The American Experiment as a Violation of *Jus Cogens* Norms: Capital Punishment, State Secrecy, & A Novel Way to Kill

Anna Beth Peters*

* J.D. Candidate, Washington University School of Law in St. Louis. Anna Beth Peters is a proud alumna of the University of Alabama. She previously worked as both a Legal Intern and a Smart Justice Organizing School Fellow with the Alabama ACLU, where she first learned of the ever-persisting methodological alterations and secrecy surrounding capital punishment in Alabama.

I am incredibly grateful for the members and executive board of the *Washington University Global Studies Law Review*, who provided invaluable support and feedback throughout the preparation of this note. I also want to say thank you to my family and friends for uplifting and encouraging me during the writing process, with special gratitude extended to my partner for his persistent encouragement and unconditional love.

ABSTRACT

This note argues that contemporary capital punishment practices in the United States, specifically lethal injection and execution via nitrogen hypoxia, violate international *jus cogens* norms regarding torture and nonconsensual human experimentation. Though often discussed as means of obtaining a more humane death, these methods have been developed and implemented without scientific validation, medical oversight, or meaningful transparency. The adoption of secrecy statutes, collapse of the lethal injection drug supply chain, and introduction of a novel execution method have coalesced to produce an execution regime characterized by untested and largely unknown protocols. Consequently, the administration of capital punishment is marked by unreliable drug sourcing and a growing pattern of procedural failures. The following note situates these practices within the broader international human rights framework, tracing their incompatibility with the Nuremberg Code, the International Covenant on Civil and Political Rights, and the Convention Against Torture. It further emphasizes the racialized history of prisoner research and capital punishment in U.S., underscoring how secrecy and experimentation disproportionately burden Black prisoners. Against the backdrop of a global consensus trending toward abolition, this note asserts that U.S. execution practices not only contravene binding peremptory norms but also demand international scrutiny and domestic reconsideration.

INTRODUCTION

In January 2024, Alabama became the first place in the world to conduct an execution via nitrogen hypoxia when it executed Kenneth Smith.[1] The United Nations Human Rights Committee criticized this method, noting that it remains untested and lacks substantial scientific research or evidence.[2] Kenneth Smith's spiritual adviser, Rev. Jeff Hood, described the execution as watching someone "suffocating to death."[3] In response to state officials' claims that the gas would induce unconsciousness within seconds, Hood retorted: "[T]hey lied. It was 22 minutes of hell. And it was the most violent thing I've ever seen. . . . [I]t looks like someone puts their hands around your neck and chokes you out with their bare hands, because that's what the resistance looks like."[4] Ten months later, Rev. Hood, who also served as spiritual adviser to another death-row inmate Anthony Boyd, would witness a similarly disturbing experience at Boyd's execution, also via nitrogen hypoxia. Recalling the event, Hood remarked that Boyd's execution "made Kenny's look tame."[5] An Alabama reporter, also present during Boyd's execution, described Boyd gasping for air more than 225 times before he was pronounced dead.[6] Execution via nitrogen hypoxia represents a novel feature to the phenomena of traumatic execution procedures that have become increasingly familiar throughout U.S. Execution via nitrogen hypoxia remains highly controversial, yet the United States Supreme Court has rejected every prisoner's challenge against the method's constitutionality thus far.[7] Although Alabama's officials are utilizing a

1 Press Release, *U.N. Human Rights Council, United States: UN Experts Alarmed at Prospect of First-Ever Untested Execution by Nitrogen Hypoxia in Alabama*, UN (Jan. 3, 2024), https://www.ohchr.org/en/press-releases/2024/01/united-states-un-experts-alarmed-prospect-first-ever-untested-execution [https://perma.cc/8MKT-TTSF].

2 *Id*; *see also* MICHAEL COPELAND, THOM PARR & CHRISTINE PAPAS, NITROGEN INDUCED HYPOXIA AS A FORM OF CAPITAL PUNISHMENT (2015) [hereinafter THE COPELAND REPORT] This 14-page report, written by professors and attorneys, not scientists, serves as the research basis for conducting executions via nitrogen hypoxia. The bases for this Report's conclusion were incredibly speculative, relying on research regarding suicides induced by helium and research on high-altitude pilot training. *Id.* at 4.

3 Mary Harris, *It Was the Most Violent Thing I'd Ever Seen,* SLATE.COM (Feb. 1, 2024), https://slate.com/news-and-politics/2024/02/alabama-death-penalty-nitrogen-hypoxia-inside-kenny-smith-execution.html [https://perma.cc/2MCM-V5CN].

4 *Id*; *see also Kenneth Eugene Smith: Alabama Carries Out First Nitrogen Gas Execution*, BBCNEWS (Jan. 26, 2024), https://www.bbc.com/news/world-us-canada-68085513 [https://perma.cc/TXF2-KMHF].

5 Nicholas Bogel-Burroughs, *Lengthy Execution by Nitrogen Gas in Alabama Renews Concerns Over Method*, N.Y. TIMES (Oct. 24, 2025), https://www.nytimes.com/2025/10/24/us/alabama-nitrogen-execution-anthony-boyd.html [https://perma.cc/URS4-PEXV].

6 *Id.*

7 Smith v. Hamm, No. 23–6562 (23A688) (2024) (Thomas, J. denying Kenneth Smith's application for stay of execution); Grayson v. Hamm, No. 24-5993 (24A498) (2024) (denying writ of certiorari from Cary Grayson); Hunt v. Alabama, (24A1192) (2025) (denying writ of certiorari); Boyd v. Hamm, No. 25A457 (25–5928) (2025) (denying writ of certiorari).

novel method, U.S. has long imposed capital punishment using traumatic execution procedures.[8]

The American death penalty is older than the country itself, as U.S. inherited such practice from England, whose authorities had imposed it in its colonies.[9] In the earliest years, executions were public events because the government viewed them as a "good moral lesson for the colonists – a reminder of social obedience and order."[10] Today, execution methods have become increasingly more secretive and disconnected from the public.[11] The shift away from executions as public events has roughly coincided with the hunt for a "more humane" execution method, which began in U.S. as early as 1886.[12] Novel execution methods have been touted as far more civilized than those of the ancient past, but this has become increasingly difficult to verify as execution procedures become further shielded from public scrutiny.[13]

Advocates have long publicized lethal injection, in particular, as a safer, more humane method of exercising the death penalty.[14] This notion is highly contested, especially when considering that execution via lethal injection has the highest rate of "botched" outcomes.[15] Concerns about the dangers of lethal injection have persisted since its adoption in the late 1970s, originally focusing on the lack of scientific research and the method's error-prone administration.[16] Recently, concerns about lethal injection shifted to

---

8 *See generally* SARAT, GRUESOME SPECTACLES, *infra* note 15 (exploring the history of botched executions in America).

9 *History of the Death Penalty*, DEATH PENALTY INFO. CTR., https://deathpenaltyinfo.org/curriculum/high-school/about-the-death-penalty/history-of-the-death-penalty [https://perma.cc/6WQH-3X9C] (last visited Oct. 26, 2025). The 1689 English Bill of Rights was the origin of the phrase "cruel and unusual punishments," which was eventually incorporated into the United States by the Eighth Amendment in 1791. *Id*.

10 Robert A. Stein, *The History and Future of Capital Punishment in the United States*, 54 SAN DIEGO L. REV. 1, 4 (2017).

11 *See History of the Death Penalty*, *supra* note 9.

12 Philip R. Nugent, *Pulling the Plug on the Electric Chair: The Unconstitutionality of Electrocution*, 2 WM. & MARY BILL RTS. J. 185, 190 (1993).

13 *See generally* Austin Sarat, Theo Dassin & Aidan Orr, *A Dark Shadow: The Intensification and Expansion of Lethal Injection Drug Secrecy*, 12 BRIT. J. AM. LEGAL STUD. (2023).

14 *See generally* Deborah W. Denno, *The Lethal Injection Quandary: How Medicine Has Dismantled the Death Penalty*, 76 FORDHAM L. REV. 49 (2007) [hereinafter *The Lethal Injection Quandary*].

15 AUSTIN SARAT, GRUESOME SPECTACLES: BOTCHED EXECUTIONS AND AMERICA'S DEATH PENALTY 177 (2014). Sarat explains, "botched executions occur when there is a breakdown in, or departure from the "protocol" for a particular method of execution. . . Examples of such problems include, among other things, inmates catching fire while being electrocuted, being strangled during hangings (instead of having their necks broken), and being administered the wrong dosages of specific drugs for lethal injection." *Id.* at 6-7.

16 Ty Alper, *The United States Execution Drug Shortage: A Consequence of Our Values*, 21 BROWN J. WORLD AFFS. 27, 29-30 (2014) (discussing the lack of scientific research); *see also* Denno, *The Lethal Injection Quandary*, *supra* note 14, at 70-75 (discussing the method's error-prone administration). Shortly after Oklahoma adopted lethal injection as a means of execution, the man credited with inventing the three-drug cocktail, Dr. Jay Chapman, raised concerns about likelihood of improper admission. *Id.* at 72.

focus on prisons' increasingly prevalent inability to obtain the necessary drugs for lethal injections.[17] Manufacturers of the three drugs used in the "traditional" lethal injection cocktail ceased production for a variety of reasons over the past decade, with some citing their disdain for the use of their product in execution procedures.[18] Additionally, the European Union (EU) banned exports of goods "which have no practical use other than for the purpose of capital punishment" as early as 2005.[19]

Both manufacturer shortages and the EU ban have greatly affected prisons' ability to obtain lethal injection drugs legally, so prisons across the country increasingly turn to suspect sources to acquire lethal injection drugs.[20] Most states looked to "compounding pharmacies, unreliable overseas drug distributors, or untested and experimental drug combinations" to circumvent the drug shortage.[21] These questionable practices are typically accompanied by states enacting "secrecy laws" that further constrain execution protocols and procedures from prisoners and the public.[22] State "secrecy laws" purportedly protect and conceal the identities of drug suppliers and those on the execution team; however, these laws often pass judicial muster even when no credible threats are found.[23] Some states, such as Alabama, Louisiana, and Oklahoma, have responded to the lethal injection crisis by authorizing execution by nitrogen hypoxia, a novel method that has been widely criticized.[24] The addition of this largely unstudied execution method is further complicated by pre-existing secrecy statutes, which make it incredibly difficult to learn about the protocol or to challenge its legality.[25]

---

17 Alper, *supra* note 16, at 30.

18 *See id.* at 33-35. Alper briefly looks at the breakdown in the lethal injection drug supply, arguing that this was largely in opposition to usage of the products in executions. He notes that Hospira, the maker of thiopental, sent a letter to prison officials in March 2010 stating, "[W]e do not support the use of any of our products in capital punishment procedures." *Id.* at 33.

19 2005 O.J. (L 200/1) No. 1236/2005, at 9 (later amended and implemented by 2011 O.J. (L 338/31) No. 1352/2011); *see also* 2019 O.J. (L 30/1) No. 2019/125 (updating and codifying Council Regulation No. 1236/2005). In 2025, the EU amended the Regulation's annexes "in order to respond to changes in the international security market." *See* 2025 O.J. (L 31.7.2025) No. 2025/928.

20 ROBIN KONRAD, *BEHIND THE CURTAIN: SECRECY AND THE DEATH PENALTY IN THE UNITED STATES* 7, 13, https://dpic-cdn.org/production/documents/pdf/SecrecyReport-2.f1560295685.pdf [https://perma.cc/4XWB-CWH2] (last visited Oct. 26, 2025). The report found that, in their efforts to obtain execution drugs, states have used secrecy laws to conceal evidence that they have broken state and federal laws, "deliberately induced contract breaches, lied to or misled legitimate drug suppliers, obtained drugs from questionable sources, and swapped drugs with each other." *Id.* at 13*; see also* Shah, *infra* note 101, at 173-176.

21 Alper, *supra* note 16, at 36.

22 *See generally* KONRAD, *supra* note 20. The Death Penalty Information Center (DPIC) reported that every state utilizing lethal injection withheld information about their execution protocols. *Id.* at 4.

23 Sarat, *supra* note 13, at 19-20.

24 *Methods of Execution*, DEATH PENALTY INFO. CTR., https://deathpenaltyinfo.org/executions/methods-of-execution [https://perma.cc/6PA3-HJMS] (last visited Aug. 15, 2025).

25 Sarat, *supra* note 13, at 22-24.

This note argues that the United States' current usage of the death penalty is so experimental and torturous that it amounts to a violation of both international human rights treaties and *jus cogens* norms concerning experimentation and torture. Section II provides an overview of applicable international law and *jus cogens* norms, beginning with a short introduction situating the importance of international perspective in the American "death penalty debate." Next, I provide a brief history of the Nuremberg Code and cover its subsequent incorporation into international treaties. After noting treaties relevant to the standards governing human experimentation and torture, I argue that both of these concepts are established as non-derogable *jus cogens* norms under international law. Finally, I describe global trends concerning the death penalty, with a focus on the recent United Nations' resolution advocating for a worldwide moratorium on capital punishment. Section III provides a historical overview of prisoner research practices and the death penalty in U.S., emphasizing the racialized nature of both. I begin with an overview of prisoner research practices and note U.S. outlying position as a country that conducts research on prisoners post-World War II. Next, I detail the history and jurisprudence of the death penalty in U.S., contending that the search for a more humane execution method has normalized a culture of experimental execution throughout states that retain the death penalty. In examining the progression of execution methods, I discovered that most have been implemented prior to being proven as less painful; subsequently developed methods have often resulted in more "botched" outcomes than older, more brutal ways.

In Section IV, I begin by discussing the applicability of international frameworks and norms to the execution practices of lethal injection, state secrecy statutes, and execution via nitrogen hypoxia. I then describe the beginning of the lethal injection supply chain crisis in the early 2010s, when drug manufacturers began halting drug production and the EU banned the export of goods used in capital punishment. This reduction in lethal injection sourcing has led states to use increasingly suspicious suppliers, ultimately leading to a drastic rise in secrecy laws protecting those involved in the execution. I next look to recent history, when Alabama became the first state to implement the novel method of execution via nitrogen hypoxia. I conclude by emphasizing the importance of international oversight and involvement in American capital punishment, specifically with regard to the punishment's disproportionate impact on Black prisoners.

ROLE OF INTERNATIONAL LAW IN THE "DEATH PENALTY DEBATE"

The United States' persistent use of the death penalty is unique, as the country currently stands as the only Western industrialized nation that

continues to exercise capital punishment.[26] Only 54 countries legally allow capital punishment, while 145 countries are abolitionist by either law or practice.[27] As recently as December 2024, nations across the globe weighed in on a proposed "moratorium on the use of the death penalty," with 130 nations voting in favor and only thirty-two nations, including U.S., voting against the proposition.[28] This vote, alongside the many declarations and treaties adopted to push toward a moratorium on capital punishment, indicate that global trends favor abolition—especially with historically Western-aligned countries. Still, the use of capital punishment remains deep-rooted and untiring in much of U.S., making it critical to center international human rights standards in the conversation about continued usage.[29] Many Americans are particularly attached to the idea of attaining retributive justice by taking "an eye for an eye," and international human rights standards can be particularly useful for countries where the death penalty is culturally indelible.[30]

Abolition becomes an increasingly more persuasive international norm as the global community further repudiates the death penalty.[31] Moreover, "[i]nternational standards provide a legitimate basis through which to challenge a state's application of the death penalty, both from within but also from other states that may be able to exercise influence."[32] As U.S. executions have become progressively secretive and arguably constitutionally impenetrable, it is important to consider international perspectives, goals, and norms in the discussion surrounding capital punishment. Furthermore, the complicated intersections between experimental practices, racially discriminatory application, and state-

26 Alper, *supra* note 16, at 28.

27 *Abolitionist and Retentionist Countries*, DEATH PENALTY INFO. CTR., https://deathpenaltyinfo.org/policy-issues/policy/international/abolitionist-and-retentionist-countries [https://perma.cc/62J7-SF8M] (last visited Aug. 15, 2025) (data from Amnesty International's 2024 Death Penalty report). Both DPIC and Amnesty International list 113 countries as abolitionist for all crimes, nine as abolishing capital punishment for "ordinary crimes" alone, and twenty-three countries as "abolitionist in practice." *Id.*

28 G.A. Res. 79/179, Moratorium on the Use of the Death Penalty: Resolution (Dec. 17, 2024), https://digitallibrary.un.org/record/4069732?ln=en [https://perma.cc/MED5-8DXN] [hereinafter Moratorium Resolution]. There were also twenty-two abstentions and nine non-votes. The countries that joined the U.S. in voting against the proposition are as follows: Bahrain, Barbados, Belize, Botswana, Brunei Darussalam, China, Democratic People's Republic of Korea, Ethiopia, Egypt, India, Iran, Iraq, Jamacia, Japan, Kuwait, Libya, Maldives, Mauritania, Oman, Pakistan, Papua New Guinea, Qatar, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Saudi Arabia, Singapore, Sudan, Tonga, Trinidad and Tobago, and Yemen. *Id.*

29 *See The Death Penalty in 2024*, *infra* note 95, at 9 (listing twenty-two states as retaining the death penalty in 2024); *see* Salil Shetty, *The Value of International Standards in the Campaign for Abolition of the Death Penalty*, 21 BROWN J. WORLD AFFS. 41, 49 (2014) ("Human rights standards on the use of the death penalty are particularly important in addressing countries where the death penalty is entrenched.")

30 *See* Deborah Denno, *Getting to Death: Are Executions Constitutional?,* 82 IOWA L. REV. 319, 393 (1997); Shetty, *supra* note 29, at 42, 49.

31 *See generally* Shetty, *supra* note 29.

32 *Id.* at 49.

sanctioned secrecy around execution protocols raise concerns about the permissibility of U.S. actions under international law.

The Nuremberg Code as a Basis of International Human Rights Law

Prisoners have historically been used as subjects in both medical and psychological experiments due to their availability and perceived lack of autonomy, resulting in a complex and ethically charged history often marked by exploitation.[33] Opposition to prisoner experimentation notably entered the global conversation during the Nuremberg Trials, when Nazi physicians were confronted with their unconscionable medical experiments in a court of law.[34] Twenty-three doctors and administrators were prosecuted by U.S. Military Tribunal in a case referred to as the "Doctors' Trial," where they were charged with four criminal counts based on their egregious and inhumane experimentation on both prisoners and civilians during World War II.[35] Their crimes included "torturous and murderous medical experiments on prisoners in concentration camps," as well as experiments and research on civilians, who are not protected by the laws of war.[36] The trial lasted almost 140 days and included vast evidence of the atrocities committed by German physicians, along with testimony from various witnesses.[37] Ultimately, nine defendants were convicted and sentenced to various terms in prison, seven defendants were convicted and later executed, and seven defendants were acquitted.[38]

The decision in the Doctors' Trial established the non-binding but persuasive Nuremberg Code,[39] one of the first documents outlining the

33 FRANCES R. FRANKENBURG, HUMAN MEDICAL EXPERIMENTATION: FROM SMALLPOX VACCINES TO SECRET GOVERNMENT PROGRAMS 65 (2017) ("Human medical experiments in [the twentieth century] were often performed on convenient populations—with "convenient" being synonymous with 'vulnerable.'").

34 *See generally* George J. Annas, *Beyond Nazi War Crimes Experiments: The Voluntary Consent Requirement of the Nuremberg Code at 70*, 108 AM. J. PUB. HEALTH 42 (2017).

35 U.S.A. v. Karl Brandt et al.: The Doctors' Trial, HARV. L. SCH. LIBR. NUREMBURG TRIALS PROJECT, https://nuremberg.law.harvard.edu/nmt_1_intro [hereinafter Brandt] (summarizing the Doctors' Trial, 1946-47). Those prosecuted were indicted on four counts: conspiracy to commit war crimes against humanity, war crimes, crimes against humanity, and membership in a criminal organization (the SS). *Id.*

36 *Id.* ("The specific crimes charged included more than twelve series of medical experiments concerning the effects of and treatments for high altitude conditions, freezing, malaria, poison gas, sulfanilamide, bone, muscle, and nerve regeneration, bone transplantation, saltwater consumption, epidemic jaundice, sterilization, typhus, poisons, and incendiary bombs . . . Other crimes involved the killing of Jews for anatomical research, the killing of tubercular Poles, and the euthanasia of sick and disabled civilians in Germany and occupied territories."); *see also* FRANKENBURG, *supra* note 33, at 135.

37 FRANKENBURG, *supra* note 33, at 135.

38 *Id.* at 135-36; *see also* Brandt, *supra* note 35. Though many of the defendants were originally sentenced to longer terms, none of them served more than twenty years.

39 FRANKENBURG, *supra* note 33, at 141.

bounds of ethical experimentation on human subjects.[40] Nazi physicians did not inform prisoners of the underlying purpose or potential consequences of the experiments they conducted, likely because they viewed their subjects as "defective people . . . not considered to be worthy of life."[41] Doctors argued that the experiments would benefit the German military by providing knowledge about various conditions faced during war. Though their "research" did have a stated intention, these projects are much better described as overtly tortuous and murderous conduct without benefit to the subject.[42] Prisoners saw no advantage from the pain and suffering inflicted upon them, nor were they able to consent to their participation.

In reality, "racial hygiene" and the promotion of eugenics were the fundamental goals of the often-lethal experiments, as these were the overarching objectives of the Nazi regime.[43] One scholar notes that "eugenics embodied the core of German social scientific research until 1945."[44] The scientific attitudes about eugenics were bolstered by political and social forces that served to "reinforce certain power relations as natural and inevitable."[45] "By the late 1930s, German medical science constructed an elaborate world view equating mental infirmity, moral depravity, criminality, and racial impurity."[46] This was evidenced by testimony from a physician during the Doctors' Trial, who insinuated that "they did not always distinguish whether certain exterminations were for racial, political, or medical reasons."[47] Ultimately, racialized science and medicine worked alongside the law as a mechanism of social control, effectively "guarantee[ing] the execution of the racial task in accordance with the rule of law" as a means of circumventing allegations of abuse.[48]

The Nazis' explicit focus on dehumanization drove the notion of consent to the forefront of the Doctors' Trial, resulting in "informed consent" becoming the first principle of the Nuremberg Code.[49] The Code begins by

---

40 2 U.S. GOV'T PRINTING OFF., TRIALS OF WAR CRIMINALS BEFORE THE NUREMBERG MILITARY TRIBUNALS 181-82 (1949) [hereinafter THE NUREMBERG CODE].

41 FRANKENBURG, *supra* note 33, at 119.

42 ROBERT PROCTOR, RACIAL HYGIENE: MEDICINE UNDER THE NAZIS 6, 217 (1988); *see also* Annas, *supra* note 34, at 44.

43 PROCTOR, *supra* note 42, at 204-5.

44 FRANKENBURG, *supra* note 33, at 77.

45 PROCTOR, *supra* note 42, at 13.

46 *Id*. at 204-5.

47 *Id.* at 209.

48 *Id.* at 296.

49 THE NUREMBERG CODE, *supra* note 40. The Nuremberg Code is generally considered the foundational document for the concept of "informed consent." However, evidence indicates that obtaining some form of consent was a medical norm prior to and during WWII. *See* FRANKENBURG, *supra* note 33, at 275-281 (discussing the history of informed consent); *see also* Laurel Hattix, *Expanding Notions of Self-Determination: International Customs of Informed Consent in Medical Experimentation Pre-1945*, 19 CHI. J. OF INT'L LAW 145 (2018) (arguing that an international custom of informed consent pre-dated the Nuremberg Trials and Code).

stating that "the *voluntary* consent of the human subject is *absolutely essential*," going on to describe the particulars of "consent" and what information must be disclosed in order for a subject to "make an understanding and enlightened decision."[50] For an individual to provide informed consent, they must understand the experiment's nature, purpose, procedures, and method, as well as any potential risks and inconveniences.[51] Furthermore, the responsibility to obtain consent cannot be delegated, requiring researchers to directly confront their subjects as individuals.[52] As stated by infamous Holocaust memorialist Elie Weisel, "this is the legacy of the Nuremberg Tribunal and Nuremberg Code. The respect for human rights in human experimentation demands that we see persons as unique, as ends in themselves. . . . [W]e must not see any person as an abstraction."[53] The Code remains the foundational framework for voluntary participation and informed consent in human subject research, though it has been further updated by the 1964 Declaration of Helsinki.[54]

Human Rights Treaties Ratified by the United States

In the aftermath of World War II, U.S. voted in favor of the first international declaration to explicitly extend the right to life to all individuals, the Universal Declaration of Human Rights ("UDHR") of 1948.[55] The document is viewed as the foundation for international human rights law, and it was drafted "with a keen sense of the recent atrocities

50 THE NUREMBERG CODE, *supra* note 40 (emphasis added). The first principle reads:

> The voluntary consent of the human subject is *absolutely essential*. This means that the person involved should have legal capacity to give consent; should be situated as to be able to exercise free power of choice, *without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion*, and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an affirmative decision by the experimental subject there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonably to be expected; and the effects upon his health or person which may possibly come from his participation in the experiment. The duty and responsibility for ascertaining the quality of the consent rests upon each individual who initiates, directs or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity.

51 Annas, *supra* note 34, at 43.

52 *Id.* at 42.

53 *Id.*

54 FRANKENBURG, *supra* note 33, at 152, 185 ("The World Medical Association . . . was established in 1947. At its 1964 assembly in Helsinki, it issued the Declaration of Helsinki, a modified form of the 1947 Nuremberg Code addressing research ethics, and the first attempt of the internation research community to regulate itself.").

55 G.A. Res. 217 (III) A, Universal Declaration of Human Rights, Art. 3 [https://perma.cc/W36Y-F395] [hereinafter UDHR]. Countries have an ongoing debate regarding the meaning of the "right to life" under the UDHR, but it has become more common for countries to recognize capital punishment's likelihood of infringing on other fundamental rights. *See* Shetty, *supra* note 29, at 42.

committed by a State, Germany, *against its own citizens*."[56] Article V states that "no one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment."[57] Though the Declaration is technically non-binding on state members, many significant provisions—including Art. 5—have been adopted into later human rights treaties, like the International Covenant on Civil and Political Rights ("ICCPR") and Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment ("CAT").[58] While U.S. often champions itself as a leader in human rights, the country has been incredibly hesitant to ratify and validate international human rights treaties.[59] Even when U.S. has chosen to ratify treaties, it has conditionally done so by adopting Reservations, Understandings, and Declarations ("RUDs") alongside its approval.[60] Both the ICCPR and the CAT were ratified on the basis that their provisions are not self-executing, making them inactionable without Congressional legislation.[61] Further, the country interprets many international treaty provisions in line with domestic interpretations of the Fifth, Eighth, and Fourteenth Amendments, effectively nullifying the extent to which treaties provide protections that are not domestically available.[62]

---

56 Hilary Charlesworth, *Universal Declaration of Human Rights* (1948), in MAX PLANCK ENCYCLOPEDIAS OF INTERNATIONAL LAW ¶19 (Oxford Public International Law 2008) https://opil.ouplaw.com/display/10.1093/law:epil/9780199231690/law-9780199231690-e887 [https://perma.cc/V67K-X9YX] (last visited Aug. 14, 2025).

57 UDHR, *supra* note 55, at Art. 5; *see also* UNITED NATIONS, *History of the Declaration*, https://www.un.org/en/about-us/udhr/history-of-the-declaration [https://perma.cc/M8FW-VUSY] (last visited Aug. 14, 2025) ("With the end of that war, and the creation of the United Nations, the international community vowed to never again allow atrocities like those of [the Second World War] to happen again. World leaders decided to complement the UN Charter with a road map to guarantee the rights of every individual everywhere.").

58 *See* Charlesworth, *supra* note 56, ¶13.

59 Curtis A. Bradley, *The United States and Human Rights Treaties: Race Relations, the Cold War, and Constitutionalism*, 9 CHINESE J. INT'L L. 321 (2010). For example, the U.S. did not ratify the Genocide Convention of 1948 until 1988—forty years later.

60 *Id.* at 322*; see also* Vienna Convention on the Law of Treaties arts. 2(1)(d), 19–23, May 23, 1969, 1155 U.N.T.S. 331 [https://perma.cc/5VL7-GAXD] [hereinafter VCLT] (defining "reservation" as "a unilateral statement, however phrased or named, made by a State, when signing, ratifying, accepting, approving or acceding to a treaty, whereby it purports to exclude or to modify the legal effect of certain provisions of the treaty in their application to that State"); *see also* JOHN D. BESSLER, THE DEATH PENALTY AS TORTURE: FROM DARK AGES TO ABOLITION, 179-80 (2017) ("An 'understanding'… is often used 'to designate a statement when it is not intended to modify or limit any of the provisions of the treaty,' while an interpretive 'declaration' means a 'unilateral statement, however phrased or named, made by a State or an international organization, whereby that State or that organization purports to specify or clarify the meaning or scope of a treaty or of certain of its provisions.") (citing Int'l Law Comm'n, Rep. on the Work of its Sixty-Third Session, U.N. Doc. A/66/10 (2011) [https://perma.cc/5ENH-MS4N]).

61 *See* U.S. Reservations, Declarations, and Understandings, International Covenant on Civil and Political Rights, 138 Cong. Rec. S4781-01 (Apr. 2, 1992) [https://perma.cc/A6HD-WDP8] [hereinafter U.S. RUDs to ICCPR]; *see* U.S. Reservations, Declarations, and Understandings, Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, Cong. Rec. S17486-01 (daily., ed. Oct. 27, 1990), https://hrlibrary.umn.edu/usdocs/tortres.html [https://perma.cc/RW5Y-U843] [hereinafter U.S. RUDs to CAT].

62 *See* U.S. RUDs to ICCPR, *supra* note 61; *see also* U.S. RUDs to CAT, *supra* note 61.

U.S. ratified the ICCPR in 1992, reaffirming every person's "inherent" right to life and the prohibition against torture.[63] The covenant's torture prohibition, Article 7, specifies that "no one shall be subjected *without his free consent* to medical or scientific experimentation."[64] This language parroted the provisions set out by the Nuremberg Code in 1947, reiterating the worldwide desire to "help prevent a repetition of the horrors" that ran rampant in Nazi Germany.[65] U.S. ratified the ICCPR conditionally, explicitly reserving the right to use capital punishment in *all* cases (with the exception of pregnant women).[66] Art. 7 of the Covenant is interpreted in light of domestic interpretation of the Fifth, Eighth and Fourteenth Amendments of U.S. Constitution. Furthermore, the Covenant was ratified alongside a "federalism" understanding that "serves to emphasize domestically that there is *no intent* to alter the constitutional balance of authority between the State and Federal governments or to use the provisions of the Covenant to 'federalize' matters now within the competence of the States."[67] Though the United States' commitment to the ICCPR has been somewhat hollowed out by its RUDs, ratification made the Covenant the "supreme law of the land" under the Constitution's Supremacy Clause.[68]

U.S. also signed two additional and significant universal instruments from the United Nations: The Body of Principles for the Protection of All Persons under Any Form of Detention or Imprisonment and the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment. Principle 6 of the Body of Principles for the Protection of All Persons under Any Form of Imprisonment prohibits both torture and other "cruel, inhuman or degrading treatment" ("CIDT"), while Principle 22 states that no detainee or prisoner shall be subjected to *any medical or scientific experimentation* "even with his consent."[69] Art. 1 of the

---

63 International Covenant on Civil and Political Rights, Dec. 16, 1966, 999 U.N.T.S. 171 [https://perma.cc/FKV3-RL4J] [hereinafter ICCPR] (noting differences between UDHR Art. 5's language regarding the right to life versus that of ICCPR art. 6); *see* U.S. RUDs to ICCPR, *supra* note 61. The U.S. ratified the ICCPR with five reservations, five understandings, and five declarations.

64 ICCPR, *supra* note 63, at art. 7 (emphasis added).

65 Annas, *supra* note 34, at 43. The language and purpose of the Nuremberg Code was also incorporated into the Geneva Convention of 1949, but this Convention only applies during wartime.

66 *See* U.S. RUDs to ICCPR, *supra* note 61, at No. 2.

67 *Id.* at I(3) and II(5); *see also* Bradley, *supra* note 59, at 339-40 (quoting the Bush Administration's interpretation of ICCPR understanding five).

68 U.S. CONST. art. VI, cl. 2.

> This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; *and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land*; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

(emphasis added).

69 G.A. Res. 43/173, Body of Principles for the Protection of All Persons under Any Form of Detention or Imprisonment (Dec. 9, 1988) [https://perma.cc/7J29-KZCF] (emphasis added).

Convention against Torture defines torture as "any act *by which severe pain or suffering*, whether physical or mental, *is intentionally inflicted* on a person" for purposes of gaining information or a confession, as punishment for a crime or suspected crime, or "for any reason based on discrimination of any kind."[70] U.S. conditionally ratified the document on the basis that it does not prevent the country's continued use of capital punishment, alongside two reservations, five understandings, and two declarations.[71]

The Convention outlines that the definition of torture does not include "pain or suffering arising only from, inherent in or incidental to lawful sanctions."[72] This term is not defined within the instrument, but U.S. adopted a reservation *only* with respect to Art. 16—which references CIDT—stating that the country interprets the Article in line with domestic law.[73] However, this reservation does not apply to the more specific act of torture laid out in Art. 1, and both "torture" and "CIDT" have different criteria.[74] In order to establish CIDT, "the acts must qualify as cruel, inhuman, or degrading," and "public officials must participate in—or consent to—such acts in some manner."[75] The criteria for establishing torture are more robust, requiring: "1) severe pain and suffering, either physical or mental; 2) public officials must participate in or consent to the torture; 3) the torturer must intentionally inflict the suffering; 4) the torturer must inflict the suffering for the purpose such as interrogation, punishment, coercion, or discrimination; and 5) the victim's suffering must not be an inherent part of lawful sanctions."[76] Though the fifth requirement seemingly invalidates the argument that executions violate the Convention, the infliction of the death penalty must still be scrutinized under this framework.[77] However, the prohibition on torturous punishments is considered a non-derogable *jus cogens* norm, making it possible to invalidate a punishment under the Convention even if it is considered lawful.[78] In fact, judges have previously "determined that conduct or treatment labeled as 'lawfully sanctioned' can thus actually defeat the 'object and purpose' of the [CAT.]"[79] Ultimately, much of the overarching

70 Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, Dec. 10, 1984, 1465 U.N.T.S. 85 [https://perma.cc/G3YU-4NRB] [hereinafter CAT] (emphasis added).

71 *Id.*; *see also* U.S. RUDs to CAT, *supra* note 61.

72 CAT, *supra* note 70, at art. 1; *see also* U.S. RUDs to CAT, *supra* note 61.

73 *See* BESSLER, *supra* note 60, at 173-74; *see* CAT, *supra* note 70; *see also* U.S. RUDs to CAT, *supra* note 61. In line with the U.S. reservations to the ICCPR, the U.S. defines "cruel, inhuman or degrading treatment or punishment" under the CAT in line with that prohibited by the Fifth, Eighth, and Fourteenth Amendments to the Constitution.

74 *See* BESSLER, *supra* note 60, at 173-74; *see also* CAT, *supra* note 70, at art. 1 (on torture) and art. 16 (on "cruel, inhuman or degrading treatment").

75 *See* BESSLER, *supra* note 60, at 174.

76 *Id.*

77 *Id.* at 198.

78 *Id.* at 196.

79 *Id.*

purpose of the Convention speaks to the desire to stop "official acts carried out by public authorities or officials," regardless of whether they work in a legislative, administrative, or judicial capacity.[80] If a torturous punishment inflicts "severe pain or suffering" it is unlikely to be deemed lawful solely on the basis that it is permitted domestically.[81] "Governments have the right to punish offenders, *but only so long as the punishments themselves do not qualify as acts of torture*."[82]

Jus Cogens Norms Concerning Medical Experimentation & Torture

Medical experimentation and torture are both prohibited by the aforementioned treaties, but both concepts are also considered established peremptory international law, *jus cogens*.[83] The concept of *jus cogens*, Latin for "compelling law," was first explained in Art. 53 of the Vienna Convention on the Law of Treaties ("VCLT"), which refers to "a norm accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted."[84] Various U.S. courts have authoritatively referenced the VCLT as defining the concept of *jus cogens*, though there have been varying assessments of whether a violation of a customary norm reaching this status is actionable in a U.S. court.[85] There is no conclusive list of norms that constitute *jus cogens*, but, in 2022, the U.N. included crimes against humanity, racial discrimination and apartheid, and torture in its non-exhaustive list of norms previously found as *jus cogens* by the International Law Commission ("ILC").[86]

---

80 *See id.* at 201 (internal quotations omitted); *see also* CAT, *supra* note 70, at art. 1(1) ("when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity) and art. 2(3) ("An order from a superior officer or a public authority may not be invoked as a justification of torture.").

81 *See generally* BESSLER, *supra* note 60, at 201.

82 *Id.* (citing *Marbury v. Madison* for the proposition that judges ultimately decide what sanctions are lawful).

83 *See generally* Annas, *supra* note 34 (discussing the Nuremberg Code and informed consent as norms of customary international law); *see also* BESSLER, *supra* note 60, at 281. ("Although members of the international community have been unable to agree on an exhaustive list of *jus cogens* norms, genocide, torture, and slavery are definitely on that list.")

84 VCLT, *supra* note 60.

85 See Comm. of U.S. Citizens Living in Nicaragua v. Reagan, 859 F.2d 929, 940 (D.C. Cir. 1988); Siderman De Blake v. Republic of Argentina, 965 F.2d 699, 714-715 (9th Cir. 1992); Princz v. Federal Republic of Germany, 26 F.3D 1166, 1173 (D.C. Cir. 1994); Sampson v. Federal Republic of Germany, 250 F.3d 1145, 1150 (7th Cir. 2001); Quintero-Perez v. United States, 8 F.4 1095, 1100 (9th Cir. 2021). To date, the Supreme Court has only mentioned the concept of jus cogens off-handedly in disregarding the parties' arguments in context of juvenile life without parole ("LWOP") sentences. See Graham v. Florida, 560 U.S. 48, 82 (2010) ("The debate between petitioner's and respondent's amici over whether there is a binding *jus cogens* norm against this sentencing practice is likewise of no import. The Court has treated the laws and practices of other nations and international agreements as relevant to the Eighth Amendment not because those norms are binding or controlling but because the judgment of the world's nations that a particular sentencing practice is inconsistent with basic principles of decency demonstrates that the Court's rationale has respected reasoning to support it.")

86 Int'l Law Comm'n, Rep. on the Work of its Seventy-Third Session, U.N. Doc. A/77/10, at 85 (2022) [https://perma.cc/EDK8-B6ZG].

Though medical experimentation is not explicitly referred to, the fundamentals of international law were established in the wake of World War II and clearly intended to prohibit this unconscionable conduct by classifying it as either a crime against humanity or a form of torture.[87] Moreover, a domestic U.S. Appeals Court has previously recognized the authority of the "prohibition on nonconsensual medical experimentation," stating "history illustrates that from its origins with the trial of the Nazi doctors at Nuremburg through its evolution in international conventions, agreements, declarations, and domestic laws and regulations, the norm prohibiting nonconsensual medical experimentation on human subjects has become firmly embedded and has secured universal acceptance in the community of nations."[88] The Court also emphasized that the government relied on both Nuremberg Code and the Declaration of Helsinki when it instituted a requirement of obtaining "informed consent" in human subjects research both domestically and abroad.[89] In contrast to the implied prohibition on medical experimentation, the international condemnation of torture is an established *jus cogens* norm recognized by various instruments under both international human rights and humanitarian law.[90] As stated by the Ninth Circuit: "torture is illegal under the law of virtually every country of the world and under the international law of human rights. We cannot therefore ever view torture as a lawful method of punishment."[91]

Global Trends Informing Attitudes toward Abolition

In addition to the variety of international instruments protecting human rights, there are four distinct protocols calling for total abolition of capital punishment. Unsurprisingly, U.S. is not a party to *any* of them. In 1989, the Second Optional Protocol to the International Covenant on Civil & Political Rights established abolition of the death penalty as a human rights goal.[92]

87 *See* Annas, *supra* note 34, at 43 (stating that the international community endorsed the Nuremberg Code by incorporating its principles into the Geneva Convention and the ICCPR).

88 Abdullahi v. Pfizer, Inc., 562 F.3d 163, 183-84 (2d Cir. 2009) (analyzing claim by Nigerian children and their guardians against Pfizer under the Alien Tort Statute). The court further articulated that it reached this conclusion "as a result of [its] review of the multiplicity of sources—including international conventions, whether general or particular, and international custom as identified through international agreements, declarations and a consistent pattern of action by national law-making authorities—that [its] precedent requires [it] to examine for the purpose of determining the existence of a norm of customary international law." *Id*.

89 *Id.* at 182 ("Tellingly, the sources on which our government relied in outlawing non-consensual human medical experimentation were the Nuremberg Code and the Declaration of Helsinki, which suggests the government conceived of these sources' articulation of the norm as a binding legal obligation.").

90 UDHR, *supra* note 55, at art. 5; ICCPR, *supra* note 63, at art. 7; *See generally* CAT, *supra* note 70.

91 Nuru v. Gonzales, 404 F.3d 1207, 1222-23 (9th Cir. 2005).

92 G.A. Res. 44/128, Second Optional Protocol to the International Covenant on Civil and Political Rights, Aiming at the Abolition of the Death Penalty (Dec. 15, 1989) [https://perma.cc/MB99-M2H4].

Just the next year, the General Assembly of the Organization of American States adopted a protocol calling for abolition of the death penalty as well.[93] Additionally, the European Convention on Human Rights has adopted two protocols calling for abolition.[94] The international distain toward capital punishment is most notable from the U.N. General Assembly, which has passed ten resolutions advocating for abolition since 2007, with the most recent occurring in December 2024.[95] The most recent resolution noted the need for transparency in "reporting and access to information," particularly in regard to the "precise procedures" of the method of execution.[96] As of October 2025, 113 countries have abolished the use of capital punishment within their borders.[97] Though general international sentiment favors abolition, the past few years have been marked by an increase in the number of executions occurring across the globe.[98] International human rights organizations are increasingly recognizing the irreparable harms of capital punishment, stressing that the death penalty's implementation is often discriminatorily used against those who are most vulnerable.[99] In 2024, the U.S. conducted twenty-five executions, placing it seventh in the global use of capital punishment—behind China, Iran, Saudi Arabia, Iraq, Yemen, and Somalia.[100]

HISTORICAL BACKGROUND

Prisoner Research in the United States

During the Nuremberg trials, some Nazi physicians attempted to excuse their behavior by arguing that U.S. had been experimenting on prisoners for

93 Organization of American States, Protocol to the American Convention on Human Rights to Abolish the Death Penalty, June 8, 1990, O.A.S.T.S. No. 73. [https://perma.cc/D2NW-7BSM].

94 Council of Europe, Protocol No. 6 to the Convention for the Protection of Human Rights and Fundamental Freedoms Concerning the Abolition of the Death Penalty, E.T.S. No. 114 (1983) [https://perma.cc/L9NA-TTKX] (Protocol No. 6 was adopted in 1983 and called for abolition of capital punishment during peace time.); *see also* Council of Europe, Protocol No. 13 to the Convention for the Protection of Human Rights and Fundamental Freedoms concerning the Abolition of the Death Penalty in all circumstances, E.T.S. No. 187, Apr. 28, 2002 [https://perma.cc/9DAN-UW23] (Protocol No. 13 goes even further, calling for the complete and total abolition of the death penalty in all circumstances).

95 *The Death Penalty in 2024*, DEATH PENALTY INFO. CTR., https://deathpenaltyinfo.org/research/analysis/reports/year-end-reports/the-death-penalty-in-2024 [https://perma.cc/M7ND-CENJ]; *see also* Moratorium Resolution, *supra* note 28.

96 Moratorium Resolution, *supra* note 28.

97 *Death Penalty*, AMNESTY INTERNATIONAL, https://www.amnesty.org/en/what-we-do/death-penalty/ [https://perma.cc/JP8E-B7LX].

98 *See The Death Penalty in 2024*, *supra* note 95, at 63. Per the DPIC report, the recent increase in executions is largely due to more executions taking place in Iran, Saudi Arabia, and Iraq. The report notes the difficulty of obtaining any information about executions occurring in China due to their government labeling this information as "state secrets."

99 *Id.* at 63-64. *See* Shetty, *supra* note 29, at 42. *See also Death Penalty*, *supra* note 97.

100 *Amnesty International Global Report: Death Sentences and Executions* 2024, AMNESTY INTERNATIONAL (Apr. 5, 2025), https://www.amnesty.org/en/documents/act50/8976/2025/en/ [https://perma.cc/ASW2-8NDY]; The Global Report can be found *at https://perma.cc/ZPM3-8LQV*.

years.[101] One Nazi physician referenced the experimental research practices of Dr. Richard Strong, the laboratory director at the Philippine Bureau of Science, who conducted dangerous and deadly experiments on unknowing death row prisoners in the former American territory.[102] Around the same time, the Louisiana Board of Health piloted exploitative nutrition experiments on Black prisoners to determine whether an ingredient used in molasses was harmful.[103] U.S. prisoner experimentation continued well into the 20th century, with the practice increasing during World War II as doctors tested treatments for the injuries facing American soldiers abroad.[104] American prisons were conducting research entirely "unrelated to the health or well-being" of prisoners as early as 1934.[105] The horrific Terre Haute experiments, which continuously infected U.S. prisoners with sexually transmitted diseases, occurred in the 1940s and later expanded into Guatemala.[106] In the mid-1960s, Dr. Albert Kligman exposed an estimated 75 prisoners to the main ingredient in Agent Orange at Holmesburg prison in Pennsylvania, which ultimately resulted in no conclusive records or findings.[107] Prisoner experimentation practices within U.S. were exposed to the general public by the exposure of the government funded "Keller Experiments" from 1963-73, which tested the effects of radiation on incarcerated men's testes.[108] Concerns about lack of oversight were furthered by the exposure of the Tuskegee Study of Untreated Syphilis ("TSUS" or the "Tuskegee Experiment"), a forty-year-long research project that *unknowingly* subjected Black Americans to syphilis without providing adequate treatment for infected patients.[109]

Exploitative and nonconsensual prisoner research was commonplace in American history, remaining largely unregulated until Congress produced "The Belmont Report" in 1979.[110] The report "addressed the boundaries between biomedical and behavioral research and the accepted and routine

101 Seema K. Shah, *Experimental Execution*, 90 WASH. L. REV. 147, 154–55 (2015).

102 *Id.* at 4–5. "Although a U.S. government report concluded that the deaths occurred because these inmates were mistakenly injected with plague serum instead of cholera serum, others believed that the inmates were deliberately injected with plague to try to induce an immune response. Dr. Strong subsequently conducted experiments on prisoners by withholding adequate nutrition and thereby causing them to develop beriberi, a serious disease that could cause paralysis and heart failure. These experiments also resulted in several deaths." *Id.*

103 *Id.*

104 *Id.*

105 Keramet Reiter, *Experimentation on Prisoners: Persistent Dilemmas in Rights and Regulations,* 97 CAL. L. REV. 501, 507 (2009) ("In the United States, biomedical research "unrelated to the health or well-being" of prisoners took place at least as early as 1934, when a program at Leavenworth Prison in Kansas evaluated the effects of narcotic analgesics on prisoners.").

106 Shah, *supra* note 101, at 157.

107 Reiter, *supra* note 105.

108 *Id.* at 507.

109 FRANKENBURG, *supra* note 33, at 101, 172.

110 Shah, *supra* note 101, at 179.

practice of medicine," ultimately focusing on three guiding principles for ethical human subject research: respect for persons, beneficence, and justice.[111] Subsequently, the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research was charged with studying the role of prisoners in research activities.[112] The Commission noted that prisoners outside of America "do not generally participate in biomedical research," attributing this to "continuing [international] concern over experiments that were conducted on prisoners in Nazi concentration camps."[113] Furthermore, the *Report on Prisoners* identified two important concerns regarding prisoners participating in research: exploitation and autonomy.[114] The researchers were particularly concerned about (1) prisoners being subjected to risky research and (2) whether or not participants could truly give informed consent[115] due to their coercive environment.[116] The second concern parallels opinions espoused by U.S. medical expert Andrew Ivy during the "Doctors' Trial," in which he questioned "whether prisoners could ever 'volunteer' for experiments."[117]

The Belmont Report and its successor led to the adaptation of the Federal Policy for the Protection of Human Subjects, or "the Common Rule," which provides protection for research on human subjects.[118] The Rule's definition of research hinges on whether a test or evaluation is "designed to develop or contribute to a generalizable knowledge," which presumably does not include execution protocols.[119] The Common Rule does provide additional protections for prisoners, but none specifically

---

111 *Id.*

112 *Id.*

113 *Research Involving Prisoners*, NAT'L COMM'N FOR THE PROTECTION OF HUMAN SUBJECTS OF BIOMEDICAL AND BEHAVIORAL RESEARCH, DHEW Publication No. (OS) 76-131, at 2-3 (1976), https://videocast.nih.gov/pdf/ohrp_research_involving_prisoners.pdf [https://perma.cc/FZ7F-R4EQ].

114 *Id.* at 5; *see also* Shah, *supra* note 101, at 161.

115 *See* ETHICAL CONSIDERATIONS FOR RESEARCH INVOLVING PRISONERS 15 (Lawrence O. Gostin, Cori Vanchieri & Andrew Pope, eds., Nat'l Acads. Press 2006. It states that:

> Informed consent is vital to autonomous decision making and respect for persons and is considered a bedrock of ethical research. Informed consent is an interactive and ongoing process to ensure that participants are voluntarily participating in research and that they understand the level and nature of the risks and the uncertainty of potential benefits…The informed consent process must help the prisoner to exercise autonomous decision making. The process poses special challenges in the correctional setting, where autonomy is incompatible with institutional order and judicially imposed limitations on liberty.

116 Shah, *supra* note 101, at 161; *Research Involving Prisoners*, *supra* note 113, at 5.

117 Annas, *supra* note 34, at 43. ("There was considerable testimony at the trial, especially from U.S. medical expert Andrew Ivy, about whether prisoners could ever 'volunteer'for experiments. The judges concluded that it was possible but that the ability to refuse was crucial. This is reflected in making voluntary consent not only first but 'absolutely essential' and by principle 9, the right to withdraw.").

118 *Federal Policy for the Protection of Human Subjects ('Common Rule')*, U.S. DEP'T OF HEALTH & HUMAN SERVS., https://www.hhs.gov/ohrp/regulations-and-policy/regulations/common-rule/index.html [https://perma.cc/BJ8E-7VC5].

119 *Id.*

address the administration of capital punishment.[120] In examining the regulatory gaps that allow experimental executions to persist, Seema K. Shah[121] looks to four potentially applicable regulations before concluding that state, Bureau of Prisons, and FDA regulations are those most pertinent to execution by lethal injection.[122] She proposes that three requirements, all common to each potentially applicable regulation, should be applied to experimental execution: independent oversight, risk minimization, and informed consent.[123] Further, Shaah acknowledges that when "biomedical research is poorly designed and cloaked in secrecy, it becomes much more difficult to determine how to regulate it."[124]

History of the Death Penalty in the United States

Prior to the ratification of the Eighth Amendment in 1791, capital punishment laws across the colonies varied.[125] Once enacted, the Eighth Amendment provided that no cruel and unusual punishment shall be inflicted on the American people.[126] Today, execution methods have become increasingly secretive and disconnected from the public.[127] Since the country inherited the death penalty from Britain, the punishment clause has *always* allowed the use of capital punishment in the United States of America.[128] Capital punishment has been used throughout history by various civilizations, but there are a few significant distinctions about the American death penalty, one being the long-enduring search for a more

120 *See* 45 C.F.R. § 46 (2024), *Subpart C – Additional Protections Pertaining to Biomedical and Behavioral Research Involving Prisoners as Subjects*.

121 Prof Shah works as a Professor at Northwestern School of Law, a Professor in Pediatrics at Northwestern University Medical School, and a Director of Research Ethics at Lurie Children's Hospital. Shah is an expert in "pediatrics[,] global health research ethics, [and] ethical issues in the determination of death". Her research answers question related to "When is it ethically and legally acceptable to expose some people to risk for the benefit of others?" Seema K. Shah, *Faculty Profile*, FEINBERG SCHOOL OF MEDICINE, NORTHWESTERN UNIV. , https://www.feinberg.northwestern.edu/faculty-profiles/az/profile.html?xid=42926 [https://perma.cc/SVB2-GNZT] (last visited Mar. 23, 2025).

122 The four potentially applicable regulations are "(1) the Department of Health and Human Services (DHHS) regulations governing research on prisoners; (2) the research regulations of the Bureau of Prisons; (3) state departments of corrections regulations governing research onprisoners; and (4) the FDA's Investigational New Drug (IND) regulations." Shah, *supra* note 101, at 161, 183-84.

123 *Id.* at 191.

124 *Id.* at 203-04.

125 Stein, *supra* note 10, at 4 (noting that in 1790 the First Congress adopted criminal statutes permitting the death penalty for murder, forgery, and rape).

126 *Id.*; *see also* U.S. CONST. amend. VIII.

127 *See The Death Penalty in 2024*, *supra* note 95.

128 *Id.* The U.S. has always permitted the use of capital punishment, with the exception of a brief moratorium on the death penalty in the 1970s. In 1971, the Supreme Court held in *Furman v. Georgia* that "the imposition and carrying out of the death penalty in these cases constitutes cruel and unusual punishment in violation of the Eighth and Fourteenth Amendments." 408 U.S. 238, 239-40 (1972) (remanding the cases for three defendants, with three concurring justices referencing the arbitrary imposition of capital punishment as the reason for their decision). However, the moratorium ended in 1976 when the Court reinstated the death penalty in Gregg v. Georgia, 428 U.S. 153 (1976).

humane execution method.[129] As I detail later in this section, the electric chair, gas chambers, and lethal injection were created to lessen the barbaric nature of executions, but none of these methods are free from problems or violence when administered.[130] Furthermore, actors pursuing the creation of various execution methods often proclaim to do so to make executions more humane; however, the post-World War II development of execution methods has not been in accordance with the principles articulated in the Nuremberg Code, nor has it reliably considered the input of scientific or medical professionals. As stated by Austin Sarat, "[t]he experience of execution by its witnesses—their 'suffering'—fuels the search for painless death."[131] The American death penalty is also particularly distinct for its racialized nature, as the punishment has historically and continually been enforced arbitrarily against Black Americans.[132]

I. Racialized Origins & Application

"It is impossible to find a time in American history, even well before the birth of the Republic, when the use of the death penalty was not racially inflicted."[133] Considering the history of the United States—where slavery was the law of the land for 246 years and its legacy has persisted even longer through mechanisms like Jim Crow laws, voter suppression schemes, racialized zoning schemes and mass incarceration—it is unsurprising that race plays a role in capital punishment.[134] Moreover, capital punishment has always been shaped by the local and state authority, and many scholars have linked its evolution to the lasting effects of lynching and slavery. The American death penalty has been "primarily impacted by the legacy of slavery, mainly . . . through slavery's perversion of state-level institutions and culture."[135] The long-lasting effects of America's racist founding remain at the forefront of the conversation about the death penalty, as four states—Alabama, Texas, Missouri, and Oklahoma—accounted for *seventy-*

129 *History of the Death Penalty*, *supra* note 9.

130 *Id.*; *see also* Denno, *Getting to Death*, *supra* note 30, at 377 (noting that in 1921 Nevada switched their execution method to lethal gas in response to a new "Humane Death Bill"); *see also* Denno, *The Lethal Injection Quandary, supra* note 14, at 62. (explaining that in 1885 New York's governor created a commission to study more humane execution methods, which led to the adoption of the electric chair, and asked the legislature whether "the science of the present day" could find a "less barbaric means to execute").

131 SARAT, *supra* note 13, at 15.

132 *See generally* Carol S. Steiker & Jordan M. Steiker, *The American Death Penalty and the (In)Visibility of Race*, 82 UNIV. OF CHI. L. REV. 243 (2015).

133 *Id.* at 245.

134 *See generally* Khushbu Shah & Juweek Adolphe, *400 Years Since Slavery: A Timeline Of American History*, THE GUARDIAN (Aug. 16, 2019), https://www.theguardian.com/news/2019/aug/15/400-years-since-slavery-timeline [https://perma.cc/8PYF-S28C].

135 David Rigby & Charles Seguin, *Capital Punishment and The Legacies of Slavery and Lynching in the United States*, 694 ANNALS AM. ACAD. POL. & SOC. SCI. 205, 206 (2021) .

six percent of the executions in 2024.[136] With the exception of Oklahoma, which was not yet a part of the country, all were Confederate states. The history and continued use of capital punishment are inextricably connected to anti-Black subjugation, and the sentiments of the past are woven into the fabric of the present. It is critical to consider the role of race in the administration of capital punishment, as "contemporary executions occur more often in the same places where both lynching and slavery were prevalent."[137]

II. Execution Method Development & Eighth Amendment Jurisprudence

The first case to consider the constitutionality of an execution method noted that "it is safe to assume that punishments of torture" are unconstitutional under the Eighth Amendment.[138] The search for a less barbaric execution method has persisted throughout American history, with each new development falling short of its anticipated "humaneness."[139] Hanging was the most common execution method used in U.S. prior to the electric chair.[140] After multiple "botched hangings" in early nineteenth century New York, the Governor established a commission to develop a less barbaric execution method in response to public concerns.[141] In 1889, William Kemmler became the first person to die by state-imposed electrocution.[142] His death occurred only twelve years after the Supreme Court declared punishments of torture unconstitutional, and the Court emphasized that New York adopted electrocution in an "effort to devise a more humane method" of execution.[143] Although, electrocution was intended to be more humane than hanging, Kemmler's execution lasted eight minutes, during which he frothed at the mouth and struggled to

136 *The Death Penalty in 2024*, *supra* note 95, at 7.

137 Rigby & Seguin, *supra* note 135, at 206.

138 Wilkerson v. Utah, 99 U.S. 130 (1878) (finding execution by shooting permissible under the Eighth Amendment).

139 Sarat, *supra* note 13, at 177.

140 Nugent, *supra* note 12, at 190.

141 *Id.* The commission was composed of three men, and it looked at upwards of thirty forms of execution, with a focus on those common in Europe.

142 In re Kemmler, 136 U.S. 436, 433 (1890) (challenging death by electrocution as a violation of the Eighth Amendment of the U.S. and New York constitutions) ("[W]e think that the evidence is clearly in favor of the conclusion that it is within easy reach of electrical science at this day to so generate and apply to the person of the convict a current of electricity of such known and sufficient force as certainly *to produce instantaneous, and therefore painless, death*.") (emphasis added); *see also* Timothy S. Kearns, *The Chair, the Needle, and the Damage Done: What the Electric Chair and the Rebirth of the Method-of-Execution Challenge Could Mean for the Future of the Eighth Amendment*, 15 CORNELL J.L. & PUB. POL'Y 197 (2005). Kemmler argued that execution by electrocution was a violation of the Eighth Amendment, but the Supreme Court rejected this notion by holding that the amendment did not apply to the states.

143 In re Kemmler, 136 U.S. at 447.

breathe.[144] Electricity was applied twice as Kemmler seemingly survived the first current; his autopsy revealed burns along his spine and partially on his brain.[145] "The events surrounding *Kemmler* also suggest that political and financial forces outweighed the purported humanitarian concerns over how death row inmates were executed."[146]

The violent nature of Kemmler's death did not stop states across the country from adopting electrocution as a method of execution.[147] "Electrocution was deemed superior to hanging or, at the very least, was far less visible."[148] In actuality, the method has never been proven to be instantaneous or painless; rather, many scientists have criticized the unpredictable and violent method as incredibly painful and even torturous.[149] *In re Kemmler* did not explicitly invoke the Eighth Amendment's cruel and unusual punishment clause, as this was not yet incorporated to the states, yet courts often outrightly dismiss challenges to the constitutionality of an execution method by citing the case as precedent.[150] Still, *Kemmler* acknowledged that "punishments are cruel when they cause torture or lingering death."[151] The Supreme Court has repeatedly chosen to adhere to *In re Kemmler* by permitting electrocution as a means of execution, but only eight states currently allow this execution method.[152]

Some states, like Nevada, took a different approach to find a "humane" method of execution by adopting lethal gas in 1921.[153] In 1924, Nevada had prisoners construct a makeshift gas chamber for the execution of Gee Jon, a Chinese immigrant convicted with murder.[154] Although prison officials

144 Kearns*, supra* note 142, at 203.

145 *Id.*

146 *See* Deborah W. Denno, *When Legislatures Delegate Death: The Troubling Paradox Behind State Uses of Electrocution and Lethal Injection and What It Says About Us*, 63 OHIO STATE L.J. 63, 71 (2002). ("Compelling evidence suggests that the Commission's ultimate recommendation of electrocution as the most humane method of effecting death was influenced heavily by financial competition between Thomas Edison and George Westinghouse concerning whose current would dominate the electrical industry.").

147 *See* Denno, *The Lethal Injection Quandary*, *supra* note 14, at 62. Twelve states embraced the use of the electric chair by 1915, and the number grew to twenty-six states by 1949.

148 *Id.*; *see also* Denno, *Getting to Death*, *supra* note 30, at 389.

149 *See* Nugent, *supra* note 12, at 197. In 1928, a French scientist referred to the method of electrocution as "a form of torture," and two physicians testified about the dangers of the method before Congress in 1992.

150 Denno, *When Legislatures Delegate Death*, *supra* note 146, at 72-73*; see also* In re Kemmler, 136 U.S. at 447.

151 In re Kemmler*,* 136 U.S. at 447.

152 *Methods of Execution*, *supra* note 24.

153 *See* Denno, *Getting to Death*, *supra* note 30, at 366. The state altered its protocol in response to the passage of a new "Humane Death Bill."

154 *Id.*; *see also Past to Present: 100 Years Since the United States' First Lethal Gas Execution, a Recently Renewed Practice*, DEATH PENALTY INFO. CTR (Feb. 8, 2024), https://deathpenaltyinfo.org/past-to-present-100-years-since-the-united-states-first-lethal-gas-execution-a-recently-renewed-practice [https://perma.cc/2A7J-GVPH].

reported the execution as a success, and doctors in attendance described this method as "the most merciful form yet devised,"[155] the method quickly became controversial. Other states gradually adopted this method thereafter, and by 1935, lethal gas become more popular than electrocution. However, this reign was short-lived: by 1955, electrocution once again became the most widely used method of execution in U.S.[156] Lethal gas has remained one of the most controversial methods of execution, likely as a result of high costs and a considerably high botch rate.[157] U.S. is the only country that currently permits gassing as an execution method.[158] Denno argues that "every gas execution involved torture of some sort," further elaborating that "the inmate is conscious and aware of what's going on, and the torment is obvious."[159]

Prior to the advent of additional execution methods, the Supreme Court drastically shifted Eighth Amendment jurisprudence when Justice Warren remarked that "this amendment must draw its meaning from the *evolving standards of decency* that mark the progress of a maturing society."[160] The Court further shifted away from deference by placing a moratorium on use of the death penalty in 1972, though this was ultimately overturned four years later.[161] Within the next ten years, American legislators began exploring lethal injection as an execution method.[162] Both New York and Great Britain studied the method prior to its implementation across U.S. and declined to adopt it based on concerns about capital punishment becoming

155 *Gas Kills Convict Almost Instantly*, N.Y. TIMES (Feb. 9, 1924), https://nyti.ms/4gWE7wu [https://perma.cc/7DH8-ESX9] (alleging the article alleges that Jon's death was almost instantaneous despite his head continuing to move for around six minutes after the gas began.).

156 Denno, *Getting to Death*, *supra* note 30, at 367.

157 *See id.*; *see also* Randy Dotinga, *Execution by Gas Has a Brutal 100-Year History. Now It's Back.*, THE WASH. POST (Jan. 24, 2024), https://www.washingtonpost.com/history/2024/01/24/gas-chamber-execution/ [https://perma.cc/DD6Q-N7MV].

158 *Amnesty International Global Report: Death Sentences and Executions, supra* note 100, at 11.

159 Dotinga, *supra* note 157. The author quotes Austin D. Sarat, acknowledging that other execution methods are likely both cheaper and more efficient. ("Sarat examined 8,776 American executions performed from 1890 to 2010 and found that more than 5 percent of gas chamber deaths didn't follow standard protocol and 'caused, at least arguably, unnecessary agony for the prisoner' or displayed incompetence on the part of the executioner. Only lethal injections went botched more often (7 percent of the time), while errors were less common in hangings (3 percent) and electrocutions (2 percent)."); *see also* Denno, *Getting to Death supra* note 30, at 367-68 (discussing a 1979 botched execution in Nevada, which caused the state to abolish lethal gas as an execution method).

160 Trop v. Dulles, 356 U.S. 86, 100 (1958) (considering question of whether forfeiture of citizenship comports with Constitutional guarantees). ("The basic concept underlying the Eighth Amendment is nothing less than the dignity of man. While the State has the power to punish, the Amendment stands to assure that this power be exercised within the limits of civilized standards.")

161 *Furman*, 408 U.S. 238. It is arguable that this holding's rationale was based on the arbitrary and capricious use of the death penalty in the U.S.; however, the *per curiam* opinion did not mention this rationale and only three of the five concurrences referenced either "arbitrary" or "capricious" application. *See also Gregg*, 428 U.S. 153 (reinstating the use of capital punishment in the U.S. and effectively overturning *Furman*).

162 Sarat, *supra* note 13, at 17.

associated with medicine.[163] Britain's Royal Commission on Capital Punishment specifically worried about application, noting the difficulty of locating an individual's veins and the need for executioners with medical skill.[164] The Commission's report stated that people with certain "physical abnormalities" have veins that would be almost impossible to locate, forcing executioners to resort to intramuscular injection rather than intravenous.[165] Great Britain refrained from adopting the method based upon the lack of evidence that injections could be administered "quickly, painlessly, and decently."[166] Furthermore, "a detailed investigation of lethal injection's creation and history shows that *at no point* was the procedure medically *or* scientifically studied on human beings."[167]

Though the method was allegedly born out of the desire for more palatable executions, it appears that no prior medical research was consulted during the process.[168] "Seemingly oblivious to prior concerns, American lawmakers emphasized that lethal injection *appeared* more humane and visually palatable relative to other methods."[169] In U.S., the method's adoption was spearheaded by two Oklahoma Congressmen, who eventually enlisted the state's chief medical examiner, Jay Chapman, to aid in the method's conception.[170] The Oklahoma Medical Association (OMA) refused to participate in development for ethical reasons, yet policymakers continued to seek the new method without scientific or medical consensus.[171] By 1981 Oklahoma lawmakers concocted the three-drug protocol that would become the standard combination for lethal

163 Denno, *The Lethal Injection Quandary*, *supra* note 14, at 64. New York first considered lethal injection by cyanide in 1888, but the state ultimately decided not to adopt the method. In 1953, Great Britain's Royal Commission on Capital Punishment studied lethal injection, ultimately deciding that the method's administration was "no better than hanging, the country's longstanding method." *Id*.

164 *Id.*

165 *Id.* Intravenous injections go directly into a prisoner's veins, while intramuscular injections go into a muscle and can result in extreme pain.; *see also* Shah, *supra* note 101, at 197 ("Individuals who receive intramuscular injections may experience wide variation in how quickly the drug is taken up by their bodies, and may therefore suffer extended executions and increased exposure to painful side effects."); *see also Methods of Execution*, *supra* note 24. It is not uncommon for prisoners to have damaged veins from long-term use of intravenous drugs, which further complicates application.

166 Denno, *The Lethal Injection Quandary*, *supra* note 14, at 64-65. The Royal Commission on Capital Punishment's Report was published in 1953. The country ultimately abandoned the death penalty in 1965.

167 *Id.* at 65-70 (emphasis added).

168 *Id.* at 65 ("The United States reexamined the lethal injection issue after the Supreme Court reinstated the death penalty following a four-year moratorium. Remarkably, during this reexamination, none of the medical opinion evidence gathered on lethal injection—either from the New York or the British Commissions—was addressed in legislative discussions or debates").

169 *Id.* (emphasis added).

170 *Id.* at 65-70.

171 *Id.* Chapman was open about his lack of medical training and expertise, and he believed that doctors could administer the injection without any ethical dilemmas. Before creation of the protocol, State Senator Bill Dawson and House Representative Bill Wiseman attempted to solicit advice from the OMA, who refused, Jay Chapman, and Stanley Deutsch, the head of the anesthesiology department at Oklahoma Medical School.

injections.[172] The three-drug protocol consists of sodium thiopental, a strong sedative intended to put the prisoner to sleep, pancuronium bromide, which paralyzes the prisoner's muscle system and stops their breathing, and potassium chloride, an agent that causes death by cardiac arrest.[173] "If everything went according to plan, the first drug anesthetized the inmate from pain, the second drug prevented the inmate's spasms or death throes from disturbing the audience, and the third drug caused death quickly."[174]

Both Chapman and legislators advocating the method argued that lethal injection would not be unpleasant or painful; however, it is now known that faulty administration of the anesthetic causes a prisoner "excruciating suffering before death."[175] Though Oklahoma was the first state to permit lethal injection as a means of execution, Texas was the first state to utilize the method in 1982.[176] Lethal injection's first casualty, Charles Brooks Jr., made an agreement with a reporter to shake his head if he felt pain during the execution, which he did before groaning and gasping to his eventual death.[177] Despite the lack of conducted research, Brooks' perceived pain, and a plethora of subsequent "botched" executions, lethal injection quickly became the most used method of execution in U.S.[178]

After the Supreme Court's decision to reinstate the death penalty in 1974, its application has been limited by prohibiting executions in juvenile cases and cases in which the offender is "insane" or intellectually disabled.[179] In considering the aforementioned cases, the Court increasingly

---

172 *Id.* at 72-74.

173 *See Methods of Execution*, *supra* note 24; *see also* Shah, *supra* note 101, at 171-72.

174 Shah, *supra* note 101, at 172.

175 *See* Denno, *The Lethal Injection Quandary*, *supra* note 14, at 67-70. Congressman Wiseman said the benefits of lethal injection were "no pain, no spasms, no smells or sounds – just sleep, then death." Chapman compared the procedure's sensations to being placed under an anesthetic. *See also* Baze v. Rees, 553 U.S. 35, 53 (2008) ("It is uncontested that, failing a proper dose of sodium thiopental that would render the prisoner unconscious, there is a substantial, constitutionally unacceptable risk of suffocation.")

176 Denno, *The Lethal Injection Quandary*, *supra* note 14, at 79.

177 Dick Reavis, *Charlie Brooks' Last Words."* TEX. MONTHLY MAG. (1983), https://www.texasmonthly.com/news-politics/charlie-brooks-last-words/ [https://perma.cc/DZ7L-4P43] ("He slowly moved his head toward the left shoulder, and back toward the right, then upward, leftward again, as if silently saying no . . . His head pointed up, his body lay flat and still for seconds. Then a harsh rasping began. His fingers trembled up and down, and the witnesses standing near his midsection say that his stomach heaved. Quiet returned, and his head turned to the right … A second spasm of breathing began. It was brief. Charlie's body moved no more … it was seven minutes after the injection had begun.").

178 *See Methods of Execution*, *supra* note 24; *see also Botched Executions*, DEATH PENALTY INFO. CTR., https://deathpenaltyinfo.org/executions/botched-executions [https://perma.cc/736U-JGCY] (last visited Aug. 15, 2025). DPIC's analysis of post-*Furman* executions reveals that 49 lethal injection executions have been botched since 1982. The organization notes that their list of botched executions is not meant to be exhaustive, but rather to provide a list of "examples that are well-known."

179 Thompson v. Oklahoma, 487 U.S. 815 (1988) (holding that the 8th and 14th Amendments prohibit the execution of people under the age of sixteen at the time of offense); Ford v. Wainwright, 477 U.S. 339 (1986) (holding that executing "criminally insane" individuals is a violation of the 8th Amendment); Atkins v. Virginia, 536 U.S. 304 (2002) (holding that the execution of a "mentally retarded

referenced the views of the international community and international agreements in determining what constitutes cruel and unusual punishment under the Eighth Amendment.[180] There was another drastic shift in capital punishment jurisprudence in 2008, when the Supreme Court considered a challenge to Kentucky's lethal injection procedure and found that the protocol was *not* a violation of the Eighth Amendment.[181] Prisoners challenged the state's execution method on the basis that improper administration of the first drug, sodium thiopental, would cause them immense pain.[182] The Court conceded that improper administration created a "substantial, *constitutionally unacceptable* risk" of suffocation and pain from the subsequent two drugs, yet they determined that the petitioners did not prove that the risk "of an inadequate first dose of the first drug [was] *substantial*."[183] The Court articulated that executions violate the Eighth Amendment when they create a "substantial or objectively intolerable risk of serious harm."[184]

At the time of the *Baze* decision, all thirty-eight states that permitted execution by lethal injection utilized the original three-drug protocol, though the named drugs were often substituted with similarly effective alternatives.[185] Before *Baze*, states frequently carried out botched lethal injections, but "the post-*Baze* lethal injection debate encompassed problems even worse and more varied than those that existed before the Court's

offender" is a violation of the 8th Amendment); Roper v. Simmons, 543 U.S. 551 (2005) (ending use of the juvenile death penalty in the U.S.).

180 *Cf Thompson*, 487 U.S. at 815 (considering but not relying on international opinion), *with* Roper, 543 U.S. at 551 (making several references to international covenants and the international community's opinion in ruling on the nature of punishment under the 8th Amendment); *see International Influence on the Death Penalty in the U.S.*, DEATH PENALTY INFO. CTR, https://deathpenaltyinfo.org/stories/international-influence-on-the-death-penalty-in-the-u-s (Oct. 2003) (noting the continuing effects and influence of Scalia's dissent in *Thompson*, which expressed a strong distaste for international opinion in 8th Amendment interpretation).

181 *See Baze*, 553 U.S. at 45. The Court upheld Kentucky's three-drug protocol, which consisted of 3 grams of sodium thiopental, 50 milligrams of pancuronium bromide, and 240 milliequivalents of potassium chloride. The incarcerated individuals challenging the protocol advocated for an alternative protocol that only used one dose of sodium thiopental or other barbiturate. *See also* Deborah Denno, *Lethal Injection Secrecy Post-Baze*, 102 GEO. L.J. 1331, 1334-35 (2014), https://dpic-cdn.org/production/legacy/LethalInjectionSecrecy.pdf [https://perma.cc/X2AB-FB5G] ("*Baze* was so splintered that none of its seven opinions [comprises] more than three votes, and the Justices offered a wide range of explanations and qualifications in their reasoning.").

182 *Baze*, 553 U.S. at 45.

183 *Id.* at 54, 62. "The risks of maladministration they have suggested—such as improper mixing of chemicals and improper setting of IVs by trained and experienced personnel—cannot remotely be characterized as 'objectively intolerable.'" *Id.* at 51. "Given what our cases have said about the nature of the risk of harm that is actionable under the Eighth Amendment, a condemned prisoner cannot successfully challenge a State's method of execution merely by showing a slightly or marginally safer alternative."

184 *Id.* at 35 (holding that "a state's refusal to adopt proffered alternative procedures may violate the Eighth Amendment only where the alternative procedure is feasible, readily implemented, and in fact significantly reduces a substantial risk of pain").

185 *See* Shah, *supra* note 101, at 171-73.

intervention."[186] Impending drug shortages almost entirely eviscerated the applicability of the Court's ruling, as states have increasingly resulted to risky measures to obtain necessary drugs for lethal injections.[187] The petitioners in *Baze* sought the use of an untested one-drug protocol as an alternative method of execution, citing its routine use in veterinary euthanasia.[188] The Court rejected their proffered alternative, holding that "to qualify, the alternative procedure must be feasible, readily implemented, and in fact significantly reduce a substantial risk of pain."[189] Further, the Court stated that "we reject the argument that the Eighth Amendment requires Kentucky to adopt the untested alternative procedures petitioners have identified."[190]

Seven years after *Baze*, the Supreme Court in *Glossip v. Gross* further restricted thee interpretation of the Cruel and Unusual Punishment Clause by requiring that prisoners, challenging the method of execution, **must** establish "a known and available alternative method of execution that entails a lesser risk of pain" to prevail.[191] Sotomayor's dissent discussed widespread hurried changes to execution protocols across states, declaring: "Courts' review of execution methods should be more, not less, searching when States *are engaged in what is in effect human experimentation*."[192]

MODERN EXPERIMENTAL EXECUTION

International human rights law and the peremptory concept of *jus cogens* both stem from the global desire to prevent the atrocities of World War II from ever reoccurring. The principles of the Nuremberg Code have been integrated into various international instruments, and it is evident that the prohibition of torture has long been considered a *jus cogens* norm of international custom.[193] Though the historic understanding of torture and medical experimentation are helpful in examining the American practice of "experimental executions," there are several clear distinctions. First and foremost, the horrors and depravity of Nazi Germany were an affront to

186 *See also* Denno, *Lethal Injection Secrecy Post-Baze*, *supra* note 181, at 7.

187 *Id.*

188 *Baze*, 553 U.S. at 58.

189 *Id.* at 52.

190 *Id.* at 54.

191 Glossip v. Gross, 576 U.S. 863, 867 (2015) (citing *Baze* dicta as precedent for additional component); *see also id.*, (Sotomayor, J., dissenting) ("A method of execution that is intolerably painful—even to the point of being the chemical equivalent of burning alive—will, the Court holds, be unconstitutional if, and only if, there is a "known and available alternative" method of execution. It deems *Baze* to foreclose any argument to the contrary. *Baze* held no such thing. Even assuming that the *Baze* plurality set forth such a requirement—which it did not—none of the Members of the Court whose concurrences were necessary to sustain the *Baze* Court's judgment articulated a similar view.").

192 *Id.* at 976 (Sotomayor, J., dissenting).

193 *See* UDHR, *supra* note 55; *see* ICCPR, *supra* note 63; *see* CAT, *supra* note 70; *see also* Nuru , 404 F.3d at 1222-23.

humanity that took place on an unimaginable scale; victims of the Holocaust were wholly denied due process, unfairly targeted for their ethnicity and/or race, and stripped of all personhood for cruelty's sake. Further, World War II experiments were undertaken by *trained and licensed physicians*, which is distinct from the practice of modern execution, in which American physicians have actively chosen not to participate.[194] In utilizing the frameworks and concepts that were born out of the atrocities of World War II, I do not intend to equivalize modern executions with the experiments conducted on nonconsenting concentration camp prisoners and civilians. Rather, I hope to analogize the few similarities to illustrate the ways in which American execution practices are out-of-step with the controlling international framework.

The principles articulated in the Nuremberg Code require that all human experimentation "yield fruitful results for the good of society," be "based on the results of animal experimentation," "avoid *all unnecessary physical and mental suffering*," and only be conducted by "scientifically qualified persons."[195] The Code also emphasizes that experiments should not involve undue risk or the possibility of death, alongside the first requirement which mandates obtaining voluntary and informed consent from the participant.[196] The intentional infliction of severe pain or undue suffering has likewise been condemned by numerous international treaties prohibiting torture, including instruments that the United States has ratified and purportedly followed.[197] Though the ICCPR and the CAT were adopted alongside RUDs and are interpreted in line with domestic Amendments, the Supreme Court held as early as 1878 that torturous punishments are *impermissible*.[198] Punishments are also analyzed in terms of the "evolving standards of decency that mark the progress of a maturing society," meaning that interpretation of the Eighth Amendment is not static.[199] Moreover, the United States' invocation of domestic law cannot "defeat the object and purpose of the Convention to prohibit torture," which the country *explicitly acknowledged* alongside its adopted understandings.[200] A U.S. appellate court articulated that *jus cogens* norms "enjoy the highest status in international law and prevail over both customary international law and

194 Sarat, *supra* note 13, at 119.

195 THE NUREMBERG CODE, *supra* note 40, at principles 2-4, 8.

196 *Id.* at principles 1, 5, & 6.

197 *See* UDHR, *supra* note 55; *see also* ICCPR, *supra* note 63; *see also* CAT, *supra* note 70.

198 Wilkerson v. Utah, 99 U.S. 130, 136 (1878) (emphasis added) (referencing the Eighth Amendment) ("It is safe to affirm that punishments of torture, such as those mentioned by the commentator referred to, and all others in the same line of unnecessary cruelty, are forbidden by that [a]mendment to the Constitution").

199 *Trop*, 356 U.S. at 101 (finding denationalization as punishment to violate the Eighth Amendment).

200 *See* 136 Cong. Rec. S17486-01 at II(c) (daily ed., Oct. 27, 1990) [https://perma.cc/9XPC-M9WK]. U.S. RUDs to CAT, *supra* note 61 OR CAT, *supra* note 70.

treaties" before declaring that "official torture is now prohibited in the law of nations."[201] U.S. is not exempt from the confines of international peremptory law; *jus cogens* norms are a proscription that "binds the community of the States, *including the United States*. The norm cannot be validly derogated from, whether by treaty or by the objection of the State, persistent or otherwise."[202]

Current Practices in the United States

Lethal injection and nitrogen hypoxia are distinct in their experimental aspects, but both execution methods blur the line between execution and non-consensual human experimentation. The unreliable nature of lethal injection drugs has greatly increased the likelihood of botched executions, making the risk of suffering more probable and foreseeable.[203] Furthermore, the rapid alteration of drug protocols effectively makes every drug combination an untested experiment, one that will be inflicted on a prisoner without prior medical authorization.[204] Execution via nitrogen hypoxia posits an even stronger violation of the prohibition on torture, as prisoners are the *first humans* ever subjected to the execution method.[205] None of the safeguards proposed in the Nuremberg Code are present, and this methodology evokes alarming parallels to the gas chambers condemned since World War II. In fact, U.S. is the *sole nation* that authorizes execution by gas in 2025.[206] These methods are made even more dangerous by state secrecy laws, which allow states unfettered discretion to "circumvent federal regulations, pharmaceutical company policies, and international law" without having their conduct exposed to the public.[207]

I. Beginning of Lethal Injection Drug Supply Issues

In 2010, the sole manufacturer of sodium thiopental, Hospira, was temporarily forced to stop production of the drug.[208] The same year, the company sent a letter to the Ohio Department of Rehabilitation and Corrections stating, "we do not support the use of any of our products in

201 *See* Comm. of U.S. Citizens Living in Nicaragua v. Reagan, 859 F.2d 929, 935, 941 (D.D.C. 1988).

202 Domingues v. USA, Case No. 12.285, Inter-Am. Comm'n. H.R., Report No.62/02, ¶85 (Oct. 22, 2022).

203 *See generally* Shah, *supra* note 101; *see generally* SARAT, *supra* note 15, at ch. 1, 5, & 6.

204 Shah, *supra* note 101, at 202. "By using new drugs, novel drug combinations, and untested doses, executions by lethal injection involve medical experimentation that is neither well designed nor evidence based."

205 Press Release, *supra* note 1.

206 *Amnesty International Global Report: Death Sentences and Executions, supra* note 100, at 11.

207 Sarat, *supra* note 13, at 22.

208 *See* Alper, *supra* note 16, at 29.

capital punishment procedures."[209] Hospira ultimately decided to halt production of the drug entirely, noting that its decision was related to the possibility of being held liable for the diversion of their drugs for use in capital punishment.[210] Concurrently, the European Union developed a regulation to ban goods "which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment."[211] A variety of drug manufacturers have expressed their disapproval for the use of their product in executions, with some eliminating their drugs from the American market and others halting production altogether.[212] Under the amended European Commission Regulation, pharmaceutical manufacturers cannot export drugs to U.S. without obtaining an export authorization that *ensures* the medicines will not be used "for torture or other cruel, inhuman or degrading treatment or punishment."[213]

Correction Departments across U.S. started illicitly obtaining lethal injection drugs since the shortage began in 2010; many states have exchanged drugs with one another, while some have turned to unregulated and/or illegal foreign imports.[214] In analyzing post-*Baze* executions, Deborah Denno stated,

> [S]tates can—and do—modify virtually any aspect of their lethal injection procedures with a careless frequency that is unprecedented among execution methods in this country's history. There have been more changes in lethal injection protocols during the past five years than there have been in the last three decades. The resulting protocols differ from state

209 *Id.* at 33; *see also Statement from Hospira*, DEATH PENALTY INFO. CTR. (Mar. 31, 2010), https://dpic-cdn.org/production/legacy/HospiraMarch2010Statement.pdf [https://perma.cc/KPS5-G3RQ].

210 *See* Statement from Hospira, DEATH PENALTY INFO. CTR. (Jan. 21, 2011), https://dpic-cdn.org/production/legacy/HospiraJan2011.pdf [https://perma.cc/X8QU-7NPV] ("In the last month, we've had ongoing dialogue with the Italian authorities concerning the use of Pentothal in capital punishment procedures in the United States—a use Hospira has never condoned . . . These discussions…led us to believe we could not prevent the drug from being diverted to departments of corrections for use in capital punishment procedures. Based on this understanding, we cannot take the risk that we will be held liable by the Italian authorities if the product is diverted for use in capital punishment").

211 2011 O.J. (L 338/31) No. 1352/2011 (implicitly repealed by adoption of Regulation (EU) 2019/125 of the European Parliament and of the Council of 16 January 2019). For a more detailed history of the Regulation, *see infra* note 19.

212 *See generally Statements from Drug Manufacturers And Medical Professionals*, DEATH PENALTY INFO. CTR., https://deathpenaltyinfo.org/executions/lethal-injection/statements-from-drug-manufacturers-and-medical-professionals [https://perma.cc/Y2AB-V68A] (last visited Oct. 24, 2025); *see also* Alper, *supra* note 16, at 33-35 (describing 2011 EU Ban and pharmaceutical company attempts to stop product use in executions).

213 2025 O.J. (L 30/1) No. 2019/125, at 9.

214 *See* Denno, *Lethal Injection Secrecy Post*-Baze, *supra* note 181, at 33 (explaining that the shortage of sodium thiopental has led prison officials to seek out drug alternatives from "England to Pakistan" which raises concerns "that prisoners may be injected with drugs that are impure, expired, unsafe, or ineffective").

> to state and even from one execution to the next within the same state.[215]

Another solution for states seeking lethal injection drugs has been the use of regional compounding pharmacies, which are not regulated by the FDA.[216] States' reliance on unchecked drug manufacturers has resulted in an increase in botched executions, higher prevalence of states arbitrarily and recklessly modifying their execution protocols,[217] and an influx of state secrecy "shield" laws throughout the country. "Shield laws" create a plethora of potential problems for both litigants and everyday Americans. They make it more difficult for prisoners to understand, and therefore challenge, execution protocols while also starkly limiting the information available to the public.[218]

The introduction of execution by lethal injection medicalized capital punishment, as "the insertion of intravenous needles and the proper administration of drugs require that executioners have a basic level of medical knowledge."[219] Despite this, medical professionals have never been centered in development of execution protocols because the American Medical Association and individual physicians have consistently denounced doctor participation in any form of execution.[220] Prison officials, rather than doctors, administer lethal injection drugs, yet the use of anesthesia suggests an indivisible medical component in executions utilizing this method.[221] Furthermore, executions by lethal injection incorporate elements associated with several "categories of medical practice and innovation," including non-validated practice, research, and quality improvement/control.[222] The combination of a sterilized, seemingly 'clinical' procedure and the near-total state secrecy surrounding execution protocols has significantly shaped public perception, making lethal injections appear quick, easy, and painless. In reality, this method has the highest rate of botched executions.[223] Between 2010 and October 2025, nineteen of twenty *known* botched executions were administered via lethal injection—with five out of the

---

215 *Id.* at 7.

216 Austin Sarat, *Death Row Gone Rogue: It's Time to Regulate Lethal Injection Drugs*, THE HILL, (May 28, 2024), https://thehill.com/opinion/healthcare/4689097-death-row-gone-rogue-its-time-to-regulate-lethal-injection-drugs/ [https://perma.cc/7QU9-7Z6T].

217 *See* Denno, *Lethal Injection Secrecy Post*-Baze, *supra* note 181, at 7.

218 *See generally* KONRAD, *supra* note 20.

219 *See* SARAT, *supra* note 15, at 119.

220 *Id.*

221 Shah, *supra* note 101, at 165.

222 *Id.* at 176-78.

223 *See* SARAT, *supra* note 15, at 120, 177 (Appendix A); *see also Botched Executions*, *supra* note 178 (Studies estimate that lethal injection has a botch execution rate of approximately 7.2%, compared to 3.12% for hanging and 1.92% for electrocution.).

nineteen failing.[224] "To a large extent, the death penalty's medicalization—as well as the secrecy surrounding its administration—has lulled the general public into thinking that the death penalty is *not* an act of torture."[225]

Examining the drug crisis's effect on state execution protocols reveals an increase in changes to various aspects of lethal injection procedures.[226] Shah states that "the current approaches to lethal injection executions involve exposing inmates to new and uncertain risks of bodily harm from untested drugs and drug combinations."[227] Further, she notes the "great potential for abuse and exploitation of prisoners because prison officials' interests differ so dramatically from those of inmates."[228] The difficulty in obtaining lethal injection drugs has revealed that the United States' most popular execution method is "very much dependent on major players in [the pharmaceutical industry]." This dependence illustrate U.S.' unique position: unlike other countries that retain capital punishment but control or produce their execution means domestically, U.S. relies heavily on external suppliers, highlighting both practical and ethical challenges in continuing its use of the death penalty.[229]

II. Increased State Secrecy Laws

Though the goal of a more humane execution method is admirable, it is hollow if new methods never fully account for the science and medicine of the modern era. Furthermore, the enduring hunt for more palatable execution methods coincides with the removal of execution from public life, distancing American citizenry from the continuing complications occurring in state-sanctioned killings. Between 2011 and 2023, thirteen states enacted new secrecy laws and eight or more states invoked pre-existing laws to restrict information disclosure; three additional states passed increased secrecy statutes in 2024.[230] States argue that secrecy is critical for drug suppliers and the people involved in the execution process, though no evidence of credible threats to pharmacies or drug sponsors has been discovered.[231] "In fact, the secrecy is not intended to protect manufacturers

224 *Botched Executions*, *supra* note 178. Anthony Boyd's Oct. 2025 execution via nitrogen hypoxia is the twentieth botched execution in this period.

225 BESSLER, *supra* note 60, at 278.

226 *See* Denno, *Lethal Injection Secrecy Post*-Baze, *supra* note 181, at 7 (analyzing "over 300 cases citing *Baze* in the five years since the decision [2008-2013]," and finding extensive variety and irregularity throughout states).

227 *See* Shah, *supra* note 101, at 164.

228 *Id.*

229 Alper, *supra* note 16, at 37; *see also* Mary D. Fan, *The Supply-Side Attack on Lethal Injection and The Rise of Execution Secrecy*, 95 B.U.L. REV. 427 (2015).

230 KONRAD, *supra* note 20, at 4-5, 14; *see also Death Penalty in 2024*, *supra* note 95.

231 KONRAD, *supra* note 20, at 24; *see also* Sarat, *supra* note 13, at 20, n. 117.

but to prevent them from learning that their medicines are being diverted from therapeutic uses to use in executions."[232]

Shield laws have been enacted to conceal executioners' identities and qualifications, prevent witnesses or reporters from viewing executions, obscure drug combinations, protocols and procedures, and, most significantly, to hide the use of execution drugs that were misrepresented during purchase, illegally obtained, or suspiciously compounded.[233] In fact, "[S]tate secrecy laws have prevented the public from knowing the extremes to which its state governments are resorting to carry out the most severe and irreversible punishment."[234] In response to reporters unearthing Missouri's use of a physician-executor who was consistently sued for malpractice, the state became the first to enact a statute protecting the identity of the execution team.[235] The law was later expanded to prevent the public from knowing what government contracts are awarded to execution drug suppliers, masking probable violations of Missouri and federal law by multiple compounding pharmacies.[236] Reporters uncovered that an Oklahoma-based company supplied Missouri with more than $30,000 of drugs.[237] Subsequently, FDA inspection of the supplier revealed vast guideline violations and "questionable potency, disinfecting, and sterilization practices."[238] This story is not an outlier, as DPIC's report details various other states resorting to increasingly absurd lengths to carry out death sentences.[239]

The lack of governmental transparency is increasing the number of botched executions, especially in the states where the most executions occur.[240] A rise in problematic executions is troubling in itself, but even more concerning is the increased likelihood that prisoners will be unable to challenge their execution methods in court.[241] State secrecy statutes further

---

232 KONRAD, *supra* note 20, at 25.

233 *See generally id.*

234 *Id.* at 24.

235 *Id.* at 33-34.

236 *Id.* at 40.

237 *Id.*

238 *Id.* at 39-41. The investigation showed 1,892 state guideline violations and uncovered employees extending drug expiration dates and storing drugs in a blue Igloo cooler. *See also id.* at 45 ("Cumulatively, Missouri has paid its executioners more than $200,000 in cash, placing hundred-dollar bills in envelopes with instructions not to open until services are completed.").

239 *Id.* at 42-43. Texas purchased drugs on the false premise that they were going to a decades-closed hospital, while Louisiana did the same for an alleged "medical patient." Ohio inserted a mental health agency as a middleman for distribution, and Missouri evaded distribution controls to utilize companies' banned drugs in executions. Arkansas deliberately breached a distribution contract, while Nevada misled manufacturers about their intentions for the drug purchase.

240 *Id.* at 18.

241 *Id.* at 6. ("Prisoners have a right to information about the execution process so that they can raise legitimate challenges to execution methods that may subject them to excruciating pain."); *see also* Sarat, *supra* note 13, at 23 ("The new secrecy creates a circularity problem for death row inmates. To make a legitimate claim of cruel and unusual punishment, inmates need complete information

entrench the authority of already powerful state Department of Corrections, granting officers and personnel an unimaginable amount of discretion and control.[242] "Even when eyewitnesses have seen and described classic symptoms of execution-drug failures, prison-officials have asserted that the execution was carried out without complications or responded to concerns by claiming to have successfully followed the protocol when the protocol itself was the reason for the troubling execution."[243] Incarcerated individuals are often unable to meet the burden of proof needed to challenge an execution in court, leaving them without any means of vindicating their rights.[244] For example, in 2010, Jeff Landrigan learned that Arizona planned to execute him with imported drugs only days before the matter was scheduled.[245] He went to court to challenge the method's legality, where the federal court instructed Arizona to disclose sourcing information about the drug.[246] The state appealed the decision, then the Supreme Court allowed Landrigan's execution to proceed by relying on his lack of information about the drug.[247] After his execution, Landrigan's attorneys discovered that the drugs used were from Dream Pharma, a company that was exporting drugs from the back of a west London driving school.[248]

As the United States' enforcement of the death penalty becomes more secretive and experimentative, global leaders must step in and call out these human rights abuses. This holds especially true in the early days of the Trump administration, which has been characterized by rampant attacks on civil liberties *and* international practices. In contrast to recent international calls for abolition, the Trump administration passed an Executive Order purporting to "restor[e] the death penalty and protect public safety" on his first day in office.[249] Section 5 of the Order encourages the Attorney General to "take all appropriate action to seek the overruling of Supreme Court precedents that limit the authority of the State and Federal governments to impose capital punishment."[250] Further, the Attorney General released a statement saying that his office has been directed to assist states in prosecuting capital cases and implementing death sentences.[251] The Federal

surrounding the lethal injection process. However, they cannot access this information unless they have a legitimate Eighth Amendment claim.").

242 *See generally* Sarat, *supra* note 13.

243 *Id.* at 18.

244 *Id.* at 6.

245 *Death Penalty in 2024*, *supra* note 95, at 36.

246 *Id.*

247 *Id.*

248 *Id.*

249 Exec. Order No. 14164, 90 Fed. Reg. 8463 (Jan. 20, 2025), https://www.federalregister.gov/d/2025-02012 [https://perma.cc/598A-M9D9].

250 *Id.* at § 5.

251 Attorney General's Memorandum on Federal Law Protections for Religious Liberty, U.S. DEP'T OF JUSTICE (Oct. 6, 2017), https://www.justice.gov/ag/media/1388561/dl [https://perma.cc/K8EV-AWAX] ("The President's Executive Order directs the Attorney General to

Bureau of Prisons will now "ensure the states have sufficient supplies and resources to impose the death penalty."[252] The current reality of the death penalty in the United States is largely unknown due to various state secrecy laws; however, the information that *is* known indicates that executions are overwhelmingly scientifically untested, inhumane and, effectively, a human experiment. As Harry S. Truman previously declared: "secrecy and a free, democratic government don't mix."[253]

III. A Novel Execution Method – Nitrogen Hypoxia

Three states have authorized nitrogen hypoxia as a method of execution, but to date, only Alabama and Louisiana have implemented executions using it.[254] The idea for the method originated from a fourteen-page academic paper, the Copeland Report, requested by an Oklahoma State Representative and written by individuals without medical training.[255] The bases for the Report's six "findings" were incredibly speculative, relying on limited research regarding suicides induced by helium and research on hypoxia in high-altitude pilot training.[256] During 2024, Alabama executed three individuals with this method – Kenneth Smith, Alan Miller, and Carey Grayson.[257] When Alabama executed Mr. Miller, he "struggled against the restraints on the gurney, shaking and trembling for about two minutes" before gasping for air for approximately six minutes.[258] His spiritual advisor commented on the abnormal "jerking around" during the prisoner's death, stating that Miller's "face was twisted and he looked like he was suffering."[259] The state executed Grayson a mere two months later, where "media witnesses reported labored and heavy breathing for nearly 10

assist states in prosecuting capital crimes and implementing death sentences. Consistent with that Executive Order, the Federal Bureau of Prisons is directed to work with each state that allows capital punishment to ensure the states have sufficient supplies and resources to impose the death penalty.").

252 *Id.*

253 *See* KONRAD, *supra* note 20, at 7.

254 *Alabama Carries Out Nation's Third Nitrogen Gas Execution*, THE ASSOCIATED PRESS (Nov. 22, 2024), https://www.npr.org/2024/11/22/nx-s1-5201699/alabama-nitrogen-gas-execution [https://perma.cc/45CK-6JMS]. Alabama, Oklahoma, & Mississippi Have Authorized the Use of Nitrogen Gas to Execute Prisoners; *see also Execution Database*, DEATH PENALTY INFO. CTR., https://deathpenaltyinfo.org/facts-and-research/data/executions [https://perma.cc/A7FR-PW4R].

255 *See* THE COPELAND REPORT, *supra* note 2.

256 *Id.*

257 Eric Ortiz & Abigail Brooks, *Carey Dale Grayson Put to Death in Alabama's Third Nitrogen Execution*, NBC NEWS (Nov. 21, 2024), https://www.nbcnews.com/news/us-news/alabama-execute-carey-dale-grayson-nitrogen-gas-rcna180893 [https://perma.cc/K7ST-KG65]. Both Smith and Miller survived botched execution attempts via lethal injection prior to their second execution by nitrogen suffocation.

258 *Alabama Executes Alan Miller*, EQUAL JUSTICE INITIATIVE NEWS, https://eji.org/news/alan-miller-alabama-execution-2024/ [https://perma.cc/G478-V7NH] (last visited Aug. 16, 2025).

259 *Id.*

minutes and some sudden muscle movements that officials described as involuntary."[260]

A federal district court recently considered an Eighth Amendment claim challenging execution via nitrogen hypoxia in *Frazier v. Hamm et al.*, ultimately ruling against the petitioner.[261] The opinion exemplifies the difficulties plaintiffs now face when challenging the constitutionality of an execution method.[262] The court notes that the plaintiff only had access to the public, partially redacted, execution protocol, but later reprimands the prisoner for his failure to conduct adequate discovery.[263] Though the decision does not contend with state secrecy statutes, its existence still lingers in the background of all modern death penalty litigation.[264] Frazier insisted that Alabama's lack of transparency contributed to his filing delay and inability to obtain information, but the Judge did not engage with his reasoning.[265] Further, the court denied the validity of Petitioner's alternate execution protocol, citing *Bucklew*'s assertion that States are not required to adopt "untried and untested" execution methods.[266] Remarkably, this precedent was absent when Alabama conducted its first nitrogen hypoxia execution; rather, the Supreme Court denied Petitioner's request for a stay of execution without providing any comment.[267]

The Supreme Court has yet to hear a case directly challenging the constitutionality of execution via nitrogen hypoxia, the most novel method currently in use. However, the Court *ardently* rejected the use of nitrogen hypoxia as an alternate method in *Bucklew v. Precythe*, where the plaintiff sought execution by the never-before-used method due to a rare blood condition.[268] The opinion declared that Bucklew failed to establish nitrogen hypoxia as a viable execution method based on two reasons, both of which

---

260 Ralph Chapoco, *Alabama Executes Carey Dale Grayson For 1994 Murder of Vickie Deblieux*, ALABAMA REFLECTOR (Nov. 21, 2024), https://alabamareflector.com/2024/11/21/alabama-executes-carey-dale-grayson-for-1994-murder-of-vickie-deblieux/ [https://perma.cc/FX2A-BP6B]. Alabama Department of Corrections Commissioner John Hamm stated, "[T]he first movements he was doing, all that, in our opinion and our staff's opinion, that was all show."

261 Frazier v. Hamm, 2025 WL 361172 at *8 (M.D. Ala. 2025) (concluding that Plaintiff was not entitled to a preliminary injunction because 1) "Frazier failed to show a substantial likelihood of success on the merits" and 2) "the balance of the equities militates strongly against injunctive relief," based on Petitioner's delay in filing action). Frazier filed a §1983 action challenging his scheduled execution "based on allegations that the [nitrogen hypoxia] Protocol creates unconstitutional risks of psychological pain." *Id*. at *1.

262 *Id.*

263 *Id.* at *7, *37.

264 See KONRAD, *supra* note 20.

265 *Frazier,* 2025 WL 361172 at *37.

266 *Id.* at *14; *see also* Bucklew v. Precythe, 587 U.S. 119 (2019).

267 Smith, *supra* note 7.

268 *Bucklew*, 587 U.S. at 120. This Court rejected the Plaintiff's "as applied" challenge to execution by lethal injection because the Plaintiff failed to show that the method would "superadd pain" to his death sentence. *Id*. at 138.

were related to the method's novel nature.[269] In rejecting the method which would be used by Alabama ***only six years later***, the opinion declared that "the Eighth Amendment prohibits States from dredging up archaic cruel punishments or perhaps inventing new ones, but it does not compel a State to adopt "untried and untested" (*and thus unusual in the constitutional sense*) methods of execution."[270] *Bucklew* recharacterized the holdings and the standard set forth by *Baze* and *Glossip*, effectively establishing a more stringent standard that starkly narrows interpretation of cruel and unusual punishment under the Eighth Amendment.[271] Rather than having to show an alternative execution method that is "feasible, readily implemented, and reduce[s] a substantial risk of pain," those challenging their execution must now provide a "sufficiently detailed" proposal within their state.[272]

Alabama has now executed eight individuals via nitrogen hypoxia.[273] Louisiana announced its intention to implement the method as it resumed executions after a 15-year hiatus in February 2025, and the state promptly executed Jessie Hoffman with the method in March.[274] There are pending legislative attempts to add the execution method in Nebraska and Ohio, while Florida recently altered its protocol to include, presumably any, "method not deemed unconstitutional."[275] Arkansas enacted legislation to allow execution via nitrogen hypoxia in March, but prisoners are currently challenging the law as violating the state constitution's separation of powers.[276] Various organizations, including the United Nations, have called

269 *Id.* at 149. The first reason was Bucklew's inability to produce evidence that the method was "readily implemented," though the Court did not mention the various secrecy laws affecting access to information about executions. The second reason was the legitimate basis of the State's decision to reject nitrogen hypoxia because the method was "untried and untested." The Court went on to remark that "even if execution by nitrogen hypoxia were a feasible and readily implemented alternative to the State's chosen method, Mr. Bucklew has still failed to present any evidence suggesting that it would significantly reduce his risk of pain." *Id.*

270 *Id.* at 142 (emphasis added).

271 *Id.* at 147. The Court also indicated that the petitioner failed to show that nitrogen hypoxia would "significantly reduce his risk of pain," citing an expert's discussion of the varying potential outcomes based on the gas's administration.

272 Sami Semiatin, Comment, *Lethal Injection Secrecy Laws: A Cruel and Unusual Solution for the Preservation of Capital Punishment*, 28 J. HEALTH CARE L. & POL'Y 49 (2024) (referencing decisions in *Glossip v. Gross* (2015) and *Bucklew v. Precythe* (2019) as further restricting standard from *Baze*.

273 *See* Execution Database, *supra* note 254. As of October 25th, Alabama had executed Demetrius Frazier, Gregory Hunt, Geoffrey Todd West, and Anthony Boyd in 2025.

274 Emily Mae Czachor, *Louisiana Resumes Executions After 15 Years, Issues First Protocol For Nitrogen Hypoxia*, CBS NEWS (Feb. 12, 2025), https://www.cbsnews.com/news/louisiana-resumes-nitrogen-hypoxia-execution/ [https://perma.cc/WG87-J3DS]; *see also* Execution Database, *supra* note 254.

275 *Recent Legislative Activity*, DEATH PENALTY INFO. CTR., https://deathpenaltyinfo.org/facts-and-research/data/recent-legislative-activity#open-sessions [https://perma.cc/X8D3-3SJA] (last visited Aug. 15, 2025).

276 H.B. 1489, 95th Gen. Assemb., Reg. Sess. (Ark. 2025), https://arkleg.state.ar.us/Home/FTPDocument?path=%2FACTS%2F2025R%2FPublic%2FACT302.pdf [https://perma.cc/X9P5-UTXK]; *see also* Hayley Bedard, *Arkansas Death-Sentenced Prisoners File Lawsuit Challenging Constitutionality of State's New Nitrogen Gas Execution Law*, DEATH PENALTY

for a ban against this execution method, arguing that it is prohibited by international law and violates America's international treaty obligations.[277] In 2012, the U.N. concluded that execution by gas asphyxiation was a violation of ICCPR Article 7; the pronouncement was based on a case from the Human Rights Committee in 1993, *Ng. v. Canada*, which held similarly.[278]

The Supreme Court has rejected any constitutional challenges to executions via nitrogen hypoxia in Alabama, most recently denying Anthony Boyd's application for a stay without any explanation of the majority's reasoning.[279] Concerningly, both the District Court and the Eleventh Circuit refused Boyd's request to be executed by firing squad.[280] The implementation of death by firing squad was both "feasible" and "readily implemented," meeting the Constitutional mandate set forth by *Bucklew v. Precythe*.[281] As Sotomayor noted in dissent, "[t]here is a significant constitutional difference between three to six *seconds* of physical pain and terror and two to seven *minutes* of conscious suffocation with its associated psychological pain and terror."[282] The lower courts improperly equated the physical pain from death by firing squad with the psychological pain inflicted via nitrogen hypoxia, ignoring the reality that *all executions via nitrogen hypoxia thus far* have shown signs of prolonged suffering.[283] Furthermore, Boyd's execution lasted for an excruciating *thirty-seven* minutes—much longer than the two minutes posited by Boyd's medical expert.[284] In closing, Justice Sotomayor remarked that "[a]llowing the nitrogen hypoxia experiment to continue despite mounting and unbroken evidence that it violates the Constitution by inflicting unnecessary suffering

---

INFO. CTR (Aug. 12, 2025), https://deathpenaltyinfo.org/arkansas-death-sentenced-prisoners-file-lawsuit-challenging-constitutionality-of-states-new-nitrogen-gas-execution-law [https://perma.cc/B7TK-M6KG].

277 Press Release, *United States: Experts Call For Urgent Ban on Executions By Nitrogen Gas in Alabama*, U.N. HUM. RTS. (Nov. 20, 2024), https://www.ohchr.org/en/press-releases/2024/11/united-states-experts-call-urgent-ban-executions-nitrogen-gas-alabama [https://perma.cc/JPZ5-FFE6].

278 G.A. RES. 67/279, ¶ 32, 77, Interim Report of the Special Rapporteur on Torture and other Cruel, Inhuman or Degrading Treatment or Punishment (Aug. 9, 2012); see also Chitat Ng v. Canada, Communication No. 469/1991, U.N. Doc. CCPR/C/49/D/469/1991 (1994), https://hrlibrary.umn.edu/undocs/html/dec469.htm.

279 Nicholas Bogel-Burroughs, *Supreme Court Declines to Stop Nitrogen Execution in Alabama*, N.Y. TIMES (Jan. 24, 2024), https://www.nytimes.com/2024/01/24/us/alabama-nitrogen-execution.html; *see also* Boyd v. Hamm, No. 25A457 (25–5928) (11th Cir. 2025) (denying Anthony Boyd's application for stay of execution).

280 *Boyd*, No. 25-13545 (11th Cir. 2025), https://www.supremecourt.gov/DocketPDF/25/25-5928/380239/20251021174228804_Boyd-SCOTUS-Appendix.pdf.

281 *Boyd*, *supra* note 279 (Sotomayor, J., dissenting); *Bucklew*, 587 U.S. at 119.

282 *Boyd*, *supra* note 279 (Sotomayor, J., dissenting).

283 *Id.* (detailing the recent history of executions by nitrogen hypoxia) (emphasis added).

284 Lee Hedgepeth, *After Justices Warned of Prolonged Suffocation, Alabama Subjected Anthony Boyd to the Longest Nitrogen Execution in U.S. history*, TREAD (Oct. 23, 2025), https://www.treadbylee.com/p/after-justices-warned-of-prolonged [https://perma.cc/EDH5-GSSF]; *see also Boyd*, *supra* note 280, at 7-8.

fails to 'protect the dignity' of 'the Nation we have been, the Nation we are, and the Nation we aspire to be.'"[285] Though the United States has always permitted capital punishment, courts' increasing tendency to rubber-stamp questionable methods begs the question of whether American execution practices are *truly* governed by the "evolving standards of decency that mark the progress of a maturing society."[286]

CONCLUSION

U.S. is an anomaly amongst the rest of the Western world, as abolition has been the global trend for the past few decades.[287] The country's particularly ruthless history of exploiting prisoners for research purposes continues today through the use of experimental execution methods.[288] The country once justified executions as a public reminder of morality, where they now occur behind prison walls to hide the blunder and disdain of those distributing the final punishment.[289] Those advocating for capital punishment have continually pressed for a more humane means of execution, but the expertise of scientists or medical professionals has rarely been considered in this conversation.[290] As the global attitude towards the death penalty shifts further and further towards abhorrence, U.S. sits alone as the only Western nation using the practice.[291] Manufacturers and the EU's attempt to ban the export of lethal drugs created a widespread shortage for retentionist states, who have increasingly resorted to more untrustworthy suppliers or even novel methods of execution.[292] As the dangers of these risky executions become clearer, states across the country vehemently fight for secrecy to hide their horrifying, yet resilient, implementation of capital punishment.[293] The danger created by ever-increasing state secrecy in one of the world's chief democracies is deeply concerning, and Americans should make note and pressure legislatures to reexamine policies which keep information available to the public. Furthermore, international actors must work to observe and place pressure on the United States, urging the nation to join them in the modern era.

---

285 *Boyd, supra* note 279, at 9 (Sotomayor, J., dissenting).

286 *Trop*, 356 U.S. at 100.

287 *See* Alper, *supra* note 16, at 28.

288 *See* Shah, *supra* note 101.

289 *See* Stein, *supra* note 10, at 4; *see also* KONRAD, *supra* note 20.

290 *See generally* Denno, *Getting to Death*, *supra* note 30.

291 *See* Alper, *supra* note 16.

292 *Id.* at 32; *see also* Denno, *Lethal Injection Secrecy Post-Baze*, *supra* note 181, at 1360-61; *see* Shah, *supra* note 101, at 173, 176.

293 *Id.*