

1988

Chakrabarty's Progeny: Genetic Engineering and the Law

E. L. Roy Hunt

Follow this and additional works at: <https://scholarship.law.ufl.edu/jlpp>

Recommended Citation

Hunt, E. L. Roy (1988) "Chakrabarty's Progeny: Genetic Engineering and the Law," *University of Florida Journal of Law & Public Policy*. Vol. 2: Iss. 1, Article 6.

Available at: <https://scholarship.law.ufl.edu/jlpp/vol2/iss1/6>

This Article is brought to you for free and open access by UF Law Scholarship Repository. It has been accepted for inclusion in University of Florida Journal of Law & Public Policy by an authorized editor of UF Law Scholarship Repository. For more information, please contact kaleita@law.ufl.edu.

CHAKRABARTY'S PROGENY: GENETIC ENGINEERING AND THE LAW

*E.L. Roy Hunt**

Mark Twain's Connecticut Yankee in King Arthur's Court tells us that the very first official thing he did in his administration — and on the very first day of it — was to start a patent office. He knew that a "country without a patent office and good patent laws was just a crab, and couldn't travel any way but sideways or backwards."¹

Our own nation's founders apparently shared this Connecticut Yankee's view since the Constitution grants Congress the power to promote the progress of science and useful arts, by securing for a limited time to inventors the exclusive right to their discoveries.²

In language little changed for almost two hundred years, the implementing Patent Act of 1793 defined statutory subject matter as "any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement [thereof]."³ Thomas Jefferson authored that Patent Act and he, like the Connecticut Yankee, believed that "ingenuity should receive a liberal encouragement."⁴

The 1952 recodification of the patent laws changed Jefferson's language only to the extent of substituting the word "process" for the word "art." The accompanying Committee Reports inform us that Congress intended this statutory subject matter to "include anything under the sun that is made by man."⁵

Did Congress really intend that a patent be issued on a living organism itself, no matter how produced or used? This was the question answered by the United States Supreme Court in 1980. In *Diamond v. Chakrabarty*,⁶ a microbiologist filed a patent application relating to his invention of a human-made, genetically-engineered bacterium capable of breaking down crude oil. The patent examiner denied the patent on the ground that living things were not patentable subject matter under section 101 of the Patent Code.⁷

*Professor of Law, University of Florida College of Law. B.A., 1955, Vanderbilt; J.D., 1960, University of Mississippi; LL.M., 1962, Yale.

1. M. TWAIN, A CONNECTICUT YANKEE IN KING ARTHUR'S COURT 68 (1889).
2. U.S. CONST. art I, § 8, cl. 8.
3. Patent Act of Feb. 21, 1793, 1 Stat. 318 (1793) (current version at 35 U.S.C. § 101 (1982)).
4. WRITINGS OF THOMAS JEFFERSON 75-76 (Washington ed. 1871).
5. S. REP. NO. 1979, 82d Cong., 2d Sess. 5 (1952); H.R. 1923, 82d Cong., 2d Sess. 6 (1952).
6. 447 U.S. 303 (1980). See generally Seibold, *Can Chakrabarty Survive the "Harvard Mouse?"*, 2 U. FLA. J.L. & PUB. POL'Y 81, 85 n.27 (1988-89) (explaining the facts and holding in *Diamond v. Chakrabarty*).
7. *Id.* at 306.

To the bare majority of the Court, the simple answer to the question of patentability for living organisms was yes. The drafter of the majority opinion relied on the most basic tenets of statutory construction.⁸ The majority opinion makes one wonder how the patent examiner and the Patent Office Board of Appeals could have thought otherwise. The examiner and the Board were not alone, however, in their failure to answer the question affirmatively. They were joined by four dissenting justices in *Chakrabarty*.⁹

While the examiner and the Board justified their negative answer on the ground that living things are not patentable subject matter, the dissenting justices viewed the question in the broader context of this nation's historic commitment to a competitive economy.¹⁰ Patents, after all, are the ultimate monopoly. The Constitution's authorization to Congress to grant patent protection represents a judgment that long-range competitive interests are best served by granting a limited short-range monopoly. But justices philosophically more attuned to antitrust laws — which oppose all monopolies — might be expected to interpret more restrictively the language of the patent law. This judicial attitude pervaded intellectual property decisions in the Warren Court, and this same attitude underlies the dissenting opinion in *Chakrabarty*.

For the lay public, seeking to predict outcomes on the basis of past decisions and not used to studying the changing makeup of the Supreme Court, *Chakrabarty* should have come as a surprise. In two 1970's cases, *Gottschalk v. Benson*¹¹ in 1972 and *Parker v. Flook*¹² in 1978, the Court also was asked to provide monopoly protection by way of a patent to new technology — in these instances to computer programs. The Court refused to do so. Importantly, the Court, faced with complex technical problems, decided to leave to Congress the issue of whether computer programs should be accorded patent protection. In *Parker*, the Court said that the judiciary “must proceed cautiously when . . . asked to extend patent rights into areas wholly unforeseen by Congress.”¹³

By 1980 and *Chakrabarty*, the Court's makeup had changed. The *Chakrabarty* majority, in the spirit of the Connecticut Yankee and

8. *Id.* at 318.

9. *Id.*

10. *Id.* at 319. Cf. Seibold, *supra* note 6, at 87 n.42 (1989) (criticizing *Chakrabarty* decision for creation of potential harm and failure to allow Congress to consider the issues involved).

11. 409 U.S. 63 (1972).

12. 437 U.S. 584 (1978).

13. *Id.* at 596.

Thomas Jefferson, understood that radically new technology was exactly what the founders and Congress intended the patent system to encourage and reward.

The importance of *Chakrabarty* goes far beyond the immediate result, which was an approval of protection for gene splicing. The importance of the case goes to judicial attitude — a majority view that when the statutory criteria of novelty, utility, and non-obviousness are met, a patent should issue in the absence of an explicit order by Congress that a patent should not issue. As if to emphasize this new judicial attitude, the following year, a majority of five justices voted for issuance of a patent which used a computer program to improve the operation of a rubber-curing process.¹⁴ In the lower courts, the post-*Chakrabarty* cases have predictably followed the Court's lead.

Clearly, *Chakrabarty* narrowed the zone of unpatentability. Since *Chakrabarty*, the United States Patent Office has issued over 200 patents for microorganisms. In April 1987, the Board of Patent Appeals and Interferences upheld the principle of patentability of higher life forms. The Harvard recombinant mouse patent was the logical next step. While Congress, at the behest of farmers and other interest groups may threaten or exterminate Harvard's mouse, the judicial attitude reborn in *Chakrabarty* likely will live on.

Some consideration is due a new venue where that judicial attitude resides — the United States Court of Appeals for the Federal Circuit located in Washington. For a variety of reasons unrelated to the issue in *Chakrabarty*, Congress created this new court and, significantly for our purposes, assigned it exclusive jurisdiction over patent appeals.¹⁵ Thus, it will hear all patent infringement appeals from each federal district court in the country. It will also hear all appeals from the Patent Office. A reason given for the court's creation was that it would provide a single appellate forum in which the judges and their clerks would be skilled in both law and technology and able to resolve substantive patent issues.¹⁶ Congress also intended the court to eliminate the forum shopping between federal circuits occasioned by the dramatic disparity of results in patent infringement actions.¹⁷

Statistics bear out this latter need for a new appellate court. Before the court was established, patents were held invalid in about sixty percent to seventy percent of cases decided by all the circuits. Vari-

14. *Diamond v. Diehr*, 450 U.S. 175 (1981).

15. Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (1982) (codified at 28 U.S.C. § 1295 (1982)).

16. S. REP. NO. 275, 97th Cong., 1st Sess. 17 (1981), reprinted in 1982 U.S. CODE CONG. & ADMIN. NEWS 11, 27.

17. *Id.* at 15.

ation between circuits in validity determination percentages was dramatic, with such results as seventy-seven percent invalidity in the Third Circuit and thirty-eight percent invalidity in the Tenth Circuit.¹⁸

On both counts, Congress' goals for the new court seem to be met. Since the court's establishment, it has addressed and settled most of the outstanding substantive issues of patentability, validity, and patent liability. With respect to validity, the court more often than not, upholds the validity of patents. The practical and immediate effect for biotechnology is that the successful patentee is far more likely to have his or her patent upheld in court.

The 1986 Federal Circuit case of *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*¹⁹ is representative of this trend toward validation. In *Hybritech*, the Federal Circuit reversed in all respects a California federal district court's holding that all twenty-nine claims of plaintiff's patent were invalid as anticipated under section 102(g) and obvious under section 103.²⁰

The Federal Circuit's Chief Judge Howard Markey's view of the court's role as an activist in the realm of technology is revealed in a recent speech: "If we are to be free of the applications of *perverted* science, we must control technology. We must insure that it remains the servant of man, not his master. . . . The only means man has to control technology is the law."²¹ And while Chief Judge Markey does not answer his own rhetorical question, it is perhaps significant that he then asks: "How far shall we go with genetic engineering?"²² Law for Chief Judge Markey clearly includes court-made law, and his comments suggest that the leader of the court most likely to consider genetic engineering and other biotechnology cases may attempt to reinstate a moral criterion for patents similar to that applied to gambling devices during the period 1850-1950.

Should the Federal Circuit move in this direction, it would seem to place it at odds with the Supreme Court's explicit statement in *Chakrabarty* that the Court is without competence to entertain arguments that genetic research may pose serious threat to the human race.²³ The Court emphasizes that such choices are matters of high

18. Mangels, *Federal Circuit Court is Spurring a Quiet Revolution in the Field*, NAT'L L.J., Aug. 24, 1987, at 24, col. 1.

19. 802 F.2d 1367 (Fed. Cir. 1986).

20. *Id.* at 1368.

21. Markey, *Technology, Law and the Courts*, 50 ALB. L. REV. 399, 400 (1986) [emphasis added].

22. *Id.* at 401.

23. 447 U.S. at 317.

policy appropriately resolved within the legislative process. The Court views the process of balancing competing values and interests as the business of elected representatives.²⁴

A federal circuit court embarking upon judgments concerning which applications of science are perverted seems to invite a reminder from today's Supreme Court that the appropriate judicial attitude in patent cases is one which encourages "the progress of science and useful arts." Judgments concerning risks posed by research endeavors such as genetic engineering should be left to the political branches of government.

24. *Id.*

