COMMENTS

ANTITRUST REGULATION—INCLUSION OF SUBSTITUTE PRODUCTS WITHIN THE RELEVANT MARKET

United States v. E. I. du Pont de Nemours & Co., 351 U.S. 377 (1956)

Defendant, producing seventy-five per cent of the cellophane produced in the United States,[1] was charged with monopolizing interstate commerce in cellophane in violation of section 2 of the Sherman Antitrust Act.[2] After making an extensive market analysis, the district court found that cellophane was in active competition with other flexible wrapping materials, and ruled that the relevant market for cellophane consisted of the market for such materials. Upon further finding that cellophane accounted for less than twenty per cent of the flexible wrapper market, the district court held that the defendant did not have the requisite market control to constitute a monopoly.[3] In affirming, the Supreme Court stated that the relevant market for determining the existence of a monopoly—the power to control prices or exclude competition—consists of those products which are "reasonably interchangeable" by consumers for the same purpose.[4]

Although decisions prior to 1945 involving alleged violations of section 2[5] contain an abundance of language identifying monopolies with

1. The remainder of the cellophane production was accounted for by the Sylvania and Olin companies. The former was licensed to produce cellophane by defendant after Sylvania began to test the validity of defendant's moisture proof cellophane patent. Olin was allowed to produce cellophane after the principal case was instituted in the lower court. Stocking & Mueller, *The Cellophane Case and the New Competition*, 45 AM. ECON. REV. 29, 41-44 (1955).

2. 26 STAT. 209 (1890), 15 U.S.C. § 2 (1952), the pertinent provisions of which are, "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor . . . ."

The government, however, did not charge the defendant with a misdemeanor under § 2, but instead brought a civil action under § 4 seeking an injunction against the alleged violations and also divesture for the purpose of removing the effect of monopolization. Section 4 provides: "The several district courts of the United States are invested with jurisdiction to prevent and restrain violations of sections 1-7 . . . ." 26 STAT. 209-10 (1890), 15 U.S.C. § 4 (1952).

3. United States v. E. I. Du Pont De Nemours & Co., 118 F. Supp. 41 (D. Del. 1953). The defendant was also charged under § 2 with attempting and conspiring to monopolize interstate commerce. Although the district court found for defendant on all issues, the government appealed only from the ruling that defendant had not monopolized the cellophane trade.

4. United States v. E. I. du Pont de Nemours & Co., 351 U.S. 377 (1956). Determination of the relevant market also requires a geographical delimitation. For examples, see United States v. Columbia Steel Co., 334 U.S. 495 (1948) (delimited to an eleven-state area); United States v. Yellow Cab Co., 332 U.S. 218 (1947) (delimited to a four-city area). In the principal case the geographical market was nationwide. United States v. E. I. du Pont de Nemours & Co., *supra* at 395.

5. The vast majority of cases involved alleged violations of both § 1 and § 2. Very few cases have considered § 2 separately. Rostow, *The New Sherman Act: A Positive Instrument of Progress*, 14 U. CHI. L. REV. 567, 575 (1947).

control of the market, there was generally little examination of pertinent economic data on which to base a determination of the degree of market control.[6] While indications of market control must have influenced judges,[7] courts tended to emphasize restriction of competition[8] or abuse of corporate power[9] in determining whether there had been a violation of the Sherman Act. As a result of the paucity of economic analysis of the market during this earlier period, there was a corresponding lack of analysis of the problem of inclusion or exclusion of "substitute products" within the relevant market[10]—the courts tended simply to exclude those products which were physically distinguishable from the defendant's product.[11] The essence of this problem is whether to delimit the market to physically identical or fungible products only, or whether to include alternative products which are in competition with the alleged monopolist's product, *i.e.*, those products which consumers will readily "substitute" for the product allegedly monopolizing the market.

A notable exception to the approach of the courts during this earlier period is *United States v. Corn Products Refining Co.*[12] Decided in 1916 by Judge Learned Hand, this case was unique both for its extensive examination of market data and for its treatment of substitute products.[13] The case involved both identical and physically distinguishable products, and established two guides for their inclusion or exclusion from the market: (1) *identical* products were to be included only if produced on a cost basis comparable to that of the alleged monopolist's product, and (2) physically *distinguishable* products, if produced on a comparable cost basis, were to be included if consumer preferences

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6. Mason, *Monopoly in Law and Economics*, 47 YALE L.J. 34, 41 (1937). The conclusions reached in this article as to the divergence of legal and economic concepts of monopoly were subsequently modified by Professor Mason. See Mason, *The Current Status of the Monopoly Problem in the United States*, 62 HARV. L. REV. 1265, 1272 (1949).

7. *Ibid.*; Levi, *The Antitrust Laws and Monopoly*, 14 U. CHI. L. REV. 153, 160 (1947).

8. Mason, *Monopoly in Law and Economics*, 47 YALE L.J. 34 *passim* (1937).

9. Practically speaking, until a comparatively recent date the abuse theory was followed in the application of the Sherman Act. That is, the successful competitor who succeeded in becoming the sole occupier of the field was regarded as a monopolist only if he abused his privilege to compete freely "by conduct outside the normal methods of business or by charging exorbitant prices. . . ." Levi, *supra* note 7, at 157, and cases cited. See Turner, *Antitrust Policy and the Cellophane Case*, 70 HARV. L. REV. 281, 289 (1956).

10. The only case prior to United States v. Aluminum Co. of America, 148 F.2d 416 (2d Cir. 1945), giving extensive treatment to product substitutes within the relevant market was United States v. Corn Products Refining Co., 234 Fed. 964 (S.D.N.Y. 1916), *appeal dismissed on appellant's motion*, 249 U.S. 621 (1921). See Turner, *supra* note 9, at 288.

11. Turner, *supra* note 9, at 289; Macdonald, *Product Competition in the Relevant Market Under the Sherman Act*, 53 MICH. L. REV. 69, 73 (1954).

12. 234 Fed. 964 (S.D.N.Y. 1916), *appeal dismissed on appellant's motion*, 249 U.S. 621 (1921).

13. See note 10 *supra*.

indicated that the products were in competition.[14] The court reasoned that where production costs differ the corporation with the lower cost basis could control prices within the differential, and to that extent, *even though limited,* constituted a monopoly.[15] This decision was the forerunner of *United States v. Aluminum Co. of America*[16] which was decided in 1945—the opinion again being written by Judge Learned Hand. In *Alcoa* Judge Hand delimited the relevant market for aluminum and in so doing excluded imported aluminum—a physically identical product. The court was of the opinion that within the limits of the tariff and transportation costs the defendant was free to raise its prices as it chose[17]—thus echoing the "limited monopoly" of the *Corn Products* case.[18] "Secondary" aluminum—a physically distinguishable product—was also excluded although found to be in competition with "virgin" aluminum. The court reasoned that since defendant controlled the output of "virgin" aluminum, it also controlled the quantity of "secondary" aluminum with which the "virgin" would compete in the future.[19] Both the *Corn Products* and *Alcoa* cases considered extensive economic data in determining market control, and in delimiting the relevant market for identical products relied on the cost basis as the criterion. In its delimitation of the relevant market for physically distinguishable products, the *Corn Products* case was consistent in utilizing this criterion in conjunction with the requirement that the products be in competition as indicated by consumer preferences. The *Alcoa* case, on the other hand, departed from this approach in its exclusion of "secondary" aluminum; both the cost factor and the fact that "virgin" and "secondary" aluminum were in competition were ignored. The court emphasized what appears to be a practical consideration—since defendant controlled the output of "virgin" aluminum, it controlled the quantity of "secondary" aluminum produced.

The *Alcoa* case marked the beginning of a trend of decisions emphasizing the significance of market control.[20] As a result of this

14. See note 12 *supra,* at 974-77; Turner, *supra* note 9, at 288.

15. See note 12 *supra,* at 975.

16. 148 F.2d 416 (2d Cir. 1945). The *Alcoa* case was originally appealed to the Supreme Court, but due to the lack of a quorum of six justices qualified to hear the case, it was referred to the second circuit for final disposition. *Id.* at 421. The Supreme Court, however, has gone out of its way to approve of this decision. See United States v. American Tobacco Co., 328 U.S. 781, 811-15 (1946).

17. 148 F.2d at 426.

18. See text supported by note 15 *supra.*

19. 148 F.2d at 423-26. The court's reasoning has been criticized on the theory that it is very doubtful that Alcoa would have controlled its output of "virgin" aluminum and thereby sacrificed profits for the purpose of controlling the amount of competitive scrap which would appear on the market at some later date. Mason, *The Current Status of the Monopoly Problem in the United States,* 62 HARV. L. REV. 1265, 1273-74 (1949).

20. The early cases under § 2 seemed to follow the rule that "size alone does not determine guilt," but required that there also be wrongful intent, some restriction of competition, or coercive practices by the corporation. United States v. Aluminum Co. of America, 148 F.2d 416, 429 (2d Cir. 1945); Adams, *The "Rule*

emphasis there has been increased examination and analysis of economic data to determine the relevant market, a concomitant of which has been increased consideration given the problem of including substitute products within that market. However, while the decisions subsequent to *Alcoa* undertook exhaustive market analysis, the Court was not faced with the grand scale of possible market substitutes as in the principal case, and further, no additional tools of analysis were presented to the Court prior to the principal case to serve as guides in delimiting the relevant market.[21] One case, *Times-Picayune Publish-*

of Reason": Workable Competition or Workable Monopoly? 63 YALE L.J. 348, 352 (1954). It is now argued that the *Alcoa* decision, in its sudden change of emphasis to the degree of market control, sets forth the proposition that size alone may constitute a violation of § 2, and that the intent to monopolize will be inferred from the attainment of the monopoly power unless the defendant can show that the power was "thrust upon it," *i.e.*, that the monopoly simply resulted from superior business skills. Under this view it has been stated that the *Alcoa* case has given a new birth to the Sherman Act. Rostow, *supra* note 5 *passim*. See Rostow, *Monopoly Under the New Sherman Act: Power or Purpose?* 43 ILL. L. REV. 745 (1949). See also United States v. Columbia Steel Co., 334 U.S. 495, 534 (1948) (dissenting opinion); Adams, *supra* at 353; Oppenheim, *Federal Antitrust Legislation: Guideposts to a Revised National Antitrust Policy*, 50 MICH. L. REV. 1139, 1193 (1952); Schwartz, *The Schwartz Dissent*, 1 ANTITRUST BULL. 37, 38-40 (1955). Consequently, if the courts are now willing to find that the existence of a monopoly, *i.e.*, the power to control prices and exclude competition, is itself a violation of § 2 without requiring proof of abusive practices, it is acutely necessary to delimit accurately the relevant market. Professor Rostow's views have caused a great deal of controversy and have been rejected by some who contend that the Sherman Act does not prohibit size—that the mere existence of monopolistic power is not an offense. This group maintains that there must be some evidence of abuse or misuse of this power, or that the defendant intended to misuse it. Johnston & Stevens, *Monopoly or Monopolization—a Reply to Professor Rostow*, 44 ILL. L. REV. 269 (1949); Robbins, *"Bigness," The Sherman Act, and Antitrust Policy*, 39 VA. L. REV. 907 (1953).

It is submitted, however, that the increased emphasis by the Court upon the degree of market control may not be attributed so much to a change of philosophy toward antitrust prosecutions as to a different type of case coming before the courts. In the earlier cases the courts could easily find abusive practices by the corporation as a peg upon which to hang their decisions. It has been stated that courts did this because of the extreme difficulty of developing rules for determining market control. Mason, *supra* note 8, at 45. Modern corporations, however, with their large legal staffs have become much more sophisticated and do not conduct themselves in such notorious fashion. Consequently, the courts are being *forced* to examine the degree of market control to determine whether there is a monopoly in the first instance before deciding whether the corporation is guilty of monopolization under § 2. It should also be noted that as corporations become more "mannerly" in their conduct, the courts will be increasingly forced to decide the issue whether size alone constitutes monopolization under § 2, or whether it requires size plus abusive practices.

It was unnecessary for the Court in the principal case to decide whether size alone constitutes a violation of the Sherman Act since it held that defendant was not a monopoly. The lower court had held that even if defendant were a monopoly, it was not subject to prosecution because the acquisition of its power was protected by patents, and further, that the power had been acquired through defendant's business skill. As stated by the Supreme Court, a finding that defendant was not a monopoly obviated any necessity of deciding these issues. 351 U.S. at 381.

21. See United States v. Columbia Steel Co., 334 U.S. 495 (1948); United States v. Paramount Pictures, Inc., 334 U.S. 131, 166-67 (1948). In the former case the Court extensively considered the problem of including rolled steel products and plate and shape steel products within the relevant market. Both were included following a purely factual examination of their comparative uses. The

ing Co. v. United States,[22] did suggest in a footnote that since all products have substitutes, an examination of the cross-elasticity of demand for those products would be useful in determining which products were to be included within the relevant market. This appears to be the first case suggesting that *an economist's method of analysis* would be used to solve the problem of substitute products within the relevant market.

In determining the existence of a monopoly, *i.e.*, the power to control price and competition within the market, the principal case has continued the trend emphasizing examination of economic data to determine the degree of market control,[23] and is the first case attempting to utilize the economist's method of analysis in solving the problem of product substitutes within the relevant market. The Court stated that in examining the economic data for the purpose of determining which product substitutes shall be included in the relevant market, it is necessary to appraise the cross-elasticity of demand in the trade,[24] and further stated that that part of trade or relevant market over which there is an alleged monopoly was to include those products which have "reasonable interchangeability for the purposes for which they are produced—price, use and qualities considered."[25] After emphasizing the similarities of use and quality between cellophane and other wrapping materials, the Court stated that an indication of cross-elasticity of demand was a responsiveness of sales of one product to price changes in the other. The fact that a decrease in the price of cellophane caused buyers to switch to it was considered by the Court as an indication that a high cross-elasticity of demand existed between cellophane and other wrapping materials.[26] Pursuant to these findings the Court delimited the relevant market to flexible wrapping materials, rather than merely cellophane, and concluded that defendant did not possess a monopoly.[27]

Court in the latter case held that "first-run" showing of films was a distinct market from "second-run" showings. No market analysis was undertaken, apparently because "first-run" showings were obviously the "cream of the business." For a summary of the developments between the *Alcoa* decision and the principal case, see Turner, *supra* note 9, at 292-96.

22. 345 U.S. 594, 612 n.31 (1953).

23. Judge Leahy in the lower court opinion stated that, "Need for market analysis is the teaching of every major monopoly power case since Judge Hand's Alcoa decision." 118 F. Supp. at 197.

24. 351 U.S. at 394.

25. *Id.* at 404. It is not clear whether the Court set up two tests for determining the relevant market, namely, reasonable interchangeability and cross-elasticity of demand, or whether the latter was encompased by the former. Logically, it would seem the determination of the relevant market requires two steps: first, a delimitation of products which are functionally interchangeable, and secondly, a determination as to whether those products are actually in competition. See Note, *The Market: A Concept in Antitrust*, 54 COLUM. L. REV. 580, 585-94 (1954).

26. 351 U.S. at 400.

27. *Id.* at 404.

It has also been suggested that the principal case has adopted the theory of "workable competition" as a guide in determining the existence of a monopoly.

While economists agree with the use of cross-elasticity of demand as a tool in determining the relevant market,[28] some disagree with the manner of its application in the principal case, for they not only consider the responsiveness of the consumer to price changes in cellophane but also the reaction of other sellers. In other words, if the other wrapping materials had actually been in competition with cellophane, *i.e.*, were the cross-elasticity of demand high, the prices of these materials would have followed any price cut by cellophane to prevent its incursion upon their markets. The facts demonstrated that while cellophane reduced its price over a period of years, none of the other wrapping materials followed a similar pattern. It is argued that either the sellers of other wrapping materials did not feel the effect of the price changes, *i.e.*, the cross-elasticity of demand was low, or these sellers were already selling *at cost* and were unable to meet the price change. Thus, these economists conclude that defendant could price cellophane independently, which is indicative of possessing

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Stocking, *The Rule of Reason, Workable Competition, and Monopoly*, 64 YALE L.J. 1107, 1136 (1955); Stocking & Mueller, *supra* note 1, at 29. See also Mason, *supra* note 19, at 1272. Though vague and indefinite it has been described as the economist's concept of public policy, *i.e.*, a formulation of those conditions which would provide the basis for a policy that would assure to society the advantages of a competitive economy. REPORT OF THE ATTORNEY GENERAL'S NATIONAL COMMITTEE TO STUDY THE ANTITRUST LAWS 320 (1955). See also Schwartz's dissent to this report, *supra* note 20. More specifically, the concept is said to require "a fairly large number of sellers and buyers, no one of whom occupies a large share of the market, the absence of collusion among either group, and the possibility of market entry by new firms." Mason, *supra* note 19, at 1268. For a more extensive discussion of the concept of "workable competition," see REPORT OF THE ATTORNEY GENERAL'S NATIONAL COMMITTEE TO STUDY THE ANTITRUST LAWS 324-36 (1955). See also Clark, *Toward a Concept of Workable Competition*, 30 AM. ECON. REV. 241 (1940); Oppenheim, *supra* note 20, at 1187-88. The concept of "workable competition" was advanced as a more realistic approach to actual conditions in our economy after a realization by the economists that the classical concept of pure competition was divorced from reality. See Stocking, *supra* at 1109; Oppenheim, *supra* note 20, at 1183. If "workable competition" were found to exist in the market, the adovcates of this concept would find that no monopoly existed within the meaning of the Sherman Act. See Oppenheim, *supra* note 20, at 1182-98 for an excellent discussion of the concept and its effect. See also Stocking, *supra* at 1107 n.1, for a bibliography of those who have endorsed this concept.

Several economists have sharply criticized the use of this theory as a tool for enforcement of the Sherman Act. See Stocking, *supra* at 21-25 for a summary of the criticisms of these economists. Two principal criticisms advanced are that the concept is vague in not establishing any definite criteria for effective enforcement of the antitrust laws, and that its emphasis upon inter-industry competition is consistent with a fully monopolized economy. The latter criticism points out that several industries could be monopolized 100% and yet be in competition with one another. See Adams, *supra* note 20, at 362-70. Although the majority opinion purportedly rejected the theory of "interindustry competition," 351 U.S. at 393, the dissenting opinion, recognizing Adams' argument, maintained that in fact this theory was adopted by the majority. 351 U.S. at 423-24.

Finally, it should be noted that if the *Alcoa* case did in fact hold that "mere size" violates § 2, see note 20 *supra*, it appears that the case would be severely restricted by the adoption of the concept of "workable competition" as a guide for antitrust enforcement. See Schwartz, *supra* note 20, at 40-49.

28. CHAMBERLIN, MONOPOLY AND COMPETITION AND THEIR REGULATION 256 (1954); Stocking & Mueller, *supra* note 1, at 54.

monopoly power.[29] Essentially, it would seem that these economists believe that the application of cross-elasticity of demand should include, where it is found that other sellers do not respond to defendant's price cuts, an examination of the production costs of the various alternative products, which examination was considered so important in the *Corn Products* case and again suggested in the *Alcoa* decision.[30]

The Court in the principal case, through the enunciation of the rule of "reasonable interchangeability," has attempted to establish a more definite criterion for determining the inclusion of alternative products within the relevant market and has also attempted to introduce the use of economic methods of analysis to aid in the solution of this problem. The utilization of cross-elasticity of demand as set forth by the Court provides a method for determining the existence of competition among alternative products. The existence of such competition was considered essential to the inclusion of substitute products within the relevant market by the court in the *Corn Products* case.[31] In the application of this method, however, the Court did not consider the costs of production of the other flexible wrapping materials. The logic of Judge Hand justifying consideration of this factor[32] appears sound and should not be ignored. In the principal case, while the price of cellophane was high enough so that it appeared to be in competition with other flexible wrapping materials, it is quite possible that defendant had an advantage in its cost of production which it decided to exploit. That is, defendant may have been able to lower prices much further and still have enjoyed a reasonable return but instead decided to maintain high prices and enjoy monopolistic profits to the extent of the cost differential.[33]

Finally, if the principal case is an example of the complexity of the

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29. Stocking & Mueller, *supra* note 1, at 55-57. The Court in the principal case appears to have been aware of this approach to the use of cross-elasticity. 351 U.S. at 398 n.26. For a criticism of Stocking & Mueller's article, see Dirlam & Seltzer, *The Cellophane Labyrinth*, 1 ANTITRUST BULL. 633 (1956). A reply to this criticism is found in Stocking, *On the Concept of Workable Competition as an Antitrust Guide*, 2 ANTITRUST BULL. 3 (1956).

30. See text supported by notes 14-15 & 17-18 *supra*.

31. See text supported by note 14 *supra*. Since the principal case would include within the relevant market those products which are found to be in competition, it seems clear that if the problem of the *Alcoa* case were presented to the Court today it would include "secondary" aluminum within the relevant market inasmuch as it competed with "virgin" aluminum. See text supported by note 19 *supra*.

32. See text supported by note 15 *supra*.

33. The high profits enjoyed by defendant, see Stocking, *supra* note 1, at 59; 351 U.S. at 420-23 (dissenting opinion), possibly indicate that defendant's prices were much higher than its costs. No evidence was presented to the Court, however, which compared defendant's rate of return with that of producers of other flexible wrapping materials. 351 U.S. at 404. This may explain why the Court did not consider the costs of production of the various wrapping materials.

It has been stated that the Court probably did not intend that the test of reasonable interchangeability should include products within the relevant market regardless of their production costs. Turner, *supra* note 9, at 308-09.

antitrust cases which will be coming before the courts in the future, the establishment of an administrative agency to enforce these laws might well provide a better means of enforcement than the courts. Such a board would be better equipped to gather and analyze economic data, would eventually develop economic and legal experts familiar with the problems arising out of antitrust prosecutions, and what is more important, would develop a uniform policy in the enforcement of the antitrust laws.[34]

CRIMINAL LAW—POWER OF A TRIAL COURT TO MODIFY A VERDICT

State v. Odom, 292 S.W.2d 23 (Tenn. 1956)

The jury found the defendant guilty of murder in the first degree. He moved for a new trial, and after a hearing on the motion, the trial judge found that the evidence was insufficient to support the verdict and entered judgment modifying the degree of the offense to murder in the second degree. On certiorari[1] the appellate court reversed and directed a new trial holding that where the evidence does not support the verdict the limit of the trial judge's authority, and his duty, is to order a new trial.[2]

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34. See 118 F. Supp. at 213 where Judge Leahy states that there is much argument as to the interpretation and enforcement of the antitrust laws and that "excellence of corporate function . . . calls for a critical re-examination by the Congress, after a half-a-century of the enforcement of the Sherman and allied Acts."

For judicial suggestions that courts and judges may not be capable of handling masses of economic data, see Standard Oil Co. v. United States, 337 U.S. 293, 310 n.13 (1948); United States v. United Shoe Mach. Co., 110 F. Supp. 295, 345 n.2 (D. Mass. 1953). In the principal case, the success of the defense may be attributed to the tremendous amount of evidence which defendant produced in proving the existence of competition, an approach which corporations in the future might very well take to heart. For a summary of the extent of defendant's evidence, see 118 F. Supp. at 198. The government, on the other hand, *failed* to offer any guides for determining degree of market control. *Id.* at 196.

It has been suggested that a panel of economic experts be provided for the judge. Clark, *The Orientation of Antitrust Policy*, 40 AM. ECON. REV. 93, 98 (1950); Newman, *The Place of Economic and Market Analysis in Antitrust Administration*, 1 ANTITRUST BULL. 743, 752 (1956). In United States v. United Shoe Mach. Co., *supra*, an economist, disguised as a law clerk, served as economic advisor to Judge Wyzanski. Newman, *supra* at 746.

See also Kansas City Star Co. v. United States, 25 U.S.L. WEEK 1117 (8th Cir. Jan. 23, 1957) (Citing the principal case, defendant argued for a broad interpretation of the relevant market. The court, however, concluded that broadcasting stations, newsreels, topical books, and other specialty items were not competing, in the true sense of the word, with defendant newspaper.).

1. The defendant sought dismissal of the state's petition on the ground that the state was precluded from an appeal in a criminal case. The court, citing TENN. CODE ANN. §§ 40-3401, 40-3404 (1955), held that the state was precluded from appeal in Tennessee only when the trial had resulted in an acquittal. State v. Odom, 292 S.W.2d 23, 24 (Tenn. 1956).

For a general discussion of the right of a state to appeal in criminal cases, see Miller, *Appeals by the State in Criminal Cases*, 36 YALE L.J. 486 (1927); Note, 47 YALE L.J. 489 (1938); Comment, 23 WASH. U.L.Q. 439 (1938).

2. State v. Odom, 292 S.W.2d 23 (Tenn. 1956).