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A COMPREHENSIVE NATIONAL POLICY TO STOP HUMAN CLONING: AN ANALYSIS OF THE HUMAN CLONING PROHIBITION ACT OF 2001 WITH RECOMMENDATIONS FOR FEDERAL AND STATE LEGISLATURES

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"THE FIRST HUMAN CLONE,"¹—that headline signaled to the world that what before was only science fiction now had become reality. U.S. News & World Report broke the story that Advanced Cell Technology (ACT), a small biotech firm in Massachusetts, had succeeded in creating the first human embryonic clone.² This announcement came just four months after the House of Representatives passed the Human Cloning Prohibition Act of 2001 (HCPA),³ which was designed to prevent such cloning. President George W. Bush also supports the HCPA⁴ and has denounced all kinds of human cloning.⁵ Many European countries have condemned the U.S. company's creation of a human clone as well.⁶ Despite consistent pressure from House members, the Bush Administration, and the international community, Senate Democrat leaders stalled the passage of the

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1. U.S. NEWS & WORLD REP., Nov. 25, 2001, at cover.

2. Joannie Fischer, *The First Clone*, U.S. NEWS & WORLD REP., Nov. 25, 2001, at 51, 52.

3. Human Cloning Prohibition Act, H.R. 2505, 107th Cong. (2001). This bill will be analyzed in the form that it was reported in the House of Representatives on July 27, 2001. This Act seeks to add §§ 301–02 to Title 18. For this Note, all pinpoint cites will provide a parallel and usually a more detailed cite to the proposed text in a corresponding parenthetical.

4. See Ronald Brownstein & Aaron Zitner, *The Nation*, *Bush to Urge Senate to Ban All Cloning*, L.A. TIMES, Apr. 10, 2002, at A1.

5. Laurie McGinley & Antonio Regalado, *Bush Criticizes Firm That Clones Human Embryos, Presses for Ban*, WALL ST. J., Nov. 27, 2001, at A4 (quoting Bush as stating that "[t]he use of embryos to clone is wrong . . . [and that we] should not, as a society, grow life to destroy it").

6. See Gautam Naik, *U.S. Company's Clone Creation is Decried in Europe as Governments Weigh Ethics*, WALL ST. J., Nov. 27, 2001, at A4.

HCPA and have yet to allow a full vote on the HCPA or another similar bill.⁷

The human cloning debate has been brewing since the Roslin Institute's announcement on February 22, 1997 that its scientists had cloned a sheep, the first successful cloning of an adult mammal.⁸ After that announcement President William J. Clinton issued an executive order prohibiting the use of federal funds for cloning research involving human embryos.⁹ In addition, President Clinton ordered the National Bioethics Advisory Commission (NBAC) to thoroughly review the various legal and ethical considerations involving human cloning and to issue a report with recommendations within ninety days.¹⁰ The NBAC issued its report on June 9, 1997 and concluded that human cloning was "morally unacceptable."¹¹ The NBAC recommended that President Clinton continue withholding federal funds from such research.¹² Moreover, the NBAC urged private actors to refrain from cloning humans¹³ and asked Congress to pass anti-cloning legislation.¹⁴

Attempts to pass legislation restricting human cloning following the NBAC's recommendation failed in the Senate in 1998.¹⁵ Nevertheless, six states have passed human cloning bans, but these bans alone, as shown by ACT's experiments in Massachusetts, are hardly enough to prevent cloning in the U.S. In the spring of 2001, federal proposals to ban human cloning resurfaced as a reaction to a vigorous public debate over whether the federal government should fund embryonic stem cell research.¹⁶

Part I of this Note will overview the science of human cloning, which is necessary to understand the ethical and political

7. See McGinley & Regalado, *supra* note 5.

8. See NAT'L BIOETHICS ADVISORY COMM'N, CLONING HUMAN BEINGS 1 (1997) [hereinafter NBAC REPORT].

9. *Cloning Technology: Scientific Developments and Current Guidelines*, 77 CONG. DIG. 35, 38 (Feb. 1998).

10. Letter from William J. Clinton, President of the United States, to Harold Shapiro, Chair, NBAC, 33 WKLY. COMP. PRES. DOC. 237 (Feb. 24, 1997), reprinted in NBAC REPORT, *supra* note 8.

11. NBAC REPORT, *supra* note 8, at 108.

12. See *id.* at 109.

13. See *id.*

14. *Id.* The Commission suggested that such legislation should include a "sunset" provision, which would cause the legislation to expire and force the Congress to reevaluate its cloning stance in the near future.

15. See Clark D. Forsythe, *Human Cloning and the Constitution*, 32 VAL. U. L. REV. 469, 470-71 (1998) (describing the various proposals offered and their differences that led to a stalemate in the Senate).

16. See Megan Garvey, *House Approves Strict Ban on Human Cloning Science*, L.A. TIMES, Aug. 1, 2001, at A1.

issues surrounding the various proposals and statutes discussed throughout this paper. Part II will briefly survey the international response to human cloning. Part III will summarize the various types of federal proposals, including the HCPA. Part IV will analyze the HCPA, critique its constitutional authority, and present the most prominent constitutional challenges of the Act. Part V will propose several changes to the HCPA to increase its effectiveness and to strengthen its constitutional foundation. Part VI will briefly describe the five state cloning bans that are currently in effect. Part VII will analyze a proposed state ban and will recommend changes to strengthen state cloning bans. The ethical foundations surrounding cloning policies are discussed in Part VIII. Finally, this Note concludes by calling for a comprehensive national policy against human cloning.

I. A SCIENTIFIC OVERVIEW OF HUMAN CLONING

To understand the legal, political, and moral issues revolving around the HCPA, a brief overview of the scientific and historical issues surrounding human cloning is necessary. The purpose of human cloning is to genetically replicate a human being.¹⁷ A human cell contains a nucleus that holds chromosomes, which carry genes,¹⁸ and deoxyribonucleic acid (DNA) is "the substance of the gene."¹⁹ Moreover, "[a]lmost all of the DNA in a cell is contained in the nucleus, and virtually every cell in the human body contains a human being's complete genetic code."²⁰

A healthy human ovum and a human sperm each have twenty-three chromosomes.²¹ During fertilization a process point called syngamy occurs where the ovum and the sperm unite to become one entity. At that point, a new "individual member of the species *homo sapiens sapiens*—or human being—begins and before which that unique being did not exist."²² Thus, "fertilization is a critical landmark."²³ After the point of syngamy, "the nuclei of the male and female gametes

17. See Forsythe, *supra* note 15, at 474.

18. *Id.* at 474.

19. *Id.* (citing GERALD TORTORA ET AL, MICROBIOLOGY: AN INTRODUCTION 190–226; CEDRIC I. DAVERN, INTRODUCTION TO READINGS FROM SCIENTIFIC AMERICAN: GENETICS 2 (1982)).

20. *Id.* at 474.

21. See *id.* at 475.

22. *Id.* For further evidence as to why a zygote is a human being see *id.* at 477–80.

23. *Id.* at 476 (quoting RONAN O'RAHILLY & FABIOLA MULLER, HUMAN EMBRYOLOGY & TERATOLOGY 29 (2d ed. 1996)).

[begin to] unite resulting in the formation of a zygote . . . [which has a] full complement of chromosomes [for a human] nucleus."²⁴ Thus, once a zygote exists, the embryonic genome is completely formed and embryonic development begins.²⁵

When the one-celled zygote develops into other distinct cells, the new cells are called blastomeres.²⁶ Blastomeres, early in the process, have the potential to split off and become a second embryo.²⁷ As a zygote divides, the new cells become specialized²⁸ or they will not be able to divide to become new embryos.²⁹ In addition, the new cells, like the zygote, are somatic cells as opposed to germ cells.³⁰

Based upon modern science, human cloning³¹ could potentially be accomplished using two separate techniques. One technique is to separate a blastomere from the zygote and is commonly referred to as twinning.³² This type of cloning actually occurs naturally with the formation of identical twins³³ and now may occur artificially.³⁴ The other technique is called nuclear transfer or somatic cell nuclear transfer; this was the one

24. *Id.* at 475 (quoting WILLIAM J. LARSEN, *HUMAN EMBRYOLOGY* 1 (1993)).

25. *Id.* (quoting LARSEN, *supra* note 24, at 1 (1993)). Although the embryonic genome is complete, it is not activated until four to eight cells are present. See O'RAHILLY & MULLER, *supra* note 23, at 29.

26. Forsythe, *supra* note 15, at 476. ("Because they divide mitotically, all blastomeres contain identical chromosomes and genetic information as the original one-celled zygote.") (citing 10 *ENCYCLOPEDIA AMERICANA* 281 (Int'l ed. 1991)).

27. See O'RAHILLY & MULLER, *supra* note 23, at 33. When this occurs naturally, identical twins develop.

28. They can specialize and become bone, hair, skin, ovum, sperm, or other kinds of cells. See Forsythe, *supra* note 15, at 477. They may also be referred to as differentiated. See, e.g., Melissa K. Cantrell, *International Response to Dolly: Will Scientific Freedom Get Sheared?*, 13 *J.L. & HEALTH* 69, 70 (1998-1999).

29. See Forsythe, *supra* note 15, at 477.

30. "A somatic cell is any cell of the embryo, fetus, child, or adult which contains a full complement of two sets of chromosomes; in contrast with a germ cell, i.e., an egg or a sperm, which contains only one set of chromosomes." NBAC REPORT, *supra* note 8, at 1 n.2.

31. Human cloning should not be confused with gene cloning. Human cloning seeks to make an entirely identical genetic entity whereas gene cloning means replacing and replicating one specific gene. See Forsythe, *supra* note 15, at 480-81 (citing JEFF LYON & PETER GORNER, *ALTERED FATES: GENE THERAPY AND THE RETOOLING OF HUMAN LIFE* (1995); EVE K. NICHOLS, *NAT'L ACAD. OF SCI., HUMAN GENE THERAPY* (1988)).

32. See John A. Robertson, *Embryos, Families, and Procreative Liberty: The Legal Structure of New Reproduction*, 59 *S. CAL. L. REV.* 939, 951 (citing C. GROBSTEIN, *FROM CHANCE TO PURPOSE* (1981)) [hereinafter Robertson].

33. NBAC REPORT, *supra* note 8, at 14.

34. See John A. Robertson, *The Question of Human Cloning*, *HASTINGS CTR. REP.*, Mar.-Apr. 1994, at 6 [hereinafter *The Question*].

the Roslin Institute used.³⁵ In this technique, scientists remove the nucleus, and thus its twenty-three chromosomes, from an ovum. Scientists also remove a nucleus from a somatic cell of the person to be cloned.³⁶ The somatic cell's nucleus, which has forty-six chromosomes, is altered³⁷ and then placed into the enucleated cell of the ovum.³⁸ Thus, the ovum cell is tricked into reacting as if the nucleus of a sperm cell had merged with its ovum nucleus. The ovum is now fertilized and is re-implanted into a womb to begin developing.³⁹ Both techniques for artificial cloning are accomplished extracorporeally.⁴⁰

Human cloning, either somatic cell nuclear transfer or twinning, could also be divided into two separate types, reproductive and therapeutic. Reproductive cloning occurs for the explicit purpose of creating or producing a human child.⁴¹ Therapeutic cloning occurs to create an embryonic clone for research purposes or for harvesting his or her cellular materials like stem cells, bone marrow, or organs.⁴²

II. THE INTERNATIONAL RESPONSE TO HUMAN CLONING

After the Roslin Institute's announcement that they had successfully cloned a mammal, the international community immediately responded. The Vatican quickly suggested that countries come together to pass a worldwide ban on human cloning.⁴³ The Council of Europe adopted a parliamentary opinion on September 22, 1997, which called on the governments of the Coun-

35. See Cantrell, *supra* note 28, at 69-70.

36. See Forsythe, *supra* note 15, at 481.

37. One writer described the process for the cloned sheep as follows: Dr. Wilmut's trick was to make the DNA of the differentiated donor cell act like the DNA of a sperm or unfertilized egg. He and his team "starved" the mammary cell into a dormant stage by reducing the nutrient-laden serum to the cell, which made it capable of duplicating the entire organism (like an undifferentiated cell). An electrical current was then administered which caused the "starved" mammary cell to fuse, in a process called renucleation, with an unfertilized egg from which the nucleus had previously been removed through enucleation.

Cantrell, *supra* note 28, at 70.

38. Forsythe, *supra* note 15, at 481.

39. *Id.* at 482.

40. *Id.* (meaning outside the body).

41. See Francis Fukuyama, *The House Was Right to Ban Cloning*, WALL ST. J., Aug. 2, 2001, at A14 (reporting that the U.S. House of Representative voted 265 to 162 to prohibit human cloning).

42. *Id.*

43. See Matthew M. Merrill, *The Sheep Heard 'Round the World': Legislation vs. Self-Regulation of Human Cloning*, KAN. J.L. & PUB. POL'Y, Spring 1998, at 169, 182.

cil to prohibit human cloning and suggested that the United Nations adopt a similar worldwide ban.⁴⁴ Specifically, the Council recommended that each nation adopt legislation that "bans any intervention seeking to create a human being genetically identical to another human being, whether living or dead . . . and to provide for severe penal sanctions to deal with any violations."⁴⁵ The Council reasoned that allowing a human to be cloned into the same set of nuclear genetics was "contrary to human dignity and thus constitutes a misuse of biology and medicine."⁴⁶ By January 12, 1998, nineteen members⁴⁷ of the Council signed this protocol.⁴⁸ Since the Roslin Institute's announcement in 1997, the issue of cloning has come to the forefront as many countries, but not all, have either publicly condemned cloning,⁴⁹ prohibited it, or limited it to therapeutic procedures.⁵⁰ Despite the United State's appearance of joining the Council in condemning human cloning,⁵¹ the Senate has yet to pass a restriction on any human cloning procedure.⁵²

44. Council of Europe: Draft Additional Protocol to the Convention on Human Rights and Biomedicine on the Prohibition of Cloning Human Beings with Explanatory Report and Parliamentary Assembly Opinion, *adopted* Sept. 22, 1977, 36 I.L.M. 1415, 1422.

45. *Id.*

46. *Id.* at 1417.

47. The countries who signed the protocol are Denmark, Estonia, Finland, France, Greece, Iceland, Italy, Latvia, Luxembourg, Macedonia, Moldova, Norway, Portugal, Romania, San Marino, Slovenia, Spain, Sweden, and Turkey. See Joseph Schuman, *European Countries Sign Ban On Human Cloning*, ASSOCIATED PRESS, Jan. 12, 1998.

48. John R. Schmertz & Mike Meier, *Nineteen Council of Europe Members Sign Protocol to Oviedo Convention on Bio-Ethics That Would Add Ban on Cloning of Human Genes Set Except As to Isolated Cells or Tissue*, 4 INT'L L. UPDATE 14, 14. Germany did not sign the protocol claiming that its cloning prohibition was stricter than the Council's protocol. *Id.* The United Kingdom did not sign the protocol. *Id.*

49. See Jason T. Corsover, *The Logical Next Step? An International Perspective on the Issues of Human Cloning and Genetic Technology*, 4 ILSA J. INT'L & COMP. L. 697, 715-40 (1998) for a comprehensive overview of international responses to genetic research and human cloning.

50. "[T]herapeutic cloning involves creating a clone of a patient by hollowing out a donor egg and replacing it with a patient's cell. The resulting embryo could be dissected to provide a source of stem cells that can be turned into transplantable tissues to treat diseases." Antonio Regalado, *Human Cloning Attempt Is Opposed in Hearing*, WALL ST. J., Mar. 29, 2001, at B5.

51. See *supra* notes 6-11 and accompanying text; see also Schuman, *supra* note 47 (citing how the United States is helping with the drafting of the Council of Europe's prohibitory protocol).

52. See Regalado, *supra* note 50.

III. FEDERAL PROPOSALS TO BAN HUMAN CLONING & THE HCPA

In recent years, members of Congress have tried to pass legislation to regulate private human cloning,⁵³ but all of those attempts prior to the HCPA have failed.⁵⁴ Before the House of Representatives passed the HCPA in 2001, at least twelve other bills had been introduced in the 107th Congress to prevent human cloning.⁵⁵ The proposals that Congress entertained varied substantially in some key areas and can be grouped into two general categories, strict and permissive.⁵⁶ The fundamental policy difference between strict and permissive legislation is their stance on whether the government should allow scientists to clone humans into embryos.⁵⁷ Strict bills forbid all human cloning using the somatic cell nuclear transfer method,⁵⁸ while permissive bills allow scientists to clone humans into embryos but prohibit the scientists from implanting embryonic clones into uteruses.⁵⁹ In addition, only strict bills have attempted to enact

53. Multiple bills have been introduced to ban the use of federal funds to further human cloning. This topic, however, will not be the subject of this paper or part of my analysis. My Note will deal primarily with efforts to stop human cloning by any person or entity, regardless of the source of funding.

54. See Fukuyama, *supra* note 41; S. 1601, 106th Cong. (1998); 144 CONG. REC. S599-05 (daily ed. Feb. 11, 1998) (The Senate failed to approve a motion for cloture on the bill 42-54. The bill never made it out of committee after that vote.); see also S. 1611, 105th Cong. (1998) (failing to carryover into the next session after adjournment); S. 1599, 105th Cong. (1998) (failing to carryover); S. 1574, 105th Cong. (1998) (failing to carryover); H.R. 923, 105th Cong. (1997) (failing to carryover).

55. See S. 2439, 107th Cong. (2002); S. 2076, 107th Cong. (2002); S. 1899, 107th Cong. (2002); S. 1893, 107th Cong. (2002); S. 1758, 107th Cong. (2001); H.R. 2608, 107th Cong. (2001); H.R. 2172, 107th Cong. (2001); H.R. 1644, 107th Cong. (2001); H.R. 1608, 107th Cong. (2001); S. 704, 107th Cong. (2001); H.R. 1260, 107th Cong. (2001); H.R. 1601, 107th Cong. (2001).

56. The categories of "strict" and "permissive" may seem at first to correspond respectively to supporters of bans on reproductive and therapeutic cloning and supporters of just banning reproductive cloning, but that is not the case. A supporter of only a ban on reproductive cloning may believe that a permissive ban could not be adequately enforced unless a strict ban on all cloning occurs. In addition, strict bans are also characterized by a strong effort to criminalize cloning, whether therapeutic or reproductive.

57. Although the legislative difference appears to be over at what point cloning should be prohibited from occurring, in actuality much of the debate is between outlawing both reproductive and therapeutic cloning or just reproductive cloning. See Fukuyama, *supra* note 41.

58. See S. 1899, § 2(a) (proposed 18 U.S.C. § 301(1)); H.R. 1644, § 3(a); S. 790, 107th Cong. § 3(a) (2001) (proposed 18 U.S.C. § 302(a)); H.R. 1608, § 3(a); S. 1601, § 3(a); S. 1599, § 3(a) (proposed 18 U.S.C. § 301(d)).

59. See S. 2439, § 4(a) (proposed 18 U.S.C. § 301(a)(1)) ("implanting or attempting to implant . . . into a uterus or the functional equivalent of a

prohibitions under Title 18, the "Crimes and Criminal Procedure" section of the federal code.⁶⁰ Most of these strict bills sanction a maximum of ten years in prison and various civil penalties for those who violate them.⁶¹ The permissive proposals generally mandated lesser sanctions than those imposed by the strict bills. Some permissive bills do sanction criminal penalties for a violation,⁶² but they are more likely to contain only civil remedies or fines that range from five thousand⁶³ to ten million dollars.⁶⁴

The permissive bills seem to be more conscientious about protecting certain types of reproductive techniques and modes of scientific exploration than about exhausting all measures to prevent human cloning. In fact, House Bill 2172 and House Bill 2608, two permissive bills, exempt procedures that do not in any way involve cloning.⁶⁵ House Bill 1611, House Bill 2172, House

uterus"); S. 2076, § 2(1)(A)-(C) ("initiating or attempting to initiate a human pregnancy; [or] . . . the implantation . . . into a mammalian uterus"); S. 1893, § 2 (proposed 42 U.S.C. § 498C(c)(1)) ("by implanting or attempting to implant . . . into a woman's uterus or a substitute for a woman's uterus"); S. 1758, § 4 (proposed 18 U.S.C. § 301(a)(1)) ("by implanting or attempting to implant . . . into a uterus"); H.R. 2608, § 2 (proposed 21 U.S.C. § 1001a(1)(A)) ("with the intent to initiate a pregnancy"); H.R. 2172, § 2 (proposed 21 U.S.C. § 1001a(1)(A)) ("with the intent to initiate a pregnancy"); S. 704, § 2(1)(A)-(C) ("initiating or attempting to initiate a human pregnancy; [or] . . . the implantation . . . into a mammalian uterus"); H.R. 1260, § 2(a) ("with the intent of implanting"); S. 1611, § 4 (proposed 42 U.S.C. § 289(b)(1)) ("to implant or attempt to implant . . . into a woman's uterus"); S. 1574, 105th Cong. § 3(c) (1997) ("for the purpose of, or to implant, the resulting product to initiate a pregnancy . . ."); H.R. 923, § 2(a) (This statute is vague as to whether it would allow implantation of a embryonic clone. In taking into account the principle of lenity, however, the statute would likely be narrowly construed to only prohibit implantation.).

60. S. 1899 § 2(a) (proposed 18 U.S.C. § 302(c)(1)); S. 790 § 3(a) (proposed 18 U.S.C. § 302(a)); H.R. 1644 § 3(a); H.R. 1608 § 3(a); H.R. 1601 § 3(a); H.R. 1599 § 3(a) (proposed 18 U.S.C. § 301(d)).

61. S. 1899, § 2(a) (proposed 18 U.S.C. § 301(c)(1)); S. 790 § 3(a) (proposed 18 U.S.C. § 302 (c)(1)); H.R. 1644 § 3(a) (proposed 18 U.S.C. § 302(c)(1)); H.R. 1608 § 3(a) (proposed 18 U.S.C. § 1822(a)) (giving only a maximum two-year sentence and not providing any civil penalties); S. 1601 § 3(a) (proposed 18 U.S.C. § 301(c)(1)); S. 1599 § 3(a) (proposed 18 U.S.C. § 301(c)(1)).

62. S. 2439 § 4(a) (maximum ten-year sentence); S. 2076 § 4(b) (maximum ten-year sentence); S. 1893 § 2 (maximum ten-year sentence); H.R. 2608 § 2(b) (maximum ten-year sentence); H.R. 2172 § 2(b) (ten-year sentence); S. 704 § 4(c) (maximum ten-year sentence); H.R. 1260 § 2(a) (maximum five-year sentence).

63. See S. 1574 § 4(a); H.R. 923 § 2(b).

64. See S. 704 § 4(a).

65. Both H.R. 2608 and H.R. 2172 exempt "[t]he use of in vitro fertilization, the administration of fertility-enhancing drugs, or the use of other medical procedures to assist a woman in becoming or remaining pregnant." H.R.

Bill 2608, and Senate Bill 1758 have even tried to strike down all state and local laws regarding cloning by attaching a broad preemption clause.⁶⁶ Furthermore, those bills contain sunset clauses, which would allow human cloning to become legal again without any further legislative action.⁶⁷ Although some federal proposals to prohibit somatic cell nuclear transfer cloning are more permissive than others, only two federal proposals—Senate Bill 2076 and Senate Bill 704—would actually prohibit human cloning using the twinning technique.⁶⁸

Despite these varying proposals, none have been able to garner the consent of an entire house of Congress. HCPA remains the only proposal to pass one house, and to date it has yet to pass the Senate. Thus, no federal law prohibiting private individuals from cloning exists in the United States.⁶⁹ The Food and Drug Administration (FDA), though, has claimed that Congress has given the FDA the authority to regulate human cloning.⁷⁰ For the FDA to have such authority, however, the FDA would have to deem human clones “drugs,” which the Act defines as “articles (other than food) intended to affect the structure of any function of the body.”⁷¹ Experts have questioned the FDA’s interpretation, which at its heart treats clones as “articles.”⁷² Moreover, because Congress has not given the FDA explicit and clear

2608 § 2(a) (proposed 21 U.S.C. § 1001(b)(3)); H.R. 2172 § 2(a) (proposed 21 U.S.C. § 1001(b)(3)). Both bills along with H.R. 1611 also protect the use of mitochondrial, cytoplasmic, or gene therapy. H.R. 2608 § 2(a) (proposed 21 U.S.C. § 1001(b)(2)); H.R. 2172 § 2(a) (proposed 21 U.S.C. § 1001(b)(2)); S. 1611 § 4(a) (proposed 42 U.S.C. § 498C(c)(2)).

66. “The provisions of this section shall preempt any State or local law that prohibits or restricts research regarding, or practices constituting, somatic cell nuclear transfer, mitochondrial or cytoplasmic therapy, or the cloning of molecules, DNA, cells, tissues, organs, plants, animals, or humans.” S. 1611 § 4 (proposed 42 U.S.C. § 498C(h)); *see also* S.1758 § 4(a) (proposed 18 U.S.C. 301(g)) (containing similar preemptive language). H.R. 2608 and H.R. 2172 have a similar preemption statement, but they contain a limited grandfather clause of statutes enacted before the bill’s enactment date. *See* H.R. 2172 § 2(a) (proposed 21 U.S.C. § 1001(d)); H.R. 2608 § 2(a) (proposed 21 U.S.C. § 1001(d)).

67. H.R. 2608 § 2(a) (proposed 21 U.S.C. § 1001(e)) (ten-year sunset clause); H.R. 2172 § 2(a) (proposed 21 U.S.C. § 1001(e)) (ten-year sunset clause); S. 1611 § 4 (ten-year sunset clause).

68. S. 2076, § 2(1)(C); S. 704, § 2(1)(C). These bills, however, only prohibit the implantation of embryonic clones and do not prohibit the twinning technique to develop embryonic clones. Ethical concerns regarding this type of legislation will be addressed *infra* in Part VIII(D).

69. *See* H.R. REP. 107-170, at 3 (2001).

70. *See id.*

71. *Id.*

72. *Id.*

authority and has attempted but failed to pass a ban on human cloning, a court will probably hold that the FDA does not have the authority to regulate human cloning, regardless of its own statutory interpretations.⁷³

The push for the HCPA in the House of Representatives developed largely from the national debate over whether federal funds should be used to fund embryonic stem-cell research.⁷⁴ Both the debates over human cloning and stem-cell research are also closely linked to the highly volatile topic of abortion, as one's perception of when life begins may influence what techniques and types of cloning one believes should be outlawed and how strict or permissive the law should be.⁷⁵ Thus, many moral and ethical issues surround the HCPA, and the proposal is based, at least in part, upon some basic presuppositions, which will be discussed in Part IV(A).

The HCPA's text and its legislative history describe its characteristics. HCPA is a complete ban on human cloning using the somatic cell nuclear transfer technique,⁷⁶ as it seeks to outlaw both reproductive and therapeutic cloning.⁷⁷ Moreover, the HCPA is inherently strict, and the bill would forbid human cloning using the somatic cell nuclear transfer method at any stage.⁷⁸ In addition, the HCPA would be enforced under Title 18, and its violators would be subject to sentences of up to ten years in prison.⁷⁹ Furthermore, the Act contains civil penalties for violators who derive a pecuniary gain, including a minimum million-dollar fine.⁸⁰ The HCPA, however, does contain an exclusion provision protecting some types of research, but the provision is

73. See *Food and Drug Admin. v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120 (2000). The Supreme Court held that Congress had precluded the FDA from regulating tobacco products, despite the FDA's construction of a statute that it administers claiming that it could regulate them. The Court instead found that Congress had specifically spoken on the matter of tobacco regulations through its past legislation and would not have delegated such broad power to the FDA, which included the ability to ban all tobacco products, over a policy decision of such a magnitude to an administrative agency.

74. Garvey, *supra* note 16.

75. *Id.*

76. See Brownstein & Zitner, *supra* note 4 and accompanying text.

77. Fukuyama, *supra* note 41.

78. See H.R. 2505, 107th Cong. § 2a (2001) (proposed 18 U.S.C. § 301(1)).

79. See *id.* (proposed 18 U.S.C. § 302(c)(1)).

80. See *id.* (proposed 18 U.S.C. § 302(c)(2)) ("a civil penalty of not less than \$1,000,000 and not more than an amount equal to the amount of the gross gain multiplied by 2, if that amount is greater than \$1,000,000").

relatively limited.⁸¹ Additionally, the HCPA neither preempts state laws concerning cloning or research matters, nor contains a sunset provision. The HCPA's legislative history reinforces these characteristics as the House Subcommittee on Crime rejected amendments to exclude therapeutic or research cloning from the law, to protect certain types of reproductive techniques, to include a five-year sunset provision, or to adopt language preempting state cloning laws.⁸² Thus, the key features of the HCPA are not in dispute.

IV. A CRITIQUE OF THE HCPA & ITS CONSTITUTIONAL AUTHORITY

As shown in Part III, the HCPA varies significantly from other types of human cloning legislation. These variations occur as a result of the HCPA's philosophical underpinnings and its textual characteristics and scope. This section discusses the purpose of the HCPA and analyzes its textual features. Moreover, this section examines the legislation's constitutional authority, which would enable its text to be enforced and its purpose to come to fruition. Additionally, this section discusses the prominent constitutional arguments that may be used to challenge such legislation.

A. *Philosophical Underpinnings*

A fundamental premise underlying all proposed federal human cloning bans is that reproductive cloning—cloning that would produce a child—should be prohibited.⁸³ Proponents of such a ban offer reasons ranging from claims that cloning procedures are unsafe for women to claims that the act of human cloning is inherently evil.⁸⁴ The HCPA, along with other strict cloning prohibitions, hold to another underlying premise—no one should clone a human, even for therapeutic or research pur-

81. "Nothing in this section restricts areas of scientific research not specifically prohibited by this section, including research in the use of nuclear transfer of other cloning techniques to produce molecules, DNA, cells other than human embryos, tissues, organs, plants, or animals other than humans." *Id.* (proposed 18 U.S.C. § 302(d)).

82. See H.R. REP. 107-170, at 6-7 (2001).

83. Fukuyama, *supra* note 41.

84. See NBAC REPORT, *supra* note 8, at 64 (arguing that the significant risks to the unborn and the physical well-being of the child requires that the procedure be prohibited); Lisa Zagaroli, *Ban Cloning Funding, Research, Ehlers Says*, DET. NEWS, Mar. 6, 1997, at A5 (quoting Rep. Vern Ehlers as saying that "[i]t is simply wrong to experiment with the creation of human life in this way").

poses. Proponents justify such legislation by using arguments anywhere from "embryonic research is inherently wrong"⁸⁵ to "a total ban is the only effective means available to prevent reproductive cloning."⁸⁶ Thus, although the premises of the statute are apparent enough to produce a somewhat effective ban, policymakers should still seek a consensus as to the theories behind the premises in order to develop additional, coherent policies against human cloning.⁸⁷

85. See generally Phil Belin, *A Pro-life Primer on Embryonic Stem Cell Research* (Aug. 2001) (on file with author) (discussing how life begins at conception and before implantation, which means that research that causes undue harm or death to an embryo is unacceptable).

86. See *Prohibition on Human Cloning: Prepared Witness Testimony on H.R. 1644, Human Cloning Prohibition Act of 2001, and H.R. 2172, Cloning Prohibition Act of 2001 Before the Subcomm. on Health of the House Comm. on Energy and Commerce*, 107th Cong. (2001) (statement of Leon Kass, M.D., Ph.D., Addie Clark Harding Professor of Social Thought, University of Chicago) [hereinafter Kass Testimony] (discussing how once one of the existing embryonic clones that was developed for research purposes only is implanted no one will be able to legally stop the clone from being born, except the woman carrying him or her).

87. For instance, the theories of criminal law that Congress wishes to use to implement such a policy make a significant impact on its interpretation and effectiveness. The three most recognized theories behind criminal law are retribution, deterrence, and rehabilitation. The theory of retribution states that "someone who has violated the rights of others should be penalized, and punishment restores the moral order that has been breached by the original wrongful act." 4 *ENCYCLOPEDIA OF CRIME AND JUSTICE* 1338 (Sanford H. Kadish ed., 1983) [hereinafter "4 *ENCYCLOPEDIA*"]. The theory of deterrence, though, claims that punishment of offenders occurs to create a threat of punishment that will discourage the offenders and society from committing such offenses. See *id.* at 1686. Retribution focuses on attempting to reform an offender by reducing or eliminating his "subsequent criminal behavior through a program of planned intervention." *Id.* at 1364. Because the three theories differ in their approaches to punishment, when they are all applied to a similar situation the outcomes may be different. Consequently, if Congress agrees that therapeutic and reproductive cloning are both not inherently evil, the laws would be *malum prohibitum* regulations. 1 *ENCYCLOPEDIA OF CRIME AND JUSTICE* 296 (Sanford H. Kadish ed., 1983) (*Mala prohibita* acts are wrong simply because they are prohibited.) [hereinafter "1 *ENCYCLOPEDIA*"]. This situation would likely mean that the statute should be interpreted and construed to only deter a person from cloning and that if a person did clone a human, the person should only be punished if the punishment was consistent with the deterrence principles. If human cloning was *malum in se*, however, a clonist would be punished regardless if the punishment would deter others from cloning or deter her from cloning again. Thus, because multiple combinations of theories exist, the bill could be construed or reformed in vastly different ways to become more effective in light of its underlying theories. I argue and then assume that the HCPA was passed on the theory that both therapeutic and reproductive cloning—either by their ultimate results or their procedures—are *malum in se* and that what the House intended to impose was both a theory of retribution and deterrence in enforcing this legislation.

In examining the text and the legislative history of the HCPA, several key aspects point to the House's understanding that reproductive and therapeutic cloning are inherently unethical. The legislative history plainly states that somatic cell nuclear cloning is an "ethically and morally objectionable procedure."⁸⁸ Additionally, the Act "specifies that the mental culpability standard for violating the criminal statute is 'knowingly.'"⁸⁹ This state of mind requirement, which was specifically noted in committee,⁹⁰ appears to cast the bill as a *malum in se* offense and not as a mere morally neutral regulation.⁹¹ Furthermore, the HCPA prohibits someone to "knowingly . . . receive for any purpose an embryo produced by human cloning or any product derived from such embryo."⁹² The mere fact that simply receiving the byproduct of human cloning is strongly prohibited shows that the act of cloning itself must be intolerable or reprehensible. Moreover, the fact that human cloning is prohibited "for any purpose" indicates how severe and repugnant the House perceived cloning to be. In addition, H.R. 2505 also criminalizes attempts to perform a human cloning procedure or to participate in an attempt,⁹³ which further indicates that Congress believes that human cloning is *malum in se*.⁹⁴ Therefore, because both the legislative history and the text indicate that the House believed cloning to be morally objectionable, lawmakers intended to use the HCPA to punish and prevent a moral wrong. In fact, because the text prohibits and indiscriminately punishes both therapeutic and reproductive cloning, the most probable message that the House wished to convey was that both types of

88. H.R. REP. 107-170, at 3 (2001); *But see id.* ("[T]he sections on Congressional findings and the sense of Congress contained in H.R. 1644 are not included in H.R. 2505.). The findings in H.R. 1644 included § 2(7), which stated "the prospect of creating new human life solely to be exploited and destroyed in this way has been condemned on moral grounds by many[.]"

89. H.R. REP. 107-170, at 4.

90. *See id.*; *see also Cloning Prohibition Body Armor Restrictions: Hearings on Human Cloning H.R. 1644 Before the Subcomm. on Crime of the House Comm. on the Judiciary*, 107th Cong. (2001) (statement of Gerald V. Bradley, Professor of Law, University of Notre Dame) [hereinafter Bradley Testimony].

91. *See* 1 ENCYCLOPEDIA, *supra* note 87, at 299-300 (describing how acts associated with crimes that contain a lower level of mens rea are sometimes not considered to be moral wrongs in and of themselves).

92. H.R. 2505, 107th Cong. § 2a (2001) (proposed 18 U.S.C. § 302(a)(3)) (emphasis added).

93. *See id.* (proposed 18 U.S.C. § 302(a)(1)-(2)).

94. The fact that Congress wishes either to severely deter the procedure or to punish that actor not only for a completed result but an intention, along with the overt act, to complete the result conveys the message that the procedure, including the intention to perform it, is objectionable.

cloning were morally objectionable. Consequently, the House likely adopted the position that "the prospect of creating new human life solely to be exploited and destroyed" is morally problematic.⁹⁵

B. *Textual Analysis*

An understanding of the prominent textual issues is necessary in evaluating any statute, including the HCPA.⁹⁶ Although textual issues may be numerous at times, the main issues involving the HCPA are its ambiguous scientific language, its state of mind requirement, and the ability of prosecutors to enforce such legislation.

95. H.R. 1644, 107th Cong. § 2(7). This bill was the statutory precursor to the HCPA. The HCPA was identical with the exception of a few changes in committee and without H.R. 1644's findings. *See* H.R. REP. 107-170, at 3.

96. The chargeable portions of the test are as follows:

Sec. 301. Definitions

In this chapter:

- (1) HUMAN CLONING- The term 'human cloning' means human asexual reproduction, accomplished by introducing nuclear material from one or more human somatic cells into a fertilized or unfertilized oocyte whose nuclear material has been removed or inactivated so as to produce a living organism (at any stage of development) that is genetically virtually identical to an existing or previously existing human organism.
- (2) ASEXUAL REPRODUCTION- The term 'asexual reproduction' means reproduction not initiated by the union of oocyte and sperm.
- (3) SOMATIC CELL- The term 'somatic cell' means a diploid cell (having a complete set of chromosomes) obtained or derived from a living or deceased human body at any stage of development.

Sec. 302. Prohibition on human cloning

- (a) IN GENERAL- It shall be unlawful for any person or entity, public or private, in or affecting interstate commerce, knowingly—
 - (1) to perform or attempt to perform human cloning;
 - (2) to participate in an attempt to perform human cloning;
 - or
 - (3) to ship or receive for any purpose an embryo produced by human cloning or any product derived from such embryo.
- (b) IMPORTATION- It shall be unlawful for any person or entity, public or private, knowingly to import for any purpose an embryo produced by human cloning, or any product derived from such embryo.

H.R. 2505 § 2(a) (proposed 18 U.S.C. §§ 301-02).

1. Restrictive Scientific Language

Because language is by nature inadequate to convey a full and complete understanding of one's thoughts, statutory texts are prone to being incomplete and misunderstood, misconstrued, or misapplied. Although these concerns exist in the typical statute, they are heightened in those, like the HCPA, that must describe a scientific procedure. The HCPA's goal was to eliminate the possibility of cloning in the United States but to not restrict valid and morally permissible scientific procedures.⁹⁷ "Extremely carefully drafted and limited to its scope, the bill makes very clear that there is to be no interference with the scientific and medical practices [that are not morally objectionable]."⁹⁸ The exact wording in barring somatic cell nuclear transfers, however, may be too rigid to constitute an effective ban on human cloning.

The statute defines human cloning very specifically in ways that may prove problematic. The HCPA states that "[t]he term 'human cloning' means human asexual reproduction, accomplished by introducing nuclear materials from one or more human somatic cells"⁹⁹ The word "mean" is exclusionary,¹⁰⁰ and therefore, if a scientist develops a similar method that is distinguishable from the definition of "human cloning" the Act would not apply. With the dynamics and growth of the biotech industry, this restrictive approach would protect some non-morally objectionable techniques but may not effectively prohibit human cloning. Furthermore, the HCPA only prohibits somatic cell nuclear transfers that "produce a living organism (at any stage of development) that is *genetically virtually identical* to [another human organism]."¹⁰¹ The phrase "genetically virtually identical" is not defined in the text, and therefore, if a court liberally construes the phrase, a scientist who has cloned a human

97. See Kass Testimony, *supra* note 86 ("[The bill is] precisely suited to accomplish this goal [of stopping human cloning], no more and no less.").

98. *Id.* This claim is disputed, however, as critics cite multiple procedures that this bill inadvertently bans. See H.R. REP. 107-170, at 73, 80 (claiming that the bill is overbroad and would ban stem-cell research, ooplasmic transfers, and mitochondria introductions).

99. H.R. 2505 § 2(a) (proposed 18 U.S.C. § 301 (1)) (emphasis added).

100. "'Mean' is the most common and general in carrying the basic sense although it can often connote evaluation or appraisal; in applying to a term it involves the term's full content." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1398 (1986).

101. H.R. 2505 § 2(a) (proposed 18 U.S.C. § 301 (1)) (emphasis added).

but made a few genetic alternations may escape prosecution.¹⁰² Therefore, although the definitions are narrowly defined, the effectiveness of the law, in light of new advancements in technology, may be minimal at best.

2. State of Mind

Criminal statutes that do not include a state of mind requirement are disfavored,¹⁰³ and the nature of this offense and its ten-year sentence suggests that a state of mind other than strict liability, like recklessly or knowingly, be implied in the statute.¹⁰⁴ Therefore, the drafters of the HCPA inserted a state of mind of "knowingly" for the conduct needed to violate the statute in sections 302(a)(1)–(a)(3) and (b).¹⁰⁵ Nevertheless, several contextual ambiguities exist concerning exactly what an actor must know to violate the statute. For instance, the courts will likely interpret the requirement that the violation take place "in or affecting interstate commerce" to be a jurisdictional hook. Thus, the courts will likely imply strict liability to that element.¹⁰⁶

In Section 302(a), the statute states, "it shall be unlawful for any person . . . knowingly . . . to perform *human cloning* . . . to participate in an attempt to perform *human cloning*."¹⁰⁷ The question arises, however, concerning what level of knowledge "knowingly" requires as to the "human cloning," which the statute defines in Section 301(1).¹⁰⁸ If the actor must fully know that human cloning, as defined, would take place, participants who may not have a scientific background but who knew they were participating in a least a general type of cloning could not be guilty of violating the statute. But, if a participant need only

102. The phrase "genetically virtually identical" has also been criticized as possibly outlawing practices that Congress did not intend to outlaw, such as the introduction of mitochondria into a fertilized egg. See H.R. REP. 107-170, at 80.

103. See *United States v. U.S. Gypsum Co.*, 438 U.S. 422, 437–38 (1978).

104. See Bradley Testimony, *supra* note 90.

105. H.R. 2505 § 2(a) (proposed 18 U.S.C. § 302(a)–(b)).

106. See *United States v. Yermian*, 468 U.S. 63, 68 (1984) ("[Jurisdictional hook's] primary purpose is to identify the factor that makes the [offense] an appropriate subject for federal concern. Jurisdictional language need not contain the same culpability requirement as other elements of the offense.")

107. H.R. 2505 § 2(a) (proposed 18 U.S.C. § 302(a)).

108. *Id.* (proposed 18 U.S.C. §§ 301–02).

The term 'human cloning' means human asexual reproduction, accomplished by introducing nuclear material from one or more human somatic cells into a fertilized or unfertilized oocyte whose nuclear material has been removed or inactivated so as to produce a living organism (at any stage of development) that is genetically virtually identical to an existing or previously existing human organism.

know that a general type of cloning is to occur, the statute would be more effective in deterring human cloning but would also likely deter participation in cloning techniques that fall outside the statute.

In general, "knowingly" would probably be construed to mean full knowledge of the human cloning as defined in the statute. In interpreting the statute, the principle of lenity dictates that the statute be construed in favor of the defendant,¹⁰⁹ which would result in a "full knowledge" interpretation. The government may argue, however, that because human cloning is unusual and morally wrong, such exact knowledge should not be required, but rather only general knowledge should be required. A court, however, will likely hold that knowledge as to the surrounding circumstances is required.¹¹⁰

Section 302(a)(3) also states that it is unlawful for a person "knowingly . . . to ship or receive . . . *an embryo produced by human cloning.*"¹¹¹ Section 302(b) states a similar requirement that it is unlawful for a person "knowingly to import . . . *an embryo produced by human cloning.*"¹¹² Thus, on its face, the statute may seem unclear whether it requires that the actor know that the embryo was produced by human cloning or whether she knew that the thing she knowingly possessed was an embryo. When a statute is silent, however, the government must show that the defendant possessed knowledge as to the surrounding circumstances that bear on liability.¹¹³ Therefore, a court will likely find that the actor needed to have known that the actor possessed a human embryonic clone. For the same reason, a court may find that the actor needs knowledge that the embryo was produced through somatic cell nuclear transfer human cloning. Nevertheless, a court could reasonably find "in view some category of dangerous and deleterious devices" that the law could assume that the individual was alerted to the fact that he stood in "responsible relation to a public danger."¹¹⁴ In addition, a court could rule that simply importing, shipping, or receiving embryos in and of itself is an act that "one would hardly be surprised to learn . . . is not

109. See, e.g., *Liparota v. United States*, 471 U.S. 419, 427 (1985) (applying the rule of lenity to an ambiguity in favor of the defendant, which resulted in the reversal of the defendant's conviction).

110. See, e.g., *United States v. X-Citement Video*, 513 U.S. 64 (1994).

111. H.R. 2505 § 2(a) (proposed 18 U.S.C. § 302 (a)(3)) (emphasis added).

112. *Id.* (proposed 18 U.S.C. § 302 (b)) (emphasis added).

113. See *Staples v. United States*, 511 U.S. 600 (1994).

114. *Id.* at 612 (quoting *United States v. Dotterweich*, 320 U.S. 277, 281 (1943)).

an innocent act."¹¹⁵ In all likelihood, a court will find that knowledge that the embryo is a human clone is needed because of the principle of lenity and because importing, shipping, and receiving embryos in and of itself is not generally considered to be morally objectionable.

3. Prosecutorial Discretion

The United States Congress has created approximately 3,300 criminal laws in Title 18 in an attempt to establish national policies concerning various types of actions and behaviors.¹¹⁶ The responsibility to implement these policies, however, rests solely on the Executive Branch and more specifically, the Department of Justice. Thus, the effectiveness of a law depends largely on its ease of enforceability and prosecutorial initiative. Relative to other proposals, the HCPA is generally enforceable.¹¹⁷ The scientific definition, though, may pose an enforceability problem as technology increases causing procedures to escape the scope of the statute.¹¹⁸ Furthermore, how a court interprets the Act's *men rea* requirement will affect a prosecutor's ability to convict those who clone humans.¹¹⁹ As the courts require more *mens rea* to violate a statute, the statute becomes more difficult to enforce. Moreover, if the courts continue to apply rules of construction in favor of those who clone, they will limit the statute's scope and its effectiveness.

Prosecutorial initiative will also dictate the legislation's effectiveness. For instance, if prosecutors are interested, committed, and supportive of the HCPA's attempt to ban all human cloning, the HCPA is more likely to be enforced.¹²⁰ Moreover, if local law

115. *United States v. Freed*, 401 U.S. 601, 609 (1971) (holding that knowingly possessing hand grenades satisfies the mental culpability requirement for a statute forbidding the possession of unregistered grenades because grenades are so dangerous to the public safety that one has fair notice that they may need to be registered); *see also* *United States v. Balint*, 258 U.S. 250 (1922) (holding that knowing that the drug possessed is prohibited is not required because the act of possessing drugs is so dangerous that the possessor has already been put on fair notice that the types of drugs he possesses may be regulated).

116. *See* Ronald L. Gainer, *Federal Criminal Code Reform: Past and Future*, 2 *BUFF. CRIM. L. REV.* 45, 53 (1998).

117. *See* Bradley Testimony, *supra* note 90.

118. *See supra* notes 97–102 (discussing the difficulty with the HCPA's scientific language).

119. *See supra* notes 103–15 and accompanying texts for a discussion on textual ambiguities involving state of mind.

120. *See* Timothy S. Bynum, *Prosecutorial Discretion and the Implementation of a Legislative Mandate*, in *IMPLEMENTING CRIMINAL JUSTICE POLICIES* 47 (Merry Morash ed., 1982) (citing M. McLaughlin, *Implementation as Mutual Adaption*, in *SOCIAL PROGRAM IMPLEMENTATION* 167–80 (W. Williams & R. Elmore eds.,

enforcement officials perceive the policies and their purpose to be clear, stricter enforcement is more likely.¹²¹ Additionally, prosecutors face environmental pressures from those within the legal community and from political constituencies that may shape prosecutorial policies and decisions, which could alter its effectiveness.¹²² Furthermore, the prosecutorial structure is such that even if committed prosecutors have a clear statute with no pressing negative environmental pressures "there may [be] a great deal of variation in the manner in which [cloning policies] are carried out."¹²³ In addition, neither Congress nor the courts have power to compel a prosecution,¹²⁴ and the prosecutor's decision to bring a charge cannot be second-guessed.¹²⁵ Thus, unless the United States Attorney General makes a concerted effort to mandate strict enforcement of the HCPA, its effectiveness toward prohibiting all cloning is in jeopardy. But, because the HCPA does not preempt state and local laws on cloning, state prosecutors may still have the ability to prohibit cloning if federal prosecutors prove unreliable.¹²⁶ Consequently, prosecutorial discretion may threaten the HCPA's effectiveness, but the legislation would serve as a good first step towards a national policy against human cloning.

C. Constitutional Authority Under the Commerce Clause

The HCPA cites Article I, Section 8, Clause 3 of the United States Constitution, the Commerce Clause, as Congress' sole

1976); D. Van Meter & C. Van Horn, *The Policy Implementation Process: A Conceptual Framework*, 6 ADMIN. & SOC'Y 445-88 (1975)).

121. See *id.* at 47 (citing BERYL RADIN, IMPLEMENTATION, CHANGE, AND THE FEDERAL BUREAUCRACY (1978)).

122. See *id.* (citing L. Mellon, J. Jacoby & M. Brewer, *The Prosecutor Constrained by His Environment: A New Look at Discretionary Justice in the United States*, 72 J. CRIM. L. & CRIMINOLOGY 52, 52-81 (1981)). Although federal prosecutors are more insulated from some pressures than state prosecutors because they are not elected, they ultimately must answer to the Chief Executive, the President, who is elected.

123. See *id.* at 48.

124. See G. Robert Blakey, *Federal Criminal Law: The Need, Not for Revised Constitutional Theory or New Congressional Statutes, But the Exercise of Responsible Prosecutive Discretion*, 46 HASTINGS L.J. 1175, 1216 n.91 (1995) (citing *United States v. Cox*, 342 F.2d 167, 170-72 (5th Cir. 1965)).

125. See *id.* (citing *Newman v. United States*, 382 F.2d 479, 480-82 (D.C. Cir. 1967)).

126. Nevertheless, because state prosecutors are generally limited to only enforcing state criminal laws and because the HCPA does not extend prosecutorial authority to state prosecutors, a state anti-cloning statute would first have to be enacted to enable state prosecutors to enforce a cloning ban.

authority to enact such legislation,¹²⁷ which states that Congress has the power “[t]o regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.”¹²⁸ In *Champion v. Ames*, the Court interpreted this power to allow Congress to prohibit items in commerce from traveling across state lines.¹²⁹ The Court, in *United States v. Green*, upheld Congress’ ability to protect interstate commerce from injury.¹³⁰ Thus, because other acts have outlawed criminal actions that interfered with commerce “in any way or degree,”¹³¹ Congress’ power to criminalize acts in or affecting commerce has generally been considered broad. In addition to the broad power, the Court found in *Perez v. United States*¹³² that Congress could find, as a matter of law, whether a class of activities affects interstate commerce, thus alleviating a federal prosecutor’s duty to prove that a class of alleged activities actually affected interstate commerce.¹³³ On its face, the HCPA appears to meet this standard as the statute applies to cloning that occurs “in or affecting interstate commerce.”¹³⁴

The Court, however, appeared to shift its Commerce Clause jurisprudence in *United States v. Lopez*.¹³⁵ The Court stated that valid Commerce Clause legislation should be grouped into three categories:

127. See H.R. REP. 107-170, at 10 (2001).

128. U.S. CONST. art. I, § 8, cl. 3.

129. 188 U.S. 321 (1903).

[L]ottery tickets are subjects of traffic among those who choose to sell or buy them; that the carriage of such tickets by independent carriers from one state to another is therefore interstate commerce; that under its power to regulate commerce among the several states Congress—subject to the limitations imposed by the Constitution upon the exercise of the powers granted—has plenary authority over such commerce, and may prohibit the carriage of such tickets from state to state

Id. at 363; see also *Hoke v. United States*, 227 U.S. 308 (1913) (upholding the Mann Act as constitutional, which outlawed the transporting of women in interstate commerce for the purposes of prostitution).

130. 350 U.S. 415, 420–21 (upholding the Hobbs Act and stating that the legislation was aimed at protecting interstate commerce from extortion and that “racketeering affecting interstate commerce was within federal legislative control” (citation omitted)); see *Stirone v. United States*, 361 U.S. 212, 215 (1960) for a more explicit explanation of the Hobbs Act’s constitutional authority.

131. See *Stirone*, 361 U.S. at 215 (quoting 18 U.S.C. § 1951(a)).

132. 402 U.S. 146 (1971).

133. See *id.* at 151–52.

134. H.R. 2505, 107th Cong. § 2a (2001) (proposed 18 U.S.C. § 302(a)).

135. 514 U.S. 549 (1995).

First, Congress may regulate the use of the channels of interstate commerce. . . . Second, Congress is empowered to regulate and protect the instrumentalities of interstate commerce, or persons or things in interstate commerce, even though the threat may come only from intrastate activities. . . . Finally, Congress' commerce authority includes the power to regulate those activities having a substantial relation to interstate commerce, *i.e.*, those activities that substantially affect interstate commerce.¹³⁶

Furthermore, the Court also held that if the congressional regulations could only be upheld under the substantial relationship category, the regulated activities must also be economic for the regulation to be sustained.¹³⁷ Moreover, the Court suggested that states "possess primary authority for defining and enforcing the criminal law."¹³⁸ In addition, the Court in *United States v. Morrison*, struck down another statute in a similar fashion even though Congress had numerous findings as to the prohibited activities' effect on interstate commerce.¹³⁹ Therefore, in light of the Court's recent shift in jurisprudence, the HCPA's constitutional authority under the Commerce Clause may be less sound.¹⁴⁰

Congress would undoubtedly have the authority to prohibit all cloning activities that involved the channels of interstate commerce.¹⁴¹ Thus, anyone who crossed state lines to perform, attempt to perform, or participate in an attempt to perform a proscribed human cloning procedure would be held liable under this statute. Furthermore, any person shipping goods over state lines or receiving or importing a good from across state lines could also be liable under the HCPA. Congress also has the

136. *Id.* at 558–59 (citations omitted).

137. *Id.* at 560 ("Where economic activity substantially affects interstate commerce, legislation regulating that activity will be sustained.").

138. *Id.* at 561 n.3 (quoting *Brecht v. Abrahamson*, 507 U.S. 619, 635 (1993)). The Court also identifies other areas of state sovereignty like family law, *see id.* at 564, and education, *see id.* at 566.

139. 529 U.S. 598 (2000).

140. The courts could interpret the HCPA's jurisdictional phrase "in or affecting interstate commerce" either to establish an element of the crime to which the government would have to prove beyond a reasonable doubt or to be a flat ban on human cloning through Congress' exercising their plenary commerce power. *See Bradley Testimony*, *supra* note 90. If a court should doubt that Congress has the power to completely ban human cloning under the Commerce Clause, the court would likely construe the statute's jurisdictional phrase to establish an element of the crime. *See id.* Thus, this paper will proceed on the basis that the HCPA's jurisdictional phrase is an element that must be proven.

141. *See supra* text accompanying notes 135–36.

power to regulate interstate instrumentalities and to protect items in interstate commerce.¹⁴² Therefore, if the government proved that a person used a plane, train, car, or another instrument of interstate commerce while engaging in, or attempting to engage in, an act prohibited under the statute, proper jurisdiction would be established to hold the actor liable under the HCPA.¹⁴³ If the alleged perpetrator failed to involve an interstate channel or use an interstate instrumentality, however, the court would have to find that his or her activities were economic and had or would have had a "substantial effect" on interstate commerce.¹⁴⁴

Typically, the Court would look at whether the class of activities in the aggregate would have a substantial affect on commerce.¹⁴⁵ The Court has recently scrutinized such activities, however, and has been hesitant to apply the aggregation principle.¹⁴⁶ Furthermore, because human cloning should not be considered an economic activity,¹⁴⁷ the Court may not look favorably upon the HCPA, especially considering that the Act criminalizes cloning activities on the federal level. Moreover, the Act contains no congressional findings that show that human cloning would substantially affect commerce. However, one could reasonably foresee how human cloning, especially in the hands of a major biotech industry, could have a substantial impact on com-

142. See *supra* text accompanying note 136.

143. Congress, or a federal prosecutor, may argue that an embryonic clone is a part of interstate commerce. Nevertheless, deeming a clone to be commerce or allowing clones to be bought and sold raises some serious ethical questions, not the least of which is whether such activity would treat humans as buyable and sellable objects. Thus, such arguments should not be furthered and courts should not accept them until these questions have been addressed, regardless of a case's potential outcome.

144. See *infra* text accompanying note 148.

145. See, e.g., *Perez v. United States*, 402 U.S. 146 (1971) (looking to the class of activities and not an individual act to see whether commerce was substantially affected).

146. See *Solid Waste Agency v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 173 (2001) (striking down regulations attempting to preserve migratory birds because they exceed Congress' authority under the Commerce clause despite the finding by the Court of Appeals that "millions of people spend over a billion dollars annually on recreational pursuits relating to migratory birds").

147. See *infra* notes 162-68 and Part VIII(C). Although some may claim that human cloning research performed by private companies for commercial interests is inherently economic, that view fails to consider the broader perspective that what actually is occurring is the creation and use of a human being. In addition, the procreative process, either through surrogate motherhood or in vitro fertilization procedures, should not be deemed predominately economic. Deeming these actions as commercial or economic would not only degrade human dignity but would likely lead to numerous public policy dilemmas.

merce and a national economy. In addition, some uses for cloning, whether ethical or otherwise, may be largely commercial. Nevertheless, a court would likely find that some instances exist where cloning is not commercial. Therefore, a court would probably construe the statute to apply only in instances where cloning is performed for economic gain.

Regardless, with the complicated procedures involved in the cloning process, the likelihood of some communication, equipment, or personnel that must either appear in an interstate channel or use an interstate instrumentality is great. Moreover, most clonists and their supporting organizations have monetary motivations, and thus their actions would probably be considered commercial in nature. Therefore, the HCPA would likely be effective in prohibiting human cloning in most instances and be held constitutional.¹⁴⁸

D. Constitutional Challenges

1. Procreative Rights

In *Skinner v. Oklahoma*,¹⁴⁹ the United States Supreme Court alluded that the Constitution protected a fundamental right to marry and to procreate. The Court has expanded upon the right to marry;¹⁵⁰ however, the right to procreate remains largely a mystery. Advocates of cloning argue that a right to clone a human is encompassed within the right to procreate.

Nevertheless, if the Court did recognize a right to clone, the Court would not be recognizing the "right to procreate" as defined by the facts of *Skinner*. In *Skinner*, the Court invalidated an act that allowed certain criminals to be sterilized.¹⁵¹ Thus, any "right to procreate" found in *Skinner* would mean the right not to be affirmatively deprived of one's natural abilities that, if exercised within conical a act of sex, could cause conception, a definition that is also in accordance with traditional notions of procreation throughout American history. Therefore, the Court would either have to expand the "right to procreate" or establish a "right to clone" to hold the HCPA unconstitutional.

148. See Bradley Testimony, *supra* note 90.

149. 316 U.S. 535 (1942) (invalidating an act under the Equal Protection Clause that compelled the sterilization of criminals after their third conviction of crimes involving "moral turpitude").

150. See *Zablocki v. Redhail*, 434 U.S. 374 (1978) (invaliding restrictions that required a court to give permission for an adult to marry); *Griswold v. Connecticut*, 381 U.S. 479 (1965) (right to marital privacy involving contraception).

151. See *Skinner*, 316 U.S. at 541.

The Supreme Court restated its test for recognizing substantive due process rights in *Washington v. Glucksberg*.¹⁵² In rejecting the notion that a person has a substantive due process right to commit suicide, the Court in *Glucksberg* stated,

Our established method of substantive-due-process analysis has two primary features: First, we have regularly observed that the Due Process Clause specially protects those fundamental rights and liberties which are, objectively, "deeply rooted in this Nation's history and tradition," . . . and "implicit in the concept of ordered liberty," . . . such that "neither liberty nor justice would exist if they were sacrificed," Second, we have required in substantive-due-process cases a "careful description" of the asserted fundamental liberty interest. . . . Our Nation's history, legal traditions, and practices thus provide the crucial "guideposts for responsible decisionmaking," . . . that direct and restrain our exposition of the Due Process Clause.¹⁵³

Because human cloning is an extremely recent development, the Court would likely not find that a person had a fundamental right to clone a human. The Court has not even taken the intermediate step of finding that married couples that struggle to naturally create a child have a fundamental right to an in vitro fertilization procedure.

Moreover, any such expansion for cloning or in vitro fertilization would in effect be recognizing a right "to create a child" or a right "to a child." Such a right would not only run afoul of American tradition but would treat children as property to be created to fulfill their parents' desires, interests, and wants. Although the wanting of a child is one of the deepest desires a couple may have,¹⁵⁴ the act of parenting is not about the parents' desire but the child's needs. At a time when public policies need not reinforce the myth that raising a family is all about the parents, the Court would not likely constitutionalize such a policy by effectively recognizing a "right to a child."

Pro-cloners have also argued that a fundamental "right to clone" or a fundamental "right to harm an embryonic human, whether a clone or not, for researching toward an admirable goal" rests in the penumbra of the woman's "right to an abortion."¹⁵⁵ However, *Roe v. Wade*¹⁵⁶ and *Planned Parenthood v.*

152. 521 U.S. 702 (1997).

153. *Id.* at 711-12 (citations omitted).

154. See Robertson, *supra* note 32, at 942.

155. See Debra L. Moore, *Don't Rush to Judgment on "Dolly": Human Cloning and its Individual Procreative Liberty Implications*, 66 U.M.K.C. L. REV. 425, 433-35

*Casey*¹⁵⁷ are not applicable in the cloning debate, as banning cloning or embryonic research does not affect a woman's right to terminate her pregnancy, to maintain bodily integrity, to make autonomous decisions, or to avoid physical or emotional harm.¹⁵⁸ Thus, the harms the plurality opinion in *Casey* used to justify sustaining *Roe* are not present when a woman seeks to become pregnant with a clone.¹⁵⁹ Therefore, no basis exists to extend the reproductive rights announced in *Roe* or *Casey* to human cloning or even in vitro fertilization for that matter.

2. Research Rights

Some academics have attempted to take advantage of the Supreme Court's libertarian First Amendment jurisprudence by claiming that a ban on human cloning will restrict scientists' free speech rights, academic freedoms, and their search for knowledge and truth. Indeed, the First Amendment does protect expressive conduct,¹⁶⁰ and some claim that the First Amendment protects the "marketplace of ideas" to advance knowledge and

(1997) (presenting the argument that the right to clone could be found to be a fundamental right under the Supreme Court's substantive due process doctrine if the right is broadly defined as a "right to non-coital reproduction," which may be held to be a fundamental right if broadly defined as a "right to procreate," which has its basis the "right to privacy"); see June Coleman, *Playing God or Playing Scientist: A Constitutional Analysis of State Laws Banning Embryological Procedures*, 27 PAC. L.J. 1331 (1996).

Many parents might feel uneasy being involved in a process that creates the potential for life merely to have the excess embryos destroyed without being used for a higher purpose Thus, denying these parents an option [that does not merely destroy them for no benefit,] such as donation for embryological research, would seriously affect and limit their reproductive choices.

Id. at 1379.

156. 410 U.S. 113 (1973).

157. 505 U.S. 833 (1992).

158. See Forsythe, *supra* note 15, at 517-25.

159. See *Casey*, 505 U.S. at 852 (plurality opinion). The *Casey* Court outlined those harms, stating,

The mother who carries a child to full term is subject to anxieties, to physical constraints, to pain that only she must bear. . . . Her suffering is too intimate and personal for the State to insist, without more, upon its own vision of the woman's role, however dominant that vision has been in the course of our history and our culture. The destiny of the woman must be shaped to a large extent on her own conception of her spiritual imperatives and her place in society.

Id.

160. See, e.g., *Texas v. Johnson*, 491 U.S. 397 (1989).

discover truth.¹⁶¹ Nevertheless, the First Amendment does not allow someone to use any means necessary to gain knowledge, nor does it protect every avenue that may be used to obtain truth. Furthermore, the claims of academic freedom deal mainly with content-based restrictions and not content-neutral restrictions on conduct.¹⁶² Moreover, a scientist's illegal experimentation does not convey an apparent message concerning cloning other than defying the government's laws,¹⁶³ which if accepted as the applicable First Amendment test would nullify all laws.¹⁶⁴ As the Court stated in *O'Brien*, it will not "accept the view that an apparently limitless variety of conduct can be labeled 'speech' whenever the person engaging in the conduct intends thereby to express an idea."¹⁶⁵

3. Humans as Commerce

Because the HCPA attempts to ban human cloning through the Commerce Clause, one could challenge Congress' authority to pass such a statute because the legislation would treat humans and their creation as economic or commercial.¹⁶⁶ As previously discussed in Part IV(C), Congress' Commerce Power allows it to regulate three areas of commerce, but the only issue here would be under the "substantial relation" test which would treat the creation of embryos as "in or affecting commerce."¹⁶⁷ Human life

161. Thomas I. Emerson, *Toward a General Theory of the First Amendment*, 72 YALE L.J. 877, 878-87 (1963), reprinted in JOHN H. GARVEY & FREDERICK SCHAUER, *THE FIRST AMENDMENT: A READER* 50-51 (2d ed. 1996).

162. Pro-cloners claim that *Barenblatt v. United States*, 360 U.S. 109 (1959), and *Sweezy v. New Hampshire*, 354 U.S. 234 (1957), are foundations for academic freedom to clone. These cases focused on inquiries into political affiliation, however, and not a content-neutral restriction on conduct. Moreover, "[a]n educational institution is not a constitutional sanctuary from inquiry into matters that may otherwise be within the constitutional legislative domain merely for the reason that inquiry is made of someone within its walls." *Barenblatt*, 360 U.S. at 112.

163. An exemption to a conduct restriction for expressive conduct only occurs if the actor "intends to convey a particularized message" and "the likelihood [is] great that the message would be understood by those who viewed it." *Johnson*, 491 U.S. at 404 (quoting *Spencer v. Washington*, 418 U.S. 405, 410-11 (1974)).

164. See *United States v. O'Brien*, 391 U.S. 367 (1968) (upholding a conviction of someone charged with burning his selective service registration even though his burning of his card was expressive conduct).

165. *Id.* at 376.

166. Regardless of this challenge, Congress would still have the power to outlaw the use of the instrumentalities of commerce to create a child.

167. See *supra* text accompanying note 135. Regardless of this challenge, Congress would still have the power to regulate the use of the instrumentalities of commerce to create a child and to protect instrumentalities or persons

should never be considered to be "in" commerce. Moreover, treating the creation of a human as commerce creates some serious ethical and constitutional implications.¹⁶⁸ For instance, the Thirteenth Amendment¹⁶⁹ stands for the proposition that human life should not be treated as chattel.¹⁷⁰ Thus, tying bans on cloning to a commerce power portrays the message that human clones are just that—commerce. Of course, Congress could legitimately outlaw commercial transactions involving commerce or even developing a human clone as a service. These restrictions would not violate the Thirteenth Amendment because surely Congress has the ability to exclude something from interstate commerce,¹⁷¹ and by the very act of excluding cloning from commerce Congress is sending the proper message that humans should not be cloned for commercial purposes. Excluding a procedure from the commercial realm does not, however, equal a total ban on cloning but a total ban on commercial cloning. Thus, the Thirteenth Amendment may well call for the HCPA to be narrowed to allow pro-bono cloning that is not materially related to a commercial scheme.¹⁷² Normally, these exempted cloning instances would be banned under the Commerce Power's "effects" prong, but in this instance banning cloning as "an effect" of commerce may send a message contrary to the Thirteenth Amendment. Nevertheless, because the HCPA

within those instrumentalities, including the banning or regulating the transporting of human clones.

First, Congress may regulate the use of the channels of interstate commerce. . . . Second, Congress is empowered to regulate and protect the instrumentalities of interstate commerce, or persons or things in interstate commerce, even though the threat may come only from intrastate activities. . . . Finally, Congress' commerce authority includes the power to regulate those activities having a substantial relation to interstate commerce, *i.e.*, those activities that substantially affect interstate commerce.

United States v. Lopez, 514 U.S. 549, 558–59 (1995) (citations omitted).

168. The ethical implications will be discussed *infra* Part VIII(A).

169. U.S. CONST. amend. XIII (1865). "Section 1. Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction. Section 2. Congress shall have power to enforce this article by appropriate legislation." *Id.*

170. See Esther Slater McDonald, Note, *Patenting Human Life and the Rebirth of the Thirteenth Amendment*, 78 NOTRE DAME L. REV. (forthcoming 2003).

171. See *Champion v. Ames*, 188 U.S. 321 (1903) (excluding lottery tickets from commerce).

172. The "commercial scheme" restriction should be added to prevent scientists from doing voluntary cloning as a means to gain information that will allow them to materially benefit from the pro bono activities.

is a total ban on somatic cell nuclear transfer cloning, the Court will likely find that Congress is not sending a message that humans are chattel, but that humans should never be a part of a commercial system, which is the message of the Thirteenth Amendment.

V. PROPOSALS TO STRENGTHEN THE HCPA

Although the HCPA may be constitutional and fairly effective in relation to its counterparts, Congress could improve the bill to solidify its constitutional authority and allow the bill to be more effective.

A. *Enhancing Constitutional Authority*

Although the HCPA would likely be found constitutional under the Commerce Clause,¹⁷³ Congress could take a few steps to either eliminate or narrow the possible gap that may exist with a conservative interpretation of the "substantially affects" test.

1. Prohibit Human Cloning Under the Enforcement Clause of the 13th Amendment

Because of the ethical and constitutional implications and the Court's ability to narrow the statute to only commercial cloning, Congress should enact the ban on cloning under the enforcement clause of the Thirteenth Amendment.¹⁷⁴ Although the Supreme Court has not ruled as to whether extracting stem cells from embryos, harvesting organs from clones, or producing a clone for one's own benefit or desires violates the Thirteenth Amendment, this should not deter Congress from enforcing the amendment. In *City of Boerne v. Flores*, the Supreme Court reaffirmed that the Enforcement Clause of the Fourteenth Amendment, a similarly constructed amendment, allows Congress to remedy or prevent injuries caused by unconstitutional acts if there is "congruence and proportionality between the injury to be prevented or remedied and the means adopted to that end."¹⁷⁵ When human embryonic clones are developed for research purposes or for the benefit of the donor, the clone, a

173. See *supra* Section IV(D).

174. U.S. CONST. amend. XIII, § 2.

175. See *City of Boerne v. Flores*, 521 U.S. 507, 520 (establishing that while Congress does not have the power to determine the rights established in the Fourteenth Amendment, Congress does have the power to remedy or prevent unconstitutional actions if there is congruence and proportionality between the injury to be prevented or remedied and the means adopted to that end).

human life, is inherently dehumanized and stripped of individual dignity as she is used simply as research material—without her consent—or as a donor-making instrument. This treatment of human life strikes at the heart of the Thirteenth Amendment, and thus, the Court will likely agree that the HCPA is enforcing that which is unconstitutional under the Thirteenth Amendment.¹⁷⁶

2. Attach Legislative Findings

Although Congress does not need to include legislative findings for a bill to be constitutional, they may “enable [the courts] to evaluate the legislative judgment that the activity in question substantially affected interstate commerce, even though no such substantial effect was visible to the naked eye.”¹⁷⁷ The precursor to the HCPA, H.R. 1644, included legislative findings.¹⁷⁸ These findings were not attached to HCPA, however, before it passed the House of Representatives.¹⁷⁹ Thus, to help show the court that human cloning would substantially affect commerce, Congress should commission studies and make findings to attach to its human cloning ban.

3. Prohibit Human Cloning Activities under the “Postal Power”

Although the text prohibits shipping, receiving, and importing embryonic clones or products made from embryonic clones, the bill does not explicitly claim that Congress’ Postal Power could be exercised to prohibit shipping them in the mail system.¹⁸⁰ In addition, the text should be amended to prohibit any activity in furtherance of a plan to clone a human—mirroring the federal mail fraud statute—or should amend the mail fraud statute to prohibit similar human cloning activities.¹⁸¹ Thus, any

176. See generally McDonald, *supra* note 170 (arguing that cloning violates the Thirteenth Amendment).

177. *United States v. Lopez*, 514 U.S. 549, 563 (1995).

178. See H.R. 1644, 107th Cong. § 2 (2001).

179. See *supra* note 86.

180. See U.S. CONST. art. I, § 8, cl. 7; see also *Ex parte Rapier*, 143 U.S. 110 (1892) (stating that Congress need not have jurisdiction over a crime or immorality to forbid the use of the mail system to aid in the perpetration of a crime or immorality). This proposal, of course, would still allow clonists to use private carriers, but would nevertheless restrict the ability of clonists to transport supplies.

181. 18 U.S.C. §1341 (1994).

Whoever . . . places in any post office or authorized depository for mail matter, any matter or thing whatever to be sent or delivered by the Postal Service, or deposits or causes to be deposited any matter or

action, attempt, or participation that included the mail system would be prosecutable, regardless if it substantially affected commerce.

4. Prohibit Human Cloning under the "Admiralty Power"

For the federal government to prohibit human cloning in admiralty jurisdictions, Congress "must first make an act a crime, affix a punishment to it, and declare the Court that shall have jurisdiction of the offence."¹⁸² Thus, the HCPA should include language similar to the federal murder statute¹⁸³ to convey to the courts jurisdiction to enforce and decide violations of the HCPA. If such language was included, the HCPA would be enforceable not only on the high seas within the United States admiralty and maritime jurisdiction, but also on any land reserved or acquired by the United States, any U.S. military base, any aircraft owned by a U.S. citizen or corporation, or any U.S. space craft.¹⁸⁴ Although the possibility of human cloning occurring on a boat, plane, or a government area to avoid prosecution may seem unthinkable, doctors are currently performing abortions just off the shores of countries that refuse to legalize abortions to circumvent those countries' laws.¹⁸⁵ Thus, these types of acts should not be overlooked, and this precautionary measure should be taken now.

5. Include a Severability Clause

Congress should seek to protect the HCPA against constitutional challenges by including a severability clause. This clause will shield the remaining features of the statute should one fail to

thing whatever to be sent or delivered by any private or commercial interstate carrier, or takes or receives therefrom, any such matter or thing, or knowingly causes to be delivered by mail or such carrier according to the direction thereon, or at the place at which it is directed to be delivered by the person to whom it is addressed, any such matter or thing [shall be liable.]

Id.

182. *United States v. Hudson*, 11 U.S. 32, 34 (1812); *see also* *United States v. Bevens*, 16 U.S. 336 (1818) (holding that murder committed on a ship is not a federal crime unless Congress conferred admiralty jurisdiction on the court).

183. *See* 18 U.S.C. § 1111(b) (1994) ("Within the special maritime and territorial jurisdiction of the United States, Whoever is guilty of murder . . .")

184. *See* 18 U.S.C. § 7 (1994).

185. *See* Carl Honore, *Abortion Clinic Sails Into Irish Indignation: Anti-abortion Groups Accuse Crew of the Aurora of Peddling Murder on the High Seas: Women on Waves*, NAT'L POST, June 16, 2001, at A13. Euthanasia advocates may soon attempt a similar method. *See* David Batty, *Doctor Plans Euthanasia Boat in UK Waters*, GUARDIAN, available at http://www.guardian.co.uk/uk_news/story/0,3604,509129,00.html (June 19, 2001).

pass constitutional muster. In addition, if the Act's application to any person causes a constitutional conflict, the court would not immediately declare the law unconstitutional as applied to everyone but would instead evaluate whether another application of the statute would not violate the Constitution. Therefore, Congress should seek to enact a severability clause with the legislation.¹⁸⁶

B. *Increasing the HCPA's Effectiveness*

Congress should also amend the current proposal to increase its effectiveness. Establishing certain rules of construction and conveying selective interpretive authority to an administrative agency would prevent courts from narrowing the statute. Furthermore, allowing private enforceability and increasing the Act's statute of limitations will provide more opportunities for the HCPA to be enforced. Moreover, creating a conspiracy charge within the proposed statute and lowering its state of mind requirement will allow prosecutors more flexibility in enforcing the prohibition on human cloning.

1. Establishing Friendly Rules of Construction and a Non-Preemption Clause

The HCPA will be more effective if courts applied prosecutorial friendly rules of construction. As discussed in Part IV(B), because the statute uses scientific language ambiguity is likely to arise while interpreting the statute.¹⁸⁷ In addition, having ambiguities as to the mental culpability requirement of knowing a scientific procedure or technique could also cause enforceability problems.¹⁸⁸ If a statute is overwhelmingly and principally always decided in favor of the defendant, however, a statute's effectiveness may become minuscule.¹⁸⁹ Thus, the statute should include a liberal construction clause to override the usual principle of lenity.¹⁹⁰

186. The federal Mail Fraud Statute has a severability clause that states, "[I]f any provision of [the enacting statute] or the application thereof to any person or circumstance is held invalid, the remainder of [the statute] and the application of the provision to other persons not similarly situated or to other circumstances [is] not to be affected thereby" Mail Fraud Statute, 18 U.S.C. § 1341 (1994).

187. See *supra* notes 111–18 and accompanying text.

188. See *supra* notes 130–32 and accompanying text.

189. See *supra* note 154 and accompanying text.

190. See, e.g., Organized Crime Control Act of 1970, Pub. L. No. 91-452, § 904, 84 Stat. 947 (1970) ("The provisions of this title [enacting this chapter and amending sections 1505, 2516, and 2517 of 18 U.S.C.] shall be liberally

As a rule of construction, a court also presumes that a federal law does not preempt a state law.¹⁹¹ Therefore, unless Congress conveys its purpose plainly, the courts will construe the statute so as not to shift the federal-state balance, especially in the marginal cases.¹⁹² This statute, however, does not and should not seek to preempt state regulations.¹⁹³ In fact, a more comprehensive and effective policy assumes that jurisdictions are concurrent and not mutually exclusive.¹⁹⁴ Therefore, Congress should also include a clause explicitly stating that the HCPA does not preempt state and local laws to prevent a judicial misinterpretation.¹⁹⁵

2. Expressly Convey Interpretive and Rulemaking Authority to HHS

Because Congress does not wish to stifle important, morally acceptable science, Congress should give rulemaking or interpretative authority to the U.S. Department of Health and Human Services (HHS) as to what scientific techniques are prohibited under the HCPA.¹⁹⁶ This authority would allow scientists to petition HHS to review the legality of new scientific procedures under the HCPA.¹⁹⁷ "Such determinations, made before any agency action has been taken, apply only to the petitioner. They generally predate any actual dispute between the agency and a party, are rendered by agency staff and are not subject to judicial

construed to effectuate its remedial purposes."). Congress should also explicitly state in a bill's text its purpose for the statute to guide the courts in their interpretations.

191. See *Jones v. United States*, 529 U.S. 828, 859 (2000) (Stevens, J., concurring) (citing *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 157 (1978)).

192. See *id.* at 860 (quoting *United States v. Bass*, 404 U.S. 336, 349 (1971)).

193. State statutes should not be preempted so states may be able to effectively prosecute cloning violations if the federal legislative or prosecutorial policies are inadequate to prohibit the cloning occurring in a particular state.

194. See Blakey, *supra* note 124, at 1176.

195. See, e.g., § 904, 84 Stat. at 947 ("Nothing in this title shall supersede any provision of Federal, State, or other law imposing criminal penalties or affording civil remedies in addition to those provided for in this title.").

196. At this point, Congress should only authorize interpretive powers concerning the HCPA's scientific definitions. The scientific language, definitions, and techniques could become clumsy when trying to fulfill Congress' objective of banning human cloning. Nevertheless, other parts of the statute may not present such problems, and thus, I see no reason at this time to delegate such authority to HHS.

197. See ALFRED C. AMAN, JR. & WILLIAM T. MAYTON, *ADMINISTRATIVE LAW* 266 (1993) ("Rulings or interpretations, for example, usually involve requests to determine whether a particular regulation actually applies to certain facts and, if so, with what result.").

review.”¹⁹⁸ Thus, when HHS promulgates rules interpreting the scientific procedures prohibited in the HCPA and applying Congress’ intent to new procedures, those interpretations—rather than a court’s preferred reasoning—will be given controlling weight “unless they are arbitrary, capricious, or manifestly contrary to the statute.”¹⁹⁹ Because a ban on cloning should manifestly state its objection to any human cloning, granting this authority to HHS should not result in the creation of executive loopholes around the HCPA but instead would provide an additional tool to prevent human cloning while protecting morally acceptable scientific techniques. Moreover, if the statute included a broader definition of cloning, HHS could interpret the HCPA to prohibit any cloning techniques that develop in the future.

3. Encourage Private Enforceability

Although some countries, like Great Britain, have historically allowed private citizens to prosecute criminal cases on behalf of the king,²⁰⁰ the United State’s Congress has only allowed private individuals to enforce criminal statutes in a few select cases.²⁰¹ Private enforcement of the HCPA would increase the likelihood of the provision’s effectiveness.²⁰² Nevertheless, a plaintiff must have standing to bring the suit,²⁰³ which means that the plaintiff must have suffered an actual injury or will immi-

198. *Id.* (citing *Kixmiller v. SEC*, 492 F.2d 641, 643–44 (D.C. Cir. 1974)).

199. *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843–44 (1984).

200. For a brief summary of Britain’s enforcement policies, see Lynne N. Henderson, *The Wrongs of Victim’s Rights*, 37 STAN. L. REV. 937, 938–53 (1985).

201. The two most prominent federal examples are antitrust laws, *see* 15 U.S.C. § 15 (1994), and R.I.C.O., *see* 18 U.S.C. § 1964(c) (1994).

202. “Congress intended to create a private enforcement mechanism that would deter violators and deprive them of the fruits of their illegal actions, and would provide ample compensation to the victims of antitrust violations.” *Supermarket of Homes, Inc. v. San Fernando Valley Bd. of Realtors*, 786 F.2d 1400, 1404 (9th Cir. 1986) (citing *Blue Shield of Va. v. McCready*, 457 U.S. 465, 472 (1982)).

203. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992).

First, the plaintiff must have suffered an “injury in fact”—an invasion of a legally protected interest which is (a) concrete and particularized and (b) “actual or imminent, not ‘conjectural’ or ‘hypothetical.’” Second, there must be a causal connection between the injury and the conduct complained of—the injury has to be “fairly . . . trace[able] to the challenged action of the defendant, and not . . . th[e] result [of] the independent action of some third party not before the court.”

Third, it must be “likely,” as opposed to merely “speculative,” that the injury will be “redressed by a favorable decision.”

Id. at 560–61 (citations omitted).

nently suffer one.²⁰⁴ Consequently, if someone was involuntarily cloned or if the cloning process damaged someone other than the clone,²⁰⁵ he or she would have standing to recover, and a percentage of the minimum million-dollar civil damage remedy would allow him or her to enforce the HCPA.²⁰⁶ Congress could also grant a State standing to sue on the principle of *parens patriae* on behalf of the human clones or would-be clones.²⁰⁷ Thus, States would be able to seek injunctive or other types of equity relief to prohibit the use of cloning techniques that fall under the HCPA. Nevertheless, simply creating a clause of pri-

204. See *id.* at 564 (holding the plaintiff did not have a sufficiently imminent injury to bring a suit, even under a "citizen-suit" provision which theoretically created a "procedural right").

205. The clone should probably be barred from recovering damages for simply being born a clone. See *Gleitman v. Cosgrove*, 227 A.2d 689 (N.J. 1967). It is basic to the human condition to seek life and hold on to it however heavily burdened. If [the infant] could have been asked as to whether his life should be snuffed out before his full term of gestation could run its course, our felt intuition of human nature tells us he would almost surely choose life with defects as against no life at all. *Id.* at 693; see also *Berman v. Allan*, 404 A.2d 8 (N.J. 1979).

We recognize that as a mongoloid child, Sharon's abilities will be more circumscribed than those of normal, healthy children and that she, unlike them, will experience a great deal of physical and emotional pain and anguish. We sympathize with her plight. We cannot, however, say that she would have been better off had she never been brought into the world. Notwithstanding her affliction with Down's Syndrome, Sharon, by virtue of her birth, will be able to love and be loved and to experience happiness and pleasure[,] emotions which are truly the essence of life and which are far more valuable than the suffering she may endure. To rule otherwise would require us to disavow the basic assumption upon which our society is based. This we cannot do. Accordingly, we hold that Sharon has failed to state a valid cause of action founded upon 'wrongful life.'

Id. at 13. But see Charles Bremner, *Damages for 'Life Not Worth Living'*, TIMES (London), Nov. 18, 2001, at 1 (reporting that the highest appellate court in France allowed a "wrongful birth" suit in which a handicapped child, Nicolas Perruche, was allowed to sue his mother's doctor for damages for being born because the doctor did not report his prenatal illness to his mother who, had she known, would have aborted him).

206. The RICO statute's private enforcement clause states, *inter alia*: "Any person injured . . . by reason of a violation of section 1962 of this chapter may sue therefore [sic] in any appropriate United States district court and shall recover threefold the damages he sustains and the cost of the suit, including a reasonable attorney's fee[.]"

18 U.S.C. § 1964(c) (1994).

207. "[T]he principle of *parens patriae* . . . 'held in English Law that the King was the . . . father of all.'" 4 ENCYCLOPEDIA, *supra* note 87, at 1627 (quoting C.J. FLAMMANG, THE POLICE AND THE UNDERPROTECTED CHILD 15 (1970)). This principle gives the State broad authority to affect the child's welfare. 59 AM. JUR. 2D *Parent and Child* § 11 (1987).

vate enforcement would not confer the constitutionally required standing upon the average individual citizen.²⁰⁸ Congress would have to create, as it did in the False Claims Act,²⁰⁹ "a concrete private interest in the outcome of a suit against a private party for the government's benefit, by providing a cash bounty for the victorious plaintiff."²¹⁰ Although Congress may be leery of granting private enforcement techniques to others, any type of private enforceability would increase the HCPA's effectiveness and further Congress' objective of prohibiting human cloning.

4. Create a Statute of Limitations Exception and a Controlling Provision

To increase the Act's effectiveness, Congress should create an exception to 18 U.S.C. § 3282, which imposes a default five-year statute of limitations requirement on charges filed under Title 18 that begins after the offense has been committed.²¹¹ In addition, to avoid confusion or a court imposed statute of limitations for civil claims, Congress should include an explicit statute of limitations provision for civil claims. Because individuals may look substantially different as children than they do as adults, detecting cloned individuals with the naked eye before they reach the age of four and three months would be difficult. Furthermore, typical side effects for clones may not manifest themselves until well after the five-year limitation. Additionally, specially gifted individuals or celebrities who may have been

208. See *Lujan*, 504 U.S. at 564 (holding that the plaintiff did not have a sufficiently imminent injury to bring a suit, even under a "citizen-suit" provision which theoretically created a "procedural right").

209. 31 U.S.C. § 3730 (1994). The purpose of the False Claims Act was "to protect government funds and property from fraudulent claims[]" through private citizens coming forward and initiating false claims action on behalf of the government. Jonathan M. Kaye & John Patrick Sullivan, *Eighth Survey of White Collar Crime Substantive Crimes: False Claims*, 30 AM. CRIM. L. REV. 643, 643, 652 (1993). Congress gave the private enforcers a stake in the case as it promised persons who either substantially contributed to the case that the government wins, or won the suit apart from the government, between twenty-five and thirty percent of the damages. See 31 U.S.C. §§ 3730(d)(1)–(2) (1994).

210. See *Lujan*, 504 U.S. at 573. This option is viable but may prove problematic. Congress would have to create guidelines and limitations to prevent a public policy problem of over zealous citizens attempting to receive the bounty. Under the proper framework though, this type of statute may prove useful in preventing secretive attempts to clone human beings. For an example of some suggested substantive and procedural guidelines, see 31 U.S.C. § 3730 (1994).

211. "Except as otherwise expressly provided by law, no person shall be prosecuted, tried, or punished for any offense, not capital, unless the indictment is found or the information is instituted within five years next after such offense shall have been committed." 18 U.S.C. § 3282 (1994).

involuntarily cloned would not likely detect that they had been until the clone reaches a sufficient age of maturity.²¹² Therefore, although a cloned person can be identified scientifically almost immediately, for all practical purposes a cloning may not be suspected for quite some time after the clone's birth. Thus, Congress should exempt the HCPA from the federal criminal statute of limitations. Moreover, because a court is likely to impose a statute of limitations from an analogous state or federal statute to limit civil claims,²¹³ Congress should outline a statute of limitations provision that would adequately allow individuals to sue once they have good reason to believe that a particular cloning had taken place.²¹⁴

5. Incorporate Conspiracy and Solicitation Charges

Although Title 18 already has a conspiracy and a solicitation charge, incorporating another conspiracy and solicitation charge into the HCPA would also increase its effectiveness. For instance, the general conspiracy charge carries a maximum criminal penalty of five years in prison,²¹⁵ whereas HCPA's maximum is ten years.²¹⁶ In addition, the general solicitation section only applies to felonies that have "as an element the use, attempted use, or threatened use of physical force against property or against the person of another."²¹⁷ Because many cases violating the HCPA may not entail physical force against a "person," the general solicitation statute would not apply. In addition, providing extra counts for a federal prosecutor to try a perpetrator may give the

212. For example, if Michael Jordan was involuntarily cloned, his clone may not be identified until the child reaches high school and his athletic ability becomes evident.

213. See *Agency Holding Corp. v. Malley-Duff & Assocs., Inc.*, 483 U.S. 143 (1987) (discussing the Court's usual policy of looking to state statutes to imply a statute of limitations to federal statutes that do not specify, discussing when an analogous federal statute's statute of limitations should be implied instead of a state statute's, and holding that RICO's statute of limitations for civil claims is four years because it is similar to antitrust laws which have a four-year limitation).

214. A four-year statute of limitations would be proper if it began running from the time that the plaintiff reasonably believed that she had been harmed by the cloning procedure. In the case of the private enforcer, the statute of limitations for his filing could start running from when he had adequate information to bring the suit.

215. See 18 U.S.C. § 371 (1994).

216. See *supra* note 79 and accompanying text.

217. 18 U.S.C. § 373(a) (1994).

prosecutor leverage in handling the case and in successfully prosecuting offenders.²¹⁸

6. Heighten the State of Mind Requirement to Recklessly

Although the HCPA's current state of mind requirement of "knowingly" would definitely help prohibit some human cloning from occurring, heightening the state of mind requirement to "recklessly" would increase the HCPA's effectiveness. "To be reckless, the accused must have been aware of, and have consciously disregarded, a risk that a prohibited result will occur, or that a material circumstance exists."²¹⁹ This requirement would force scientists to approach new scientific reproductive techniques cautiously and would encourage them to contact the U.S. Department of Health and Human Services or the Department of Justice to inquire if new techniques are prohibited under the HCPA.²²⁰ Thus, scientists who recognize the risk that their procedure may violate the HCPA but who consciously disregard that risk and take no measures to prevent violating the statute would not be exempt from the statute and thus rewarded for their risk-taking. Moreover, because human cloning is unique, rare, and inherently immoral, participants who become aware of the risk that their action may assist a human cloning procedure and yet disregard such a risk and continue, should also not be rewarded. In addition, if "knowingly" remained the state of mind for participants, scientists would simply shield all participants from the entire process and reward participants for blindly donating money, bodily tissues including ovum, medical services, and even

218. If the HCPA should contain a private enforcement clause, Congress should exempt those who participate in a conspiracy or a solicitation from suing the government for triple damages. This policy would discourage individuals from placing themselves in a position to be solicited and from initiating their own sting operations. Furthermore, Congress should be cautious about allowing former conspirators to only benefit from their experience in a conspiracy to violate federal law.

219. 3 *ENCYCLOPEDIA OF CRIME AND JUSTICE* 1036-37 (Sanford H. Kadish ed., 1983).

220. Recklessness would be the most appropriate requisite state of mind standard if Congress gave the Attorney General or HHS the ability to interpret the HCPA and to decide whether a technique would fall within the statute. Otherwise, scientists would fear being prosecuted under the HCPA for performing new experiments, thus stifling science. Nevertheless, if Congress requires scientists to inquire as to whether their actions would violate the HCPA, scientists could appeal to HHS before the experiment to ensure safety from prosecution. Thus, because inquiring scientists could receive legal guidance on their procedures before they occur, responsible science would not be stifled.

prenatal surrogate services.²²¹ Thus, for both enforceability and public policy reasons, the state of mind should be reduced to "recklessly."

VI. STATE BANS ON HUMAN CLONING

Six states—California, Louisiana, Michigan, Rhode Island, Virginia, and Iowa—have passed their own bans on human cloning.²²² California law provides a maximum²²³ civil fine of \$250,000 for every person and one million dollars for every clinic involved in a human cloning.²²⁴ A violation of the Louisiana statute could lead to a five million dollar fine²²⁵ or a ten-year prison sentence for individuals²²⁶ and a ten million dollar fine for clinics or corporations.²²⁷ Michigan has the strictest human cloning laws as their violators are subject to a civil penalty up to ten million dollars²²⁸ and a criminal penalty of up to fifteen years in jail.²²⁹ Rhode Island's law fines an individual \$250,000²³⁰ and a clinic one million dollars²³¹ for violating its statute. Virginia penalizes violators of its human cloning law up to \$50,000²³² and Iowa assesses a maximum ten-year prison sentence and a ten thousand dollar fine against violators along with additional fines

221. Although I recommend heightening the state of mind to recklessness for non-scientists, the matter is not as critical, in my view, as heightening the state of mind for scientists and possibly their financial supporters. The ultimate goal of the HCPA should be to disassemble the financial and intellectual infrastructure that is required to clone a human. Nevertheless, encouraging lay participants to be more responsible in donating bodily tissues or prenatal surrogate services is generally good public policy.

222. See CAL. HEALTH & SAFETY CODE § 24,185 (West Supp. 2002) (This section was repealed on Jan. 1, 2003. *Id.* § 24,189.); LA. REV. STAT. ANN. § 40:1299.36.2 (West 2001) (This section was repealed on Jan. 1, 2003. 1999 La. Acts 788, § 3.); MICH. COMP. LAWS ANN. § 750.430a (West Supp. 2002); R.I. GEN. LAWS § 23-16.4-2 (2001) (This section expires July 7, 2003. *Id.* § 23-16.4-4.); VA. CODE ANN. § 32.1-162.22 (2001); Iowa S. File 2118, 79th Gen. Assemb., 2d Sess. (Apr. 26, 2002) (to be codified at IOWA CODE ANN. § 707B).

223. The maximum fine in many of the States can be extended for violators who derive a pecuniary gain from the violation. See, e.g., CAL. HEALTH & SAFETY CODE § 24,187(c).

224. *Id.* § 24187(a)-(b).

225. LA. REV. STAT. ANN. § 40:1299.36.3A(2).

226. *Id.* § 40:12299.36.2D.

227. *Id.* § 40:12299.36.3A(1).

228. MICH. COMP. LAWS ANN. § 333.16,275(3) (West 2001).

229. *Id.* § 750.430a(3).

230. R.I. GEN. LAWS § 23-16.4-3(b) (2001).

231. *Id.* § 23-16.4-3(a).

232. VA. CODE ANN. § 32.1-162.22C (2001).

equaling twice the gross gain achieved by the human cloning.²³³ All six states ban the somatic cell nuclear transfer technique,²³⁴ but Rhode Island also bans the "twinning" method.²³⁵ Furthermore, only the Michigan, Virginia, and Iowa statutes are permanent; the others contain sunset provisions.²³⁶ Thus, only three permanent laws against cloning exist in the United States, only two of which impose criminal liability.

VII. PROPOSED STATE REFORMS TO BAN HUMAN CLONING

Although Congress could pass an effective ban on human cloning, Congress cannot insure that the law will be strictly enforced. Therefore, both the federal government and state and local governments need to pass effective bans on human cloning to create an adequate and comprehensive national policy against human cloning.²³⁷

A. *Proposed Legislation to Ban Cloning & Destructive Embryonic Research*

Just as lawmakers in Congress are offering both strict and permissive proposals in Congress, state lawmakers are also offering both types in state legislatures. But, to avoid an incoherent policy on cloning and to effectively prohibit it, any new state legislation should look similar to H.R. 2505. The aspects of the HCPA that have been previously discussed would apply to a potential state proposal as well. Moreover, the HCPA should also

233. Compare Iowa S. File 2118, § 4(3)(a), 79th Gen. Assemb., 2d Sess. (Apr. 26, 2002) (to be codified at IOWA CODE ANN. § 707B.4.3.(a)), with IOWA CODE § 902.9.3 (Supp. 2002).

234. CAL. HEALTH & SAFETY CODE § 24,185(c) (West Supp. 2002) (This section was repealed on Jan. 1, 2003. *Id.* § 24,189.); LA. REV. STAT. ANN. § 40:1299.36.1 (West 2001) (This section is repealed on Jan. 1, 2003. 1999 La. Acts 788, § 3.); MICH. COMP. LAWS ANN. § 333.16,274(5)(a); § 23-16.4-1; VA. CODE ANN. § 32.1-162.21; Iowa S. File 2118, § 3(2) (to be codified at IOWA CODE ANN. § 707B.3.2).

235. R.I. GEN. LAWS § 23-16.4-2(a).

236. CAL. HEALTH & SAFETY CODE § 24,189; 1999 La. Acts. 788, § 1; LA. REV. STAT. ANN. § 40:1299.36.2; R.I. GEN. LAWS § 23-16.4-4.

237. Thus, no federal legislation should preempt a state ban. See *supra* note 126 and accompanying text. In addition, state governments should be able to prosecute acts of human cloning if the federal government should fail to bring a suit. Moreover, allowing this duplication would not cause many of the adverse consequences that may accompany having similar state and federal criminal statutes because cloning is a new crime, few occurrences are likely to occur, and federal resources should be devoted to preventing this type of crime. See TASK FORCE ON FEDERALIZATION OF CRIM. LAW, AM. BAR ASS'N, THE FEDERALIZATION OF CRIMINAL LAW 26-43 (1998) (discussing adverse consequences of dual criminal statutes) [hereinafter TASK FORCE].

incorporate the recommendations offered in Part V of this note. A main difference, though, would be that states would be free to ban human cloning under their typical police powers instead of a commerce power.²³⁸ By using their police power, states would be able to take a more comprehensive approach to deterring cloning.

In addition to the general cloning ban, states should pass legislation criminalizing experimenting on embryos. As of October 1, 2001, eleven states have outlawed destructive embryo research.²³⁹ South Dakota recently passed such a bill that made knowingly conducting nontherapeutic research that destroys an embryo and nontherapeutic research that subjects an embryo to substantial risk of injury or death illegal.²⁴⁰ Similar bans should be included among the proposed human cloning bills offered on the state level. However, as with the federal and state HCPAs, rulemaking authority for the scientific definitions should be given to a state administrative agency with clear guidelines to pre-

238. Obviously, states would not be able to incorporate the Postal or Admiralty Powers or use the enforcement clause of the Thirteenth Amendment.

239. AMS. UNITED FOR LIFE, POLICY GUIDE 18 (Nov. 2001).

240. S.D. CODIFIED LAWS § 34-14-16 to -20 (Michie Supp. 2002).

No person may knowingly conduct nontherapeutic research that destroys a human embryo. A violation of this section is a Class 1 misdemeanor.

Id. § 34-14-16.

No person may knowingly conduct nontherapeutic research that subjects a human embryo to substantial risk of injury or death. No person may sell or transfer a human embryo with the knowledge that the embryo will be subjected to nontherapeutic research. A violation of this section is a Class 1 misdemeanor.

Id. § 34-14-17.

No person may use for research purposes cells or tissues that the person knows were obtained by performing the activities described in §§ 34-14-16 and 34-14-17. A violation of this section is a Class 1 misdemeanor.

Id. § 34-14-18.

For purposes of §§ 34-14-16 to 34-14-20, inclusive, the term, nontherapeutic research, means research that is not intended to help preserve the life and health of the particular embryo subjected to risk. It does not include in vitro fertilization and accompanying embryo transfer to a woman's body or any diagnostic test which may assist in the future care of a child subjected to such tests.

Id. § 34-14-19.

For purposes of §§ 34-14-16 to 34-14-20, inclusive, the term, human embryo, means a living organism of the species *Homo sapiens* at the earliest stages of development (including the single-celled stage) that is not located in a woman's body.

Id. § 34-14-20.

vent courts from finding that the scientific definitions are too vague.²⁴¹

B. *Proposed Reforms for State Cloning Bans*

1. Revoke Licenses from Individuals and Businesses Affiliated with Human Cloning

Because States are primarily responsible for issuing licenses to professionals, states should add a provision to revoke the perpetrator's professional business license as an additional punishment. This policy would not only deter individuals and companies from participating in cloning activities, but also would prevent the perpetrator from attempting to clone again in the state. Iowa and Louisiana have recently established such a punishment as a part of their anti-cloning policies. Nevertheless, a state could even enact a separate statute with a lesser state of mind or a broader definition of cloning to give the government more discretion in denying renewals of such licenses than in the typical criminal trial. Thus, the government would have more recourse to prevent companies and doctors from proceeding in suspicious experiments or endeavors that may produce a clone.

2. Exclude Benefits from Biotech Firms Affiliated with Human Cloning

States should also take measures to deter companies that receive general state benefits from affiliating with human cloning procedures or doing business with companies that clone humans or use products made from human cloning experiments. For instance, the State of Michigan excludes biotech firms who participate in human cloning or embryonic research from receiving state tax credits.²⁴² Because corporations often receive some state benefits, this tool would be useful in deterring corporations from investing in cloning activities, especially if a federal ban has not been enacted.

VIII. AN ETHICAL FOUNDATION FOR A POLICY DISCUSSION

Developing public policies requires a conceptual ethical groundwork on which the policies should be based. This framework should consider not only the purpose of the policies and what the policies should accomplish, but also what the policies should not do. In establishing what decisions and procedures

241. See, e.g., *Forbes v. Napolitano*, 247 F.3d 903 (9th Cir. 2000).

242. MICH. COMP. LAWS ANN. § 207.803(g)(iii) (West Supp. 2002); *Id.* § 207.808.

are ethical and unethical, the approach that ethicists use varies, which not surprisingly causes their outcomes to vary as well. Thus, this section will discuss the four approaches that a modern ethicist is likely to take. Moreover, this section will discuss which aspects of public policy decisions are bound by the rules of ethics. Furthermore, this section will recommend a conceptual framework in which society should evaluate the various types of human cloning bans.

A. *Ethical Approaches*

1. Principle Ethics

Principlism is an approach some ethicists use to make a decision about a particular situation in light of an abstract principle. Moral principles, under this approach, are general standards of conduct in society "that describe[] obligations, permissible actions, and ideals of action."²⁴³ The principles are guidelines in determining a condition's "permissibility, obligatoriness, rightness, or aspirational quality[.]"²⁴⁴ Such established principles are usually consistent with other, more particular moral rules and focus on moral obligations that are impartial.²⁴⁵ One can establish a principle by evaluating current society and its norms, by asserting a principle consistent with those norms, and by developing a consensus on the validity of those norms. Thus, these norms are subjective to societies but are typically implemented as objective, or as the standard, for individuals within society. Generally though, the ethic does not rest on the concept of a discernable, objective truth. Consequently, the principle ethic rests more on what are the societal norms versus what they ought to be.²⁴⁶

The four most notably accepted principles that principlists accept are:

- (1) respect for autonomy (a principle of respect for the decision-making capacities of autonomous persons); (2) nonmaleficence (a principle of avoiding the causation of harm to others); (3) beneficence (a group of principles for

243. Tom L. Beauchamp, *Principles and Other Emerging Paradigms in Bioethics*, 69 IND. L.J. 955 (1994), *reprinted in* A HEALTH LAW READER: AN INTERDISCIPLINARY APPROACH 22 (John H. Robinson et al. eds., 1999).

244. *Id.*

245. *Id.*

246. See DAVID HUME, A TREATISE OF HUMAN NATURE (L.A. Selby-Bigge & P.H. Nidditch eds., 1978) (introducing the "is/ought" distinction as a criticism against natural law theorists by concluding that just because something "is" in society or nature does not necessarily mean it "ought" to be that way).

providing benefits and balancing benefits against risks and costs); and (4) justice (a group of principles for fairly distributing benefits, risks, and costs).²⁴⁷

Principle ethics does have its constraints, as principles can often be underdetermined, ambiguous, and difficult to apply in specific situations.²⁴⁸ Moreover, because principles are based on common norms and are not deduced from a larger philosophical thought but from common norms, the theory gives no guidance when two or more principles conflict.²⁴⁹ Furthermore, principle ethicists generally consider principles as suggestions and not imperatives, which turns principle ethicists from deciding their ethics based on a principle to having to first discuss the appropriateness of principle at the beginning decision-making process.²⁵⁰ Consequently, principle ethics fails to provide a sense of certainty for those who apply that approach.

2. Values Ethics

The values ethics approach proposes that particular decisions should be based upon the values society holds. This approach is similar to a very abstract and general principle approach, but value ethics are concerned more with policy than with principles and are skeptical of rules.²⁵¹ A values ethicist attempts to look beyond principles to their premises, and thus subsequent decisions are based not just on a principle but also the principle's purpose. Values are also based on societal consensus and are thus subjective rather than objective. Because values ethics will incorporate a principle's purpose or will propose an outcome more inline with societal values, applying value ethics to a particular situation could be relatively simple when the controlling value is clear. When values conflict, whichever value a society more highly esteems will control. In practice, discerning which value is held higher in society could be difficult. In

247. Beauchamp, *supra* note 243, at 23. This paradigm represents only a categorization of its underlining principles. Thus, the four-principle paradigm resembles a values ethic discussed in the next section.

248. See K. Danner Clouser & Bernard Gert, *A Critique of Principlism*, 15 J. MED. & PHIL. 219 (1990), *reprinted in* A HEALTH LAW READER: AN INTERDISCIPLINARY APPROACH, *supra* note 243, at 28.

249. See *id.*

250. See *id.* at 28–29.

251. This approach resembles the American Realist's approach to law that developed in the first half of the twentieth century in the United States. American Realists were concerned about the consequences of decision and the "rightness" of the outcome and were skeptical about rules and mechanically applying them to every situation. See HILAIRE MCCOUBREY & NIGEL D. WHITE, TEXTBOOK ON JURISPRUDENCE 202–03 (3d ed. 1999).

addition, several values may converge to form a societal consensus on a principle that otherwise would not have developed had society only been given the option to form the principle off of one of the converging values. In the long-run, special interest groups will compete to promote their values over others to develop an overarching value that could cause ethicists to have tunnel vision and over focus on a particular value.²⁵²

3. Situational Ethics

A situational ethicist, like a principle or values ethicist, is also aware of the community's ethical standard and the community's heritage, but is willing to compromise those standards if doing so would seem to better serve a greater good or purpose.²⁵³ Thus, a situational ethicist focuses on the "contextual appropriateness" of the act and therefore does not focus on whether the act is good or right but whether it would be an appropriate fit given the circumstances.²⁵⁴ Situational ethicists do not completely disregard all rules but are aware of the circumstances that allow them to deviate or weigh against the rules.²⁵⁵ In a sense, situational ethics is a reaction to a rigid principle-based ethics and a dominant value-based ethics because it allows the individual to reason to a conclusion by taking into account those principles, values, and his situation. This approach is similar to natural law in part because it accepts reason as the instrument of moral judgment, but it differs significantly from natural law because situational ethics rejects that a discernable objective standard—such as the virtuous person—exists.²⁵⁶

The strength of situational ethics is that it allows the ethicist to assess the facts in light of the principles and values and thus, no gaps exist between what one thinks should occur and what does. This approach violates the rule of external consistency, however,—the rule that claims that which applies in one case should apply in all—because similar situations may not be treated similarly.²⁵⁷ Moreover, although situational ethicists may

252. For an example of where this ethic may lead, see *id.* at 240–41, which contains a discussion of how focusing on capitalism and individuality has produced isolation, passivity, and disconnectedness in society.

253. See JOSEPH FLETCHER, *SITUATIONAL ETHICS: THE NEW MORALITY* 26 (1966).

254. See *id.* at 27–28.

255. See *id.* at 28–29.

256. See *id.* at 26.

257. See *id.* at 32. Although a particular person may make the same choice in the same situation, he is not ethically bound to do so. If he were bound, even by just reason, a rule would then exist and could be applied, which would eliminate the situational ethic system and admit that principlism is the

still find some principles helpful when making decisions, individuals generally must wrestle with ethical dilemmas with little guidance as to what the circumstances actually call for them to do.²⁵⁸ Therefore, decisions in similar situations may become unpredictable.

4. Virtue Ethics

Virtue ethicists focus less on the actual functions of a procedure to determine if that action is ethically acceptable, but look more broadly to the character of the agent, the nature of the act, the circumstances surrounding the act, and its consequences.²⁵⁹ Hence, virtue ethicists emphasize the actor and see the actor's morality as based on whether her actions were "a matter of good or virtuous practice."²⁶⁰ Whether an act is virtuous is based on whether a virtuous person would have acted similarly in that situation. A virtuous person is one who embodies virtuous traits, which are those that "habitually disposed humans to act in accord with the ends of human nature."²⁶¹ Virtue ethics presupposes an objective moral order and a concept of a human nature that could be discovered through reason, and therefore, an act would be no less virtuous if a society embraced or condemned the act.²⁶² Aquinas claimed to have reasoned that the following were human goods and thus virtuous: life, knowledge, play, aesthetics, friendship, and practical reasonableness (or judgment).²⁶³

As a whole, virtue ethics has a lot to offer, as it draws attention to the moral development of individuals. The belief in objective morality also tends to resonate with the belief that some

real system but that principlism is just underdetermined. Thus, most situational ethicists question whether any situation is identical to another situation and are skeptical about drawing any generalizations. *See id.*

258. Individuals must still contemplate, usually in the heat of the moment, if ethically the circumstances allow them to deviate from the principle and, if so, whether they should. This situation could cause undue stress and continual second-guessing and force individuals to make decisions in the least opportune situations, which may inadvertently cause emotion to displace reason in the decision-making process.

259. *See* Edmund D. Pellegrino, *Toward a Virtue-Based Normative Ethics for the Health Professions*, 5 KENNEDY INST. OF ETHICS J. 253 (1995), reprinted in A HEALTH LAW READER: AN INTERDISCIPLINARY APPROACH, *supra* note 243, at 43.

260. *Id.*

261. *Id.* For Socrates, Plato, and Aristotle, the end of human nature was fulfillment in natural happiness, and for Aquinas the end of human nature was the supernatural happiness realized union with God. *See id.*

262. *See id.* at 44.

263. *See generally* JOHN FINNIS, AQUINAS: MORAL, POLITICAL, AND LEGAL THEORY (1998).

acts are wrong in and of themselves.²⁶⁴ Nevertheless, opinions differ widely as to how to discern objective morality or even whether objective morality is ascertainable at all. Consequently, unless a modern society reaches a consensus as to the basics of the virtue theory, America's philosophical pluralism makes the application of such a theory difficult.²⁶⁵

B. *Ethical Restraints*

In evaluating whether a public policy proposal is ethically permissible, a society must scrutinize the ethics of the proposal's end and means. If each of these two aspects of the policy is ethically sound, the public policy is permissible. If one aspect should fail, however, the public policy should not be enacted. Moreover, even if the policy is ethically permissible, the policy's effects should be scrutinized, and if the effects are ethically questionable, the policy should be reconsidered.

1. "End" Restraints

Subjecting a policy's end to ethical scrutiny lies at the heart of ethics, regardless of the approach used. Describing an aspect of a policy as an "end" can be confusing, however, especially when improperly distinguished from a motivation, a means, or an effect. In the context of our discussion, an "end" is what the individual intends the policy to do. For instance, for a school district rearranging its educational system for the purpose of increasing its students' literacy, thus causing the children to be segregated by race, the literacy is the end. The end is legitimate because it is not ethically objectionable to seek to increase the student body's literacy. However, if the goal was to segregate students by race and that had happened to increase student literacy, the end would be the segregation of students, which would be morally objectionable. Thus, the intended purpose, whether stated or hidden, is critical in ethically evaluating a policy's end.

264. A few examples of things that American society holds as objectively wrong come to mind. For instance, few argue that slavery was moral in America in the Eighteenth and early Nineteenth centuries despite the fact that societal consensus indicated that slavery was acceptable. Moreover, few argue that the holocaust in Nazi Germany was morally acceptable although the acts were legal. Thus, many in American society hold that slavery and the holocaust were objectively wrong—wrong regardless of place and time—and therefore, on some level, a few objective morals must exist.

265. See generally Pellegrino, *supra* note 259, at 43–50 (claiming that virtue ethics is workable in professional ethic environments, including the medical profession).

2. "Means" Restraints

In evaluating a policy, the means used to accomplish the desired "end" must also pass ethical scrutiny. In other words, the means are an independent limitation on the end. Although much of our law has focused on maximizing preferences, as a society we have realized that we cannot travel every path that leads to a desired destination. For instance, society encourages racial equality but finds it impermissible to fire a host of people based upon their race, even if the firing would lead to racial equality.²⁶⁶ For most policies, we weigh the end in light of the means if the means are ethically acceptable.²⁶⁷

C. *Ethical Evaluation*

Each of the four approaches to ethics is represented in some form in American society. American society, including the legal, medical, and scientific community, is ethically pluralistic. Thus, developing a consensus within those communities as to which approach should be used is unlikely. Just because something ethically could happen, however, does not necessarily mean that it should. In other words, pluralism requires toleration and respect of each other's views. In the field of ethics, this means that personally refraining from what others may deem to be unethical may be the proper response. It was for this reason that the NBAC recommended that Congress outlaw all human cloning efforts.²⁶⁸ Unfortunately, ACT, CLONAIID, and other cloning scientists have failed to accord such respect.

In an ethically diverse society, a policy on human cloning should be created so as not to ethically offend a sizeable segment of the population. This approach undoubtedly disfavors situational ethicists. Nevertheless, in a pluralistic society how could one individual's judgment as to another individual's (or potential individual's) status not be subject to the community at large while still maintaining law or a civil and non-chaotic society no

266. See *Crumpton v. Bridgeport Educ. Ass'n*, 993 F.2d 1023 (2d Cir. 1993) (finding the policy of firing only white teachers because of their race when layoffs are required is an impermissible means to achieving racial equality).

267. This is represented by the Supreme Court's standard strict scrutiny test. See, e.g., *Austin v. Mich. Chamber of Commerce*, 494 U.S. 652 (1990) (applying strict scrutiny and upholding a prohibition of corporate contributions and independent expenditures by weighing means used by the state—restricting corporate speech—with the State interest in preventing the distortion of the political process—the end).

268. See *supra* notes 10–14 and accompanying text.

less? Therefore, this Note proposes two common principles²⁶⁹ on which to judge cloning policies: (1) human beings should not be subjected to harmful experimentation without informed consent and (2) human beings should not be treated as property.

1. No Harmful Experimentations Without Informed Consent

The principle of informed consent applies when the subject has the ability to give consent or where the experimentation would not personally benefit the subject. Both internationally and domestically, this principle has proven to serve just results and thus, unless universal consensus can be reached again regarding medical research, this principle should control. Under the virtue theory, human life, and more specifically the conservation of oneself, is a basic good, which includes the good of health and bodily integrity.²⁷⁰ Consequently, one's health and bodily integrity should not be compromised under the virtue theory. Moreover, under this theory individuals cannot risk the life of a non-aggressor, even to save their own lives, as "every act which is intended, whether as end or means, to kill an innocent human being; and every act done by a private person, which is intended to kill any human being" is unethical.²⁷¹ Under the predominant principle-based theory in the medical profession, this principle is firmly established by three of its four competing principles. Without informed consent, autonomy of the human subject is compromised as she is either denied the choice to consent or her choice is ignored. In addition, its principle of nonmaleficence is also violated as the experimentation not only fails to avoid harm but increases the likelihood of harm to the subject. Moreover, its principle of justice is violated in the cloning context as the clone fails to personally and imminently suffer from illness that the research hopes to cure. Under American consensus values, the informed consent principle has wide support, typically under the value of human dignity.²⁷² Some have challenged this proposition stating the human cloning furthers human dignity because of the positive effects may lead to preserv-

269. This Note uses principles because in a pluralistic society principles are more accommodating as several values and virtues may lead to the same principle. Because various virtues and values are embodied in these principles, they are not simply asserted and neither are they underdetermined for the purposes of evaluating cloning policies.

270. See FINNIS, *supra* note 263, at 81 (describing Aquinas' theory on human goods).

271. *Id.* at 141.

272. See Richard W. Garnett, *Why Informed Consent? Human Experimentation and the Ethics of Autonomy*, 36 CATH. LAW. 455 (1996).

ing human life. This theory is flawed, however, because although the end serves human dignity, the means of forcing human experimentation does not. In addition, if values theorists applied the consensus values of the Western society, they would clearly support this principle, as it was the basis of assessing guilt for Nazi doctors during the Nuremberg trials²⁷³ and would likely be accepted in the cloning context as well.²⁷⁴ Therefore, because the principle of informed consent is widely supported, it should be applied when deciding whether a policy is ethically acceptable.

2. Human Beings Should Never Be Treated as Commerce

Though this principle is almost universally accepted, many politicians and policymakers are tempted to subtly cross this line. To do so however, would be ethically unacceptable. Under the values approach, American society appears to be strongly against deeming human beings chattel. The emancipation proclamation and its later codification in the Thirteenth Amendment to the United States Constitution ended slavery in America. Moreover, women's rights movements have helped women achieve equal legal and social status in the United States, ending an era when they were perceived by the law as property. Principlism also seems to be against treating individuals as property as it would violate its principles of justice and respect for individual autonomy. Virtue ethicists would also oppose treating humans as property, as "all human beings are both free and equal."²⁷⁵ Although some aspects of American society—such as the movement to repeal prostitution laws, the advocating of a market-driven organ donation system, and even a continued commitment to capitalism—may indicate a contrary value, these instances are typically not portrayed as treating humans as chattel. Thus, they remain the exceptions and not the rule.

273. See *id.* at 469–71. The first criteria in the Nuremberg Code's section on scientific research stated, "The voluntary consent of the human subject is absolutely essential." *Id.* at 469 n.67 (quoting THE NAZI DOCTORS AND THE NUREMBERG CODE: HUMAN RIGHTS IN HUMAN EXPERIMENTATION 2 (George J. Annas & Michael A. Grodin eds., 1992)).

274. See *supra* Part II.

275. FINNIS, *supra* note 263, at 170 ("'Free' here refers both to the radical capacity for free choices, in which one is master of oneself, and to one's freedom from any justified domination by other human persons; to be free is to be—unlike a slave—an end in oneself.").

D. *Unethical Proposals*

1. FDA Regulation and Partial Protection

The FDA has claimed that it has the power to regulate human cloning under a statute interpretation in which embryonic clones are considered "articles."²⁷⁶ In this situation, the FDA undoubtedly has an ethically acceptable end, prohibiting human cloning. In fact, with the absence of federal cloning legislation and with the cloning of humans occurring, some might advocate such a measure. But, although the end is ethical, the means to accomplish the end violates the universal principle that human beings should not be treated as chattel. Consequently, this approach is ethically unacceptable and should be rejected.

Congress has also proposed allowing some types of cloning, like therapeutic cloning, while banning other types of cloning, namely reproductive cloning under the Commerce Clause. Again, the end of preventing reproductive cloning is ethically acceptable, but the use of the Commerce Clause in this case is not. Under a total cloning ban, Congress would be tacitly acknowledging that human cloning should not be a part of commerce at all, which reinforces the universal principle. By passing a law allowing some cloning to occur, however, Congress is conveying the message that cloning is legitimately a part of commerce and that only some subset of cloning should not occur. Consequently, if Congress desires to regulate the transportation or selling of embryonic clones or products of cloning embryos, or the creating of embryos for a fee under the Commerce Clause, Congress must impose a total ban for its action to be ethically acceptable.²⁷⁷ Therefore, Congress would either have to pass a total ban or assert the ban under another power, possibly the Thirteenth Amendment.

2. Allowing Therapeutic Cloning While Prohibiting Reproductive Cloning

Along with deeming clones as commerce, a congressional policy of allowing therapeutic cloning while banning reproductive cloning creates other ethical issues. First, the law allows embryonic clones to be created, but unlike extra embryos from in vitro fertilizations, these embryonic clones may never be

276. See *supra* notes 70–72 and accompanying text.

277. Congress or the FDA could ethically regulate the use of any chemicals, facilities, or corporations that perform cloning research under the Commerce Clause. In addition, Congress could depend solely upon its channels and instrumentality portions of the commerce clause power to enact legislation that restricts cloning.

implanted because the law prohibits it. Thus, no one will legally be able to carry the embryo to term, and few would rescue the embryo for fear of the criminal or civil sanctions. Therefore, this law would in effect order the death of these embryos, and as a public policy, this approach would encourage the creation and deaths of thousands of embryos. Forcing the deaths of thousands of embryonic clones is unmistakably ethically unacceptable.

Because human cloning is allowed for research purposes only, this policy would also violate the universal principle of informed consent. The purpose of those advocating researching of embryonic clones has not been to administer therapy to them in hopes of saving their own lives. Instead, the focus of the research has been to cure the diseases affecting the rest of society, including the clone's parent. Thus, because the human embryo is a human being and because she cannot and has not given her consent, performing harmful research on her is plainly unacceptable. This research clearly violates a proposition that virtue-, value-, and principle-based ethicists largely support and violates the standards used to convict Nazi doctors during the Nuremberg trials.

IX. CONCLUSION

Establishing a national policy against human cloning requires adherence to general ethical standards. That being said, the federal government should join the other nations in the international community who have attempted to ban human cloning. Because of the international interest and the dynamics of human cloning, human cloning is both a federal issue and a state issue. The HCPA would be a good and effective first step toward banning human cloning. Nevertheless, Congress should make several amendments to the proposed ban to increase its effectiveness. These proposals include instilling friendly rules of construction, giving HHS interpretive authority over the scientific subsections of the statute, creating its own expressed statute of limitations, and adding its own conspiracy and solicitation charge. Moreover, the HCPA is constitutional because the Court has not recognized a right to create a child and because the HCPA does not implicate the First Amendment. In light of the Supreme Court's recent change in its Commerce Clause jurisprudence, however, the HCPA should include legislative findings and incorporate Congress's Postal Power, Admiralty Power, and its Enforcement Power of the Thirteenth Amendment. In addition, each state should pass a similar ban on human cloning to

allow state officials to enforce the ban and to police cloning activities. Moreover, states should pass acts prohibiting the destruction of embryos for research purposes to give further disincentives for researchers to clone embryos within their borders. If the recommended HCPA, and similar state acts, are enacted, we will be able to stop human cloning within the United States. Whether Congress and its state counterparts have the will and the courage to take such a definitive step however, remains to be seen.