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NO HUMAN CLONING: A SOCIAL ETHICS PERSPECTIVE

*Lisa Sowle Cahill**

This Essay addresses the negative impact of human cloning on the family, and argues further that market incentives to develop and implement cloning techniques exploit and exacerbate socioeconomic inequities. It suggests that cloning should be prohibited internationally and examines possible routes to that aim. To begin with, it offers some reflections on the nature of moral argument, and on the role of religion in public debate.

I. THE NATURE OF THE MORAL ARGUMENT

In bioethics discourse in North America, particularly when public policy or law is addressed, it is typically assumed that acceptable arguments must meet a standard of rationality, secularity, and empirical demonstrability (of harm or benefit) that excludes religion.¹ On this assumption, participants in debate must shed particularistic identities and commitments and enter into a realm of neutrality in which only what is rationally self-evident to all, empirically demonstrated, or clearly derived from, and coherent with existing laws and practices, will govern the public regulation of research and clinical medicine. Interestingly, the moral value that is most often held up as most self-evidently primary is autonomy.² While liberty and privacy, upon which that autonomy is

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1. Cf. LINELL ELIZABETH CADY, *RELIGION, THEOLOGY, AND AMERICAN PUBLIC LIFE* 2 (1993) (contending that "[u]nder the ruse that we are a secular, pluralistic society, various forces have succeeded in excluding an appeal to religion or religiously based values in determining our laws and policies").

2. See Bernadette Tobin, *Did You Think About Buying Her a Cat? Some Reflections on the Concept of Autonomy*, 11 J. CONTEMP. HEALTH L. & POL'Y 417, 421 (1995) (criticizing theorists who contend that autonomy is supreme).

based, are certainly key to the political and legal traditions of the United States,³ they do not enjoy similar privileged status worldwide and in all cultures.⁴ The special articulation they have received in this country is in fact deeply rooted in historical and cultural experiences, informed by commitments to freedom of worship and religious toleration, that for the nation's "founding fathers" were tied to religious identity.

The assumption that public moral discourse requires a community-neutral status for all admissible value commitments is already eroding in the United States. For instance, the 1997 cloning report of the National Bioethics Advisory Commission ("NBAC") took religiously-based moral considerations to be of public concern.⁵ Introducing its chapter on "Religious Perspectives," NBAC suggested that several different religious communities share concerns about responsible dominion over nature, human dignity and destiny, procreation, and family life.⁶ Noting that such commitments do not necessarily depend on religious authority, NBAC also expressed interest in understanding how they could contribute to "a broader societal discussion."⁷

Nevertheless, the following chapter, on ethics, seems to reinstate liberty as the key ethical consideration.⁸ The freedom of researchers and of individual couples who might choose to reproduce should be curtailed only in the presence of a clear and urgent danger to society. The chapter notes, somewhat paradoxically, that there is no single "moral theory" on which all agree, that can govern public debate. Yet autonomy becomes the fallback position (as if its priority were not also the product of an ethical "theory" grounded in a particular history and moral vision of the good society). Other kinds of arguments about the unacceptability of cloning are described as deriving from "moral intuition," in a way that the belief that autonomy is key apparently does not.⁹

At the same time, this chapter commendably acknowledges that the value of autonomy is nested in a particular political tradition, that there

3. See G. Sidney Buchanan, *The Right of Privacy: Past, Present, and Future*, 16 OHIO N.U. L. REV. 403, 403-04 (1989).

4. See Gerald Dworkin, *Privacy and the Law*, in PRIVACY 113, 114-15 (John B. Young ed., 1978) (discussing the difficulties in defining privacy and the assertion that there is no express right to privacy under English law).

5. See 1 NATIONAL BIOETHICS ADVISORY COMM'N, CLONING HUMAN BEINGS: REPORT AND RECOMMENDATIONS OF THE NATIONAL BIOETHICS ADVISORY COMMISSION 37 (1997) [hereinafter CLONING HUMAN BEINGS].

6. See *id.* at 42-49.

7. *Id.* at 37.

8. See *id.* at 59.

9. See *id.* at 69 (explaining the fear opponents of somatic cell nuclear cloning have that any children resulting from clones will be regarded as objects rather than persons).

are other moral concerns on the table that might conceivably carry policy weight, and support restriction of liberty, and that a clear ethical analysis of cloning as a social practice is difficult to achieve.¹⁰ In the end, NBAC recommends a temporary ban on federal funding for human cloning, along with an exhortation to privately funded researchers to abstain.¹¹ NBAC grounds this recommendation, not in the ostensibly elusive values of family and noncommodification of procreation, but in the physical harm to children that might result from cloning in this early stage of the technique's development.¹²

Overall, the NBAC report gives a sense that the Commissioners were in fact sympathetic to ethical and social values beyond liberty and harm, and that these values influenced their decision to recommend at least a temporary ban on federally funded cloning. Yet, they were caught between a model of moral reasoning that is logical, deductive, probative, empirically substantiated, and "neutral"; and a model that is affective and emotional as well as logical; that is inductive, experiential, cumulative, consensual, and self-consciously indebted to particular communities and practices. Religious sensitivities could play a valid role on the latter model, even if they are not always directly expressed in the final consensus position. Physical harm would be a counter-consideration in either category, but the more inductive model of reasoning would be better able to take into account general social perceptions, concerns, commitments, and priorities. It could thus ground a broad-based process of reflection, not limited to logical and empirical arguments. The more inclusive model of reasoning is also compatible with the fact that policies about scientific research or clinical practice can be implemented through several intersecting social institutions, not just federal regulations and laws.

The "secular reason" model tends to demand a single universally persuasive line of analysis, concluding in some clear, unequivocal policy or law.¹³ The "community consensus" model is multilayered in both

10. *See id.* at 77-79.

11. *See id.* at 105 (discussing the NBAC's recommendation that the moratorium on the use of federal funding for somatic cell nuclear transfers to attempt to create a child be continued).

12. *See id.* at 103-04.

13. The "secular reason" model can be described as one which focuses on three main concerns with regard to cloning: (1) the elimination of human uniqueness as well as individuality; (2) concern over the pathological motivations of individuals who desire to clone; and (3) the fear that medical science has spun dangerously "out-of-control." *See* Patrick D. Hopkins, *Bad Copies: How Popular Media Represent Cloning as an Ethical Problem*, HASTINGS CENTER REP., Mar.-Apr. 1998, at 6, 6.

the warrants upon which it relies and the implementation it requires.¹⁴ A funding ban on cloning at the federal level could be complemented, for instance, by public education about the proper social role of medicine, regulation of private research, professional ethics and standards that counteract market incentives, reassessment of the moral and social implications of media coverage of science and reproduction, legislation governing insurance for reproductive therapies, support for reproductive alternatives like adoption, and better coordination with international policies on cloning and related issues.

Our assumption that autonomy should hold the most privileged and central place in moral thinking is a bioethical and public policy problem.¹⁵ It prevents us from seeing why other values are socially important and protected, and why certain freely chosen practices are wrong, even if they do not result in immediate or quantifiable harms, or direct infringement on the options of other free agents. A narrow focus on autonomy to freely choose personally preferred goals undermines our ability to talk together about what would go to make up a "good society," and what we can do concretely to move toward one. In addition to autonomy and individuality, we need to place on the table human goods like the interdependence of all in the society we create for ourselves and our children, concern for the well-being of people with less decision-making power and options, and restraint in the face of the profit motive. We need to look at "the scientific imperative" and "free enterprise" in a broad and humanistic social context including as well as extending beyond the self-interest and self-determination of very talented scientists and very shrewd entrepreneurs.

Religion can be an important and valid influence in shaping a new public consensus. Religious themes, symbols, and stories can function prophetically, or shape and sensitize moral sensibilities in ways that are neither sectarian nor imperialist. Instead these themes represent an imaginative response to the human condition and its moral dimensions, deepening empathy, and expanding solidarity. Religiously inspired moral insights and commitments need to be tested by justice and the common good, since it is a tested truth that religion can function in divisive, oppressive, even violent ways.¹⁶ However, the noncoercive,

14. The "community consensus" model may be described as one which focuses on the fear that cloning "may disrupt the interconnected web of social values, practices, and institutions that support the healthy growth of children." CLONING HUMAN BEINGS, *supra* note 5, at 67.

15. See Hopkins, *supra* note 13, at 9 (describing the fact that much of the opposition to cloning is grounded in this nation's attitudes about individuality).

16. See, e.g., ALEX BEIN, THE JEWISH QUESTION: BIOGRAPHY OF A WORLD PROBLEM 94-96,

evocative, prophetic role of religion can be seen, for instance, in Dena S. Davis's essay in this symposium on the Jewish myth of the "golem" as an analogue to cloning.¹⁷ It can also be seen in John Paul II's biblically-informed exhortations to global solidarity in making a preferential option for the poor, and in combating consumerism, materialism, and a market mentality.¹⁸

The issue is how to join discourse across and among traditions and come up with some reasonable consensus on a just and humane social policy. This Essay now addresses two spheres of consideration that are essential to such a policy. These are the bio-social aspects of identity represented by the intergenerational family, and the role of market exchange in defining the practices of genetics and assisted reproduction.

II. FAMILY

Up until now, every human child has had two parents. The biological relation between parent and child is a symbol of reproductive, social, and domestic partnership with great personal and social significance. Historically and cross-culturally, families in all their variety of cultural forms have been key institutions for the structuring of societies and the transmission of knowledge, values, and practices, as well as for training in moral dispositions such as empathy, fidelity, honesty, and altruism. A cloned individual will have a biogenetic link to one lineage only. In the first relatively innocuous cloning cases we might imagine—like an infertile couple using genetic material from one spouse only to create a child without having to resort to donor gametes—the child will have a genetic relation. However, he or she will be only one step removed from both lineages of the cloned parent. Yet, cloning is clearly different from other types of assisted reproduction, such as in vitro fertilization for ex-

104-05 (Harry Zohn trans., 1990) (discussing Christian degradation, defamation, and persecution of the Jews); Mary Ann Glendon, *Sudan's Unpunished Atrocities*, N.Y. TIMES, Dec. 8, 1998, at A27 (criticizing the United Nation's silence regarding the Islamic Sudanese government's "genocidal campaign" against individuals, primarily Christian civilians, "who do not share the regime's radical Islamic ideology").

17. See Dena S. Davis, *Religious Attitudes Toward Cloning: A Tale of Two Creatures*, 27 HOFSTRA L. REV. 509, 518-20 (1999) (comparing the Frankenstein myth with the Jewish myth of the "golem" and concluding that the latter represents a more positive attitude toward "technology and toward human uses of power").

18. See John Paul II, *Respect for Human Rights: The Secret of True Peace* (visited Feb. 2, 1999) <http://www.vatican.va/holy_father/j..._xxxii-world-day-for-peace_en.shtml> (declaring that there should be a greater focus in achieving economic solidarity for the world due to the inability of a free market to care for the needs of the world's poor).

ample.¹⁹ *The salient intrinsic difference* is that a cloned individual would have only one genetic parent and be an end-product of one biological lineage.²⁰ No other lineage would be combined with it in the event of the clone's "conception." This represents a revolution in the nature of human families.

It will be possible in time to develop all-male or all-female genetic lineages; it will be possible for female lineages to proceed without any male contribution at all; and it will be possible for one woman to create her own child, using her own ovum and deoxyribonucleic acid ("DNA").²¹ I am far from sure that separating male and female procreation, or making men unnecessary to the procreative process at all, will work to the ultimate advantage of women, much less to that of human responsibility for the next generation.

It might be proposed that the appearance of novelty in the one-parent child could be dissolved by considering the child as the twin or sibling of the originating individual, rather than as his or her offspring or descendant. It might be plausible in some cases to view the clone of a child as a sibling, but the clone of an adult, raised in the next generation, is more properly his or her child.

When an adult contributes the DNA, "parent" is a more adequate designator than "twin sibling," both because the latter term implies a common and simultaneous origin; and because kinship terms like "parent," "child," and "sibling" carry a generational reference as well as a biological or genetic one. For instance, one's biologically related and adopted children are easily seen as "siblings" to one another, despite the genetic discontinuity, but we would find it implausible or even impossible for an adult to adopt a same-age or older adult as his or her "child" because of the intergenerational component of the parent-child relationship.

19. "In vitro fertilization" is the "process whereby [multiple] ova . . . are placed in a medium" and fertilized by the addition of sperm. See *STEDMAN'S MEDICAL DICTIONARY* 573 (25th ed. 1990). The resulting zygote is then introduced into the uterus and developed to term. See *id.*

20. See *Scientific Discoveries in Cloning: Challenges for Public Policy: Hearing Before the Subcomm. on Pub. Health and Safety of the Senate Comm. on Labor and Human Resources*, 105th Cong. 42 (1997) [hereinafter *Hearings*] (statement of George J. Annas, Edward R. Utley Professor of Health Law, Boston University) (claiming that "replication of a human by cloning would radically alter the very definition of what a human being is by producing the world's first human with a single genetic parent"). But see John A. Robertson, *Liberty, Identity, and Human Cloning*, 76 *TEX. L. REV.* 1371, 1410 (1998) (claiming that "persons created through nuclear transfer cloning do have two genetic parents—the same genetic parents as the clone source").

21. Deoxyribonucleic acid is "considered to be the autoreproducing component of chromosomes and of many viruses, and the repository of hereditary characteristics." *STEDMAN'S MEDICAL DICTIONARY*, *supra* note 19, at 415, 461.

This implies that the clone of an existing child, whose parents intended to raise both children in one family unit, might indeed be considered the "sibling" of the original, and could reasonably be regarded as sharing with the first child the same two parents. However, the moral issues are not thereby resolved. For one thing, the nature of the sibling relationship has been changed; and there arises a danger of treating the second child as a means to an end. Let us address these issues in turn.

A *second intrinsic difference* between other reproduction technologies and cloning is that the existence of genetic "doubles" (not new in itself)²² is moved to a new location in the family or kinship structure: the clone's genetic twin would be older. This is especially significant in the case in which the clonee is an adult, since the twins would belong to different generations. This new kinship location of genetic twinning intersects with the danger of "objectification" or means-to-end control of the child.

A *third difference is that*, in cloning, the DNA of an existing individual is selected deliberately and in its entirety to be the source of a new individual, without leaving anything to the chances inherent in ordinary conception. It is not necessarily predestined that such a decision would always amount to the "objectification" of the child. In the least problematic case, an infertile couple would simply be trying to have a child without resorting to a donor, and would like nothing better than to leave the process to "nature," if only that were possible. However, there is in conception by cloning, *de facto*, more "control" over the outcome than would be the case in nature, more pre-determination of the result, and hence more danger of an overt or tacit expectation that the product of the process will look or function in a certain way.

In the case in which the source of the clone is an adult, the genetic near-identity between parent and child may hinder the ability of both to see the child as an independent individual, for whom maturity will require separation from the parent and the development of a unique identity. There will be a differential of power and responsibility far exceeding that which would characterize the sibling relationship of natural twins.²³ Thus, although because of the age difference, there would actually be less compromise of individuality than with an identical, same-

22. A clone is "a precise copy of a molecule, cell, or individual plant or animal." CLONING HUMAN BEINGS, *supra* note 5, at app. A-1.

23. Identical twins differ from clones in several respects: (1) they begin at the same time; (2) they share the same intrauterine environments; and (3) because identical twins are born at the same time, they share the same familial as well as cultural events. See Nancy L. Segal, *Behavioral Aspects of Intergenerational Human Cloning: What Twins Tell Us*, 38 JURIMETRICS 57, 58 (1997).

age, "natural" twin, the new familial location of overlap in identity might exacerbate issues of separation and control.²⁴

To return to the case of the "sibling" clone (to replicate a living or dead child, or to supply body products for an ill sibling), the issue of genetic identity within greatly unequal power positions in the family might be diminished, but the objectification or end-means aspect would certainly become more pronounced.²⁵ The plausibility of arguing either way on this one (clonee alternately as parent or as sibling) is probably an indicator in itself of the potential of this technique to disrupt and change our notions of family radically, and especially to upset the distinction of and relations between generations which are constitutive of the very meaning of "family" crossculturally.²⁶

The child who is truly the child of a single parent is a genuine revolution in human history, and his or her advent should be viewed with immense caution. Arguably, it is not too strong to say that cloning is a violation of the essential reality of human family and of the nature of the socially related individual within it. We all take part of our identity, both material or biological and social, from combined ancestral kinship networks. The existing practice of "donating" gametes when the donors have no intention to parent the resulting child is already an affront to this order of things. However, in such cases, as in cases of adoption where the rearing of a child within its original combined-family network is impossible or undesirable, the child can still in fact claim the dual-lineage origin that characterizes every other human being. This kind of ancestry is an important part of the human sense of self (as witnessed by searches for "biological" parents and families), as well as a foundation of important human relationships. Cloning would create an unprecedented rupture in those biological dimensions of embodied humanity, which have been most important for social cooperation.

III. MARKET EXCHANGE AND COMMODIFICATION

Treating others as means to the ends of those with more status, privilege, and power is represented in a particularly clear way by the

24. See Lori B. Andrews, *Is There a Right to Clone? Constitutional Challenges to Bans on Human Cloning*, 11 HARV. J.L. & TECH. 643, 655 (1998) (discussing the fact that "[c]loning could undermine human dignity by threatening the replicant's sense of self and autonomy").

25. For example, due to the distinct beginnings of a clone, unreasonable expectations may develop about him or her. See *id.* at 653. Specifically, when a clone is constructed from a dead child, "the parents might expect the second child to be a replacement for the first." *Id.*

26. See *id.* at 656 (explaining how cloning may bring about harmful changes to the institution of the family).

dominance of the market in issues of human dignity and human life. Some prescient bioethicists, such as Daniel Callahan and Lori Andrews, went on record after the formation of NBAC to predict that economic incentives will control when humans will be cloned, not any supposed ban.²⁷ Kirkpatrick Sale wrote a frightening and impressive editorial for the *New York Times* entitled *Ban Cloning? Not a Chance*.²⁸ To illustrate the cult of progress which ensures that science will proceed with little conscience and few restraints, Sale quoted the makers of the atomic bomb. “When you see something that is technically sweet you go ahead and do it,”²⁹ and “[t]echnological possibilities are irresistible to man,”³⁰ said Robert Oppenheimer and John von Neumann (respectively).

History teaches us that every instance of human “progress” creates an equal and opposite opportunity for moral and social “regress.” Let us not be naive: neither nuclear power nor new genetic technologies like cloning are intrinsically beneficent instruments for the improvement of the human lot. Although many are still committed to the proposition that human decisions and policies can be influenced by reasonable public discourse about values, there is a quickly rising level of pessimism about self-interest as the overriding motivator of human behavior. The doctrine of “original sin” is a religious symbol which springs all too readily to the mind of the theologian.³¹

According to 1998 news reports, a chemist from Lyons, France, Brigitte Boisselier, runs a World Wide Web home page for a Bahamas-based operation called “Clonaid.”³² For \$200,000 each, Clonaid promises individuals cloning services in order to have a child.³³ Ms. Boisselier has an agent in Nevada, and intends to meet prospective clients in Third World countries “to avoid . . . any possible official interference

27. See Lisa Seachrist, *Bioethics Experts Sort Out Limits of Genetic Engineering*, *BIO WORLD TODAY*, Feb. 19, 1998, available in 1998 WL 7882280; see also Tim Radford, *Soundbites: The Clone and the Bill of Rights*, *GUARDIAN* (London), Feb. 19, 1998, at 13 (referring to Lori Andrews).

28. See Kirkpatrick Sale, *Ban Cloning? Not a Chance*, *N.Y. TIMES*, Mar. 7, 1997, at A35 (contending that “[i]n a world that not only permits but also commodifies gene-splicing, amniocentesis and in vitro fertilization, there cannot be any lasting legal restraints on any breakthrough in reproductive technology”).

29. *Id.*

30. *Id.*

31. See Gabriel Daly, *Original Sin*, in *THE NEW DICTIONARY OF THEOLOGY* 727, 727-31 (Joseph A. Komonchak et al. eds, 1987).

32. See August Gribbin, *Human Cloning Draws Nearer as Ethicists Seek to Draw Rules*, *WASH. TIMES*, Nov. 9, 1998, at A1.

33. See *id.*

that might be encountered elsewhere.”³⁴ Says Ms. Boisselier of applicants: “They are willing to pay, and they want to be the first ones cloned.”³⁵ Although Clonaid and its sponsors may be unrealistic renegades, the market and hence investment interest in cloning and other genetic innovations is real. The American Stock Exchange biotechnology index jumped higher by fifty percent in twelve weeks in the fall of 1998.³⁶ And a variant on the same theme is the irresistible attraction of research prestige via landmark discoveries.

Research with public funding is easier to control and less market-driven than private research, but the sphere of control is quite limited. Privately funded research would be motivated by foreseeable profits, and success in marketing the results would easily overtake other ethical considerations. Projections of “great gains for mankind in curing disease” are equally projections of great profits for investors. Consider already existing parallels in the manufacture and pricing of drugs; the operation of health maintenance organizations; and the pricing and advertising of infertility therapies. In all of these, the profit motive is concealed behind a facade of beneficence and “medical miracles.” In all of these cases, the actual practices which have resulted are often unfair and discriminatory, and certainly not governed by considerations of the common good. The authors of an essay aptly titled *Homo Economicus* conclude in a lament that “the encroachment of commercial practices on the human body is increasingly challenging individual and cultural values, encouraging exploitation through the collection and use of tissue, and turning tissue (and potentially people) into marketable products.”³⁷

In an essay in this symposium, Lee M. Silver eloquently expresses similar concerns.³⁸ He notes as a matter of human and cultural fact that people want to have babies and want to give them all the advantages in life they can afford.³⁹ In the absence of restrictions on other ways the wealthy equip their children for a privileged life (healthcare, education, and cultural assets), it is difficult to envision limits on the marketing of benefits like genetic enhancement, projected to be available soon via

34. *Id.*

35. *Id.*

36. See Justin Gillis, *Biotech Shares Now Outpacing the Dow*, BUFFALO NEWS, Nov. 17, 1998, at E3.

37. Dorothy Nelkin & Lori Andrews, *Homo Economicus: Commercialization of Body Tissue in the Age of Biotechnology*, HASTINGS CENTER REP., Sept.-Oct. 1998, at 30, 38.

38. See Lee M. Silver, *How Reprogenetics Will Transform the American Family*, 27 HOFSTRA L. REV. 649 (1999).

39. See *id.* at 656.

“reprogenetics.”⁴⁰ Although human reproductive cloning implies the duplication of parental DNA and not its enhancement, cloning as a reproductive technique could be marketed to the wealthy; stem-cell research using cloned embryonic cells could produce marketable remedies for disease; and cloned siblings could be produced as matched tissue donors for the children of the well-to-do. Not only would the poor and uninsured be excluded from these choices, they may well continue to lack basic health care and other important necessities like decent public education.

This scenario raises anew an old issue: distributive justice in access to social benefits, not limited to medical and reproductive treatments. It might be argued that genetic benefits are unlike other assets, in that they affect the physical being of a person in profound and unalterable ways, passing ineluctably to future generations. However, whether or not cloning presents any unique moral dilemmas in this regard, the global marketing of cloning virtually outside of social limits certainly leads to a biotechnology climate in which financial incentives to pander to individual preferences, without regard for their aggregate effect on the social body, are quickly outpacing moral and regulatory restraints. In this case, Jeremy Rifkin’s apocalyptic worries do not sound far-fetched: “Together, genes, biotechnologies, life patents, the global life-science industry, human-gene screening and surgery, the new cultural currents, computers, and the revised theories of evolution are beginning to remake our world.”⁴¹ Certainly, cutting off federal money will not be a deterrent to the cloning of humans. Stronger measures and more profound attention to our social values and the way we express, promote, and change them, will be required.

Self-interest is not always base, profit is not always exploitative, and the market may provide an efficient and salutary way for human beings to exchange goods and services to their mutual benefit. This is true in the realms of science, medicine, and technology, and, to a lesser extent, in sex, marriage, and family. The problem of social ethics is to place the self-interested behavior of the market within certain limits, so that it neither overrides other types of reciprocal relationships, nor achieves undue incursions into spheres of life that should be governed at least as much by duty, respect, fidelity, and compassion as by maximization of profit. One important moral restraint on the market is a com-

40. *See id.* at 657.

41. JEREMY RIFKIN, *THE BIOTECH CENTURY: HARNESSING THE GENE AND REMAKING THE WORLD* 10 (1998).

munal duty to provide basic or essential goods and services to all, including those who cannot achieve for themselves through free exchange. This limit derives from the fact of human interdependence, paired with recognition of a basic human dignity or equality. This latter value of equality already undergirds the moral legitimacy of markets as an arena in which persons can exercise their liberty in disposing of and profiting from the fruits of their labor.

Individual autonomy and the goals and preferences of individuals must often be subordinated to the common good, as defined incrementally and collaboratively by all those who participate in or stand to be affected by it.⁴² Market behavior is constrained in United States medical research and practice, for instance, through the prohibition of sales of organs and embryos,⁴³ and the disproportionate compensation of research subjects.⁴⁴ Serious limitation of the market in cloning would require several tiers of action: for example, withholding of federal funds, a general legislative ban on all cloning, denial of insurance coverage to persons who reproduce by cloning, and direct regulation of the infertility business. However, market commodification of cloning and other biotechnologies is not a social concern that the United States can solve alone.⁴⁵

One important barrier to the effective moral restraint of biotechnology, including cloning, however, is the globalization of the industry.⁴⁶ As illustrated in the claims and aims of Clonaid, national and regional restrictions still permit escape to less heavily regulated areas of the globe. Indeed, reproductive free-market nations such as Italy and the United States now serve as havens for entrepreneurs who want to avoid bans or funding restrictions on ventures such as the technologically-assisted impregnation of postmenopausal women. The reproduction experts in these societies also attract the elites of countries whose general level of economic development cannot support local refinement of the

42. See Daniel R. Finn, *John Paul II and the Moral Ecology of Markets*, 59 THEOLOGICAL STUD. 662, 676-77 (1998).

43. See Nelkin & Andrews, *supra* note 37, at 32-33 (discussing the landmark case *Moore v. Regents of the University of California*, 793 P.2d 479 (Cal. 1990)).

44. See *id.* (discussing how scientists were able to exploit the unique cell structure of a research subject for millions while the subject received nothing).

45. See Karen Lebacqz, *Fair Shares: Is the Genome Project Just?*, in GENETICS: ISSUES OF SOCIAL JUSTICE 82, 83-85 (Ted Peters ed., 1998) (discussing the significance of the international community in issues involving the development of biotechnologies); RIFKIN, *supra* note 41, at 8-10 (explaining how the emergence of a new "operating matrix" will play a pivotal role in shaping mankind's relationship with the world).

46. "A global life-science industry is already beginning to wield unprecedented power over the vast biological resources of the planet." RIFKIN, *supra* note 41, at 9.

more exotic methods of reproductive control.

The regulation of biotechnology, including genetics and cloning, requires more than a national approach, even a multi-pronged one. On other issues of urgent global concern, such as the environment, ethnic conflict, and human rights, it has proved necessary for regional and international bodies or alliances to cooperate in seeking solutions. One approach is through the United Nations ("UN"), conceived as a forum through which nation-states, through their representatives, act as individual agents in coming to agreement and action with other sovereign states. However, the ability of markets to function outside the scope of existing national and international legislation suggests that more complex approaches to regulation are necessary. In an article for the 75th anniversary issue of *Foreign Affairs*, Anne-Marie Slaughter suggests that the "liberal internationalism" that produced the United Nations is no longer adequate to the real "new world order."⁴⁷ Her thesis is that states are disintegrating into functionally distinct parts that are interacting with their counterparts around the globe, rather than through the agency of the state as such.⁴⁸ The emerging "transgovernmental networks" can actually help enhance the status of states in international life by "ensuring that specific state institutions derive strength and status from participation in a transgovernmental order."⁴⁹

Disaggregating the state into its functional components makes it possible to create networks of institutions engaged in a common enterprise even as they represent distinct national interests. "Moreover, they can work with their subnational and supranational counterparts, creating a genuinely new world order in which networked institutions perform the functions of a world government—legislation, administration, and adjudication—without the form."⁵⁰

How does this or can this work for biotechnology, "reprogenetics," and cloning? Much of the necessarily complicated answer to that question exceeds the scope of this Essay, however, that national regulatory bodies like NBAC, as well as the courts and legislatures, could be paying more attention to their counterparts in other countries, and especially to the policy consensus that regional bodies have achieved elsewhere on related issues.

Although perhaps not exactly "transgovernmental" in Slaughter's

47. See Anne-Marie Slaughter, *The Real New World Order*, FOREIGN AFF., Sept.-Oct. 1997, at 183, 183.

48. See *id.* at 184.

49. *Id.* at 196.

50. *Id.* at 195.

sense in that they act through national representatives, the European Commission and the Council of Europe have developed policies on both genetics and embryo research. The latter have the force of law for member nations that vote to ratify them. These policies tend to be more restrictive than United States guidelines, to express more concern about objectification of human persons, and to invoke social concerns as a rationale for constraints on science, the market and individual choice. These European policies complement the recently developed guidelines of the United Nations Commission on Human Rights, and an earlier statement of the United Nations Educational, Scientific and Cultural Organization.⁵¹ These policies all ban "reproductive" cloning (as does NBAC), but do not distinguish among funding sources. They encourage member nations to enact laws that conform to the guidelines, and are direct in defining such practices as cloning as "ethically unacceptable,"⁵² in the words of the European Commission.⁵³ The UN's 1998 "Universal Declaration on the Human Genome and Human Rights" not only excludes the cloning of human beings as "contrary to human dignity,"⁵⁴ but also calls the genome the "heritage of humanity,"⁵⁵ and in that light, rules out patenting portions of the genome as such for financial gain, as well as making profit from human products and tissues.⁵⁶ International professional societies also have provided ethical guidelines for medical research and practice, attempting to limit the influence of market incentives on research and practice across national borders.⁵⁷

In conclusion, the international debate about cloning will hopefully

51. For a brief review up through 1997, see Lisa Sowle Cahill, *Genetics, Ethics and Social Policy: The State of the Question*, in *THE ETHICS OF GENETIC ENGINEERING* at vii, vii-xiii (Maureen Junker-Kenny & Lisa Sowle Cahill eds., 1998); see also F. William Dommel, Jr. & Duane Alexander, *The Convention of Human Rights and Biomedicine of the Council of Europe*, 7 *KENNEDY INST. ETHICS* J. 259, 259 (1997) (comparing the regulations promulgated by the Convention on Human Rights and Biomedicine with federal regulations controlling research with human subjects).

52. See Cahill, *supra* note 51, at viii-x.

53. This is a May 1997 Opinion of the European Commission's Group of Advisors on the Ethical Implications of Biotechnology.

54. UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, *UNIVERSAL DECLARATION ON THE HUMAN GENOME AND HUMAN RIGHTS* at art. 11 (1997).

55. *Id.* at art. 1.

56. See *id.* at art. 4.

57. See Christine Grady, *Science in the Service of Healing*, *HASTINGS CENTER REP.*, Nov.-Dec. 1998, at 34, 37 (demonstrating the Council for International Organizations of Medical Sciences' concerns in its *International Ethical Guidelines for Biomedical Research involving Human Subjects*); see also Leonard H. Glantz et al., *Research in Developing Countries: Taking "Benefit" Seriously*, *HASTINGS CENTER REP.*, Nov.-Dec. 1998, at 38, 39 (discussing how in 1992, the Council for International Organizations of Medical Sciences published guidelines for using research subjects from third world countries).

lead to profound consideration of questions of the common good; will resist the technological imperative and market forces; and will engage moral reflections that go beyond autonomy, informed consent, and even immediate, identifiable harms to specifiable individuals. It might provide a national and international forum in which to envision the big, long-range social picture that can be so difficult to regard as a meaningful context of ethical responsibility and action, much less to evaluate. In the debate about human cloning, Americans may have an opportunity to begin to create a more reflective, more cautious, more farsighted, less entrepreneurial and pragmatic social ethos in this country, and to create networks of biogenetic responsibility and standards of accountability that join our public concerns to those of other political and cultural communities.

