To pack a lot of punch, police often leverage the most severe charges

NataPOff, *Institutional and Communal Consequences*, *supra* note 14, at 657 (stating that “[s]tudies in Atlanta, Boston, San Diego, and Cleveland . . . [found] that 92 percent of the 1,200 federal warrants issued in those cities relied on an informant”).

19. By already being an accepted member of a relevant criminal underworld, an informant generally goes unsuspected by peers. Alternatively, the informant may meet the necessary criminal demographic for the crime under investigation. With respect to juveniles, both social justifications are relevant. A juvenile may be the only way to infiltrate a teenage drug ring, or the presence of the juvenile might be an element of a crime (e.g., selling alcohol to a minor), or both circumstances may simultaneously exist. *See* Andrea L. Dennis, *Collateral Damage? Juvenile Snitches in America’s “Wars” on Drugs, Crime, and Gangs*, 46 AM. CRIM. L. REV. 1145, 1166–67 (2009).

20. *See supra* note 15.

21. ALEXANDRA NATAPOFF, SNITCHING: CRIMINAL INFORMANTS AND THE EROSION OF AMERICAN JUSTICE 16 (2009) [hereinafter NATAPOFF, SNITCHING].

22. *Id.*

23. *Id.* at 15.

24. *Id.* at 40.

25. *Id.* In fact, one commentator argues that the practice is so coercive it violates the Thirteenth Amendment’s prohibition on forced servitude. Michael L. Rich, *Coerced Informants and Thirteenth Amendment Limitations on the Police-Informant Relationship*, 50 SANTA CLARA L. REV. 681, 685 (2010) (observing that the choice between working for the state or facing criminal prosecution is, “in a practical and constitutional sense . . . no choice at all”) [hereinafter Rich, *Coerced Informants*].

26. NATAPOFF, SNITCHING, *supra* note 21, at 40 (quoting a former narcotics agent: “It is widely accepted fact that individuals are most vulnerable to becoming cooperative immediately following arrest . . . [I] learned to ‘strike’ while the ‘iron is hot.’ Informants will often rethink their exposure and decide not to cooperate if given too much time to contemplate their decision.”).

27. *Kirby v. Illinois*, 406 U.S. 682, 688 (1972) (stating that the Sixth Amendment “right to counsel only attaches at or after the time that adversary judicial proceedings have been initiated against him”); *see also* *Rothgery v. Gillespie Cnty.*, 554 U.S. 191, 213 (2008) (holding that “a criminal defendant’s initial appearance before a judicial officer, where he learns the charge against him and his liberty is subject to restriction, marks the initiation of adversary judicial proceedings that trigger attachment of the Sixth Amendment right to counsel”).

and sentences without the oversight of the prosecutor.²⁸ As a result, the deals are often unenforceable and deceptively simple: you snitch or go to jail.²⁹

While many who enter the “system” are vulnerable to the recruitment tactics employed by police, neuroscience suggests that, as compared to adults, juveniles³⁰ like LeBron Gaither are particularly ill-equipped to meet police on equal ground.³¹ Specifically, neuroscience suggests that the juvenile brain, owing to the unbalanced development of the prefrontal cortex and limbic midbrain, is physiologically predisposed to poor risk assessment, ill-conceived decision-making, high sensation-seeking behaviors, and increased vulnerability to social pressures.³² Increased dopamine activity and a surge in pubescent sex hormones further amplify impaired decision-making.³³ Put another way, the physiology of the developing brain limits juveniles’ ability to make rationally sound, forward-thinking decisions, even in low-stress situations.³⁴ Take a high-stress situation (such as a police encounter or sting operation) and juveniles are even more likely to fall victim to their own adolescence and act adverse to their own interests.³⁵

This Note analyzes the use of juveniles as confidential informants in light of the neuroscience of adolescent brains. Part I discusses the inner workings of the confidential informant system. Part II then examines what neuroscience tells us about the developing adolescent brain and frames those scientific findings within the context of the juvenile confidential informant system. Part III surveys existing statutory protections for juvenile informants and evaluates their successes and failures. Finally, Part IV recommends how states should regulate law enforcement’s use of juvenile confidential informants.

I. THE INFORMANT

Law enforcement has significant discretion in recruiting and incentivizing informants.³⁶ Outside of federal law enforcement agencies,³⁷ interdepartmental

28. See Rich, *Brass Rings*, *supra* note 13, at 1442–43.

29. Rich, *Coerced Informants*, *supra* note 25, at 700–01 (discussing the challenges informants have in enforcing “breached” agreements).

30. The term “juvenile” will include anyone under the age of 18.

31. See *infra* Part I.

32. See *infra* Part II.

33. See *infra* Part II.

34. Amy F.T. Arnsten & Rebecca M Shansky, *Adolescence: Vulnerable Period for Stress-induced Prefrontal Cortical Function? Introduction to Part IV*, 1021 ANNALS N.Y. ACAD. SCI. 143, 143 (2004).

35. *Id.*; see also Pilar Vigil et al., *Influence of Sex Steroid Hormones on the Adolescent Brain and Behavior: An Update*, 83 LINACRE Q. 308, 311 (2016).

36. NATAPOFF, SNITCHING, *supra* note 21, at 46.

37. The United States Attorney General has issued mandatory guidelines regarding the use of “confidential human sources.” The guidelines institute mandatory reporting and documentation practices; prohibit the Federal Bureau of Investigation from promising immunity and certain rewards; and create specific interagency policies for engaging with informants. However, these guidelines still largely leave informant training and protection up to the discretion of the agency and its agents. See *generally* DEP’T OF JUST., THE ATTORNEY GENERAL’S GUIDELINES REGARDING THE USE OF FBI CONFIDENTIAL HUMAN

policy provides state, county, and local law enforcement with the only real restrictions on the recruitment, use, and management of informants.³⁸ To date, there does not appear to be any structured research into (a) whether those policies actually exist; (b) if so, whether they promote any meaningful standards for law enforcement to follow; or (c) whether they are actually enforced.³⁹ However, some authors, by interviewing various law enforcement agencies, have produced some meaningful insights into how things typically unfold.⁴⁰

A. The Recruitment of an Informant

Generally, the process of recruiting an informant begins when an individual is apprehended by police during the commission of a low-level offense such as drug possession.⁴¹ Police have also admitted to approaching or arresting individuals solely for the purpose of turning them into informants, knowing they do not have enough evidence to prosecute those individuals.⁴² Whichever way the encounter comes about, police seize the opportunity to introduce the idea of cooperating as an informant in exchange for leniency on the alleged offenses.⁴³

Provided the grounds for approaching or arresting an individual are legitimate, deal negotiations generally occur before the prosecuting agency has pressed charges.⁴⁴ This serves three critical functions. First, it maintains discretion: a highly publicized arrest or a night in jail greatly diminishes the “value” of the informant to police.⁴⁵ Second, negotiating before formal charges are brought enables police to capitalize on the fear experienced by the target recruit.⁴⁶ Agents are trained to “strike while the iron is hot” to compromise the individual’s rational thinking.⁴⁷ Anticipating the recruit will be highly motivated to avoid the stigma and stress of criminal prosecution, law enforcement leverages the most severe charge and coercively emphasizes the harm criminal charges could cause to an individual’s social standing and personal relationships, all to suppress reason and encourage

SOURCES (2020). Accordingly, while the information provided in this Note may apply to federal agencies, the primary focus is on what is happening at the hands of state, county, and local law enforcement agencies.

38. See NATAPOFF, SNITCHING, *supra* note 21, at 60–67 (“[T]he legislative and judicial branches have ceded authority on this issue to executive law enforcement The end result of this laissez-faire, unregulated approach is that the American practice of using criminal informants is centrally shaped by individual decisions of police and prosecutors, with few external controls and little judicial oversight or legislative or public scrutiny.”).

39. *See id.* at 67.

40. *See infra* Section I.A–C.

41. Dodge, *supra* note 17, at 240.

42. NATAPOFF, SNITCHING, *supra* note 21, at 18.

43. *See id.* at 40.

44. *Id.* at 19.

45. *Id.* at 18 (quoting a DEA agent who explains that “the incident should take place discretely and without fanfare. If not, word of his arrest will have spread quickly ‘on the street.’ Once booked into jail, his value to the agents as an informant may rapidly diminish.”) (cleaned up).

46. Rich, *Brass Rings*, *supra* note 13, at 1442.

47. NATAPOFF, SNITCHING, *supra* note 21, at 40 (internal quotation marks omitted).

compliance.⁴⁸ Third, negotiating early allows law enforcement to escape constitutional constraints that would otherwise permit the target recruit to have counsel present.⁴⁹ Before formal charges are brought, the Sixth Amendment right to counsel does not attach, and law enforcement can leverage legal consequences that may or may not in reality exist for the recruit.⁵⁰

If a deal is struck, it often is not in writing.⁵¹ Striking a deal without reducing it to writing operates as a power play by law enforcement; a written agreement would undercut the secrecy and malleability the investigator requires the deal to have.⁵² That is not to say that formal written agreements do not exist.⁵³ Although rare, written agreements do exist. However, they generally include only the “broadest parameters of cooperation,” omitting “details of informant activities or obligations” and leaving much of law enforcement’s obligations under the deal up to their own discretion.⁵⁴

Whether oral or written, an informant agreement generally lacks finality.⁵⁵ “The promise of cooperation does not bring closure to the [informant’s] case.”⁵⁶ Rather, it opens the door for an “open-ended and indefinite” relationship with the government where the government has the opportunity, in theory, to leverage criminal prosecution against the informant in perpetuity.⁵⁷

B. Assisting Police—Duties & Training

Once recruited, an informant risks physical, mental, and moral harm for assisting police.⁵⁸ Of course, an informant’s degree of exposure depends on the deal struck and the status of law enforcement’s ongoing investigations.⁵⁹ For example, a

48. See Rich, *Brass Rings*, *supra* note 13, at 1442 (“To best utilize an arrestee’s fear of punishment as an incentive to cooperate, police emphasize the maximum penalties. . . . [P]olice may even bluff by threatening charges for which there is insufficient evidence to convict.”). See also Dodge, *supra* note 17, at 240 (“Police might say stuff like, ‘You don’t want your parents to find out’ or ‘You can go down with this whole thing.’”).

49. NATAPOFF, SNITCHING, *supra* note 21, at 46. Alexandra Natapoff criticizes lack of counsel as “characteristic” of “even formal [informant] agreements.” Natapoff, *The Institutional and Communal Consequences*, *supra* note 14, at 667.

50. Kirby v. Illinois, 406 U.S. 682, 688 (1972).

51. Rich, *Brass Rings*, *supra* note 13, at 1442.

52. That is to say, the informant deal is structured to promote police’s power over the informant. By not reducing the agreement to writing, law enforcement reserves the right to back out of the deal and pursue criminal prosecution of the informant should they be dissatisfied with their performance. Natapoff, *The Institutional and Communal Consequences*, *supra* note 14, at 665 (“[The deal] involves the constant exercise of law enforcement judgment as to the utility of the informant’s cooperation, and in the end, it may be jettisoned if the government decides the informant is unhelpful or lying.”).

53. *Id.*

54. *Id.* at 665–66. (“More broadly, informant deals are contingent upon police or prosecutor satisfaction with an informant’s usefulness, and therefore the benefits to be conferred remain indeterminate and discretionary.”).

55. *Id.*

56. *Id.* at 666.

57. See *id.*

58. Rich, *Brass Rings*, *supra* note 13, at 1435.

59. See NATAPOFF, SNITCHING, *supra* note 21, at 20–21.

casual snitch may only be responsible for delivering information on unprescribed criminal activities as they observe them or individuals that police merely want to keep tabs on.⁶⁰ Others, like LeBron Gaither, may be thrown into intense sting operations at the culmination of a long investigation.⁶¹ Either way, informants are exposed to ongoing criminal activity,⁶² dangerous and distressing scenes, moral corruption,⁶³ and the constant threat that their status as a snitch might be found out.⁶⁴

Unfortunately, informants meet these risks with little training.⁶⁵ State and local law enforcement informant procedures are generally self-regulated.⁶⁶ Accordingly, the creation, implementation, and enforcement of any training procedures are also left up to department discretion.⁶⁷

C. Juvenile Informants

The juvenile informant—an informant under the age of 18—fits a particular niche within investigations.⁶⁸ Law enforcement uses juvenile informants to identify perpetrators of crimes against children⁶⁹ or among children.⁷⁰ With no government agency tracking the use of juvenile informants, the practice occurs off the record, exposed only when something goes horribly wrong.⁷¹ The inherently secretive nature of informant recruiting makes it impossible to know just how often juveniles are engaged in police investigations.⁷² Some law enforcement agencies deny the practice, while others call their use of child informants “negligible.”⁷³ Still,

60. Rich, *Brass Rings*, *supra* note 13, at 1440.

61. *See supra* Introduction.

62. *See, e.g.*, Dana Parsons, *Mother Laments Chad’s ‘Last Thing,’* L.A. TIMES (May 17, 1998, 12:00 A.M. PT), <https://www.latimes.com/archives/la-xpm-1998-may-17-me-50765-story.html> [<https://perma.cc/5YFX-B6SM>] (discussing how juvenile informant Chad McDonald’s own “drug involvement deepened . . . after he began working with police”).

63. *See, e.g.*, James Blair, *Ethics of Using Juvenile Informants*, CHRISTIAN SCI. MONITOR (Apr. 14, 1998), <https://www.csmonitor.com/1998/0414/041498.us.us.3.html> [<https://perma.cc/23SH-HP6T>] (“The essence of being an undercover operative . . . is to win the trust of someone in order to betray it What it teaches—to become a betrayer, to become a seducer, to become a traitor to the trust of other people—is certainly a bad thing to teach to young people.”) (internal quotation marks omitted).

64. *See supra* Introduction.

65. Rich, *Brass Rings*, *supra* note 13, at 1498.

66. Dennis, *supra* note 19, at 1159. *See also* NATAPOFF, SNITCHING, *supra* note 21, at 187–88.

67. *See, e.g.*, NATAPOFF, SNITCHING, *supra* note 21, at 188 (comparing the interdepartmental procedures in place between the Las Vegas Police Department and the Stanislaus County Sheriff’s Office in California).

68. Dennis, *supra* note 19, at 1150–51.

69. *See, e.g., id.* at 1151 (discussing the government’s commission of juvenile informants to assist in the investigation of sex abuse and tobacco and liquor sales to minors, among other things).

70. *See* Dodge, *supra* note 17, at 235 (describing how adult agents of law enforcement and adult informants are unable to penetrate teenage drug or crime subcultures).

71. *See* Blair, *supra* note 63.

72. *See* Dennis, *supra* note 19, at 1157.

73. *Id.*

there are others who “willingly acknowledge that their use is ‘frequent’ or ‘higher than many think.’”⁷⁴ Notwithstanding any one law enforcement statement, studies suggest that the use of juvenile informants is “more than just a few, isolated instances.”⁷⁵

Police agencies admitting to the practice have indicated that recruitment of juveniles generally mimics recruitment of their adult counterparts.⁷⁶ Just like in adult recruitment, police leverage legal, social, and personal consequences to persuade juveniles to assist them.⁷⁷ Similarly, the degree of use spans from merely providing information on crimes as they are encountered to informing on a particular individual or crime to participating in sting operations.⁷⁸

II. NEUROSCIENCE OF THE DEVELOPING ADOLESCENT BRAIN

A. *Brain Physiology*⁷⁹

The brain is composed of many different types of cells, but its main functional cell is the neuron.⁸⁰ The neuron has three function-specific parts: the cell body, the axon, and dendrites.⁸¹ Both the axon (there is one) and the dendrites (there are multiple) extend outward from the cell body.⁸² Conceptually, the neuron looks a bit like a tree: the dendrites are the branches and the axon is the trunk.⁸³ Functionally, the cell body is responsible for the cells’ general metabolic functioning,⁸⁴ including the production of the enzymes required for neurotransmitter synthesis.⁸⁵ A neurotransmitter is a “chemical messenger” sent out by the axon into intercellular space (the synapse) to be received by the neighboring neuron’s dendrites.⁸⁶ In other words, a neurotransmitter is responsible for ferrying neurological signals across the

74. *Id.*

75. *Id.* at 1158 (discussing the history of news reporting, judicial decisions, and empirical studies over the past 50 years on the use of juvenile informants).

76. *See id.* at 1155.

77. *Id.* (discussing how police have offered to reduce charges; threatened to detain a loved one; manipulated sense of self and security; and leveraged adult charges when attempting to recruit a juvenile).

78. *Id.* at 1151–52.

79. While it is infeasible to completely illustrate neurophysiology in this Note, a few basic elements are discussed to give context to the discussion below.

80. *Brain Basics: Know Your Brain*, NAT’L INST. NEUROLOGICAL DISORDERS & STROKE (Sept. 26, 2022), <https://www.ninds.nih.gov/health-information/public-education/brain-basics/brain-basics-know-your-brain> [https://perma.cc/K5BF-6JMB] [hereinafter *Brain Basics: Know Your Brain*].

81. *Brain Basics: The Life and Death of a Neuron*, NAT’L INST. NEUROLOGICAL DISORDERS & STROKE (Mar. 24, 2023), <https://www.ninds.nih.gov/health-information/public-education/brain-basics/brain-basics-life-and-death-neuron> [https://perma.cc/A5WE-D6JC] [hereinafter *Brain Basics: The Life and Death of a Neuron*].

82. *Id.*

83. *Id.*

84. NEUROSCIENCE ch. 6 (Dale Purves et al. eds., 2d ed. 2001) (ebook), <https://www.ncbi.nlm.nih.gov/books/NBK11110/> [https://perma.cc/WL2B-BL5Z].

85. *See Brain Basics: The Life and Death of a Neuron*, *supra* note 81.

86. *Id.*

space between neurons.⁸⁷ In this manner, neurons work together to form complex electrochemical pathways throughout the nervous system.⁸⁸

These complex neuropathways are not composed of neurons alone.⁸⁹ A variety of support cells are often involved to enhance a neuron's ability to do its job.⁹⁰ One such support cell is the glial cell.⁹¹ Glial cells produce myelin, a "coating of compacted cell membrane" that wraps around the body of a neuron.⁹² This insulation process is known as "myelination."⁹³ "[A]nalogous to wrapping electrical tape around bare wires," myelination facilitates conduction and thus increases the speed at which signals are transmitted from neuron to neuron.⁹⁴

Because the myelin sheath presents as a fatty white layer, scientists have deemed brain tissue comprised of a high concentration of myelinated neurons as "white matter."⁹⁵ Unmyelinated cells maintain the grey color of the axon; so, similarly, brain tissue comprised of a high concentration of unmyelinated neurons is "grey matter."⁹⁶ The distinct physiologies of white and grey matter implicate their functionality.⁹⁷ To oversimplify, white matter makes up major neural pathways for efficient communication within the nervous system, while grey matter supports processing of the signal communicated.⁹⁸

Zooming out from the cellular level, the brain—though one organ—is comprised of several distinct regions, each with a distinct job to do.⁹⁹ This Note will primarily discuss two regions of the brain: the prefrontal cortex and the limbic midbrain.

87. *Id.*

88. *See Brain Basics: Know Your Brain, supra* note 80.

89. *Id.*

90. *Id.*

91. Kevin Ashley & Forshing Lui, *Physiology, Nerve*, NAT'L LIBR. MED. (May 8, 2022), <https://www.ncbi.nlm.nih.gov/books/NBK551652/> [<https://perma.cc/2PHP-XXMW>].

92. R. Douglas Fields, *Myelin—More than Insulation*, 344 SCI. 264, 264 (Apr. 18, 2014).

93. Keiichiro Susuki, *Myelin: A Specialized Membrane for Cell Communication*, NATURE EDUC. (2010), <https://www.nature.com/scitable/topicpage/myelin-a-specialized-membrane-for-cell-communication-14367205/> [<https://perma.cc/E7AG-VE3G>].

94. *Brain Electrical Activity Spurs Insulation of Brain's Wiring*, NAT'L INST. HEALTH (Aug. 10, 2011), <https://www.nih.gov/news-events/news-releases/brain-electrical-activity-spurs-insulation-brains-wiring> [<https://perma.cc/U3S4-9DBC>].

95. Anthony A. Mercadante & Prasanna Tadi, *Neuroanatomy, Gray Matter*, NAT'L LIBR. MED. (July 25, 2022), <https://www.ncbi.nlm.nih.gov/books/NBK553239/> [<https://perma.cc/F522-9YBG>].

96. *Id.*

97. *See* Christopher M. Filey, *Why the White Brain Matters*, DANA FOUND. (Jan. 1, 2005), <https://www.dana.org/article/why-the-white-brain-matters/> [<https://perma.cc/RM9D-NM4K>].

98. *Id.*

99. *Brain Basics: Know Your Brain, supra* note 80.

1. *Prefrontal Cortex (“PFC”)*

The PFC is the anterior portion of the cerebral cortex (the squiggly layer of grey matter covering the cerebrum).¹⁰⁰ It is primarily responsible for what psychopathologists call “executive function.”¹⁰¹ Executive function is a “set of cognitive control processes . . . [that] enable self-regulation and self-directed behavior toward a goal, allow us to break out of habits, make decisions and evaluate risks, plan for the future, prioritize and sequence our actions, and cope with novel situations.”¹⁰² Studies show that damage to the PFC greatly diminishes cognitive functions including, but not limited to, planning and moderating behavior in a way that balances emotions, rationale, and social standards.¹⁰³

The PFC is divided into several regions, two of which are relevant to this discussion—the Orbitofrontal PFC and the Dorsolateral PFC.¹⁰⁴

The Orbitofrontal PFC is found in the anterior portion of the brain.¹⁰⁵ Located right behind the eyes and middle forehead, the Orbitofrontal PFC plays a major role in reward expectations and anticipating future consequences of decisions.¹⁰⁶ In other words, it is the “region related to inhibiting primal survival responses arising from the primitive limbic system.”¹⁰⁷

The Dorsolateral PFC spans the longitudinal crest of the brain, from one temple to the other.¹⁰⁸ Its activity facilitates task switching, inhibition, and planning, and “seems to reflect an aspect of general intelligence.”¹⁰⁹ It has also been shown to be involved in evaluating social outcomes of behavior and developing appropriate

100. See John Hopkins Medicine, *Brain Anatomy and How the Brain Works*, JOHN HOPKINS UNIV. (2022), <https://www.hopkinsmedicine.org/health/conditions-and-diseases/anatomy-of-the-brain> [<https://perma.cc/7RSJ-N7JF>].

101. Hannah R. Snyder, Akira Miyake & Benjamin L. Hankin, *Advancing Understanding of Executive Function Impairments and Psychopathology: Bridging the Gap between Clinical and Cognitive Approaches*, FRONTIERS PSYCH., Mar. 2015, at 1, <https://www.frontiersin.org/articles/10.3389/fpsyg.2015.00328/full> [<https://perma.cc/5Z6S-UW6N>].

102. *Id.*

103. SARAH-JAYNE BLAKEMORE, *INVENTING OURSELVES: THE SECRET LIFE OF THE TEENAGE BRAIN* 88 (2018) (discussing the story of Phineas Gage, who experienced tremendous difficulty in perceiving and planning for the future after his PFC was impaled by a spike).

104. William R. Hathaway & Bruce W. Newton, *Neuroanatomy, Prefrontal Cortex*, NAT’L LIBR. MED. (2023), <https://www.ncbi.nlm.nih.gov/books/NBK499919/> [<https://perma.cc/2F6Z-NPVM>].

105. *See id.*

106. Shazia Veqar Siddiqui et al., *Neuropsychology of the Prefrontal Cortex*, 50 INDIAN J. PSYCHIATRY 202, 203 (2008).

107. Hathaway & Newton, *supra* note 104.

108. SHINTARO FUNAHASHI, *DORSOLATERAL PREFRONTAL CORTEX: WORKING MEMORY AND EXECUTIVE FUNCTIONS* 13 (2022).

109. Ingo Hertrich et al., *The Role of the Dorsolateral Prefrontal Cortex for Speech and Language Processing*, FRONTIER HUM. NEUROSCIENCE (May 17, 2021), <https://www.frontiersin.org/articles/10.3389/fnhum.2021.645209/full> [<https://perma.cc/8TW8-ZR2Q>].

responses to social or emotional stimuli in conjunction with memory-centers within the limbic midbrain.¹¹⁰

2. *Limbic Midbrain*

The limbic midbrain is below the PFC and directly above the brainstem.¹¹¹ This region of the brain informs behavioral and emotional responses.¹¹² It is home to structures responsible for major hormone production and regulation (the thalamus and hypothalamus), reward processing (the basal ganglia), memory (the hippocampus), and emotional responses (the amygdala).¹¹³

B. *Brain Development*

Volumetrically, the brain is roughly “90% of its adult size by the age of six.”¹¹⁴ However, during adolescence—that period of maturation between late childhood and early adulthood—the brain goes through substantial physiological reorganization as sex hormones surge.¹¹⁵ Three major maturation processes are at play in the adolescent brain: (1) grey matter volumetric decrease;¹¹⁶ (2) white matter volumetric increase;¹¹⁷ and (3) dopamine system hyperactivity.¹¹⁸

1. *Grey Matter Volumetric Decrease*

Grey matter in the PFC reaches its peak between the ages of 11 and 13.¹¹⁹ After this point, the PFC culls over one-third of its neural synapses.¹²⁰ Studies

110. See generally D.H. Weissman, A.S. Perkins & M.G. Woldorff, *Cognitive Control in Social Situations: A Role for the Dorsolateral Prefrontal Cortex*, 40 *NEUROIMAGE* 955 (2008).

111. Queensland Brain Institute, *The Limbic System*, UNIV. QUEENSL. AUSTL. (2022), <https://qbi.uq.edu.au/brain/brain-anatomy/limbic-system> [<https://perma.cc/S738-FDGZ>].

112. *Id.*

113. *Id.*

114. Jay N. Giedd, *Structural Magnetic Resonance Imaging of the Adolescent Brain*, 1021 *ANNALS N.Y. ACAD. SCI.* 77, 79 (2006).

115. Kerstin Konrad et al., *Brain Development During Adolescence*, 110 *DEUTSCHES ARZTEBLATT INT'L* 425, 429 (2013). See also Vigil et al., *supra* note 35, at 313 (“During [adolescence], sex steroids and other compounds structurally remodel the circuits that determine behavioral responses to hormones or sensory stimuli in adulthood. Hence, adolescence represents a second stage in the development of the [Central Nervous System] where steroid hormones, increasing during puberty, trigger permanent structural changes.”).

116. Giedd, *supra* note 114, at 77.

117. *Id.*

118. Adriana Galvan, *Adolescent Development of the Reward System*, *FRONTIERS HUM. NEUROSCIENCE*, Feb. 2010, at 1, <https://www.frontiersin.org/articles/10.3389/neuro.09.006.2010/full> [<https://perma.cc/MP6T-ZE2Z>].

119. Dr. Ilan Samish, *The Disappearing Adolescent Brain*, *WEIZMANN INST SCI.* (Sept. 4, 2016), <https://davidson.weizmann.ac.il/en/online/sciencepanorama/disappearing-adolescent-brain> [<https://perma.cc/7TJM-C36N>].

120. *Id.* This process is known as “synaptic pruning” and marked by a volumetric decrease of grey matter. Giedd, *supra* note 114, at 82. That is to say, synaptic pruning does not result in a reduction in the actual number of neurons, merely the “size and complexity” of

suggest this pruning is aimed at removing old or unused neural connections to maximize efficiency.¹²¹ But maximum efficiency is not achieved overnight. Rather, this transition is gradual and marked by detectable reduction in neural efficiency until other maturation processes in the brain can catch up.¹²²

This volumetric decrease in grey matter does not occur uniformly across the brain.¹²³ Rather, it occurs at a gradient from back to front.¹²⁴ Within the context of the regions discussed here, this maturation process occurs earliest in the more primal limbic midbrain and latest in the dorsolateral prefrontal cortex.¹²⁵

2. White Matter Increase

As grey matter begins to decrease, white matter production ramps up.¹²⁶ This process, called myelination, is where neurological efficiency evolves dramatically.¹²⁷ Like grey matter synaptic pruning, the myelination of neurons occurs at a gradient.¹²⁸ Unlike grey matter synaptic pruning, however, the gradient occurs from the bottom of the brain up, affecting the limbic midbrain before much of the PFC.¹²⁹

the neuron. *Id.* By way of the neuron-tree comparison discussed in Section II.A, it is a reduction in the density of neurons' "branches" (dendrites). *Id.*

121. Robert Stirrups, *The Storm and Stress in the Adolescent Brain*, 17 LANCET NEUROLOGY 404, 404 (May 2018), <https://www.sciencedirect.com/science/article/pii/S1474442218301121?via%3Dihub> [<https://perma.cc/6UBB-5MEW>]. Maximizing efficiency requires more than just synaptic pruning within grey matter tissue. *See infra* Section II.B.2. Myelination—an increase in white matter—must also occur. *See infra* Section II.B.2.

122. Stirrups, *supra* note 121, at 404. (stating, as an example, that adolescents have been shown to experience diminished facial recognition abilities). The increase in efficiency actually occurs through grey matter synaptic pruning in conjunction with other brain maturation processes, namely the increase in myelinated white-matter neurons. *Id.*

123. *See* Giedd, *supra* note 114, at 83.

124. Mariam Arain et al., *Maturation of the Adolescent Brain*, 9 NEUROPSYCHIATRIC DISEASE & TREATMENT 449, 453 (2013). For visual representation, see Nitin Gogtay et al., *Dynamic Mapping of Human Cortical Development During Childhood through Early Adulthood*, 101 PROC. NAT'L ACAD. SCI. 8174, 8178 fig. 3 (2010).

125. *Id.*

126. BLAKEMORE, *supra* note 103, at 87.

127. NEUROSCIENCE ch. 3 (Dale Purves et al. eds., 2d ed. 2001) (ebook), <https://www.ncbi.nlm.nih.gov/books/NBK10921/#:~:text=By%20acting%20as%20an%20electrical,up%20to%20150%20m%2Fs>. [<https://perma.cc/3A5F-SFHG>] (noting that "whereas unmyelinated axon conduction velocities range from about 0.5 to 10 m/s, myelinated axons can conduct at velocities up to 150 m/s").

128. *See* Konrad et al., *supra* note 115, at 427 ("Myelination tends to proceed from inferior to superior brain areas, and from posterior to anterior.").

129. *Id.*

3. Dopamine System Hypersensitivity

Earning its nickname from the “vital role” it plays in reward regulation pathways of the brain,¹³⁰ “dopamine is known as the feel-good neurotransmitter.”¹³¹ Produced in the limbic midbrain,¹³² dopamine is responsible for helping us feel pleasure and is the key player in a powerful biological reinforcement mechanism.¹³³ Simply put, dopamine is the biological voice in your head saying, “that felt good, let’s do it again.”¹³⁴

This encouraging voice evolved to promote survival.¹³⁵ When the dopamine system is in balance and working properly, it helps induce repetition of beneficial behaviors,¹³⁶ motivates an individual to take on difficult tasks,¹³⁷ and aids an individual in handling perceived threats.¹³⁸ However, when the dopamine system is disrupted and thrust out of its normal feedback loop, complications can arise.¹³⁹ Dopamine deficiencies have been linked to Parkinson’s disease, depression, schizophrenia, and attention-deficit hyperactivity disorder.¹⁴⁰ On the flip side, diseases such as mania, obesity, and addiction have been associated with heightened levels of dopamine.¹⁴¹

From a developmental perspective, scientific evidence suggests that significant alterations of the dopamine system occur during adolescence.¹⁴² Specifically, the “dopamine system is hyper-responsive, or over-engaged, in response to rewards during adolescence,” owing to an increased number of

130. Hugo Juárez Olguín et al., *The Role of Dopamine and Its Dysfunction as a Consequence of Oxidative Stress*, 2016 OXIDATIVE MED. & CELLULAR LONGEVITY 1, 1 (2016).

131. Stephanie Watson, *Dopamine: The Pathway to Pleasure*, HARV. HEALTH PUBL’G (July 20, 2021), <https://www.health.harvard.edu/mind-and-mood/dopamine-the-pathway-to-pleasure> [<https://perma.cc/9PWP-5GAJ>].

132. Olguín et al., *supra* note 130, at 1 (“Dopamine . . . is produced in the substantia nigra, ventral tegmental area, and hypothalamus of the brain.”).

133. Watson, *supra* note 131.

134. *Id.*

135. Wolfram Schultz, *Updating Dopamine Reward Signals*, 23 CURRENT OP. NEUROBIOLOGY 229, 229 (discussing how the dopamine-reward pathway plays a critical role in motivating individuals to acquire, among other things necessary for survival, food and water).

136. *Dopamine*, CLEVELAND CLINIC (Mar. 23, 2022), <https://my.clevelandclinic.org/health/articles/22581-dopamine> [<https://perma.cc/9U93-6CJC>] [hereinafter CLEVELAND CLINIC, *Dopamine*].

137. Erin Bryant, *Dopamine Affects How Brain Decides Whether a Goal is Worth the Effort*, NAT’L INST. HEALTH (Mar. 31, 2020), <https://www.nih.gov/news-events/nih-research-matters/dopamine-affects-how-brain-decides-whether-goal-worth-effort> [<https://perma.cc/L3JT-LA86>].

138. CLEVELAND CLINIC, *Dopamine*, *supra* note 136.

139. See Roy A. Wise & Mykel A. Robble, *Dopamine and Addiction*, 71 ANN. REV. PSYCH. 79, 79 (2020).

140. *Dopamine Deficiency*, CLEVELAND CLINIC (Mar. 23, 2022), <https://my.clevelandclinic.org/health/articles/22588-dopamine-deficiency/> [<https://perma.cc/ENF6-QY6A>].

141. CLEVELAND CLINIC, *Dopamine*, *supra* note 136.

142. Galvan, *supra* note 118, at 2.

dopamine receptors in the cerebral cortex.¹⁴³ This hyper-responsiveness appears to be incredibly sensitive to the value of a reward, evoking an elevated dopamine response for big rewards and diminished response for small rewards.¹⁴⁴ This sensitivity to the value of the reward, coupled with the slower maturation trajectory of the PFC, suggests a biological explanation for the questionable decisions made in adolescence.¹⁴⁵ In essence, executive function is “hijacked” by dopamine firing in the primal limbic midbrain, “render[ing] [the adolescent] unable to appropriately modulate decisions in the context of future consequences.”¹⁴⁶

C. Discussion

To summarize, neuro-maturation during adolescence is marked by a volumetric decrease in grey matter and a volumetric increase in white matter so to establish more efficient communication across regions of the brain.¹⁴⁷ The gradients on which both processes occur are distinct.¹⁴⁸ Grey matter decrease occurs from the back of the brain to the front, and white matter increase occurs from the bottom of the brain up.¹⁴⁹ The limbic midbrain thus matures much faster than the cognitive control system provided by the PFC—specifically that of the orbitofrontal and dorsolateral regions.¹⁵⁰ Conceptually, the neurobiological maturation of adolescent brain thus “involves a shift from greater limbic to [PFC] control of behavior with an increase in the inhibitory connections between these two regions.”¹⁵¹

This developmental discrepancy, coupled with hyper-sensitivity to dopamine, predisposes the adolescent to act with extreme impulsivity.¹⁵² The immature PFC is unable to rationally neutralize powerful emotional stimuli, filter out erroneous information, subdue risky or sensation-seeking behaviors, or, more generally, facilitate voluntary behavior.¹⁵³ This is not to say, of course, that an adolescent is incapable of distinguishing right from wrong.¹⁵⁴ Rather, it confirms what, as Justice Kennedy put it, “any parent [already] knows”¹⁵⁵: juveniles are

143. *Id.* at 7.

144. Adriana Galvan et al., *Earlier Development of the Accumbens Relative to Orbitofrontal Cortex Might Underlie Risk-Taking Behaviors in Adolescents*, 26 J. NEUROSCIENCE 6885, 6890 (2006).

145. *Id.* at 6891.

146. *Id.*

147. *See supra* Section II.B.

148. *See supra* Sections II.B.1–2.

149. *See supra* Sections II.B.1–2.

150. *See supra* Sections II.A–B.

151. Sarah Whittle et al., *Prefrontal and Amygdala Volumes are Related to Adolescents' Affective Behaviors During Parent-Adolescent Interactions*, 105 PROCS. NAT'L ACAD. SCIS. 3652, 3652 (2008).

152. Vigil et al., *supra* note 35, at 312.

153. *Id.*

154. *Less Guilty by Reason of Adolescence*, MACARTHUR FOUND. RSCH. NETWORK ON ADOLESCENT DEV. & JUV. JUST., 1, 3 (2006), available at <https://ccoso.org/sites/default/files/import/Less-guilty-by-reason-of-adolescence.pdf> [<https://perma.cc/Z5H8-EX6G>].

155. *Roper v. Simmons*, 543 U.S. 551, 569 (2005).

predisposed to ill-conceived decision-making, poor risk assessment, and vulnerability to social pressures.¹⁵⁶

D. Receptivity of the Court

To the U.S. Supreme Court, this is not new science.¹⁵⁷ American criminal law has already recognized the limitations of the adolescent brain and has responded in a manner that protects even the most grotesque of child offenders.¹⁵⁸ In *Roper v. Simmons*, the Court affirmed a decision to vacate the death sentence of a 17-year-old boy after he was convicted of a heinous, premeditated murder of an elderly woman.¹⁵⁹ The decision outlawed the death penalty—a punishment reserved for offenders who “commit a narrow category of the most serious crimes” and act with the most “extreme culpability”—with respect to juvenile offenders¹⁶⁰ as a violation of the Eighth Amendment.¹⁶¹ In reaching its decision, the Court pointed to several scientific studies suggesting the adolescent brain caused juveniles “instability and emotional imbalance.”¹⁶² This evidence was sufficient to satisfy the Court that juveniles act with diminished culpability such that it would be cruel and unusual to subject them to the death penalty.¹⁶³

Five years later, the Supreme Court further expanded protections for juvenile offenders.¹⁶⁴ In *Graham v. Florida*, the Court outlawed mandatory life sentences without the possibility of parole for juvenile offenders of nonhomicidal crimes.¹⁶⁵ In reaching its decision, the Court relied heavily on the *Roper* theory of diminished culpability and emphasized that “developments in psychology and brain science” since *Roper* underscored the scientific theories on which the decision was predicated.¹⁶⁶ Namely, the Court observed that “parts of the brain involved in behavior control continue to mature through late adolescence.”¹⁶⁷

156. Laurence Steinberg, *Adolescent Brain Science and Juvenile Justice Policymaking*, 23 PSYCH. PUB. POL. & L. 410, 414 (2017).

157. See, e.g., *Roper*, 543 U.S. at 569–70 (concluding that a juvenile acts with diminished culpability because science suggests they have an underdeveloped sense of responsibility and easily fall victim to “negative influences”).

158. See, e.g., *id.* at 578–79 (holding that, despite the 17-year-old defendant’s heinous premeditated slaying of an elderly woman, the Eighth Amendment forbids the imposition of the death penalty on juvenile offenders under 18). See also *Miller v. Alabama*, 567 U.S. 460, 469–70 (2012) (relying on the *Roper* diminished liability theory to outlaw mandatory life sentences without the possibility of parole for those under the age of 18 at the time of their crimes).

159. *Roper*, 543 U.S. at 556–60.

160. *Id.* at 568 (quoting *Atkins v. Virginia*, 536 U.S. 304, 319 (2002)).

161. The Eighth Amendment forbids the infliction of cruel and unusual punishment. U.S. CONST. amend. VIII.

162. *Roper*, 543 U.S. at 569, 578.

163. *Id.* at 570–71.

164. *Graham v. Florida*, 560 U.S. 48, 68 (2010).

165. *Id.* at 82.

166. *Id.* at 68.

167. *Id.*

Most recently, the Court expanded the reach of the *Graham* decision to all crimes in *Miller v. Alabama*.¹⁶⁸ The *Miller* Court reemphasized the influence of neuroscience in reaching its decision.¹⁶⁹ Specifically, it acknowledged that “adolescent brains are not yet fully mature in regions and systems related to higher-order executive functions such as impulse control, planning ahead, and risk avoidance.”¹⁷⁰ Therefore, a mandatory life sentence without the possibility of parole could not be imposed on any offender who was under the age of 18 at the time of the offense.¹⁷¹

American criminal jurisprudence already recognizes that juveniles are vulnerable to their own adolescence due to their imbalanced neurological development. On this notion, the United States protects juveniles who commit severe crimes from the ordinarily prescribed punishments.¹⁷² Yet courts and legislatures allow law enforcement to exploit the same vulnerability in low-level juvenile offenders by refusing to regulate their use as informants.¹⁷³ Indeed, for LeBron Gaither and many others, America’s tolerance of this practice going unchecked was or will be a death sentence.¹⁷⁴

III. EXISTING REGULATIONS

Federal restrictions on informant use are limited; the U.S. Department of Justice’s published guidelines for informant use stand alone and apply only to the Federal Bureau of Investigation.¹⁷⁵ Thus, state and lower law enforcement agencies operate unencumbered by federal regulation and are subject solely to restrictions imposed by interagency regulation or state legislation.¹⁷⁶ Up until recently, state regulation of juvenile informant use was nonexistent.¹⁷⁷ Though still largely unregulated, a few states—California,¹⁷⁸ Florida,¹⁷⁹ and North Dakota¹⁸⁰—have responded to the growing list of tragedies.

A. California: “Chad’s Law”¹⁸¹

In January 1998, 17-year-old Chad MacDonald found himself facing drug possession charges after police discovered methamphetamine in his vehicle during a traffic stop.¹⁸² Police promised to drop the charges if Chad agreed to serve as an

168. *Miller v. Alabama*, 567 U.S. 460, 465 (2012).

169. *Id.* at 472 n.5.

170. *Id.* (quoting Brief for the American Psychological Association et al. as Amici Curiae in Support of Petitioners at 4) (internal quotation marks omitted for clarity).

171. *Id.* at 465.

172. *See supra* pp. 16–17.

173. *See supra* Parts I–II.

174. *See supra* Parts I–II; *infra* Part III.

175. *See supra* note 37.

176. NATAPOFF, SNITCHING, *supra* note 21, at 26.

177. *See id.*

178. CAL. PENAL CODE § 701.5 (2023).

179. FLA. STAT. ANN. § 914.28 (2023).

180. N.D. CENT. CODE §§ 29-29.5-01 to 08 (2023).

181. CAL. PENAL CODE § 701.5.

182. Martelle & Hayes, *supra* note 7.

informant, which he did.¹⁸³ Though Chad's service led to a few arrests, his time as an informant was short-lived.¹⁸⁴ By late April 1998, police withdrew from their deal because of Chad's continued criminal activity.¹⁸⁵ Unfortunately, despite the withdrawal, the damage was done; a target had already been painted on the "narc[']s" back.¹⁸⁶ On March 1, 1998, Chad's "tortured and battered body" was found in an alley in South Los Angeles.¹⁸⁷

In response to Chad's murder, the California Legislature codified "Chad's Law,"¹⁸⁸ a comprehensive amendment to California's penal code that imposed significant restrictions on law enforcement's recruitment of minor informants.¹⁸⁹ Chad's Law expressly prohibits minors under the age of 13 from serving as informants.¹⁹⁰ Minors older than 13 but younger than 18 may be used as informants only if authorized by the Stop Tobacco Access to Kids Enforcement Act ("STAKE Act")¹⁹¹ or a court order.¹⁹² Before a court order authorizing such use may be issued, a court must find that the minor is entering into the informant arrangement voluntarily, knowingly, and intelligently.¹⁹³ Additionally, an agreement must satisfy four procedural safeguards: A court must (1) find probable cause for the relevant crime; (2) inform the juvenile of the mandatory minimum and maximum sentences of the alleged offense; (3) inform the juvenile of the benefit they may obtain by cooperating as an informant; and (4) find that the minor's parent or guardian has

183. *Id.*

184. *Id.*

185. *Id.* Specifically, Chad continued to use meth. *Id.*

186. Michael R. Santiago, *The Best Interests of the Child—Scrutinizing California's Use of Minors as Police Informants in Drug Cases*, 31 MCGEORGE L. REV. 777, 778 (2000).

187. Martelle & Hayes, *supra* note 7.

188. Darci G. Oster, *Juvenile Informants—A Necessary Evil?*, 39 WASHBURN L.J. 106, 122 (1999).

189. Within the statutory scheme, a "minor informant" is defined as:

[A] minor who participates, on behalf of a law enforcement agency, in a prearranged transaction or series of prearranged transaction with direct face-to-face contact with any party, when the minor's participation in the transaction is for the purpose of obtaining or attempting to obtain evidence of illegal activity by a third party and where the minor is participating in the transaction for the purpose of reducing or dismissing a pending juvenile petition against the minor.

CAL. PENAL CODE § 701.5(e).

190. PENAL § 701.5(a).

191. The Stop Tobacco Access to Kids Enforcement Act is a piece of California legislation that was implemented in 1995 to combat illegal sales of tobacco to underage persons. CAL. BUS. & PROF. CODE §§ 22950–64 (West 2023). The Act requires the California Department of Health Tobacco Control Section to, among other things, conduct regular sting operations on tobacco retailers throughout the state using persons under the age of 21. BUS. & PROF. § 22952.

192. PENAL § 701.5(b).

193. PENAL § 701.5(c).

consented.¹⁹⁴ The consent requirement may be waived if the parent or guardian is a suspect in the same criminal investigation.¹⁹⁵

B. Florida: “Rachel’s Law”¹⁹⁶

In early 2007, police found cannabis on Rachel Hoffman during a traffic stop.¹⁹⁷ A little over a year later, police entered Rachel’s apartment and found 200 grams of cannabis, tabs of ecstasy, and valium pills.¹⁹⁸ Facing severe drug charges, police offered Rachel leniency in exchange for her help in penetrating a local drug syndicate.¹⁹⁹ When Rachel agreed to cooperate, police quickly threw her into a sting operation targeting two convicted felons without providing her any training.²⁰⁰ During the sting operation, Rachel was to buy a variety of drugs and a semi-automatic handgun from the two suspects.²⁰¹ When the transaction was complete, police were to arrest the suspects.²⁰² But when the suspects changed the meeting location at the last minute, police quickly lost track of Rachel. Her body was found two days later.²⁰³

At the time of her death, Rachel was 23.²⁰⁴ Though a legal adult, the public outcry in response to her death largely centered around her youth.²⁰⁵ The Florida Legislature responded by enacting Rachel’s Law in 2009.²⁰⁶ Although fairly “watered down” from the bill’s original form,²⁰⁷ Rachel’s Law introduced

194. PENAL § 710.5 (d).

195. PENAL § 710.5(d)(4).

196. FLA. STAT. ANN. § 914.28 (2023).

197. *Rachel’s Timeline*, RACHEL MORNINGSTAR FOUND., <http://www.rachelmorningstarfoundation.com/timeline/> [https://perma.cc/W2M3-48AT] (last visited Jul. 24, 2023).

198. David Schoetz, *Fla. Cops Under Fire After Informant’s Murder*, ABC NEWS (May 13, 2008), <https://abcnews.go.com/US/story?id=4844484&page=1> [https://perma.cc/N7UM-U8M4]. See also Stillman, *supra* note 7.

199. Schoetz, *supra* note 198.

200. Brian Ross & Vic Walter, *Botched Sting: Killed with Gun She Was Supposed to Buy*, ABC NEWS (July 25, 2008), <https://abcnews.go.com/Blotter/story?id=5450550&page=1> [https://perma.cc/MR6M-VBFL].

201. Schoetz, *supra* note 198.

202. *Id.*

203. Stillman, *supra* note 7.

204. *Id.*

205. See, e.g., Sarah Glasser, *Looking Out for the Little Guy: Protecting Child Informants and Witnesses*, 26 BROOK. J. L. & POL’Y. 677, 697 (2018).

206. Ian Leson, Note, *Toward Efficiency and Equity in Law Enforcement: “Rachel’s Law” and the Protection of Drug Informants*, 32 B.C. J.L. & SOC. JUST. 391, 391 (2012).

207. Rachel’s Law in its final form eliminated three major provisions included in the bill’s initial draft: (1) an all-out ban on the use of an individual under the age of 18 as an informant; (2) a prohibition on the use of any individual participating in a drug treatment program as an informant; and (3) a provision that ensured anyone offered a deal to become a confidential informant would have the right to talk to a lawyer. Talk of the Nation, *Use of Confidential Informants Mostly Unregulated*, NPR (Sept. 5, 2012), <https://www.npr.org/2012/09/05/160615427/use-of-confidential-informants-mostly-unregulated> [https://perma.cc/D4LC-CPSW].

procedural requirements for law enforcement's use of informants both young and old.²⁰⁸ Namely, Rachel's Law requires police to establish an interdepartmental policy on the use of informants that provides, among other things, some level of supervisory approval before a juvenile is used as an informant.²⁰⁹ It further requires law enforcement to establish a procedure for assessing the suitability of an individual in light of their age, maturity, and other defined factors.²¹⁰ Finally, Rachel's Law mandates that police provide recruits with the opportunity to consult with counsel prior to entering into an informant agreement.²¹¹

*C. North Dakota: "Andrew's Law"*²¹²

In 2013, police caught 19-year-old Andrew Sadek attempting to sell \$80 worth of marijuana.²¹³ Andrew agreed to serve as an informant to avoid the threatened 41-year imprisonment arising from the incident.²¹⁴ In June 2014, Andrew's lifeless body was pulled from the Red River.²¹⁵ He had been shot in the head, and his backpack was filled with rocks.²¹⁶ Investigators ruled his manner of death inconclusive.²¹⁷ Regardless, his death called into question the "use of young, low-level . . . offenders as confidential informants."²¹⁸

In 2017, the North Dakota Legislature enacted "Andrew's Law."²¹⁹ Andrew's Law is the most comprehensive legislation passed on the general use of criminal informants to date. Among other things, the law mandates informant

208. *The 2009 Legislative Session: The Good, the Bad and Everything in Between*, ACLU FLA., <https://www.aclufla.org/en/legislation/2009-florida-legislative-session-summary> [<https://perma.cc/U5S2-WAKZ>] (last visited Jul. 24, 2023); see also Jim Ash, *Another Rachel's Law Debate*, WFSU PUB. MEDIA (Jan. 20, 2015), <https://news.wfsu.org/state-news/2015-01-20/another-rachels-law-debate> [<https://perma.cc/4AFA-B463>] (stating that the bill was "watered down after police complained they would lose their best tool for catching drug and other suspects").

209. FLA. STAT. ANN. § 914.28(4)(g) (2023).

210. § 914.28(5).

211. § 914.28(3)(c).

212. N.D. CENT. CODE §§ 29-29.5-01 to 08 (2023).

213. Associated Press, *Suit Tossed Over Death of North Dakota Man Turned Informant*, STARTRIBUNE (May 22, 2019, 5:35 PM), <https://www.startribune.com/lawsuit-dismissed-in-death-of-student-turned-drug-informant/510263932/> [<https://perma.cc/7A3S-ZNG9>].

214. *Id.*

215. Levi Lass, *North Dakota Bill Aims to Protect Police Informants*, COURTHOUSE NEWS SERV. (Apr. 19, 2017), <https://www.courthousenews.com/north-dakota-bill-aims-protect-police-informants/> [<https://perma.cc/FE7G-3U3A>].

216. *Id.*

217. Blake Nicholson, *Mysterious Death of North Dakota College Student Raises Questions about Use of Drug Informants*, STARTRIBUNE (Apr. 8, 2015, 11:00 AM), <https://www.startribune.com/student-s-mystery-death-raises-doubts-on-drug-informer-use/299007391/> [<https://perma.cc/EH8W-BRBQ>].

218. *Id.*

219. TJ Nelson, *Parents of Andrew Sadek Attend Ceremonial Signing of Andrew's Law*, KVRN LOCAL NEWS (Apr. 26, 2017), <https://www.kvrn.com/2017/04/26/parents-andrew-sadek-attend-ceremonial-signing-andrews-law/> [<https://perma.cc/EKB5-EJZZ>].

training for police departments²²⁰ and written informant agreements that include statements informing candidates of their rights and describing the risks inherent to aiding police.²²¹

While Andrew was a legal adult when he engaged with police as an informant, the Legislature took the opportunity to further limit the use of juveniles as informants.²²² Andrew's Law expressly prohibits the use of minors under the age of 15 as informants and permits the use of juveniles between 15 and 18 only if the juvenile is married, emancipated, or serving active duty in the armed forces.²²³ Further, a juvenile who is subject to criminal charges may only partake: (1) if there are no other "reasonable avenues to obtain evidence of the crime being investigated and the risk of harm to the juvenile is minimal"; (2) with parental/custodial consent; and (3) if the juvenile has discussed the agreement with legal counsel.²²⁴

1. Discussion

All the legislation discussed above seeks to strike a balance between maintaining a critical crime-fighting tactic and protecting our youth. Many have argued that seeking this balance is inappropriate: the only way to properly protect minors is to outlaw the practice.²²⁵ Such a view, however, ignores the tangible harms to other, non-informant youth that may arise without the service of juvenile informants.²²⁶ Of course, whether the abolitionist view would afford more protections to our youth is a question only empirical data can answer, which we do not have and will continue to go without unless courts and legislatures get more involved.²²⁷ Accordingly, abolition of the practice cannot be considered an empirically sound solution right now.

Instead, legislators should focus on what the science is telling us regarding the neurocognitive vulnerabilities of youth²²⁸ and draft legislation that mitigates the risk posed by those vulnerabilities. Unfortunately, California, Florida, and North Dakota all fall short of this goal by perpetuating police discretion in some capacity.

Take California as an example. It has significantly limited the use of juveniles as informants—juveniles ages 13 and up may act as informants only if consistent with the STAKE Act or permitted by court order.²²⁹ The restriction imposed by court order removes the officer, as an interested party, and properly places the juvenile's fate in the hands of the judiciary. But beyond what can be essentially boiled down to judicial consent, there are no statutory protections for the

220. N.D. CENT. CODE § 29-29.5-04 (2023). This training program is to be approved by the attorney general and occur at least once every three years. *Id.*

221. § 29-29.5-05.

222. § 29-29.5-02.

223. *Id.*

224. *Id.*

225. *See, e.g.,* Santiago, *supra* note 186, at 800 (arguing that, as a matter of policy, protecting children from harm should be valued over arrests).

226. Juvenile informants generally aid police in investigating crimes against children. *See supra* Part I.

227. *See supra* Part I.

228. *See supra* Part II.

229. *See supra* notes 190–91 and accompanying text.

child, who is handed back over to law enforcement and its discretion for what may become indefinite servitude.

Further, with minimal judicial recourse available for the families of injured juvenile informants, many of the imposed “safeguards” will, as a practical matter, never undergo the fine-tuning of judicial review. Take, for example, North Dakota’s elemental approach to permissible juvenile use. It requires, among two other elements, that there be no other “reasonable alternative” for investigating the relevant crime and that the “risk of harm to the juvenile [be] minimal.”²³⁰ What is a “reasonable alternative”? What, contextually speaking, is a minimal risk? Surely your average investigator is not intentionally trying to get kids killed. The intent of the North Dakota legislature was clearly vested in balancing the needs of police departments with affording a greater depth of protection for our youth, but the language produced promotes an unchecked and therefore toothless standard.

IV. NEUROSCIENCE APPLIED, REGULATORY SUGGESTIONS

Within the context of the developing brain, the juvenile Judas is inappropriately equipped to engage with police at all stages of snitching.

A. Recruitment and Negotiations

Current police recruitment tactics focus on creating a high-stress, fear-fueled environment.²³¹ This is an environment ripe for exploitation. Emerging neuroscience tells us that adolescents may struggle to overcome emotion with reason, and exploitation of this predisposition has the capacity to wrongly induce a juvenile to act adversely to their interests at the bargaining table.²³² To adequately protect the juvenile in negotiations, legislation should include (a) mandatory “cooling off” periods between arrest and negotiations, (b) access to counsel in the negotiation process, and (c) custodial and judicial consent.

The imposition of a mandatory cooling-off period, where a juvenile is required to take time away from a proposal to serve as a confidential informant, may mitigate the adolescent brain’s tendency to act impulsively. A recommendation for the proper duration of this period would require an empirical analysis of stress responses in juveniles and goes beyond the scope of this Note. However, if a legislature agrees on the duration, this mandatory “cooling off” period could enable a juvenile to set emotions aside and offset law enforcement’s coercive tactics. It could also allow a juvenile to seek counsel from a parent or guardian and an attorney.

A statutory right to counsel would further protect juveniles from their adolescence by providing a check on police’s admitted practice of leveraging baseless legal consequences.²³³ The attorney’s neutrality and legal skill set may also

230. N.D. CENT. CODE § 29-29.5-02 (2023).

231. *See supra* Part I.

232. *See supra* Part II.

233. Beyond likely not having the legal know-how to reasonably sort through offers from law enforcement, heightened sensitivity to reward and unchecked emotions may interfere with a juvenile’s ability to make sound decisions in furthering their interests. *See supra* Part II.

serve in soliciting truly voluntary consent from a parent or guardian.²³⁴ Note that North Dakota goes beyond this and mandates discussion of an informant agreement with counsel.²³⁵

As California's legislature has already recognized, both custodial and judicial consent are needed to support the juvenile's interests.²³⁶ Much like the effect of access to counsel, judicial consent premised on an evaluation of the recruit's maturity; the danger of law enforcement's plans for them; the severity of the recruit's crimes; and the degree of proof police already have relative to the recruit's crimes will place a factual check on the negotiation process. One may criticize access to counsel and judicial consent as redundant, but the judiciary as an entity imposes a level of authority or finality on the matter that counsel alone could not. Counsel is still necessary to guide juveniles and their families in the early stage of recruitment to ensure only informed recruits and their guardians end up in front of the magistrate, alleviating unnecessary burdening of the courts.

B. Agreement Reached

After an informant relationship has been established, a juvenile is vulnerable to continued pressure by law enforcement, exposure to ongoing criminal activity, and dangerous environments.²³⁷ These elements necessarily involve a high degree of stress that can overpower the juvenile's developing PFC and lead to risky or high-sensation-seeking behaviors.²³⁸ Legislators can protect juveniles by codifying statutes that prescribe mandatory documentation, reporting, and training practices.²³⁹

Two fundamental characteristics of confidential informant use—secrecy and police discretion—are wielded to justify the lack of mandatory recordkeeping or auditing requirements among state and lower law enforcement agencies. Not only does a lack of recordkeeping create a presumption of wrongdoing, it also makes it very difficult to empirically evaluate the successes and failures of the system to inform future legislation. Prescribed documentation practices and timely audits by a neutral agency²⁴⁰ could help to remedy the information gap and further ensure (1) police compliance with any prescribed safeguards, whether imposed internally or

234. Chad McDonald's mother consented to his use as an informant but regrets all of it. Parsons, *supra* note 62 (recalling that she was a "complete nervous wreck" when police told her that her son will be imprisoned for a long time if she did not agree to let him snitch).

235. § 29-29.5-02 (2023).

236. *See supra* note 194 and accompanying text.

237. *See supra* Part I.

238. *See supra* notes 34–35 and accompanying text. *See also supra* Section II.B.

239. While this Note focuses primarily on developmental neuroscience and the corresponding psychopathology underlying adolescent behavior to inform protective legislative measures, many of these suggestions may also serve to protect adult confidential informants and should be considered for such use, especially when one considers the fact that biological adolescence does not end until well into legal adulthood. *See* BLAKEMORE, *supra* note 103, at 2 (commenting that biological adolescence spans from around 12 years-of-age to 25 years-of-age).

240. North Dakota does this with their prescriptions; police are to write the training procedures to be approved and audited by the attorney general. *See supra* note 220.

externally; (2) police protection from liability; and (3) informed modification to statutory restrictions on investigative practices by the legislature.

However, mandatory documentation practices and timely audits cannot be imposed alone. To maintain the integrity of police investigations, records produced by the law enforcement or auditing agencies cannot be subject to federal or local Freedom of Information Act requests. To balance the interests of law enforcement, the public, and the legislature, such records should only be disclosable by court order.

Although existing legislation in a few states requires police to create an interdepartmental training procedure and enforcement mechanism, little can be said about whether police comply. Without a supervisory authority or statutory penalty, these mandates are toothless and act primarily as suggestions with no meaningful ramifications for the newly recruited informant.

North Dakota recognizes the need for training and a supervisory authority for officers engaging with informants.²⁴¹ This is a step in the right direction, but it falls short because it does not compel juvenile-specific training, nor does it compel training of the juveniles themselves. As has already happened with child witnesses,²⁴² state legislatures should demand handlers of juvenile informants receive training specific to working with children. Further, because juveniles are limited in their ability to overcome strong stress-induced or emotional stimuli with rational thought,²⁴³ law enforcement officials (preferably those with child-specific training) should be compelled to develop very specific training programs for new juvenile informants. Such programs should explicitly outline law enforcement's suggestions on how juveniles should proceed in a variety of situations they may face as an informant. Not only will this increase the physical, mental, and moral safety of all involved, it might also limit police liability should something go wrong.

CONCLUSION

The Juvenile Judas knows not what they do.²⁴⁴ Owing to the unbalanced maturation processes at play in the adolescent brain, juvenile informant-recruits meets law enforcement at the bargaining table predisposed to act adverse to their own interests. Because agreeing to assist police has proven to be a death sentence for some, the urgency with which this must be addressed cannot be overstated. America's tolerance of police discretion with respect to the use of juvenile informants must end. Legislatures can facilitate change by implementing safeguards aimed at mitigating the risks posed by a juvenile's physiological predispositions. Namely, legislatures should consider implementing mandatory cooling-off periods, a statutory right to counsel, mandatory parental and judicial consent, prescribed documentation and recordkeeping requirements, and enforced training regimens. Absent empirical data showing that youth at large are better protected by the

241. *Id.*

242. Glasser, *supra* note 205, at 695 (discussing the litany of entities imposing child-specific trainings for child witnesses).

243. *See supra* Section II.C.

244. *See Luke 23:34* (King James) ("Then said Jesus, Father, forgive them; for they know not what they do.").

abolition of the use of juvenile informants, legislatures looking to implement these suggestions or otherwise restrict the practice should be careful to balance proposed legislation with the needs of law enforcement.