Strict Liability of Cigarette Manufacturers and Assumption of Risk

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THE NEED FOR SPECIFIC TREATMENT

The liability of manufacturers for the physical harms allegedly caused by the smoking of cigarettes has been before the courts on several occasions and has been dealt with by a goodly number of writers. In the main, the courts have sought solutions by using the concepts of negligence, express and implied warranty, strict liability, and assumption of risk as worked out for and applied to other types of industries. While some of the legal writers have focused specifically on the unique characteristics of the issues in the cigarette cases, others have examined the issues somewhat more superficially. These traditional modes of treatment by the courts and this latter group of writers have obscured the basic question: whether under all the facts and circumstances cigarette manufacturers should bear the loss which the use of their products has caused.

Such conceptualized treatment has also caused remote and false analogies. Judge Goodrich, concurring in Pritchard v. Liggett & Myers Tobacco Co., was troubled about holding liable the manufacturer of cigarettes, a product unavoidably danger-

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1. Green v. American Tobacco Co., 391 F. 2d 97 (5th Cir. 1968), prior appeals reported in 325 F. 2d 673 (5th Cir. 1963) and 304 F. 2d 70 (5th Cir. 1962); Pritchard v. Liggett & Myers Tobacco Co., 350 F. 2d 479 (3d Cir. 1965), prior appeal reported in 295 F. 2d 292 (3d Cir. 1961); Ross v. Philip Morris & Co., 328 F. 2d 3 (8th Cir. 1964); Lartigue v. R. J. Reynolds Tobacco Co., 317 F. 2d 19 (5th Cir. 1963).

2. See, e.g., James, The Untoward Effects of Cigarettes and Drugs: Some Reflections on Enterprise Liability, 54 CALIF. L. REV. 1550 (1966); Prosser, Strict Liability to the Consumer in California, 18 HAST. L. REV. 9 (1966); Prosser, The Fall of the Citadel (Strict Liability to the Consumer), 50 MINN. L. REV. 791, 807-14 (1966); Wegman, Cigarettes and Health: A Legal Analysis, 51 CORNELL L.Q. 678 (1966); Comment, The Deadly Weed: Cigarettes are in Trouble, 5 HOUSTON L. REV. 717 (1968); Comment, Cigarette Manufacturers’ Warranty; Application of Old Law or New, 11 VILL. L. REV. 546 (1966).


4. See James, The Untoward Effects of Cigarettes and Drugs: Some Reflections on Enterprise Liability, 54 CALIF. L. REV. 1550 (1966); Wegman, Cigarettes and Health: A Legal Analysis, 51 CORNELL L.Q. 678 (1966); Comment, The Deadly Weed: Cigarettes are in Trouble, 5 HOUSTON L. REV. 717 (1968).

5. 295 F. 2d 292, 302 (3d Cir. 1961).
ous, on a theory of implied warranty of merchantability lest it compel a similar holding against the makers of whiskey, butter, and salted peanuts. The court in Lartigue v. R. J. Reynolds Tobacco Co., shared this concern and enlarged the list to include the manufacturers of sugar and ice cream. Prosser, discussing strict liability sounding in tort, has been more expansive still by adding the makers of sharp knives, hammers, legal drugs, rabies vaccine, automobiles, ether, castor oil, and the givers of blood for transfusions. Prosser recognizes that in actions based on negligence we have been able to escape the difficulty he foresees in applying strict liability because “The utility and social value of the thing sold clearly outweighs the known, and all the more so the unknown risk,” resulting in there being no negligence in marketing such products in their expected normal state. It would seem, however, that the same process of balancing of values and harms should be available to us in applying strict liability. No reason compels us to slavishly apply strict liability to the manufacturers of all such products because we elect to apply it to some. The common characteristic of having potential for harm does not create an indestructible unity of those products regardless of other differences. Courts, in some instances with the aid of juries, have been making value judgments similar to those involved in distinguishing among such products throughout the history of tort law. In negligence cases, the initial escape from Winterbottom v. Wright was accomplished by making a distinction between products, and the transition from negligence as a ground of recovery by consumers against manufacturers to the grounds of implied warranty and strict liability was made by making similar distinctions. For courts to decline to extend strict liability sounding in tort to the manufacturers of cigarettes solely because they fear an “infinity of actions” or a “flood of litigation” involving other products would be to again give us a body of law by judicial fear—historically the source of much bad

6. 317 F. 2d 19, 37 (5th Cir. 1963).
9. See Restatement (Second) of Torts § 402A, Comment k (1965) [hereinafter cited as Restatement].
12. See Jacob E. Decker & Sons, Inc. v. Capps, 139 Tex. 609, 164 S.W.2d 828 (1942).
It is inconceivable that courts, having extended strict liability to cigarettes manufacturers, would be unable to distinguish between them and the manufacturers of hammers and castor oil. The Federal Communications Commission was met with a similar problem when it invoked the fairness doctrine as to cigarette advertising. The cigarette manufacturers urged that the commission was setting a precedent which it could extend to other products. The commission replied that it knew of no other "advertised product whose normal use has been found by the Congress and the government to represent a serious potential hazard to public health."

The application of the doctrine to distillers, one of the groups for whom tender concern has been expressed, might not be amiss for reasons similar to those discussed hereinafter with respect to cigarette manufacturers. The fact that we tried and repealed prohibition is no argument against doing so since the political judgment to repeal prohibition in no sense constituted a judgment that a legal whiskey industry should not pay its way.

Return is now made to the specific, basic question of whether there should be a general judicial policy of strict liability against cigarette manufacturers for the physical harms caused by smoking cigarettes. Strict liability has been recently extended by many courts to a great mass of industrial products potentially harmful if sold with an unexpected defect, or if caused to be used without adequate warning or instructions. Such basis of liability is confidently asserted to be the law of today and tomorrow. Whether the doctrine will be extended to cigarette manufacturers involves the broader question of whether it is to be extended to the manufacturers of any product which is unavoidably dangerous. If it is to be extended to any, cigarette

16. Cf. Vincent v. Lake Erie Transp. Co., 109 Minn. 456, 124 N.W. 221 (1910), where the shipowner was held liable to the dock owner for damages caused to the dock during a furious storm, although the shipowner was lawfully docked and all steps he took to remain docked and to preserve his ship were lawful. The shipowner was simply required to pay his way.
manufacturers and whiskey distillers are among the most likely to be included because of the unique facts surrounding their product's use. There is no reason why the manufacturers of such products should be exempt from the sort of critical examination which produces judicial policy distinctions. The difference between rabies vaccine and cigarettes, two unavoidably dangerous products, is as great and as clear as that between cigarettes and permanent wave lotions, which is not treated as unavoidably dangerous. The approach should be that of weighing and balancing all social evils and values, the unavoidably dangerous status of any product being only one of the multitude of relevant factors to be considered.

One of the functions of this paper will be to examine the social evils and values of the manufacture and consumption of cigarettes to determine whether strict liability should be extended to cigarette manufacturers.

THE TOBACCO INDUSTRY

In 1966, 700,000 families in the United States cultivated 976,000 acres to produce a tobacco crop valued at $1,254,000,000, or $1,266 per acre. The five states of North Carolina, Kentucky, Virginia, South Carolina and Tennessee provided approximately five-sixths of this production. Exports of the value of $611,000,000 were made during that year, offset by imports valued at $137,000,000, leaving a favorable trade balance of $474,000,000. The 976,000 acres devoted to tobacco and its $1,254,000,000, or $1,266 per acre crop, compares to: 36,644,000 acres devoted to soybeans, producing a crop valued at $2,583,000,000, or $73 per acre; 1,436,000 acres devoted to peanuts, producing a crop valued at $271,000,000, or $190 per acre; 1,479,000 acres devoted to Irish potatoes, producing a crop valued at $663,000,000, or $448 per acre; and 56,888,000 acres devoted to corn, producing a crop valued at $5,285,000,000, or $92 per acre. Tobacco is thus revealed to be a very high gross-yield-per-acre crop. The net yield, however, presents a substantially modified picture. It required 494 man-hours of labor to produce an acre

22. Id. at 725.
of tobacco, whereas corn, cotton, and potatoes could be produced with 6.4, 44 and 47.6 manhours of labor respectively.\textsuperscript{24} This suggests that the net value of the tobacco produced per acre is not significantly different from the net value per acre of other crops. This is substantiated by comparing recent average values of farm lands in the principal tobacco-producing states with those in states producing little, if any, tobacco. Such average values for Kentucky and North Carolina, the two principal tobacco-growing states, were $165 and $158 per acre, respectively, while such averages for Mississippi, Texas, and Oklahoma, states producing insignificant amounts of tobacco, were $182, $172 and $181, respectively.\textsuperscript{25} There is no indication that the acreage devoted to tobacco production could not produce meat and many of the world's other needed food crops. In fact the principal tobacco-producing states of Kentucky, North Carolina, and Virginia produce a diversity of such food products.\textsuperscript{26}

In 1966, the government made price support loans to tobacco growers in the amount of $64,984,384, and during the years 1933-1967, there was a subsidy in the form of a realized loss on such loans of $44,615,601.\textsuperscript{27} The subsidized growth and export of foods would be a much more effective, and much more humanitarian instrument of international policy, than the subsidized growth and export of tobacco. Any other course means that some must starve in order that others may smoke.

So if by a combination of governmental policies including taxation, education, regulation of advertising, and the imposition of strict tort liability, the tobacco industry was gradually phased out of American life, or substantially so, no great and enduring economic void would necessarily result in our agricultural economy. Any void created could be filled by the production of life-sustaining agricultural products.

In 1965, 75,124 persons were employed in the manufacture of tobacco products, producing an annual payroll of $353,000,000. In 1966, tobacco manufacturers realized net profits after taxes of $389,000,000 amounting to 5.9\% of sales. This compared to like profits in the food industry of $2,102,000,000, amounting to 2.7\% of sales. The tobacco industry was 9th out of 26 major industries in the ranking of profits to sales. The

\textsuperscript{24} Id. at 629.
\textsuperscript{25} Id. at 616.
\textsuperscript{26} World Almanac 332, 340, 346 (Long ed. 1968).
\textsuperscript{27} Id. at 606.
annual profit rate in 1966 on stockholders's equity was 14% as compared to that for textile mill products of 10%; to that of leather and leather goods products of 12.9%; to that of petroleum and petroleum products of 12.4% and to that of all manufacturing corporations of 13.4%.

The production of cigarettes in 1966 amounted to 562,677,000,000, resulting in a per capita consumption of 4,290. This was up from a production of 147,922,000,000 in 1940, and a per capita consumption of 1976. In order to induce the populace to use its products, the tobacco industry in 1964 spent $328,000,000 for all forms of advertising. This was 6.1% of its total receipts and constituted the highest such percentage of all industries. The 6.1% compares to 4.4% for chemicals and allied products, the next highest; and 0.9% for apparel and other fabricated textile products. The average family expenditure for tobacco in 1960-61, was 1.8% of family income though in the case of the rural, nonfarm population and of Negroes, the poorer elements of our society, the percentages were 2% and 2.2% respectively. The actual expenditure for tobacco in 1962 was $7,400,000,000 and in 1965, $8,400,000,000. From the manufacture and sale of cigarettes in 1966, the federal government collected $2,006,000,000 in taxes and the states collected from the sale of tobacco products $1,541,000,000.

In addition to the foregoing economic and tax values of the tobacco industry, there are claimed physical and psychological benefits from the use of tobacco. The physical benefits claimed are "(a) maintenance of good intestinal tone and bowel habits . . . , and (b) an anti-obesity effect upon reduced hunger and a possible elevation in blood sugar." While recognizing that to the extent the claims were valid, they could not be "totally dismissed," the Committee reporting to the Surgeon General concluded: "[I]t would be difficult to support the position that these attributes would carry much weight in counter-balancing a significant health hazard." The committee found more nebulous and troublesome the question of the relationship of smoking to mental health. It noted that historically man had sought contentment through the use of pharmacologic aid and that

28. Id. at 582-83.
30. Id. at 338, 323.
31. Id. at 396, 429.
33. Id.
cigarettes contributed to the satisfaction of this widespread need for a psychological crutch. The committee then concluded: "Since no means of quantitating these benefits is apparent the Committee finds no basis for a judgment which would weigh benefits versus hazards of smoking as it may apply to the general population." But the general observations of the committee about the mental health benefits from smoking are weakened by the fact that they are supported very little by the results of studies made on the reasons why people begin smoking. In a study made of 3,449 boys and 3,361 girls, grades 7-12, in Newton, Massachusetts High School, the participants were asked to give their reasons for beginning smoking, if they had, and the reasons why they thought others began smoking. Answering both for themselves and for others, "conformity" led all other reasons given by male smokers by a substantial margin. "Enjoyment and tension release" led desire to "impress others" by a very small margin as the second ranking reason, but there is a strong basis for believing that "enjoyment and tension release" does not rank that high as a reason for beginning smoking. In speaking of themselves, 34.3% of the smokers gave this as at least one of their reasons for beginning smoking, but only 15.0% of the smokers gave this as one of the reasons why they thought others began smoking. This indicates that in speaking of themselves, smokers were either (1) giving an excuse for why they smoked, or (2) were describing their reasons for satisfying their habit after it was formed, or both. That (1) may be true is supported by the fact that "enjoyment and tension release" would appear to be a more flattering substantive reason, and thus a more solid basis of self-justification, than either "conformity" or to "impress others." That (2) may be true is borne out by the fact that nobody "enjoys" beginning smoking. The body's initial reaction is to reject the foreign substances contained in the smoke resulting in nausea and sometimes vomiting. It is only after

34. Id. at 355-56.
36. Id. at 127, 128: "Smokers, in talking about themselves, apparently find conformity, curiosity and enjoyment 'acceptable' reasons since they attribute these to themselves in appreciable numbers. Adult emulation and the desire to impress others also appear to be strong motivations as judged by smokers in relation to other smokers, but since they are given much less frequently as reasons for their own smoking, it appears that they are 'less acceptable'. . . . Firstly, there may be a genuine projective mechanism at play by which students attribute to others motives they unconsciously have themselves and attribute to themselves motives which are acceptable even though they may in fact be of small importance."
37. Smoking and Health '64, 353.
the body is pounded into submission and builds up a tolerance to nicotine, and at least a limited habituation has developed, that one "enjoys" smoking. A substantial part of the "enjoyment" that then occurs comes from releasing the "tension" caused by the gnawing, cigarette induced desire. Thus, the industry hoists itself by its own petard. The reasons of "conformity" and to "impress others," the first and probably second real reasons, would seem to have no independent connotations for mental health, but have meaning only in a context created by the prior existence of smoking.

So, while the committee had no studies that provided it with a quantitative measure of smoking's aid to mental health, causing it not to strike a balance between such aid and the great physical harms it did find, it presented little evidence, and little exists, that smoking does more than aid in curing the mental ills created by its own existence and use.

The observations on mental health by the committee apparently spawned a great number of studies in this complex area. The Surgeon General's 1967 Report, the only subsequent report making reference to this aspect of the problem, stated that many studies had been begun, but no reportable conclusions had become available. So at this point there is essentially no evidence that cigarette smoking aids independently existing mental ills, while there is overwhelming evidence that it is a great destroyer of human life.

TOBACCO AND HEALTH

"A custome lothsome to the eye, hateful to the nose, harmfull to the braine, dangerous to the lungs, and in the blacke

38. See text accompanying notes 40-53 infra.
39. This is strongly indicated by a special news item appearing in the Houston Chronicle on June 18, 1968. It bore a San Francisco dateline and read:

DOCTOR SAYS SOME PEOPLE SHOULD SMOKE

San Francisco (UPI)—Even though they are slowly killing themselves, some people are better off smoking, a psychiatrist told the American Medical Assn. "Once you've got it, the smoking habit, it may well be that you shouldn't stop," said Dr. Sheldon Cohen of Atlanta.
Cohen said patients who have been ordered to give up cigarettes because of serious disease frequently develop bad emotional disorders. "All too often, it brings about the unmasking of depression, aggression and what have you," the doctor said.
Cohen, a nonsmoker, has researched withdrawal problems for 11 years and has treated numerous patients who were trying to stop.
He cited the case of a patient who had cancer-prone lesions in the throat. "Shortly after he quit smoking, this fellow went to a party, beat up his wife and best friend and made quite a fool of himself," Cohen said. "He and I both agreed he was better off with cigarettes."
41. Id. at 188.
stinking fume thereof, neerest resembling the horrible Stygian smoake of the pit that is bottomlesse."

—King James I, 1604

As quoted in the Houston Chronicle January 10, 1964.

On the basis of reliable information, it is estimated that cigarette smoking causes at least 125,000 excess deaths per year.\textsuperscript{42} That is almost double the combined number of people killed annually by automobile accidents,\textsuperscript{43} the Viet-Nam War\textsuperscript{44} and murder.\textsuperscript{45} It has been established that smoking is causally related to lung cancer, cancer of the larynx, bronchitis, coronary heart disease and emphysema,\textsuperscript{46} and a strong associational connection has been established between smoking and cancer of the esophagus and urinary bladder, peptic ulcers, cirrhosis of the liver, and the birth of smaller babies to smoking mothers.\textsuperscript{47}

And the increase in the death rates in these areas has roughly paralleled the increase in the consumption of cigarettes. In 1910, the per capital consumption of cigarettes was 138; in 1930, 1,365; in 1940, 1,828; in 1950, 3,322, and in 1961, 3,986. Deaths from arteriosclerotic, coronary, and degenerative heart disease rose from 273,000 in 1940 to 578,000 in 1962; from emphysema, deaths rose from 2,300 in 1945 to 25,416 in 1966, and from lung cancer deaths rose from less than 3,000 in 1930 to 48,483 in 1965.\textsuperscript{48}

The mortality ratio of smokers to nonsmokers among those who die of lung cancer is 10.8 to 1; of bronchitis and emphysema, 6.1 to 1; of cancer of the larynx, 5.4 to 1; of coronary disease, 1.7 to 1, and of those who die of all causes 1.68 to 1.\textsuperscript{49}

All thirty-five year old men who smoke from 10-19 cigarettes per day will pay, on the average, with 5.4 years of their lives; if they smoke 20-39 cigarettes per day with 6 years of their


\textsuperscript{43} There were 49,163 killed in automobile accidents in the United States in 1965. Stat. Abs. 1967, 59.

\textsuperscript{44} There were approximately 9,378 killed in the Viet Nam War in 1967. This is not an official figure but has been established to be a reliable estimate.

\textsuperscript{45} There were 9,850 murders and non-negligent manslaughters in the United States in 1965. Stat. Abs. 1967, 149.


\textsuperscript{47} Health Consequences '67, 33-36, 39.


\textsuperscript{49} Smoking and Health '64, 29.
lives and with 6.9 years of their lives if they smoke more than 40 cigarettes per day. That is, depending on the number of cigarettes per day used in the calculation, the cost is approximately 8 minutes of life per cigarette smoked—about the length of time it takes to smoke it.

If we leave aside the illness, suffering, grief, and loss of life caused by cigarette smoking, and express the loss only in economic terms, the figures are startling. Using men only, and concentrating on the younger age groups where premature loss of life is most tragic, we determine that in 1966 there were 12,325 excess deaths in the 35-44 age bracket because of cigarette smoking. At 31 years each, the life expectancy of a 40-year old man, this amounted to a loss of 382,075 man-years of life. If we value a man-year of life at $4,000, the total loss is $1,528,300,000. Similarly, we find that in the 45-54 age bracket there were 50,214 excess deaths in 1966. By using 23 years, the life expectancy of a 50-year old man, and $3,000 per man-year as the average economic value, we arrive at a loss of $3,464,766,000. The combined total for these two age brackets alone is $4,993,066,000. And of course economic loss occurs from disabilities short of death. It has been estimated that we now lose annually 77,000,000 excess man-days of work because of illnesses induced by cigarette smoking. At an average of $25 per day, that loss is $1,925,000,000 for a grand total of $6,918,066,000 in losses from these three items alone. If we should add the remainder of the age brackets for men, and all the age brackets for women, the total would undoubtedly exceed a loss of $10,000,000,000 annually. The tobacco industry, in waging its battles in Congress, points out defensively that it is a $10,-000,000,000 industry and of vital importance to the economy. But looked at as an economic phenomenon alone, the balance seems to be heavily on the debit side since, apart from the human tragedy it produces, the industry devours annually economic assets equal to its total worth.

51. See Appendix A at end of footnotes.
52. Health Consequences Supp. 1968, 6. The entire statement reads: "Data from the National Health Survey provide a base for estimating that in 1 year in the United States an additional 77 million man-days were spent ill in bed, and an additional 306 million man-days of restricted activity were experienced because cigarette smokers have higher disability rates than non-smokers. ..."
Since it could not be determined what overlapping, if any, might be in those figures, only man-days of work lost were used.
This is the tobacco industry and its fruits. Tobacco is neither food nor medicine, and it is doubtful that it satisfies any significant desires other than those of its own creation.\textsuperscript{54} It is certain, however, that it is one of the nation's leading producers of death and other human tragedies. In applying any legal principle in cases involving the cigarette industry, the above facts bearing on its utility must be taken into account. Failure to do so would be to decide cases in a conceptual vacuum.

It thus seems evident that no policy considerations based on utility dictate shielding the cigarette manufacturing industry from strict tort liability, but, on the contrary, the low utility of the industry and the gravity of the risks it poses makes it an appropriate industry for the imposition of such policy.

\textbf{THE ASSUMPTION OF RISK}

If strict liability is to be so extended, there would still remain the crucial question of whether cigarette smokers are to be barred from recovery because they have assumed the risks involved in smoking. There has been comparatively little discussion of this problem\textsuperscript{55} and the second function of this paper will be to develop this issue in the light of the total relevant facts.

The defense of assumption of risk will be vigorously urged by cigarette manufacturers regardless of the tort theory on which plaintiffs seek to establish their liability. And based upon the holdings in other products liability cases the defense will likely be effective\textsuperscript{56} unless the unique nature of cigarettes, and the health hazards from their use, cause the adoption of a different policy in cigarette cases.\textsuperscript{57} The convictions expressed in

\begin{itemize}
\item \textsuperscript{54} A famous lung surgeon and medical authority has said: "The only good thing that I know about tobacco is that it kills bugs. Nicotine does this. But there is \textit{nothing} good about it as far as human consumption is concerned." Ochsner, \textit{Dabbling in Death}, Smoke Signals, July-September 1962.
\item \textsuperscript{55} Pritchard v. Liggett & Myers Tobacco Co., 350 F.2d 479, 485 (3d Cir. 1965); and Wegman, \textit{Cigarettes and Health: A Legal Analysis}, 51 \textit{Cornell L.Q.} 628, 718 (1966), contain some discussion on this point. Wegman's discussion is brief and inadequate and that in \textit{Pritchard}, a case that arose in 1953, will have little relevance to future cases because of the wide dissemination of the information contained in the Surgeon General's 1964 and subsequent reports. See \textit{Smoking and Health '64}, 355; Health Consequences '67, 27-31; Health Consequences Supp. 1968, 97, 136.
\item \textsuperscript{56} Shamrock Fuel & Oil Sales Co. v. Tunks, 416 S.W.2d 779 (Tex. 1967); See cases cited note 17 supra; Cowan, \textit{Some Policy Bases of Products Liability}, 17 \textit{Stan. L. Rev.} 1077, 1094 (1965), predicts, however, that ultimately defect as a requirement and assumption of risk as a defense will both be dropped from products-liability cases.
\item \textsuperscript{57} It is not sound to consider assumption of risk except in the full context of the fact situation in which it is invoked, since no conceptual term has real meaning apart from the setting in which it is to be applied. "Let it be emphasized that each of these defensive doctrines is a variable or
\end{itemize}
this paper will be cast as arguments that the defense of assumption of risk should not have its normal application in these cases.

The first thing that should be said is that the defense of assumption of risk has experienced growing disfavor since the height of its application around the beginning of this century.\textsuperscript{58} This is illustrated by its elimination by Workmen's Compensation Statutes, the Federal Employer's Liability Act, and kindred statutes. Some states have narrowed its application by judicial action.\textsuperscript{59} Still others would eliminate it altogether as an affirmative defense and leave its functions to contributory inconstant and highly ambiguous and each is given meaning by the factual content of the particular case and its environment. The assumption of risk doctrine as a residuary doctrine of the group takes on many colorations and any authoritative formula for making use of it will be helpful only so long as it does not impinge on the freedom of a court to evaluate the factual and environmental data of the particular case to the end that the risk involved can be allocated to the one party or the other with a maximum of justice."


58. W. Prosser, \textit{The Law of Torts} 450-68 (3d ed. 1964) [hereinafter cited as Prosser]; Symposium, \textit{Assumption of Risk}, 22 La. L. Rev. 1-166 (1961). One of the writers in this symposium stated:

"Society has an interest in the well-being of its members. It seeks to shield them from very grievous harm when there will be no appreciable gain. For the most part this concern manifests itself only when the loss to the individual has some more or less discernible impact on the welfare of others or the community at large. But the interest goes beyond this, perhaps as the mark of a civilized society, to a concern for the individual himself... Society takes an interest in the individual for his own sake, without the necessity of piecing out some altogether imagined effect on the community at large. His life, his safety, his welfare are themselves matters of common concern in a society largely organized to promote them..."


"Of course, the defendant can impose some burdens on the alternatives open to the plaintiff, perhaps even with the purpose of coercing willingness, without his conduct in exposing the plaintiff to a risk or invading his interest being conclusively condemned... But if the effect of his conduct is seriously to impair the plaintiff's power to meet him on an equality, a judgment whose difficulty need not be emphasized, then the philosophy of choice is abandoned and the defendant's conduct in invading the plaintiff's interest or exposing him to a risk conclusively condemned.

"There has been no greater change in social policy over the past half century than on this question of when the plaintiff's power over his environment is so reduced that it is best unqualifiedly to forbid the defendant to act in a risky manner. In regard to certain classes of plaintiffs there has been a radically altered and notably more realistic appraisal of the alternatives practically open to them and the slightness of their power over the environment. The change has come through both statute and judicial decision. Experience here has been the great teacher as to the insufficiency of individual choice, no matter how intelligently exercised, to overcome social and economic disabilities.""

\textit{Id.} at 45, 50.

negligence. And the disfavor it has increasingly incurred can be attributed to the fact that, as applied, it has been essentially a rigid, harsh doctrine, producing injustice in many individual cases. It provided, especially in its earlier application, little room for weighing the great variety of circumstances, of varying degrees of compulsion, under which the plaintiff had acted, or for weighing the utility of the activity the defendant was seeking to advance. Justice Frankfurter once described it in a concurring opinion as a literary expression that had come to be uncritically applied. The United States Supreme Court has characterized the defense as being one judicially created to protect expanding industry from the “human overhead” inevitably involved in its operation. It hardly needs to be said, however, that we do not need by judicial policy to provide a climate for the expansion of the cigarette-manufacturing industry. On the contrary, it would seem to be appropriate for courts to use their full measure of judicial discretion to discourage its expansion. And this is an area in which our courts, of all our branches of government, may be the freest to act. The lobby pressures on Congress are tremendous.

The elements of implied assumption of risk, as it would be asserted in cigarette cases, are, first, that there be a risk created by defendant; second, that the plaintiff “must not only know of the facts which create the danger, but he must comprehend


61. “The phrase 'assumption of risk' is an excellent illustration of the extent to which uncritical use of words bedevils the law. A phrase begins life as a literary expression; its felicity leads to its lazy repetition; and repetition soon establishes it as a legal formula, undiscriminatingly used to express different and sometimes contradictory ideas . . . .”


62. “Perhaps the nature of the present problem can best be seen against the background of one hundred years of master-servant tort doctrine. Assumption of risk is a judicially created rule which was developed in response to the general impulse of common law courts at the beginning of this period to insulate the employer as much as possible from bearing the 'human overhead' which is an inevitable part of the cost—to someone—of the doing of industrialized business. The general purpose behind this development in the common law seems to have been to give maximum freedom to expanding industry . . . .”

Id. at 58-59.

63. A congressman, responding to a survey by the Christian Science Monitor, stated:

“Let's face it, though. When you combine the money and power of the tobacco and liquor interests with advertising agencies, newspapers, radios, and television . . . . there is too much political muscle involved to expect much accomplishment.”

and appreciate the danger itself," and third, that plaintiff's "choice to incur it [the risk] must be entirely free and voluntary." As to the first of these elements, it cannot be seriously questioned that cigarette manufacturers have created a grave health risk by making and marketing cigarettes, and by urging their use by massive and continuous advertising campaigns. The existence and application of the second and third elements of this defense raise much more difficult questions, however, and require a more comprehensive analysis. It is here that additional words of Justice Frankfurter in *Tillier v. Atlantic Coast Line R.R.* have particular significance. He stated: "The notion of 'assumption of risk' as a defense—that is, where the employer conceded failed in his duty of care and nevertheless escaped liability because the employee had 'agreed' to 'assume the risk' of the employer's fault—rested in the context of our industrial society upon a pure fiction." It is equally "pure fiction," speaking in the social context of our beginning teenage smokers where normal teenage pressures are intensified by an incessant bombardment of tempting advertising, to say that they assume the health risk of smoking.

In dealing with these latter two aspects of assumption of risk, one of the most important factors to bear in mind is that almost all smokers begin while they are yet children. One study of the smoking habits of a group of high school students shows that 40.2% of those approximately 15-17 years of age considered themselves to be smokers. It is reasonable to assume that if the study had involved 17-year-olds only, the percentage would have been higher still. In fact, the United States Public Health Service has reported that 50 percent of American teenagers have become regular smokers by the time they reach 18 years of age, and that more than 4,000 young people begin

65. Id. at 461.
66. 318 U.S. 54 (1943).
67. Id. at 69.
68. The legal significance of this fact is that the law has universally recognized that children lack competence and discretion. In *Charbonneau v. MacRury*, 153 A. 457, 462 (N.H. 1931), the court said: "A minor, in the absence of evidence to the contrary, is universally considered to be lacking in judgment. His normal condition is one of recognized incompetency . . . . It is a matter of common knowledge that the normal minor not only lacks the adult's knowledge of the probable consequences of his acts or omissions, but is wanting in capacity to make effective use of such knowledge as he has. His age is a factor insofar as it is a mark of capacity . . . ."
smoking every day. Others "have concluded that by the early college years the habit is well-formed and therefore hard to break." About 10 percent develop the habit "before the teens."

The general prevalence of teenage smoking is a significant part of the context in which the cigarette manufacturer operates. He casts his product into the free and unrestricted channels of commerce where he knows that children, heedless and indiscreet, will be engulfed by exposure to them. He knows that any amount and type of warning will not likely be wholly effective, especially in view of his continuing program of seductive advertising. In this situation, as a manufacturer of a product unavoidably dangerous and of low utility, he should not be privileged to market it without paying for the damages caused by its normal and intended use. When we ask whether a smoker, with full knowledge and understanding of the risk, voluntarily and responsibly assumed that risk, we must remember, if we focus on the point of beginning, that we will be asking that question about the very young. We will be asking it about them before we consider them old enough to vote or to make, though without fraud or overreaching of the other party, a binding contract involving the ordinary, transitory things of life. The reason generally stated for this policy is to protect the minor from being injured by his own improvident acts or from the fraud of overreaching of others. Yet, if we say that by the

71. Id. at 881.
72. "The psychology of teenagers being what it is, and living as they do under the 'illusion of immortality', even the most bluntly-worded warning may be not effective in overcoming the pressures to take up, or continue with, a habit that has been made to symbolize a 'passport to adulthood'."
time the cigarette habit is set these youngsters have assumed the risk, we are saying that they are competent to responsibly make a decision that may cost them up to 35 years of their lives. It is certain that on the average it will cost them 5 or 6 years of their potential existence.76

Further, the pressures under which teenagers begin smoking are very similar to those under which they buy that shiny new automobile, a transaction we will let them disavow. While the yearnings of the normal youth for the new automobile are strong, the pressures to begin smoking are similarly great. An investigation by a noted research team found the principal reasons given by teenagers for beginning smoking were: "Conformity to peer group," "Adult emulation," "To impress others," "Curiosity and novel experience," "Rebellion against authority," "Enjoyment and tension release," and miscellaneous other reasons that did not fit into these categories.76 Some of these reasons, especially "Conformity to the peer group," "Adult emulation," "Curiosity and novel experience," and "To impress others," constitute very strong teenage pressures. All of us can recall instances, perhaps our own, of the young man who wants to impress that favorite young lady with his masculinity, adulthood, and urbanity, and who uses the nonchalant smoking of a cigarette to make his point. Similarly, we can recall having the experience, or of knowing of others who did, of being under severe temptation to smoke because "friends" were doing it or to avoid being thought of as lacking in daring. Those pressures are pulsating and real and to the young, to whom middle age is an eternity away, are likely to be overpowering, even though they have all the facts about the risks involved.77 Few children

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75. It might be urged that contract ideas are not relevant here; that personal injury cases against cigarette manufacturers are tort cases, and that cases recognizing that children can commit torts, or be guilty of contributory negligence are the most applicable. Apart from the point that assumption of risk has a contractual ring to it, it should be remembered that in cases which hold that children can commit torts, the child's adversary is by assumption a completely innocent person whose interests are to be balanced against those of the child tortfeasor. While the child's adversary is not innocent where the issue is the child's contributory negligence, the child there, as well as where the issue is his primary negligence, is entitled to have the issue decided on the basis of all the surrounding facts and circumstances, his age, intelligence, and experience being among those to be considered. Certainly no less consideration should be accorded the child in an assumption of risk case, and it is the conviction reached in this paper that, all facts and circumstances considered, assumption of risk, as applied to them, should be rejected as a matter of law.


77. "Furthermore, being a minor, he did not assume the risk of the accident which caused his injuries, unless, in addition to a knowledge of the defects referred to, he knew the nature and extent of the danger, and had the discretion to
would voluntarily exchange candy for promises of good, sound teeth, or give it up because of warnings of the prospects of false ones. Effectiveness of fact motivations with the young will roughly equal their intrinsic strength discounted by the time distance away.

These normal teenage pressures are intensified by the massive, continuous advertising programs of the cigarette manufacturers. During 1967, cigarette manufacturers spent in excess of 311 million dollars on all forms of advertising and more than 226 million dollars on television advertising alone.\(^7\) Such television advertising may depict young, handsome people smoking in a happy, romantic mood, or associate smoking with the rugged, virile male mastering his machine, or surveying inspiring scenes of open country.\(^8\) Such advertising may not be expressly directed to teenagers, but in view of their known motivations to smoke, it could hardly be made to appeal to them more.

Such advertising reaches the very young in saturating proportions...In one month alone, January 1968, there were 1,827,420,000 television exposures to children between the ages of 2-11 years, or 44.5 exposures per child. In the same month, there were 1,371,430,000 exposures to children between the ages of 12-17, or 60.88 exposures per child.\(^9\) And in the face of increasingly

properly weigh his liability to injury from it.” Missouri, K. & T. Ry. v. Smith, 99 S.W. 743, 746 (Tex. Civ. App. 1907), rehearing denied. In the case of beginning cigarette smokers, there should be added: the will power to withstand the temptation to begin, knowledge of the force of the habit, and the difficulties of quitting. Courts recognize that a child’s discretion may not keep pace with his chronological age: “And we may remark just here that the discretion of a minor does not always keep pace with his intelligence. His intellect may be cultivated and developed, and yet he may be more heedless than one of more tender years.” Texas & P. Ry. v. Brick, 20 S.W. 511, 514 (Tex. 1892).

\(^7\) FTC Report ’68, 7.
\(^8\) Id. at 14-17.
\(^9\) Id. at 9-11.

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ing publicized evidence that cigarette smoking poses hazards to health, the industry has increased its exposure per child for small children from 39.27 in January 1967, to 44.5 in January 1968, and for teenagers in the same period from 55.53 per child to 60.88.\(^{81}\) If we use an average of 50 exposures per month for the total period, ages 2-17 inclusive, we find that the average child is thus alluringly exposed to cigarette smoking a total of 9,600 times during the most impressionable years of its life. What tremendous odds to overcome by parents who all too often become to their teenage children symbols of opposition to fun and the good things of the young life.

The lure of advertising is only one of the bases for objection to it. In the light of present knowledge, it can be said to be outright misrepresentation. The Federal Trade Commission has recommended to Congress that all cigarette advertising on radio and television be banned.\(^ {82} \) Commissioner Elman, in a statement attached to the Commission’s report, concurred in this recommendation and stated:

“The avalanche of cigarette advertisements on television and radio is a national disgrace. The industry spends hundreds of millions of dollars each year on such advertising—and the rate of expenditure is increasing—to obscure the fact that cigarette smoking is a dangerous and harmful habit which each year shortens the lives of hundreds of thousands of people. . . .

“The airwaves are saturated with an endless barrage of commercials pounding home the deceptive message that cigarette smoking is a pleasant and satisfying habit enjoyed by healthy and attractive people. . . .”\(^ {83} \)

What the industry is doing, viewed most charitably, is telling half truths and it has long been held to be implied misrepren-
sentation to intentionally relate a half truth as though it were the whole truth. So, if there are many happy and attractive people who smoke, and there are, it is a tacit misrepresentation to drum that fact home daily without revealing the tragic results from smoking that are now established with certainty to exist. The Federal Trade Commission's 1968 report to Congress discloses how the themes of cigarette advertising are adroitly selected and exploited to make cigarette smoking appear to be the socially attractive thing to do while subtly attempting to allay all apprehensions that one might entertain about such smoking. It is deliberate, subtle misrepresentation on a grand scale.

One particular project of cigarette manufacturers designed to mislead was given specific treatment by the commission in its 1968 report to Congress. It went beyond product advertising. A public relations executive retained by one of the tobacco companies wanted to get a favorable article on cigarette smoking published in True magazine. He and the editor of True got an author who was predominantly a sports writer, to prepare the article "To Smoke or Not to Smoke—That is Still the Question." He was paid a total of $2,000 for his work. The Public Health Service in a post publication analysis concluded that the article contained many half truths, distortions, and misrepresentations. Of the four editors of True who considered the article, three approved it for publication, but one of them stated: "I find it completely biased and if actually not hogwash, pretty damn misleading." The editor who disapproved stated: "Let's really face it: what's wrong here is that our writer didn't go out like a good reporter and do his legwork and his homework. The result is the purest trash—dated, biased and without present

84. In a case where the seller revealed the existence of easements for two unopened streets across land he was selling, but did not disclose the existence of a third, the court said: "The enumeration of two streets, described as unopened but projected, was a tacit representation that the land to be conveyed was subject to no others, and certainly subject to no others materially affecting the value of the purchase." Junius Constr. Co. v. Cohen, 178 N.E. 672, 674 (1931).

85. Even the warning presently appearing on cigarette packages: "Caution: Cigarette smoking may be hazardous to your health" is itself misleading. Cigarette smoking hurts all smokers.

"Every regular cigarette smoker is injured, though not in the same degree. Cigarette smoking kills some, makes others lung cripples, gives still others far more than their share of illness and loss of work days. Cigarette smoking is not a gamble; all regular cigarette smokers studied at autopsy show the effects." (Medical Bulletin on Tobacco, December 1967, April 1968.)

FTC Report '68 (concurring statement of Comm'r Elman).

86. FTC Report '68 at 12-21.
87. Id at 24-30.
88. Id. at 26.
The reason the writer had not done his legwork was because an attorney for one of the tobacco companies supplied him with his materials. When True was published and distributed, ads costing $67,146.68 were bought by the tobacco companies and run in 63 newspapers quoting such statements from the article as "there is absolutely no proof that smoking causes human cancer." The companies then purchased over a million reprints of the article which they distributed or caused to be distributed. Mailing lists were obtained from sources for some of those caused to be distributed without disclosing to such sources the tobacco companies' interest in the project, and some of those distributed were made to appear to be coming from the editors of True. Among these were 414,820 sent to medical and communications personnel, biological scientists, educators, government officials, security analysts, lawyers and other opinion leaders.

Such questionable practices by the industry make believable the contention that its other advertising is deceptive by cold and deliberate calculation.

The consequences of this deception are believed to be legally significant if cigarette manufacturers should defend against future damage suit actions by invoking assumption of risk. There would be significance for all cases, but especially so in those involving persons who began smoking in their teens or younger. Even without a setting of fraud or deceptive advertising, courts have refused in many cases, as a matter of public policy, to apply to children the doctrine of implied assumption of risk where otherwise the facts for doing so were strong. The action in Chicago, R.I. & E.P. Ry. v. Easley was by a 17-year-old employee against his employer for injuries incurred when the walls of the gravel pit in which he was working caved in. Defendant asked for an instruction that if the dangers of the wall caving were as open and obvious to the plaintiff as they were to the defendant, then the plaintiff would have assumed the risks of his employment. The court in approving the denial of that instruction said:

"In the case of a minor, on the other hand, the defense of an assumption of ordinary risks is viewed as one which is merely conditional upon production of specific and positive evidence going to show that the risk in question was as a

89. Id. at 27.
90. 149 S.W. 785 (Tex. Civ. App. 1912), rehearing denied.
matter of fact comprehended. In short, where a minor is concerned, ordinary risks are for evidential purposes always treated at the outset of the inquiry as extraordinary, and the burden of establishing the servant’s comprehension of the particular risk is cast upon the employer. . . .

“[T]he law is not as willing to charge a minor with the assumption of risks attendant upon employment as a man of mature years.”

Lenahan v. Pittston Coal Mining Co. involved a child labor law which prohibited the employment of children under 15 years of age around certain types of dangerous machinery. The court held that “A boy employed in violation of the statute is not chargeable with contributory negligence or with having assumed the risks of employment in such occupation.” There are in most, if not all, states laws against selling cigarettes to children below a certain age. While cigarette manufacturers do not sell cigarettes directly to children below the prohibited age, they launch them into the channels of trade, knowing that through vending machines and other outlets children can and will buy them. The manufacturers then seek to entice them to do so by a barrage of attractive advertising. Surely the parasitic cigarette manufacturer should fare no better than the employer who engages the youngster in the basically wholesome activity of work and pays him for his services.

The courts have made similar holdings to that in Lenahan where no employer-employee relation in violation of statute existed. In Bonner v. Moran, a 15-year-old boy sued a surgeon for taking skin from him for a skin graft though the plaintiff had knowingly consented to the performance of the operation. The trial court had given an instruction that if the child was capable of appreciating and did appreciate the nature and consequences of the operation, and did expressly or impliedly consent, there would be no liability. The court of appeals held this charge to be erroneous. It said the basic consideration was

91. Id. at 789; accord, Crenshaw Bros. Produce Co. v. Harper, 194 So. 353 (Fla. 1949); Tabert v. Zier, 368 P.2d 685 (Wash. 1962).
92. Hamilton v. Redeman, 97 P.2d 194, 200 (Ore. 1939). This case also draws a sharp distinction between knowing something is dangerous and understanding and appreciating the risk with sufficient fullness to make an intelligent decision as to whether to encounter it. Id.
93. 67 A. 642 (Pa. 1907).
94. Id. at 643; accord, Terry Dairy Co. v. Nalley, 225 S.W. 887 (Ark. 1920); Tamiami Gun Shop v. Klein, 116 So.2d 421 (Fla. 1959); Dusha v. Virginia & Rainy Lake Co., 176 N.W. 482 (Minn. 1920).
95. 126 F.2d 121 (D.C. Cir. 1941).
whether the proposed operation was for the benefit of the child, being done to save his life or limb. The court concluded that the nature of the operation and the possible consequences were such that they required a mature mind to understand. How much more is that true of the young smoker who is pulled and hauled between the sober warnings by his elders of the dangers of smoking cigarettes and the contradictory claims of the industry backed by subtle and deceptive advertising.

In still another situation, the law protects children against the consequences of their indiscretions and their own inability to protect themselves. A previously chaste girl under a certain age, usually 18, cannot give a valid consent to sexual intercourse though, in fact, consent may be willingly given. In a number of cases such girls have brought suit for damages against the male participants and recovered. Initial sex relations with unmarried girls of that age is looked upon by society as a serious violation of their persons. Encouraging a child to start down a habit forming road from which the weakness of his will may never let him return, and which may cost him many years of his life, should be regarded as equally serious.

The policy which causes the law to extend protection to minors in the normal, fair, and open transactions of life, often when the stakes are comparatively low, should operate to prevent the defense of assumption of risk being used against them when years of their lives are at stake, when planned deception is used to encourage them to incur the risk, and when the product of the defendant inflicting the harm has little, if any, utility.

The defense of assumption of risk requires that defendant establish, among other things, that plaintiff was aware of the risk at the time he acted. While reliance by plaintiff on the implied representations of the defendant that its product is harmless is not essential to an action based on strict liability in tort, the defendant should not be able to claim, as a matter of

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96. *Id.* at 123; see also *Wellman v. Fordson Coal Co.*, 143 S.E. 160 (W. Va. 1928), holding defendant liable for the death of an 11-year-old boy occurring while he was throwing powder on a fire, the dangers of which he was established to be aware. The defendant had not enticed the child to use the powder—as cigarette manufacturers do children to use cigarettes—he had only negligently left it exposed.


STRICT LIABILITY

law, that plaintiff was aware of a risk which defendant incessantly and over long periods of time had been, by its advertising, telling plaintiff did not exist. In analogous situations involving adults, even where the risk was open and obvious, defendants have been unable to establish as a matter of law the defenses of contributory negligence and assumption of risk. The underlying reason is that stated by the court in **Bishop v. E. A. Strout Realty Agency, Inc.**, "[I]t was never any credit to the law to allow one who had defrauded another to defend on the ground that his own word should not have been believed." In fact, there is a substantial line of products-liability cases beginning with **Baxter v. Ford Motor Co.** which have gone further and recognized such misrepresentations as the basis for a cause of action by the consumer against the manufacturer. That proof of reliance in the traditional sense is not necessary

99. There should be no problem about presuming that such misleading representations have often reached substantially all children when such children in television audiences alone have 9,600 exposures between the ages of 2-17. See text following note 80 supra.

100. In **Beck v. Texas Co.**, 148 S.W. 295, 298 (Tex. 1912), the court said:

"It is an established principle of law recognized by the almost unanimous current of judicial authority that if the servant complains or directs attention to a defect in the machinery to be used by him, or danger to result from the use of same, and the master or his vice principal assures such servant that he can use such machinery with safety and directs that he proceed to use same, the servant, under such circumstances, will not, as matter of law, be held to have assumed the risk, or to have been guilty of contributory negligence, in relying upon the superior knowledge of such master or representative and continuing the use of such machinery, unless the danger of using such defective machinery is so apparent as to rebut the idea that reliance was placed upon such assurance. Wrong, under such circumstances, will not be imputed to the servant, as he would have the right to act upon the advice or assurance of the master or his vice principal, and the master, under such state of facts, would be estopped to impute assumed risk or contributory negligence, as matter of law, to the servant; but the issue would be one properly to be determined by the jury...."

**See also** **De Eugenio v. Allis-Chalmers Mfg. Co.**, 210 F. 2d 409 (3d Cir. 1954). Defendant had sold plaintiff a baling machine and sent two men to demonstrate its use. Plaintiff was later hurt when doing what he had seen the demonstrators do. The court said:

"It is probably true, as defendant insists, that there is no duty to warn against the obvious, that is, that defendant had no duty to warn plaintiff to stay away from the front of the chute since the risk of injury by being carried into the rolls was clear. But that does not end the matter. Although there may have been no duty to warn plaintiff to stay clear of the chute, manifestly, there was a duty to refrain from directing him to place himself there by representations that only by so doing could the baler be made to do its work. The negligence was not in failing to warn plaintiff to stay away but in demonstrating to him that it was proper and safe to come near, because defendant, in those circumstances, had every reason to know that such instruction would cause injury, and it is thus liable for the natural consequences of its act."

**Id.** at 413.

101. 182 F.2d 503, 505 (4th Cir. 1950).

102. 12 P.2d 409 (Wash. 1932).
is shown by the fact that ones other than the purchaser have recovered in such cases.\textsuperscript{103}

The deceptive character of cigarette advertising is significant from yet another point of view. Even though the plaintiff was aware of the risk, the defendant cannot prevail on the defense of assumption of risk unless the plaintiff unreasonably exposed himself to that risk. In \textit{De Eujenio v. Allis-Chalmers Mfg. Co.},\textsuperscript{104} the court said:

"We are told that plaintiff was an adult farmer of at least average intelligence and was familiar with farm equipment; that he had observed the baler in operation on three prior occasions and that the risk of injury from the rolls was obvious; consequently, he voluntarily exposed himself to a known danger. But . . . that alone is not enough to bar plaintiff as a matter of law; to have that effect the voluntary exposure must be unreasonable, and it is for the trier of fact to say whether that inference should be made. The weighty factor which defendant seems to overlook is that plaintiff was doing just what defendant's demonstrators had done. Conduct which might otherwise bar a plaintiff as a matter of law must be looked at in a different light when the seller's experts have indicated that that is the proper way to operate the purchased machine. Under these circumstances, whether plaintiff's reliance upon the experts' instructions was unreasonable was for the jury."\textsuperscript{105}

It would, therefore, seem that whether young people unreasonably exposed themselves to the risks of cigarette smoking would, as a minimum, be a question for the jury under all the facts and circumstances. Among the facts to be considered would be the age, intelligence, and experience of the child; the influences and pressures on the young; the normal state of daring and indiscretion characteristic of his age, and the constant stream of defendant's attractive and seductive advertising to which he had been exposed. It would seem, however, to be

\textsuperscript{103} 2 L. Frumer & M. Friedman, \textit{Products Liability} §§ 16.04[4] (a) & (b) 1968. The authors conclude proof of reliance should not be required.

\textsuperscript{104} 210 F.2d 409 (3d Cir. 1954).

\textsuperscript{105} \textit{Id.} at 413-14. (Footnotes omitted.) Cf. \textit{O'Neill v. City of Port Jervis}, 171 N.E. 694, 698 (N.Y. 1930) where the court did not find assumption of risk as a matter of law, though a father, in passing around a blocked sidewalk, led his child into a street where there were obvious traffic hazards. Insofar as the record discloses, the father was under pressure to go into the street only to do Saturday night shopping and could have avoided all danger by retreating around the block on which the obstruction occurred. \textit{See also} \textit{Johnson v. City of Rockford}, 35 Ill. App. 2d 107, 182 N.E.2d 240 (1962).
much more in keeping with the state and trend of the law to say as a matter of law, based upon public policy, that one who begins smoking as a child does not at the time of beginning assume the risks involved.

THE YOUNG SMOKER BECOME ADULT

Legal undertakings of the child which extend into adulthood will become binding in accordance with their terms if not disavowed within a reasonable time after attaining majority. So it might be urged, everything said about the minor being conceded, the child-become-adult will be said to have assumed all the risks of smoking if he continues thereafter. This is a neat, superior-attitude type of theory, but it is not realistic. It treats too lightly the strength of the cigarette habit. Regardless of what the scientists say about the limited addiction characteristics of nicotine, and about the basis of the cigarette habit being primarily psychogenic, the habit for most is a clinging monster and extremely difficult to break. One noted medical authority has called the habit an addiction. He said:

"Now if the cigarette people were sincere in wanting to produce a safer cigarette, they could make cigarettes out of those nicotine-free tobaccos. But they don't. Why don't they? It is the nicotine that produces the addiction, and the manufacturers are not going to put a product on the market that isn't going to get one addicted. Their tactics are exactly the same as those of the dope peddler. Once the customer is addicted, they know they have him. . . ."

". . . .

"Smoking is an addiction. How much of an addiction it is difficult for me to say because never having been a smoker, I don't know. I have told many patients that if they did not stop smoking they would lose their legs. They were frightened, of course, but they could not stop smoking. They continued, and have lost their legs. Now any man who continues doing a thing which he knows is going to cause gangrene in his legs, has an addiction."
Out of a group of 75 who wanted to quit smoking badly enough to attend an anti-smoking clinic where they got professional help, only 25 had been able to quit and stay quit at the end of one year.\textsuperscript{109} This figure is borne out by other studies.\textsuperscript{110} After having noted that some could quit, Blakeslee stated:

"For many others, quitting becomes a long and often agonizing struggle; probably most persons are the off-again; on-again kind of soldier in the battle against cigarettes. . . .

" . . . Breakdowns occur particularly when the new ex-smoker feels stress, thinks he needs some comfort, when the hunger or psychological desire becomes powerfully severe after a meal, during the coffee break, or when the cocktail hour arrives."\textsuperscript{111}

The earlier a person starts smoking, the more difficult he finds it is to stop,\textsuperscript{112} and the greater the likelihood that he will prematurely die.\textsuperscript{113} In the world of reality, it is thus clear that among those who want to quit badly, much less than half can succeed, and the younger they begin the more difficult it is for them to stop, and the greater the likelihood of their premature death. The strength of the habit is such that the weak of will, a majority among us, will never be able to overcome it. If we are to ask and answer, in the context of reality, the question whether the child-become-adult smoker has assumed the risk, we must consider that inescapable fact. Stated more brutally and more bluntly, the question is: are the millions among us who are unable to resist the temptation to begin smoking, usually when children, and who as adults are too weak of will to quit, fair game for liability free exploitation by a high powered industry bent on exploiting such weaknesses for gain? It seems clear that they should not be. The defendant's duty should not be determined with respect to a theoretical man of high prudence and strong will—a condition that never has and never will universally exist—but should be determined in the light of frailties known to exist in the masses—a condition that does and always will exist.

\textsuperscript{109} IV Medical Bulletin on Tobacco No. 1 (1966).
\textsuperscript{110} Blakeslee, \textit{It Is Not Too Late To Stop Smoking Cigarettes!} Public Affairs Pamphlet No. 386, 18-20 (reporting on the results of several studies).
\textsuperscript{111} \textit{Id.} at 18-19.
\textsuperscript{112} \textit{Id.} at 19.
\textsuperscript{113} "Men who began smoking before age 20 have a substantially higher death rate than those who began after age 25." Health Consequences Supp. 1968, 3.
In situations where less was at stake and the pressures no greater, the law has seen fit, as a matter of public policy, to protect adult individuals from their own inability to protect themselves. The courts consistently hold that an adult does not assume risks by knowingly working in their presence when such risks are created by his employer's violation of safety statutes intended for the employee's protection.\textsuperscript{114} While the defense of assumption of risk has been eliminated in most employer-employee relationships by Workmen's Compensation and kindred statutes, some courts have eliminated it altogether or narrowed its application by independent judicial action in relationships not covered by those statutes.\textsuperscript{115}

Further, in consumer commercial transactions the courts are more and more finding the consumer not bound by disclaimers of liability contained in the contract of purchase.\textsuperscript{116} In some of the cases,\textsuperscript{117} discussion occurs about the obscurity of the disclaimer provision, but it is apparent from a reading of the cases as a whole that the decisions are policy ones based on the inequality of the bargaining positions of the parties, and on the manufacturers being the more socially desirable risk bearer. The Restatement (Second) concurs by providing disclaimers shall not provide a defense in products-liability cases.\textsuperscript{118} Then there is the broad general area of adhesion contracts whereby parties under varying types of pressure are relieved from the binding effects of consents apparently given.\textsuperscript{119}

\textsuperscript{114} W. Prosser, \textit{The Law of Torts} 468 (3d ed. 1964) ; Suess v. Arrowhead Steel Prods. Co., 180 Minn. 21, 230 N.W. 125 (1930), a case cited by Prosser, involved a plant superintendent who had worked for 6 years in the presence of the risks created by his employer's statutory violation.


\textsuperscript{118} \textit{See} Restatement (Second) of Torts § 402A, Comment m (1965). It might be argued that the informed smoker assumes the risk of a specific, known danger from a specific, known defect, while the automobile purchaser would be, by his disclaimer, merely agreeing to assume the risks of a danger being there. But in the main, this is a difference represented by implied and express assumptions of risk. Both have been recognized by the courts. W. Prosser, \textit{The Law of Torts} 450-69 (3d ed. 1964).

The adult cigarette smoker, seen in the perspective of his past and present experiences, is under pressures as great as the greatest of these, and much more severe than in some. To allow the defense of assumption of risk in cigarette cases would be to run counter to the growing humanitarian impulse that has characterized recent decisions where defendants have sought to capitalize on persons' immaturity, bargaining weakness or other human frailty.

OTHER RELEVANT FACTORS

The decisions of the courts in the cigarette smoking cases will be policy ones whatever the legal language used. The decisions that allow the defense of assumption of risk will be no less policy decisions than will be those which deny it. The total facts here are so unlike those in any other areas where the doctrine has been invoked that the decisions, whichever way they go, must of necessity be based on policy. But policy decisions fashioned to accomplish justice within the broad framework of basic legal principles are in the finest tradition of the common law judiciary.

Another factor seems to bear significantly on the decision to be made here. Appropriate to any tort decision in a new area is the comparative quality of the conduct of the adversary parties. In a number of situations, the courts in civil actions have held the intentional wrongdoer to a stricter accountability than they have less culpable actors. This has been done both by restricting the limiting role of proximate cause and by adjusting the defenses available to the wrongdoer. While it may strike one as a harsh thing to say about industrial leaders who have enjoyed a mantle of respectability that their present conduct in making and aggressively marketing cigarettes constitutes the intentional infliction of death, there seems to be no other permissible characterization of it. One intends the consequences which are

120. "The role of assumption of risk in products liability cases is properly a limited one. It applies only to actions of the consumer that shift the blame from the manufacturer to him." (Emphasis added.) Traylor, The Ways and Meanings of Defective Products and Strict Liability, 32 Tenn. L. Rev. 363, 371 (1965).
122. Cf. Commonwealth v. Feinberg, 211 Pa. Super. 100, 234 A.2d 913 (1967) wherein defendant sold from his store in a skid-row area cans of high percentage solidified methyl alcohol marked: "Institutional Sterno. Danger. Poison; not for home use. For commercial and industrial use only." This was sold to residents of the area without further warning and without specifically calling attention to the warning on the cans. Deaths occurred from its use, and defendant was convicted of involuntary manslaughter. In affirming the court said:
"In the light of the recognized weaknesses of the purchasers of the product, and appellant's greater concern for profit than with the results of his actions, he was grossly negligent and demonstrated a wanton and reckless disregard
known to follow with substantial certainty from his actions. Stated conservatively, there is now substantial certainty that the making and aggressive marketing of cigarettes will cause thousands of premature deaths annually. In known certainty of results, there is no difference between the actions of cigarette manufacturers, who make, sell, and promote the use of their deadly product, and the angry man who fires his gun into a crowd. Neither knows who is to die, but both know with substantial certainty that someone will. To be sure, the cigarette manufacturers will claim that they only make attractively available the means of death, and that others, much as in the case of the gun or automobile, actively administer the lethal product. But contrary to the gun and automobile examples, the normal and only use of cigarettes—a use aggressively promoted by cigarette manufacturers—is one that unavoidably produces the death of many users without the diverting or abusive actions of anyone. This cannot be said, when it can be said at all, in anything approaching the same degree with respect to any other product, and certainly cannot be said with respect to rabies vaccine, blood plasma, new drugs, automobiles, guns, sharp knives, hammers, butter, sugar, or castor oil, products with which many have sought to compare them. The only benefits advanced as justification for the massive loss of life and other physical impairments are the possible contributions of cigarette smoking to mental health, but there is ample basis to question whether such smoking contributes significantly to the cure of any mental or nervous disorders other than those of smoking's own creation. This makes the utility of the cigarette manufacturing industry very, very low, and the utility of a defendant's conduct, as well as the moral quality of his acts, have always been important elements when balancing the respective claims of plaintiffs and defendants.

An interesting phenomenon is seen to be at work here. If an individual was found to be intentionally preying for profit on the known disabling frailties of a small group, say a family, to induce them to begin and continue to use a habit-forming product known to all of them to take an average of six years

for the welfare of those whom he might reasonably have expected to use the product for drinking purposes."

Id. at 917. See also Tidd v. Skinner, 122 N.E. 222 247 (N.Y. 1919), where the court held a jury could have found a retail druggist to have inflicted "willful injury" by selling heroin to an 18-year-old boy under circumstances producing addiction.


124. See text accompanying notes 29-35 supra.

of their lives, we would condemn him as antisocial and find a way to punish him. But our criminal law developed long ago when our relationships were simpler, more direct, and better defined. We can easily see the personal wrong in that situation. But given the anonymity and diffused responsibility of corporate action, directed, through established business operations, to the disabling frailties of undetermined millions, and which produces many tens of thousands of deaths annually, we are likely to remain somewhat unmoved by it. It is a variant of the psychology of the big lie which has been so skillfully used by manipulators of the masses. The fallacy of this idea seemed to have captured the mind of a writer who recently rejected enterprise tort liability for the tobacco industry, and concluded assumption of risk must be applied, since to do otherwise might cause the tobacco industry to have to pay for 125,000 lives per year. That he found to be inconceivable. I assume from the general tenor of his comments that had the potential number of lives for which liability might have been found had been 1,000, he would have favored enterprise liability. The logic and social policy justification for that distinction are difficult to see. If an industry is unavoidably taking only a few lives in the course of its operations, we require it to pay for them through Workmen’s Compensation or some other form of strict liability; but if the ultimate, unavoidable effect of its operations is mass destruction of life, enterprise liability should not be imposed since that would impair its ability to continue its operations and to take its predictable quota of human lives. And that without inquiry into the utility of the defendant’s operations. This position assumes a sanctity of the status quo with respect to products and the right to produce them, particularly those of low utility “whose norm is danger,” which is believed to be unjustified. We survived the passing of the buggy whip industry, a valid one in its day, and I am sure we can survive the passing of many more when they outlive their social usefulness. Prohibition of the manufacture of cigarr-
ettes, their sale or smoking is not proposed—it is proposed only that the cigarette manufacturing industry pay the inevitable, and thus intentional, cost of its present system of operations. If it cannot do that and survive, it has no basis on which to claim a right to stay.

**Restatement of Torts (Second), Section 402A and the Cigarette Cases**

If the comments to Section 402A of the Restatement are uncritically accepted and applied, the result will be that the manufacturers of little killers like high utility automobiles, with defects that constitute variations from the norm, will be held strictly liable, though adult purchasers for a consideration knowingly sign disclaimers in arms length bargains; while the manufacturers of big killers, such as low utility whiskey and cigarettes, whose norm is danger, will be free to promote death, liability free, based on plaintiff's implied assumption of risk though no disclaimers are filed and no consideration is received. It will be legally fatal, inadvertently and in the exercise of high care, to deviate slightly from the norm,\(^\text{129}\) though the purchaser expressly agrees for a consideration to assume the risks of your having done so, while the approval of the law is yours if you make and market a product known to be inevitably dangerous for its normal and intended use, though assumption of risk is implied only, and is clouded by factors of immaturity, gripping habit and a babble of deceptive and confusing advertising. Surely the courts will not follow such false analogies as those contained in Comment i which equates cigarettes to butter and sugar to reach such absurd results.\(^\text{130}\) The observation of Ashhurst, Justice, is reassuring here. He said in *Pasley v. Freeman*:\(^\text{131}\) "... I have so great a veneration for the law as to suppose that nothing can be law which is not founded on common sense or common honesty."

In addition to the false analogies contained in Comment i, it is believed that the commentators fell into another error that contributes to confusion and erroneous results. They have attempted to define what are essentially physical characteristics

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\(^\text{129}\) In some products liability cases, the evidence is very close as to whether there was in fact a deviation at all. *E.g.*, Ford Motor Co. v. Mathis, 322 F.2d 267, 270-71 (5th Cir. 1963).


or qualities in terms of what the user knows, or is caused to know by the seller. In Comment g, the existence of a "Defective condition" is made to depend in substantial part on whether the product leaves the sellers' hands "in a condition not contemplated by the ultimate consumer. . . ." But "Defective condition" is in reality a physical property and has nothing to do, strictly speaking, with what the consumer contemplates. What the consumer contemplates has something to do with whether there should be liability on the seller, but that is because of the precautions we assume the consumer will take and its bearing on the application of assumption of risk; not because it changes the physical characteristics of the product. So what the consumer contemplates would be much more at home if it was left to be considered under the principles of assumption of risk. Similarly, in Comment j, the condition of being "defective and unreasonably dangerous" is made to turn on whether proper warning has been given. It is stated: "Where warning is given, . . . a product . . . is not in defective condition, nor is it unreasonably dangerous." But it is submitted that we are required to give warning because the product is physically in a "defective" condition that makes it "unreasonably dangerous," and that giving the warning does nothing to transform that physical condition. Again, giving the warning has something to do with whether one is likely to get hurt by the defective product and whether the seller should be liable if he does, but that stems from the expected or required conduct of the consumer, matters properly to be considered under assumption of risk, and not from the effect the warning has on the product itself. How inapplicable the discussions on "Warning" in Comment j are to cigarette smoking is revealed by the statement that: "Where warning is given, the seller may reasonably assume that it will be read and heeded; and a product bearing such a warning, which is safe for use if followed, is not in a defective condition, nor is it unreasonably dangerous." (Emphasis added.) No warning on a cigarette package could make them "safe for use if . . . followed," except a warning not to use them at all, and in the face of the known immaturity of many users and the strength of the cigarette habit, the seller would have no basis to assume that even if he gave such a warn-

132. "Even 'light' smokers, who smoke less than 10 cigarettes per day, have from 2.8 to 4.6 fewer years of life expectancy than corresponding nonsmokers." Health Consequences Supp. 1968, 9.
ing it would be "heeded" by more than a few. This Comment further shows that the commentators expect the product to cease to be defective and unreasonably dangerous because of consumer reaction to "warnings" or "contemplated conditions," a phenomenon better treated under assumption of risk.

The whole effort of the Restatement commentators to give a closed definition to "Defective condition" runs counter to the reactions of many others who have considered the matter. A number of writers have concluded the term should remain flexible and open-ended.133

It makes a significant difference where these matters of knowledge are treated. If their function is to alter what are essentially physical characteristics, as the Restatement commentators have used them, the test of their effectiveness appears to be an objective one. This might be debatable if we looked only at the phrase "condition not contemplated by the ultimate consumer" contained in Comment g, but objectivity is indicated by the last paragraph of Comment j next above quoted.134 If a warning is given, says the quoted portion of Comment j, the seller can assume it will be read, understood, and heeded regardless of the reasons for not doing so, and regardless of how foreseeable it might have been to the seller that, under all the circumstances, it would not be so read, understood, and heeded.135 The mere giving of the warning, concludes the Comment, cures the product of its physical defects and removes its unreasonably dangerous properties.

133. "It is not necessary in the context of this case to attempt to define the outer limits of the term 'defect'... Defectiveness of defendant's carpeting is conceded. Suffice it to say the concept is a broad one. The range of its operation must be developed as the problems arise and by courts mindful that the public interest demands consumer protection." Santor v. A & M Karagheusian, Inc., 44 N.J. 52, 207 A.2d 305, 313 (1965). "Defects must remain an accordion-like, open-ended term." Kessler, Products Liability, 76 Yale L.J. 887, 930 (1967).

"A defect may be variously defined; as yet no definition has been formulated that would resolve all cases." Traynor, The Ways and Meanings of Defective Products and Strict Liability, 52 Tenn. L. Rev. 363, 367 (1965). The author then at 367-72 examines a number of bases for defining defect, including these used in the Restatement, and found them all to suffer serious shortcomings. He then concluded: "The complications surrounding the definition of a defect suggest inquiry as to whether defectiveness is the appropriate touchstone of liability. Id. at 372.

134. Even if Comment j is subjective, it goes only to what the "ultimate consumer" "contemplated" and not other subjective aspects of assumption of risk such as appreciation of the risks and the voluntariness of its assumption. So to make what the consumer contemplates alone a controlling aspect of defectiveness and then make defectiveness a requirement of recovery is to deprive a plaintiff of much of the protection that the courts over the years have built into assumption of risk.

Further, by making what would be "contemplated by the ultimate consumer" a characteristic of defectiveness, the burden of proof on this feature is placed on the plaintiff by Comment g. On the other hand, if matters bearing on the knowledge of the ultimate consumer is treated where it characteristically belongs, as a factor in assumption of risk, the test would be more comprehensive and substantially subjective, and the burden of proof would be on the defendant. As the Comments now have it, a plaintiff may not be able to overcome the objective hurdles posed by Comments g and j, thus preventing his recovery, whereas if the matters were left to assumption of risk, the defendant would be unable to discharge his burden of proof on that issue and recovery would result. This is because, in addition to the burden of proof factor, assumption of risk involves more than what the "ultimate consumer" contemplates as to the physical characteristics of the product, and whether a warning has been given as to those dangerous features which he does not contemplate. It involves actual knowledge of the risks, full appreciation and understanding of them, and action voluntarily encountering them while that actual knowledge, appreciation and full understanding are present. Thus, the seller of the product is placed in a more favorable position than he would have been had all matters bearing on the knowledge of the consumer been left for consideration under assumption of risk. An approach which is harsher than that imposed by that warning and questionable doctrine is highly suspect.

Still another reason for treating these factors under assumption of risk is that it would enable them to become involved in the reconciliation that must be made between the Restatement's (Second) position of outlawing express disclaimers while recognizing implied assumptions of risk.136 What the Restatement Comments now seem to be saying is that if the consumer knows of a risk from a specific, known defect, and encounters it, he will be barred from recovery by impliedly assuming it, though there may be no consideration or estoppel involved; on the other hand, if he knows and understands that there may be injurious defects not yet discovered, though he understands what their

136. See Restatement (Second) of Torts § 402A, Comments m and n (1965).
nature might be if they did exist, he cannot for a consideration expressly disclaim his right to recover if such risk and injury actually come to pass. The differences in basic underlying policy in these two situations is a bit hard to delineate. But at any rate, matters which bear on the consumer's knowledge and understanding should be included under assumption of risk for comprehensive consideration with the policy on disclaimers rather than having such knowledge and understanding given the foreign assignment of altering what are essentially physical characteristics of products.

The false analogies appearing in Restatement (Second) Comment i, "Unreasonably dangerous," whereby sugar, butter, whiskey, and cigarettes are equated, and all claimed not to be "unreasonably dangerous" in their normal state, could be avoided by placing cigarettes in Comment k, "Unavoidably unsafe products," which they unquestionably are for their normal, intended use. There is no known way whereby tar and nicotine cigarettes can be made safe for their only normal, intended and temperate use. They are "unavoidably unsafe." If cigarettes were treated under Comment k, their utility could be balanced against the established harm from their use, as the Comment properly does in the cases of rabies vaccine and new drugs. Since cigarettes are neither food nor traditional medicine, since it is doubtful that they cure any mental ills except those of their own creation, and since their use kills more people annually than die from automobile accidents, the Viet-Nam war and murder, it is hard to see where on balance their manufacturers have any valid claim to market them liability free.

Speaking in terms of the second announced function of this paper, it is believed that the courts should conclude as a matter of law, based on public policy, that assumption of risk should not be applied in personal injury actions brought against cigarette manufacturers by either child cigarette smokers, or child smokers who have become adult smokers. For the courts not to so conclude would constitute regression in the field of product liability which only now somewhat tardily is arriving where justice long ago indicated should have been its destination.

137. Compare the language of the court in Jacob E. Decker & Sons v. Capps, 164 S.W. 2d 828, 829 (Tex. 1942): "We think the manufacturer is liable in such a case under an implied warranty imposed by operation of law as a matter of public policy."
APPENDIX A

Comparison of 3 measures of relationship between cigarette smoking and overall death rates by age and sex as derived from 2 major prospective studies.¹

<table>
<thead>
<tr>
<th>Age</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
<th>65-74</th>
<th>75-84</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. VETERANS: MEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total deaths</td>
<td>383</td>
<td>366</td>
<td>13,840</td>
<td>17,550</td>
<td>1,932</td>
</tr>
<tr>
<td>Death rates per 100,000:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never smoked regularly</td>
<td>127</td>
<td>264</td>
<td>1,056</td>
<td>2,411</td>
<td>6,214</td>
</tr>
<tr>
<td>Current cigarette smokers</td>
<td>232</td>
<td>728</td>
<td>1,819</td>
<td>4,032</td>
<td>8,471</td>
</tr>
<tr>
<td>Mortality ratio²</td>
<td>1.83</td>
<td>2.76</td>
<td>1.72</td>
<td>1.67</td>
<td>1.36</td>
</tr>
<tr>
<td>Difference in death rates per 100,00³</td>
<td>105</td>
<td>464</td>
<td>762</td>
<td>1,621</td>
<td>2,257</td>
</tr>
<tr>
<td>Excess deaths as percentage of total⁴</td>
<td>33</td>
<td>43</td>
<td>21</td>
<td>17</td>
<td>8</td>
</tr>
</tbody>
</table>

HAMMOND MEN

| Total Deaths | 631   | 5,297 | 8,427 | 8,125 | 3,968 |
| Death rates per 100,00: |       |       |       |       |       |
| Never smoked regularly | 210   | 406   | 1,202 | 3,168 | 7,863 |
| Current cigarette smokers | 397   | 406   | 1,202 | 4,788 | 9,674 |
| Mortality ratio² | 1.89  | 2.28  | 1.83  | 1.51  | 1.23  |
| Difference in death rates per 100,0³ | 187   | 519   | 1,000 | 1,620 | 1,811 |
| Excess deaths as percentage of total⁴ | 33    | 38    | 25    | 13    | 4     |

HAMMOND WOMEN

| Total deaths | 727   | 2,826 | 3,915 | 5,115 | 4,188 |
| Death rates per 100,00: |       |       |       |       |       |
| Never smoked regularly | 165   | 304   | 698   | 1,913 | 5,914 |
| Current cigarette smokers | 186   | 384   | 838   | 2,229 | 5,846 |
| Mortality ratio² | 1.13  | 1.26  | 1.20  | 1.17  | .99   |
| Difference in death rates per 100,0³ | 21    | 80    | 140   | 316   | 68    |
| Excess deaths as percentage of total⁴ | 5     | 9     | 4     | 2     |       |

¹ These figures are derived from the references. 5 year age groups were combined directly from the reported statistics without adjustment to any standard population.

² Mortality ratios — Death rate for current cigarette smokers divided by death rate for those who never smoked regularly.

³ Difference in death rates — Death rate for current cigarette smokers minus death rate for those who never smoked regularly.

⁴ Excess deaths among current cigarette smokers (i.e., additional deaths that occurred among current cigarette smokers per year above those which would have occurred if smokers had the same death rates as those who never smoked regularly). This is expressed as a percentage of all deaths occurring in that age-sex group.
APPENDIX B

Population, By Age, Sex, and Color: 1966

[In thousands. Estimates as of July 1. The median is the value which divides the distribution into two equal parts—one-half of the cases falling below this value and one-half exceeding this value.]

<table>
<thead>
<tr>
<th>Age</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ages</td>
<td>195,857</td>
<td>95,920</td>
<td>99,937</td>
</tr>
<tr>
<td>Under 5 years</td>
<td>19,851</td>
<td>10,135</td>
<td>9,715</td>
</tr>
<tr>
<td>5 to 9 years</td>
<td>20,806</td>
<td>10,580</td>
<td>10,226</td>
</tr>
<tr>
<td>10 to 14 years</td>
<td>19,402</td>
<td>9,861</td>
<td>9,542</td>
</tr>
<tr>
<td>15 to 19 years</td>
<td>17,756</td>
<td>8,950</td>
<td>8,806</td>
</tr>
<tr>
<td>20 to 24 years</td>
<td>13,606</td>
<td>6,625</td>
<td>6,981</td>
</tr>
<tr>
<td>25 to 29 years</td>
<td>11,472</td>
<td>5,632</td>
<td>5,840</td>
</tr>
<tr>
<td>30 to 34 years</td>
<td>10,852</td>
<td>5,326</td>
<td>5,527</td>
</tr>
<tr>
<td>35 to 44 years</td>
<td>24,097</td>
<td>11,738</td>
<td>12,359</td>
</tr>
<tr>
<td>45 to 54 years</td>
<td>22,998</td>
<td>10,822</td>
<td>11,476</td>
</tr>
<tr>
<td>55 to 64 years</td>
<td>17,260</td>
<td>8,247</td>
<td>9,013</td>
</tr>
<tr>
<td>65 to 69 years</td>
<td>6,378</td>
<td>2,901</td>
<td>3,476</td>
</tr>
<tr>
<td>70 to 74 years</td>
<td>5,190</td>
<td>2,261</td>
<td>2,929</td>
</tr>
<tr>
<td>75 to 79 years</td>
<td>3,688</td>
<td>1,564</td>
<td>2,124</td>
</tr>
<tr>
<td>80 to 84 years</td>
<td>2,076</td>
<td>847</td>
<td>1,230</td>
</tr>
<tr>
<td>85 years and over</td>
<td>1,124</td>
<td>430</td>
<td>694</td>
</tr>
<tr>
<td>Under 1 year</td>
<td>3,666</td>
<td>1,872</td>
<td>1,793</td>
</tr>
<tr>
<td>1 to 4 years</td>
<td>16,185</td>
<td>8,263</td>
<td>7,922</td>
</tr>
<tr>
<td>5 to 13 years</td>
<td>36,525</td>
<td>18,567</td>
<td>17,958</td>
</tr>
<tr>
<td>14 to 17 years</td>
<td>14,289</td>
<td>7,258</td>
<td>7,032</td>
</tr>
<tr>
<td>18 to 21 years</td>
<td>12,549</td>
<td>6,191</td>
<td>6,358</td>
</tr>
<tr>
<td>14 years and over</td>
<td>138,481</td>
<td>67,217</td>
<td>72,264</td>
</tr>
<tr>
<td>18 years and over</td>
<td>125,192</td>
<td>59,960</td>
<td>65,232</td>
</tr>
<tr>
<td>21 years and over</td>
<td>115,347</td>
<td>55,080</td>
<td>60,268</td>
</tr>
<tr>
<td>65 years and over</td>
<td>18,457</td>
<td>8,004</td>
<td>10,453</td>
</tr>
</tbody>
</table>

Median age .... years 27.8 26.6 29.0

Source: Dept. of Commerce, Bureau of the Census; Current Population Reports, Series P-25, No. 352.