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ARTICLE: CONDUCTING EMBRYONIC STEM CELL RESEARCH ON NATIVE LANDS IN MICHIGAN

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SUMMARY:

... Historically, however, the term "domestic dependent nation" has been applied to the sovereignty status of a tribe. ... Even for those who do not believe that an embryo enjoys person-hood, there might be hesitation in advocating therapeutic cloning (as opposed to embryonic stem cell research) for fear that someone will continue the process and clone a fully developed human being. ... Because of the *Santa Clara Pueblo* decision, it is likely that, should a Michigan tribe enact laws to legalize and promote embryonic stem cell research and therapeutic cloning, and an Indian were performing the research, tribal sovereignty would prevail. ... Even given the uncertainties of Indian law regarding sovereignty, it is possible, under most circumstances, that a Michigan tribe could successfully argue that it is entitled to an exemption from the state civil statutes concerning embryonic stem cell research and the state criminal statutes regarding therapeutic cloning.

TEXT:

[*396] INTRODUCTION

A unique relationship has developed between the Native peoples and the United States government, which in some ways resembles the relationship between the States and the federal government. n1 Historically, however, the term "domestic dependent nation" has been applied to the sovereignty status of a tribe. n2 Exclusive federal authority and tribal sovereignty trump many laws of the particular state in which the tribal lands are located. n3 For example, state laws restricting gaming are unenforceable on Indian land, at the discretion of the tribal government. n4 Gaming is a well known example, but to what extent are other state laws inapplicable to Indian land located within the boundaries of a particular state? Michigan has civil and criminal statutes prohibiting the use of live or dead embryos and human somatic cell nuclear transfer [*397] technology to produce a human embryo. n5 In the opinion of Michigan State Representative Andy Meisner, n6 these statutes severely limit stem cell research, negating the potential medical benefits that may be derived from such research, and are among the most restrictive in the nation. There is enough concern in promoting stem cell research in Michigan, that a newly formed group called Michigan Citizens for Stem Cell Research & Cures, has launched a stem cell public education project. n7 On the other end of the spectrum, some states

are actively promoting and funding stem cell research. n8 Despite the laws in Michigan inhibiting stem cell research, could research that is prohibited by state law be conducted on Indian land should the Indian governing bodies so desire? The answer depends on many factors, but none more important than Indian tribal sovereignty.

Michigan has some of the most restrictive laws concerning stem cell research, when compared to most other states. The question of whether this type of research could be done on Indian lands is compelling because there are medical diseases which affect the native populations disproportionately compared to Caucasian populations, and for which stem cell research shows great promise to cure or improve the treatment. One of the most devastating diseases that has disproportionate affects on Native Americans is diabetes, a disease that has been hailed as having great potential to be cured with stem cell research. Additionally, the economic benefit from a large research center on Indian lands would greatly aid the Native population financially. Third, there is the consideration of keeping top Michigan scientists in the field from moving (along with their research dollars, prestige, and programs for budding Michigan scientists) to other states, such as California, that allow, encourage, and fund embryonic stem cell research.

This article provides a background for the legal considerations that play a part in debates concerning embryonic stem cell research and therapeutic cloning as it affects this research being performed on Indian lands. This article first examines the importance of stem cell research (Part I), Indian sovereignty (Part II), the Michigan statutes prohibiting such research (Part III), the status [*398] of international, federal, and other state laws (Part IV), the legal status of an embryo (Part V), and discusses the ethics of embryonic stem cell (Part VI). In Part VII, the issue of whether embryonic stem cell research and cloning can be done in Indian lands is discussed. This article argues that under most scenarios, embryonic stem cell research, and probably therapeutic cloning, could be performed on Indian reservations in Michigan despite the state statutes prohibiting such research.

I. THE SCIENCE AND IMPORTANCE OF STEM CELL RESEARCH

Imagine you are in a car accident and suffer horrible injuries. You have severed your left leg at the thigh and are facing a life in a wheelchair or, if you are fortunate enough to be otherwise young and healthy, walking again with a prosthesis after months or years of physical therapy. But, if you had the capability of a salamander, you would regenerate a new leg as if nothing had happened. n9 What is the difference between you and a salamander? The salamander has the ability to convert adult stem cells into cells similar to embryonic stem cells, and these embryonic-like stem cells develop into new tissue to form a new and complete leg. n10 This is just *one possibility* for stem cell use, and this potential is why physicians and scientists are so excited about stem cell research.

A. What Is a Stem Cell?

When our normal body cells divide (reproducing themselves), the result is two cells which are identical to the first. Heart muscle cells beget heart muscle cells and no other types of cells. Hair follicle cells beget hair follicle cells and no other types of cells. A stem cell is the wild card. An embryonic stem cell has the ability to develop into another stem cell or into any type of cell in the body. n11 Theoretically, these cells can divide without limit. In the three to five day old embryo, called a blastocyst, stem cells give rise to all the various types of tissue cells (approximately 200) in the body. n12 This is a one-way process called differentiation (or specialization). Differentiation is an irreversible process where cell immortality is lost; a finite life span is set into motion. [*399] Specialized tissue cells have been thought to never revert to embryonic stem cells, but this has been questioned. n13

In adults, there are adult stem cells in tissue such as bone marrow and muscle which, though limited in their potential, can regenerate cells of that type of tissue only. n14 Unlike their embryonic counterparts, adult stem cells cannot proliferate more than a year in the laboratory. Nonetheless, adult stem cells already have a place in the treatment of disease. n15 Adult stem cells from bone marrow have been used for transplantation for over three decades. n16

B. How Are Stem Cells Obtained?

Currently there are four sources of stem cells for use in scientific research: (1) embryos created via in vitro

fertilization in the setting of fertility clinics, (2) embryos or fetuses obtained through elective abortion, (3) embryos created through somatic cell nuclear transfer (cloning), and (4) adult tissues, which include bone marrow, umbilical cord blood, and testicular tissue. n17 A fifth source, theoretically, would be the creation of embryos for the express purpose of research, but with the abundance of leftover embryos from in vitro fertilization, there is not a need for this approach. Also, creating an embryo while planning its destruction for research, as opposed to using embryos left over from in vitro fertilization, may not be as ethically tolerable to many.

Embryonic stem cells were first isolated in mice tissue in 1981, n18 but it was not until 1998 that researchers at the University of Wisconsin n19 isolated [*400] human stem cells from five-day-old embryos which were produced via in vitro fertilization. The Johns Hopkins group n20 isolated cells very similar to the cells from the University of Wisconsin from five- to nine-week-old embryos donated from elective abortions. Shortly before this last discovery, cloning made headlines.

In 1996, a group in Scotland used somatic cell nuclear transfer techniques (SCNT) to clone the first mammal, Dolly the sheep. n21 SCNT involves removing the nucleus from a cell of a fully formed organism, inserting this genetic code into an egg which has had its DNA removed, and then implanting the "embryo" onto the lining of the uterus of a host birth mother. Theoretically, the DNA should be identical to the original organism (except for the mitochondrial DNA of the egg), producing an "identical twin."

Stem cells from adult tissue have also been the focus of scientific research. There are private companies working on therapeutic uses of these types of stem cells. n22 This type of research is not controversial, as is the case with research involving embryonic stem cells and cloning.

C. Why Scientists Are Not Satisfied with Use of the Existing Federally Funded Embryonic Stem Cell Lines

The current federally funded embryonic stem cell lines were initially touted to be seventy in number, but it turns out there are only twenty-two. These stem cell lines are listed on the National Institutes of Health Embryonic Stem Cell Registry. n23 All of these cell lines have been grown on mouse "feeder" cells, which secrete a substance that inhibits embryonic stem cells from differentiating. The problem is that infectious agents, such as viruses, may be contaminating these stem cell lines and, for this reason, any future therapeutic use of products from these cells may be unreasonably risky. n24 The major concern expressed by public health officials is the retroviruses which may remain dormant in the DNA of the host for many years, only to cause clinical infection years later. n25 There is also concern about unrecognized [*401] agents. Newer techniques have been developed which allow for a sterile environment for embryonic stem cells. n26

D. Why Scientists Are Not Satisfied with Just the Use of Adult and Cord Stem Cells

As mentioned, there is no going back with respect to differentiation in humans (although adult salamander stem cells do de-differentiate into cells similar to embryonic stem cells). An adult stem cell (or other stem cells from fully formed organisms) has differentiated from an embryonic stem cell and is not nearly as versatile as an embryonic stem cell. n27 They do not live as long as embryonic stem cells. The location and rarity of these cells may make the harvesting of these cells unsafe and difficult. Prestigious national scientific societies such as the National Academies and the Coalition for the Advancement of Medical Research, along with the National Bioethics Advisory Commission, all have taken the position that limiting stem cell research to adult stem cells and cord cells is scientifically inadequate. n28

E. What Does Cloning Have to Do with Stem Cells?

Remember the accident where afterwards you were able to grow a new leg due to embryonic stem cells? All cells have antigens (markers) on their cell membrane (surface), which allow organisms to recognize and distinguish between their own cells and cells from other organisms. If doctors are to attach a new leg, unless you take anti-rejection drugs as patients do in kidney transplants, the new tissue has to be your own. Foreign tissue (allograph from the same species,

xenograft from a different species) elicits an immune response and is rejected by our bodies. Unless this rejection is suppressed with powerful drugs, it will never become a part of the new organism (even powerful drugs are inadequate for most xenografts). In identical twins, donation of organs does not require immunosuppressive drugs because the donated tissue has the same genetic make up as the recipient and there is no recognition of foreign tissue, thus no rejection. If stem cells were made via somatic cell nuclear transfer (SCNT), n29 the DNA of the resultant cells would be the same as the original host (like an identical twin), thereby negating the need for immunosuppression. n30 There are many potential uses for this type of therapy, but [*402] imagine the utility of propagating stem cells by SCNT of a patient with end stage heart disease, then stimulating these cells to produce new myocardial (heart muscle) cells which could then be injected into the patient's heart, providing much needed improved pumping ability.

The advantages cloning would create with regards to the immune response has special significance in the context of organ transplants. As of August 23, 2006, there were 92,608 patients waiting for organ transplants that could save their lives. n31 Cloning via stem cells to grow organs to meet this shortage with a method that did not require the use of immunosuppressive drugs would save lives and could reduce morbidity. n32 Successful generation of organs in this manner would revolutionize transplantation therapy.

The result of SCNT for tissue regeneration is either a growth of tissue or technically cloning an embryo, but the embryo is never allowed to develop, nor is it implanted into a host mother. If one takes the position that an embryo does not possess person-hood, then this would not be human cloning. n33 It would be the cloning of cells (tissue), similar to what is done on a daily basis in labs across the country. However, if one takes the position that an embryo is a human, then this process would be human cloning. Which position is correct is probably not to be found in science, but it is a moral/religious, political, and ultimately a legal answer. However, the special non-allogenic properties of cloned host stem cells make them very important. This is such an important consideration that it was announced that in the summer of 2006, that a Harvard group would begin developing embryos via SCNT. n34

F. The Potential Promise of Stem Cell Research

Taken to its logical conclusion, the promise of stem cell research is almost limitless. If a leg can be regenerated, why can't we regenerate aging bodies and minds? With enough technical knowledge about stem cell manipulation, why can't cells be designed to eradicate cancer? While these types of therapies are years (possibly decades) away, they are not so far removed as to be dismissed as fantasy. Paralysis has already been cured in mammals.

A giant step towards the "Holy Grail"--specifically the regeneration of tissues damaged by spinal cord disease--was reported in the *Annals of Neurology* in July of 2006. Researchers from Johns Hopkins succeeded in treating [*403] paralyzed adult rats with embryonic stem cells. n35 This group was able to specifically direct embryonic stem cells to differentiate into mature functional central nervous system cells and allow replacement of those cells that were destroyed in paralyzed rats. This was the first demonstration of restoration of functional motor units by embryonic stem cells and potentially represents the beginning of a cure for many patients with motor neuron paralysis, long thought to be impossible. This study demonstrated two important practical points. Stem cells can now be *directed* to differentiate into specialized cells. Furthermore, they can be directed to differentiate into *working* central nervous cells (thought to be the most highly differentiated cells in the human body), and implanted into a mammal. n36

Diabetes is another disease for which many believe stem cell research holds promise. Diabetes occurs in two types. In type I, or juvenile diabetes, the body does not have enough insulin to allow glucose (a simple sugar providing fuel for cell metabolism) to enter the cell. In type II, or adult onset diabetes, there may be enough insulin, but the cell is "resistant" to the actions of the insulin present. n37

Diabetes is a devastating disease which leads to early death and morbidity, such as increased cardiovascular disease (strokes and heart attacks), hypertension, blindness, cataracts, amputation, kidney failure (requiring dialysis and transplants), coma, pregnancy complications, dental disease, and peripheral neuropathies, among other conditions. n38 Current treatment can include multiple daily injections with insulin produced by genetically modified micro-organisms,

monitored by multiple daily self-administered blood draws. n39

The total costs associated with diabetes in 2002 was estimated to be \$ 132 billion (\$ 92 billion direct costs and \$ 40 billion in indirect costs). n40 In 2002, diabetes was listed as the sixth leading cause of death, according to death certificates, n41 [*404] but this may be a gross underestimate, because the end organ disease (heart attack, stroke, kidney disease, etc.) is often listed as the cause of death, when in reality it was the diabetes which caused the end organ disease.

It is estimated that 20.8 million people, or seven percent of the population, in the United States have diabetes and, of this group, 6.2 million are un-diagnosed (early diabetes may go on for years with few or no symptoms, but still causing the progression of disease on the end organs mentioned above). n42 In contrast to the white population, Native Americans are particularly hard hit by this deadly disease. Up to 26.7% of American Indians in the southern United States, and 27.6% of Indians living in southern Arizona have diabetes, with the overall number of Indians having the disease being 2.2 times the incidence in non-Hispanic whites. n43

Stem cell research has the potential to offer a cure for this disease, and would have the ripple effect of addressing all the other end organ disease that results from diabetes. If stem cells can be directed to form beta cells in the Islets of Langerhans of the pancreas (the types of cells which produce insulin), then these could be injected into the portal system n44 (a venous system which drains the blood from the intestine to the liver), much like what is done presently for pancreatectomies (removal of the pancreas) for benign disease. The cells could take up residence in the liver and become functional, in effect curing this destructive disease. To be most effective, these cells would have to be cloned from the patient's own cells to avoid the rejection problems seen in allografts.

Almost any organ that fails, theoretically, could be cured or improved by stem cells directed to differentiate into the tissue that is failing. For instance, if stem cells can be directed to form healthy heart cells, then these could be transplanted into patients with heart disease. This has been done in mice with bone marrow stem cells, and this heart muscle has successfully repopulated heart tissue. n45 Other types of diseases whose treatments could benefit from the results of embryonic stem cell research include "Parkinson's and Alzheimer's diseases, spinal cord injury, stroke, burns, ... osteoarthritis, and rheumatoid arthritis." n46

[*405] II. THE RELATIONSHIP BETWEEN A RECOGNIZED TRIBE AND THE STATE

A. Indian Tribal Sovereignty

The most basic principle of all Indian law, supported by a host of decisions hereinafter analyzed, is the principle that those powers which are lawfully vested in an Indian tribe are not, in general, delegated powers granted by express acts of Congress, but rather inherent powers of a limited sovereignty which has never been extinguished... What is not expressly limited remains within the domain of tribal sovereignty. n47

The origins of United States tribal sovereignty law can be traced back to what has been termed the Marshall Trilogy. n48 In 1832, in *Johnson v. McIntosh*, the Supreme Court, in an opinion written by Chief Justice Marshall, found the basis for all land title in the United States; what land the Indians "owned," was in fact the property of the federal government. n49 Marshall reached this conclusion by applying the "Doctrine of Discovery," and concluding that the Indians had only the right to possess and occupy the land. n50 In the early nineteenth [*406] century, Indian rights were still largely a mystery, as the case law was evolving. The State of Georgia, hungry for Indian land, was trying to annihilate the Cherokee nation by passing laws contrary to treaty agreements with the federal government. n51 In 1831, Justice Marshall, in the case *Cherokee Nation v. Georgia*, used the phrase "domestic dependent nations" when referring to the sovereign status of Indian tribes. n52 The last case of the trilogy, *Worcester v. Georgia*, proved to be a very important one for Indian rights. n53 In *Worcester*, Marshall described Indian nations as "distinct, independent political communities," as "nations," and "holding the right of self government under the guarantee and protection of

one or more allies." n54 This language became very important in later Supreme Court cases. n55 The Court used the idea of Indian sovereignty to void the Georgia statutes which were contrary to federal law. n56

In response to the devastating effects of the General Allotment Act of 1887, n57 Congress passed "one of the most significant pieces of legislation directly affecting Indians ever enacted by the Congress of the United States" in the Indian Reorganization Act (IRA) of 1934. n58 The IRA reversed the assimilationist policies of the Allotment Act and, among other provisions, gave tribes the right to organize for their common good and welfare. Importantly, the Act also eliminated the absolute executive discretion of the Interior Department and the Office of Indian affairs. n59

The passage of the Indian Self-determination Act of 1975, ("Act") n60 was another landmark in history, shifting the tide against the previous federal policies which had the intention of termination of American Indian tribalism. n61 No longer would policy implementing the administration of Indian affairs be totally centralized in Washington, but would be planned and administered by [*407] the tribes themselves, if they so desired, and funded by the federal government. n62 The Act directed the Secretaries of the Interior and of Health and Human Services to enter into contracts with Indian tribes and other organizations for the delivery of federal services. n63

Tribal sovereignty was further advanced by the Supreme Court in interpreting § 12 of the Indian Reorganization Act n64 and upholding the hiring preferences for qualified Indians to vacancies in the Bureau of Indian Affairs in the landmark case of *Morton v. Mancari*. n65 The basis for giving preference in hiring was *not* affirmative action, but a practice based on political status and sovereignty. n66 In *Morton v. Mancari*, Justice Blackmun reasoned that

[t]he preference, as applied, is granted to Indians not as a discrete racial group, but, rather, as members of quasi-sovereign tribal entities whose lives and activities are governed by the BIA in a unique fashion. In the sense that there is no other group of people favored in this manner, the legal status of the BIA is truly *suigeneris*. n67

An equal protection analysis done requiring a compelling state interest to justify overt racial discrimination, again, is inapplicable to legislation or governmental action toward Indians because the policy of preference is not based on race, but on culture. n68

This concept of political status as the determining factor, rather than race, when evaluating policies governing Indians is further reinforced by the fact that it was not until 1924 that Congress declared that all Indians born in the United States are United States citizens. n69 Had race been the reason Indians were denied United States citizenship rather than "members of quasi-sovereign tribal entities," it would have been a violation of the Fourteenth Amendment. n70

[*408] Tribal sovereignty can be limited at the pleasure of the Congress and is subject to complete annulment. n71 "Indian tribes have long been recognized as possessing the common-law immunity from suit traditionally enjoyed by sovereign powers. ... Further, it is settled that a waiver of sovereign immunity 'cannot be implied but must be unequivocally expressed." n72

However, a tribe's immunity is not entirely equal to that of the federal government or the states. n73 The Supreme Court notes that "[i]n *Blatchford*, [they] distinguished state sovereign immunity from tribal sovereign immunity, as tribes were not at the Constitutional Convention. They were thus not parties to the 'mutuality of ... concession' that 'makes the States' surrender of immunity from suit by sister States plausible." n74 The Court reaffirmed that "tribal immunity is a matter of federal law and is not subject to diminution by the States." n75 Despite this recognition by the Court, it has placed limitations on tribal authority consistent with what is called implicit divestiture, which has been defined by the Court as "that part of sovereignty which the Indian implicitly lost by virtue of their dependent status." n76 Recent Supreme Court cases have applied, despite precedent to the contrary, the doctrines of laches, acquiescence, and impossibility, and as Justice Stevens states in his dissent in *Sherrill*, this trend violates the "bedrock principles of Indian law." n77 Tribal [*409] sovereignty is thus being limited without the "express" consent of Congress through

the doctrine of implicit divestiture by the Supreme Court.

Despite these limitations of tribal sovereignty by the Supreme Court, Congress, as late as 2000, reaffirmed its policy in the Indian Tribal Justice and Technical Legal Assistance Act. n78 In the Assistance Act, the findings of Congress declared that "Indian tribes are sovereign entities and are responsible for exercising governmental authority over Indian lands," and that "enhancing tribal court systems and improving access to those systems serves the duel Federal goals of tribal political self-determination and economic self-sufficiency." n79

B. Applicability of State Laws to Indian Country

The Supreme Court has "held that state laws may only be applied to tribal lands 'if Congress has expressly so provided." n80 The *California v. Cabazon on* decision is instructive in that it shows how and when state laws may apply to Indian country. n81 The Supreme Court in *Cabazon* addressed the issue of whether county and state regulatory gambling laws are applicable to Indian country. n82 *Cabazon* held that since the bingo statute in this case was regulatory rather than a criminal law, Public Law 280 n83 which granted state criminal jurisdiction over reservations in California was not applicable. n84 Despite the fact that the violation was part of the penal code, n85 the Supreme Court was persuaded that in the distinction between criminal/prohibitory and civil/regulatory law, the statute in question was regulatory in nature. n86

[I]f the intent of a state law is generally to prohibit certain conduct, it falls within Pub. L. 280's grant of criminal jurisdiction. If the state law generally permits the conduct at issue, subject to regulation, it must be classified as civil/regulatory and Pub. L. 280 does not authorize its enforcement on an Indian reservation. n87

[*410] Thus, the test is whether the conduct "violates the State's public policy." n88 At least for the six states covered by Public Law 280 (Michigan is not one of them), a statute prohibiting certain activity will be deemed "criminal," and therefore subject to enforcement in Indian country if it is against "public policy." n89 The Court is careful to point out that "[n]othing in this opinion suggests that cockfighting, tattoo parlors, nude dancing, and prostitution are permissible on Indian reservations in California," and that lower courts have not shown incompetence in distinguishing criminal versus regulatory statutes. n90

The Supreme Court has held that "[s]tate laws generally are not applicable to tribal Indians on an Indian reservation except where Congress has expressly provided that State laws shall apply." n91 Additionally, "under certain circumstances a State may validly assert authority over the activities of non-members on a reservation, and that in exceptional circumstances a State may assert jurisdiction over the on-reservation activities of tribal members." n92 These "certain circumstances" have mainly been narrowly applied to requiring Indian vendors in Indian country to collect state sales tax on goods sold to non-Indians. n93 However, taxation of Indian resources needs explicit permission from Congress. n94

[*411] When weighing the state interests, the Supreme Court has stressed that "[t]he inquiry is to proceed in light of traditional notions of Indian sovereignty and the congressional goal of Indian self-government, including its 'overriding goal' of encouraging tribal self-sufficiency and economic development." n95 The phrase "overriding goal' of encouraging self-sufficiency and economic development" refers to the considerable number of statutes enacted by Congress with this goal. n96

Even though the Supreme Court balances the interests of the state with the interests of the tribe, the presumption is that state laws do not apply on Indian reservations absent express Congressional intent to the contrary. n97 In *White Mountain Apache Tribe v. Bracker*, the respondent argued that the state may collect taxes on non-Indians engaged in commerce on Indian lands because there was no express Congressional statement to the contrary. n98 Nevertheless, the Court made it clear, "[t]hat is simply not the law." n99 The *Bracker* decision applied to state regulation of non-Indians on Indian land, and the *Cabazon* court commented that it is "even less correct when applied to the activities of tribes and

tribal members within reservations." n100 However, the *Bracker* decision addressed an approved comprehensive plan by the federal government and did not address the state's authority over non-Indians on Indian land absent such a plan. n101

Michigan Courts have addressed the issue of Indian sovereignty, regarding the applicability of state laws having force in Indian country, in cases such as *Kobogum v. Jackson Iron Co.*, n102 and *Taxpayers of Michigan Against Casinos v. State.* n103 In *Kobogum*, the Supreme Court of Michigan held that "the United States Supreme [C]ourt and the state courts have recognized as law that no state laws have any force over Indians in their tribal relations," specifically rendering traditional Indian polygamy a valid institution to be recognized by the state of Michigan. In *Taxpayers*, the Supreme Court of Michigan acknowledged the sovereignty of Indian tribes when it stated that "tribal sovereignty is limited only by Congress: 'The sovereignty that the Indian tribes retain is of a unique and limited character. It exists only at the sufferance of Congress and is subject to complete defeasance.'" n104 Later, the Court concluded that "only [*412] the federal government or the tribes themselves can subject the tribes to suit; tribal immunity 'is not subject to diminution by the States." n105

C. The Jurisdiction of Tribes over Non-Indians

The extent to which a tribe has power to regulate non-Indian activities is limited to land belonging to the tribe or land held in trust by the United States government for the tribe. n106 Tribes may regulate fully the activities of non-Indians who do not reside in Indian country. n107 Nonetheless, this regulation rarely extends to fee lands owned by non-Indians in Indian country, but "[a] tribe may also retain inherent power to exercise civil authority over the conduct of non-Indians on fee lands within its reservation when that conduct threatens or has some direct effect on the political integrity, the economic security, or the health or welfare of the tribe." n108 The Supreme Court has held that tribal courts have exclusive jurisdiction over civil matters where "a non-Indian asserts a claim against an Indian for conduct occurring on that Indian's reservation." n109

In criminal cases, the geographic extension of jurisdiction is more complicated, but in civil matters the tribal jurisdiction applies fully to Indians and non-Indians, though only on the reservation proper. n110 This New Mexico ruling seems to conflict with *Cabazon*, which applied both civil and criminal jurisdictional authority to all "Indian country." n111 Jurisdiction of tribal authority over non-Indians has also been recognized by other Court decisions. n112 The Indian Major Crimes Act confers sole jurisdiction of crimes committed by Indians within Indian country for a specified list of offenses, but for offenses not listed, the applicable state law applies. n113

[*413] For crimes by an Indian against an Indian or non-Indian, and crimes by a non-Indian against an Indian in Indian country, the state courts (with the exception of those states covered by Public Law 280) have no jurisdiction. n114 However, for crimes by a non-Indian on a non-Indian, the state court may have jurisdiction consistent with the *McBratney* rule, which the Supreme Court allowed as the first incursion of state law into Indian country without the permission of Congress by holding that state courts have jurisdiction over non-Indian on non-Indian crime in Indian country. n115 The *McBratney* rule was further defined to take into consideration whether the conduct of white offenders, which happened to take place on Indian land, "but which did not directly affect the Indians," as a positive factor in applying the rule. n116 For victimless or consensual crimes by Indians, the tribal courts should have exclusive jurisdiction, but dicta in *Cabazon* n117 indicates that an analysis of whether the activity is prohibitory in nature or against public policy, and therefore those crimes may be punishable in federal court under the Assimilative Crimes Act in states subject to Public law 280. n118

[*414] When a non-Indian commits a victimless or consensual crime, the federal courts technically have jurisdiction via the federal enclave law or state law (by way of the Assimilative Crimes Act) under the Indian Country Crimes Act. n119 State courts may have concurrent jurisdiction, as state courts routinely try non-Indians for traffic and other minor offenses in Indian country, although the practice is not supported by federal statutes or any Supreme Court decision. n120 It is possible that the *McBratney* rule would apply if there were no tribal interests involved. n121

D. The Tribe's Ability to Make Laws and Congressional Ability to Regulate Indian Commerce

In view of the recognition that Indian tribes are distinct political entities, the Supreme Court has ruled that tribes have the right to make laws and regulations for the government and protections of their persons and property, consistent with the Constitution and federal laws. n122 Even though there are significant limitations imposed by federal statute on criminal jurisdiction, n123 Indian tribes' jurisdiction concerning civil matters is not similarly limited. n124

Commerce with and among Indian tribes is governed by the plenary authority of Congress under the Indian Commerce Clause, which explicitly singles [*415] out Indians as suitable for separate legislation. n125 For those tribes that exercise tribal government, the states may not control commerce with Indian tribes. n126 Two barriers stand in the way of state control over commerce with tribes, and either standing alone is sufficient. n127 The first barrier is the potential pre-emption by federal law. n128 Secondly, "it may unlawfully infringe 'on the right of reservation Indians to make their own laws and be ruled them." n129

E. Statutes Construed Liberally in Favor of Indians

The relationship between tribes and the federal government alters the usual method of interpretation of statutes in that they are to be construed liberally in favor of Indians. n130 "The standard principles of statutory construction do not have their usual force in cases involving Indian law. As we [the Supreme Court] said earlier this Term, '[the] canons of construction applicable in Indian law are rooted in the unique trust relationship between the United States and the Indians." n131 Generally the Indian law rules of construction are derivations of "(1) very liberal construction to determine whether Indian rights exist, and (2) very strict construction to determine whether Indian rights are to be abridged or abrogated." n132

III. MICHIGAN STATUTES: WHAT IS AND IS NOT ALLOWED

Michigan laws concerning stem cell research have been described as "among the most restrictive in the nation." n133 For violations of the some Michigan statutes, there are civil penalties of up to \$ 10,000,000 and felony criminal penalties of up to ten years in jail. n134 The following is a summary of what the law allows and prohibits in Michigan.

Nontheraputic research, as opposed to research that is reproductive or done in the interest of the embryo or mother, can not be performed on any [*416] living embryo and is prohibited on dead embryos which result from planned abortions (except when done to protect the life of the mother). n135

A person shall not use a live human embryo, fetus, or neonate for nontherapeutic research if, in the best judgment of the person conducting the research, based upon the available knowledge or information at the approximate time of the research, the research substantially jeopardizes the life or health of the embryo, fetus, or neonate. Nontherapeutic research shall not in any case be performed on an embryo or fetus known by the person conducting the research to be the subject of a planned abortion being performed for any purpose other than to protect the life of the mother. ... However, if procedures are done for the purpose determining the life, status, or health, of the embryo or mother, the procedure is not prohibited. n136

Research may not be done on a non-living embryo unless the mother's consent has been obtained (routine pathologic examination is excepted). n137 It is prohibited to perform, or offer to perform, an abortion "when the consideration for the performance is that the embryo, whether alive or dead, may be used for research." n138 Selling, transferring, distributing, or giving away an embryo in violation of the statute's other provisions is also prohibited. n139

A licensee or registrant, under the public health code, is prohibited from engaging, or attempting to engage in, human cloning, defined as "the use of human somatic cell nuclear transfer technology to produce a human embryo." n140 The punishment for violating the prohibition on human cloning includes civil penalties of up to \$ 10,000,000, and criminal penalties of up to ten years in jail. n141 Health facilities and agencies are prohibited from allowing individuals

to engage in human cloning. n142 Human cloning is exempt from any laws governing biotechnology. n143 However, scientific research or cell-based therapies not specifically prohibited by statute are permitted. n144

[*417] Research on adult stem cells, cord cells, and testicular cells, or other cell-based therapies and research is not prohibited by Michigan statute. n145 The statutes contained in this section do not prohibit the "diagnostic, assessment, or treatment procedures, the purpose of which is to determine the life or status or improve the health of the embryo, fetus, or neonate of the mother involved." n146

IV. FEDERAL ACTION ON STEM CELLS AND CLONING

Human cloning is not prohibited by federal statute. n147 Moreover, it would appear that the mood of Congress has shifted somewhat, such that more think that the current federal funding for embryonic stem cell research should be expanded. n148 The major activity in this realm of research by the federal government has been by executive order, and the Food and Drug Administration (FDA) has weighed in to some degree, however President Bush exercised his first veto in his term as President when he did not change from his earlier position of restricting federal funding to those stem cell lines already in use in 2001.

Executive Order No. 12882, issued in 1993 by President William J. Clinton, established the President's Council of Advisors on Science and Technology (PCAST), whose function was to advise the President on matters involving science and technology. n149 Following the advice of the PCAST, President Clinton took the position that no federal funds would be used for human embryonic stem cell research. n150

The PCAST was continued by President George W. Bush on September 30, 2001. n151 The President then ordered that no funds shall be used for any embryonic stem cell research other than from those existing stem cell lines. n152

There have been attempts at passing federal legislation prohibiting human cloning and banning any product derived from an embryo created via cloning. This legislation would negate the benefits of any therapy developed [*418] in any other country to United States patients, simply because it was created via embryo cloning. n153 However, the only bill that has passed Congress would have extended federal funding of embryonic stem cell research, and this legislation was vetoed by President Bush. n154

"The Federal Drug Administration (FDA) has announced that it has the authority to regulate human cloning," but according to the background section of the House report on H.R. 534, "that authority has been questioned by many experts and remains unclear." n155 The FDA claims two sources of authority. n156 First, the Public Health Services (PHS) Act, which gives the agency the authority to regulate "biological products" that are used to treat medical conditions. The Agency contends that a cloned embryo is a "biological product" used to treat a medical condition, that being infertility. n157 The second authority claimed is the Food, Drug, and Cosmetic Act (FD&C); the FDA interprets the statute's definition of "drugs" to include human somatic cell clones. n158 In this act, drugs are defined as "articles (other than food) intended to affect the structure or any function of the body," and "a human somatic cell clone is an 'article' that affects the structure and function of a [person's] body," and thus "would be subject to investigational new drug application requirements." n159

V. POSITIONS ON EMBRYONIC STEM CELL RESEARCH OF OTHER STATES, INTERNATIONAL POSITIONS, AND THE SCIENTIFIC COMMUNITY

As of 2005, there were fifteen states that that have laws regarding research on an aborted fetus or embryo, including California, which encourages stem cell research, and Nebraska, which prohibits state funds to support any stem cell research. n160 The restrictions vary, with about half the states restricting the use of live fetuses or embryos, and the other half restricting all use, both living and non-living. n161 The remaining thirty-five states did not restrict the use of aborted fetal tissue either living or non-living. n162

Thirteen states had restrictions on the use of fetal or embryonic tissue obtained by means other than abortion,

specifically, in vitro fertilization or [*419] somatic cell nuclear transfer (cloning). n163 "Maine, New Mexico, Rhode Island, and Utah prohibited research on fetuses on embryos born or extracted alive," but this does not apply to pre-implantation in vitro fertilized eggs. n164 "Arkansas and Iowa prohibit research on cloned embryos." n165 "Michigan and North Dakota prohibit research on live embryos and fetuses and cloned embryos." n166 Thirty-seven states have no restrictions on the research on non-abortion embryonic tissue. n167

In light of the federal policy restricting the use of federal funds to stem cell lines already in use, many states have passed legislation, to encourage and fund stem cell research. n168 This decentralized approach has some concerned that there will be a lack of coordination in the direction of the research, possibly some ethical lapses, duplication of effort, and loss of U.S. leadership in this field. n169 In response to the restrictions of federal money for stem cell research, Harvard and Stanford have developed ambitious programs for stem cell research using private money, with the Harvard group developing at least twenty-eight new embryonic cell lines. n170 The University of California at San Francisco has developed an eleven million dollar program funded entirely by private sources. n171

In September of 2002, California became the first state to pass legislation that expressly encouraged the use of embryonic stem cells and cloned embryos. n172 Further, in 2004 California passed Proposition 71, with fifty-nine percent of the vote and endorsed by Governor Schwarzenegger, which amended the constitution and established the California Institute for Regenerative Medicine, along with funding of three billion dollars by state bonds. n173 In this Stem Cell Act, the writers of the bill noted that "[u] fortunately, the federal government is not providing adequate funding necessary for the urgent research and facilities needed to develop stem cell therapies to treat and cure diseases and serious injuries. This funding gap prevents the rapid advancement of research that could benefit millions of Californians." n174 The funds may not be used for reproductive cloning. n175

[*420] Other states have followed with legislation, and proposed legislation, promoting stem cell research. Wisconsin announced in 2004 that they would fund stem cell research with \$ 750 million over the next several years. n176 In 2004, New Jersey, the second state which enacted a law that expressly permits embryonic stem cell research passed legislation to fund a twenty-five million dollar stem cell research center and in the 2005 State of the State speech, the acting governor called for \$ 380 million for the Stem Cell Institute of New Jersey. n177 In 2005, Massachusetts passed a bill authorizing the use of embryonic stem cells and therapeutic cloning. n178 The Maryland House approved a bill which would permit and fund embryonic stem cell research and therapeutic cloning, but the bill died in the Senate and did not come to a vote. n179 In January of 2005, the Connecticut governor "proposed twenty million dollars in funding for human embryonic stem cell research." n180 In Illinois, the State Comptroller "proposed creating the Illinois Regenerative Medicine Institute which would be funded by a six percent tax on elective cosmetic surgery." n181 Ohio created the Center for Stem Cell and Regenerative Medicine in 2003, and funded the project with \$ 19.5 million. n182 Other states that have considered options to allow cloning and thus prevent the relocation of their scientists and biotechnology firms include Delaware, Pennsylvania, Texas, New York, and Florida. n183

On March 8, 2005, the United Nations General Assembly passed a non-binding resolution, eighty-four to thirty-four with thirty-seven abstentions, taking the position that member nations adopt legislation prohibiting all forms of human cloning, as it was "incompatible with human dignity and the protection of human life." n184 The European Union allows funding of embryonic stem cell research and funding for research on tissue from spontaneous and therapeutic abortions, but not for the creation of human embryos for the purpose of stem cell production. n185 Canada allows research on embryonic stem cells derived from donated eggs left over from in vitro fertilization. n186 The United Kingdom and Belgium allow for the creation of human embryos for research by fertilizing an egg or by somatic cell nuclear transfer (cloning). n187 Japan allows the creation of embryos for stem cell research for the purpose of [*421] obtaining "intellectual property rights based on such research." n188 Australia allows the use of human embryos left over from in vitro fertilization techniques and funds stem cell research. n189 Singapore permits cloning of human embryos and keeping them alive for fourteen days to extract stem cells. n190 Singapore has partnered with the New York based Juvenile Diabetes Research Foundation International to fund a three million dollar program for research with stem cells. n191

In July of 2004, the National Academies, n192 due to the perceived lack of guidelines by the federal government, in July of 2004, commissioned the Committee on Guidelines for Human Embryonic Stem Cell Research (Committee) to develop voluntary guidelines for the production, handling, and use of human embryonic stem cells. n193 The Academies' position was that there should be a voluntary worldwide ban on human reproductive cloning, and therefore they would address only therapeutic cloning using embryonic stem cells and somatic cell nuclear transfer. n194 The Committee recommended that each institution establish an oversight committee to review all proposed research and to establish a national committee to oversee the issue in general. n195

There were some activities that the Committee recommended be presently prohibited. First, the "culture of any intact embryo ... for more than 14 days;" and second, the insertion of human embryonic stem cells into a human embryo or the insertion of human embryonic stem cells into a nonhuman primate. n196 Also, animals in which human embryonic stem cells have been introduced, should not be allowed to breed. n197 Donors and the solicitation of embryos, sperm, eggs, or somatic cells should not involve any financial incentive. n198

[*422] VI. THE LEGAL STATUS OF THE CRYOPRESERVED EMBRYO

The beginning and ending of person-hood is a shifting point, and the law has, at times, been seemingly slow to adapt to the advanced technologies which cause those boundaries to shift. For instance, the common law relied heavily on quickening as the beginning of person-hood, but in light of *Roe v. Wade* that definition may not be as accepted as in the past. Traditionally, death has been the absence of respiration and heart function, but statutes have caught up with technology, and now "brain death" is the criterion for death. As a result, organs can be harvested from brain dead persons to save the life of another. Now accepted, this new definition was controversial several decades ago. What then, is the legal status of an embryo? Is a cryopreserved embryo a "person"?

In an opinion rendered in 2005, *Jeter v. Mayo Clinic Arizona*, the Court of Appeals of Arizona held that a cryopreserved three-day-old eight cell "pre-embryo" was not a person for the purposes of recovery under Arizona's wrongful death statute. n199 The Court did allow for action for breach of bailment contract when the reproductive clinic allegedly lost or destroyed five frozen pre-embryos. n200 The Court relied on a previous Arizona Supreme Court decision, *Summerfield v. Superior Court*, for the basis of their holding. n201 In *Summerfield*, the court held that person-hood did not extend to conception outside the womb, while overturning a prior decision which required a live birth for the application of the wrongful death statute. n202 The *Summerfield* court adopted the standard established as a "viable fetus" for the application of the wrongful death statute, while affirming that a person commits manslaughter for knowingly or recklessly causing death of an unborn child in the womb at any stage of development by physically harming the mother. n203 The *Jeter* court went on to observe that "[u]nlike a viable fetus, many variables affect whether a fertilized egg outside the womb will eventually result in the birth of a child ... This makes it speculative at best to conclude that 'but for the injury' to the fertilized egg a child would have been born and therefore entitled to bring suit for the injury." n204 The court acknowledged that "in the twenty years since the *Summerfield* decision, most jurisdictions have limited the definition of a person to a fetus that is viable." n205

The Supreme Court of the United States has not spoken directly to the issue of whether a cryopreserved embryo is a person and entitled to protection under the Federal Constitution, but it could have ruled on the issue in 2004. Mary Doe, a human embryo "born" in the United States and subsequently [*423] frozen, individually, and on the behalf of all other frozen embryos similarly situated, sued the Secretary of Health and Human Services. n206 This action was brought in response to what was perceived as President Clinton's policy favoring embryonic stem cell research, and sought an injunction on stem cell experimentation. n207 The case was rendered moot because of the new federal policy announced by President Bush, and the subsequent new policy adopted by the National Institutes of Health (NIH), which stated that no federal funding would be available for research on any stem lines that were not already in existence, and there was no reasonable expectation that embryos would be subject to the former policy again. n208

In the landmark case of *Roe v. Wade*, the Supreme Court intentionally dodged the difficult question of when person-hood begins and would not "speculate" when an embryo or a fetus gains person-hood:

We need not resolve the difficult question of when life begins. When those trained in the respective disciplines of medicine, philosophy, and theology are unable to arrive at any consensus, the judiciary, at this point in the development of man's knowledge, is not in a position to speculate as to the answer.

It should be sufficient to note briefly the wide divergence of thinking on this most sensitive and difficult question. There has always been strong support for the view that life does not begin until live birth. This was the belief of the Stoics. It appears to be the predominant, though not the unanimous, attitude of the Jewish faith. It may be taken to represent also the position of a large segment of the Protestant community, insofar as that can be ascertained; organized groups that have taken a formal position on the abortion issue have generally regarded abortion as a matter for the conscience of the individual and her family. As we have noted, the common law found greater significance in quickening. Physicians and their scientific colleagues have regarded that event with less interest and have tended to focus either upon conception, upon live birth, or upon the interim point at which the fetus becomes 'viable,' that is, potentially able to live outside the mother's womb, albeit with artificial aid. Viability is usually placed at about seven months (28 weeks) but may occur earlier, even at 24 weeks. The Aristotelian theory of 'mediate animation,' that held sway throughout the Middle Ages and the Renaissance in Europe, continued to be official Roman Catholic dogma until the 19th century, despite opposition to this 'ensoulment' theory from those in the Church who would recognize the existence of life from the moment of conception. The latter is now, of course, the official belief of the Catholic Church. As one brief amicus discloses, this is a view strongly held by many non-Catholics as well, and by many physicians. Substantial problems for precise definition of this view are posed, however, by [*424] new embryological data that purport to indicate that conception is a 'process' over time, rather than an event, and by new medical techniques such as menstrual extraction, the 'morning-after' pill, implantation of embryos, artificial insemination, and even artificial wombs. n209

The *Roe* court reviewed the common law and found that an abortion before the "quickening" (the first time the mother felt the fetus move, usually the sixteenth to the eighteenth week of pregnancy) was not a punishable offense. n210 It was noted that choosing "quickening" was a result of earlier concepts of the point in which a fetus becomes recognizably human, or when a "person" is infused with a soul, or is "animated." n211 The court held that the "floor" was the third trimester (viability of the fetus), and that a state could not restrict a woman's right to an abortion prior to viability, but could prohibit a third trimester abortion, except when done to preserve the life or the health of the mother. n212

In 1992, the *Casey* court upheld the *Roe v. Wade* decision on the basis of stare decisis. n213 The Court stated that "[n]o evolution of legal principle has left *Roe's* doctrinal footings weaker than they were in 1973. No development of constitutional law since the case was decided has implicitly or explicitly left *Roe* behind as a mere survivor of obsolete constitutional thinking." n214

In another decision striking down a Pennsylvania legislative declaration that "[person-hood] begins at conception and that conception occurs at fertilization," the Supreme Court reasoned that there was no secular purpose for the declaration and therefore it was a violation of the Establishment Clause. n215 The Court did not strike the legislative statement that person-hood begins at conception because it happened to coincide with certain religions, but "[r]ather, it rests on the fact that the preamble, an unequivocal endorsement of a religious tenet of some but by no means all Christian faiths, serves no identifiable secular purpose. That fact alone compels a conclusion that the statute violates the Establishment Clause." n216 In exploring the traditions of Christianity from the middle ages, the Court pointed out that the general view was that of St. Thomas: there is a period of forty days after conception for men and eighty days after conception for women, before the "soul's infusion." n217 St. Thomas wrote that what is "seed and what is not seed is determined by sensation and movement;" this was the general belief of Christendom [*425] at the Council of Trent in 1545. n218 The *Webster* court used this as an example of religious belief that if incorporated into a preamble of a statute as a "finding," would be struck down as a violation of the Establishment Clause. n219

Louisiana, in contrast gives legal status statutorily to an in vitro fertilized ovum: "An in vitro fertilized human ovum exists as a juridical person until such time as the in vitro fertilized ovum is implanted in the womb; or at any other time when rights attach to an unborn child in accordance with law." n220 The state also prohibits, of course, research on these embryos. n221

VII. CONTROVERSY AND STEM CELLS

A. The Controversy of Embryonic Stem Cell Research and Cloning

There is no opposition to the ends or goals of stem cell research. The opposition is with the means. The question boils down to when person-hood begins. n222

1. Political Controversy

President Bush takes the view that a fertilized egg outside the womb is a life, and therefore believes it to be immoral to take that life to preserve life. Senator Bill Frist, the Senate majority leader (and a transplant surgeon), has broken ranks with the President on this issue, and does not believe that person-hood begins at conception outside the womb. He believes that these embryos are merely "nascent human lives" that deserve dignity. n223

Senator Arlen Specter supports Senator Frist. Senator Spector is a survivor of two types of cancer and believes that "it is a clear-cut question to use embryos to save lives, because otherwise they will be destroyed." n224 He notes that fertility clinics hold about 400,00 "extra" unneeded embryos, and only 128 have been "adopted" by families that had no role in creating them. He continues by saying that "[a] century from now people will look back in amazement that we could even have this debate when the issues are so clearly cut." n225

[*426] Senator Rick Santorum, on the other hand, supports the President's position. "Since that little embryo doesn't have a pair of eyes and a color hair, doesn't have a name, it's very easy to dismiss this entity as insignificant, particularly when we see some utilization or some usefulness to us in its existence." n226 He continued by arguing that "we just kind of claim that there is a cloud as to what this is, and that allows us then to destroy that life and use it for our purposes." n227 There is no political consensus as to the status of an extra-uterine embryo, but the passage of H.R. 810 (which was subsequently vetoed by President Bush) tends to indicate that a majority in Congress would favor extending the funding of embryonic stem cell research. n228

2. Federal Funding of Stem Cell Research

At present, there are three main camps in regard to stem cell research and funding. First, there are those that oppose *all* embryonic stem cell research, including the National Right to life Committee and the United States Conference of Catholic Bishops. n229 There are those that support President Bush's limited funding of embryonic stem cell research, including the Christian Legal Society, Focus on the Family, and the Christian Coalition. n230 Others, including the National Academies, the Coalition for the Advancement of Medical Research (which urged the President to sign H.R. 810), the former first lady Nancy Reagan, Congress, and former Presidents Gerald Ford, Jimmy Carter, and Bill Clinton, favor *more* embryonic stem cell research than is currently funded. n231

3. Presidential Councils

President Bush created the Presidential Council on Bioethics (Council), which published several conclusions on the ethics of stem cell research and cloning. It recommended that Congress should allow stem cell research until a designated stage in their development (ten to fourteen days after fertilization). n232 There was unanimous agreement that all "cloning-to-produce-children" should be banned. In 2002, the Council recommended by a ten to seven margin, a four year moratorium on "cloning-for-biomedical-research." [*427] However, because one member did not attend the meeting and did not vote initially, the original vote was in favor of *no ban* on "cloning-for-biomedical-research" by a nine to eight margin. The final report reflected a change in vote at the last minute by two members. n233 The Council's

recommendations thus seem to support the advocates of federal funding for embryonic stem cell and "cloning-for-biomedical-research," despite being appointed by an administration who may be at odds with the recommendations.

President Clinton preceded President Bush with an entity called the National Bioethics Advisory Commission (NBAC), chartered in 1996. The NBAC concluded, among other things, that federal funding should be given to support research using embryonic stem cells derived from leftover embryos from fertility clinics. n234 They noted that in 1994, the NIH Human Embryo Research Panel argued for the federal funding of the creation of embryos for research purposes in exceptional cases. n235 This group recommended that no federal funds should be used for therapeutic cloning. The NBAC came to the conclusion that the status of an embryo was between a clump of cells, with no human status, and person-hood, with full legal status. From this position, the NBAC justified its recommendation of using leftover embryos from in vitro fertilization for research, as the potential benefits to individuals suffering from serious and fatal conditions outweighed the cost of destroying human embryos that would not ever be born.

4. When Does Person-hood Begin?

The battle lines are usually drawn based on a person's answer to the question of when person-hood begins. More specifically, is an embryo human life? Scientists, doctors, philosophers, religious leaders, politicians, and the general public cannot agree on whether an embryo is human life. Even the Supreme Court has refused to directly address the question in *Roe v. Wade* n236 and *Planned Parenthood v. Casey*, n237 but seemed to use viability of the fetus as a practical way to determine the legal definition of person-hood, at least as to when the rights of the fetus become significant.

Those who argue that an extra-uterine embryo is a human life, feel that it is never justified to take a human life even for the purpose of helping others. n238 Those who believe that an extra-uterine embryo is not human life but something akin to a pre-life form or "nascent" human life, argue that it is the moral duty of society to relieve the pain and suffering of others. n239 They also [*428] stress that it is an inconsistent position to argue that embryos are human beings and not have the same concern for fertility clinic production of embryos. To be consistent with this view, all fertility clinic treatments that involve the creation and the destruction of embryos would have to end. n240

There are those who argue that, from a pragmatic standpoint, the leftover embryos from fertility clinics will be discarded regardless of what society thinks of the morals involved, and only forty percent of these have a chance of surviving and becoming human even when implanted into a host uterus. n241 The problem with this argument is that on a moral basis, the ends should never justify the means. If it is wrong to take the human life of an embryo, it should be wrong to do it just because it is expedient. This is why the President's "middle road" position on federal funding of existing stem cell lines, while being politically expedient, is morally inconsistent. Those stem cell lines which the President approved federal funds for research, were obtained from embryos who were "killed" for research purposes. It appears that the President made a political compromise, not a firm moral stance.

But the question has to be asked: How many of those who reject embryonic stem cell research on moral grounds would deny themselves, or their loved ones, the benefit of life saving cures, for spinal cord paralysis, or Alzheimer's disease, developed by this type of research in another state, such as California, which allowed the research? Additionally, it has been pointed out that society does not, either on religious or moral grounds, respond to the natural loss (miscarriage, which may occur in twenty-five to thirty percent of normal pregnancies), of an embryo or fetus as it does to the death of an infant. n242 Under usual circumstances, these "products of conception" are discarded via the trash or "flushing," and no one would advocate this type of treatment for "human" remains in lieu of burial or cremation. If these are "lives," there seems to be some inconsistency as to how their remains are treated by society and those who consider an embryo a "person." n243

One could argue that the measure of person-hood is the "potential" of the cell or group of cells, and not the viability which determines person-hood. A one-celled fertilized ovum has the potential under the right circumstances (successful

implantation onto a uterus for at least six months and a successful delivery) to develop into a fully formed human. In fact, that is how all humans came into being. A single sperm and a single egg separately have "potential" to form a human under the right circumstances (joining in the fertilization process), but the difference is the unique genetic makeup of a fertilized ovum, and this has the potential to make a definite unique individual. On the other [*429] hand, one could argue that there is no "potential" short of the chance to implant into a uterus, and an embryo frozen for reproductive purposes and not used, destined to be discarded, has no "potential" and therefore does not have person-hood.

"Potential" gets even more murky when the following scenario is considered. Doctors routinely "clone" skin cells of burn victims in tissue culture to cover the areas of burns in patients who have such severe burns that there is not enough non-injured skin to harvest for split-thickness skin grafting to cover all of the wounds. Each of these cells has a nucleus capable of forming a fully formed human (the host's identical twin, and no one denies that identical twins produced naturally are human). Each full nucleus in our body has the "potential," of an embryo, given the right circumstances (being placed into an egg via somatic cell nuclear transfer and then into a receptive uterus, as occurred in the case of Dolly the sheep), of becoming a fully formed human. Although seemingly absurd, when we spit (saliva contains cells) or discard our body cells in any way, are we destroying the "potential" person-hood of the DNA in the cells that have been shed into the saliva because the DNA in these cells could potentially be implanted into an egg? "Potential" would seem to be a compelling argument, but the argument is not totally flawless because it depends on where you draw lines. Also, the "potential" argument is inconsistent because many of its proponents ignore the activities of fertility clinics, which produce embryos far in excess of those actually used (though done with medical justification).

This is not the first time technology has presented moral dilemmas to society. Consider the fact that it was not until the thirteenth century that universities were allowed to do limited and controlled dissection of human cadavers for research. Traditionally, the definition of death was the absence of a heartbeat and respiration. "Brain death" became a controversy when medical technology advanced to the point where a patient who had no electrical activity in the cerebral cortex could be kept "alive" artificially. Here, there was potential for the body to live, even though the brain was not viable. This definition based on lack of brain function succeeded in completely changing society's legal definition of death. More recently society has debated the right to die and who makes the decisions, as in the Terri Schiavo case, though she could have been kept alive with a simple feeding tube. n244 Ultimately, the courts were called upon to make the decision.

The evolution of the concept of brain death suggests one definition of "life" or "person-hood" that could be justified from a scientific point of view which would be consistent with the current scientific thought. Since the definition of death is the absence of brain function, would it not be logical for the definition of person-hood to be the antithesis of death? Brain function which [*430] can be measured by electroencephalogram begins at about eight weeks gestation in the fetus. n245 This could be used as a definition, however, all of the functions of an eight week old fetus are only reflexive. n246 Thus, this measurable "brain function" may not be brain function consistent with person-hood.

Another possible way of determining "personhood" would be to look at pain. Pain pathways do not develop and mature until the fetus is at least twenty-two weeks old, and maybe as late as twenty-six to thirty-four weeks. n247 Physiologic stress hormones that are released in response to pain (in mature babies) are not released in the fetus until about twenty-three weeks, suggesting this is the time frame when pain perception begins, despite earlier fetal reaction to noxious stimuli. n248 Because pain perception is so basic to the survival of any organism, this benchmark could be used as the basis for determining when person-hood begins.

For those that believe that stem cell research is ethical, the definition based on electrical brain activity would not be inconsistent with their beliefs. For those who believe that person-hood begins at conception this definition would be inconsistent with their beliefs, but their beliefs are already inconsistent with the case law that exists on the subject. Since the Supreme Court has explicitly stated that they have not directly addressed the issue of when person-hood begins, this definition would not be inconsistent with case law, but it would be inconsistent with the notion that abortion does not destroy a person. Since it is not illegal to destroy human life in the third trimester (as in partial birth abortions),

the notion of destroying a person could not be the primary consideration in the abortion decision. Practically speaking, *Roe* and *Casey* have used viability to determine when person-hood begins, or at least when the state interest of protecting the fetus becomes important enough to overcome some of the privacy interests of the mother, in the abortion issue. n249

5. Cloning: Is It Ever Justified?

Cloning of adult organism DNA via somatic cell nuclear transfer (tissue culture or human cloning depending on your point of view), is tied to stem cell research in the ways already discussed. Its main foreseeable use would be to regenerate non-allogenic tissue for organ or limb replacement. No reputable [*431] scientific organization has advocated reproductive cloning. n250 The issue becomes whether therapeutic cloning is ethical since most would agree that reproductive cloning is unethical. For those who believe that all embryos are human, the answer is no, because a person is destroyed. Even for those who do not believe that an embryo enjoys person-hood, there might be hesitation in advocating therapeutic cloning (as opposed to embryonic stem cell research) for fear that someone will continue the process and clone a fully developed human being. Science fiction images come to mind, such as a society that grows clones, devoid of rights, for the sole purpose of harvesting organs to prolong the member's lives, or the Star Wars motion picture, *Attack of the Clones*, which features an army of identity-less slaves. It appears that at the gut level, reproductive cloning just does not feel right. It is repugnant. n251

In addition to the gut feeling, Constitutional questions need to be considered. In *Skinner v. Oklahoma*, the Supreme Court held that the Constitution protected the fundamental right to marry and procreate. n252 Could the Court hold that a human cloning ban infringed upon the rights to procreate? To do so the Court would have to consider asexual, non-coital reproduction as a fundamental right. Also, there are issues as to the scientist's rights to personal liberty and free speech on the basis of the First Amendment. The Court has not ruled directly on when person-hood begins, and it would be unlikely that the issue of person-hood would be significant in deciding these other potentially Constitutional questions.

Can therapeutic cloning be regulated such that there is no chance of reproductive cloning? One would surmise that such regulation would not be one hundred percent effective. Do the potential benefits of therapeutic cloning have greater weight than the risk of reproductive cloning? The answer to this moral question depends on your point of view and knowledge of the subject. Should we ban an activity for the sole purpose that it might *lead* to an undesirable activity? In general, no. Will we take the high moral ground and condemn the practice of therapeutic cloning for research, only later to use and take advantage of the medical benefits developed via therapeutic cloning in countries like England, where it is legal? The answer is probably yes. But, unless the answer to this question is no, banning therapeutic cloning on moral grounds is a contradictory, hypocritical moral stance.

[*432] B. Religion and Embryonic Stem Cells

In the beginning, there was the stem cell (literally and figuratively).

It is almost impossible to discuss the ethics of stem cell research without discussing religion, because with most people to whom religion is important (the majority of Americans according to polls), they will draw the moral lines based on their religious beliefs. The problem with using religion to help draw the lines is that there are many competing religions in our society. There are those that may argue that stem cell research is "playing God." Nonetheless, this argument is inconsistent in that *everything* concerning modern medical care (constantly referred to as "modern miracles") is "unnatural" and "playing God" when viewed in this light. On the other hand there are those who make the argument that we are just "playing human," by using the gifts that God has given us, our innate talents, to improve mankind's existence. Nonetheless, our innate talent is like a double edged sword. We have created technology (nuclear weapons) that have the capacity to erase all life on earth. It can be argued that unabated scientific advancement without a moral compass is a similarly dangerous road to follow.

1. Catholic Church

At one end of the spectrum is the Catholic Church. "The Catholic Church is against stem-cell research because it involves the destruction of human embryos. Pope John Paul II says embryonic stem-cell research is related to abortion, euthanasia and other attacks on innocent life." n253 The Catholic church opposes any use of embryos which results in their destruction and has gone so far as to say excommunication is appropriate for those scientists who engage in embryonic stem cell research. n254 The Catholic Church has made it clear that they are not opposed to stem cell research itself. n255 Polls, however, show that there is a split between the individual members and official position of the Catholic Church. In a Harris poll, Catholics favored the use of excess embryos for research by a margin of sixty-seven percent to fifteen percent, with eighteen percent of the respondents being unsure. n256

[*433] 2. Orthodox Jewish Position

In a letter to President Bush, the Orthodox Union's position was very clear. It was stated that

our rabbinic authorities inform us that an isolated fertilized egg does not enjoy the full status of person-hood and its attendant protections. Thus, if embryonic stem cell research can help us preserve and heal humans with greater success, and does not require or encourage the destruction of life in the process, it ought to be pursued. n257

The Jewish religion seems to hold that since an isolated fertilized egg is not a person, embryonic stem cell research is ethical.

3. Islam

A majority of American Muslims favor stem cell research, according to a poll conducted by the Islamic Institute in 2001. n258 In order to formulate a position on the stem cell controversy a panel of experts was convened in 2001, in cooperation with the High Council of North America, the Graduate School of Islamic and Social Sciences, and the International Institute of Islamic Thought. The conclusion of the panel was to support embryonic stem cell research. n259

Muslims have usually rejected human cloning experiments but have supported in vitro fertilization technology. But "[i]n 2003, a scholar in Cairo issued a fatwa (Islamic religious ruling) stating that therapeutic cloning of embryos would be considered lawful and could be compared to the accepted practice of donating cells, tissues, or organs for transplants." n260 The views by Muslims are not uniform, however, and some agree with the position of the Catholic Church. n261 There are some scholars that say that ensoulment does not occur until the 120th day of pregnancy. Others say it occurs on the fortieth day. Still another view of the *sharia* (Islamic Law) holds that there is a difference between potential person-hood and actual person-hood, and that although life begins at conception in the womb, an embryo formed artificially "is not in its natural environment" and if not placed into the womb, will not [*434] survive and will not become a human being. Therefore, excess embryos should be used for research. n262

4. Protestant

By definition, there is no one voice for the protestant religions, and therefore polls are one way to gauge their religious and moral views. In a Harris poll in 2004, seventy-seven percent of Protestants thought that stem cell research with excess embryos from in vitro fertilization should be allowed, while ten percent were opposed, and twelve percent were unsure. For born-again Christians, the numbers were fifty-eight percent in favor, twenty-one percent against, and twenty-one percent unsure. For those that described themselves as "very religious," the numbers were fifty-five percent in favor, twenty-three percent against, and twenty-two percent not sure. n263 Other polls show that evangelical white Christians favor embryonic stem cell research by forty-seven to fifty percent, while opposing it by forty to forty-seven percent; and non-evangelical white Protestants favor this research by seventy to seventy-seven percent, while eighteen to nineteen percent opposed the research in 2004. n264 It appears that the majority of Protestants favor embryonic stem

cell research using excess embryos, and that even among the white evangelical Protestants the difference in opinion is roughly split down the middle, slightly favoring the use of embryos for research.

C. Polls of the American Public

It may not be important to anyone who holds a deep conviction as to the morality of an issue, but examining what the populous believes on a subject, especially an ethical issue, is important because these issues are political hotbeds, and what the constituents believe is important to a legislator and thus important to the passage of laws. Although seemingly less important to a countermajoritarian court, the idea of the convictions of the general population in defining societal norms can be important when the issue is not strictly a legal or scientific one.

In an ABC News/Washington Post Poll conducted April 21-24, 2005, sixty-three percent of Americans supported embryonic stem cell research, while twenty-eight percent opposed it. n265 An NBC News/Wall Street Journal [*435] Poll conducted June 25-28, 2004, showed that seventy-one percent were in favor of using embryonic stem cells for research, and twenty-two percent opposed. n266 An earlier poll by Fox News/Opinion Dynamics Poll conducted July 15-16, 2003, indicated that forty-six percent of the respondents favored embryonic stem cell research, and thirty-seven percent were opposed. n267 An earlier poll still, the Ipsos-Reid Poll conducted August 10-12, 2001, found that seventy-one percent favored using embryos for research and nineteen percent opposed. The largest percentage found supporting embryonic stem cell research was by the Harris Poll #58, conducted between July 12-18, 2004. n268 This group found that seventy-three percent (up from sixty-one percent in 2001) favored embryonic stem cell research, and eleven percent (down from twenty-one percent in 2001) opposed this research. Broken down to party affiliation favoring the research, Republicans, Democrats, and Independents were sixty percent, eighty-nine percent, and eighty-three, respectively.

In a CNN/USA Today/Gallup poll dated August 5-7, 2005, fifty-six percent of the respondents felt that the federal government should fund research on stem cells from newly created human embryos, while forty percent felt that the government should not. n269 The trend in this poll was an increased number approving federal funds from fifty percent the previous year. In this poll, when asked with which of the following three options they agreed more, twenty percent supported the President's limited use of federal monies for stem cell research, fifty percent favored the California approach to more liberally fund embryonic stem cell research, and twenty-two percent did not support any government funds for any type of stem cell research. The Newsweek Poll conducted October 14-15, 2004, showing similar numbers for federal funding as the CNN /USA Poll in 2004, showed fifty percent favored federal dollars for embryonic stem cell research, and thirty-six percent opposed the funding. n270 Higher favorable numbers were obtained in the University of Pennsylvania National Anneburg Election Survey conducted July 30-Aug. 5, 2004. n271 Results revealed that sixty-four percent of those polled support federal funding of embryonic stem cell research, and twenty-eight percent oppose. Still earlier, a 2002 poll by the Pew Research Center for the People and the Press and the Pew Forum on Religion and Public life Survey found that only forty-three percent favored government funding of stem cell research. n272

When asked if, in general, it was morally acceptable to use human cloning technology in developing new treatments for disease, the Virginia Commonwealth [*436] University life Sciences Survey conducted in September of 2003, found that fifty-three percent felt it was wrong, while thirty-six percent though it was acceptable. n273 In this survey, there was a concern that scientists did not know enough about cloning technology to make it safe in the treatment of disease (seventy-seven percent). The Los Angeles Times Poll conducted January 30 through February 2, 2003, found that forty-three percent of the population supported a complete ban on therapeutic cloning, and fifty-two percent supported a partial or no restrictions on therapeutic cloning. n274 The Ipsos-Reid Express poll conducted November 30 to December 2, 2001, showed that thirty-three percent supported a complete ban on human cloning research, while sixty percent either felt there should be no restrictions or it should be regulated. n275

In terms of cloning for reproduction, the CNN/USA Today/Gallup Poll conducted January 3-5, 2003, found overwhelming opposition to legalization, eighty-six percent opposed to eleven percent for legalization. n276 This

group found similar results in 2001, when eighty-eight percent opposed cloning for reproduction and nine percent did not oppose. n277 But, in this 2001 poll, when asked about *therapeutic* cloning research, fifty-four percent approved and forty-two percent disapproved.

VIII. CAN EMBRYONIC STEM CELL AND CLONING RESEARCH BE PERFORMED IN INDIAN COUNTRY IN MICHIGAN?

In deciding this issue, several threshold issues have to be decided based on the authority previously discussed. What force and under what circumstances does state law apply to tribes located in that state? How do the courts weigh the interests of the state verses the tribes? What force do the laws that tribes pass have within Indian country? What is the jurisdiction of tribal laws over non-Indians? Is there a difference between the civil and criminal applications of Michigan law?

A. Will Tribal Sovereignty Allow Michigan Tribes to Conduct This Research from a Civil Law Perspective?

In *Taxpayers of Michigan Against Casinos v. State*, the Supreme Court of Michigan noted that the U.S. Supreme Court has held that for a state law to apply to tribal lands, there must be express consent by Congress. n278 In *Kobogum*, the Supreme court of Michigan noted that "[t]he United States [*437] [S]upreme [C]ourt and the state courts have recognized as law that no state laws have any force over Indians in their tribal relations." n279 Thus for the civil and criminal statutes of Michigan which forbid embryonic stem cell research to apply to Indian country, there has to be express consent of Congress. However, this is a general rule and not a blanket one, and there are exceptions and conditions. In certain exceptional circumstances a state may exercise state jurisdiction over the on-reservation activities of tribal members as noted by the Supreme Court in *New Mexico v. Mescalero Apache Tribe*. n280 These cases have been fairly narrowly applied to conditions where the state interest is great, such as collecting state sales tax on goods sold to non-Indians, or requiring a state liquor license for vendors selling to non-Indians, and the state interest causes minimal interference with tribal functions. The Supreme Court has explicitly stated that the state interests should be weighed against traditional notions of Indian sovereignty and the Congressional goals of Indian self-governance, self-sufficiency, and economic development, as noted in *Mescalero Apache Tribe v. Jones.* n281

In Michigan, a Native tribe could pass a law allowing embryonic stem cell research and therapeutic cloning research, and this would be valid according to the Supreme Court ruling in *Mescalero Apache Tribe v. Jones*, n282 as long as it was consistent with the Constitution of the United States and federal laws, and the state's interest is not sufficient to override tribal and federal interests. This type of law would not violate the Constitution, as it is not prohibited and there are similar laws in other states, nor would it violate any federal law, as there is no law concerning embryonic stem cell research except an executive order limiting federal funding to certain strains of stem cells. Any state law which would interfere with Indians on Indian land would be ordinarily void absent an overriding state interest. This is particularly true for civil laws. An argument could be made that tribal law applies to more than just Indians, but it is the applicability of the law to non-Indians that is the overriding question.

It would be unlikely that a court would find that a Michigan law making the research illegal would have a sufficient state interest to justify interfering with tribal sovereignty, because the state already allows stem cell research, just not *embryonic* stem cell research. In *California p. Cabazon*, the Supreme Court held that California could not enforce state bingo and poker restrictions on [*438] Indian land. n283 Even though the restriction was part of the penal code, the Court was persuaded that there was a distinction between "criminal/prohibitory" and "civil/regulatory" laws. Since the activity prohibited (bingo) was not completely banned, but only subject to regulation, Public Law 280 did not apply. However, in states where Public Law 280 was in effect, if the activity in question was prohibited as against public policy, the state law would apply. n284 For a non-Public Law 280 state like Michigan, the reach of state law should be significantly weaker or non-existent for most circumstances.

In *Cabazon*, the Court held that California did not meet the standard set in *New Mexico v. Mescakro Apache Tribe*, for the interests of the state. n285 The Court noted that "in the absence of express congressional permission, a State

could require tribal smoke shops on Indian reservations to collect state sales tax from their non-Indian customers ... [in] cases involv[ing] nonmembers entering and purchasing tobacco products on the reservations ... [The] State's interest in assuring the collection of sales taxes from non-Indians enjoying the off-reservation services of the State was sufficient to warrant the minimal burden imposed on the tribal smoke shop operators." n286 In the case of stem cell research, the interest of the State of Michigan would be evaluated in light of the absence of express congressional permission and would not fit into the narrow exception carved by the Court of state taxes on non-members entering and purchasing products on reservations lands. The burden imposed on the tribe would not be a minimal burden, because of the interest in the tribe's autonomy, sovereignty, commerce, land ownership, and corporate ownership.

Under the Indian Commerce Clause, which would apply to a commercial venture such as a tribe building a research facility or owning a corporation involved in research, Michigan may not control the commerce of a tribe. n287 Two barriers stand in the way of Michigan control, and either standing alone would be sufficient. The first is pre-emption by federal law n288 and the other is "the right of reservation Indians to make their own laws and be ruled by them." n289

Because of the *Santa Clara Pueblo* decision, it is likely that, should a Michigan tribe enact laws to legalize and promote embryonic stem cell research and therapeutic cloning, and an Indian were performing the research, tribal sovereignty would prevail. n290 But if a non-Indian were doing the research [*439] on a non-Indian (a non-Indian embryo), or even if it were deemed a victimless crime, the *McBratney* rule could be argued to apply, even though it is well established by cases such as *Winer* n291 and *Merrion* n292 that the tribe has civil and criminal jurisdiction over non-Indians on Indian land. To counter the *McBratney* rule, an argument could be made that there would need to be a situation where the state action would not "directly affect the Indians." For the reasons discussed, this would not be the case in Michigan, as the tribe's interests would be great. It could also be argued that under a conflict of laws rule, the state interest does not have sufficient weight to trump tribal sovereignty principles established by Congress and the Supreme Court. n293

Under *Cabazon*, a more compelling argument could be made for non-Indians performing embryonic stem cell research, because stem cell research itself, like bingo, is not prohibited, only regulated. The State of Michigan might argue in rebuttal that all destruction of embryos is prohibited and that destruction of embryos is against public policy. n294 A tribe would then have to argue that Michigan, unlike California, is not subject to Public Law 280. It could also be argued that embryonic stem cell research is so widely accepted that Michigan's public policy banning embryonic stem cell research is an extreme stance on the issue and the tribe's sovereignty should not be subject to, and limited by, Michigan's polar moral position. This type of argument was employed in support of the ruling in *Kobogum v. Jackson*. n295

Assuming that valid tribal laws were in place and the tribe owned the corporation sponsoring the research on Indian land, the question would be whether this make any difference as to the immunity of a non-Indian from prosecution under state law for a victimless crime? In the civil matter of regulation of embryonic stem cell research, the addition of Indian ownership of the research may make a difference because in this scenario there would be direct Indian involvement in a civil matter and the interest of the state would have to be shown to be great enough to overcome the "traditional notions" of Indian sovereignty as explained by the Supreme Court in *Mescalero Apache* [*440] *Tribes v. Jones*, n296 and the ability of tribes to fully regulate the activities of non-Indians on Indian land as discussed in *Montana v. United States*. n297

Moreover if the Michigan tribe had their law or ordinance legalizing embryonic stem cell research approved by the Secretary of the Interior as the Cabazon tribe in California had their ordinance permitting bingo and poker in violation of state and local statues approved, then it is more than likely that all non-Indians would be exempt from outside state jurisdiction on Indian lands. n298 In the *Cabazon* case the Supreme Court determined that the tribal ordinance permitting the playing of draw poker and other card games open to the public and "are played predominandy by non-Indians coming onto the reservations" was valid. n299 In a game of poker played exclusively by non-Indians, as would be expected to happen at least from time to time by the language of the Court, the crime is either victimless or committed by a non-Indian on a non-Indian on Indian land. The Supreme Court upheld the validity of the tribal

ordinance (even in light of Public law 280), while striking down any jurisdictional claims of the state or local authorities. n300 Similarly, a tribal ordinance in Michigan which allowed embryonic stem cell research, and was approved by the Secretary of the Interior, in a facility run and owned by the tribe, could make the argument that like in *Cabazon*, the non-Indian on non-Indian or victimless state crime of stem cell research when done under direction and control of a tribal corporation and sanctioned by the federal government, falls under a "civil/regulatory" category that is not enforceable on tribal lands by the state.

This also dovetails with the presumption that state laws do not apply on Indian reservations absent express congressional intent to the contrary, as the Supreme Court indicated in *White Mountain Apache Tribe v. Bracker*. n301 In *Bracker*, the respondent argued that the state may collect taxes on non-Indians engaged in commerce on Indian lands because there was no express Congressional intent to the contrary. The Supreme court said "[t]hat is simply not the law." The *Bracker* decision was also in the setting of an approved plan by the federal government, seemingly indicating, as with the *Cabazon* decision, that when the tribe has the blessing of the federal government, the civil tribal law and criminal law that is not against public policy will be upheld when in conflict with a state law. Thus, if some federal government approval is obtained, there is additional Supreme Court case law to support non-Indian exemptions to violations of the state law against embryonic stem cell research. n302

[*441] The question of whether a state employee could conduct embryonic stem cell research on Indian land in violation of state law is analogous to whether anyone would be legally exempt. If that is the case then state employees would be exempt under the right circumstances (although this might not apply to the criminal violations for cloning, due to the Assimilative Crimes Act). n303 On the land of a federally recognized tribe, if the tribe were to pass an ordinance, as in *Iowa Mutual Insurance* Co., n304 making the research on embryos legal, and this were approved by the appropriate federal agency, such as the Secretary of the Interior, as in *Cabazon*, n305 and the tribe owned the research entity as in *Montana v. United States*, n306 and *Muscakro Apache Tribe v. Jones*, n307 it is possible that a non-Indian state employee could legally perform the research. On this issue it might be prudent to have a state official, such as an interested state representative or senator, ask for an opinion of the state attorney general. Before this step, however, it is likely that the state could simply exercise their control over employees and just forbid the work, though it is considered legal on Indian land, and this threshold issue would need to be resolved.

The optimal solution to ensure that embryonic stem cell research could be performed on Indian land as exempt from the Michigan state stem cell and cloning law, would be for Congress to give express permission to the tribe similar to what was done with gaming after the *Cabazon* decision. n308 The commerce of Indian tribes is under the plenary authority of Congress because of the Indian Commerce Clause in the U.S. Constitution. n309 However, without the proper momentum (big money in the case of gaming), the politics for such a move is often a long difficult endeavor.

B. Will Tribal Sovereignty Allow Michigan Tribes to Conduct Stem Cell Research from a Criminal Law Perspective?

In the case of Michigan tribal laws being subject to state law preemption, Michigan is not a Public Law 280 state, and is not, therefore, subject [*442] to the state's criminal jurisdiction, unlike California. Thus, a Michigan tribe is even further removed from state criminal jurisdiction than a California tribe. If a Michigan tribe passed a law allowing embryonic stem cell research, it could be argued successfully that Michigan's prohibition would have no effect. n310 Since Michigan is not subject to Public Law 280, a tribe could successfully defend the passage of a law which would permit therapeutic cloning, even though it is completely prohibited by Michigan statute, because it would not violate the Constitution or any federal statute. This is because Congress has not given Michigan explicit permission to exercise this jurisdiction over the tribes (like in Public Law 280 states), cloning is allowed and encouraged by other states, and to give the Michigan laws effect on reservations would interfere with the overriding goal of encouraging tribal self-sufficiency and economic development. n311

The State of Michigan might argue that under the Assimilative Crimes Act, n312 the federal government could and should prosecute violations of state law in federal court, as this act allows federal prosecutions by assimilating substantive state law, as in *United States v. Sosseur*. n313 In that 1950 Seventh Circuit case, the federal court allowed a

Wisconsin anti-gambling statute to be applied to the prosecution of a tribally licensed slot machine operator. However, this case was decided before the modern era of increased tribal sovereignty (which began in the 1960's, and has gained momentum since that time), and before the *Cabazon* decision. Additionally, Robert N. Clinton makes a compelling argument concerning the *Sosseur* decision and the application of state laws to tribal lands. He argues that victimless or consensual crime statutes enacted by states involve the legislation of morals, which are imposed on the Indian culture and undermines the ability of the tribes to maintain their own separate and evolving cultural traditions and government. n314 It would still be at the discretion of the federal government to use state law or not and if the plan were approved by the Secretary of the Interior, prosecution would be very unlikely.

The State of Michigan may also argue that under the Indian Major Crimes Act for offenses not listed in that section, the applicable state law applies and prosecution could be pursued in federal court. n315 In the case of embryonic stem cell research, this would apply to the criminal statute in Michigan prohibiting any form of cloning. However, if the tribe were to enact a law allowing and specifically encouraging therapeutic cloning, then it could [*443] be argued that conflict of law rules should be applied. n316 For example, in *Chischilly v. General Motors Acceptance Corp.*, a New Mexico appellate case, the court assigned the same status to the tribe as it would have to another state. n317 They concluded that "[i]f there is a conflict between an Indian law and a state law, the state law is unenforceable on Indian land." Additionally, the Supreme Court has ruled that statutory interpretation should be construed liberally in favor of Indians. n318 In *Montana v. Blackfeet Tribe of Indians*, the Court stated that "[t]he standard principles of statutory construction do not have their usual force in cases involving Indian law. As we said earlier this Term, '[the] canons of construction applicable in Indian law are rooted in the unique trust relationship between the United States and the Indians." n319 An argument can be made that between the conflict of law rules and the Supreme Court liberally interpreting federal statues in favor of Indian interests, that even under the Major Crimes Act, the state laws prohibiting therapeutic cloning would not be enforceable in federal court.

For crimes by an Indian against an Indian or non-Indian, and crimes by a non-Indian against an Indian, in Indian country, the state courts, with the exception of those states covered by Public Law 280, have no jurisdiction as the Supreme Court noted in *Santa Clara Pueblo v. Martinez*. n320 A tribe has the power to regulate the activities of non-Indians on land belonging to the tribe or on land held in trust by the United States government for the tribe, as noted by the Court in *Montana v. United States*. n321 A tribe has exclusive jurisdiction over a non-Indian in civil matters where an Indian is involved and the conduct occurred on Indian land, as explained in *Winer v. Penny Enterprises, Inc.* n322

However, for crimes by a non-Indian upon a non-Indian, the state court may have jurisdiction consistent with the *McBratney* rule, where the Supreme Court allowed the first incursion of state law into Indian country without the permission of Congress, by holding that state courts have jurisdiction over non-Indian on non-Indian crime in Indian country. n323 The *McBratney* rule was further defined to take into consideration whether the conduct of white offenders, [*444] which happened to take place on Indian land, "but which did not directly affect the Indians," as a positive factor in applying the rule. n324

Although the question did not make it to a court, a similar question regarding state laws and tribal sovereignty arose in South Dakota, in February of 2006. The South Dakota legislature passed H.B. 1215, which was signed into law by Governor Rounds; the bill forbids pregnancy termination under virtually every circumstance except to prevent the death of the mother. Cecilia Fire Thunder, the first woman President of the Ogalala Sioux tribe in South Dakota, advocated establishing an abortion clinic on her own lands which are "within the boundaries of the Pine Ridge Reservation where the state of South Dakota has absolutely no jurisdiction." n325 South Dakota Attorney General Larry Long countered Fire Thunder's claim by dividing jurisdiction into three categories, the third being applicable to the situation at hand. He interpreted the law such that on tribal lands, if both people involved in a crime are not tribal members or if it is a victimless crime involving a non-tribal member, then it is a state crime. Thus if a non-tribal member performs an abortion on a non-tribal member in Indian country, then it is a state crime and subject to state jurisdiction (presumably under the *McBratney* rule). n326 This is a misapplication of the *McBratney* rule in that Mr. Long assumes that abortion "would not directly affect the Indians," as required by the rule. Similarly, for the *McBratney* rule to apply to the issue of

stem cell research, the state would have to prove that this activity "did not directly affect the Indians," as required by the rule, n327 which would be unlikely in light of the tribal law, property, and ownership by the tribe in such an endeavor. In *Cabazon*, even under the additional weight of Public Law 280, the Court held that non-Indian on non-Indian, or victimless, "crime" was outside the jurisdiction of the state, in that non-Indian employees were conducting gaming activities with non-Indians. n328 The *Cabazon* decision directly contradicts Mr. Long's interpretation because he did not consider the tribal interest. In Michigan, especially without the burden of Public law 280, the courts could hold that state law did not apply to non-Indian on non-Indian, or victimless, crime of stem cell research and therapeutic cloning on reservation lands because of the economic tribal interests at stake.

When a non-Indian commits a victimless or consensual crime, the federal courts technically have jurisdiction via the federal enclave law or state law (by way of the Assimilative Crimes Act) under the Indian Country Crimes [*445] Act. n329 It is possible that the *McBratney* rule would apply if there were no tribal interests involved. n330 However, for the reasons stated, the tribal interests would be great, and it is unlikely that the rule would apply.

IX. CONCLUSION

It is highly likely that a Michigan tribe could successfully argue for exemption from state laws banning embryonic stem cell research on the basis of tribal sovereignty, especially where the individual doing the research is an Indian. If the researcher were a non-Indian, then the argument could be made on the basis of sovereignty and could be supported by Supreme Court case law, especially for civil violations under the right conditions. In the case of criminal violations, the argument for this exemption could be probably successfully accomplished by arguing against the misapplication of the *McBratney* rule. If the embryonic stem cell researcher were a state employee, she would likely be subject to the same exemptions as any other non-Indian, but an opinion by the state attorney general on the matter would seem prudent. Even given the uncertainties of Indian law regarding sovereignty, it is possible, under most circumstances, that a Michigan tribe could successfully argue that it is entitled to an exemption from the state civil statutes concerning embryonic stem cell research and the state criminal statutes regarding therapeutic cloning.

Legal Topics:

For related research and practice materials, see the following legal topics: Estate, Gift & Trust LawAnatomical GiftsGovernmentsNative AmericansGeneral OverviewHealthcare LawTreatmentBlood & Organ DonationsGeneral Overview

FOOTNOTES:

n1 In a dispute between an Indian and a non-Indian entity that takes place on Indian land, the jurisdiction will be that of the tribe and not the state. Conflicts of law rules should be used to determine which law to apply, and the same status should be assigned to the tribe as to another state. *Chischilly v. General Motors Acceptance Corp.*, 629 P.2d 340, 342 (N.M. Ct. App. 1980) rev'd on other grounds, 628 P.2d 683 (1981) ("If there is a conflict between an Indian law and a state law, the state law is unenforceable on Indian land. ... In our deliberations, we assign the same status to the Navajo tribe as we would to another state. This is proper because, in certain respects, Indian tribes possess attributes of sovereignty akin to those of the states."). See also Quechan Tribe of Indians v. Rowe, 350 F. Supp. 106, 109 (S.D. Cal. 1972).

n3 See, e.g., Kobogum v. Jackson Iron Co., 43 N.W. 602, 605 (1889) (upholding traditional Indian polygamy as valid despite state law to the contrary).

n4 See, e.g., California v. Cabazon, 480 U.S. 202 (1987) (holding that California state law did not apply to gaming on the reservation).

n5 MICH. COMP. LAWS §§ 333.2685, 333.16274, 333.16275; MICH. COMP. LAWS § 777.16v (2005).

n6 Tim Martin, GOP Pushes Stem Cell Research, LANSING St. J.June 8, 2006, at 1B.

n7 Michigan Citizens for Stem Cell Research & Cures, http://www.stemcellresearchformichigan.com/ (explaining that Michigan Citizens for Stem Cell Research & Cures is a self-described "group of Michigan citizens dedicated to the long-term goal of educating our state's residents about the stem cell research process and its potential for life-saving cures.").

n8 Bernard Siegal, Genetics Policy Institute, *The California Stem Cell Research and Cures Act*, 805 PLI/Pat 159, 161 (2004) (explaining that the California state constitution was amended to create the California Institute for Regenerative Medicine and established a program authorizing a bond granting \$ 250 million per year for stem cell research because "[u]nfortunately, the federal government is not providing adequate funding necessary for the urgent research and facilities needed to develop stem cell therapies to treat and cure diseases and serious injuries.").

n9 Andrew Pollack, *Missing Limb? Salamander May Have Answer*, N.Y. TIMES, Sep. 24, 2002, at F1 ("Eli Lilly is supporting research aimed at finding genes that help amphibians regenerate, and venture capitalists recently invested \$ 9 million in starting what is perhaps the first company that wants to replicate natural regeneration in people.").

n10 Susan V. Bryant et al., *Vertebrate Limb Regeneration and the Origin of Limb Stem Cells*, 46 INT.J.DEV.BIOL. 887 (2002).

n11 National Institutes of Health, Stem Cell Information, http://stemcells.nih.gov/info/basics/basics2.asp (last visited Feb. 6, 2007).

n12 Id.

n13 E.J. Mundell, Molecule Helps Turn Regular Cells into Stem Cells,

http://www.healthfinder.gov/news/newsstory.asp?docID=533242.com (last visited Feb. 6, 2007) (reporting that in the June 15, 2006 issue of *Nature*, Jose Silva, the lead researcher at the Institute for Stem Cell Research at the University of Edinburgh in the United Kingdom, reported that a molecule called Nanog was discovered which may allow ordinary adult stem cells to become like embryonic stem cells, with the potential of replacing or repairing damaged tissue; it was acknowledged that this research was in the very early stages, and the researcher urged continued embryonic stem cell research).

n14 National Institutes of Health, Stem Cell Information, http://stemcells.nih.gov/info/basics/basics4.asp (last visited Feb. 6, 2007).

n15 Id.

n16 See Dr. Donnall E. Thomas,

http://www.cartage.org.lb/en/themes/Biographies/MainBiographies/T/Thomasl/Thomas.htm (explaining how Dr. Thomas pioneered bone marrow transplants in Seattle in the 1970's, carried out more that 4,000 human bone marrow transplants, and was awarded a Nobel prize in 1990 for his work).

n17 Judith A. Johnson & Erin D. Williams, *Stem Cell Research--CRS Report for Congress*, 840 PLI/Pat 351, 361 (2005).

n18 Audrey Chapman et al., American Association for the Advancement of Science, *Stem Cell Research and Applications Monitoring the Frontiers of Biomedical Research*, Nov. 1999, *available at* http://72.14.203.104/search?q=cache:yM3RPE4qbDkJ:www.aaas.org/spp/sfrl/projects/stem/report.pdf+mice+stem+cells&hl=en&gl=us&ct=clnk&cd=33.

n19 Frederic Golden, *Stem Winder*, CNN .COM (2001), http://www.cnn.com/SPECIALS/2001/americasbest/science.medicine/pro.jthomson.html.

n20 Department of Human and Health Services, *Human Pluripotent Stem Cell Research Guide lines*, Jan. 19, 2001, http://www.hhs.gov/news/press/2001pres/01fsstemcell.html.

n21 *Dolfy the Sheep Clone Dies Young*, BBC NEWS, Feb. 14, 2003, http://news.bbc.co.Uk/l/hi/sci/tech/2764039.stm.

n22 Adult Stem Cell Breakthroughs Ex	citing Interest from Private Investor	s, LIFESITEENEWS.COM, June 24,
2005, http://www.lifesite.net/ldn/2005/	jun/05062409.html.	

n23 National Institutes of Health, Embryonic Stem Cell Registry http://stemcells.nih.gov/research/registry/.

n24 Andy Coghlan, 'Safer' Stem Cells Bring Therapies Closer, NEWSCIENTIST.COM, March 8, 2005, http://www.newscientist.com/article.ns?id=dn7116.

n25 NATIONAL INSTITUTES OF HEALTH, STEM CELLS: SCIENTIFIC PROGRESS AND FUTURE RESEARCH DIRECTIONS 95 (2001), available at http://stemcells/nih.gov/info/scireport/2001report.htm.

n26 Id.

n27 National Institutes of Health, Stem Cell Information, http://stemcells.nih.gov/info/basics/basics2.asp (last visited Feb. 6, 2007).

n28 Johnson & Williams, supra note 17, at 392.

n29 Genetic Science Learning Center, *Learn. Genetics* http://learn.genetics.utah.edu/units/cloning/whatiscloning/ (explaining that somatic nuclear cell transfer is accomplished by removing the complete complement of DNA from a host and implanting the DNA into an egg which has had its normal half complement removed).

n30 National Institutes of Health, Stem Cell Information, http://stemcells.nih.gov/info/basics/basics6.asp (last visited Feb. 6, 2007).

n31 United Network for Organ Sharing, http://www.unos.org/ (last visited Feb. 6, 2007).

n32 Nancy Gibbs, The Hope and the Hype, TIME, Aug. 7, 2006, at 40.

n33 When life begins confuses the issue. There is no doubt that an embryo is alive as are the millions of cells our bodies that are shed or a blade of grass is life (living, reproducing, respiration). The appropriate question is when there is person-hood, or when an embryo or fetus attains the status of a human being.

n34 Gibbs, <i>supra</i> note 32.
n35 Deepa M. Deshpande et al., <i>Recovery from Paralysis in Adult Rats Using Embryonic Stem Cells</i> , 60 ANN. NEUROLOGY 32 (2006).
n36 <i>Id</i> .
n37 CURRENT MEDICAL DIAGNOSIS AND TREATMENT 776, 1194-97 (Lawrence M. Tierney, Jr. et al eds., 45th ed 2006).
n38 Id. at 1220-33.
n39 Insulin once had to be harvested from cow and pig pancreas. It was allogenic, causing some reactions, and difficult to purify. Now far superior human insulin for injection is "manufactured" in genetically modified micro-organisms, the first being a strain of <i>E.Coli</i> , in which actual human DNA is introduced into the nuclei of the bacterium. This is just one of the advances of genetic engineering benefiting patients. <i>What Is Insulin?</i> , ENDOCRINEWEB.COM, http://www.endocrineweb.com/diabetes/2insulin.html (last visited Feb. 6, 2007).
n40 These numbers are based on a study by the Lewin Group, Inc., done in 2002 for the American Diabetes Association. The estimates are for both the direct costs (costs of medical care) and indirect costs (costs of short-term and permanent disability and of premature death) which are associated with diabetes. National Diabetes Information Clearinghouse, National Diabetes Statistcs, http://diabetes.niddk.nih.gov/dm/pubs/statistics/index.htm (last visited Feb. 6, 2007).
n41 <i>Id</i> .

n44 This is already being done with autografts percutaneously. See F. Bayl, Focus on Islets of Langerhans Transplantation, 30 PRESSE MED. 19 (2001)

n42 Id.

n43 Id.

n45 National Institutes of Health, Stem Cell Information, http://stemcells.nih.gov/info/basics/basics6.asp (last visited Feb. 6, 2007).

n46 Id.

n47 FELIX S. COHEN, HANDBOOK OF FEDERAL INDIAN LAW 122-23 (1941) This Cohen formulation is the most influential passage ever written by an Indian law scholar. DAVID H. GETCHES ET AL., CASES AND MATERIALS ON FEDERAL INDIAN LAW 122-23 (5th ed., 2005). The Getches case book is a well-recognized authority on Indian law and has been recently cited by the Supreme Court of the United States. *See Sherrill v. Oneida Indian Nation of New York, 544 U.S. 197, 205 (2005).*

n48 Mathew L.M. Fletcher, *The Iron Cold of the Marshall Trilogy*, 82 N.D. L. REV. (forth coming 2007). The Marshall Trilogy consists of three cases decided by the Supreme Court of the United States in the early years, authored by Chief Justice Marshall, which lay the foundation for Indian law. The cases included in the Marshall Trilogy are *Johnson v. McIntosh*, 21 U.S. (8 Wheat.) 543 (1823) (holding that the Doctrine of Discovery prevented Indians from having the rights of alienation in Indian lands and only the federal government could buy or take the lands), *Cherokee Nation v. Georgia*, 30 U.S. (5 Pet.) 1 (1831) (holding that Indian tribes were not foreign states, but akin to "domestic dependant nations," with a relationship to the federal government as a "ward to his guardian"), and *Worcester v. Georgia*, 31 U.S. (6 Pet.) 515 (1832) (holding that the Cherokee nation was a nation with a distinct, independent community, occupying its own territory, and the laws of the state of Georgia could have no force on the Cherokee reservation).

n49 Johnson, 21 U.S. at 543. The Doctrine of Discovery as Marshall applied it in Johnson was that due to the Indian's inferiority and the superior sovereignty of the European governments, and subsequently the United States, gave the white race claim to the New World either by purchase or conquest. See GETCHES ET AL., supra note 47, at 68-69. Later in the Worcester case, Marshall softened, and possibly overturned, his view of the Doctrine. He gave the generally accepted view of the Doctrine which was that upon discovery, all other European countries would be forbidden to interfere with the discover's right to purchase the land the natives were willing to sell and that it was an "absurd idea" that the feeble European settlements made on a sea coast conferred the power to govern the people and the land from sea to sea. Worchester, 31 U.S. at 544. At the time Johnson was decided the United States had neither purchased or conquered all the land they were claiming. GETCHES ET AL., supra note 47, at 114.

n50 Johnson, 21 U.S. at 574.

n51 Worcester, 31 U.S. at 515.

n52 Cherokee Nation, 30 U.S. at 2. n53 Worcester, 31 U.S. at 559-61. n54 Id. n55 Of all the pre-Civil War cases, "only three cases were cited more in the 1970's and 1980's than Worcester." See GETCHES ET AL., supra note 47, at 126. Those cases were Marbury v. Madison, 5 U.S. (1 Cranch) 137 (1803), McCullock p. Maryland, 17 U.S. (4 Wheat) 316 (1819), and United States v. Perez 22 U.S. (4 Wheat) 579 (1824). n56 Worcester, 31 U.S. at 519. n57 GETCHES ET AL., supra note 47, at 165-66. The General allotment Act, also called the Dawes Act, was enacted as a result of the perceived need on the part of whites for more of the Indian's land (Federal Indian policy merging with Manifest Destiny), resulting in the taking of Indian reservations, splitting them into "allotments" (usually 40-160 acres, without regard to the suitability of the land for farming), assigning an "allotment" to each tribal family unit, and then selling the "surplus" allotments to non-Indians. In 1889 alone, it is estimated that Indians lost 12,000,000 acres of "surplus" reservation land. Id. at 169. n58 Id. at 188 (quoting Comment, Tribal government and the Indian Reorganisation Act of 1934, 70 MICH. L. REV. 955, 955 (1972)). n59 Id. n60 25 U.S.C. §§ 450a-450n (2006). n61 Id. n62 See 25 U.S.C. § 450(a) (2006).

n63 § 450f(a)(1).

n64 25 U.S.C. § 472 (2006).

n65 Morton v. Mancari, 417 U.S. 535, 555 (1974).

n66 Id. at 554.

n67 Id.

n68 Washington v. Confederated Bands and Tribes of Yakima Indian Nation, 439 U.S. 463, 500-01 (1979) ("It is settled that 'the unique legal status of Indian tribes under federal law' permits the Federal Government to enact legislation singling out tribal Indians, legislation that might otherwise be constitutionally offensive.") (quoting Morton v. Mancari, 417 U.S. 535, 551-552 (1974)).

n69 See Iowa Mut. Ins. Co. v. LaPlante, 480 U.S. 9, 18 (1987) (holding that (1) tribal court should be permitted to determine its own jurisdiction in the first instance; (2) exhaustion of tribal court remedies was required as a matter of comity, not as a jurisdictional prerequisite; (3) exhaustion of tribal remedies requires that tribal appellate courts be given opportunity to review determinations of lower tribal courts; and (4) alleged incompetence of tribal courts is not among exceptions to exhaustion requirement). Now Indians are citizens of the state in which they reside and this citizenship grant is codified at 8 U.S.C. § 1401 (b) (2006).

n70 U.S. CONST, amend. XIV, § 1.

n71 See, e.g.., Taxpayers of Michigan Against Casinos v. State, 685 N.W.2d 221, 227 (2004) ("tribal sovereignty is limited only by Congress"); United States v. Wheeler, 435 U.S. 313, 322-23 (1978) ("The sovereignty that the Indian tribes retain is of a unique and limited character. It exists only at the sufferance of Congress and is subject to complete defeasance."); U.S. CONST. Art. 1, § 8, cl. 3.

n72 Id.

n73 Kiowa Tribe of Oklahoma v. Manufacturing Technologies, Inc., 523 U.S. 751, 756 (1998) (holding "that tribe was entitled to sovereign immunity from suit on promissory note which it had signed, regardless of whether note was signed on or off the reservation, and notwithstanding that note allegedly related to its commercial activities").

n74 *Id. at 756* (citing *Blatchford v. Noatak, 501 U.S. 775, 782 (1991)* (holding that unlike sister states, the Eleventh amendment bars suits against a state by Indian tribes despite tribal domestic sovereign immunity).

n75 Id.

n76 See, e.g., United States v. Wheeler, 435 U.S. 313, 326 (1978) ("The areas in which such implicit divestiture of sovereignty has been held to have occurred are those involving the relations between an Indian tribe and nonmembers of the tribe.").

n77 Sherrill v. Oneida Indian Nation, 544 U.S. 197, 224 (2005) The court held in that case that the doctrine of laches, acquiescence, and impossibility barred tribal sovereignty on reacquired fee lands that were once part of the reservation 200 years in the past, even when such a claim is legally viable and within the statute of limitations. Id. at 221. Justice Stevens argued that the majority's positions violated the principles that only Congress has the power to diminish or disestablish a tribe's reservation and that only Congress had the power to revoke the sovereign immunity of the tribes from state and local taxation. Id. at 224. See generally Cayuga Indian Nation v. Pataki, 413 F.3d 266 (2d Cir. 2005) (applying these doctrines). This departure from the "middle ground" of allowing damages for trespass for valid land claims while not allowing suits for eviction, has been criticized. See Wenona T. Singel & Matthew L. M. Fletcher, Power, Authority, and Tribal Property, 41 TULSA L. REV. 21 (2005) (arguing generally that the Supreme court has moved away from the middle ground in cases like Sherrill).

n78 See generally 25 U.S.C §§ 3651 (2006).

n79 25 U.S.C. § 3651 (2),(7).

n80 Taxpayers of Michigan Against Casinos v. State, 471 Mich. 306, 313 (2004) (quoting California v. Cabazon, 480 U.S. 202, 207, 107 S.Ct. 1083 (1987)).

n81 Cabazon, 480 U.S. at 208 (defining "Indian country," under 18 U.S.C. § 1151 as "all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation." This definition applies to questions of both criminal and civil jurisdiction).

n82 Cabazon, 480 U.S. at 205.

n83 *18 U.S.C.* § *1162* (2006). In 1953, Congress expressly granted five states--California, Minnesota, Nebraska, Oregon and Wisconsin--criminal jurisdiction over specified areas of Indian country.

n84 Cabazon, 480 U.S. at 211.

n85 CAL. PENAL CODE § 326.5 (b) (West 2006).

n86 Cabazon, 480 U.S. at 209.

n87 Id.

n88 Id.

n89 See Cabazon, 480 U.S. at 209.

n90 Id. at 211.

n91 *McClanahan v. Arizona State Tax Comm'n, 411 U.S. 164, 170-71 (1973)* (quoting U.S. DEPT. OF THE INTERIOR, FEDERAL INDIAN LAW 845 (1958)) (holding "that the Arizona state individual income tax was unlawful as applied to reservation Navajo Indians with respect to income derived wholly from reservation sources.").

n92 New Mexico v. Mescalero Apache Tribe, 462 U.S. 324, 331-32 (1983) (holding "that where [a] governing body of [an] Indian tribe, working closely with federal government under authority of federal law had exercised lawful authority to develop and manage reservation's resources for benefit of its members, and exercise of concurrent jurisdiction by State would effectively nullify tribe's authority to regulate use of its resources by members and nonmembers and would interfere with comprehensive tribal regulatory scheme and threaten Congress' firm commitment to encouragement of tribal self-sufficiency and economic development, and in view of absence of State interests which would justify assertion of concurrent authority, application of State's hunting and fishing laws to reservation was preempted.").

n93 See, e.g., Moe v. Confederated Salish and Kootenai Tribes, 425 U.S. 463, 483 (1976) (holding that the state

could require Indians to collect state sales tax on cigarettes sold to non-Indians); Washington v. Confederated Tribes of Colville Indian Reservation, 447 U.S. 134, 161-62 (1980) (holding that the state could require sales tax collection on goods sold by Indians to non-Indians); Oklahoma Tax Commission v. Citizen Band Potawami Tribe of Oklahoma, 498 U.S. 505, 514 (1991) (holding that tribal immunity precluded the state from collecting sales taxes from tribal members, but the state could require the tribes to collect sales tax from non-members on goods); Rice v. Rehner, 463 U.S. 713, 715 (1983) (holding that California could require a general store on the reservation to obtain a state liquor license in order to sell liquor for off-premises consumption, because there was no tradition of tribal sovereignty of inherent self-government in favor of liquor regulation by Indians).

n94 See, e.g., Montana v. Blackfeet Tribe, 471 U.S. 759 (1985) (adopting a per se rule of no taxation of Indian resources by the state absent absolute authorization by Congress.).

n95 California v. Cabazon, 480 U.S. 202, 216 (1987) (citing New Mexico v. Aescalero Apache Tribe, 462 U.S. 324, 334-35 (1983)). See also White Mountain Apache Tribe v. Bracker, 448 U.S. 136, 143 (1980).

n96 Cabazon, 480 U.S. at 216, n.19 (citing New Mexico v. Mexcalero Apache Tribe, 462 U.S. 324, 334 n.17).

n97 See, e.g., White Mountain Apache Tribe v. Bracker, 448 U.S. 136, 151 (1980)

n98 Id. at 150-51.

n99 Id

n100 Cabazon, 480 U.S. at 216.

n101 Bracker, 448 U.S. at 149.

n102 Kobogum v. Jackson Iron Co., 43 N.W. 602, 605 (1889).

n103 Taxpayers of Michigan Against Casinos v. State, 685 N.W.2d 221 (2004).

n104 Id. at 227 (quoting United States v. Wheeler, 435 U.S. 313, 323 (1978)).

n105 Id. (quoting Kiowa Tribe of Oklahoma v. Mfg. Technologies, Inc., 523 U.S. 751, 754, 756 (1998).

n106 See, e.g., Montana v. United States, 450 U.S. 544, 557 (1981) (holding "that the Tribe may prohibit nonmembers from hunting or fishing on land belonging to the Tribe or held by the United States in trust for the Tribe.").

n107 Id. at 557.

n108 Id. at 566.

n109 See, e.g., Winer v. Penny Enterprises, Inc., 674 N.W.2d 9, 13 (N.D. 2004).

n110 *Id.* ("There can be no doubt that to allow the exercise of state jurisdiction here would undermine the authority of the tribal courts over Reservation affairs and hence would infringe on the rights of the Indians to govern themselves. It is immaterial that the respondent is not an Indian.") (quoting *Williams v. Lee, 358 U.S. 217, 223 (1959)*).

n111 Cabazon, 480 U.S. at 208.

n112 Merrion v. Jicarilla Apache Tribe, 455 U.S. 130, 149 (1982) ("[A] proper respect both for tribal sovereignty itself and for the plenary authority of Congress in this area cautions that we tread lightly in the absence of clear indications of legislative intent.") (quoting Santa Clara Pueblo v. Martinez, 436 U.S. 49 (1976)).

n113 Indian Major Crimes Act, 18 U.S.C. § 1153 (2006) (including "murder, manslaughter, kidnapping, maiming, a felony under chapter 109A, incest, assault with intent to commit murder, assault with a dangerous weapon, assault resulting in serious bodily injury (as defined in section 1365 of this title), an assault against an individual who has not attained the age of 16 years, felony child abuse or neglect, arson, burglary, robbery, and a felony under section 661 of this title." Section (b) states: "Any offense referred to in subsection (a) of this section that is not defined and punished by Federal law in force within the exclusive jurisdiction of the United States shall be defined and punished in accordance with the laws of the State in which such offense was committed as are in force at the time of such offense.").

n114 See, e.g., United States v. Lara, 541 U.S. 193 (2004) (affirming the power of tribes to exercise criminal

jurisdiction over all Indians with respect to the Major Crimes Act).

n115 *United States v. McBratney, 104 U.S. 621, 624 (1881)* ("The courts of the United States have, therefore, no jurisdiction to punish crimes within that reservation. It follows that the Circuit Court of the United States for the District of Colorado has no jurisdiction of this indictment, but, according to the practice heretofore adopted in like cases, should deliver up the prisoner to the authorities of the State of Colorado to be dealt with according to law.").

n116 See Ray v. Martin, 326 U.S. 496, 501 (1946) ("Generally no emphasis has been placed on whether state or United States Courts should try white offenders for conduct which happened to take place upon an Indian reservation, but which did not directly affect the Indians.").

n117 Cabazon, 480 U.S. at 209.

n118 Assimilative Crimes Act, 18 U.S.C. § 13 (1996) (permiting federal prosecutions by assimilating substantive state law). For example, a federal court of appeals allowed a Wisconsin anti-gambling statute to be applied to the prosecution of a tribally licensed slot machine operator. *United States v. Sosseur*, 181 F.2d 873 (7th Cir. 1950). The implications of this type of ruling have frequently been criticized:

Victimless or consensual crime statutes enacted by the states generally involve legislation of morals in one sense or another. To allow the states, through the Act, to make moral judgments for the tribes, undermines the purpose for continuing reservation policy--permitting the Indian tribes to maintain their own separate, evolving, cultural tradition and government. The result in *Sosseur*, insofar as it applies to victimless or consensual crimes, is an aberration in terms of Indian policy.

Robert N. Clinton, Criminal jurisdiction over Indian hands: A Journey Through a Jurisdictional Maze, 18 ARIZ. L. REV. 503, 536 (1976).

n119 Indian Country Crimes Act, 18 U.S.C. § 1152 (2006). The statute is also referred to as the "General Crimes Act," the "Interracial Crime Provision," and the "Federal Enclave Stat ute." It provides for federal jurisdiction, but not state jurisdiction, of crimes committed by non-Indians against Indians and crimes committed by Indians against non-Indians on Indian land. It states:

Except as otherwise expressly provided by law, the general laws of the United States as to the punishment of offenses committed in any place within the sole and exclusive jurisdiction of the United States, except the District of Columbia, shall extend to the Indian country. This section shall not extend to offenses committed by one Indian against the person or property of another Indian, nor to any Indian committing any offense in the Indian country who has been punished by the local law of the tribe, or to any case where, by treaty stipulations, the exclusive jurisdiction over such offenses is or may be secured to the Indian tribes respectively.

n120 See GETCHES ET AL., supra note 47, at 492	n120 See	e GETCHES	ET AL.,	supra note	47, at 492
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n121 Id.

n122 *Iowa Mut. Ins. Co. v. LaPlante, 480 U.S. 9, 15 (1987)* (as a matter of federal law, any state-court jurisdiction over Indians or activities on Indian lands which would interfere with sovereignty and self-government is void); *see also Turner v. United States, 248 U.S. 354 (1919)* ("like other governments, municipal as well as state, the Creek Nation was free from liability for injuries to persons or property due to mob violence or failure to keep the peace.").

n123 See Oliphant v. Suquamish Indian Tribe, 435 U.S. 191, 191 (1978).

n124 Nat'l Farmers Union Ins. Cos. v. Crow Tribe, 471 U.S. 845, 855 (1985) ("[W]e conclude that the answer to the question whether a tribal court has the power to exercise civil subject-matter jurisdiction over non-Indians in a case of this kind is not automatically fore closed, as an extension of Oliphant would require.").

n125 United States v. Lomayaoma, 86 F.3d 142, 145 (9th Cir. 1996) (citing Morton v. Mancari, 417 U.S. 535, 551-52 (1974)).

n126 White Mountain Apache Tribe v. Bracker, 448 U.S. 136, 142 (1980) (holding that state taxes on Indian land are preempted by federal law).

n127 Id.

n128 Id.

n129 Id. at 142 (quoting Williams v. Lee, 358 U.S. 217, 220 (1959).

n130 See, e.g., Montana v. Blackfeet Tribe of Indians, 471 U.S. 759, 766 (1985).

n131 Id. (quoting Oneida County v. Oneida Indian Nation, 470 U.S. 226, 247 (1985)).

n132 GETCHES ET AL., supra note 47, at 337.

n133 Tim Martin, GOP Pushes Stem Cell Research, LANSING ST. J., June 8, 2006, at B1.

n134 MICH. COMP. LAWS § 333.16275 (2006).

n135 *MICH. COMP. LAWS § 333.16274 (5)(b)* ("Human embryo" means "a human egg cell with a full genetic composition capable of differentiating and maturing into a complete human being.").

n136 MICH. COMP. LAWS § 333.2685(1), 22686.

n137 MICH. COMP. LAWS § 333.2688.

n138 MICH. COMP. LAWS § 333.2689.

n139 MICH. COMP. LAWS § 333.2690.

n140 A human somatic cell is a cell "of a developing or fully developed human being that is not and will not become a sperm or egg cell." *MICH. COMP. LAWS § 333.16274 (5)(c)*. Human somatic cell nuclear transfer means "transferring the nucleus of a human somatic cell into an egg cell from which the nucleus has been removed or rendered inert." *MICH. COMP. LAWS §§ 333.16274(5)(d)*, *333.2686*.

n141 MICH. COMP. LAWS § 333.16275.

n142 MICH. COMP. LAWS § 333.20197.

n143 *MICH. COMP. LAWS §* 207.803(k)(iii). Biotechnology is any technology that uses living organisms, cells, macromolecules, microorganisms, or substances from living organisms to make or modify a product, improve plants or animals, or develop microorganisms for useful purposes. *MICH. COMP. LAWS §* 207.803(k)(iii).

n144 MICH. COMP. LAWS § 333.16274(2).

n145 See MICH. COMP. LAWS § 333.26404.

n146 MICH. COMP. LAWS § 333.2686.

n147 H.R. REP. NO. 108-18, at 2-3 (2003).

n148 Letters from Congress to the President, one signed by 206 representatives and another signed by 58 senators, have urged President Bush to expand current federal funding for stem cell research. Johnson & Williams, *supra* note 17. The House legislators wanted the current policy to be changed to include and utilize embryos that are created in excess of need for couples who use in vitro fertilization techniques because there are in excess of 400,000 frozen embryos which will be destroyed. *Id.* at 371. The Senate letter stated that "despite the fact that U.S. scientists were the first to derive human embryonic stem cells, leadership in this area of research is shifting to other countries such as the United Kingdom, Singapore, South Korea and Australia." *Id.* at 372.

n149 58 Fed. Reg. 62493 (Nov. 23, 1993).

n150 Id.

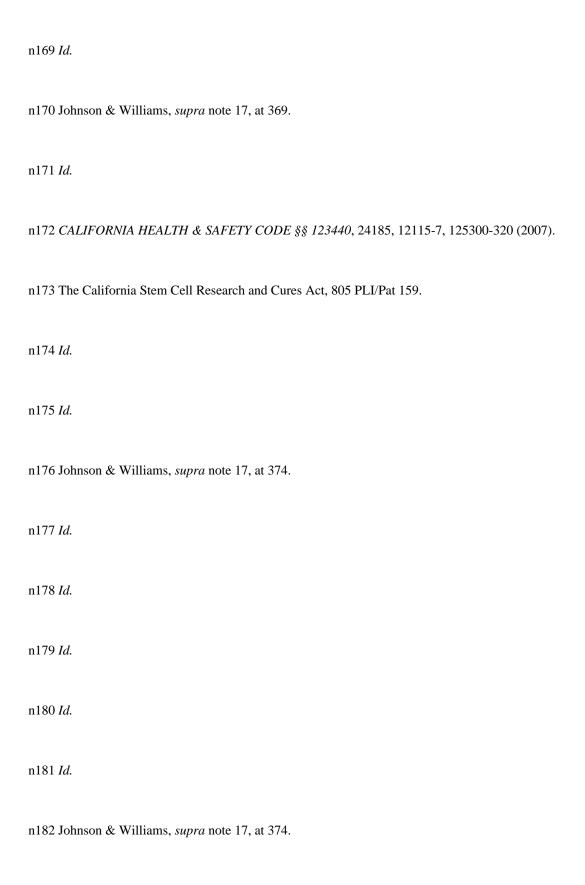
n151 Exec. Order No. 13,226, 66 Fed. Reg. 50,523 (Sept. 30, 2001).

n152 Id.

n153 See H.R. REP. No. 108-18 (2003).

n154 Members of Congress on July 19, 2006, failed, 235-193, to reach the two thirds majority needed to override President Bush's veto of H.R. 810 to expand federal financing of embryonic stem-cell research beyond limits he set in 2001.





n183 Id.

n184 Id. at 381; G.A. Res. 59/280, P(b), U.N. Doc. A/RES/59/280 (Mar. 23, 2005).

n185 Johnson & Williams, supra note 17, at 381.

n186 Id. at 383. See generally Assisted Human Reproduction Act, 2004, C-2 (Can.).

n187 Johnson & Williams, supra note 17, at 383.

n188 *Id.; Embryonic Stem Cell Research OK'd*, JAPAN TIMES, Feb. 14, 2004, *available at* http://search.japantimes.co.jp/print/nn20040214bl.html.

n189 Johnson & Williams, supra note 17, at 383-84.

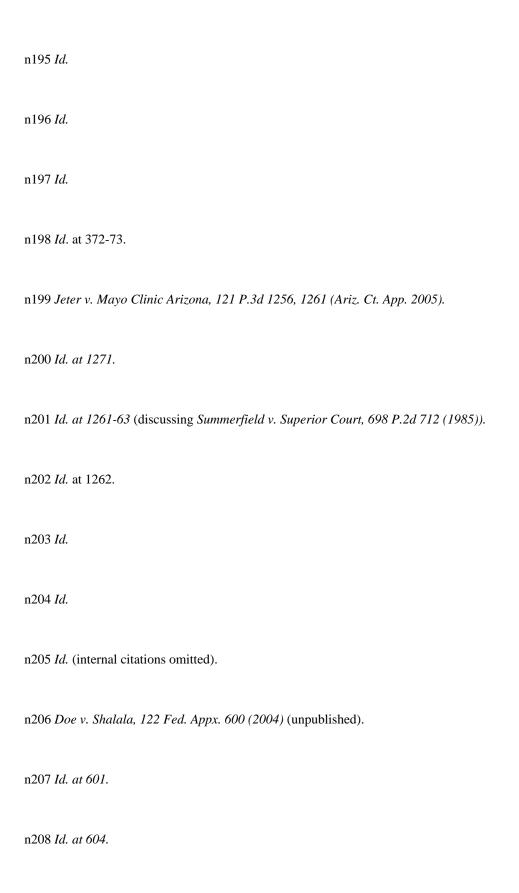
n190 Id. at 384.

n191 Id.

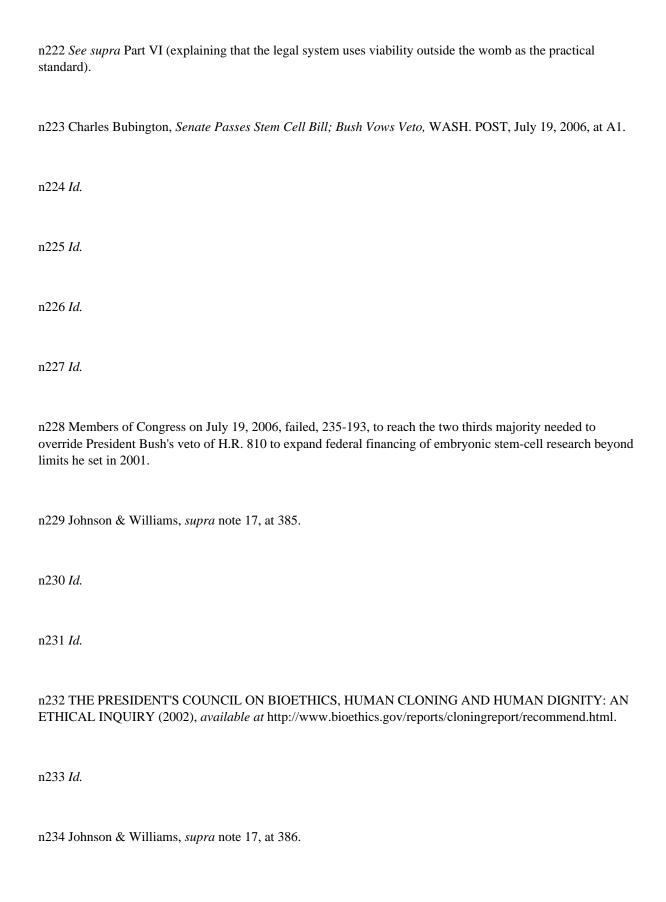
n192 National Academy of Sciences, http://www.nasonline.org/site/PageServer?pagename=ABOUT_main_page (last visited Feb. 14, 2007) ("The National Academy of Sciences (NAS) is an honorific society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare." It was established in 1863, by President Lincoln to "investigate, examine, experiment, and report upon any subject of science or art' whenever called upon to do so by any department of the government." It was "eventually expanded to include the National Research Council in 1916, the National Academy of Engineering in 1964, and the Institute of Medicine in 1970," and collectively these are known as the National Academies. They are private, nonprofit institutions that provide science, technology, and health policy advice under a congressional charter).

n193 Johnson & Williams, supra note 17, at 372.

n194 Id.







n235 Id.

n236 Roe v. Wade, 410 U.S. 113, 159-61 (1973).

n237 Planned Parenthood of Southeastern Pennsylvania v. Casey, 505 U.S. 833, 857 (1992).

n238 American life League, July 20, 2006, http://www.all.org/.

n239 Johnson & Williams, supra note 17, at 387.

n240 Id. at 389-90.

n241 Charles Bubington, Senate Passes Stem Cell Bill; Bush Vows Veto, WASH. POST, July 19, 2006, at A1.

n242 Michael Sachel, Embryo Ethics--The Moral Logic of Stem Cell Research, 351 N. ENG. J. MED. 208 (2004).

n243 Id.

n244 *See, e.g., Terri Schiavo Has Died*, CNN.COM, March 31, 2005, http://www.cnn.com/2005/LAW/03/31/schiavo/index.html.

n245 J. M. Goldering, Development of the Fetal Brain, 307 NEW ENG. J. MED. 564 (1982).

n246 Parliamentary Office of Science and Technology, Post Note 94, *Fetal Awareness*, (Feb. 1997), http://www.parliament.uk/post/pn094.pdf (describing a study commissioned by the British Department of Health to help answer the question of when a fetus of a premature baby can feel pain for purposes of anesthetic management).

n247 Id.

n248 Id.

n249 Roe v. Wade, 410 U.S. 113, 159-61 (1973).

n250 However in 1997, Dr. Richard Seed, a Harvard graduate, predicted that within two years he and his wife would clone a human being before federal laws could be enacted. David Sapsted & Roger Highfield, *Plea for Cash to Clone Humans*, DAILY TELEGRAPH, Jan. 8, 1998.

n251 Steven Goldberg, *Cloning Matters: How* Lawrence v. Texas *Protects Therapeutic Research*, 4 YALE J. HEALTH POL'Y, L. & ETHICS 305 (2004) ("[T]his 'potential life' argument is ignored daily when some spare embryos produced as a by produce of routine fertility treatments are destroyed while others are used for research. ... [T]his disparate treatment reveals that the real basis for the ban on therapeutic cloning is repugnance at the idea of cloning, driven by a sense that cloning is unnatural.").

n252 *Skinner v. Oklahoma, 316 U.S. 535 (1942)* (holding mat an act which forced sterilization upon a criminal for the third conviction was invalid under the Equal Protection Clause).

n253 Americancatholic.org, *Stem Cell Research and the Catholic Church*, http://www.americancatholic.org/News/StemCell/ (last visited March 19, 2007).

n254 Elizabeth Rosenthal, Excommunication Is Sought for Stem Cell Researchers, N.Y. TIMES, June 30, 2006, at A1.

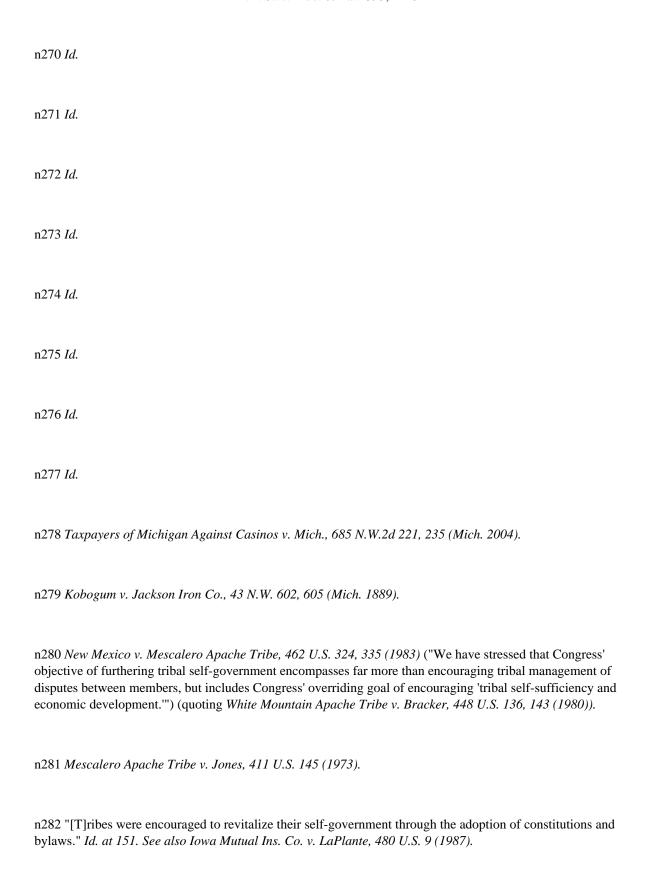
n255 Life Site News, *Catholic Church Not Oppost to Stem Cell Research: Catholic Bioethicist*, July 27, 2006, http://www.lifesite.net/ldn/2006/jul/06072709.html.

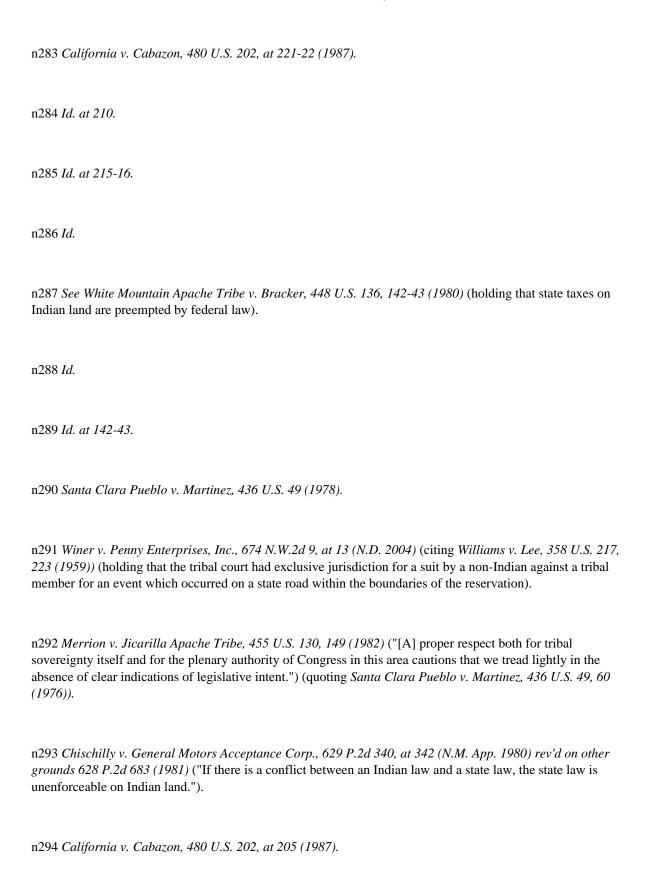
n256 *Those Favoring Stem Cell Research Increases to a 73 to 11 Percent Majority*, The Harris Poll # 58, Aug. 18, 2004, http://www.harrisinteractive.com/harris_poll/index.asp?PID=488 [hereinafter Harris Poll].

n257 Letter from the Union of Orthodox Jewish Congregations of America and the Rabbinical Council of America to George Bush, President, United States (July 26, 2001), *available at* http://www.jlaw.com/LawPolicy/stemcellou.html.

n258 <i>A Muslim Perspective on Embryonic Stem Cell Research</i> , IIISSUES, August 29, 2001, http://72.14.203.104/search?q=cache:lr-2WuVZ_5QJ:www.islamicinstitute.org/i3-stemcell.pdf+stem+cell+research+muslim+pore [hereinafter <i>A Muslim Perspective</i>].
n259 <i>Id</i> .
n260 Christl Dabu, <i>Stem-Cell Science Stirs Debate in Muslim World, Too</i> , CHRISTIAN SCIENCE MONITOR, June 22, 2005, at 15, <i>available at</i> http://www.csmonitor.com/2005/0622/pl5s02-wogi.html.
n261 See A Muslim Perspective, supra note 258.
n262 <i>Id.</i> This is the view held by Muzammil Siddiqi, chairman of the Islamic Law Council of North America in Orange County California. He feels it is obligatory to pursue embryonic stem cell research, but believes that embryos should be derived from excess frozen embryos or therapeutic cloning. The spelling of <i>sharia</i> used in this paper is consistent with this source.
n263 Harris Poll, <i>supra</i> note 256.
n264 ABCNews/Washington Post Poll, conducted July 26-30, 2004, reported Aug. 3, 2004, http://www.abcnews.go.com/sections/politics/DailyNews/poll010803.html.
n265 PollingReport.com, Stem Cell Research, Apr. 9, 2006, http://www.pollingreport.com/science.htm.
n266 <i>Id</i> .
n267 <i>Id</i> .
n268 Harris Poll, <i>supra</i> note 256.

n269 Id.





n295 See Kobogum v. Jackson Iron Co., 43 N.W. 602, at 606 (1889) (upholding traditional Indian polygamy as valid despite state law to the contrary).

n296 See supra note 281 and accompanying text.

n297 Montana v. United States, 450 U.S. 544, 557 (1981).

n298 See Cabazon, 480 U.S. at 214-15.

n299 Id. at 205.

n300 Id. at 214-15.

n301 White Mountain Apache Tribe v. Bracker, 448 U.S. 136, at 142 (1980).

n302 See id. at 151 ("In a number of cases we have held that state authority over non-Indians is pre-empted even though Congress has offered no explicit statement on the subject."); Cabazon, 480 U.S. at 211.

n303 The Assimilative Crimes Act, 18 U.S.C. § 13 (2006).

n304 *Iowa Mut. Ins. Co. v. LaPlante, 480 U.S. 9 (1987)* (holding that tribes can pass laws in accordance with the Constitution and federal statutes).

n305 California v. Cabazon, 480 U.S. 202 (1987).

n306 *Montana v. United States, 450 U.S. 544, at 557 (1981)* (holding that the federal court had jurisdiction over non-Indians on Indian land).

n307 Mescalero Apache Tribe v. Jones, 411 U. S. 145, at 151 (1973) (holding "that [the] state could impose

nondiscriminatory gross receipts tax on ski resort operated by tribe on off-reservation land that tribe leased from the federal government under the Indian Reorganization Act, but that provision in Indian Reorganization Act that any lands or rights acquired pursuant to any provision of the Act shall be exempt from state and local taxation barred use tax that state sought to impose on personalty that tribe purchased out of state and which had been installed as a permanent improvement at the resort.").

n308 Cabazon, 480 U.S. at 202.

n309 United States v. Lomayaoma, 86 F.3d 142, 145 (9th Cir. 1996).

n310 Montana v. United States, 450 U.S. 544, 557 (1981).

n311 Mescalero, 411 S. at 151.

n312 The Assimilative Crimes Act, 18 U.S.C. § 13 (2006).

n313 United States v. Sosseur, 181 F.2d 873 (7th Cir. 1950).

n314 Robert N. Clinton, Criminal jurisdiction over Indian Lands: A Journey through a Jurisdictional Maze, 18 ARIZ. L. REV. 503, 536 (1976).

n315 18 U.S.C. § 1153(2006).

n316 Chischilly v. General Motors Acceptance Corp., 629 P.2d 340, at 342 (N.M. App. 1980), rev'd on other grounds, 628 P.2d 683 (N.M. 1981).

n317 Id.

n318 Montana v. Blackfeet Tribe of Indians, 471 U.S. 759, at 766 (1985).

n319 Id.

n320 Santa Clara Pueblo v. Martinez, 436 U.S. 9, at 65 (1978) (holding that tribal courts are the "appropriate forums for the exclusive adjudication of disputes affecting important personal and property interests of both Indians and non-Indians.").

n321 See Montana v. United States, 450 U.S. 544, at 557 (1981).

n322 See Winer v. Penny Enterprises, Inc., 674 N.W.2d 9, at 13 (N.D. 2004).

n323 See generally United States v. McBratney, 104 U.S. 621 (1881).

n324 Ray v. Martin, 326 U.S. 496, at 501 (1946) ("Generally no emphasis has been placed on whether state or United States courts should try white offenders for conduct which happened to take place upon an Indian reservation, but which did not directly affect the Indians.").

n325 Tom Lawrence, *Ogalal Sioux President Mulls Opening Planned Parenthood Clinic*, RAPID CITY WKLY. NEWS, March 21, 2006.

n326 Id.

n327 See Ray v. Martin, 326 U.S. 496, at 501 (1946).

n328 California v. Cabazon, 480 U.S. 202 (1987).

n329 18 U.S.C. § 1152(2006).

n330 See GETCHES ET AL., supra note 47, at 492.