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AN ANDY WARHOL SOCIETY - FIRST COCA-COLA, NOW HUMANS: AN EXAMINATION OF WHETHER A BAN ON HUMAN CLONING VIOLATES PROCREATIVE LIBERTY

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I. INTRODUCTION

The idea of human cloning is repulsive to many people. The thought of replicating a person conjures up images from science fiction movies involving strange mutants and creatures. This power is in the hands of mankind, and many are afraid of how it will be used. The fear stems from talk of using a cloned human for spare body parts, replacing a child that has died, and even recreating and raising oneself or one's mother or father as a child.¹ The rights of the cloned human and the psychological implications of both parent and clone become serious issues.

Proponents sometimes criticize those who oppose human cloning as merely doing so based on ethical feelings, without giving substantive explanations.² Of course, a discussion of

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¹ See Lori B. Andrews, *Is There a Right to Clone? Constitutional Challenges to Bans on Human Cloning*, 11 HARV.

J.L. & TECH. 643, 647-49 (1998) (discussing these abilities as desirable). See generally Leon R. Kass, *Triumph or Tragedy? The Moral Meaning of Genetic Technology*, 45 AM. J. JURIS. 1, 1-3 (2000) (discussing how far scientists have come with gene therapy); Kathryn D. Katz, *The Clonal Child: Procreative Liberty and Asexual Reproduction*, 8 ALB. L.J. SCI. & TECH. 1, 3-15 (1997) (discussing controversy surrounding human cloning).

² See Lawrence Wu, *Family Planning Through Human Cloning: Is There a Fundamental Right?*, 98 COLUM. L. REV. 1461, 1461 (1998) (arguing ethical considerations are immaterial because they overstate concerns). See generally Noelle Lenoir, *Universal Declaration on the Human Genome and Human Rights: The First Legal and Ethical Framework at the Global Level*, 30 COLUM. HUM. RTS L. REV. 537, 537-49 (1999) (outlining bioethic laws which have stemmed from moral concerns). But see, Symposium, *Gene Therapy: Legal, Financial and Ethical Issues*, 4 B.U. J. SCI. & TECH. L. 3, 4-5 (1997) (cautioning history teaches us that technology can be used for both good and evil).

cloning necessarily involves moral and ethical considerations, as this is the ultimate reason for the immediate repugnancy many people feel. The fear is that this ultimate power placed in the hands of anyone desiring to clone is unnatural and will be misused. Indeed, many reasons forwarded for allowing cloning appear to be misuses in and of themselves.³

Few arguments appear valid to allow cloning. One argument stands out above the rest and requires further examination. It has the potential for providing a legal basis for allowing cloning and cloning research to continue on humans. This argument is founded in the Constitution and the question becomes: whether there is a constitutional right to clone based on the fundamental right to have children.⁴ This paper will examine the development of the fundamental right to procreate and will decide whether this fundamental right applies to human cloning, which would result in a constitutionally protected right to clone. The legal arguments surrounding human cloning will be discussed, including an analysis of the various state interests involved in preventing the cloning of humans for reasons of procreation and whether these interests are compelling enough to ban human cloning.

II. CLONING PROCEDURES

Cloning is the process by which biological material, including genes or cells, is duplicated⁵ Molecular, cellular, and nuclear

³ See Andrews, *supra* note 1, at 647-49 (discussing reasons for human cloning). See generally Symposium, *supra* note 2, at 3-15 (1997) (discussing possibility cloning may be used for evil purposes); Jane Lampman, *Cloning's Double Trouble*, CHRISTIAN SCIENCE MONITOR, Aug. 13, 1998, at B1 (arguing human cloning poses deep religious and moral questions).

⁴ This paper is limited to the discussion of human cloning as protected under the right to privacy. See Wu, *supra* note 2, at 1461 (arguing married couples have fundamental right to procreate through human cloning). See generally Weldon E. Havins & James J. Dalessio, *The Ever-Widening Gap Between the Science of Artificial Reproductive Technology and the Laws Which Govern that Technology*, 48 DEPAUL L. REV. 825, 829-32 (1999) (discussing Constitutional protections of procreation); Matthew B. Hsu, *Banning Human Cloning: An Acceptable Limit on Scientific Inquiry or an Unconstitutional Restriction of Symbolic Speech?*, 87 GEO. L.J. 2399, 2400 (1999) (examining prohibition of human cloning as possible First Amendment violation).

⁵ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS 1, 13-38 (1997) (discussing process of cloning); *Cow/Human Embryonic Stem Cell Produced*, APPLIED GENETIC NEWS, Dec., 1998 Bioprocessing Vol. 19, No. 5 (reporting method discovered for production of primitive human embryonic stem cells). See generally *U.K. Legalizes Human Cloning*, APPLIED GENETIC NEWS, Feb., 2001 Cell Therapy Vol. 21, No. 7 (discussing uses of creating cloned human embryos).

transplantation are the three types of cloning procedures currently available to scientists.⁶ Molecular cloning involves the copying of DNA fragments that contain genes to be grown in a host cell.⁷ This type of cloning is used mainly for DNA technology and research. With cellular cloning, cells are copied from the body and grown in a laboratory.⁸ These techniques are used for medical advances, such as producing insulin for diabetics.⁹ Both are reliable procedures, but neither have the ability to produce embryos because they do not involve the use of egg or sperm. They would not, therefore, be used to clone human beings.¹⁰

Somatic cell nuclear transfer, or nuclear transplantation, involves reproducing the entire genetic code, rather than just DNA fragments or cells.¹¹ This process was used by Scottish

⁶ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at 13; see also Gregory J. Rokosz, *Human Cloning: Is the Reach of the FDA Authority Too Far a Stretch?*, 30 SETON HALL L. REV. 464, 471-78 (2000) (discussing science of cloning techniques). See generally *Multigenerational Mouse Clones Revive Human Replication Talk*, BIOWORLD TODAY, July 24, 1998 (reporting new technique used to clone more than 50 mice).

⁷ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at 14 (stating that molecular cloning is simplest type of cloning). See generally N. Omori, et al., *Molecular Cloning of Rat CD34 CDNA and Expression During Stem Cell Dependent Liver Regeneration*, CANCER WEEKLY PLUS, May 5, 1997, at 35 (examining expressions of CD34 on hepatic stem cell progeny); *Method For Molecular Cloning and Polynucleotide Synthesis Using Vaccinia DNA Topoisomerase*, BIOTECHNOLOGY NEWSWATCH, Oct. 21, 1996, at 7 (discussing method of molecular cloning).

⁸ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at 14 (describing cellular cloning). See generally N. Guillen, et al., *Stabilized Non-Complementing Diploids From Fused Protoplast Products of B. Subtilis*, EMBO J., May 4, 1985, at 1333-8 (reporting experiment using cellular cloning); *House Hearing Focuses on How to Ban Human Cloning*, TRANSPLANT NEWS, Feb. 28, 1998 (describing fight over cellular cloning research).

⁹ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at 14 (describing medical advances made through cellular cloning). See generally Craig M. Borowski, *Human Cloning Research in Japan: A Study in Science, Culture, Morality, and Patent Law*, 9 IND. INT'L & COMP. L. REV. 505, 509-13 (1999) (describing history of cellular cloning); Shannon H. Smith, *Ignorance Is Not Bliss: Why a Ban on Human Cloning is Unacceptable*, 9 HEALTH MATRX 311, 314 (1999) (describing parameters of cellular cloning).

¹⁰ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at 14 (reporting that cellular cloning and molecular cloning do not involve use of egg or sperm). See generally Borowski, *supra* note 9, at 511-12 (describing the absence of egg and sperm from molecular and cellular cloning); Smith, *supra* note 9, at 314 (same).

¹¹ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at 13 (describing process of somatic cell nuclear transfer). See generally Kenton Abel, *Biotechnology and Medical Devices*, 13 BERKELEY TECH. L.J. 465, 468-69 (1998) (describing somatic cell nuclear transfer); Katz, *supra* note 1, at 6-9 (outlining Congress' approach to use of somatic cell nuclear transfer in creation of children).

scientist Ian Wilmut, to create the sheep Dolly, the first adult mammal to be successfully cloned.¹² Prior to this, Dr. John Gurdon cloned a frog in the 1970s, the first clone to be reported.¹³ The frog cells were larger and easier to handle than the cells of mammals, though the frogs never matured beyond tadpoles.¹⁴

Nuclear transplantation is the process that threatens to artificially replicate a human being.¹⁵ This procedure was developed in the early 1980s. The cells used in this technique must be somatic, which include any cell except that of a germ.¹⁶ Once donor cells are obtained, the genetic material is isolated and inserted into the nucleus of a recipient egg cell of which the genetic material has been destroyed.¹⁷ This transfer produces an egg that has complete genetic material, identical to that of the donor. The egg is then fused and activated by electrofusion, where a pulse of electric current stimulates the development of the egg.¹⁸ Finally, it is implanted into the uterus of a surrogate, using in vitro fertilization.¹⁹ If the growth and development are successful, the result is a genetic replica of the donor.²⁰

¹² See Human Cloning Research Prohibition Act, H.R. REP. NO. 105-239, at 2 (1997) (noting creation of "Dolly" through somatic cell transfer); Abel, *supra* note 11, at 465-69 (describing creation of "Dolly" through somatic cell nuclear transfer). See generally Mary B. Mahowald, *Genes, Clones, and Gender Equality*, 3 DEPAUL J. HEALTH CARE L. 495, passim (2000) (describing one facet of debate over somatic cell nuclear transfer).

¹³ See Smith, *supra* note 9, at 311 (reporting first cloning); see also Michael I. Kahn, *Public Policy: Cloning Around With Clones: The Moral and Legal Implications of Human Cloning*, 3 U.S.F. J.L. & SOC. CHALLENGES 161, 163 (1999) (reporting J. Gurdon cloned toads from tadpole).

¹⁴ See Smith, *supra* note 9, at 311 (describing result of frog cloning); see also Kahn, *supra* note 13, at 163 (describing J. Gurdon's work in cloning frog).

¹⁵ See Human Cloning Research Prohibition Act, H.R. REP. NO. 105-239, at 2 (stating nuclear transplantation is new cloning technique which raises prospect of human cloning); see also Jennifer Cannon and Michelle Haas, *The Human Cloning Prohibition Act: Did Congress Go Too Far?*, 35 HARV. J. ON LEGIS. 637, 637 (describing human cloning as modern possibility).

¹⁶ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at appendix 3 (identifying somatic cells).

¹⁷ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at 13 (discussing process of nuclear transplantation); Hsu, *supra* note 4, at 2401 (describing nuclear transplantation); see also Human Cloning Research Prohibition Act, H.R. REP. NO. 105-239, at 1 (outlining nuclear transplantation process).

See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at 13 (describing nuclear transplantation process); Smith, *supra* note 9, at 315-16 (same).

¹⁹ See *Cloning Human Beings*, National Bioethics Advisory Commission, 1 CLONING HUMAN BEINGS, at appendix

²⁰ See *id.* at 14 (noting unlike previous experiments, Dolly had the genetic material of only one parent).

III. LEGAL STATUS OF HUMAN CLONING

When news of Dolly spread after the announcement on February 23, 1997,²¹ there was great public outcry against the cloning of humans.²² Nine days later, President Clinton initiated a moratorium on federal funding of cloning research and proposed a voluntary moratorium on private funding, as well.²³ The President authorized the National Bioethics Advisory Commission (NBAC) to examine the implications of human cloning.²⁴ The NBAC's report recommended the continuation of the moratorium on the use of federal funding to produce a human clone by nuclear transplantation and subsequent in vitro fertilization.²⁵ The Human Cloning Research Prohibition Act is the federal bill that currently prohibits the use of federal funds to further such research on human cloning. The moratorium is currently in effect for five years until 2002, while proposed federal legislation that would place a permanent ban on the cloning of human beings is pending.²⁶

Some states have also passed legislation banning human cloning and related research.²⁷ California was the first to enact such a law.²⁸ Other states followed and much new legislation has

²¹ See Human Cloning Research Prohibition Act, H.R. REP. NO. 105-239, at 2 (explaining on February 23, 1997, *The Observer* broke the international news an embryologist in Scotland had successfully cloned a sheep).

²² See Cannon and Haas, *supra* note 15, at 637 (noting news of Dolly grabbed attention of President, Congress, and American public).

²³ See H.R. REP. NO. 105-239, at 2 (stating in February 1997, Clinton issued executive order disallowing federal funding for cloning human beings).

²⁴ See *id.* at 2 (affirming NBAC issued report in June 1997 with several recommendations).

²⁵ See *id.* at 2 (specifying somatic cell nuclear transfers should not be used to produce any products for later in vitro fertilization into woman's womb); see also Fahd Riaz, *Genetic Transplantation Cloning And Federal Legislation: Some Constitutional Issues*, 7 B.U. J. SCI. & TECH. L. 421, 425 (2001) (recommending adoption of federal legislation that banned somatic cell nuclear transfer cloning to create humans).

²⁶ See H.R. REP. NO. 105-239, at 8 (providing review by National Research Council on impact of this Act upon research to be completed five years after date of enactment of Act).

²⁷ See CAL. BUS. & PROF. CODE § 2260.5 (Deering 2001) (establishing violation of human cloning prohibition constitutes unprofessional conduct); CAL. HEALTH & SAFETY CODE § 24185 (Deering 2001) (prohibiting human cloning and operative until January 1, 2003); LA. REV. STAT. ANN. §1299.36.2 (West 2001) (prohibiting human cloning, but excluding scientific research and cell based therapy, and imposing maximum \$10 million fine or ten years imprisonment); MICH. COMP. LAWS ANN. §750.430(a) (West 2001) (banning human cloning except for scientific research and cell based therapies); R.I. GEN. LAWS §23-16.4-2 (1999) (prohibiting human cloning for purpose of creating humans).

²⁸ See Kenton Abel, *1997 California Legislative Service 688 (West) Human Cloning*, 13 BERKELEY TECH. L.J. 465, 470 (1998) (indicating California was first state to enact

been proposed.²⁹ Problems with the drafting of the bills are evident, however, and many are vague, inconsistent, and unclear.³⁰ New York's proposed legislation even goes so far as to impose civil fines; create grounds for license revocation if public funds are used; and make human cloning, for reasons other than medical or scientific research, a class D felony.³¹

Several countries are also taking measures to ban human cloning. Germany, Denmark, Australia, Spain, and the United Kingdom, have already enacted or proposed laws prohibiting cloning.³² Other countries, such as France, Argentina, China,

moratorium on human cloning after announcement of Dolly).

²⁹ See S.R. 292, 91st Gen. Assem., Reg. Sess. (Ill. 2000) (calling for report on human cloning); S.B. 649, 91st General Assembly, Reg. Sess. (Ill. 1999) (prohibiting human cloning with exceptions for certain medical research until January 1, 2005); S.B. 1394, 181st General Court, Reg. Sess. (Mass. 1999) (prohibiting human cloning); S.B. 1689, 224th Annual Leg. Sess. (N.Y. 2001) (prohibiting human cloning through nuclear transplantation, except for scientific research for diseases or cures, and establishes human cloning as class D felony); A.B. 8341, 222nd Annual Leg. Sess. (N.Y. 1999) (imposing \$250 fine for violating prohibition on human cloning); A.B. 6874, 222nd Annual Leg. Sess. (N.Y. 1999) (making violation of human cloning prohibition grounds for license revocation); S.B. 1954, 222nd Annual Leg. Sess. (N.Y. 1999) (imposing civil fine for human cloning); A.B. 3026, 222nd Annual Leg. Sess. (N.Y. 1999) (prohibiting sale of ovum, zygote, embryo, or fetus for purpose of human cloning and establishing civil penalties); S.B. 1179, 222nd Annual Leg. Sess. (N.Y. 1999) (prohibiting sale of ovum, zygote, embryo, or fetus for purpose of human cloning and establishing civil penalties); S.B. 102, 123rd General Assem., Reg. Sess. (Ohio 1999) (prohibiting human cloning for five years after effective date of prohibition); S.B. 794, 70th Leg. Assem., (Or. 1999) (creating moratorium on human cloning).

³⁰ See Abel, *supra* note 28, at 480 (asserting constitutionality of state legislative bills will depend upon how carefully they are drafted); see also Cannon and Haas, *supra* note 15, at 638 (noting language of federal ban is vague); Lori Andrews, et al. *Cloning Position Paper of the IIT Institute for Science, Law and Technology Working Group on Reproductive Technologies* 8 S. CAL. INTERDIS. L.J. 87 (noting much of proposed legislation suffers from drafting infirmities, some state bills create loopholes by only prohibiting creation of "genetically identical" individuals through cloning).

³¹ See S.B. 6538, 223rd Annual Leg. Sess. (N.Y. 2000) (prohibiting human cloning through nuclear transplantation, except for scientific research for diseases or cures, and establishes human cloning as class D felony); A.B. 8341, 222nd Annual Leg. Sess. (N.Y. 1999) (imposing \$250 fine for violating prohibition on human cloning); A.B. 6874, 222nd Annual Leg. Sess. (N.Y. 1999) (making violation of human cloning prohibition grounds for license revocation); S.B. 1954, 222nd Annual Leg. Sess. (N.Y. 1999) (imposing civil fine for human cloning); A.B. 3026, 222nd Annual Leg. Sess. (N.Y. 1999) (prohibiting sale of ovum, zygote, embryo, or fetus for purpose of human cloning and establishing civil penalties); S.B. 1179, 222nd Annual Leg. Sess. (N.Y. 1999) (prohibiting sale of ovum, zygote, embryo, or fetus for purpose of human cloning and establishing civil penalties).

³² See H.R. REP. NO. 105-239, at 2 (noting these countries are drafting or have drafted prohibitions on human cloning); see also Heidi Forster, *Legal Perspectives on Cloning: Legal Responses to the Potential Cloning of Human Beings*, 32 VAL. U.L. REV. 433, 457-65 (discussing possible constitutional arguments if laws were passed to restrict creation of children through somatic cell nuclear transfer cloning). *But see* Abel, *supra* note 28, at

Japan, and the Council of Europe and World Health Organization have demonstrated a desire to prevent the cloning of humans.³³ An international ban was supported by the United States, Japan, Germany, England, France, Italy, and Canada, at the G7 Summit of Economic Countries in June of 1997.³⁴ Such worldwide response is an indication of the intense concern and apprehension that human cloning presents and the extreme caution with which we must proceed.

IV. FUNDAMENTAL RIGHT TO PROCREATE

Many Supreme Court decisions have led to the interpretation that the right to decide whether or not to have children is constitutionally protected by the fundamental right to privacy. The Constitution does not specifically enumerate a right to privacy. *Griswold v. Connecticut*³⁵ was the first decision to recognize a general privacy right.³⁶ This case held that state

467 (explaining while many countries agree on idea of ban on cloning, there is division among several European Union countries concerning proper means).

³³ See H.R. REP. NO. 105-239, at 2 (declaring intent of these countries to deter human cloning efforts); see also Melissa K. Cantrell, *International Response to Dolly: Will Scientific Freedom Get Sheared*, 13 J.L. & HEALTH 69, 72 (1998-99) (stating World Medical Association, World Health Organization, and UNESCO were among many international organizations who condemned human cloning). But see Nati Somekh, *The European Total Ban On Human Cloning: An Analysis Of The Council Of Europe's Actions In Prohibiting Human Cloning*, 17 B.U. INT'L L.J. 397, 398 (1999) (noting several countries including Australia, United States, Canada, and Japan, have not signed European treaty banning human cloning possibly because treaty proposes absolute ban on human cloning as opposed to less restrictive legislative prohibition).

³⁴ See H.R. REP. NO. 105-239, at 2 (professing intent of these countries to propose world-wide ban on human cloning); see also Anne Lawton, *The Frankenstein Controversy: The Constitutionality of a Federal Ban on Cloning*, 87 KY. L.J. 277, 280 (1998-99) (noting in order to strike down federal cloning legislation as unconstitutional, the Supreme Court must recognize cloning decisions as fundamental right and declare government's countervailing interest in banning cloning technology is not compelling); Valerie S. Rup, *Human Somatic Cell Nuclear Transfer Cloning, the Race to Regulate, and the Constitutionality of the Proposed Regulations*, 76 U. DET. MERCY L. REV. 1135, 1137 (1999) (noting many of proposed state laws are arguably unconstitutional based on First Amendment and Due Process Clause of either Fifth or Fourteenth Amendments).

³⁵ 381 U.S. 479 (1965) (discussing several rights included in "penumbra" of right to privacy). See generally Kenneth Pimple, *Religious, Philosophical, and Ethical Perspectives On Cloning: The Ethics of Human Cloning and the Fate of Science in a Democratic Society*, 32 VAL. U.L. REV. 727, 735 (1998) (discussing JAMA article which comments on "complexity of the ethical and legal issues related to reproduction, genetic manipulation, [and] rights to privacy," and notes "Wilmut and many other investigators have few objections to laws forbidding the actual cloning of a human being).

³⁶ *Griswold*, 381 U.S. at 482-86 (examining some important rights found under First Amendment, but also some rights not specifically delineated in Constitutional text including right to educate one's child as one chooses (*Pierce v. Society of Sisters*, 268 U.S. 510 (1925)) and right to study German in a private school (*Meyer v. State of Nebraska*,

laws preventing the use and distribution of contraceptives are unconstitutional because they intrude on the right to marital privacy.³⁷ In finding a right to marital privacy, the Court stated there is a general zone of privacy created by several fundamental constitutional guarantees.³⁸ The Court held a general right to privacy exists and this right is evidenced by certain amendments. In reaching this conclusion, the Court examined general privacy interests in the First,³⁹ Third,⁴⁰ Fourth,⁴¹ Fifth,⁴² Ninth,⁴³ and Fourteenth⁴⁴ Amendments.⁴⁵

262 U.S. 390 (1923)), and stating that these cases establish right of a parent to be free from government interference in raising his or her child); Elizabeth Price Foley, *The Constitutional Implications of Human Cloning*, 42 ARIZ. L. REV. 647, 694 (2000) (specifying within *Griswold* dicta, Seventh Circuit noted that "the rights to marry and to procreate biologically are older than any state law and, for that matter, older than the Constitution or the Bill of Rights).

³⁷ See *Griswold*, 381 U.S. at 485-86 (stating present case concerns relationships lying within zone of privacy created by several fundamental constitutional guarantees); see also Andrews, *supra* note 1, at 664 (discussing possible existence of fundamental right to clone and noting right to make decisions about whether or not to bear children is constitutionally protected under constitutional right to privacy and constitutional right to liberty).

³⁸ See *Griswold*, 381 U.S. at 485. See also Charlene Kalebic, *Symposium on Cloning: The Constitutional Question of Cloning Humans: Duplication or Procreation? An Examination of the Constitutional Right to Procreate* 8 S. CAL. INTERDIS. L.J. 229, 239 (1998) (citing *Roe v. Wade* as holding activities relating to family and procreation fall within definition of fundamental right to privacy).

³⁹ U.S. CONST. amend. I; see also Katz, *supra* note 1, at 45 (noting religious groups argue that restrictions on right of procreative freedom invade religious liberties protected by Free Exercise Clause of First Amendment).

⁴⁰ U.S. CONST. amend. III. See generally Kimberly M. Jackson, *Well, Hello Dolly! The Advent of Cloning Legislation and its Constitutional Implications*, 52 SMU L. REV. 283 (1999) (discussing legal ramifications of bans on cloning).

⁴¹ U.S. CONST. amend. IV. See generally Paul Tully, *Dollywood is Not Just a Theme Park in Tennessee Anymore: Unwarranted Prohibitory Human Cloning Legislation and Policy Guidelines for a Regulatory Approach To Cloning*, 31 J. MARSHALL L. REV. 1385 (1998) (discussing public policy issues enumerated by reproductive experts speaking at preliminary hearings).

⁴² U.S. CONST. amend. V. See generally David Orentlicher, *Cloning and the Preservation of Family Integrity*, 59 LA. L. REV. 1019 (1999) (stating it is too early to conclude that cloning can be performed without putting children that result at undue risk of harm as children of cloning will have exactly same genetic material as their single genetic parent).

⁴³ See U.S. CONST. amend. IX ("The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people."); see also *Griswold*, 381 U.S. at 491 (Goldberg, J., concurring) (concluding that to deny privacy rights would be equivalent to ignoring Ninth Amendment); Lisa Jane McGuire, *Banking on Biometrics: Your Bank's New High-Tech Method of Identification May Mean Giving Up Your Privacy*, 33 AKRON L. REV. 441, 459 (2000) (noting Court has recognized that Ninth Amendment creates zone of privacy). See generally Gregory Allen, *Ninth Amendment and State Constitutional Rights*, 59 ALB. L. REV. 1659, 1660-63 (1996) (discussing meaning of Ninth Amendment).

⁴⁴ See U.S. CONST. amend. XIV, § 2 ("Nor shall any State deprive any person of life, liberty, or property, without due process of law"); see also Eileen L. McDonagh, *My Body, My Consent: Securing the Constitutional Right to Abortion Funding*, 62 ALB. L. REV.

The notion that a person has a fundamental right to make decisions about procreation originated in *Skinner v. State of Oklahoma*.⁴⁶ This case involved the constitutionality of a state statute that allowed sterilization of habitual criminals under the theory that the offspring of a criminal would also be socially undesirable.⁴⁷ The Supreme Court in *Skinner*, described procreation as a basic liberty⁴⁸ that is fundamental⁴⁹ to our existence and recognized that the statute deprive[d] certain individuals of a right which is basic to the perpetuation of a race - the right to have offspring.⁵⁰ Although the Court arrived at its

1057, 1075 (1999) (noting many constitutional law scholars do not believe Fourteenth Amendment requires state to protect individual's body and integrity). Compare Steven J. Heyman, *The First Duty of Government: Protection, Liberty and the Fourteenth Amendment*, 1991 DUKE L.J. 507, 570-71 (1991) (arguing existence of basic obligation of government to protect individual from violence).

⁴⁵ See *Griswold*, 381 U.S. at 482-86 (examining privacy interests in Bill of Rights); see also David Luban, *The Warren Court and the Concept of a Right*, 34 HARV. C.R.-C.L. L. REV. 7, 27-28 (1999) (critiquing Justice Douglas' use of phrase 'zone of privacy'). See generally Samuel J. Levine, *Unenumerated Constitutional Rights and Unenumerated Biblical Obligations: A Preliminary Study in Comparative Hermeneutics*, 15 CONST. COMMENT. 511, 519 (1998) (discussing *Griswold* in determining fundamental constitutional guarantees). Compare John D.R. Craig, *Invasion of Privacy and Charter Values: The Common-Law Tort Awakens*, 42 MCGILL L.J. 355, 369-70 (1997) (describing notion of fundamental human right determined by Canadian Supreme Court).

⁴⁶ See 316 U.S. 535 (1942); see also *United States v. Vuitch*, 402 U.S. 62, 78 (1971) (Douglas, J. dissenting) (recognizing right to procreate). But see *Bowers v. Hardwick*, 478 U.S. 186, 190 (1986) (rejecting claim that *Skinner* confers right of privacy in this case).

⁴⁷ See *Skinner*, 316 U.S. at 538-39 (1942) (finding violation of Equal Protections Clause in statute which sterilizes one offender and not another when offenses are morally indistinguishable); see also Jana Leslie-Miller, *From Bell to Bell: Responsible Reproduction in the Twentieth Century*, 8 MD. J. CONTEMP. L. ISSUES 123, 132 (1997) (noting that *Skinner* Court recognized potential devastating and far-reaching effects of state's power to sterilize). Compare Stephanie Hyatt, *A Shared History of Shame: Sweden's Four-Decade Policy of Forced Sterilization and the Eugenics Movement in the United States*, 8 IND. INT'L & COMP. L. REV. 475, 488-89 (1998) (comparing coercive, compulsive, involuntary sterilization in Sweden with eugenics movement in United States).

⁴⁸ See *Skinner*, 316 U.S. at 541 (finding basic liberty in right to procreate); see also *Reproductive Technology and the Procreation of the Unmarried*, 98 HARV. L. REV. 669, 676 (1985) (arguing basic liberty at stake in *Skinner* is ability to procreate); Samuel Gunsburg, *Frozen Life's Dominion: Extending Reproductive Autonomy Rights to In Vitro Fertilization*, 65 FORDHAM L. REV. 2205, 2236-37 (1997) (discussing basic liberty right to procreate through in vitro fertilization).

⁴⁹ See *Skinner*, 316 U.S. at 541 (holding that procreation is fundamental right); see also Kevin Aloysius Zambrowicz, *"To Love and Honor All the Days of Your Life": A Constitutional Right to Same-Sex Marriage?*, 43 CATH. U.L. REV. 907, 913-14 (1994) (discussing marriage as fundamental right as discussed in *Skinner*). Compare William M. Hohengarten, *Same-Sex Marriage and the Right to Privacy*, 103 YALE L.J. 1495, 1512 (1994) (distinguishing between mixed-race and same sex marriage in explaining fundamental right to procreate).

⁵⁰ See *Skinner*, 316 U.S. at 536 (finding right to procreate to be fundamental right); see also John A. Robertson, *Genetic Selection of Offspring Characteristics*, 76 B.U. L. REV.

holding through an equal protection analysis, *Skinner* is generally identified as the seminal case for establishing the right to procreate.⁵¹ This view is supported by the Supreme Court in *Eisenstadt v. Baird*.⁵²

Eisenstadt concerned a state statute prohibiting the distribution of contraceptives to unmarried individuals.⁵³ The Court extended *Griswold*, when it held that a state may not differentiate between persons on the basis of marital status when regulating the distribution of birth control.⁵⁴ In *Eisenstadt*, the Court recognized that [i]f the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child.⁵⁵

421, 427 (1996) (arguing pre-birth genetic selection should be permissible). Compare Maura A. Ryan, *Religious, Philosophical, and Ethical Perspectives on Cloning: Cloning, Genetic Engineering, and the Limits of Procreative Liberty*, 32 VAL. U.L. REV. 753, 756 (1998) (commenting that Court has not yet dealt with right to procreate in claims of infertile person's right to noninterference).

⁵¹ See Wu, *supra* note 2, at 1475 (stating "the strongest precedent for establishing a fundamental right to procreate is *Skinner*"); see also Mary Lynne Birck, *Modern Reproductive Technology and Motherhood: The Search for Common Ground and the Recognition of Difference*, 62 U. CIN. L. REV. 1623, 1627-28 (1994) (noting Supreme Court has not addressed legality of surrogate arrangement or egg donation). See generally Jennifer Marigliano Dehmel, *To Have or Not to Have: Whose Reproductive Rights Prevail in Disputes over Dispositions of Frozen Embryos?*, 27 CONN. L. REV. 1377, 1379 (1995) (recounting background of cases establishing right to procreate).

⁵² See 405 U.S. 438 (1972) (holding Massachusetts statute denying unmarried individuals contraceptives unconstitutional); see also Katz, *supra* note 1, at 31 (questioning whether it is within government's power to curtail procreation). See generally Kris W. Druhm, *A Welcome Return to Draconia: California Penal Law 645, the Castration of Sex Offenders and the Constitution*, 61 ALB. L. REV. 285, 320 (1997) (discussing history of established right to procreate).

⁵³ See 405 U.S. 438, 440-42 (holding Massachusetts statute violated rights of single person under Fourteenth Amendment); see also Gwendolyn Prothro, *RU 486 Examined: Impact of New Technology on an Old Controversy*, 30 U. MICH. J.L. REF. 715, 719-720 (1997) (discussing legal standard used by Court to determine woman's right to use contraception). Cf. Lisa A. Hayden, *Gender Discrimination within the Reproductive Health Care System: Viagra v. Birth Control*, 13 J.L. & HEALTH 171, 181-82 (1998-99) (arguing men and women are not treated equally when it comes to sexual health care).

⁵⁴ See *Eisenstadt*, 405 U.S. at 453; see also Carey v. Population Services International, 431 U.S. 678, 678 (1977) (extending constitutional protection to minors); William Cohen, *Is Equal Protection Like Oakland? Equality as Surrogate for Other Rights*, 59 TUL. L. REV. 884, 897 (1985) (arguing *Skinner* and *Eisenstadt* holdings avoided addressing underlying issues of substantive due process and resulted in narrow precedent). See generally David B. Cruz, *"The Sexual Freedom Cases"?: Contraception, Abortion, Abstinence, and the Constitution*, 35 HARV. C.R.-C.L. L. REV. 299, 311 (2000) (discussing constitutional right to choose to have abortion in wake of *Eisenstadt*).

⁵⁵ See *Eisenstadt*, 405 U.S. at 453; see also Stanley v. Georgia, 394 U.S. 557, 564 (1969) (noting fundamental right of privacy to be free from government intrusion); Irah H. Donner, *The Right To Privacy One Hundred Years Later: Case Comment: Goodwin v.*

In the landmark case, *Roe v. Wade*,⁵⁶ the Supreme Court extended the right of privacy to include the right of a woman to choose whether to have an abortion prior to viability of the fetus.⁵⁷ This case was decided on a general right to privacy basis,⁵⁸ although it is sometimes discussed in the context of individual autonomy and personal liberty of the Fourteenth Amendment.⁵⁹ *Roe v. Wade* advanced individual autonomy aspects of the right to privacy.⁶⁰ This may explain why the misleading term procreative liberty is often used to describe the right to procreate.⁶¹ Although it is labeled a liberty right, it developed under the right to privacy through *Griswold*,⁶²

Turner: Cons and Pro-Creating, 41 CASE W. RES. L. REV. 999, 999 (1991) (noting Due Process Clause of Fourteenth Amendment protects individual's right to bear or beget children); *Panel Discussion: Contemporary Challenges to Privacy Rights*, 43 N.Y. L. SCH. L. REV. 195, 196 (1999) (discussing Justice Douglas' influence on Justice Brennan's opinion).

⁵⁶ See *Roe*, 410 U.S. at 113 (invalidating Texas law banning all abortions except for life of mother); see also Edward Sylvester, *Chenault v. Huie: Denying the Existence of a Legal Duty Between a Mother and her Unborn Child*, 33 AKRON L. REV. 107, 124 (1999) (discussing right of privacy established by *Roe*). See generally McGuire, *supra* note 43 at 457-68 (discussing privacy protections under Federal Constitution and statutes).

⁵⁷ See *Roe*, 410 U.S. at 154-56 (discussing individual rights to privacy versus state interests). See generally, *Connecticut v. Menillo*, 423 U.S. 9, 10 (1975) (stating woman's right to abortion was unconstitutionally restricted by Texas statute); Terry Brantley, *People v. Kevorkian: Michigan's Supreme Court Leads the Way in Declaring No Fundamental Right to Assist Another in Suicide*, 47 MERCER L. REV. 1191, 1192-93 (1996) (discussing right of privacy concerns and abortion privilege being applied to right to assist in suicides).

⁵⁸ See *Roe*, 410 U.S. at 152-56 (stating that right of privacy is "broad enough to encompass a woman's decision whether or not to terminate her pregnancy").

⁵⁹ See Gerald Gunther & Kathleen M. Sullivan, *Constitutional Law* 538, 543 (13th ed. 1997) (stating interpretation of *Roe* is more narrow since Court discusses Fourteenth Amendment as helping to provide basis for more general right to privacy). See generally Stephen E. Gottlieb, *Compelling Governmental Interests: An Essential But Unanalyzed Term in Constitutional Adjudication*, 68 B.U. L. REV. 917, 949, (1988) (stating Court derived general right to privacy out of constitutional guarantee of liberty); Elizabeth A. Reilly, *The Rhetoric of Disrespect: Uncovering the Faulty Premises Infecting Reproductive Rights*, 5 AM. U. J. GENDER SOC. POL'Y & L. 147, 186 (1996) (stating reproductive choices have rested on Supreme Court's recognition of general right of privacy).

⁶⁰ See *Roe*, 410 U.S. at 152-56 (extending prior general privacy right to autonomy over body); Gunther & Sullivan, *supra* note 59, at 543; see also Christina L. Misner, *What If Mary Sue Wanted An Abortion Instead? The Effect of Davis v. Davis on Abortion Rights*, 3 AM. U. J. GENDER SOC. POL'Y & L. 265, 270-71 (1995) (discussing possible deterioration of personal autonomy and right to privacy established by Supreme Court).

⁶¹ See Clarke D. Forsythe, *Human Cloning and the Constitution*, 32 VAL. U. L. REV. 469, 513 (1998) (discussing "reproductive freedom" and "procreative liberty"); see also Katz, *supra* note 1, at 44 (stating due to unclear Constitutional basis of procreative liberty future of reproductive freedom may be in danger); John A. Robertson, *Gestational Burdens and Fetal Status: Justifying Roe v. Wade*, 13 AM. J.L. & MED. 189, 189 (1987) (stating *Roe* recognized procreative liberty).

⁶² 381 U.S. 479 (1965).

*Skinner*⁶³ and *Eisenstadt*,⁶⁴ as demonstrated above.

Another important Supreme Court decision, *Carey v. Population Services International*,⁶⁵ discussed a state law preventing the sale or distribution of contraceptives to minors. The Court, in holding that the law was unconstitutional, stated that access to contraceptives is essential to exercise of the constitutionally protected right of deciding matters of childbearing, that is the underlying foundation of the holdings in *Griswold*, *Eisenstadt*, and *Roe*.⁶⁶ The Court specifically identified the right to procreate in its discussion of the existence of a right to personal privacy.⁶⁷ It stated that, "[w]hile the outer limits of this aspect of privacy have not been marked by the Court, it is clear that among the decisions that an individual may make without unjustified government interference are personal decisions relating to marriage, procreation, contraception, family relationships, and child rearing and education."⁶⁸

Finally, in *Planned Parenthood of Southeastern Pennsylvania v. Casey*,⁶⁹ the Supreme Court reaffirmed *Roe v. Wade*, and also recognized the existence of a right to procreate.⁷⁰ In discussing *Roe*, the Court stated that subsequent constitutional developments have neither disturbed, nor do they threaten to diminish, the scope of recognized protection accorded to the liberty relating to intimate relationships, the family, and decisions about whether or not to beget or bear a child.⁷¹

While public policy generally encourages traditional families, an individual's privacy interest and freedom from unwarranted governmental intrusion are held sacred. The preceding line of

⁶³ 316 U.S. 535 (1942).

⁶⁴ 405 U.S. 438 (1972).

⁶⁵ 431 U.S. 678 (1977).

⁶⁶ See *Carey*, 431 U.S. at 687-89. See generally Pilar S. Ramos, *The Condom Controversy in the Public Schools: Respecting a Minor's Right of Privacy*, 145 U. PA. L. REV. 149, 169-70 (1996) (discussing minor's right to privacy concerning contraception decisions); Holly L. Robinson, *Joint Custody: Constitutional Imperatives*, 54 U. CIN. L. REV. 27, 41-44 (1985) (discussing historical development of right to procreation decisions).

⁶⁷ See *Carey*, 431 U.S. at 684-86 (explaining that right to personal privacy includes right of procreation).

⁶⁸ See *Carey*, 431 U.S. at 684-85 (quoting *Roe*, 410 U.S. at 726-27).

⁶⁹ 505 U.S. 833 (1992).

⁷⁰ See *Casey*, 505 U.S. at 857 (stating subsequent decisions of Supreme Court after *Roe* "have neither disturbed, nor do they threaten to diminish the scope of recognized protection accorded to the liberty relating to intimate relationships, the family, and decisions about whether or not to beget or bear a child.").

⁷¹ See *id.* at 857.

cases shows the development and recognition of the right to procreate.⁷² This right falls under the general right to privacy and is, therefore, constitutionally protected.

V. HUMAN CLONING AS A CONSTITUTIONAL RIGHT

It is first necessary to establish that human cloning is considered a form of procreation before it can be discussed as constitutionally protected. Procreation is defined as the generation of children.⁷³ Generate means to bring into existence, cause to be, reproduce, procreate.⁷⁴ Human cloning for purposes of producing offspring is a form of procreation by its very process. Human cloning is a common term used to describe somatic cell nuclear transfer, or nuclear transplantation as described in Part II above. This type of cloning is different from molecular cloning and cellular cloning which are used for medical advances.⁷⁵ Human cloning involves the process of replicating genetic material for the purpose of producing an entire human.⁷⁶ Once the genetic material of an egg cell has been replaced, the egg is placed in the woman's womb through in vitro fertilization and she would then bear a child.⁷⁷ Human cloning is a process by

⁷² See, e.g., *Davis v. Davis*, 842 S.W.2d 588, 601 (Tenn. 1992) (stating that "procreational autonomy is composed of two rights of equal significance - the right to procreate and the right to avoid procreation"); Andrea Michelle Siegel, *Legal Resolution to the Frozen Embryo*, 4 J. PHARMACY & LAW 43, 51 (1994) (pointing to alternative position recognizing interest in preembryo as property right enabling donor to exercise nearly exclusive authority regarding its disposition); Misner, *supra* note 60, at 270 (stating Supreme Court has limited states' power to either require or deny certain medical treatment out of respect for individual's bodily integrity). *But see* Ruth Colker, *Pregnant Men Revisited or Sperm is Cheap, Eggs Are Not*, 47 HASTINGS L. J. 1063, 1065 (1996) (declaring court in *Davis v. Davis* was incorrect in finding that men have constitutional right to avoid procreation).

⁷³ See BLACK'S LAW DICTIONARY 1207 (6th ed. 1990).

⁷⁴ See WEBSTER'S ENCYCLOPEDIA UNABRIDGED DICTIONARY OF THE ENGLISH LANGUAGE 590 (1989).

⁷⁵ See *Cloning Human Beings*, National Bioethics Advisory Commission, available at <http://bioethics.georgetown.edu/nbac/pubs/cloning1/cloning.pdf> (discussing ethical concerns involved with such processes). Gregory Rokosz, *Human Cloning: Is the Reach of FDA Authority Too Far a Stretch?* (2000) 30 SETON HALL L. REV. 464, 475 (discussing benefits and risks of molecular and cellular cloning). *But see* Shannon H. Smith, *Ignorance is Bliss: Why a Ban on Human Cloning Is Unacceptable*, 9 HEALTH MATRIX 311, 314 (1999) (noting neither molecular nor cellular cloning are capable of allowing development of clones into embryos).

⁷⁶ See *Cloning Human Beings*, *supra* note 75 (describing medical processes involved). *But see* Richard Perry, *Broadening the Moral Conversation (A Response to Margaret McLean)* 32 U. TOL. L. REV. 351, 354 (2001) (arguing against ban on cloning because of health benefits human cloning may provide).

⁷⁷ See *Cloning Human Beings*, *supra* note 75, appendix A (defining cloning); *see also*

which children may be generated, and in this sense, it is a form of procreation.⁷⁸

Currently there are no cases that discuss human cloning as protected by procreative liberty,⁷⁹ since it technically does not yet exist.⁸⁰ The procedure can, however, be discussed in light of its relation to presently available assisted reproductive technologies, such as artificial insemination or in vitro fertilization.⁸¹ An examination of the way courts treat cases involving these techniques sheds some light on how future cases regarding

Hsu, *supra* note 4, at 2401; Human Cloning Research Prohibition Act, H.R. REP. NO. 105-239, at 1 (discussing ban on human cloning).

⁷⁸ See Stephanie J. Hong, *And "Cloning" Makes Three: A Constitutional Comparison Between Cloning and Other Assisted Reproductive Technologies*, 26 HASTINGS CONST. L.Q. 741, 743 (1999) (describing human cloning as "reproductive method"); Michael H. Shapiro, *I Want a Girl (Boy) Just Like the Girl (Boy) That Married Dear Old Dad (Mom): Cloning Lives*, 9 S. CAL. INTERDISC. L. J. 1, 26 (1999) (noting if source of clone is rearing parent, no contradiction ensues in saying she is child's mother); Lee M. Silver & Susan Remis Silver, *Confused Heritage and the Absurdity of Genetic Ownership*, 11 HARV. J. LAW & TECH. 593, 603 (1998) (stating cloned children would be indistinguishable from all other children by any biological test or criteria). *But see* Heidi Forster & Emily Ramsey, *Legal Perspectives on Cloning: Legal Responses to the Potential Cloning of Human Beings*, 32 VAL. U. L. REV. 433, 460 (1998) (pointing to arguments cloning is entirely new means of creating person dissimilar from procreation and therefore not entitled to constitutional protection).

⁷⁹ See *Sheils v. Univ. of Pa. Med. Ctr.*, No. 97-5510, U.S. Dist. LEXIS 3918, at 5-6 (E.D. Pa. March 24, 1998) (finding a ban on human cloning constitutional and did not infringe on individual's rights "to make reproductive choices free from Government interference[,] and stating court, however, dismissed case since plaintiffs did not allege any actual or threatened enforcement of statute against them directly and in reaching this conclusion, court cited *Wheeler v. Travelers Insurance Co.*, 22 F.3d 534, 538 (3d Cir. 1994), to support that plaintiffs must assert their own legal interests, not those of third party). *See generally* Stacy J. Ratner, *Baa, Baa, Cloned Sheep, Have You Any Law? Legislative Responses to Animal Cloning in the European Union and United States*, 22 B.C. INT'L & COMP. L. REV. 141, 150-51 (1999) (stating legislative response in both House and Senate to news of successful cloning of sheep was almost immediate, proposing prohibitions on use of federal funds for human cloning research); Susan Greenlee, *Dolly's Legacy to Human Cloning: International Legal Responses and Potential Human Rights Violations*, 18 WIS. INT'L L. J. 537, 542 (2000) (reporting National Bioethics Advisory Commission, at behest of President Clinton, filed report recommending continued ban on federal funding of cloning research and requesting private sector compliance).

⁸⁰ See Human Cloning Research Prohibition Act, H.R. REP. NO. 105-239, at 2 (stating nuclear transplantation is new cloning technique that raises prospect of human cloning); *see also* Jennifer Cannon & Michelle Haas, *The Human Cloning Prohibition Act: Did Congress Go Too Far?* 35 HARV. J. ON LEGIS. 637, 637 (1998) (describing human cloning as modern possibility).

⁸¹ See Virginia Godoy, *Where Is Biotechnology Taking the Law? An Overview of Assisted Reproductive Technology, Research on Frozen Embryos and Human Cloning*, 19 J. JUV. L. 357, 364 (1998) (discussing various assisted reproductive technologies); *see also* Hong, *supra* note 78, at 788 (stating cloning of humans involves right to procreate and would be protected by Supreme Court case law establishing right to privacy). *But see* Andre P. Rose, *Reproductive Misconception: Why Cloning Is Not Just Another Assisted Reproductive Technology*, 48 DUKE L. J. 1133, 1150 (1999) (arguing currently available assisted reproductive technologies still require union of egg and sperm from two distinct persons, while cloning is more akin to replication or manufacturing).

human cloning will be decided.

There are no Supreme Court decisions and few federal or state court cases involving assisted reproductive technologies.⁸² While not directly holding that these procedures are protected under the procreative right, the majority of the cases discuss the procedures in the context of having this protection.⁸³ One district court case, *Lifchez v. Hartigan*,⁸⁴ explicitly stated that embryo transfer and chorionic villi sampling both "fall within a woman's zone of privacy as recognized in *Roe v. Wade*, *Carey v. Population Services International*, and their progeny [. . .] It takes no great leap of logic to see that within the cluster of constitutionally protected choices that includes the right to have access to contraceptives, there must be included within that cluster the right to submit to a medical procedure that may bring about, rather than prevent, pregnancy."⁸⁵ The court, in essence, recognized that the choice of how to procreate is included within the constitutionally protected zone of privacy from which the right to procreate developed.⁸⁶

Many other courts and legal commentators just assume that

⁸² See, e.g., *Gerber v. Hickman*, 264 F.3d 882, 890 (9th Cir. 2001) (Silverman, J., dissenting) (finding law denying inmate from artificially inseminating his wife and violative of his fundamental right to procreate); *C.K. v. N. J. Dep't. of Health & Human Serv.*, 92 F.3d 171, 194-95 (3d Cir. 1996) (holding government aid program deterring childbirth did not violate plaintiffs' procreative rights because government has no obligation to subsidize reproductive choice); Kimberly Horvath, *Does Bragdon v. Abbott Provide the Missing Link for Infertile Couples Seeking Protection Under the ADA?* 2 DEPAUL J. HEALTH CARE L. 819, 819 (1999) (discussing *Bragdon v. Abbott*, 524 U.S. 624 (1998) (Rehnquist, C.J., dissenting) decision reproduction is major life activity under Americans with Disabilities Act, may help infertile couples find treatment).

⁸³ See *Webster v. Reprod. Health Serv.*, 492 U.S. 490, 523 (1989) (Blackmun, J., dissenting) (noting abortion regulation statute did not prohibit in vitro fertilization); Debra Feuerberg Duffy, *To Be or Not To Be: Legal Ramifications of the Cloning of Human Embryos*, 21 RUTGERS COMPUTER & TECH. L.J. 189, 209 (1995) (discussing court's interpretation of Illinois' Abortion Law in *Margaret S. v. Edwards*, 794 F.2d 994 (5th Cir. 1986) did not prohibit in vitro fertilization).

⁸⁴ 735 F. Supp. 1361 (N.D. Ill. 1990) *aff'd*, 914 F.2d 260 (7th Cir. 1990).

⁸⁵ See *id.* at 1377 (finding if there is no compelling state interest sufficient to prevent women from terminating pregnancy during first trimester there can be no such interest sufficient to intrude upon other protected activities during first trimester); see also *Roe v. Wade*, 410 U.S. 113, 163 (1973) (White, J., dissenting) (noting government may not regulate during first trimester of pregnancy); *Akron v. Akron Ctr. for Reprod. Health*, 462 U.S. 416, 450 (1983) (O'Connor, J., dissenting) (stating there is no legitimate state interest served by imposing twenty-four hour waiting period before abortion can be performed).

⁸⁶ See generally *Griswold*, 381 U.S. at 483 (1965) (discussing several rights included in penumbra of right to privacy); *Skinner v. Oklahoma*, 316 U.S. 535, 541 (1942) (recognizing fundamental right to procreation); *Eisenstadt v. Baird*, 405 U.S. 458, 453 (1972) (Burger, C.J., dissenting) (recognizing privacy as individual right regardless of marital status).

assisted reproductive technologies are protected under the right to procreate, without detailed analysis. The New Jersey Supreme Court, in the famous case involving a surrogacy contract, *In re Matter of Baby M*,⁸⁷ noted that [t]he right to procreate very simply is the right to have natural children, whether through sexual intercourse or artificial insemination.⁸⁸

Courts do not generally dictate what means of procreation are or are not acceptable.⁸⁹ An interference with the decision whether or not to procreate, including how the procreation should occur, would be an infringement on the right to privacy.⁹⁰ To arbitrarily prevent an individual from cloning would serve to prevent a means of procreation, and accordingly, would be unconstitutional.⁹¹

However, it is ultimately unclear whether courts will determine that human cloning should receive the same protection as natural procreation through sexual intercourse. There is a strong argument that it will, however, based on the refusal of courts to interfere with decisions regarding procreation, and the general notion that assisted reproductive technologies are protected.

Assuming courts reach the conclusion that human cloning is constitutionally protected by the right to procreate, this right is not absolute. The question arises whether there are

⁸⁷ 109 N.J. 396 (N.J. 1988).

⁸⁸ See *id.* at 448 (holding surrogacy contract invalid and refusing to terminate parental rights of natural mother). See generally *Skinner*, 316 U.S. at 538-39 (recognizing individual fundamental right to make decisions concerning procreation); *Griswold*, 381 U.S. at 479 (focusing on right to choose not to procreate).

⁸⁹ See Kristin L. Antall, *Who Is My Mother?: Why States Should Ban Posthumous Reproduction By Women*, 9 HEALTH MATRIX 203, 224 (1999) (stating Supreme Court established fundamental right to procreate, but permissible means and methods have not been decided); see also Stephanie F. Schultz, *Surrogacy Arrangements: Who Are the "Parents" of a Child Born Through Artificial Reproductive Techniques?* 22 OHIO N.U. L. REV. 273, 277 (1995) (stating courts have not defined permissible methods of procreation). See generally Gary N. Skoloff, *Introduction to Special Issues on Surrogacy*, 22 FAM. L.Q. 119 (1988) (discussing competing rights of participants within surrogacy arrangement).

⁹⁰ See *Skinner*, 316 U.S. at 538-39 (holding individuals have fundamental right to make decisions about procreation); see also *Eisenstadt*, 405 U.S. at 453 ("If the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision to bear or beget a child."). See generally *Griswold*, 381 U.S. at 482 (discussing several rights included in penumbra of right to privacy).

⁹¹ See Antall, *supra* note 89, at 224 (arguing "the fact that couple needs assistance when reproducing does not lessen their fundamental right in any way"); see also *Skinner*, 316 U.S. at 541 (stating strict scrutiny must be applied to fundamental right); Hong, *supra* note 78, at 743 (describing human cloning as reproductive method).

circumstances that would allow the government to restrict this right. An analysis of the possible compelling state interests involved in preventing human cloning for procreative purposes, is therefore necessary.

VI. STATE INTERESTS IN BANNING HUMAN CLONING TO CREATE FAMILIES

The government may not arbitrarily take away rights that are protected by the Constitution.⁹² There are some limited situations, however, where the government may restrict or prohibit such rights. Any law that prevents an individual from enjoying his or her fundamental rights as protected by the Constitution, must pass the strict scrutiny test, the highest standard of review.⁹³ The test provides that the law must be narrowly tailored to serve a compelling governmental interest.⁹⁴ The Supreme Court in *Skinner v. State of Oklahoma*,⁹⁵ specified that the strict scrutiny test must be used when a law affects an individual's fundamental right to procreate.⁹⁶ This test is necessary to balance the interests of the government against the constitutional rights of the individual.

⁹² See *Marbury v. Madison*, 5 U.S. 137, 177 (1803) (discussing written constitutions and stating that "an act of the legislature, repugnant to the constitution, is void"); see also *NAACP v. Alabama*, 377 U.S. 288, 307 (1964) (stating governmental purposes to control or prevent activities constitutionally subject to state regulations may not be achieved by means which sweep unnecessarily broad and thereby invade areas of protected freedoms); *Cantwell v. Connecticut*, 310 U.S. 296, 304 (1940) (holding governmental regulations must not unduly infringe protected freedoms).

⁹³ The origin of the strict scrutiny standard is generally credited to Justice Stone's famous footnote in *United States v. Carolene Products Co.*, 304 U.S. 144, 153 n.4 (1938). Justice Stone stated, "There may be narrower scope for operation of the presumption of constitutionality when legislation appears on its face to be within a specific prohibition of the Constitution, such as those of the first ten Amendments." *Id.* He suggested that restrictive legislation may be "subjected to more exacting judicial scrutiny . . . than are most other types of legislation." *Id.*

⁹⁴ See *Nixon v. Shrink Missouri Gov't PAC*, 528 U.S. 377, 427 (2000) (Thomas, J. dissenting) (stating strict scrutiny requires law be narrowly tailored to compelling governmental interest); *Roe*, 410 U.S. at 155-56 (stating laws may limit fundamental rights only if they serve compelling state interest and are narrowly drawn to express that interest); *Skinner*, 316 U.S. at 541 (applying strict scrutiny to fundamental right).

⁹⁵ 316 U.S. 535 (1942).

⁹⁶ See *Skinner*, 316 U.S. at 541 (stating strict scrutiny classification that states make in sterilization law is essential); see also *Roe*, 410 U.S. at 155-56 (1973) (stating laws may limit fundamental rights only if they serve compelling state interest and are narrowly drawn to express that interest); John A. Robertson, *Assisted Reproductive Technology and the Family*, 47 HASTINGS L.J. 911, 915 (1996) (acknowledging procreative rights can be limited when it cause harm but heavy burdens of justification are placed upon those who would restrict them).

There are several governmental interests that may be considered sufficiently compelling to override an individual's fundamental right to procreate.⁹⁷ There are concerns about the welfare of the clone and protection of human life.⁹⁸ The possibility of mutation, the psychological impact, and the use of a clone for spare body parts all raise questions concerning the individual rights and autonomy of the person that would be produced.⁹⁹ Others raise objections to human cloning because it threatens individuality and genetic diversity.¹⁰⁰ One commentator examines morality as a possible state interest.¹⁰¹

Human cloning raises the disturbing possibility of eugenics.¹⁰² Some might be tempted to choose characteristics of the clone that are considered desirable.¹⁰³ If the resulting child did not live up

⁹⁷ See Sophia Kolehmainen, *Human Cloning: Brave New Mistake*, 27 HOFSTRA L. REV. 557, 560-63 (1999) (discussing concerns that human cloning raises); see also Charlene Kalebic, *The Constitutional Question of Cloning Humans: Duplication or Procreation? An Examination of the Constitutional Right to Procreate*, 8 S. CAL. INTERDIS. L.J. 229, 249 (1998) (arguing state interests are compelling and override individual procreative interests).

⁹⁸ See *supra* note 38, at 94-95 (1998) (describing cloning technologies as "physically risky to offspring").

⁹⁹ See Vernon J. Ehlers, *The Case Against Human Cloning*, 27 HOFSTRA L. REV. 523, 526 (1999) (quoting Dr. Ian Wilmut, chief researcher for Dolly experiment, "[t]he one who is truly affected by cloning is the child. The child is the one who is most vulnerable in this technology"); Debra L. Moore, *Don't Rush to Judgment on "Dolly": Human Cloning and its Individual Procreative Liberty Implications*, 66 UMKC L. REV. 425, 436-42 (1997) (discussing various harms that human cloning may create).

¹⁰⁰ See Leon R. Kass, *Why We Should Ban the Cloning of Human Beings*, 4 TEX. REV. L. & POL. 41, 43 (1999) (offering reasons to ban human cloning for procreative purposes); Kolehmainen, *supra* note 97, at 560-63 (discussing concerns that human cloning raises); Eric A. Posner & Richard A. Posner, *The Demand for Human Cloning*, 27 HOFSTRA L. REV. 579, 595-96 (1999) (speculating on possible long term loss of genetic diversity in human species as parents clone more desirable children); see also Daniel Callahan, *A Step Too Far*, N.Y. TIMES, Feb. 26, 1997, at 23 (explaining how cloning upsets balance between forces; parents verses their child's individuality).

¹⁰¹ See Moore, *supra* note 99, at 436-42 (suggesting courts may find morality to be legitimate state interest in light of *Bowers v. Hardwick*); see also *Human Cloning: Position Paper of the Catholic Medical Association*, 15 ISSUES L. & MED. 323, 323-24 (2000) (stating Catholic Medical Association's views of human cloning as contrary to natural moral law). See generally *Bowers v. Hardwick*, 478 U.S. 186, 196 (1986) (validating sodomy law as based on notions of morality).

¹⁰² See Kalebic, *supra* note 97, at 232 (indicating that eugenics and mass cloning are significant concerns);

Kolehmainen, *supra* note 97, at 560-63 (raising eugenics as reason to ban human cloning); see also Leon R. Kass, *Triumph or Tragedy, the Moral Meaning of Genetic Technology*, 45 AM. J. JURIS. 1, 1-2 (2000) (articulating concerns which new genetic technology raises, including eugenics).

¹⁰³ See Kolehmainen, *supra* note 97, at 560-63 (stating that people could create clones to be "taller, blonder, smarter"); Posner & Posner, *supra* note 100, at 607-08 (debating real possibility wealthy members of society creating genetically superior offspring while poor have normal children). But see Stephen J. Gould, *Message from a Mouse*, TIME, Sept. 13, 1999, at 62 (questioning whether smartness gene would in reality make any difference

to the expectations of the parents, considerable psychological problems might occur.¹⁰⁴

The notion of eugenics also raises the possibility of a master race being created. There is an existing fear that allowing human cloning would provide the ability to create such a race or result in mass cloning.¹⁰⁵ Supporters of human cloning criticize these views as being far-fetched and speculative.¹⁰⁶ These fears, however, have a legitimate potential of turning into reality, as history proves.¹⁰⁷ Allowing unrestricted human cloning would place great power in the hands of many people. To think that the entire population will wield this power in a responsible manner, underestimates the potential problems.

"[M]ost people are repelled by all aspects of human cloning: the possibility of mass production of human beings with large numbers of look-alikes, compromised in their individuality; the idea of father-son or mother-daughter twins; the bizarre prospect of a woman bearing and rearing a genetic copy of herself, her spouse, or even her deceased father or mother; the grotesqueness

over education and environment).

¹⁰⁴ See Callahan, *supra* note 100, at 23 (explaining cloning upsets balance between forces, parents and child's individuality which influence child); Elliot N. Dorff, *Human Cloning: A Jewish Perspective*, 8 S. CAL. INTERDIS. L. J. 117, 120 (1998) (stating that cloning will likely exacerbate psychological problems children and parents already have, bringing new meaning to parent saying "I got A's in school; you should too!"); Moore, *supra* note 99, at 436-42 (stating that "because the potential [psychological] harms could prove devastating to the human clone, they must be accounted for in an interest balancing test").

¹⁰⁵ See John R. Harding, Jr., *Beyond Abortion: Human Genetics and the New Eugenics*, 18 PEPP. L. REV. 471, 471 (1991) (stating "history provides horrific examples of despots who would abuse the eugenic power of genetic engineering to create a master race"). See generally GÖTZ ALY, PERER CHROUST, & CHRISTIAN PROSS, *CLEANSING THE FATHERLAND: NAZI MEDICINE AND RACIAL HYGIENE* 23, 23-24 (The Johns Hopkins University Press 1987) (describing Nazi Germany's attempt to create master race through eugenics and disturbing experiments performed on prisoners to that end); L.A. TIMES, *France's Chirac to Seek Ban on Human Cloning*, April 30, 1997, at A13 (calling for world wide ban on human cloning).

¹⁰⁶ See Katz, *supra* note 1, at 1 (1997) (recognizing many supporters of human cloning who believe benefits will outweigh any negative aspects); John A. Robertson, *Liberty, Identity, and Human Cloning*, 76 TEX. L. REV. 1371, 1385 (1998) (describing human cloning as providing "fertile arena for fantasies about exercising a despotic or narcissistic power over others," but conceding that "with the eugenics movement in the United States and Germany hovering in recent memory, one could not be sure that the worst uses of cloning would not occur").

¹⁰⁷ See Harding, Jr., *supra* note 105, at 471 (stating "history provides horrific examples of despots who would abuse eugenic power of genetic engineering to create a master race"); ALY, CHROUST, & PROSS, *supra* note 105 (describing Nazi Germany's attempt to create master race through eugenics and disturbing experiments performed on prisoners to that end); Robertson, *supra* note 106 (recounting eugenics movements in Germany as grim reminder of evils which may occur).

of conceiving a child as an exact replacement for another who has died; the utilitarian creation of embryonic duplicates of oneself, to be frozen away or created when needed to provide homologous tissues or organs for transplantation; the narcissism of those who would clone themselves and the arrogance of others who think they know who deserves to be cloned; the Frankensteinian hubris to create human life and increasingly to control its destiny; men playing God. [. . .] [W]e sense that cloning is a radical form of child abuse."¹⁰⁸

Though there may be a constitutionally protected right to clone, following a procreative liberty analysis, many state interests exist that could prevent human cloning as a form of procreation. Probably the most convincing reason for enacting a ban, is the potential abuse of the power that human cloning would offer through eugenics. A total ban on all human cloning and human cloning research might not be sufficiently narrow to pass the strict scrutiny test.¹⁰⁹ A ban would have to clearly state that it does not include the prohibition of human cloning for purely scientific or medical research.¹¹⁰ If it is clear that the ban is only directed at preventing human cloning by individuals as a means of procreation, it would most likely sustain strict scrutiny. Such a ban serves compelling state interests that override the fundamental right to procreate.¹¹¹

¹⁰⁸ See Kass, *supra* note 100, at 43.

¹⁰⁹ See *Roe*, 410 U.S. at 155-56 (stating laws may limit fundamental rights only if they serve compelling

state interest and are narrowly drawn to express that interest); Robertson, *supra* note 96, at 915 (acknowledging procreative right "can be limited when it causes great harm . . . but a heavy burden of justification is placed upon those who would restrict them"); see also Judith F. Daar, *Assisted Reproductive Technologies and the Pregnancy Process: Developing an Equality Model to Protect Reproductive Liberties*, 25 AM. J. L. & MED. 455 n.89 (1999) (stating argument can be made that fundamental right to procreate should apply equally to coital and noncoital reproduction).

¹¹⁰ See, e.g., LA. REV. STAT. ANN. § 1299.36.2 (West 1999) (prohibiting human cloning, but excluding scientific research and cell based therapy); MICH. COMP. LAWS ANN. § 750.430(a) (West 1999) (banning human cloning except for scientific research and cell based therapies); R.I. GEN. LAWS § 23-16.4-2 (1999) (prohibiting human cloning for purpose of creating humans).

¹¹¹ See Kalebic, *supra* note 97, at 249 (arguing state interests are compelling and override individual procreative interests). *But see* Cameron v. Board of Ed., 795 F.Supp. 228, 237 (S.D. Ohio 1991) (extending constitutional privacy right to artificial insemination); Lifchez v. Hartigan, 735 F.Supp. 1361, 1377 (N.D. Ill. 1990) (extending procreative rights to embryo transfer and chronic villi sampling), *cert. denied* Scholberg v. Lifcherz, 498 U.S. 1069 (1991).

VII. CONCLUSION

Since the birth of Dolly, there has been a movement to ban human cloning and prevent any further research in this area. Setting aside ethical principles, the legal question arises as to whether the banning of human cloning would violate the fundamental right to have children. The government may not interfere with a person's decision to procreate or have a family, as this would violate the individual's privacy rights. An arbitrary prevention of procreation would infringe on the right to procreate, and this would be a violation of the Constitution.

There are, however, potential disastrous effects of human cloning that must be considered. The psychological ramifications are likely to be seriously damaging. The idea of commodification of children has severe consequences, as well. For now, a total ban on human cloning and human cloning research, without more information, should not be enforced. There are possible medical advances and benefits that might derive from such research. The courts should proceed with appropriate discretion and take into consideration the profound implications and effects that are involved. If a statute banning human cloning as a form of procreation is narrowly tailored, it will probably withstand strict scrutiny analysis, as there are compelling governmental interests that transcend procreative liberty interests.

