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Brief for Respondent Microwonder, Inc. v. Environmental Genetics Laboratories, Inc.

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On January 26-31, 1980, the National Moot Competition was held in New York City, New York. Over 160 law schools from across the United States entered the competition. The Chicago-Kent College of Law Moot Court Society team won the best brief award and placed third in the oral argument competition. *Chicago-Kent Law Review* is pleased to present the winner of the Best Brief Award of the 1980 National Moot Court Competition.*

BRIEF FOR RESPONDENT
MICROWONDER, INC. v. ENVIRONMENTAL GENETICS LABORATORIES, INC.

QUESTIONS PRESENTED

I. Whether the court of appeals was correct in holding that the facts and issues exceeded the comprehension of a jury?
II. Whether a bench trial is necessary to provide a reasoned verdict?
III. Whether the seventh amendment requires a jury trial in cases where the issues are too complex for jurors to comprehend?
IV. Whether due process requires denial of a jury trial when a case is so complex as to exceed the capacity of any jury to understand the issues?

STATEMENT OF THE CASE

Respondent, Environmental Genetics Laboratories, Inc., ("En-Gen"), was formed in 1968 to conduct research in the field of genetic engineering. En-Gen is a not-for-profit corporation funded in part by the government and in part by private foundations and environmental organizations. Petitioner, MicroWonder, Inc., ("MicroWonder"), is a wholly owned subsidiary of Richesse Oil Company. Recently, both corporations have been engaged in developing microorganisms for use in cleaning up oil spills.

In 1970, employees of MicroWonder, including Dr. Helen L. Toohey, genetically modified a microorganism through the incorporation of extrachromosomal elements known as plasmids into a single cell. The modified cell, which would degrade hydrocarbons such as crude oil, had a plurality of different plasmids and was allegedly different

* Note: The title page, index, and table of cases have been omitted. References to the trial record have been deleted from the original brief.

from any cell which existed previously. Prior to 1970, various single bacterial strains existed which degraded single components of oil, but none degraded more than one component of oil. A patent was filed for this microorganism on June 8, 1972.

In early 1971, Dr. Toohey, in disputed circumstances, left the employ of MicroWonder to become director of the En-Gen staff. In May 1972, En-Gen began to market "know how" licenses for the production of a microorganism which degraded not only oil but also detergents. This remarkable new product could be used to clean detergents as well as oil waste from rivers and streams. En-Gen did not seek a patent and priced its product under a formula calculated only to recover development costs.

MicroWonder filed suit against En-Gen for patent infringement. Other counts sought damages for the appropriation of MicroWonder's trade secrets, unfair competition, and wrongful interference with contractual relationships.

In its complaint, MicroWonder asserted that En-Gen's product infringed claim 7 of MicroWonder's patent, which reads: "A bacterium from the genus Pseudomas [sic] containing therein at least two stable energy-generating plasmids, each of said plasmids providing a separate hydrocarbon degradative pathway."

En-Gen's bacterium contains three energy-generating plasmids, one of which degrades hydrocarbons, while the remaining two plasmids degrade detergent. MicroWonder has data which allegedly demonstrates that En-Gen's product is within the scope of MicroWonder's patent.

En-Gen asserted that the patent was invalid because: (1) the claimed invention was first conceived in En-Gen's laboratory, not MicroWonder's; (2) even if MicroWonder was the first to conceive, they did not diligently reduce the invention to practice (but withheld it with the intent to increase the price); and (3) En-Gen's reduction to practice preceded that of MicroWonder. En-Gen further claimed that MicroWonder's invention was "obvious" in view of the prior art and therefore not patentable.

As trial approached, En-Gen became increasingly conscious of the difficulty of trying this case to a jury, as demanded by MicroWonder. The great technical difficulty and complexity of the case necessitated that En-Gen's counsel for the trial take evening classes in biochemistry and molecular biology in order to discuss intelligently the issues. En-Gen was forced to retain a Ph.D. in molecular biochemistry to assist

the attorneys in discovery. Since an understanding of sophisticated scientific concepts was absolutely essential to En-Gen's defense, En-Gen conscientiously developed techniques to try to enable the jury to understand the case. A Techniques of Civil Advocacy Program ("T-CAP") team of jury specialists worked with trial counsel in developing techniques to aid the jury. The trial judge accepted all of the innovative suggestions of the T-CAP team, which included: three "teaching witnesses," interim charges to instruct the jury, depositions in chronological order, personal notebooks for the jury, a copy of the 342 page Stipulation of Facts for each juror, and daily review of the transcripts.

Shortly before trial commenced, En-Gen and MicroWonder cooperated in obtaining jury profiles. Despite the existence of a fair cross-section of the community in the venire, the attrition of the jury selection process produced a jury largely lacking in technical training or advanced education. Due to the lengthy trial, twenty-five jurors were excused for hardship, including twelve with technology-related jobs. Moreover, twelve jurors were excused for cause and three jurors with college educations were excused because of plaintiff's peremptory challenges. Of the six chosen jurors and two alternates, only one had any education beyond high school, four were not employed, and none had any technical training. The employed jurors included a postal clerk, a shoe sales clerk, a school teacher (alternate), and a bank teller (alternate).

Trial commenced before Judge Wall of the Eastern District of Krypton. The jury sat for ninety-six days of trial, over six months' time. The trial record was over 26,500 pages long and over 25,000 documents were admitted into evidence. Eighty-five witnesses testified, including two former Nobel Prize winners who gave opposing testimony.

Numerous issues within the trial were of great complexity. The controversy as to the dates of first conception and first reduction to practice required testimony of what took place in the laboratories of both parties over a three-year period. The issue of "obviousness" required extensive testimony as to the scope and content of the prior art. Additional evidence was presented as to the "diligence" issue, the commercial success of MicroWonder's product, the circumstances surrounding the contracts for 150 licenses of En-Gen's product, and numerous other issues.

At the close of the trial, the court, exercising its discretion under Fed. R. Civ. P. 49(b), submitted the case to the jury under a general verdict accompanied by 105 interrogatories. The interrogatories in-

cluded such essential questions as the biochemical compositions of the two inventions, the dates on which each invention was conceived, and whether plaintiff's invention was "obvious" with respect to several points of the prior art.

After three days of deliberation, the jury returned a $158 million verdict for the plaintiff without answering a single one of the 105 interrogatories. After a further unsuccessful attempt by the jury to answer the questions, Judge Wall granted the defendant's motion for a mistrial.

En-Gen further moved to strike plaintiff's jury demand upon retrial, as provided by Fed. R. Civ. P. 39(a). In ruling on that motion Judge Wall noted that the "common sense" of jurors was simply not enough to produce a decision rationally related to the facts and law. Therefore, no jury could be expected to resolve the issues of this case. He further commented that the extra aids available to the court under the Federal Rules of Civil Procedure would make the judge a much more competent arbiter. Nevertheless, the trial judge regretfully denied En-Gen's motion because he felt that the case was a classic legal action under the seventh amendment. However, Judge Wall certified the question of re-trial by jury for immediate appeal to the court of appeals.

The United States Court of Appeals for the Twelfth Circuit reversed. The court concluded that the seventh amendment does not and never did require jury trial of issues not cognizable by a randomly selected group of lay persons. In addition, jury trial under such circumstances would clash fatally with the fifth amendment's fundamental command of due process. Judge Katz dissented. On August 1, 1979, the United States Supreme Court granted MicroWonder's petition for a writ of certiorari.

SUMMARY OF ARGUMENT

There are a small number of complex and lengthy cases which present problems of such incredible dimension that they exceed comprehension of a jury. The case at bar falls into that category. The volume of the evidence and the conceptual sophistication of the issues, combined with the protracted trial, resulted in a case that far exceeded the capabilities of a jury. Only a bench trial could reasonably resolve the issues.

Removing this case from a jury's consideration is in accord with the traditional function of equity: to take jurisdiction when the remedy

at law was inadequate. Beginning long before 1791 and continuing to the present day, the inability of the jury to comprehend the facts and the issues in a case constituted an inadequate remedy at law and allowed a bench trial of the issues under equity jurisdiction.

This Court's modern seventh amendment holdings reflect the historical concern over the inadequacies of juries. Recently, the capabilities and limitations of juries have been isolated as a key factor which would act as a limitation on the right to a jury trial. Therefore, in complex cases, the seventh amendment right to a jury trial must be determined in light of the ability of a jury to comprehend the case.

The historical relegation of complex cases to the equity courts is highly consistent with modern concepts of fairness in litigation. The due process clause of the fifth amendment requires courts to adjudicate disputes in accordance with procedures designed to assure non-arbitrary decisions. A jury trial in a case presenting a fact situation that is incomprehensible to the jury is contrary to the due process clause because an arbitrary decision will result.

The courts have never hesitated to apply the due process clause in order to limit other constitutional provisions. The original purpose of the jury system was to prevent arbitrary decisions and it would be a subversion of that ideal to require a jury trial in highly complex situations such as in the case at bar.

The court of appeals correctly determined that the instant case is beyond the practical abilities of any jury and that a retrial by the court would ensure due process without violating the seventh amendment. Therefore, this Court should affirm the decision of the court of appeals.

ARGUMENT

I. THE COMBINATION OF THE FACTS, ISSUES AND LAW OF THIS CASE EXCEEDS THE PRACTICAL ABILITIES AND LIMITATIONS OF ANY JURY

A. The Extraordinary Complexity of the Issues in This Case Renders It Beyond the Comprehension of a Jury

Children, insane people, and those who do not speak English are barred from jury service. 28 U.S.C. § 1865(b)(1), (3), (4) (1976). This common sense requirement reflects the notion that people judging a case should understand the facts and the issues. Yet, the record is clear that the jury in the instant case was incapable of understanding the

evidence and the issues involved in the proceeding so as to form a rational and fair judgment.

Moreover, the trial of the present case would exceed the practical abilities and limitations of any jury. Because of the legal and factual complexities, and because the trial involved massive quantities of highly technical and scientific evidence presented over a prolonged period of time, this case was fundamentally unsuited for trial by jury.

At trial, plaintiff MicroWonder alleged infringement of its patent, appropriation of trade secrets, and wrongful interference with its contractual relationships. En-Gen denied these claims and asserted that the patent was invalid because the microorganism was conceived in En-Gen's lab, because plaintiff did not diligently reduce the invention to practice, and because the invention was an obvious development in view of the prior art.

To determine whether the plasmid was an obvious development, the jury was required to pinpoint the state-of-the-art in the fields of microbiology and biochemistry at the time En-Gen developed its product. This required a comprehension of the development of multiplasmid implantation in microorganisms. The following excerpt from one of the documents admitted into evidence is an example of the *basic* knowledge required to adequately comprehend this microbiological development.

> The basic minimum requirement for a plasmid-like existence would appear to be equipment for autonomous replication coordinated with the division cycle of the host cell and for equitable distribution of replicas to daughter cells. A reasonable hypothesis is that the structure of a plasmid includes a recognition site or sites for initiation or repression of replication and a site for attachment to a structural component of the cell (a maintenance site) through which plasmid replication is keyed to the cell cycle and replicas are properly distributed. Diffusible substances, such as enzymes, involved in replication could be supplied by the host or by the plasmid — different plasmid systems may vary in this respect.

Novick, *Extrachromosomal Inheritance in Bacteria*, 33 Bacteriological Reviews 210, 214 (1969).

To reach a proper conclusion on the issue of obviousness, the jurors had to understand not only the development of transmissibility of plasmids. They also had to compare the prior art to the results of the detailed work which transpired in plaintiff's and En-Gen's laboratories over a three year period. Only with a working knowledge of these sophisticated scientific matters could the jury competently resolve the issue of obviousness.

The validity of plaintiff's patent also depended on whether it proceeded diligently to reduce the invention to practice. This determination required an understanding of what actually occurred in plaintiff's lab between the date of conception and the filing of the patent application, and what *should have* occurred. If plaintiff did not use reasonable diligence to reduce the invention to practice and, instead, intentionally withheld the product to inflate its price, the patent would not be valid. *See Globe-Union, Inc. v. Chicago Telephone Supply Co.*, 103 F.2d 722, 730-31 (7th Cir. 1939).

If the jurors did find the patent to be valid—*i.e.*, diligence was used in reducing the product to practice and it was not obvious in light of the prior art—the jury still had to determine whether the patent was infringed. This determination required the jury to decide whether the extrachromosomal gene clusters in En-Gen's microorganism provided single or multiple pathways for hydrocarbon degradation. The complicated theory is addressed in the following paragraph which is taken from an article introduced into evidence:

> Transductional and conjugational genetic analyses of several degradative pathways in various species of Pseudomonas point to the tight clustering of genes governing synthesis of an array of inducible enzymes involved in the degradation of several complex organic compounds. Transductional analysis shows a tight clustering of genes specifying 10 to 12 enzymes that convert D-camphor to isobutyrate; this genome cluster is easily cured of the cells either spontaneously or by treatment with mitomycin C. The gene cluster for D-camphor degradation is also transmissible among different Pseudomonal species; this suggests that the entire pathway occurs in nature as an extrachromosomal element responsible for the degradation of n-octane to octanoic acid. It can be cured by mitomycin C. and can be transferred from parent P. oleovorans to octane-negative segregants to P. oleovorans or to other octane-negative P. putilda strains.

A. Chakrabarty & I. Gunsalas, *Genetics* 510 (vol. 68, No. 1 1971). Ph.D.s spend years of intensive study to be conversant with these vital facts. In order to prepare this case for trial, a Ph.D. in molecular biochemistry was retained by En-Gen's attorneys to decipher information at trial depositions and to frame accurate discovery requests. Even with this help, the attorneys had to take courses in biochemistry and molecular biology just to converse adequately with their "go-between." But the six untrained people deciding this matter had to attempt to fathom the extraordinarily advanced concepts in only six months.

B. The Massive Dimensions of this Case Render a Jury Incapable of Deciding It Fairly and Reliably

It would be difficult enough for any jury to understand and resolve just *one* of the complex microbiological issues in the case. But the jury was asked to perform the Herculean task of resolving many complex issues. The difficulty of the jury's task in learning and interrelating the complex subjects presented to it, which were vital to a proper presentment of En-Gen's case, was vastly compounded by the protracted trial.

This was, by any ordinary standard, a truly massive case. By comparison, of the 284 jury and non-jury trials concerning copyrights, patents and trademarks conducted in federal district courts during the year ending June 30, 1977, not a single one lasted more than twenty days. Administrative Office of the United States Courts, *Annual Report of the Director* 352 (1977). Yet, the first trial in the present case consumed *ninety-six* days, four times longer than any patent case heard in 1977. The trial of this action was truly an extraordinary undertaking.

The sheer magnitude of the evidence presented over the six month trial only further compounded the difficulties of jury comprehension. At trial, eighty-five witnesses gave conflicting testimony and 25,000 documents were admitted into evidence. If each page could be read in two minutes and the jurors read for eight hours a day, it would have taken them three months just to read each technical document once. And, even if they read the documents, the conceptual density and the technical complexity of the language could only leave the jurors stupefied. It would take an expert to understand such vital complex concepts as "transduction," "conjugation," "extrachromosomal genes," and "hydrocarbon degradation."

The volume of the evidence and the conceptual sophistication of the issues, combined with a protracted trial, resulted in a case that far exceeded the capabilities of the jury. As Chief Justice Burger noted in his recent speech criticizing the use of juries in complex cases, "there is a limit to the capacity of any of us—jurors or even a judge—to understand and remember complicated transactions described in a long trial." Remarks of Chief Justice Warren E. Burger, Meeting of Conference of Chief Justices, Flagstaff, Arizona (Aug. 7, 1979). Complex material barely grasped at one stage of the trial will have to be retained over long periods of time and then recalled, if it can be, for use at other stages. *Id.* Additionally, the jury will be expected to apply this complicated body of knowledge to the massive accumulation of facts and information that will be generated in a lengthy trial. "Sitting for months

on end in a complicated civil case, a jury, no matter how well directed by instruction from the court, cannot be expected to sustain the interest or attention necessary even to collate the evidence, let alone to understand it." Kirkham, *Complex Civil Litigation—Have Good Intentions Gone Awry?*, 70 F.R.D. 199, 208 (1976).

In the present case, the numerous witnesses, voluminous evidence, and complexity of the issues frustrate the purpose of the jury, which is to be a competent trier-of-fact. The constitutional model of a civil jury is a group of citizens from all walks of life who "sit together, consult, apply their separate experience of the affairs of life to the facts proven, and draw a unanimous conclusion." *Railroad Co. v. Stout*, 84 U.S. (17 Wall.) 657, 664 (1873). The civil jury functions most effectively when the "practical experience" of the jurors in "the common affairs of life" can be "wisely applied." *Id.* But in the instant case, the jurors cannot call upon their everyday experiences to interpret the foreign language of technologically advanced microbiology. In criminal and tort actions, the jury defines the community standard; in contract actions, the jury relies on its own experience for a standard of judgment. Note, *The Right to an Incompetent Jury: Protracted Commercial Litigation and the Seventh Amendment*, 10 Conn. L. Rev. 775, 784 (1978). But a jury's common sense and everyday experiences are irrelevant when it is asked to decide intricate microbiological questions of the highest order. Even co-winners of the 1976 Nobel Prize for Biochemistry could not agree on the issues. Ordinary jurors do not possess the experience and training necessary to make a rational decision. As Judge Wall lamented, this is a case "in which 'common sense' simply is not enough to produce a decision rationally related to the facts. . . ." *Micro Wonder, Inc. v. Environmental Genetics Laboratories, Inc.*, No. 74 Civ. 007 (E.D. Kryp. 1979).

Ironically, the sophisticated scientific issues required highly educated and trained jurors, but the length of the trial prevented the empanelling of even minimally educated or trained persons. As the record shows, the threat of a lengthy trial eliminated the most educated and qualified jurors. The district court, recognizing the problems that long trials impose on some jurors, excused from jury service those persons who would have suffered great hardship from losing six months' work. Additionally, plaintiff used all of its peremptory challenges to exclude jurors who had college educations or technology-related jobs. Of the one hundred potential jurors, fifty-nine had attended college. Of the six actually chosen, only one had an education beyond high school. One-half of the potential jurors were employed, but two-thirds of those

chosen were *not* employed. After challenges and excuses, the jurors were: a shoe salesperson, a postal clerk, an unemployed person, and three housewives. None had technical training. The panel hardly represented either a fair cross-section of the community or a group likely to grasp the complex matters at hand.

Yet, the jury chosen in the instant case was typical of those empanelled in complex and protracted litigation. It is unlikely that the constitution of a new jury would be significantly different. *ILC Peripherals Leasing Corp. v. I.B.M. Corp.*, 458 F. Supp. 423, 448 (N.D. Cal. 1978).

ILC involved an action for monopolization of various markets in the computer industry. In both *ILC* and this case, the trials took six months, required tremendous understanding of technology, and resulted in mistrials. Likewise, in *ILC* the lengthy trial prevented the empanelling of a qualified jury. United States District Court Judge Conti explained the effect that a long trial had upon jury selection in that case:

> The 11 jurors to whom this case was submitted probably represented a random cross-section of people in the community who could afford to spend 10 months serving on a jury, but it is open to question whether they were a true cross-section of the community. The six men and five women on the jury ranged in age from 32 years to 65 years, with the majority over 50. Several of the jurors were housewives, one was retired. . . . Only one of the jurors had even limited technical education. While the court was appreciative of the effort they put into deciding the case, it is understandable that people with such backgrounds would have trouble applying concepts like cross-elasticity of supply and demand, . . . product interface manipulation, . . . entrepreneurial subsidiaries, subordinated debentures, . . . etc. *Id.* at 488.

Other courts have recognized the practical inability of empanelling qualified jurors in protracted trials. In *Bernstein v. Universal Pictures, Inc.*, 79 F.R.D. 59 (S.D.N.Y. 1978), the court refused plaintiff's demand for a jury trial in a complex restraint of trade action after considering the complexity of the issues and the length of the trial (four months). The *Bernstein* court recognized the problem of unqualified jurors when it asked: "When persons entitled to be excused from such a lengthy case have been eliminated from the venire, must litigants be left with a panel consisting solely of retired people, the idle rich, those on welfare and housewives whose children are grown?" *Id.* at 70. The court concluded that the four month long trial would make it "impossible to empanel a representative jury in this case, whose verdict would enjoy the appearance of fairness." *Id.* Thus, "there is a double blow to

jury competency in protracted commercial trials: First, education and experience are particularly necessary; second, they are unlikely to be present." Note, *The Right to an Incompetent Jury: Protracted Commercial Litigation and the Seventh Amendment*, 10 Conn. L. Rev. 775, 786 (1978).

With the staggering depth of specialized knowledge necessary to comprehend and discuss the intricate marvels of today's technological advancements, it is logical that courts, in order to assure a reasoned decision, are turning away from juries in these matters. For example, the court in *In re Boise Cascade Securities Litigation*, 420 F. Supp. 99, 103 (W.D. Wash. 1976), struck the plaintiff's demand for a jury because the "factual issues, the complexity of the evidence that will be required to explore those issues, and the time required to do so leads to the conclusion that a jury would not be a rational and capable fact finder." *Id.* Similarly, in *In re United States Financial Securities Litigation*, 75 F.R.D. 702 (S.D. Cal. 1977),[1] the court struck the jury demand in a massive securities fraud action. The court emphasized that the entire case was beyond the "practical abilities" of a jury. The court did not believe that a jury could rationally cope with a case of such complexity. *Id.* at 713.

In all of these proceedings, the courts have removed the cases from the jury and properly placed them in equity. At least three factors militated against jury effectiveness: the composition of the jury, the conceptual sophistication of the issues, and the magnitude of the evidence.

Similarly, in the present case, these factors prevented the jury from rendering a reasoned decision. The jurors demonstrated that they did not understand the case by their inability to answer even one of the 105 special interrogatories. They were not able to determine the answer to a question even so simple as whether Dr. Toohey took any item of secret information.

The court acted properly and wisely by giving the interrogatories to test the juror's ability to understand the exceedingly difficult concepts. Using interrogatories in conjunction with a general verdict, Fed. R. Civ. P. 49, is an important procedural device in complex cases because the court knows precisely what the jury found. *American Oil Co. v. Hart*, 356 F.2d 657, 659 (5th Cir. 1966). The judge may submit as many interrogatories as he deems necessary. *Id.*

Judge Wall appropriately exercised his discretion in granting the

1. After this brief was written, *Financial Securities* was reversed on appeal. 609 F.2d 411 (9th Cir. 1979).

special interrogatories. Interrogatories are necessary to know if the jury assimilated the information and made a reasoned decision or merely flipped a coin to reach its decision. To safeguard against an arbitrary decision, the judge sought to assure that the jury understood the multitudinous facts. But the jury did not comprehend the issues. As the district court judge concluded, "the issues in this action are indeed so complicated that it is unreasonable to expect a jury to resolve them. . . ." *Micro Wonder, Inc. v. Environmental Genetics Laboratories, Inc.*, No. 74 Civ. 007 (E.D. Kryp. 1979).

The fact that one juror "didn't get the science stuff," another "slept" in the afternoon, and still another relied on a feel for "personalities"[2] likewise showed the jurors were unable to grasp the facts and issues. These examples represent the difficulties that ordinary jurors have in long, drawn out, complex litigation. The issues and evidence combined to exceed the practical limitations of the jury, thus rendering it fundamentally incompetent to resolve the litigation in a fair and reasonable manner.

Recognizing the difficulties of the information presented, En-Gen did everything possible to aid the jury's understanding of the issues. En-Gen employed a T-CAP team—jury education specialists—who attempted to make the complex microbiological issues comprehensible to untrained jurors. Through the innovative use of teaching witnesses, visual aids and summary exhibits, the team made a valiant effort to instruct adequately the jurors. To give the six jurors every possible advantage, Judge Wall accepted En-Gen's proposals that the jury be allowed to keep notebooks, be given "interim" charges and be allowed to review the daily transcript of testimony. Despite all of the efforts and procedural innovations, the jury was incapable of understanding the issues.

The only unused procedural processes, a special master, a directed verdict, and a special verdict, would have been useless in this case. The appointment of a special master, as allowed by Fed. R. Civ. P. 53(b), would not have significantly aided the jury's understanding of the case. A master is just another expert witness in a jury case. He cannot assist the jury in understanding the meaning, credibility, or weight of the testimony or in resolving difficult conceptual issues. *LaBuy v. Howes Leather Co.*, 352 U.S. 249 (1957); *Connecticut Importing Co. v. Frank-*

2. Although the affidavits are not admissible to impeach the verdict, FED. R. EVID. 606(b), we use them, as the court of appeals did, merely to show the jurors' admitted inattention during the trial. The proof of the jurors' incompetence was displayed by a total lack of comprehension *in* the courtroom.

fort Distilleries, Inc., 42 F. Supp. 225 (D. Conn. 1940). In *Bernstein*, the court held that a special master could not solve the many complex issues: "Such matters are completely unsuitable for submission to a Master." *Bernstein v. Universal Pictures, Inc.*, 79 F.R.D. 59, 71 (S.D.N.Y. 1978). Our case is no different. The jury needed help to make *all* factual findings about the state of the scientific art, the validity of the patent, and the number of hydrocarbon degradative pathways. Comprehensive fact-finding is not a master's function. *Id.* at 71.

Finally, although special verdicts and general verdicts with special interrogatories, *see* Fed. R. Civ. P. 49, may reveal that a jury failed to understand a case, *see United States Fidelity & Guaranty Co. v. Brian*, 337 F.2d 881, 882 (5th Cir. 1965), *cert. denied*, 381 U.S. 913 (1965), both devices can do little to increase the jury's understanding of the terms, concepts, and actions at issue in the trial. *See I.B.M. Corp. v. Catamore Enterprises, Inc.*, 548 F.2d 1065 (1st Cir. 1976), *cert. denied*, 431 U.S. 960 (1977).

Clearly, a jury could not possibly function effectively in the instant case. No jury could. Only the court is capable of trying this massive, complex case.

C. Only a Trial by the Bench Would Ensure a Reasoned Decision in this Complex Case

The court is better suited to hear a complex case because the court has better resources. *In re Boise Cascade Securities Litigation*, 420 F. Supp. 99, 104-05 (W.D. Wash. 1976). The advantages of a bench trial have been described by Harris & Liberman in *Can the Jury Survive the Complex Antitrust Case?*, 24 N.Y.L. Sch. L. Rev. 611 (1979). The authors state:

> The judge, unlike the jury, has law clerks and secretarial staff to help keep track of the numerous exhibits and data received. If an aspect of a witness's [*sic*] testimony is unclear, the judge, unlike the jury, can request that the witness clarify his point. The judge, unlike the jury, can undertake continuous review and analysis of trial and deposition transcripts. Furthermore, the court can be more flexible in terms of manipulating trial procedures in the absence of a jury. Issues can be tried separately. The order of proof can be rearranged. The presentation of charts and summaries can be requested throughout the trial. Supplemental briefs and arguments, and post-trial briefs and submissions, are available to the court upon request. And when the trial is concluded, the trial judge can retreat into his chambers and take as much time as is necessary to prepare a reasoned decision.

Id. at 623 (footnote omitted).

In addition, a judge has procedural aids available to him which a jury does not. He may request the services of a magistrate to conduct pre-trial conferences and make findings of fact. 28 U.S.C. § 636 (1976) and Fed. R. Civ. P. 53. If a point in a witness' testimony is unclear, the judge can directly ask the witness to explain the point. A judge can even recall witnesses on his own motion, Fed. R. Evid. 614(a), to re-question and clarify issues. Jurors, on the other hand, must sit quietly and listen to counsel's line of questions without the ability to have their own questions answered. The judge can devote as much time as he needs to the study of evidence and review of arguments before deciding. If the matter is perplexing, the judge may rest or do other matters until he is refreshed. A jury must be kept in deliberation on one case until a decision is reached.

Trial by the bench is particularly compelling in the case at bar because a protracted and unsuccessful jury trial has already occurred. The courts in *Bernstein, Boise Cascade*, and *Financial Securities* denied jury trials merely upon the speculation that a jury would be incompetent. After an unsuccessful trial, one court stated that, "even if one does not want to eliminate jury trials completely in complex anti-trust cases, then surely if the first trial results in a mistrial, the system, and probably the parties themselves, are better served if the decision is [made] . . . by the court." *ILC Peripherals Leasing Corp. v. I.B.M. Corp.*, 458 F. Supp. 423, 448 (N.D. Cal. 1978). Similarly, in our case, this Court has the actual evidence that a jury was incompetent. A mistrial has already occurred. The Court can draw upon Judge Wall's evaluations of the six month trial and the jury's inability to comprehend the complex issues.

Ordering a new trial is inadequate to protect the parties from a jury's inability to understand an extraordinarily complex and protracted case because retrial would almost certainly produce another floundering jury. Also, retrial would involve a tremendous waste of the resources of the court and the parties. Using a jury in a long and costly case burdens the judicial system with an obvious and substantial inefficiency because the jury may be unable to decide the case. *See id.*

A bench trial is much more efficient. As Judge Lacey, who decided *Van Dyk Research Corp. v. Xerox Corp.*, No. 75-419, slip. op. at 4559 (D.N.J. Aug. 15, 1978) (transcript), explained:

> While in most cases capable lawyers and a capable judge can try a case to a jury in the same time it could be tried non-jury, there is no question but that a complex anti-trust case, involving thousands of documents, numerous depositions, and technical expert testimony

about patents, refined technology and esoteric financial data, is tried much faster by a bench than a jury trial. Depositions need not be read into the record. Instead, they can be marked as exhibits and submitted to the court along with each side's narrative analysis. Lengthy exhibits can be submitted with counsel simply highlighting appropriate portions, accompanying their submissions with a digest of the exhibits. The testimony of numerous experts can be shortened by submitting as exhibits their written curriculum vitae and abbreviating their testimony by introducing only so much by way of facts and data as is necessary.

A bench trial would alleviate the unnecessary strain on the judicial system and on the litigants as well. A second jury trial might well bankrupt En-Gen before the substantive issues are ever heard. As the court concluded in *Railex Corp. v. Joseph Guss & Sons, Inc.*, 40 F.R.D. 119, 125 (D.D.C. 1966), if the suit might bankrupt the defendants, "they ought to have some voice in the matter of whether their trial is to be by jury or by the Court." *See also ILC Peripherals Leasing Corp. v. I.B.M. Corp.*, 458 F. Supp. 423, 448 (N.D. Cal. 1978).

In sum, the massive proportions of this case and the inordinately difficult concepts involved will render any ordinary jury incompetent to be a trier of fact. In the first trial, En-Gen was forced to present its evidence and arguments to an uncomprehending jury. A second jury will be no better.

A trial by jury was envisioned by the constitutional framers as a means to promote fairness and justice. When the system acts to *prevent* this fairness, a more appropriate forum must be found.

II. THE SEVENTH AMENDMENT DOES NOT REQUIRE A JURY TRIAL WHEN A CASE IS OF SUCH COMPLEXITY AS TO BE BEYOND THE REASONABLE COMPREHENSION OF ANY JURY

The seventh amendment does not require that En-Gen exhaust its own resources and the court's in repeated and futile attempts to instruct ordinary jurors on the intricacies of microbiological patents. That amendment traditionally has been interpreted to preserve the right to a jury trial in civil cases only as it existed under English common law in 1791, the year in which the seventh amendment was ratified. *Atlas Roofing Co. v. Occupational Safety & Health Commission*, 430 U.S. 442, 459 (1977).

Under the English common law of 1791, a jury would not have been expected to try the case at bar. Instead, a case of such complexity

and magnitude would have been removed from the jury and tried by a judge sitting in equity.

Recent decisions by this Court have developed a flexible interpretation of the historical test which emphasizes considerations of procedural fairness, with particular attention to the capabilities of juries. Both factors were included in this Court's most explicit consideration of seventh amendment analysis in *Ross v. Bernhard*, 396 U.S. 531, 538 n.10 (1970), where the Court said: "As our cases indicate, the 'legal' nature of an issue is determined by considering, first, the pre-merger custom with reference to such questions; second, the remedy sought; and, third, the practical abilities and limitations of juries." Under the *Ross* test, too, there is no right to a jury trial in the instant case because the facts and issues are far beyond the practical limitations and capacities of any jury.

A. Historically, Equity Granted Jurisdiction When a Case Was Beyond the Comprehension of a Jury

The traditional method for determining whether or not the seventh amendment required a jury trial was to apply an "historical test" to ascertain whether the case would have been tried in law or equity under the English common law. *Baltimore & Caroline Line, Inc. v. Redman*, 295 U.S. 654, 657 (1935); *Dimick v. Schiedt*, 293 U.S. 474, 476 (1935). It is submitted that there is no right to a jury trial in the case at bar under the historical analysis test. Under the English common law of 1791, a suit of comparable complexity would have been removed from a common law jury to be heard by a judge sitting in equity.

Equity jurisdiction arose to grant relief where legal remedies were inadequate or where the law courts worked an injustice. 1 J. Pomeroy, *Equity Jurisprudence* 211 (5th ed. 1941). These principles obviously addressed a broad spectrum of procedural inadequacies under the common law. The limits of equity jurisdiction were essentially determined by the Lord Chancellor who, after the settlement of the Ellesmere-Coke quarrel in 1616, was empowered by James I to grant to parties "such Relief in Equity (notwithstanding any Proceedings at the Common Law against them) as shall stand with the Merits and Justice of their Cause." *Arguments Proving from Antiquity the Dignity, Power, and Jurisdiction of the Court of Chancery*, 1 Chan. Rep. 49, 50, 21 Eng. Rep. 576, 588 (1616). This broad principle remained in force well past 1791, and was restated in *Cupit v. Jackson*, M'Cle 495, 13 Price 721, 148 Eng. Rep. 207, 211 Ex. Ch. (1824): "[In] cases, even the most unfavorable to

equitable relief, . . . wherever the least difficulties embarrass the legal remedies, the Courts of Equity interpose with their more effectual forms."

The inadequacies of legal remedies largely resulted from the limitations of legal procedures themselves. "Inadequate remedy at law" could be used in the generic sense to apply to the inability of the law courts to entertain an action, grant an appropriate remedy or accurately determine the facts. 1 J. Pomeroy, *Equity Jurisprudence* 31, 32 (5th ed. 1941).

Law courts were particularly inappropriate forums in which to try complex cases. The law courts were well suited to handling the great mass of simple litigation, but, as Mitford pointed out, "though admirably calculated for the ordinary purposes of justice, [law courts] are not in all cases adapted to the full investigation and decision of all the intricate and complicated subjects of litigation." J. Mitford, *Pleadings* 23-24 (4th ed. 1833). In such involved instances, equity's superior procedures could be invoked to "administer to the ends of justice, by removing impediments to a fair decision. . . ." *Id.* at 25.

From early on, chancellors demonstrated an awareness of the inappropriate nature of jury trials in certain types of cases. One such type of case involved jurors who were called upon to interpret complex written documents, a subject as far removed from the common sense of jurors then as involved treatises on advanced microbiology would be to jurors today. Thus, in *Clench v. Tomley*, Cary 23, 21 Eng. Rep. 13 (Ch. 1603), the chancellor refused to allow an action at common law when the claim depended on "books and deeds, of which the Court was better able to judge then [sic] a jury of ploughmen. . . ." In a parallel situation to the case at bar, the chancellor in *Blad v. Bamfield*, 3 Swans. App. 604, 36 Eng. Rep. 992 (Ch. 1674), enjoined a proceeding at law and took it upon himself to decide the merits when the defendants' case depended on letters, patents, and treaties between England and Denmark. The chancellor held that it was "absurd" that "a common jury should try whether the *English* have a right to trade in *Iceland*. . . ." *Id.* at 607, 36 Eng. Rep. at 993.

Another type of case which proved impractical for jury procedures was an action for account where a party claimed another owed him money but did not know how much. If there were a large number of disputed transactions between the parties, a jury would have to sit through long and elaborate pleadings concerning each transaction. G. Jeremy, *Equity Jurisprudence* 502 (1830). The chancellor, on the other

hand, could refer the accounts to a master, who would go through the transactions and frame the issues of dispute for a judge to review. Therefore, equity often assumed jurisdiction over the most complex accounts on the basis of its superior procedures. *Duke of Bridgewater v. Edwards*, 6 Bro. P.C. 368, 2 Eng. Rep. 1139 (H.L. 1733); *Weymouth v. Boyer*, 1 Ves. Jun. 416, 30 Eng. Rep. 414 (Ch. 1792). It was also fully within the power of the chancellor to enjoin suits at common law when the account was too complicated for a jury to examine practically. *See, e.g.*, *O'Connor v. Spaight*, 1 Sch. & Lef. 305 (Ire. Ch. 1804).

Although the need to assert equitable jurisdiction on the ground of jury inadequacy was rare in those simpler times, the necessity to preserve accuracy was recognized throughout the history of English law and was eventually codified when equity and the common law were merged under the English Judicature Act of 1873. Courts demonstrated no qualms over the historical correctness of allowing a court to direct a trial without a jury. Thus, as pointed out in *Clarke v. Cookson*, 2 Ch. D. 746 (1875), such procedures were "framed expressly to meet cases which under the *old system* have been tried in the Chancery Division, and which might be considered . . . from great complexity, or otherwise, not capable of being conveniently tried before a jury." *Id.* at 747-48 (emphasis added). *Wedderburn v. Pickering*, 13 Ch. D. 769 (1879), approvingly restated the "old rule" to deny a jury trial in an action for possession of land when the claim relied upon the interpretation of ancient deeds and conveyances. Thus, the limitation on the right to a jury trial in complex cases under English common law existed before, during, and after the adoption of the seventh amendment.

After 1791, American courts continued to recognize and apply the English principle of invoking equity jurisdiction in those cases where a jury trial would be inadequate. Thus, in *Ludlow v. Simond*, 2 Cai. Cas. 1 (N.Y. 1805), equity took cognizance of a case on the grounds that "[t]he settlement of accounts, if they are in any degree long or complex, is improper, if not impracticable, for a jury." *Id.* at 52. The chief justice desired to avoid confronting a jury with financial transactions which "embraced the whole process of the adventure, from its commencement to its conclusion. . . ." *Id.* Also, in *President of the Farmers' & Mechanics' Bank v. Polk*, 1 Del. Ch. 167, 175 (1821), the court held that an action for account in equity was justified on the principle that: "These transactions are so complicated, so long and intricate, that it is impossible for a jury to examine them with accuracy." The Supreme Court itself recognized the historical limitations of the sev-

enth amendment in actions for equitable accountings or otherwise in *Fowle v. Lawrason's Executor*, 30 U.S. (5 Pet.) 495 (1831):

> In all cases in which an action of account would be the proper remedy at law . . . the jurisdiction of a court of equity is undoubted . . . . But in transactions not of this . . . character, great complexity ought to exist in the accounts, or some difficulty at law should interpose . . . in order to induce a court of chancery to exercise jurisdiction.

Id. at 503. In *Kirby v. Lake Shore & Michigan Southern Railroad*, 120 U.S. 130, 134 (1887), the Court noted the existence of equitable power to dispense with a jury solely because of the "complicated nature of the accounts."

The issue of whether equity granted jurisdiction in complex cases at early common law has been thoroughly researched in a note by the Right Honorable Lord Patrick Devlin, formerly a Lord of Appeal in Ordinary. P. Devlin, *Note on the Suit at Common Law in England at the Time of the Seventh Amendment* (1791).[3] The conclusions of Lord Devlin's research clearly sustain En-Gen's historical analysis:

> I am sure that the practical abilities and limitations of juries would have been a factor very much in the mind of a Chancellor in 1791. Further, if in any particular case he had thought the "practical abilities" not up to the complexities of the case, he would have had the power to stop the suit at common law. And further, such a use of the power would not have been considered as at all outrageous, but on the contrary as in tune with the accepted relationship between equity and the common law. . . . If the court denies trial by jury in any case in which it deems the "practical abilities" to be insufficient, the court will have history on its side.

Id. at 48, para 89.

Historically, there is no basis for the conclusion that the parties and the courts are helplessly condemned by custom and law to try difficult issues before the one tribunal least suited to decide them. MicroWonder's doctrinaire reliance on the seventh amendment overlooks its historic inapplicability whenever the exercise of the jury trial right would frustrate the guarantee to a fair trial and an accurate verdict.

3. Copies of the pre-publication edition of Lord Devlin's note have been lodged with the United States District Court for the District of Arizona in connection with Greyhound Computer Corp. v. I.B.M. Corp., No. Civ. 72-242-PHX-WPC. A copy will be furnished to the Court, on request.

B. Modern Supreme Court Decisions Confirm That a Jury Trial is Not Required When No Jury Could Adequately Review and Understand the Issues Involved

After the adoption of the seventh amendment, the question of whether or not a suit was tried by a jury under common law was resolved with little difficulty by applying the "historical test." With adoption of the Federal Rules of Civil Procedure in 1938, marking the merger of law and equity in the federal system, suits containing both legal and equitable characteristics resisted classification under the traditional historical test.

In response to this new situation, the Court has increasingly relied on "adequacy of legal remedy" to distinguish whether or not a right to jury trial exists. *E.g.*, *Dairy Queen, Inc. v. Wood*, 369 U.S. 469 (1962). Specifically, the adequacy of the jury trial as a legal remedy is a vital factor in deciding what must be tried at law to a jury and what must be tried in equity to the court. *E.g.*, *Ross v. Bernhard*, 396 U.S. 531 (1970).

Modern analysis reduces reliance on outmoded pleadings and emphasizes a more practical examination of the issues. The broader view of the distinction of law and equity was encapsulated in the third factor of the test in *Ross v. Bernhard*, 396 U.S. 531, 538 n.10 (1970). The Court stated: "As our cases indicate, the 'legal' nature of an issue is determined by considering . . . the practical abilities and limitations of juries." The third factor in *Ross* reflects both the historical concern and the post-merger considerations of procedural appropriateness. *Ross* emphasizes that when a case exceeds the "practical abilities and limitations of juries,"—*i.e.*, when there is jury trial inadequacy—the seventh amendment cannot be held to require a trial by jury.

The *Ross* approach was foreshadowed in *Beacon Theatres, Inc. v. Westover*, 359 U.S. 500 (1959). *Beacon Theatres* involved a suit for injunctive relief. In substance it was a suit for damages, but in form it was a suit for prospective relief. The Court looked to the legal substance and not the equitable form and determined that the suit was legal and could be tried by a jury. Instead of making an historical classification based on the pleadings—*i.e.*, the prospective nature of the relief sought—the Court invoked the traditional equitable principle that "equity has always acted only when legal remedies were inadequate." *Id.* at 509. In addition to the fact that the action was historically legal in nature, the Court noted that no other "imperative circumstances" existed to militate against a jury trial—*i.e.*, no one was claiming that the issues involved were beyond a jury's abilities to re-

solve. *Beacon Theatres* clearly indicates the Court's emphasis on procedural appropriateness at the expense of traditional historical assumptions.

It remained for *Dairy Queen, Inc. v. Wood*, 369 U.S. 469 (1962), to isolate the jury system as the key remaining distinction between legal and equitable procedures. Faced with a claim that could be classified as either a breach of contract for damages or an accounting in equity, the Court refused to allow its jurisdictional determination to hinge upon historical labels attached to pleadings. The Court again relied on the maxim that equity jurisdiction is founded on an "absence of an adequate remedy at law." *Id.* at 478. Using this analytical touchstone, the Court stated: "[I]n order to maintain such a suit [in equity] on a cause of action cognizable at law . . . the plaintiff must be able to show that the 'accounts between the parties' are of such a 'complicated nature' that only a court of equity can satisfactorily unravel them." *Id.*, *citing Kirby v. Lake Shore & Mich. So. R.R.*, 120 U.S. 130, 134 (1887). Therefore, the capability of jurors to render a fair verdict was a necessary ingredient to providing an adequate remedy at law. Although the *Dairy Queen* accounts were held to be well within the comprehension of a jury, the decision expressly enunciated that the jury's ability to "unravel" a complex case determines the boundaries of the right to demand a jury trial.

The teachings of *Dairy Queen* are not limited to actions for an equitable accounting. Significantly, *Ross*, which followed *Dairy Queen*, dropped any reference to "accounts" when it referred to the practicality of trying issues before a jury. *Ross* itself did not require resort to the jury capabilities test in order to determine whether a shareholder's derivative suit was entitled to a jury trial. Yet, the traditionally historical analysis, which would have placed the suit in equity, was held not to be determinative. On the contrary, *Ross* continued to question the exclusive dependence on the historical method of testing and proceeded to hold that "nothing turns now upon the form of the action or the procedural devices by which the parties happen to come before the court." *Ross v. Bernhard*, 396 U.S. 531, 540 (1970).

A full discussion of all three factors of the *Ross* test is not necessary in most situations. This accounts for the lack of exposition of the *Ross* test by this Court in cases subsequent to *Ross*. *See, e.g.*, *Pernell v. Southall Realty*, 416 U.S. 363, 383 (1974); *Curtis v. Loether*, 415 U.S. 189, 195 (1974). It is quite proper for the courts to assume that an otherwise "legal" controversy is within the capabilities of the jury. In such circumstances, only an inquiry into historical precedents is neces-

sary. However, this does not preclude a stricter scrutiny of all three factors of the *Ross* test in the infrequent circumstances of an unusually complex case. *See Hyde Properties v. McCoy*, 507 F.2d 301 (6th Cir. 1974); *Bernstein v. Universal Pictures, Inc.*, 79 F.R.D. 59 (S.D.N.Y. 1978); *In re United States Financial Securities Litigation*, 75 F.R.D. 702 (S.D. Cal. 1977); *In re Boise Cascade Securities Litigation*, 420 F. Supp. 99 (W.D. Wash. 1976).

The jury capabilities factor of *Ross* would justify removing the case at bar from a jury's consideration. Concededly, this Court in the past had held that "mere complication of facts alone" may not justify recourse to equity. *Curriden v. Middleton*, 232 U.S. 633, 636 (1914); *see also United States v. Bitter Root Development Co.*, 200 U.S. 451, 472 (1906). Yet, the issues in the present case go beyond "mere complication" of ordinary facts and embrace a conceptual sophistication requiring an analytical grasp beyond that possessed by the "common sense" observer. The nature and magnitude of the documentation and the duration of the trial alone mark this case as singularly unsuited for a jury's determination. Although equity cannot take cognizance of a case simply because it appears to be more difficult than usual, equity can take jurisdiction when a jury plainly would be incapable of coming to a rational decision.

En-Gen therefore seeks relief in equity because jury procedures have been proven inadequate to providing a fair and rational decision in this case. Compelling En-Gen to retry its case before a jury when the best efforts to bring the issues within the jurors' comprehension have proven futile would extend the seventh amendment beyond its intended scope and achieve a result contrary to its purpose.

III. DUE PROCESS REQUIRES THAT TRIAL BY JURY BE DENIED WHEN A CASE IS SO COMPLEX AS TO EXCEED THE CAPACITY OF ANY JURY TO UNDERSTAND THE ISSUES

The historical relegation of complex cases to the equity courts is highly consistent with modern concepts of fairness in litigation. The due process clause of the fifth amendment requires courts to adjudicate disputes in accordance with procedures designed to assure non-arbitrary decisions. *Wolff v. McDonnell*, 418 U.S. 539, 558 (1974). Furthermore, the function of the legal process, as embodied in the Constitution, is to minimize the risk of erroneous decisions. *Greenholtz v. Inmates of the Nebraska Penal & Correction Complex*, 442 U.S. 1, 13

(1979). Together, these comments by the Court indicate that procedures of due process are intended to minimize the risk of arbitrary decisions and therefore minimize the incidence of erroneous verdicts.

The issue in the case at bar is not merely whether the jury arrived at a correct verdict, but, of equal importance, whether the decision was arrived at in a fair manner. A case presenting a fact situation of such complexity as to be incomprehensible to a jury risks both an arbitrary and an erroneous result.

The due process right to a competent tribunal is quite separate from the right to any particular *form of proceeding*. *Peters v. Kiff*, 407 U.S. 493, 501 (1972). This suggests that the right to a jury trial must be modified, in unusual circumstances, by the greater right to a fair and competent tribunal.

No constitutional provision exists in an utter vacuum. At some point, the strictest and firmest presumptions of our judicial system must give way to a sufficiently compelling counter-concern. Even if one could say that the plaintiff has a constitutional right to a trial by jury, there still remains the countervailing constitutional right of the defendant to a fair trial. Furthermore, even if the plaintiff's hypothetical right to a jury trial bore a heavy presumption, such a presumption can be overcome when it conflicts with the most basic tenet of our judicial system. In *Cox v. Louisiana*, 379 U.S. 559 (1965), this Court stated that "it is of the *utmost importance* that the administration of justice be absolutely *fair* and orderly." *Id.* at 562 (emphasis added).

Particularly in the area of first amendment rights, this Court has recognized that one important right can conflict with an even more fundamental second right. A very special solicitude has always been accorded by the courts to first amendment rights. *Lloyd Corp. v. Tanner*, 407 U.S. 551, 568 (1972). Nevertheless, "accommodations between [first amendment rights and due process property rights] are sometimes necessary. . . ." *Id.* at 567-68. In *Rowan v. United States Post Office Department*, 397 U.S. 728, 736 (1970), this Court stated that "the right of every person 'to be let alone' must be placed on the scales with the right of others to communicate." Similarly, it was recognized in *Nebraska Press Association v. Stuart*, 427 U.S. 539, 561 (1976), that although barriers to the imposition of prior restraints remain high, they could be outweighed by defendant's right to a fair trial. *Cf. Zacchini v. Scripps-Howard Broadcasting Co.*, 433 U.S. 562 (1977) (contrasting plaintiff's right to his professional property with the press' first amendment privileges); *United States v. Nixon*, 418 U.S. 683 (1974) (balancing

the President's constitutional privilege against a defendant's right to a fair trial); *Breard v. Alexandria*, 341 U.S. 622, 644 (1951) ("balancing of the conveniences between some householders' desire for privacy and the publisher's right to distribute publications. . . ."); *Saia v. New York*, 334 U.S. 558 (1948) (comparing one's right to free speech via use of a loudspeaker against others' privacy rights). In addition, the Supreme Court has never hesitated to use the flexible concepts of due process to imply limitations to constitutional powers of government. *See O'Callahan v. Parker*, 395 U.S. 258, 272-74 (1969) (Congress' power to prescribe rules for the military construed in light of the fifth amendment); *Kennedy v. Mendoza-Martinez*, 372 U.S. 144, 164 (1963) (war and foreign relations powers subject to due process); *Secretary of Agriculture v. Central Roig Refining Co.*, 338 U.S. 604, 616 (1950) (commerce power subject to due process).

It is particularly appropriate to modify a seventh amendment right to a jury trial in circumstances such as these because the jury was originally conceived to *prevent* arbitrary decisions by the sovereign. *ILC Peripherals Leasing Corp. v. I.B.M. Corp.*, 458 F. Supp. 423, 448 (N.D. Cal. 1978). In deciding that a highly complex case warranted the denial of a jury trial, the *ILC* court noted that: "It would be a subversion of [the seventh amendment] ideal to insist upon . . . a jury when there is a substantial risk that its decision will be arbitrary." *Id.* at 448-49. In other words, at the point where the seventh amendment no longer serves the purpose for which it was created, and indeed would create a result *contrary* to its purpose, then any seventh amendment presumption in favor of a jury trial must be modified.

Other courts have denied a jury trial in circumstances where the jury was unlikely to produce a just and fair result. The complex situation in *Bernstein v. Universal Pictures, Inc.*, 79 F.R.D. 59, 71 (S.D.N.Y. 1978), prompted the court to state "to hold that a jury trial is required in this case would be to hold that the Seventh Amendment gives a single party at its choice the right to an irrational verdict." Similarly, the United States Court of Appeals for the Sixth Circuit denied a jury trial in a complex interpleader action because "a non-jury trial of the issues is both more efficient and *more likely to produce a just result*." *Hyde Properties v. McCoy*, 507 F.2d 301, 306 (6th Cir. 1974) (emphasis added).

The court in *In re Boise Cascade Securities Litigation*, 420 F. Supp. 99 (W.D. Wash. 1976), was particularly sensitive to the issue of fairness to the parties. That case involved a securities fraud action brought by former stockholders of a company. Assets and liabilities in excess of a

billion dollars in transactions over a period of five years were involved in the case. In denying a jury trial that would otherwise be granted but for the great complexity of the case, the court stated:

> The procedural safeguards inherent in our legal system provide the impression and fact of fairness to the litigants. . . . Indeed, under the Fifth and Fourteenth Amendments, the legitimacy of government action is measured in terms of fairness.
>
> Central to the fairness which must attend the resolution of a civil action is an impartial and capable fact finder. . . . [A]t some point, it must be recognized that the complexity of a case may exceed the ability of a jury to decide the facts in an informed and capable manner. When that occurs, the question arises as to whether the right and necessity of fairness is defeated by relegating fact finding to a body not qualified to determine the facts. The third part of the analysis in footnote 10 [of *Ross*] directly recognizes this.

Id. at 104 (citation omitted). Even if a strictly historical analysis of the seventh amendment were to suggest that a jury trial is required, this argument should not prevail when a jury would be so incapable of comprehending the facts that an unfair and arbitrary decision is virtually certain.

Several analogies justify the proposition that a jury trial constitutionally can be denied. By statute, jurors must be able to understand English and minors are not permitted to be jurors. 28 U.S.C. § 1865 (1976). Moreover, insane people cannot serve on juries. *Jordan v. Massachusetts*, 225 U.S. 169, 176 (1912). The clear intent of these requirements is to bar people who cannot properly comprehend the facts, issues, and law of a case.

A person who cannot understand English, or who is not fully competent due to minority or insanity, should not be allowed to make a decision that can deprive a person of his life, liberty, or property. However, the underlying concepts of this case are of such immense difficulty that jurors are in the same position as one who does not understand the language or is incompetent.

Excerpts from the scientific journals are indicative of the immensely technical concepts necessary for an understanding of this case. Such concepts, presented over ninety-six days of trial, among thousands of documents and other evidence, were the equivalent of a foreign language to the harried and little-educated jurors. Only a judge who, among many other aids, may constantly question witnesses and who may periodically order breaks in the trial in order to assimilate the evidence, would have any chance of coherently understanding the facts of the case.

The directed verdict is a further analogy to the permissibility of

denying a jury trial in highly complex cases. Where the evidence in a case allows for only one reasonable interpretation, so that the jury deliberations would serve no purpose, the case can be taken from the jury. The constitutionality of the directed verdict which results was upheld by the Court in *Galloway v. United States*, 319 U.S. 372 (1943). By similar reasoning, if the jury *cannot* perform its function, then its deliberations serve no purpose and the case should be taken from the jury. *See* Note, *The Right to a Jury Trial in Complex Civil Litigation*, 92 Harv. L. Rev. 898, 910 (1979). Since there is no constitutional barrier in taking a case from the jury in the above situations, there should be no constitutional problem in denying a jury when it was utterly unable to perform its function. It is for this reason that the third factor of the *Ross* test, practical limitations and abilities of jurors, has been held to be of constitutional proportions. *See In re Boise Cascade Securities Litigation*, 420 F. Supp. 99, 105 (W.D. Wash. 1976).

In the case at bar, the jury clearly made a decision without comprehending the underlying facts. The jury was not able to answer a single one of 105 interrogatories. The questions, such as the "obviousness" of the invention, the dates of conception, and the biological compositions of the inventions, were basic to a rational and properly conceived verdict. As the distinguished Chief Judge of the Twelfth Circuit noted, jurors who sleep every afternoon or who rely on a feel for the personalities cannot be expected to be applying a logical analysis in deciding the case. *Micro Wonder, Inc. v. Environmental Genetics Laboratories, Inc.*, No. 79-1791 (12th Cir. 1979). The trial judge, who carefully witnessed all of the proceedings, specifically noted that it was unreasonable for a jury to resolve the issues. *Micro Wonder, Inc. v. Environmental Genetics Laboratories, Inc.*, 74 Civ. 007 (E.D. Kryp. 1979). Indeed, the trial judge felt that even he would be unable to properly decide the case without the extra aids available to the court.

The jury in the case at bar was faced with a monumental task. First, the case was quite complicated from the standpoint of sheer numbers of witnesses, documents, depositions, and other evidence. Second, the jury was required to comprehend various aspects of patent law and other legal concepts. In addition to these considerable problems, the jury was faced with numerous difficult and highly technical scientific concepts. Such an overwhelming load is beyond the capabilities of *any jury*.

There can be no doubt that a jury trial is the appropriate vehicle for the vast majority of cases that would traditionally be considered legal. But the courts should not hesitate to deny a jury trial in that tiny

minority of cases that are of such immense complexity that a jury could not come to a meaningful verdict. The due process clause of the fifth amendment mandates the denial of a jury in such a situation.

For the reasons above, respondent prays that the decision of the United States Court of Appeals for the Twelfth Circuit be affirmed in its entirety.

Respectfully submitted,

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APPENDIX

CONSTITUTIONAL PROVISIONS

U.S. Const. amend. I:

> Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

U.S. Const. amend. V:

> No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

U.S. Const. amend. VII:

> In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.

FEDERAL STATUTES

28 U.S.C. § 636 (1976):

§ 636. Jurisdiction, powers, and temporary assignment

> Notwithstanding any provision of law to the contrary
>
> (A) a judge may designate a magistrate to hear and determine any pretrial matter pending before the court . . . .
>
> (B) a judge may also designate a magistrate to conduct hearings, including evidentiary hearings, and to submit to a judge of the court proposed findings of fact and recommendations for the disposition, by a judge of the court, of any motion excepted in subparagraph (A), of applications for posttrial relief made by individuals convicted of criminal offenses and of prisoner petitions challenging conditions of confinement.
>
> (C) the magistrate shall file his proposed findings and recommendations under subparagraph (B) with the court and a copy shall forthwith be mailed to all parties.

28 U.S.C. § 1865 (1976):

§ 1865. Qualifications for jury service

> . . . .

(b) In making such determination the chief judge of the district court, or such other district court judge as the plan may provide, shall deem any person qualified to serve on grand and petit juries in the district court unless he—

(1) is not a citizen of the United States eighteen years old who has resided for a period of one year within the judicial district;

(2) is unable to read, write, and understand the English language with a degree of proficiency sufficient to fill out satisfactorily the juror qualification form;

(3) is unable to speak the English language;

(4) is incapable, by reason of mental or physical infirmity, to render satisfactory jury service; . . . .

FEDERAL RULES

Fed. R. Civ. P. 39(a):

Rule 39.
TRIAL BY JURY OR BY THE COURT

(a) By Jury. When trial by jury has been demanded as provided in Rule 38, the action shall be designated upon the docket as a jury action. The trial of all issues so demanded shall be by jury, unless (1) the parties or their attorneys of record, by written stipulation filed with the court or by an oral stipulation made in open court and entered in the record, consent to trial by the court sitting without a jury or (2) the court upon motion or of its own initiative finds that a right of trial by jury of some or all of those issues does not exist under the Constitution or statutes of the United States.

Fed. R. Civ. P. 49:

Rule 49.
SPECIAL VERDICTS AND INTERROGATORIES

(a) Special Verdicts. The court may require a jury to return only a special verdict in the form of a special written finding upon each issue of fact. In that event the court may submit to the jury written questions susceptible of categorical or other brief answer or may submit written forms of the several special findings which might properly be made under the pleadings and evidence; or it may use such other method of submitting the issues and requiring the written findings thereon as it deems most appropriate. The court shall give to the jury such explanation and instruction concerning the matter thus submitted as may be necessary to enable the jury to make its findings upon each issue. . . .

(b) General Verdict Accompanied by Answer to Interrogatories. The court may submit to the jury, together with appropriate forms for a general verdict, written interrogatories upon one or more issues of fact the decision of which is necessary to a verdict. The court shall give such explanation or instruction as may be necessary to enable the jury both to make answers to the interrogatories and to render the general verdict, and the court shall direct the jury both to

make written answers and to render the general verdict. When the general verdict and the answers are harmonious, the appropriate judgment upon the verdict and answers shall be entered pursuant to Rule 58. When the answers are consistent with each other but one or more is inconsistent with the general verdict, judgment may be entered pursuant to Rule 58 in accordance with the answers, notwithstanding the general verdict, or the court may return the jury for further consideration of its answers and verdict or may order a new trial. When the answers are inconsistent with each other and one or more is likewise inconsistent with the general verdict, judgment shall not be entered, but the court shall return the jury for further consideration of its answers and verdict or shall order a new trial.
As amended Jan. 21, 1963, eff. July 1, 1963.

Fed. R. Civ. P. 53:

Rule 53.
MASTERS

. . . .

(b) Reference. A reference to a master shall be the exception and not the rule. In actions to be tried by a jury, a reference shall be made only when the issues are complicated; in actions to be tried without a jury, save in matters of account and of difficult computation of damages, a reference shall be made only upon a showing that some exceptional condition requires it.

(c) Powers. The order of reference to the master may specify or limit his powers and may direct him to report only upon particular issues or to do or perform particular acts or to receive and report evidence only and may fix the time and place for beginning and closing the hearings and for the filing of the master's report. Subject to the specifications and limitations stated in the order, the master has and shall exercise the power to regulate all proceedings in every hearing before him and to do all acts and take all measures necessary or proper for the efficient performance of his duties under the order. He may require the production before him of evidence upon all matters embraced in the reference, including the production of all books, papers, vouchers, documents, and writings applicable thereto. He may rule upon the admissibility of evidence unless otherwise directed by the order of reference and has the authority to put witnesses on oath and may himself examine them and may call the parties to the action and examine them upon oath. When a party so requests, the master shall make a record of the evidence offered and excluded in the same manner and subject to the same limitations as provided in Rule 43(c) for a court sitting without a jury.

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(e) Report.

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(2) *In Non-jury Actions*. In an action to be tried without a jury the court shall accept the master's findings of fact unless clearly erroneous. Within 10 days after being served with notice of the filing of the report any party may serve written objections thereto upon the

other parties. Application to the court for action upon the report and upon objections thereto shall be by motion and upon notice as prescribed in Rule 6(d). The court after hearing may adopt the report or may modify it or may reject it in whole or in part or may receive further evidence or may recommit it with instructions.

(3) *In Jury Actions.* In an action to be tried by a jury the master shall not be directed to report the evidence. His findings upon the issues submitted to him are admissible as evidence of the matters found and may be read to the jury, subject to the ruling of the court upon any objections in point of law which may be made to the report.

As amended Feb. 28, 1966, eff. July 1, 1966.

Fed. R. Evid. 606(b):

Rule 606. Competency of Juror as Witness

. . . .

(b) *Inquiry into validity of verdict or indictment*—Upon an inquiry into the validity of a verdict or indictment, a juror may not testify as to any matter or statement occurring during the course of the jury's deliberations or to the effect of anything upon his or any other juror's mind or emotions as influencing him to assent to or dissent from the verdict or indictment or concerning his mental processes in connection therewith, except that a juror may testify on the question whether extraneous prejudicial information was improperly brought to the jury's attention or whether any outside influence was improperly brought to bear upon any juror. Nor may his affidavit or evidence of any statement by him concerning a matter about which he would be precluded from testifying be received for these purposes.

Pub. L. 93-595, § 1, Jan. 2, 1975, 88 Stat. 1934.

Fed. R. Evid. 614(a):

Rule 614. Calling and Interrogation of Witnesses by Court

(a) *Calling by court*—The court may, on its own motion or at the suggestion of a party, call witnesses, and all parties are entitled to cross-examine witnesses thus called.

Pub. L. 93-595, § 1, Jan. 2, 1975, 88 Stat. 1934.

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