

Do Patents Promote the Progress of Justice?: Reflections on Varied Visions of Justice

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INTRODUCTION

Do patents promote the progress of justice? The words “patents” and “justice” do not typically appear in the same sentence. Patents are often viewed as obscure things associated with technology, whereas justice is more frequently associated with core foundations of a democratic society. However, patents do have a place in the society envisioned by the founding fathers. In fact, the Constitution empowered Congress to create a system that enables the progress of science.¹ Although patents have Constitutional grounding, whether they are consistent with the goals of justice is a more elusive question. The term “justice” usually is not explicitly articulated with respect to promoting or criticizing the patent system. Nonetheless, as this essay will discuss, there *are* perceptions of justice inherently tied to the present patent system. However, these perceptions reflect different visions, as opposed to a single coherent one.² But before jumping into the heart of the discussion about how justice can or should be achieved in the patent system, some key terms of reference for this essay will first be further defined: patents and justice within the patent context.

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1. See U.S. CONST. art. I, § 8, cl. 8 (providing for protection of patents and copyrights). This Constitutional authority, typically referred to as the Patent Clause of the Constitution, has sometimes been invoked in response to a variety of criticisms about the present patent system.

2. Although I use the word “justice” in this essay, I recognize that many intellectual property scholars would probably consider this essay to fit within the more traditional discussion of the proper place of morality considerations in patent law. Regardless of the terminology used, the essence of the debate is the same—are all inventions equal in the eyes of the patent system? If so, should they continue to remain that way? Determining who decides these questions, as well as the “answers,” all can be considered to be different aspects of the question of justice within the patent system.

WHAT IS A PATENT?

Let's start by defining "patents." A patent is a legal document granted by the federal government to an inventor that gives the inventor rights to exclude others from the invention for the duration of the patent term, a time period that extends for a period of nearly twenty years.³

Through the popular media and personal experience, many people may be familiar with the impact of a patent as something that increases the cost of prescription drugs or medical treatments. A patent does not mandate monopoly prices, although a patent may enable its owner to charge higher prices because of the legally permissible exclusivity that accompanies a patent grant. Less commonly known, however, is that the patent system can provide an overall social benefit. In particular, the Supreme Court has noted that the potential market exclusivity of a patent may be seen as a fair exchange for encouraging development and dissemination of innovation that will ultimately benefit society.⁴ However, as the next section will discuss, the propriety of this incentive may sometimes be questionable, depending on whose opinion is sought.⁵

VISIONS OF JUSTICE IN THE PATENT SYSTEM?

This essay highlights a few current patent issues to underscore the presence of competing visions of justice for the patent system. First, competing visions of justice within the dynamics of federal funding of stem cell research are discussed. Second, two different individual

3. See 35 U.S.C. § 271(a) (2000) (providing patent owner authority to exclude all others from the invention during the term of the patent).

4. See, e.g., *Bonito Boats v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150–51 (1989) (noting that patent laws provide "a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years"); *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480 (1974) (stating that patent laws promote progress "by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research and development"). Of course, in light of the current crisis with the cost of prescription drugs, the outer limits of pricing are being tested. Even if legally permissible, public perception may force patent owners to charge less than what an absolute market might bear. Public outcry concerning drug prices has lowered the costs of prescription drugs for AIDS in the United States, as well as abroad. See, e.g., Evan Ackiron, *Patents for Critical Pharmaceuticals: The AZT Case*, 17 AM. J.L. & MED. 145 (1991) (tracing the pricing of the AIDS drug AZT as affected by public outcry).

5. In addition, although beyond the scope of this essay, some have criticized the patent system as inherently inequitable because it provides a "one size fits all" reward. In particular, all patents provide the right to exclude all others for the same amount of time—regardless of the difficulty of the innovation process, the degree of novelty involved, or how valuable the resulting innovation is to society.

2005] Do Patents Promote the Progress of Justice? 471

visions of justice for inventions that border on “human-ness” are discussed, including differing methods of achieving perceived justice. The presentation of these distinct visions shows that the perception of whether justice is served is often in the eye of the beholder.

COMPETING VISIONS OF JUSTICE

Stem Cell Research: No Federal Funds versus Federal Patent “Funding”

One place where competing visions of justice exist—typically with little transparency to the general public—is within different departments of the federal government that provide explicit or implicit financial support for research. The most typical and direct federal funding of research is through government agencies such as the National Institutes of Health, the predominant institution for biomedical research.⁶ However, a patent issued by the federal government may also be considered a federal method—albeit an indirect one—of obtaining funding. The market exclusivity granted by a government patent in effect creates a potential funding stream for the invention that is well recognized by those who seek funding in addition to, or in lieu of the traditional government agencies. This indirect federal funding has in turn been leveraged by some companies to obtain financing from private sources, such as venture capitalists who recognize the power of patents and even patent applications to produce profits through market exclusivity.⁷ Accordingly, despite limited federal agency funding of human embryonic stem cell research, substantial research is nonetheless engaged in by private companies that are obtaining patents as well as venture capital money.⁸

6. See generally Nat'l Inst. of Health, *The NIH Almanac*, at <http://www.nih.gov/about/almanac/index.html> (last reviewed May 13, 2004) (noting that the NIH mission is to steward medical research); see also Nat'l Science Foundation, *Funding: Overview of Grants and Awards*, at http://www.nsf.gov/home/funding/research_edu_community.jsp (last updated Feb. 1, 2005) (noting that the National Science Foundation also supports research in biological sciences, as well in other areas of science and engineering).

7. For example, the prospect of patent profits helped to accelerate research concerning the human genome as well as much of the development of the biotechnology industry.

8. Notably, these patents have primarily been assigned to commercial entities or to those who are funded by commercial entities who operate under a profit incentive. For example, Geron Corporation owns two key patents on embryonic stem cells that were actually originally developed by scientists at the University of Wisconsin with federal funding. However, pursuant to patent laws designed to promote commercialization of research products, the University of Wisconsin exclusively licensed the patents to Geron. See Nat'l Inst. of Health, *Stem Cell Information*, at <http://stemcells.nih.gov/research/registry/unavailable/geron.asp> (last modified July 19, 2004) (describing the characteristics of Geron Corporation stem cell lines).

Human embryonic stem cell research illustrates an interesting although unstated dichotomy of visions towards the funding of research. Direct federal agency funding of stem cell research is tied to the political (and moral) views of the current administration. For example, federal funding for stem cell research is presently restricted to existing cell lines by executive order despite scientific arguments that a broader scope is necessary.⁹ The patent system, on the other hand, presently has an open-door policy with respect to all types of innovation. Although the Commissioner of the United States Patent and Trademark Office (“PTO”) is a political appointment (made with the approval of Congress), the PTO follows patentability rules established by Congress. Thus far, political changes have not prompted Congress to modify patentability standards. Accordingly, patents are available for research that would be denied direct federal funding.

Is justice served by permitting patent rights to exist and possibly incentivize research that has been explicitly denied federal funding as unduly controversial, or even immoral? The question is important as to what research is promoted, as well as to whether the patent system is properly promoting innovation. In particular, because federal funding is presently limited for stem cell research, progress is skewed heavily towards the commercial sector where research is conducted pursuant to profit motives. In general, profit motives prompt patent owners to maximize profits by charging monopoly prices, even at the “cost” of reduced public health benefits and impediments to further research. Nevertheless, to those not morally opposed to such research, higher priced results from research that otherwise would not be conducted might be considered appropriate, even if not ideal.

Whether stem cell research should be denied direct federal funding but nonetheless indirectly funded by the patent system is a difficult question that depends on a number of variables. An initial question may be whether one believes that the federal government should affirmatively determine the parameters of research, or whether the Constitution requires that all scientific research should be promoted by patents. Alternatively, the answer may hinge on whether patents should indirectly spur research in areas that Congress has more consciously declined to promote. In addition, the choice may also depend on whether the United States should be at the forefront of all

9. President Bush has limited stem cell research to existing cell lines by executive order, in contrast to a broader scope of federal funding under President Clinton. *See generally* Nat’l Inst. of Health, *Stem Cell Information: Frequently Asked Questions*, at <http://stemcells.nih.gov/info/faqs.asp> (last modified Jan. 7, 2005) (providing information on limitations of federal funding of stem cell research).

biotechnological research, as it traditionally has, or only in areas that Congress or the President deem permissible or morally appropriate.

The question of what the patent system should promote may be an especially interesting issue in light of recent activity that points to state interest in funding stem cell research that is not permitted by direct federal research funds.¹⁰ In particular, California overwhelmingly passed a ballot initiative that provides funding for such research. Interestingly, the proposed law noted the need for state financing because of a “critical funding gap” preventing advancement of research due to a lack of federal funding.¹¹ Nevertheless, although California is financing the research through government bonds, private groups nonetheless played a substantial role in the passage of the proposition; in particular, venture capitalists funded half of the money necessary to pass the bill.¹² Although nonprofit companies and universities will be entitled to receive research money, patents, as well as private interest in obtaining patents, will likely continue to play a prominent role in the development and commercialization of such research.¹³

10. Although California is the first state to enter the business of funding stem cell research, other states have shown some interest in pursuing this path.

11. See CALIFORNIA SECRETARY OF STATE, OFFICIAL VOTER INFORMATION GUIDE: CALIFORNIA GENERAL ELECTION 147–55 (2004), available at <http://www.voterguide.ss.ca.gov/propositions/prop71text.pdf> (describing the proposed textual amendment to the California Constitution related to stem cell research).

12. See, e.g., Justin Hibbard, *Divvying up the Stem Cell Bonanza*, BUS. WK., Nov. 22, 2004, at 50 (noting that venture capitalists provided half of the \$25 million raised to pass Proposition 71). The money was used for a public relations campaign that included websites that some critics have decried as improperly misleading the public to focus on saving lives, rather than the details of the research involved. See, e.g., Debra Greenfield, *Impatient Proponents: What's Wrong with the California Stem Cell and Cures Act?*, HASTINGS CENTER REP., Sept.–Oct. 2004, at 32–33 (criticizing the promotional web site as avoiding scientific complexity and offering an overly simplistic presentation of the moral issues surrounding stem cell research); see also California Research and Cures Coalition, *Yes on 71: The California Stem Cell Research & Cures Initiative*, at <http://www.curesforcalifornia.com> (last visited Jan. 2, 2004) (providing information supporting the passage of Proposition 71). In addition, passage of the Proposition has also been criticized as an end-run around more direct routes to provide state funding of stem cell research. See Greenfield, *supra*, at 32–33 (noting that bills directly funding such research had failed to pass and Proposition 71 recruited individuals to place this initiative on the ballot by paying them “by-the-signature”).

13. State institutions may elect to license patents to commercial entities—a practice that is already well established as a symbiotic relationship in present times to provide higher education with needed financial support, as well as a benefit to private corporations. Such relations are criticized for tainting the previous sanctity of academia. However, regardless of such criticism, this is the present reality and momentum seems to be headed in the direction of continuing such relationships given the high cost of education and lack of alternative funding sources.

INDIVIDUAL VISIONS OF JUSTICE

Justice within the patent system can also be impacted by individual visions and views of morality and its proper place within the patent system. The question remains, however, whether individual visions should govern the entire patent system. Alternatively, if individual voices should not drive change within the system, should they nonetheless be entitled to some input outside of the boundaries of Congress and the PTO?

*The Vision of Representative Weldon:
No Patents for Controversial Technology*

One current example of an individual vision that may play a role in whether justice is achieved in the overall patent system is Representative Dave Weldon's Amendment to the 2003 Congressional Appropriations Bill. The substance of what has been referred to as the "Weldon Amendment" is a relatively short but controversial provision that provides that money allocated to the PTO can not be used to consider patents on certain types of controversial subject matter. In particular, the amendment purports to disallow the PTO from using government funds to "issue patents on claims directed to or encompassing a human organism."¹⁴ Interestingly, the Weldon Amendment passed after a more direct attempt to amend the patent act to exclude such subject matter failed.¹⁵

Despite the unusual background of this amendment, some have suggested that this is a case of "much ado about nothing." There are several reasons for this skepticism. First, because the amendment is placed in an appropriations bill, it will automatically expire after the fiscal year, unless renewed.¹⁶ Second, although Representative Weldon intended to limit the scope of patentable subject matter, the amendment may not have any such impact because the vaguely worded provision provides no methodology to ensure this result. In particular, the government funding provision presumably means that the typical PTO

14. Consolidated Appropriations Act, 2004, Pub. L. No 108-199, § 634, 118 Stat. 3 (2004).

15. In particular, Sen. Brownback had previously proposed an amendment to a Terrorism Bill that aimed to narrow the scope of patentable subject matter. Unpatentability of Human Organisms, S.A. 3843, 107th Cong., 148 CONG. REC. 78, § 5554-011 (2002); Terrorism Risk Insurance Act of 2002, S 2600, 107th Cong. (2002). Although Brownback's original amendment was blocked, when it was re-drafted to limit funding to the PTO for issuance of similar patents—as the Weldon Amendment—it passed.

16. However, there are some suggestions that the 2005 Appropriations legislation will contain similar language. See, e.g., *Ethical Limits for Patentability Need to be Defined, Professor Says*, 69 PAT. TRADEMARK & COPYRIGHT J. 7, 8 (Nov. 5, 2004) (proposing limitations on patent rights to be defined by Congress).

funds may not be used to examine patents that inappropriately claim a human organism. However, to the extent that the PTO generates its own funding through patent fees, this restriction would not seem to apply. In addition, because patent applications may be amended, it is possible that an application does not initially claim a human organism, but does so at a later stage. Such complexities are beyond the scope of the minimalistic language of the amendment. These possibilities may be largely theoretical, however, since Representative Weldon expressly noted that his intent was to provide Congressional authority for existing PTO practice of not granting patents on human organisms.¹⁷ Indeed, the PTO endorsed the Weldon Amendment as consistent with its existing policy.¹⁸ Moreover, even if the Amendment was enforceable, it is fairly limited in scope, as evidenced by a recently issued patent that claims methods of cloning mammals and potentially humans.¹⁹ Some have suggested that the patent issued in violation of the Amendment, which others have suggested that the issuance of the patent indicates that the PTO is narrowly interpreting the Amendment.²⁰

Even if the substance of the Weldon Amendment does not result in a remarkable change of PTO policy, it nonetheless raises major questions concerning the influence of individuals on federal patent policy. The Amendment reflects Representative Weldon's beliefs, including his opposition to research on human cloning.²¹ The Weldon Amendment could represent a path for subsequent individual visions for the patent system to be enacted without broad consensus by or from either the public or the PTO. A broad range of groups were frustrated that the Weldon Amendment passed without any public hearings or debates to provide differing scientific, legal, or patient perspectives, or at least provide a better definition of the amendment itself.²² If future visions

17. Rep. Dave Weldon, Speech in the House of Representatives, *available at* <http://johnshadegg.house.gov/rsc/word/Weldon111003.DOC> (Nov. 5, 2003).

18. Letter from James Rogan, Under Sec'y & Dir., PTO, to Ted Stevens, Chairman Comm. on Appropriations (Nov. 20, 2003).

19. U.S. Patent No. 6,781,030 (issued Aug. 24, 2004).

20. *PTO Issues Patent on Methods for Cloning Mammals, May Run Afoul of Law*, 68 PAT. TRADEMARK & COPYRIGHT J. 485, 486 (Aug. 27, 2004) (noting that it is unclear whether the patent violates the Amendment or what the impact of such a violation would be on the patent's validity); *Controversial Weldon Amendment Has Negligible Impact on Issuance of Claims to Methods for Human Cloning*, Mondaq Business Briefing, Oct. 15, 2004, *available at* <http://www.lexisnexis.com>. See 149 Cong. Rec. H 12840 (Dec. 8, 2003) (noting Rep. Weldon's clarifications on his Amendment).

21. See, e.g., Why Human Cloning Needs to Be Banned, Statement by Rep. Dave Weldon, M.D., *at* http://www.house.gov/weldon/issues/cloning_statement.htm (Jan. 8, 2003) (describing Weldon's general opposition to human cloning).

22. E.g., Press Release, Coalition for the Advancement of Medical Research, Anti-Patent

of the patent system are similarly enacted through appropriations legislation, the patent system may become extremely vulnerable to the whims of individual members of Congress, or alternatively, subject to political lobbying by wealthy constituents.²³

The Vision of Jeremy Rifkin: Patents to Prevent Controversial Research

Another example of a controversial individual vision of justice in the patent system lies with the vision of Jeremy Rifkin, a well-known opponent to biotechnology innovation. Rifkin sought out cell biologist Stewart Newman for help in patenting a type of controversial biotechnology: a chimera that contains full cells of a human and another animal.²⁴ The pair has never created the subject of the patent application, although they assert that it could be done. Rather, they apparently chose the subject matter in hopes of attracting public outcry and to obtain a patent to preempt others from creating chimeras, which they deem to be immoral.²⁵ A United States patent traditionally permits its owner to exclude all others from the patented invention, even if they do not use the invention themselves.²⁶ It remains to be seen, however,

Legislation Could Cripple Medical Research (Nov. 19, 2003) (voiding the organization's opposition to the insertion of the Weldon Amendment into the appropriations bill, without any debate), at <http://www.camradvocacy.org/fastaction/news.asp?id=723>; Rick Weiss, *Funding Bill Gets Clause on Embryo Patents*, WASH. POST, Nov. 17, 2003, at A4 (noting the stealth inclusion of the Weldon Amendment and noting that "[u]nexpectedly and some say, inappropriately, it now appears that those questions about where normal life begins and how the products of life may be commercialized are to be dealt with by Congress for the first time in the relative obscurity of an appropriations bill").

23. The use of appropriations legislation to enact substantive changes to intellectual property laws is not entirely new. For example, with respect to patents on medical procedures—a controversial subject matter at one point—legislation that was ultimately passed at the behest of a strong medical lobby was added at the last minute to the 1996 appropriations bill after a series of bills proposing to directly amend the patent laws failed. See, e.g., Cynthia M. Ho, *Patents, Patients, and Public Policy: An Incomplete Intersection at 35 U.S.C. 287(c)*, 33 U.C. DAVIS L. REV. 601, 606–07 (2000) (accounting for the passage of 35 U.S.C. § 287(c) in response to the medical lobby's efforts).

24. Rifkin could not undertake this task himself because he probably did not have the relevant background to qualify as a patent inventor as someone without any scientific expertise in the biotechnology area. However, Newman, who, like Rifkin, belongs to the Council for Responsible Genetics, a biotechnology watchdog group, agreed to work on this project with Rifkin. Newman is in fact the named inventor of the pending patent application. See, e.g., Dashka Slater, *huMOUSE™*, LEGAL AFF., Nov.–Dec., 2002, at 21 (describing Dr. Newman's work in creating chimeras and the resulting controversy with the U.S. Patent Office).

25. See, e.g., *id.* at 22 (describing Newman's concerns "about genetically manipulating human embryos, a technology he believes will lead by a series of ethical baby steps to designer babies"); Mark Dowie, *Gods and Monsters*, Mother Jones, Jan.–Feb. 2004 at 53 (noting that the application is intended to preclude research during the term of the patent).

26. See 35 U.S.C. § 284 (2000) (stating that the successful patent owner in an infringement suit is entitled to at least a reasonable royalty to compensate for the infringement); 35 U.S.C. §

whether a patent will ever issue, let alone whether it could be manipulated to block the progress of science. Because the application has not yet issued as a patent, there has not yet been the envisioned outcry among the general public.

Barring Rifkin's Vision From Becoming Reality?

Although the public is typically not made privy to the internal discussions within the PTO concerning pending applications, some public comments during part of the pendency of the Newman/Rifkin application provide an interesting insight into the PTO. In particular, after Rifkin and Newman released information to reporters that the PTO initially rejected the application as unpatentable subject matter,²⁷ the PTO took the unusual step of making a media announcement to the public (ironically on April Fool's day) in which then-commissioner Bruce Lehman stated that "[t]here will be no patents on monsters, at least not while I'm commissioner."²⁸

Since having left the PTO, Lehman has further clarified his statement about "no monsters." In particular, he told one reporter that he was reacting to what he saw as an improper use of the patent system.²⁹ In particular, he stated that he was properly relying on the concept of *ordre public*, which is actually a European—not American—limitation on what can be patentable that is roughly analogous to a limitation on immoral inventions.³⁰ In addition, he now asserts that if a biotechnology firm had submitted the same application, Lehman would not have protested, even though the technology would be identical and the biotech firm would be allowed to profit from the invention.³¹ Presumably, the distinction is that Lehman supports patents for commercial applications, but not solely to preclude research. Since completing his term as PTO Commissioner, Lehman has decried

283 (2000) (providing that district courts *may*, but need not impose injunctions in accordance with equitable principles). See generally 35 U.S.C. § 271(a) (permitting exclusion of others from patented invention without imposing any requirement of use). However, in practice, courts have sometimes respect patent owner rights to some royalty for use of an invention, but without imposition of an injunction, which is within the equitable discretion of the court.

27. *Id.*

28. "Morality" Aspect of Utility Requirement Can Bar Patent for Part-Human Inventions, 55 PAT. TRADEMARK & COPYRIGHT J. 555–56 (1998). This is particularly notable because patent applications are generally kept secret from the public and the PTO rarely discusses them in public. See 35 U.S.C. § 122(a) (2000) (noting that patent applications are generally kept in confidence with no information provided by the PTO except in "special circumstances").

29. Dowie, *supra* note 25, at 53.

30. *Id.*

31. *Id.*

Newman's patent efforts as "profoundly wrong" and "anti-science."³²

Although Lehman's objection is not grounded in existing law, his sense of inequity in the inappropriate use of a patent to stop the advancement of disfavored science could conceivably be considered at a later stage by a court faced with the task of enforcing an issued patent. There is precedence for courts to decline to enjoin infringing activity on equitable grounds, including the fact that the patent owner is not using the invention.³³ Since the Rifkin and Newman team will not be using the invention, and specifically plan to utilize the patent system to bludgeon others into complying with their particular visions about the progress of science, a court may have strong equity reasons for declining to impose an injunction on anyone who uses such a patent, if it were ever to issue. Accordingly, it is unclear whether Rifkin could actually succeed in his goal of preventing progress by obtaining a patent and suing all other researchers as infringers.

Compare and Contrast: The Visions and Methods of Rifkin and Weldon

Rifkin's visions of the harms of biotechnology research likely overlap those of Representative Weldon. Their routes to those visions, however, differ appreciably. Whereas Weldon sought to prevent patents from issuing on controversial subject matter, Rifkin attempts to use the patent system to foreclose entire areas of research from seeing the light of day. The idea of preventing controversial patents from issuing is not a new one—there have been prior attempts to limit the scope of patentable subject matter.³⁴ Rifkin, on the other hand, is breaking new ground and, at least to some, standing the patent system on its head by seeking a patent to halt rather than promote the progress of science.³⁵

The differing approaches taken by Weldon and Rifkin highlight some important implications of patents. In particular, while it may seem logical to prevent patents from issuing on controversial subject matter,

32. *Id.*

33. *See, e.g.,* Vitamin Technologists, Inc. v. Wis. Alumni Research Fund., 146 F.2d 941 (9th Cir. 1944) (refusing to grant injunctive relief for a patent infringement because of an invalid patent).

34. *See, e.g.,* Unpatentability of Human Organisms, S.A. 3843, 107th Cong. (2002) (containing Sen. Brownback's amendment that attempts to directly do what Rep. Weldon's amendment does through the circuitous appropriations process); Medical Procedures Innovation and Affordability Act, H.R. 1127, 104th Cong. (1995) (containing Rep. Ganske's proposal to amend the scope of subject matter to exclude certain medical procedures).

35. Technically, Rifkin himself is not applying for a patent, but he is clearly the motivating force behind the patent application. *See, e.g.,* Slater, *supra* note 24, at 21 (noting that Jeremy Rifkin sought out Newman to assist him with the goal of precluding further immoral research in genetic engineering).

that does not prevent continuing research and development in those areas. To the contrary, the absence of patents might ironically open the area to more research with no single player dominating the field with a patent. Of course, there is a competing argument that without the existence of a patent, there would be no economic incentive to engage in such research. However, commentators as well as the Supreme Court have generally found that research advances regardless of whether a patent exists, although a patent may certainly appreciably accelerate the progress of that research.³⁶ Foreclosing the possibility of research with a patent, on the other hand, is not a typical use of the patent system, although it is technically possible within the United States since there is no requirement that a patent owner actually use the patented invention.³⁷

SOME REFLECTIONS FOR FURTHER DISCUSSION

Hopefully, this essay has highlighted that there are some serious social issues that lie in the area of patent law that need a multi-faceted approach if there is any hope of reaching a resolution that is “just” to a majority of the population. Currently, there seems to be more finger-pointing at different institutional actors than attempts to reach constructive solutions. Academics as well as lay persons have criticized the PTO for failing to cabin morally questionable technology.³⁸ Moreover, the PTO seems uneager to take on the responsibility of deciding what inventions are morally improper.³⁹ Some, including the

36. See, e.g., *Diamond v. Chakrabarty*, 447 U.S. 303, 317 (1980) (noting that whether an invention is patentable determines whether research is accelerated).

37. A somewhat less controversial approach that nonetheless seeks to use patents for strategic purposes that differ from the traditional incentive theory is the attempt by some universities and other organizations to seek patents on technology they would like to see freely shared among researchers, rather than the exclusive domain of one company.

38. However, the present patent act does not give the PTO any such control; rather, if a patent application satisfies all the technical requirements, the Patent statute states that a patent *shall* issue, with no provision allowing for individual discretion. See 35 U.S.C. § 102 (2000 & Supp. 2002) (detailing conditions for patentability). Moreover, the PTO may be inherently subject to criticism because it is the only institution that grants patents. Typically, the PTO is more often criticized for granting patents for inventions that fail to meet the traditional technical criteria for patentability than for denying patentability. See, e.g., Gary Reback, *Patently Absurd*, FORBES ASAP, June 24, 2002, at 44 (using his experience as a lawyer in the Sun Microsystems-IBM patent dispute to argue that the U.S. Patent Office allows abusive uses of patents solely to promote free enterprise rather than focusing on proper patent policies); James Gleick, *Patently Absurd*, THE NEW YORK TIMES MAGAZINE, Mar. 12, 2000, available at, http://courses.cs.vt.edu/~cs3604/lib/Copyrights.Patents/Patently_Absurd.htm (explaining how, in his view, the U.S. Patent office has strayed from the innovation it was meant to nourish and has instead fostered too much litigation because patents are not issued based on technical criteria).

39. First, because the present patent laws do not require morality as a consideration of

Rifkin and Newman team, have suggested that the Supreme Court should clarify the boundaries of patent law.⁴⁰

However, such a clarification is probably unrealistic given the Supreme Court's track record of interpreting Congressional intent to provide a nearly limitless scope of patentable subject matter and the Supreme Court's repeated statements that it is for Congress, not the Court, to decide the proper scope of patentability.⁴¹ Congress, in turn, has thus far declined to enact legislation to directly amend the scope of patentable subject matter.

In addition, while some might suggest that the lack of Congressional activity signals that Congress has determined that no action is necessary, recent academic commentary suggests otherwise. In particular, Professor Bagley opines that Congress' lack of action does not reflect a purposeful decision that such patents are appropriate, but rather reflects the more haphazard decisions of individual scientists who decide what inventions to patent.⁴²

The scenarios presented here strongly suggest that there is a substantial need for additional oversight in this area. If not by the existing entities involved, then by entities yet to be involved, or even yet to be created. Perhaps the PTO is an improper entity for deciding policy issues with respect to the patents it issues as an inherent conflict of interest. Rather than pointing blame at any participant of the process, perhaps there is a need for a new system that regularly reviews the major patent policy issues potentially impacting society. Granted, there are periodic reports by organizations whose interests are impacted by patents, including recent reports by the Federal Trade Commission, as well as the National Academy of Sciences.⁴³ These reports are the

patentability, imposing such a condition would be outside the scope of the responsibility of the PTO. Moreover, even if the patent laws were changed, it is unlikely that the PTO would be well suited to perform such a review because PTO examiners that review applications are hired for technical, rather than moral or ethical expertise. See Cynthia M. Ho, *Splicing Morality and Patent Law: Issues Arising from Mixing Mice and Men*, 2 WASH. U. J.L. & POL'Y 247 (2000) (providing a detailed review and analysis of cases under the European Patent Convention that have addressed whether patents should be denied based on morality in the context of considering whether the United States should adopt a similar provision).

40. Dowie, *supra* note 25, at 84 (noting that Newman plans to appeal to the Supreme Court if unsuccessful at obtaining a patent).

41. See, e.g., *Diamond v. Chakrabarty*, 447 U.S. 303, 315 (1980) (noting that "Congress, not the courts, must define the limits of patentability").

42. See Margo A. Bagley, *Patent First, Ask Questions Later: Morality and Biotechnology in Patent Law*, 45 WM. & MARY L. REV. 469 (2004) (exploring why first granting patents on "morally controversial" grounds and then later considering potential policy impacts is disadvantageous).

43. FTC REPORT, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND

exception, however, and not the norm. In fact, there is no mandate that these organizations, or any others, regularly review patent policy, let alone determine whether there are gaps between patent law and social mores.⁴⁴ This is particularly important as scientific inventions continue to push the boundaries of what it means to be human, along with the concomitant question of what type of research on human-like life forms is appropriate.

In addition, beyond trying to determine absolute parameters of what is appropriate, patentable subject matter, perhaps efforts would be more fruitful if directed towards creating a process that allows differing opinions to be voiced, with an attempt to avoid the impression that any single viewpoint prevails. In particular, I would propose an opposition system for patents.⁴⁵

What I envision is a system whereby third parties can officially oppose patented technology in a way that does not change the patent status, but would be recorded officially for all to see, preferably in conjunction with the issued patent itself.⁴⁶ The purpose of such a system would be to ensure that objections were voiced and shared with all members of the public, including members of Congress, such that people are less likely to be operating in a vacuum of misinformation. These comments could then be taken into consideration with respect to whether the patent is licensed, commercialized, or possibly even subject to reexamination by the PTO to determine whether the patent was improperly issued.

CONCLUSION

Ultimately, these competing visions of justice can be distilled into two fundamental principles. First, there are legitimate differences of

PATENT LAW AND POLICY (Oct. 2003); A PATENT SYSTEM FOR THE 21ST CENTURY (Stephen A. Merrill et al., eds., 2004).

44. In addition, such informal groups and studies would have no power to induce any necessary change.

45. I am using the term "opposition" very loosely in this context. In other countries, there are formal periods of opposition where third parties may contest whether a patent should be issued, based on the same grounds that the national patent office uses.

46. Although not critical to my general point for this essay, I think that such a system would be most effective if opposition commentary were published regularly in a source likely to be seen by a reasonable representation of the public, i.e., some publication other than the Official Gazette. Instead, I think that a good model might be the Constitutional standards for providing notice to a substantial number of those with similar interests, such as notices of shareholder derivative suits or class action suits, which are often publicized through major newspapers. *See Mullane v. Cent. Hanover Bank & Trust Co.*, 339 U.S. 306, 314 (1950) (noting that due process requires notice "reasonably calculated . . . to apprise interested parties . . . and afford them an opportunity to present their objections").

opinion with respect to the proper role for patents within society and at a minimum, these differences must be *respected* for there to be any hope of reaching a “solution.” Second, patents are not just an area for back-room scientists; rather, the area is rife with controversial issues of great social importance. Recognition of these underlying issues of importance can serve to lay a foundation of understanding that may ultimately enable the Patent Act to promote not just progress in science, but also a sense of justice.