

ZENITH RADIO CORP. *v.* HAZELTINE
RESEARCH, INC., ET AL.

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR
THE SEVENTH CIRCUIT.

No. 49. Argued January 22, 1969.—Decided May 19, 1969.

Upon the expiration in 1959 of petitioner, Zenith's, license agreement with Hazeltine Research, Inc. (HRI), which permitted Zenith to use all of HRI's domestic radio and television patents under HRI's so-called standard package license, Zenith refused to renew, asserting that it no longer required a license. HRI brought a patent infringement suit in November 1959. Zenith's answer alleged invalidity of the patent, noninfringement, patent misuse by HRI, and HRI's unclean hands through conspiracy with foreign patent pools. In May 1963 Zenith counterclaimed against HRI for treble damages and injunctive relief, alleging Sherman Act violations by misuse of HRI patents, including the one in suit, as well as by conspiracy among HRI, its parent Hazeltine Corp. (Hazeltine), and patent pools in Canada, England, and Australia. Zenith contended that the patent pools refused to license the foreign patents, including Hazeltine's, placed within their exclusive licensing authority, to Zenith and others seeking to export American-made radios and television sets into those foreign markets. HRI and Zenith had stipulated before trial that HRI and Hazeltine were to be considered as one entity for purposes of the litigation. Hazeltine was not served with the counterclaim or named as a party, and made no appearance until Zenith proposed that judgment be entered against it, at which time Hazeltine filed a "special appearance." The District Court, sitting without a jury, ruled for Zenith on the infringement action, and on the counterclaim held that (1) HRI had misused its domestic patents by attempting to coerce Zenith's acceptance of a five-year package license and by insisting on extracting royalties from unpatented products, and (2) HRI and Hazeltine conspired with foreign patent pools to exclude Zenith from the Canadian, English, and Australian markets. With respect to patent misuse, judgment was entered for Zenith for treble the actual damages of approximately \$50,000, and injunctive relief given against further misuse. Treble damages for almost \$35,000,000 were awarded Zenith on the conspiracy claim, together with injunctive relief against further par-

ticipation in any arrangement to prevent Zenith from exporting electronic equipment into any foreign market. Relying on the "one entity" stipulation, the court entered the judgments for treble damages and injunctive relief against Hazeltine as well as HRI. The Court of Appeals set aside the judgments against Hazeltine, ruling that the lower court lacked jurisdiction over that company and that the stipulation was an insufficient basis for entering judgment against Hazeltine. On the patent misuse claim, the treble-damage award against HRI was affirmed, but the injunction against further misuse was modified. The conspiracy treble-damage award was reversed, the Court of Appeals holding that Zenith had failed to prove it had in fact been injured during the relevant four-year period preceding the filing of its counterclaim. That court also struck down the injunction against HRI's participation in conspiracies restricting Zenith's foreign trade. *Held:*

1. One is not bound by a judgment *in personam* resulting from litigation in which he is not designated as a party or to which he has not been made a party by service of process. Pp. 108-112.

(a) The judgments against Hazeltine were properly vacated as Hazeltine was not named as a party or served, and did not formally appear at the trial; and the stipulation executed by HRI was not an adequate substitute for the normal means of obtaining jurisdiction over Hazeltine. P. 110.

(b) It was error to enter an injunction against Hazeltine without determining that it was "in active concert or participation" with HRI in a proceeding in which Hazeltine was a party. P. 112.

2. The Court of Appeals erred in setting aside the District Court's decision with respect to the fact of damage in Canada. Pp. 114-125.

(a) The evidence was sufficient to sustain a finding that the Canadian patent pool refused to license imported goods, thus excluding foreign manufacturers like Zenith from the Canadian market for radio and television products. P. 118.

(b) The evidence clearly warrants the inference that the Canadian patent pool's past conduct interfered with and made more difficult the distribution of Zenith products in the relevant 1959-1963 period; and it could rationally be found that Zenith suffered damage during the pertinent period from having a smaller share of the market than it would have had if the pool had never existed. Pp. 118-119.

(c) The evidence is sufficient to support a finding of damage resulting from events occurring after the damage period began. Pp. 119-123.

(d) In applying the clearly erroneous standard of Fed. Rule Civ. Proc. 52 (a) to the findings of a district court sitting without a jury, the appellate court must determine whether "on the entire evidence [it] is left with the definite and firm conviction that a mistake has been committed," and not whether it would have made the same findings the trial court did. P. 123.

(e) Where a treble-damage plaintiff seeks recovery for injuries from a total or partial market exclusion, a court may "conclude as a matter of just and reasonable inference from the proof of defendants' wrongful acts and their tendency to injure plaintiffs' business, and from the evidence of the decline in prices, profits and values, not shown to be attributable to other causes, that defendants' wrongful acts had caused damage to the plaintiffs." *Bigelow v. RKO Radio Pictures, Inc.*, 327 U. S. 251, 264. Pp. 123-124.

(f) The trial court was entitled to infer from the circumstantial evidence that the necessary causal relation between the Canadian patent pool's conduct and the claimed damage existed. Pp. 124-125.

3. The Court of Appeals properly set aside the District Court's judgment with respect to injury to Zenith by the English patent pool, as the only permissible inference from the record is that Zenith did not enter the English television market because it was awaiting a change in the English line-scanning signal and not because of the activities of the patent pool. Pp. 125-128.

4. The Court of Appeals correctly reversed the lower court's damages award with respect to the Australian market as nothing in the record permits the inference that Zenith either intended or was prepared to enter the Australian market during the relevant period. Pp. 128-129.

5. Injunctive relief under § 16 of the Clayton Act is available even though the plaintiff has not suffered actual injury as long as he demonstrates a significant threat of injury from an impending antitrust violation or from a contemporary violation likely to continue or recur. Pp. 129-133.

(a) Injunctive relief against HRI with respect to the Canadian market was wholly proper, as the trial court found that HRI and the Canadian patent pool were conspiring to exclude Zenith

and others from the Canadian market, and there was nothing to indicate that this clear violation of the antitrust laws had terminated or that the threat to Zenith would cease in the foreseeable future. Pp. 131-132.

(b) The injunction which barred HRI from conspiring with others to restrict or prevent Zenith from entering any other foreign markets is also reinstated, in light of HRI's antitrust violation by its conspiring with the Canadian pool, its participation in similar pools in England and Australia, and Zenith's interest in expanding its foreign markets. Pp. 132-133.

6. Conditioning the grant of a patent license upon payment of royalties on products which do not use the teaching of the patent amounts to patent misuse. Pp. 133-140.

(a) If convenience of the parties rather than patent power dictates a percentage-of-total-sales royalty provision there is no misuse of the patents. *Automatic Radio Mfg. Co. v. Hazeltine Research, Inc.*, 339 U. S. 827. Pp. 137-138.

(b) A licensee, who obtains the privilege of using the patent and insurance against infringement suits, must anticipate some minimum charge for the license, enough to insure the patentee against loss in negotiating and administering his monopoly, even if in fact the patent is not used at all, but the patentee's statutory monopoly cannot be used to coerce an agreement to pay a percentage royalty on goods not using the patent. Pp. 139-140.

7. The matter is remanded to the Court of Appeals for it to consider whether the trial court correctly determined that HRI conditioned the grant of licenses upon the payment of royalties on unpatented products, and, if so, whether such misuse embodies the ingredients of a violation of either § 1 or § 2 of the Sherman Act, or whether Zenith was threatened by a violation so as to entitle it to an injunction under § 16 of the Clayton Act. Pp. 140-141.

388 F. 2d 25, affirmed in part, reversed in part, and remanded.

Thomas C. McConnell argued the cause for petitioner. With him on the briefs were *Philip J. Curtis* and *Francis J. McConnell*.

John T. Chadwell and *Victor P. Kayser* argued the cause for respondents. With them on the briefs for respondent Hazeltine Research, Inc., were *C. Lee Cook, Jr.*,

Joseph V. Giffin, M. Hudson Rathburn, and Laurence B. Dodds. With Messrs. Chadwell and Kayser on the brief for Hazeltine Corp. were Messrs. Cook and Giffin.

Solicitor General Griswold, Assistant Attorney General Zimmerman, and Harris Weinstein filed a brief for the United States as *amicus curiae*.

MR. JUSTICE WHITE delivered the opinion of the Court.

Petitioner Zenith Radio Corporation (Zenith) is a Delaware Corporation which for many years has been successfully engaged in the business of manufacturing radio and television sets for sale in the United States and foreign countries. A necessary incident of Zenith's operations has been the acquisition of licenses to use patented devices in the radios and televisions it manufactures, and its transactions have included licensing agreements with respondent Hazeltine Research, Inc. (HRI), an Illinois corporation which owns and licenses domestic patents, principally in the radio and television fields. HRI is the wholly owned subsidiary of respondent Hazeltine Corporation (Hazeltine), a substantially larger and more diversified company that has among its assets numerous foreign patents—including the foreign counterparts of HRI's domestic patents—which it licenses for use in foreign countries.

Until 1959, Zenith had obtained the right to use all HRI domestic patents under HRI's so-called standard package license. In that year, however, with the expiration of Zenith's license imminent, Zenith declined to accept HRI's offer to renew, asserting that it no longer required a license from HRI. Negotiations proceeded to a stalemate, and in November 1959, HRI brought suit in the Northern District of Illinois, claiming that Zenith television sets infringed HRI's patents on a particular automatic control system. Zenith's answer alleged invalidity of the patent asserted and nonin-

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fringement, and further alleged that HRI's claim was unenforceable because of patent misuse as well as unclean hands through conspiracy with foreign patent pools. On May 22, 1963, more than three years after its answer had been filed, Zenith filed a counterclaim against HRI for treble damages and injunctive relief, alleging violations of the Sherman Act by misuse of HRI patents, including the one in suit, as well as by conspiracy among HRI, Hazeltine, and patent pools in Canada, England, and Australia. Zenith contended that these three patent pools had refused to license the patents placed within their exclusive licensing authority, including Hazeltine patents, to Zenith and others seeking to export American-made radios and televisions into those foreign markets.

The District Court, sitting without a jury, ruled for Zenith in the infringement action, 239 F. Supp. 51, 68-69, and its judgment in that respect, which was affirmed by the Court of Appeals, 388 F. 2d 25, 30-33, is not in issue here. On the counterclaim, the District Court ruled, first, that HRI had misused its domestic patents by attempting to coerce Zenith's acceptance of a five-year package license, and by insisting on extracting royalties from unpatented products. 239 F. Supp., at 69-72, 76-77. Judgment was entered in Zenith's favor for treble the amount of its actual damages of approximately \$50,000, and injunctive relief against further patent misuse was awarded. Second, HRI and Hazeltine were found to have conspired with the foreign patent pools to exclude Zenith from the Canadian, English, and Australian markets. Hazeltine had granted the pools the exclusive right to license Hazeltine patents in their respective countries and had shared in the pools' profits, knowing that each pool refused to license its patents for importation and that each enforced its ban on imports with threats of infringement suits. HRI, along with its coconspirator, Hazeltine, was therefore held to have conspired

with the pools to restrain the trade or commerce of the United States, in violation of § 1 of the Sherman Act, 26 Stat. 209, as amended, 15 U. S. C. § 1, and was liable for injury caused Zenith's foreign business by the operation of the pools. 239 F. Supp., at 77-78. Total damages with respect to the three markets, when trebled, amounted to nearly \$35,000,000.¹ Judgment in this

¹ In its initial findings, handed down on January 25, 1965, 239 F. Supp., at 76, the District Court concluded that Zenith had suffered actual damages of \$16,238,872 as a result of the restraints imposed by the three pools upon Zenith's export business during the four-year damage period:

Canada:	
Television	\$5,826,896
Radio	470,495
England:	
Television	8,079,859
Radio	1,169,067
Australia:	
Television	625,786
Radio	66,769
Total	16,238,872

On April 5, 1965, the District Court entered partial judgment, awarding Zenith treble damages for patent misuse and treble damages with respect to Canada, but reserving jurisdiction for further hearings on damages in the English and Australian markets. The further proceedings were held in October and November 1965, after which the District Court amended its findings on damages for England and Australia:

England:	
Television	\$4,312,924
Radio	745,102
Australia:	
Television	223,508
Radio	24,952
Total	5,306,486

These revisions reflect the proof submitted at the further proceedings, showing that government embargoes in England and Australia, in

amount was awarded Zenith, along with injunctive relief against further participation in any arrangement to prevent Zenith from exporting electronic equipment into any foreign market.

Relying upon its finding that HRI and Zenith had stipulated before trial that HRI and Hazeltine were to be considered as one entity for purposes of the litigation, see 239 F. Supp., at 69, the court entered judgments for treble damages and injunctive relief, both with respect to patent misuse and conspiracy, against Hazeltine as well as against the named counter-defendant, HRI.

On appeal by HRI and Hazeltine, the Court of Appeals set aside entirely the judgments for damages and injunctive relief entered against Hazeltine, ruling that the District Court lacked jurisdiction over that company and that the stipulation relied upon by the District Court was an insufficient basis for entering judgment against Hazeltine. 388 F. 2d, at 28-30. With respect to Zenith's patent misuse claim, the Court of Appeals affirmed the treble-damage award against HRI, but modified in certain respects the District Court's injunction against further misuse. 388 F. 2d, at 33-35, 39.

The Court of Appeals also reversed the treble-damage award for conspiracy to restrain Zenith's export trade. Without reaching any of the other issues presented by the appeal on this phase of the case, the court held that Zenith had failed to sustain its burden under § 4 of the

effect until 1959 and 1960 respectively, precluded entry by Zenith into the English and Australian markets. The District Court found, with respect to England, that because of the embargoes, Zenith's damages were zero for the first year of the damage period, 50% of the figure initially accepted by the court for the second year, 75% for the third, and 100% for the fourth. With respect to Australia, the District Court adopted a similar 0-50-75-100% revision of the original figures used by the court in computing the damage findings of January 25, 1965.

Clayton Act, 38 Stat. 731, 15 U. S. C. § 15, to prove the fact of damage—injury to its business—within the relevant four-year period preceding May 22, 1963, the date Zenith's counterclaim was filed.² Finally, the Court of Appeals struck the injunction against HRI's participation in conspiracies restricting Zenith's trade in foreign markets.

We granted certiorari, 391 U. S. 933, to consider among other things the question whether the Court of Appeals properly discharged its appellate function under Rule 52 (a) of the Federal Rules of Civil Procedure, which specifies that the findings of fact made by a District Court sitting without a jury are not to be set aside unless "clearly erroneous."

I. THE JUDGMENTS AGAINST HAZELTINE.

The named plaintiff in the patent infringement complaint which began this litigation was HRI, not its parent, Hazeltine; Zenith's counterclaim named only HRI as the "counter-defendant," identifying HRI and Hazeltine as "counter-defendant and its parent." After Zenith had filed its answer and had delivered a draft of its counterclaim to HRI's attorneys—both the answer and the counterclaim alleging that HRI had unlawfully conspired with Hazeltine and foreign patent pools—HRI and Zenith

² The record discloses that Zenith, HRI, and the courts below all considered the damage period to be the four years prior to the date on which Zenith filed its counterclaim. No argument was made that the counterclaim, in whole or in part, related back to an earlier pleading, thereby expanding the damage period to include years prior to 1959. Cf. *Bull v. United States*, 295 U. S. 247, 262 and n. 10 (1935); *Cold Metal Process Co. v. E. W. Bliss Co.*, 285 F. 2d 231 (C. A. 6th Cir. 1960), cert. denied, 366 U. S. 911 (1961). Cf. Fed. Rule Civ. Proc. 15 (c) (amended pleading relates back to date of original pleading if the "claim or defense asserted in the amended pleading arose out of the conduct, transaction, or occurrence set forth or attempted to be set forth in the original pleading").

stipulated that "for purposes of this litigation Plaintiff and its parent Hazeltine Corporation will be considered to be one and the same company."

On May 22, 1963, two weeks after the stipulation had been signed, Zenith filed its counterclaim, seeking money damages from HRI and an injunction against HRI and those "in privity" with it. Hazeltine was not served with the counterclaim and was not named as a party, although it was alleged to be a coconspirator with HRI and the foreign patent pools. Hazeltine made no appearance in the litigation until Zenith proposed that judgment be entered against it, at which time Hazeltine filed a "special appearance." Insofar as the record reveals, Hazeltine did not formally participate in the proceedings until after the District Court had entered its initial findings of fact and conclusions of law. On April 5, 1965, after Hazeltine's special appearance, the trial judge entered judgment against Hazeltine as well as HRI, thereby rejecting Hazeltine's objection that the court was without jurisdiction over it. Apparently, the trial court based its decision on the pretrial stipulation³ and its earlier finding that:

"The parties stipulated that for the purposes of this litigation Hazeltine Research, Inc. and its parent,

³ During the proceedings before the District Court on April 2, 1965, the trial judge noted: "Well, of course, Hazeltine Corporation wasn't a party to the lawsuit." The court's reliance upon the stipulation as a basis for its decision to enter judgment against Hazeltine as well as HRI is reflected by the interchanges between the court and counsel for Hazeltine during those proceedings. An example is the following:

"Mr. Kayser [counsel for Hazeltine]: . . . Could anyone really believe for a minute that if he had any thought of bringing the parent into this lawsuit that he would not have named them and that he would be relying on this stipulation which was intended to simplify and expedite the trial? Would any lawyer who has been practicing for two years expect to hold somebody liable on a judg-

Hazeltine Corporation, would be considered as one entity operating as a patent holding and licensing company, engaged in the exploitation of patent rights in the electronics industry in the United States and in foreign countries." 239 F.Supp., at 69.

The Court of Appeals was quite right in vacating the judgments against Hazeltine. It is elementary that one is not bound by a judgment *in personam* resulting from litigation in which he is not designated as a party or to which he has not been made a party by service of process. *Hansberry v. Lee*, 311 U. S. 32, 40-41 (1940). The consistent constitutional rule has been that a court has no power to adjudicate a personal claim or obligation unless it has jurisdiction over the person of the defendant. *E. g.*, *Pennoyer v. Neff*, 95 U. S. 714 (1878); *Vanderbilt v. Vanderbilt*, 354 U. S. 416, 418 (1957).

Here, Hazeltine was not named as a party, was never served and did not formally appear at the trial. Nor was the stipulation an adequate substitute for the normal methods of obtaining jurisdiction over a person or a corporation. The stipulation represented HRI's agreement to be bound by and to be liable for the acts of its parent, but it was signed only by HRI, through its attorney, Dodds. Hazeltine did not execute the stipulation, and Dodds, although an officer of Hazeltine, did not purport to be signing on its behalf. The trial court apparently viewed the stipulation as binding Hazeltine, as equivalent to an entry of appearance, or as consent to entry of judgment against it. The stipulation on its face, however, hardly warrants this construction, and if there were other circumstances which justified the trial court's conclusion, the findings do not reveal them.

ment when he didn't even name them? He relied on some pretrial stipulation.

"The Court: You mean that pretrial stipulations are worthless?"

Perhaps Zenith could have proved and the trial court might have found that HRI and Hazeltine were *alter egos*; but absent jurisdiction over Hazeltine, that determination would bind only HRI. If the *alter ego* issue had been litigated, and if the trial court had decided that HRI and Hazeltine were one and the same entity and that jurisdiction over HRI gave the court jurisdiction over Hazeltine, perhaps Hazeltine's appearance before judgment with full opportunity to contest jurisdiction would warrant entry of judgment against it. But that is not what occurred here. The trial court's judgment against Hazeltine was based wholly on HRI's stipulation. HRI may have executed the stipulation to avoid litigating the *alter ego* issue,⁴ but this fact cannot foreclose Hazeltine, which has never had its day in court on the question of whether it and its subsidiary should be considered the same entity for purposes of this litigation.

Likewise, were it shown that Hazeltine through its officer, Dodds, in fact controlled the litigation on behalf of HRI, and if the claim were made that the judgment against HRI would be *res judicata* against Hazeltine because of this control, that claim itself could be finally adjudicated against Hazeltine only in a court with jurisdiction over that company.⁵ See *G. & C. Merriam Co.*

⁴ There is some indication that the genesis of the stipulation was a pretrial conference, when a question was raised as to whether or not a subpoena served upon HRI could reach certain records of Hazeltine relating to the latter's foreign patents. Hazeltine, of course, argues that the stipulation's only purpose and effect were to facilitate discovery and trial by obviating the necessity of litigating whether or not Zenith could "pierce the corporate veil" between HRI and its parent.

⁵ In its brief in this Court, Zenith seems to argue that Hazeltine is estopped to deny that it is bound by the stipulation. Not only was HRI's counsel, Dodds, an officer of Hazeltine, but also Ruestow and Westermann, Hazeltine's general patent counsel and general

v. *Saalfeld*, 241 U. S. 22 (1916); *Schnell v. Peter Eckrich & Sons, Inc.*, 365 U. S. 260 (1961).

Neither the judgment for damages nor the injunction against Hazeltine was proper. Although injunctions issued by federal courts bind not only the parties defendant in a suit, but also those persons "in active concert or participation with them who receive actual notice of the order by personal service or otherwise," Fed. Rule Civ. Proc. 65 (d), a nonparty with notice cannot be held in contempt until shown to be in concert or participation. It was error to enter the injunction against Hazeltine, without having made this determination in a proceeding to which Hazeltine was a party.⁶

counsel, were present during trial and failed to "repudiate" the construction allegedly given the stipulation by the parties at trial to the effect that it bound Hazeltine to any adjudication on the counterclaim. We find this theory untenable on the record of this case, for the references during trial to the stipulation are equally consistent with the interpretation advanced by Hazeltine that the stipulation merely eliminated the necessity for Zenith to perform the time-consuming task of piercing the corporate veil in proving its counterclaim against HRI. Also, Ruestow and Westermann were called as witnesses during trial, and assuming they were present throughout the trial—a fact which is neither proved nor disproved by the record—their failure to repudiate Zenith's proposed construction of the stipulation is entirely consistent with the proposition that they were present only as witnesses, and not as authorized representatives for a person who might be bound by the litigation.

⁶ Just as the *alter ego* issue was not litigated after Hazeltine had made its special appearance and while it had an opportunity to be heard, see *supra*, at 111, so the District Court evidently did not rely upon anything more than the stipulation as a basis for entering the injunction against Hazeltine as well as HRI. The record does not support the contention, implicit in Zenith's brief, that when Hazeltine appeared to contest jurisdiction it was found by the District Court to be "in active concert or participation" with HRI and that, by entering its special appearance, Hazeltine consented to be bound by such a finding. See generally Dobbs, *The Validation of Void Judgments: The Bootstrap Principle* (pts. 1 and 2), 53 Va. L. Rev. 1003, 1241 (1967).

II. THE FOREIGN PATENT POOLS.

A. *The Treble-Damage Award.*

HRI's major points in the Court of Appeals were that no injury to Zenith's business during the damage period had been proved; that if Zenith had suffered injury, it resulted wholly or partly from conduct prior to May 22, 1959, and to this extent was barred by the statute of limitations and by Zenith's 1957 settlement of certain antitrust litigation against RCA, General Electric, and Western Electric, which had the effect of releasing HRI from all liability for pre-settlement acts of the foreign patent pools;⁷ that the Hazeltine companies had not illegally conspired with foreign pools; and that the damage award was excessive. Passing the other issues pressed by HRI, including the limitations defense, the Court of Appeals held that Zenith had failed to prove any injury to its export business during the damage period which resulted from pool activities either before or after the beginning of the damage period, and that the District Court's finding to the contrary was clearly erroneous.⁸

⁷ Although HRI and Hazeltine were not parties to this prior litigation and did not enter the settlement agreement, HRI urged that all joint tortfeasors, including HRI and Hazeltine, were released from liability for injuries flowing from the pre-settlement acts of the pools. The 1957 release appears to be relevant only to Zenith's claim for injury to its Canadian trade; the embargoes in England and Australia were thought by the District Court to preclude any injury from acts of the English and Australian pools, and the embargoes were not lifted until well after the settlement was executed.

⁸ The Court of Appeals did not disturb, nor do we, the findings of the District Court that HRI and Hazeltine conspired with the Canadian pool to deny patent licenses to companies seeking to export American-made goods to Canada. Accepting these findings, we have no doubt that the Sherman Act was violated. See, e. g., *Timken Roller Bearing Co. v. United States*, 341 U. S. 593, 599

We have concluded that the Court of Appeals erred in setting aside the District Court's decision with respect to the fact of damage in Canada. Zenith's evidence, although by no means conclusive, was sufficient to sustain the inference that Zenith had in fact been injured to some extent⁹ by the Canadian pool's restraints upon imports of radio and television sets. On the other hand, we agree with the Court of Appeals that the District Court erred as to the English and Australian markets.

1. *The Canadian Pool.*

The findings of the District Court with respect to the operations of the Canadian pool may be briefly summarized. The Canadian patent pool, Canadian Radio Patents, Ltd. (CRPL), was formed in 1926 by the General Electric Company of the United States through its subsidiary, Canadian General Electric Company, and

(1951); *Continental Ore Co. v. Union Carbide & Carbon Corp.*, 370 U. S. 690, 704 (1962). Once Zenith demonstrated that its exports from the United States had been restrained by pool activities, the treble-damage liability of the domestic company participating in the conspiracy was beyond question. *Continental Ore Co. v. Union Carbide & Carbon Corp.*, *supra*. Cf. *American Banana Co. v. United Fruit Co.*, 213 U. S. 347 (1909); *United States v. Aluminum Co. of America*, 148 F. 2d 416, 443 (C. A. 2d Cir. 1945). Although patent rights are here involved, the same conclusions follow. See, for example, *United States v. Line Material Co.*, 333 U. S. 287, 305-315 (1948); *United States v. Singer Mfg. Co.*, 374 U. S. 174, 196-197 (1963).

⁹ Zenith's burden of proving the fact of damage under § 4 of the Clayton Act is satisfied by its proof of *some* damage flowing from the unlawful conspiracy; inquiry beyond this minimum point goes only to the amount and not the fact of damage. It is enough that the illegality is shown to be a material cause of the injury; a plaintiff need not exhaust all possible alternative sources of injury in fulfilling his burden of proving compensable injury under § 4. *Continental Ore Co. v. Union Carbide & Carbon Corp.*, *supra*, at 702 (1962); *Perma Life Mufflers, Inc. v. International Parts Corp.*, 392 U. S. 134, 143-144 (1968) (concurring opinion).

by Westinghouse through its Canadian subsidiary. The pool was made up largely of Canadian manufacturers, most of which were subsidiaries of American companies. The pool for many years had the exclusive right to sublicense the patents of its member companies and also those of Hazeltine and a number of other foreign concerns. About 5,000 patents were available to the pool for licensing, and only package licenses were granted, covering all patents in the pool and strictly limited to manufacture in Canada. No license to importers was available. The chief purpose of the pool was to protect the manufacturing members and licensees from competition by American and other foreign companies seeking to export their products into Canada.

CRPL's efforts to prevent importation of radio and television sets from the United States were highly organized and effective. Agents, investigators, and manufacturer and distributor trade associations systematically policed the market; warning notices and advertisements advised distributors, dealers, and even consumers against selling or using unlicensed equipment. Infringement suits or threats thereof were regularly and effectively employed to dissuade dealers from handling American-made sets.

For many years Zenith attempted to establish distribution in Canada, but distributors were warned off by the pool, and Zenith's efforts to secure a license for American-made goods were unsuccessful. Zenith then brought an antitrust suit against RCA, General Electric, and Western Electric.¹⁰ This litigation was favorably settled, Zenith receiving, among other things, worldwide licenses on patents owned by the named defendants.

¹⁰ Zenith's antitrust claim was asserted as a counterclaim in a patent infringement suit brought by RCA against Zenith and its subsidiary, the Rauland Corporation.

Armed with these and other licenses, Zenith in 1958 began exporting radio and television products to Canada. It was promptly informed by CRPL that to continue business in Canada, Zenith would be required to sign CRPL's standard license, which did not permit importation, and that to sell in Canada it must manufacture there. Zenith was notified at the time that it was infringing at least one of Hazeltine's patents which had been placed with CRPL for licensing in Canada. Soon after this demand by CRPL, HRI began its infringement suit against Zenith.

Some of the trial court's findings describing the operations of the Canadian pool and its "drastic" impact upon Zenith's foreign commerce did not date the events or state whether they had occurred before or after May 22, 1959. The damage award was confined to injuries sustained during the statutory period, but the trial court apparently deemed it immaterial whether the damage-causing acts occurred before or after the start of the damage period. Damages were awarded on the assumption that Zenith, absent the conspiracy, would have had 16% of the Canadian television market on May 22, 1959, and throughout the damage period rather than its actual 3% share.¹¹ Since the failure to have 16% of the market on the first day of the damage period was ascribed to pool operations, those operations must have occurred prior to May 22, 1959. Some part of the damages

¹¹ The computation of damages, prepared by Zenith's experts and accepted by the District Court, see 239 F. Supp., at 76, reflects a comparison between Zenith's percentage share of the United States television market, ranging from 15.6% in 1959 to 21.7% in 1963, and Zenith's actual share of the Canadian market during the same period, ranging from 3.1% in 1959 to 5.2% in 1961 and down to 3.2% in 1963. Although we discuss only the measure of damages utilized for computing Zenith's injury in the Canadian television market, a comparable method was employed to determine Zenith's lost radio sales.

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awarded, therefore, necessarily resulted from pre-damage period conduct.¹²

The Court of Appeals reversed the District Court because it considered the evidence insufficient to prove the fact of any damage to Zenith after May 22, 1959. Having put aside HRI's statute of limitations defense, belatedly raised in the District Court and pressed in the Court of Appeals,¹³ the import of the court's decision

¹² On November 22, 1965, during the further proceedings held to consider damages for England and Australia, Zenith's executive vice-president and treasurer, Kaplan, testified:

"In Canada, our assumption was that we commenced the period starting June 1, 1959 as if we had a full blown organization, and had enjoyed the benefits of doing business there for years prior to that date."

¹³ HRI's answer to Zenith's counterclaim did not plead a statute of limitations defense. However, in the course of proceedings after entry of the District Court's initial findings of fact and conclusions of law, but before judgment, the trial court granted the oral motion of HRI's new counsel for "leave to file" defenses based on the statute of limitations and on the release given by Zenith pursuant to the 1957 settlement agreement. The thrust of the former was primarily that the findings as to Canada had erroneously included damages resulting from conduct occurring prior to May 22, 1959. The trial court, without further mention of these defenses, forthwith refused to set aside or amend the damage award as to Canada, thus either rejecting the statute of limitations defense or considering it to have been waived under Fed. Rule Civ. Proc. 12 (h), as urged by Zenith in both the District Court and the Court of Appeals.

Zenith itself had requested damages only for the four-year period prior to the filing of its counterclaim, and the findings of the District Court expressly limited the damages awarded to those occurring "during the 4-year statutory damage period." 239 F. Supp., at 76. The Court of Appeals, although not purporting to pass on the statute of limitations defense, referred to the "four year damage period" and identified it as "[f]our years prior to the May 22, 1963, filing date of Zenith's counterclaim. 15 U. S. C. Sec. 15b." 388 F. 2d, at 35 and n. 4. The parties have not argued the matter here, and we make no further effort to penetrate the confusion surrounding this issue or to deal with the question of whether damage period injury from pre-damage period conduct is recoverable where an unwaived statute of limitations defense is properly asserted.

was that Zenith had not been damaged after May 22, 1959, by any act of the pool, whether occurring before or after that date. The Court of Appeals' overriding judgment—as it had to be if its no-injury rationale were to meet claims of damage period injury from pre-damage period conduct—was that Zenith would have done no more business in Canada after May 22, 1959, had the patent pool never operated in that country.

The Court of Appeals was clearly in error. The evidence was quite sufficient to sustain a finding that competing business concerns and patentees joined together to pool their Canadian patents, granting only package licenses and refusing to license imported goods. Their clear purpose was to exclude concerns like Zenith from the Canadian market unless willing to manufacture there. Zenith, consequently, was never able to obtain a license. This fact and the pool's vigorous campaign to discourage importers, distributors, dealers, and consumers from selling, handling, or using unlicensed foreign merchandise effectively prevented Zenith from making any headway in the Canadian market until after the 1957 settlement with RCA and its co-defendants. And even in 1958, when Zenith undertook in earnest to establish its distribution system in Canada and to market its merchandise, Zenith was met with further pool advertisements threatening action against imported goods and further notifications, continuing past May 22, 1959, that its products were infringing pool patents and that no license was available unless Zenith manufactured in Canada.

This evidence clearly warrants the inference that CRPL's past conduct interfered with and made more difficult the distribution of Zenith products in 1959 and later years. The District Court could reasonably conclude that the cumulative effects of the pool's campaign against imported goods had consequences lasting well into the damage period. It could also rationally

be found from the evidence that Zenith, beginning in 1958, could not have reached its maximum potential by May 22, 1959, that the pool had effectively prevented an earlier beginning, and that Zenith therefore suffered damage during the damage period from having a smaller share of the market than it would have had if the pool had never existed.

We also conclude that the record evidence is sufficient to support a finding of damage resulting from events occurring after the beginning of the damage period. We need not merely assume that the Canadian pool continued throughout the period of this suit, as we are entitled to do in the absence of clear evidence of its termination. See, e. g., *Local 167 v. United States*, 291 U. S. 293, 297-298 (1934); *United States v. Oregon State Medical Society*, 343 U. S. 326, 333 (1952). HRI frankly conceded the continuation of the pool before the District Court,¹⁴ and it appears sufficiently clear that throughout this time Zenith was deprived of what had always been refused it—a license on pool patents permitting it to sell American-made merchandise in Canada.

On May 12, 1959, the pool manager conferred with Zenith's vice president, informing him that Zenith was infringing pool patents and would require a license,

¹⁴ On April 1, 1965, during the further proceedings held by the District Court before judgment, counsel for HRI stated:

"Now, what [counsel for Zenith] is really trying to sell this court is the idea that if he can show that these pools continued after 1957 and, as he defines the pools, yes, yes, they did. There is no question about it, that these arrangements in relation to patents—that characterized necessarily as he characterizes them, but that these arrangements have continued and, so far as I know, are in existence today. There is no question about that."

HRI does contend, however, that the ties between the Canadian pool and the Hazeltine companies were broken in December 1965, when Hazeltine secured an early termination of its licensing agreement with CRPL. See n. 25, *infra*.

but that licenses were granted only for local manufacture. This was followed on June 5, 1959, by a letter stating without reservation that Zenith receivers were infringing, and enclosing the pool's standard license form. This was nothing more nor less than a demand during the damage period that Zenith either manufacture in Canada and take the standard package license or cease its activities in that country.¹⁵ There is no evidence that the pool ever retreated from that position during the next four years.

Zenith thus continued to operate without a patent license unburdened by conspiratorial conduct and granted on terms which would satisfy the antitrust laws. This deprivation in itself necessarily had an impact on Zenith and constituted an injury to its business. We find singularly unpersuasive the argument that Zenith was as well off without a license as with one. This is little more than an assertion that pool licenses, from which CRPL and its participants enjoyed substantial income, were without value. Without the license, doing business in Canada obviously involved weighty risks for Zenith itself, besides requiring it to convince the trade that it could legally and effectively do business without clearance from CRPL.¹⁶

¹⁵ That Zenith failed to make a formal request for a CRPL license during the damage period can properly be attributed to Zenith's recognition that such a request would have been futile. The pool had made its position entirely clear, and under these circumstances the absence of a formal request is not fatal to Zenith's case. See *Continental Ore Co. v. Union Carbide & Carbon Corp.*, 370 U. S. 690, 699-702 (1962); *Hanover Shoe, Inc. v. United Shoe Machinery Corp.*, 392 U. S. 481, 487, n. 5 (1968).

¹⁶ In 1960, the Report of the Royal Commission on Patents, Copyright and Industrial Designs was published. This Report described the magnitude of the risk taken by Zenith and its distributors in selling imported products in Canada:

"The portfolio in respect of which CRPL had the right to grant licences consisted of 5,000 patents, and in the absence of a licence

Of course, Zenith determined to take these risks, serious as they were. Although HRI brought the instant litigation claiming infringement of an HRI domestic patent, the foreign counterpart of which had been made available to the Canadian pool by Hazeltine, Zenith persevered in its Canadian efforts. The claim is now pressed, and the Court of Appeals held, that the pool bothered neither Zenith nor its distributors after mid-1959 and that Zenith ran the gantlet so successfully that not having a license made no difference whatsoever.

It is true that the record discloses no specific instance of subsequent infringement suits or threats against Zenith's existing or potential distributors or dealers. But there is evidence that the pool was not dormant after May 1959. The record contains a letter from the pool to a distributor of Motorola products containing clear warnings against handling unlicensed, imported merchandise.¹⁷ More significant, the fair import of the testi-

from CRPL it is doubtful if anyone could sell in Canada a radio or television receiver.

"CRPL indicated that it does not grant a licence to any importer of radio or television receivers It is particularly in respect of the policy of CRPL in precluding importers from bringing into Canada radio and television receivers that the complaint was made to this Commission.

"It was stated to be the policy of CRPL to enforce its patent rights against any person who sells in Canada an imported radio or television receiver which infringes any one or more of the patents in its portfolio"

¹⁷ This letter, brought to Zenith's attention by an ex-Zenith dealer, warned the Motorola dealer that his importation of American-made television sets and FM radios probably infringed pool patents. The dealer not only was cautioned that CRPL remained willing to litigate infringements, describing two recent and successful suits, but also was reminded of CRPL's policy against licensing imports:

"In closing, I wish to inform you that we would be most happy to issue a license to you to make or have made in Canada any equipment coming within the ambit of our patents."

mony by Zenith officers was that the pool remained active during the damage period and prevented Zenith from establishing an effective distribution system throughout Canada. Zenith was able to obtain independent distributors in the Western Provinces, but it was unable to do so in the Central and the Maritime Provinces, where it necessarily relied on its own subsidiaries for distribution. These officers, experienced businessmen, also testified to the similarities between the Canadian and American markets, attributing Zenith's much poorer Canadian performance to the discouraging and repressive effects of the pool. The Court of Appeals did not refuse to credit this testimony, as HRI insists we should do,¹⁸ but accepting it as some evidence of damage, considered it of insufficient weight to prove injury to Zenith's business. In this respect the Court of Appeals both gave insufficient deference to the findings of the trial judge

¹⁸ HRI urges that the trial testimony as to Canada of each of two Zenith officers, Wright and Kaplan, was inconsistent with his own testimony on recall, inconsistent with the testimony of the other, and inconsistent with documentary evidence, and that we should therefore disregard their testimony. It is true that the trial judge's views as to credibility are not completely impervious, but Rule 52 (a) admonishes due regard for the trial court's opportunity to assess the credibility of witnesses. The Court of Appeals clearly took into account this evidence, and we see no adequate basis in the record for refusing to accept the testimony of the two Zenith officers as probative evidence. See *United States v. United Shoe Machinery Co.*, 247 U. S. 32, 37-38 (1918); *Walling v. General Industries Co.*, 330 U. S. 545, 550 (1947); *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U. S. 605, 609-612 (1950); *United States v. Oregon State Medical Society*, 343 U. S. 326, 332 (1952); *Orvis v. Higgins*, 180 F. 2d 537, 539-540 (C. A. 2d Cir.), cert. denied, 340 U. S. 810 (1950); *Ruth v. Utah Construction & Mining Co.*, 344 F. 2d 952 (C. A. 10th Cir. 1965). HRI relies heavily in this respect on Zenith's annual reports for the years 1957-1962, but aside from the fact that these reports, except for 1962, were never admitted into evidence, we find them quite insufficient to undermine the credibility of Wright and Kaplan.

and failed to adhere to the teachings of *Bigelow v. RKO Radio Pictures, Inc.*, 327 U. S. 251 (1946), and other cases dealing with the standard of proof in treble-damage actions.

In applying the clearly erroneous standard to the findings of a district court sitting without a jury, appellate courts must constantly have in mind that their function is not to decide factual issues *de novo*. The authority of an appellate court, when reviewing the findings of a judge as well as those of a jury, is circumscribed by the deference it must give to decisions of the trier of the fact, who is usually in a superior position to appraise and weigh the evidence. The question for the appellate court under Rule 52 (a) is not whether it would have made the findings the trial court did, but whether "on the entire evidence [it] is left with the definite and firm conviction that a mistake has been committed." *United States v. United States Gypsum Co.*, 333 U. S. 364, 395 (1948). See also *United States v. National Assn. of Real Estate Boards*, 339 U. S. 485, 495-496 (1950); *Commissioner v. Duberstein*, 363 U. S. 278, 289-291 (1960).

Trial and appellate courts alike must also observe the practical limits of the burden of proof which may be demanded of a treble-damage plaintiff who seeks recovery for injuries from a partial or total exclusion from a market; damage issues in these cases are rarely susceptible of the kind of concrete, detailed proof of injury which is available in other contexts. The Court has repeatedly held that in the absence of more precise proof, the factfinder may "conclude as a matter of just and reasonable inference from the proof of defendants' wrongful acts and their tendency to injure plaintiffs' business, and from the evidence of the decline in prices, profits and values, not shown to be attributable to other causes, that defendants' wrongful acts had caused damage

to the plaintiffs." *Bigelow v. RKO Pictures, Inc.*, *supra*, at 264. See also *Eastman Kodak Co. v. Southern Photo Materials Co.*, 273 U. S. 359, 377-379 (1927); *Story Parchment Co. v. Paterson Parchment Paper Co.*, 282 U. S. 555, 561-566 (1931).

In *Bigelow*, a treble-damage plaintiff claimed injury from a conspiracy among film distributors to deny him first-run pictures. He offered evidence comparing his profits with those of a competing theater granted first-run showings and also measuring his current profits against those earned when first-run films had been available to him. This Court, reversing the Court of Appeals, found the evidence sufficient to sustain an award of damages. Although the factfinder is not entitled to base a judgment on speculation or guesswork,

"the jury may make a just and reasonable estimate of the damage based on relevant data, and render its verdict accordingly. In such circumstances, 'juries are allowed to act upon probable and inferential, as well as direct and positive proof.' *Story Parchment Co. v. Paterson Co.*, *supra*, 561-4; *Eastman Kodak Co. v. Southern Photo Co.*, *supra*, 377-9. Any other rule would enable the wrongdoer to profit by his wrongdoing at the expense of his victim. It would be an inducement to make wrongdoing so effective and complete in every case as to preclude any recovery, by rendering the measure of damages uncertain. Failure to apply it would mean that the more grievous the wrong done, the less likelihood there would be of a recovery." 327 U. S., at 264-265.

Here, Zenith was denied a valuable license and submitted testimony that without the license it had encountered distribution difficulties which prevented its securing a share of the market comparable to that which

it enjoyed in the United States, and which its business proficiency, demonstrated in the United States, dictated it should have obtained in Canada. CRPL was an established organization with a long history of successfully excluding imported merchandise; and in view of its continued existence during the damage period, the injury alleged by Zenith was precisely the type of loss that the claimed violations of the antitrust laws would be likely to cause. The trial court was entitled to infer from this circumstantial evidence that the necessary causal relation between the pool's conduct and the claimed damage existed. See *Continental Ore Co. v. Union Carbide & Carbon Corp.*, 370 U. S. 690, 696-701 (1962).

2. *The English Pool.*

Hazeltine patents were made available to the English pool in 1930. The pool issued only package licenses, restricted to local manufacture. Although pool radio patents had expired prior to the beginning of the damage period, the trial court found, and we assume, that the pool held television patents which would not be licensed for television sets made in the United States.¹⁹ Zenith was interested in the English market and made exclusive arrangements with one distributor desiring to handle its merchandise. At no time during or before the damage period, however, did Zenith make available or offer for sale a substantial number of television sets suitable for the English market or make any other serious efforts to

¹⁹ Wright testified that in mid-1955 a representative of the English pool had confirmed his understanding that "the policy of the Pool . . . required that [radio and television] sets be made in England, and that nothing would be licensed if it was imported from abroad." Wright further testified that the pool representative "saw no possibility" that this restrictive policy would be changed in the future. Subsequently, during its dealings with its English radio distributor, Zenith was "given to understand that television was just out of the question."

enter that market. It attained no appreciable position in the English television market.

Having initially found the patent pool responsible over the years for Zenith's failure to participate in the English market, the trial court, after further proceedings, held that a government embargo, not the patent pool, was the sole reason for Zenith's not entering the English market prior to the beginning of the damage period in 1959; until then, the District Court found, the pool "[was] not called upon to exercise the type of conduct that [it] exercised in Canada." It did not, however, retreat from its conclusion that restraints imposed by the pool had foreclosed Zenith during the damage period.²⁰ In this respect we agree with the Court of Appeals that the trial court clearly erred. Based on our own examination of the record, we are convinced that even with the ending of the embargo in mid-1959, Zenith faced other obstacles which effectively discouraged its entry into the English market and for which the pool was not responsible.

Positing that Zenith could not get a license from the English pool and that it did not enter the British market before or during the damage period, the issue is whether, once the embargo was lifted, Zenith wanted and intended to enter, had the capacity to do so, and was prevented from entering by its inability to secure a patent license and by other operations of the English patent pool. Section 4 of the Clayton Act required that Zenith show an injury to its "business or property by reason of anything forbidden in the antitrust laws." If Zenith's failure to enter the English market was attributable to its lack of desire, its limited production capabilities, or to other

²⁰ Because the embargo precluded any recovery by Zenith for the first year of the damage period, the trial court modified its initial measure of damages to reflect the time it would have taken Zenith, starting with the removal of the embargo, to build up its market share. See n. 1, *supra*.

factors independent of HRI's unlawful conduct, Zenith would not have met its burden under § 4.²¹

Zenith was interested in the English market; this much is clear. But its standard domestic television set was manufactured to operate on 525- and 625-line-per-second scanning signals, whereas the 405-line signal was standard in England until after the damage period. Similarly, while FM transmission was utilized in the United States for the audio portion, AM signals were used in England. Zenith's regular product thus was not salable in the English market. To succeed at all, Zenith had either to produce a differently equipped set or to provide for the mass conversion of its standard receivers. Unquestionably, the company had the facilities and the ability to follow either course. But it is equally clear that it pursued neither.²² A change in the standard British broadcast to include a 625-line signal was under

²¹ See *American Banana Co. v. United Fruit Co.* 166 F. 261, 264 (C. A. 2d Cir. 1908), affirmed without specific reference to this issue, 213 U. S. 347 (1909); *Stearns v. Tinker & Rasor*, 252 F. 2d 589, 606 (C. A. 9th Cir. 1958); *Volasco Products Co. v. Lloyd A. Fry Roofing Co.*, 308 F. 2d 383, 395-396 (C. A. 6th Cir. 1962), cert. denied, 372 U. S. 907 (1963). Cf. *Pennsylvania Sugar Rfg. Co. v. American Sugar Rfg. Co.*, 166 F. 254, 260 (C. A. 2d Cir. 1908).

²² During trial, Wright and Kaplan testified that adjustments could be made by Zenith's English distributor in his shop to adapt Zenith television sets to the English transmission system. However, the fair import of their testimony, both during trial and in November 1965 on recall, was that conversion of Zenith sets to the English system, whether done before shipment to England or in the distributor's shop, had in fact been carried out only occasionally in the past and was of questionable utility on a commercial basis. Wright and Kaplan stated that Zenith could have manufactured a television set suitable for English use without appreciably more difficulty than Zenith faced in producing a new model for the American market, but the record does not indicate that Zenith took any steps in this direction before the end of the damage period, except in anticipation of the British changeover to the 625-line-per-second transmission system.

consideration, even imminent, during the damage period. Zenith's merchandise would in any event have sold at prices substantially higher than those prevailing in the English market; tariffs and freight costs tended to widen the differential. Producing a new set for the English market, or modifying existent models on a large-scale basis, would have involved substantial costs.

Based on the evidence before us, including the correspondence between Zenith and its British representative, we think the Court of Appeals correctly rejected the inference that "Zenith intended to and was prepared to enter the English television market during the damage period," and correctly concluded that Zenith was in fact "waiting for a change in English standards to a 625-line system." 388 F. 2d, at 37. It clearly emerges from the evidence that Zenith had every intention to promote the sale of its television sets if and when the signal change occurred. Given that event, neither the absence of a pool license nor pool threats against it or its customers would have deterred Zenith from a major effort to penetrate the British market. Why the existence of the pool, which as far as the record shows was quiescent during the damage period, should be credited with the power to discourage Zenith's entry before the signal change but not after is difficult to grasp. But the question at hand is not whether, if Zenith had decided to enter the market, the pool would have been a deterrent and inflicted damage. Rather, it is whether Zenith was in fact constrained by the pool to stay out of England during the damage period or whether Zenith's own business calculus led it to await more favorable conditions. As we have said, the latter is the only permissible inference from this record.

3. *The Australian Pool.*

The Australian patent pool, which had exclusive rights to license Hazeltine patents, also granted licenses only

for local manufacture. Had HRI and Hazeltine's conspiracy with the Australian pool effectively kept Zenith from that market, a compensable violation of the anti-trust laws unquestionably would have occurred. But the findings of the District Court are wholly silent as to how the Australian pool had any impact on Zenith's business. An officer of Zenith revealed that Zenith had exported no products to Australia since the 1920's or early 1930's. Zenith had not requested a pool license during the 20-year period preceding the trial. A government embargo was found by the District Court to have foreclosed Zenith's American-made merchandise until well into the damage period. High tariffs and shipping costs were additional barriers, as well as the prospect of vigorous competition. Nothing in the record before us would permit the inference that Zenith either intended or was prepared to enter the Australian market during the damage period. The Court of Appeals was correct in reversing the District Court's award of damages with respect to the Australian market.

B. *The Injunction.*

In setting aside the District Court's grant of injunctive relief against continued participation by HRI and Hazeltine in any patent pool or similar association restricting Zenith's export trade,²³ the Court of Appeals stated, without more:

"It follows from our conclusion with respect to the foreign patent pools that injunctive relief against

²³ Paragraph C of the District Court's injunction prohibits HRI from

"Entering into, adhering to, enforcing or claiming any rights under any contract, agreement, understanding, plan or program, with any other person, company, patent pool, organization, association, corporation or entity which directly or indirectly restricts or prevents defendant-counterclaimant, Zenith Radio Corporation, or any of its subsidiaries, from exporting any electronic apparatus from the United States into any foreign market."

'threatened loss or damage' directed at those pools, alleged by Zenith to be unlawful conspiracies, cannot be justified under 15 U. S. C. Sec. 26. Paragraph C of the injunction granted must be stricken." 388 F. 2d, at 39.

The evident premise for striking Paragraph C was that Zenith's failure to prove the fact of injury barred injunctive relief as well as treble damages. This was unsound, for § 16 of the Clayton Act, 15 U. S. C. § 26, which was enacted by the Congress to make available equitable remedies previously denied private parties, invokes traditional principles of equity and authorizes injunctive relief upon the demonstration of "threatened" injury.²⁴ That remedy is characteristically available even though the plaintiff has not yet suffered actual injury, see *Bedford Cut Stone Co. v. Journeymen Stone Cutters' Assn.*, 274 U. S. 37, 54-55 (1927); he need only demonstrate a significant threat of injury from an impending violation of the antitrust laws or from a contemporary violation likely to continue or recur. See *Swift & Co. v. United States*, 196 U. S. 375, 396 (1905); *Bedford Cut Stone Co. v. Journeymen Stone Cutters' Assn.*, *supra*, at 54; *United States v. Oregon State Medical Society*, 343 U. S. 326, 333 (1952); *United States v. W. T. Grant Co.*, 345 U. S. 629, 633 (1953).

Moreover, the purpose of giving private parties treble-damage and injunctive remedies was not merely to pro-

²⁴ Section 16 provides:

"Any person, firm, corporation, or association shall be entitled to sue for and have injunctive relief, in any court of the United States having jurisdiction over the parties, *against threatened loss or damage by a violation of the antitrust laws*, . . . when and under the same conditions and principles as injunctive relief against threatened conduct that will cause loss or damage is granted by courts of equity, under the rules governing such proceedings" (Emphasis added.) 15 U. S. C. § 26.

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vide private relief, but was to serve as well the high purpose of enforcing the antitrust laws. *E. g.*, *United States v. Borden Co.*, 347 U. S. 514, 518 (1954). Section 16 should be construed and applied with this purpose in mind, and with the knowledge that the remedy it affords, like other equitable remedies, is flexible and capable of nice "adjustment and reconciliation between the public interest and private needs as well as between competing private claims." *Hecht Co. v. Bowles*, 321 U. S. 321, 329-330 (1944). Its availability should be "conditioned by the necessities of the public interest which Congress has sought to protect." *Id.*, at 330.

Judged by the proper standard, the record before us warranted the injunction with respect to Canada. The findings of the District Court were that HRI and CRPL were conspiring to exclude Zenith and others from the Canadian market; there was nothing indicating that this clear violation of the antitrust laws had terminated or that the threat to Zenith inherent in the conduct would cease in the foreseeable future. Neither the relative quiescence of the pool during the litigation nor claims that objectionable conduct would cease with the judgment negated the threat to Zenith's foreign trade.²⁵

²⁵ HRI informs us that Hazeltine, having obtained an early termination of its licensing agreement with CRPL, is now prepared to license any one or more of its Canadian patents "with no restrictions on imports." Since Hazeltine's abandonment of its participation in the Canadian pool occurred only after—and, apparently, in response to—the District Court's judgment and decree, we cannot agree with the suggestion that injunctive relief as to Canada has been rendered unnecessary and inappropriate. See *United States v. Oregon State Medical Society*, 343 U. S. 326, 333 (1952); *United States v. Concentrated Phosphate Export Assn.*, 393 U. S. 199, 202-203 (1968). Although HRI is free to attempt to demonstrate in the future that the need for injunctive relief with respect to Canada has been eliminated, or that a change of circumstances elsewhere justifies additional modifications of the injunction, see,

That threat was too clear for argument, and injunctive relief against HRI with respect to the Canadian market was wholly proper.

We also reinstate the injunction entered by the District Court insofar as it more broadly barred HRI from conspiring with others to restrict or prevent Zenith from entering any other foreign market. In exercising its equitable jurisdiction, "[a] federal court has broad power to restrain acts which are of the same type or class as unlawful acts which the court has found to have been committed or whose commission in the future, unless enjoined, may fairly be anticipated from the defendant's conduct in the past." *NLRB v. Express Publishing Co.*, 312 U. S. 426, 435 (1941). See also *United States v. National Lead Co.*, 332 U. S. 319, 328-335 and n. 4 (1947). Given the findings that HRI was conspiring with the Canadian pool, its purpose to exclude Zenith from Canada and its violation of the Sherman Act were clearly established. Its propensity for arrangements of this sort was also indicated by the findings revealing its participation in similar pools operating in England and Australia.²⁶ Zenith, a company interested in expanding its foreign commerce and having suffered at the hands of HRI and its coconspirators in the Canadian market, was entitled to injunctive relief against like conduct by HRI in other

e. g., *United States v. W. T. Grant Co.*, 345 U. S. 629, 633-636 (1953), we are not willing at this time to undertake a reappraisal of the injunction in light of post-trial developments.

²⁶ Having not disturbed the District Court's findings that HRI and Hazeltine were conspiring with English and Australian patent pools which refused to license imports, the Court of Appeals in any event should have sustained the injunction with respect to the English and Australian markets. These findings, together with Zenith's demonstrated intent to expand its export business, were sufficient foundation for the conclusion that continued participation by HRI and Hazeltine in the English and Australian pools posed a significant threat of loss or damage to Zenith's business.

world markets. We see no reason that the federal courts, in exercising the traditional equitable powers extended to them by § 16, should not respond to the "salutary principle that when one has been found to have committed acts in violation of a law he may be restrained from committing other related unlawful acts." *NLRB v. Express Publishing Co.*, *supra*, at 436. Although a district court may not enjoin all future illegal conduct of the defendant, or even all future violations of the antitrust laws, however unrelated to the violation found by the court, *e. g.*, *New York, N. H. & H. R. Co. v. ICC*, 200 U. S. 361, 401 (1906), "[w]hen the purpose to restrain trade appears from a clear violation of law, it is not necessary that all of the untraveled roads to that end be left open and that only the worn one be closed." *International Salt Co. v. United States*, 332 U. S. 392, 400 (1947). This is particularly true in treble-damage cases, which are brought for private ends, but which also serve the public interest in that "they effectively pry open to competition a market that has been closed by defendants' illegal restraints." *Id.*, at 401.

III. THE PATENT-MISUSE ISSUE.

Since the District Court's treble damage award for patent misuse was affirmed by the Court of Appeals, and HRI has not challenged that award in this Court, the only misuse issue we need consider at length is whether the Court of Appeals was correct in striking the last clause from Paragraph A of the injunction,²⁷ which enjoined HRI from

"A. Conditioning directly or indirectly the grant of a license to defendant-counterclaimant, Zenith Radio Corporation, or any of its subsidiaries, under any

²⁷ The District Court's injunction also included a paragraph barring HRI from continuing to coerce acceptance of its package license through the mechanism of offering a much lower royalty rate for

domestic patent upon the taking of a license under any other patent *or upon the paying of royalties on the manufacture, use or sale of apparatus not covered by such patent.*" (Emphasis added.)

This paragraph of the injunction was directed at HRI's policy of insisting upon acceptance of its standard five-year package license agreement, covering the 500-odd patents within its domestic licensing portfolio and reserving royalties on the licensee's total radio and television sales, irrespective of whether the licensed patents were actually used in the products manufactured.²⁸

In striking the last clause of Paragraph A the Court of Appeals, in effect, made two determinations. First, under its view of *Automatic Radio Mfg. Co. v. Hazeltine Research, Inc.*, 339 U. S. 827 (1950), conditioning the grant of a patent license upon payment of royalties on unpatented products was not misuse of the patent. Second, since such conduct did not constitute

those licensees who take a license on the entire package of patents rather than a license on merely a few of them. Paragraph B enjoined HRI from

"Conditioning directly or indirectly the grant of any license to defendant-counterclaimant, Zenith Radio Corporation, or any of its subsidiaries, under any domestic patent upon the payment of the same or greater royalty rate than the rate at which licenses have been granted or offered to others under a group of domestic patents which includes said patent."

The Court of Appeals modified this paragraph in certain respects, 388 F. 2d, at 39, but we do not disturb these modifications.

²⁸ The District Court concluded:

"Plaintiff's demands that royalties be paid on admittedly unpatented apparatus constitute misuse of its patent rights and plaintiff cannot justify such use of the monopolies of its patents, by arguing the necessities and convenience to it of such a policy. While parties in an arms-length transaction are free to select any royalty base that may suit their mutual convenience, a patentee has no right to demand or force the payment of royalties on unpatented products." 239 F. Supp., at 77.

patent misuse, neither could it be violative of the anti-trust laws within the meaning of § 16 of the Clayton Act, under which Zenith had sought and the District Court had granted the injunction. With respect to the first determination, we reverse the Court of Appeals. We hold that conditioning the grant of a patent license upon payment of royalties on products which do not use the teaching of the patent does amount to patent misuse.

The trial court's injunction does not purport to prevent the parties from serving their mutual convenience by basing royalties on the sale of all radios and television sets, irrespective of the use of HRI's inventions. The injunction reaches only situations where the patentee directly or indirectly "conditions" his license upon the payment of royalties on unpatented products—that is, where the patentee refuses to license on any other basis and leaves the licensee with the choice between a license so providing and no license at all. Also, the injunction takes effect only if the license is conditioned upon the payment of royalties "on" merchandise not covered by the patent—where the express provisions of the license or their necessary effect is to employ the patent monopoly to collect royalties, not for the use of the licensed invention, but for using, making, or selling an article not within the reach of the patent.

A patentee has the exclusive right to manufacture, use, and sell his invention. See, *e. g.*, *Bement v. National Harrow Co.*, 186 U. S. 70, 88–89 (1902). The heart of his legal monopoly is the right to invoke the State's power to prevent others from utilizing his discovery without his consent. See, *e. g.*, *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U. S. 405 (1908); *Crown Die & Tool Co. v. Nye Tool & Machine Works*, 261 U. S. 24 (1923). The law also recognizes that he may assign to another his patent, in whole or in part, and may license others to practice his invention. See,

e. g., *Waterman v. Mackenzie*, 138 U. S. 252, 255 (1891). But there are established limits which the patentee must not exceed in employing the leverage of his patent to control or limit the operations of the licensee. Among other restrictions upon him, he may not condition the right to use his patent on the licensee's agreement to purchase, use, or sell, or not to purchase, use, or sell, another article of commerce not within the scope of his patent monopoly. *E. g.*, *Ethyl Gasoline Corp. v. United States*, 309 U. S. 436, 455-459 (1940); *International Salt Co. v. United States*, 332 U. S. 392, 395-396 (1947). His right to set the price for a license does not extend so far, whatever privilege he has "to exact royalties as high as he can negotiate." *Brulotte v. Thys Co.*, 379 U. S. 29, 33 (1964). And just as the patent's leverage may not be used to extract from the licensee a commitment to purchase, use, or sell other products according to the desires of the patentee, neither can that leverage be used to garner as royalties a percentage share of the licensee's receipts from sales of other products; in either case, the patentee seeks to extend the monopoly of his patent to derive a benefit not attributable to use of the patent's teachings.

In *Brulotte v. Thys Co.*, *supra*, the patentee licensed the use of a patented machine, the license providing for the payment of a royalty for using the invention after, as well as before, the expiration date of the patent. Recognizing that the patentee could lawfully charge a royalty for practicing a patented invention prior to its expiration date and that the payment of this royalty could be postponed beyond that time, we noted that the post-expiration royalties were not for prior use but for current use, and were nothing less than an effort by the patentee to extend the term of his monopoly beyond that granted by law. *Brulotte* thus articulated in a particularized context the principle that a patentee may

not use the power of his patent to levy a charge for making, using, or selling products not within the reach of the monopoly granted by the Government.

Automatic Radio is not to the contrary; it is not authority for the proposition that patentees have *carte blanche* authority to condition the grant of patent licenses upon the payment of royalties on unpatented articles. In that case, Automatic Radio acquired the privilege of using all present and future HRI patents by promising to pay a percentage royalty based on the selling price of its radio receivers, with a minimum royalty of \$10,000 per year. HRI sued for the minimum royalty and other sums. Automatic Radio asserted patent misuse in that the agreement extracted royalties whether or not any of the patents were in any way used in Automatic Radio receivers. The District Court and the Court of Appeals approved the agreement as a convenient method designed by the parties to avoid determining whether each radio receiver embodied an HRI patent. The percentage royalty was deemed an acceptable alternative to a lump-sum payment for the privilege to use the patents. This Court affirmed.

Finding the tie-in cases such as *International Salt Co. v. United States*, 332 U. S. 392 (1947), inapposite, and distinguishing *United States v. United States Gypsum Co.*, 333 U. S. 364 (1948), as involving a conspiracy between patentee and licensees to eliminate competition, the Court considered reasonable the "payment of royalties according to an agreed percentage of the licensee's sales," since "[s]ound business judgment could indicate that such payment represents the most convenient method of fixing the business value of the privileges granted by the licensing agreement." 339 U. S., at 834. It found nothing "inherent" in such a royalty provision which would extend the patent monopoly. Finally, the holding by the Court was stated to be that in licensing the use

of patents "it is not *per se* a misuse of patents to measure the consideration by a percentage of the licensee's sales." *Ibid.*

Nothing in the foregoing is inconsistent with the District Court's injunction against conditioning a license upon the payment of royalties on unpatented products or with the principle that patent leverage may not be employed to collect royalties for producing merchandise not employing the patented invention. The Court's opinion in *Automatic Radio* did not deal with the license negotiations which spawned the royalty formula at issue and did not indicate that HRI used its patent leverage to coerce a promise to pay royalties on radios not practicing the learning of the patent. No such inference follows from a mere license provision measuring royalties by the licensee's total sales even if, as things work out, only some or none of the merchandise employs the patented idea or process, or even if it was foreseeable that some undetermined portion would not contain the invention. It could easily be, as the Court indicated in *Automatic Radio*, that the licensee as well as the patentee would find it more convenient and efficient from several standpoints to base royalties on total sales than to face the burden of figuring royalties based on actual use.²⁹ If convenience of the parties rather than patent power dictates the total-sales royalty provision, there are no misuse of the patents and no forbidden conditions attached to the license.

The Court also said in *Automatic Radio* that if the licensee bargains for the privilege of using the patent in all of his products and agrees to a lump sum or a percentage-of-total-sales royalty, he cannot escape pay-

²⁹ The record and oral argument in *Automatic Radio* disclose no basis for the conclusion that Automatic Radio was forced into accepting the total-sales royalty rate by HRI's use of its patent leverage.

ment on this basis by demonstrating that he is no longer using the invention disclosed by the patent. We neither disagree nor think such transactions are barred by the trial court's injunction. If the licensee negotiates for "the privilege to use any or all of the patents and developments as [he] desire[s] to use them," 339 U. S., at 834, he cannot complain that he must pay royalties if he chooses to use none of them. He could not then charge that the patentee had refused to license except on the basis of a total-sales royalty.

But we do not read *Automatic Radio* to authorize the patentee to use the power of his patent to insist on a total-sales royalty and to override protestations of the licensee that some of his products are unsuited to the patent or that for some lines of his merchandise he has no need or desire to purchase the privileges of the patent. In such event, not only would royalties be collected on unpatented merchandise, but the obligation to pay for nonuse would clearly have its source in the leverage of the patent.

We also think patent misuse inheres in a patentee's insistence on a percentage-of-sales royalty, regardless of use, and his rejection of licensee proposals to pay only for actual use. Unquestionably, a licensee must pay if he uses the patent. Equally, however, he may insist upon paying only for use, and not on the basis of total sales, including products in which he may use a competing patent or in which no patented ideas are used at all. There is nothing in the right granted the patentee to keep others from using, selling, or manufacturing his invention which empowers him to insist on payment not only for use but also for producing products which do not employ his discoveries at all.

Of course, a licensee cannot expect to obtain a license, giving him the privilege of use and insurance against infringement suits, without at least footing the patentee's

expenses in dealing with him. He cannot insist upon paying on use alone and perhaps, as things turn out, pay absolutely nothing because he finds he can produce without using the patent. If the risks of infringement are real and he would avoid them, he must anticipate some minimum charge for the license—enough to insure the patentee against loss in negotiating and administering his monopoly, even if in fact the patent is not used at all. But we discern no basis in the statutory monopoly granted the patentee for his using that monopoly to coerce an agreement to pay a percentage royalty on merchandise not employing the discovery which the claims of the patent define.

Although we have concluded that *Automatic Radio* does not foreclose the injunction entered by the District Court, it does not follow that the injunction was otherwise proper. Whether the trial court correctly determined that HRI was conditioning the grant of patent licenses upon the payment of royalties on unpatented products has not yet been determined by the Court of Appeals. And if there was such patent misuse, it does not necessarily follow that the misuse embodies the ingredients of a violation of either § 1 or § 2 of the Sherman Act, or that Zenith was threatened by a violation so as to entitle it to an injunction under § 16 of the Clayton Act. See, *e. g.*, *Morton Salt Co. v. G. S. Suppiger Co.*, 314 U. S. 488, 490 (1942); *Transparent-Wrap Machine Corp. v. Stokes & Smith Co.*, 329 U. S. 637, 641 (1947); *Laitram Corp. v. King Crab, Inc.*, 245 F. Supp. 1019 (D. C. Alaska 1965). See also Report of the Attorney General's National Committee to Study the Antitrust Laws 254 (1955); R. Nordhaus & E. Jurow, *Patent-Antitrust Law* 122-123 (1961); Frost, *Patent Misuse As A Per Se Antitrust Violation*, in *Conference on the Antitrust Laws and the Attorney General's Committee Report* 113-123 (J. Rahl & E. Zaidins ed., 1955).

Cf. Staff of Antitrust Subcommittee of House Committee on the Judiciary, 84th Cong., 2d Sess., Antitrust Problems in the Exploitation of Patents 23 (Comm. Print. 1956); Schueller, The New Antitrust Illegality Per Se: Forestalling and Patent Misuse, 50 Col. L. Rev. 170, 184-200 (1950). Whether the findings and the evidence are sufficient to make out an actual or threatened violation of the antitrust laws so as to justify the injunction issued by the District Court has not been considered by the Court of Appeals, and we leave the matter to be dealt with by that court in the first instance.

Accordingly, the judgment of the Court of Appeals is affirmed in part and reversed in part, and the case is remanded to that court for further proceedings consistent with this opinion.

It is so ordered.

MR. JUSTICE HARLAN, concurring in part and dissenting in part.

I concur in Parts I and II of the Court's opinion. However, I do not join Part III, in which the Court holds that a patent license provision which measures royalties by a percentage of the licensee's total sales is lawful if included for the "convenience" of both parties but unlawful if "insisted upon" by the patentee.

My first difficulty with this part of the opinion is that its test for validity of such royalty provisions is likely to prove exceedingly difficult to apply and consequently is apt to engender uncertainty in this area of business dealing, where certainty in the law is particularly desirable. In practice, it often will be very hard to tell whether a license provision was included at the instance of both parties or only at the will of the licensor. District courts will have the unenviable task of deciding whether the course of negotiations establishes "insistence" upon the suspect provision. Because of the uncertainty in-

herent in such determinations, parties to existing and future licenses will have little assurance that their agreements will be enforced. And it may be predicted that after today's decision the licensor will be careful to embellish the negotiations with an alternative proposal, making the court's unravelling of the situation that much more difficult.

Such considerations lead me to the view that any rule which causes the validity of percentage-of-sales royalty provisions to depend upon subsequent judicial examination of the parties' negotiations will disserve rather than further the interests of all concerned. Hence, I think that the Court has fallen short in failing to address itself to the question whether employment of such royalty provisions should invariably amount to patent misuse.¹

My second difficulty with this part of the Court's opinion is that in reality it overrules an aspect of a prior decision of this Court, *Automatic Radio Mfg. Co. v. Hazeltine Research, Inc.*, 339 U. S. 827 (1950), without offering more than a shadow of a reason in law or economics for departing from that earlier ruling. Despite the Court's efforts to distinguish *Automatic Radio*, it cannot be denied that the Court there sustained a Hazeltine patent license of precisely the same tenor as the one involved here, on the ground that "[t]his royalty provision does not create another monopoly; it creates no restraint of competition beyond the legitimate grant of the patent." 339 U. S., at 833.

In finding significance for present purposes in some of the qualifying language in *Automatic Radio*, I believe that the Court today has misconstrued that opinion. A reading of the opinion as a whole satisfies me that the

¹ I find it unnecessary to consider the further question whether inclusion of such a provision should be held to violate the antitrust laws.

Automatic Radio Court did not consider it relevant whether Hazeltine Research had "insisted" upon inclusion of the disputed provision, and that in emphasizing that the royalty terms had no "inherent" tendency to extend the patent monopoly and were not a "*per se*" misuse of patents, the Court was simply endeavoring to distinguish prior decisions in which patent misuse was found when the patent monopoly had been employed to "create *another* monopoly or restraint of competition." 339 U. S., at 832.² (Emphasis added.) Until now no subsequent decision has in any way impaired this aspect of *Automatic Radio*.³

Since the Court's decision finds little if any support in the prior case law, one would expect from the Court an exposition of economic reasons for doing away with the *Automatic Radio* doctrine. However, the nearest thing to an economic rationale is the Court's declaration that:

"just as the patent's leverage may not be used to extract from the licensee a commitment to purchase, use, or sell other products according to the desires of the patentee, neither can that leverage be used to garner as royalties a percentage share of the licensee's receipts from sales of other products; in either case, the patentee seeks to extend the monopoly of his patent to derive a benefit not attributable to use of the patent's teachings." *Ante*, at 136.

The Court then finds in the patentee a heretofore non-existent right to "insist upon paying only for use, and not on the basis of total sales . . ." *Ante*, at 139.

² The *Automatic Radio* Court explicitly distinguished a number of cases of that kind, including *United States v. United States Gypsum Co.*, 333 U. S. 364 (1948), and *Mercoid Corp. v. Mid-Continent Investment Co.*, 320 U. S. 661 (1944). See 339 U. S., at 832-833.

³ *Brulotte v. Thys Co.*, 379 U. S. 29 (1964), involved a different question: whether a royalty based solely upon use of the invention could be collected for use occurring after the patent's expiration.

What the Court does not undertake to explain is *how* insistence upon a percentage-of-sales royalty enables a patentee to obtain an economic "benefit not attributable to use of the patent's teachings," thereby involving himself in patent misuse. For it must be remembered that all the patentee has to license is the right to use his patent. It is solely for that right that a percentage-of-sales royalty is paid, and it is not apparent from the Court's opinion why this method of determining the *amount* of the royalty should be any less permissible than the other alternatives, whether or not it is "insisted" upon by the patentee.

One possible explanation for the Court's result, which seems especially likely in view of the Court's exception for cases where the provision was included for the "convenience" of both parties, is a desire to protect licensees against overreaching. But the Court does not cite, and the parties have not presented, any evidence that licensees as a class need such protection.⁴ Moreover, the Court does not explain why a royalty based simply upon use could not be equally overreaching.

Another possible justification for the Court's result might be that a royalty based directly upon use of the patent will tend to spur the licensee to "invent around" the patent or otherwise acquire a substitute which costs less, while a percentage-of-sales royalty can have no such effect because of the licensee's knowledge that he must pay the royalty regardless of actual patent use. No hint of such a rationale appears in the Court's opinion. Moreover, under this theory a percentage-of-sales royalty would be objectionable largely because of resulting damage to the rest of the economy, through less efficient allocation of resources, rather than because of possible harm to the licensee. Hence, the theory might not

⁴ Cf. *American Photocopy Equip. Co. v. Rovico*, 359 F. 2d 745 (1966).

admit of the Court's exception for provisions included for the "convenience" of both parties.

Because of its failure to explain the reasons for the result reached in Part III, the Court's opinion is of little assistance in answering the question which I consider to be the crux of this part of the case: whether percentage-of-sales royalty provisions should be held without exception to constitute patent misuse. A recent economic analysis⁵ argues that such provisions may have two undesirable consequences. First, as has already been noted, employment of such provisions may tend to reduce the licensee's incentive to substitute other, cheaper "inputs" for the patented item in producing an unpatented end-product. Failure of the licensee to substitute will, it is said, cause the price of the end-product to be higher and its output lower than would be the case if substitution had occurred.⁶ Second, it is suggested that under certain conditions a percentage-of-sales royalty arrangement may enable the patentee to garner for himself elements of profit, above the norm for the industry or economy, which are properly attributable not to the licensee's use of the patent but to other factors which cause the licensee's situation to differ from one of "perfect competition," and that this cannot occur when royalties are based upon use.⁷

If accepted, this economic analysis would indicate that percentage-of-sales royalties should be entirely outlawed. However, so far as I have been able to find, there has as yet been little discussion of these matters either by lawyers or by economists. And I find scant illumination on this score in the briefs and arguments of the parties in this case. The Court has pointed out both today and in

⁵ Baxter, Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis, 76 Yale L. J. 267 (1966).

⁶ See *id.*, at 299-301, 302-306.

⁷ See *id.*, at 300-301, 302-306, 331-332.

Automatic Radio that percentage-of-sales royalties may be administratively advantageous for both patentee and licensee. In these circumstances, confronted, as I believe we are, with the choice of holding such royalty provisions either valid or invalid across the board, I would, as an individual member of the Court, adhere for the present to the rule of *Automatic Radio*.