Chapter 4

ADDICTED TO 'ADDICTION'

I was a slave to cigarettes.

— George Autry[1]

Several pharmaceutical companies and many medical programs now make use of the idea that smoking is an addiction to warn smokers that they can never possibly quit without medical help since smoking—like drug addiction—involves physical dependence on a drug . . . The smoking industry is too vast and the number of smokers wishing to quit too lucrative for smoking to be overlooked as a medical problem.

— Stanton Peele[2]

In a living language like English, words are constantly subject to disuse, misuse and overuse, as well as redefinition. But in recent years few words have been more bent out of shape than has the term "addiction." So popular has this label become that it is applied not only to behaviors that people (some people) seem *compelled* to practice, such as drinking alcohol to excess, but also to things people merely *like* to do, such as eating chocolate or having sex or even communicating with others via the Internet.[3] When it is applied to smokers by antismokers, especially in the adjectival form, it is more often as an epithet or invective than as a medically justified description or explanation of the smoker's behavior.

My oldest dictionary (Webster's International Unabridged, Second Edition) defines the noun as: "State of being addicted; indulged inclination; also habituation, esp. to drugs." The adjective, "addicted," is defined simply as: "Given up or over (to); devoted (to)."

My newest dictionary (The Random House Dictionary of the English Language, Second Edition-Unabridged) defines the noun as: "the state of being enslaved to a habit or practice or to something that is psychologically or physically habit-forming, as narcotics, to such an extent that its cessation causes severe trauma." It also goes further than Webster's in its definition of the adjective as: "given up or devoted to a practice or habit or to something psychologically or physically habit-forming."

The first dictionary was originally published in 1933 and revised in 1948, the second was published in 1987. Thus in 39 years, addiction went from "indulged inclination" all the way to "the state of being enslaved." Paradoxically, we seem to cling to both definitions, both the mild and the severe, depending upon our prejudices and whom we're applying the label to, and that causes no end of confusion and misunderstanding.

We're using the first definition when, in a playful, nonpejorative sense, we speak of someone as a "chocoholic" or a soap-opera junkie or a caffeine addict. When it comes to smoking, however, everybody knows the smoker is truly addicted—that is, "enslaved"—whether or not he is a light smoker or a chain-smoker, whether or not he wishes he could quit or simply doesn't want to. When it comes to smoking, moderating words used in both dictionaries—"habituation" in the first, "habit-forming" and "practice or habit" in the second—have been deemed, as they would have said in Watergate days, "inoperative."

It was not always so. In Surgeon General Luther L. Terry's 1964 report on *Smoking and Health*, from which all else discussed in this book has flowed, Chapter 13 was titled: "Characterization of the Tobacco Habit." In the section, "Distinction Between Drug Addiction and Drug Habituation," it was stated:

> Smokers and users of tobacco in other forms usually develop some degree of dependence upon the practice, some to the point where significant emotional disturbances occur if they are deprived of its use. The evidence indicates this dependence to be psychogenic in origin. In medical and scientific terminology the practice should be labeled *habituation* to distinguish it clearly from *addiction*, since the biological effects of tobacco, like coffee and other caffeine-containing beverages, betel morsel chewing and the like, are not

> comparable to those produced by morphine, alcohol, barbiturates and many other potent addicting drugs.[4] [Emphases in original.]

In another section, "Relationship of Smoking to Use of Addicting Drugs":

> Undoubtedly, the smoking habit becomes compulsive in some heavy smokers but the drive to compulsion appears to be solely psychogenic since physical dependence does not develop to nicotine or to other constituents of tobacco, nor does tobacco, either during its use or following withdrawal, create psychotoxic effects which lead to antisocial behavior . . . In contrast to drugs of addiction, withdrawal from tobacco never constitutes a threat to life. These facts indicate clearly the absence of physical dependence."[5]

According to Richard Kluger in his voluminous work, *Ashes to Ashes*, all this was essentially the personal view of Maurice H. Seevers, the author of Chapter 13 in the surgeon general's report, whom he describes as an expert on habit-forming drugs but also "an egregious protector of the [tobacco] industry's interests." Seevers was one of two members of the SG's 10-member advisory committee recommended by the tobacco manufacturers. The other was Harvard's Louis Fieser, "a towering figure in organic chemistry," but "ten years past his prime," according to Kluger.[6]

None of the other "uneasy" members of the panel possessed the credentials to challenge Seevers, says Kluger. "Thus smoking was decreed a habit, not an addiction, and the tobacco industry was rewarded for its championing of Seevers . . ."[7]

Kluger apparently knows everything about everybody who has ever even remotely been involved with tobacco, cigarettes and smoking in the past 100 years, so I can't contradict his implication that Seevers foisted his own opinion on the committee. But who foisted it on the World Health Organization? The SG's report adopted, or at least repeated, the definitions created in 1957 by WHO's Expert Committee on Drugs Liable to Produce Addiction, which the committee (or Seevers?) noted "are accepted throughout the world as the basis for control of potentially dangerous drugs."[8]

Those definitions were:

Drug Addiction	Drug Habituation
Drug addiction is a state of periodic or chronic intoxication produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include:	Drug habituation (habit) is a condition resulting from the repeated consumption of a drug. Its characteristics include:
1) An overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means;	1) A desire (but not a compulsion) to continue taking the drug for the sense of improved well-being it engenders;
2) A tendency to increase the dose;	(2) Little or no tendency to increase the dose;
3) A psychic (psychological) and generally a physical dependence on the effects of the drug;	(3) Some degree of psychic dependence on the effect of the drug, but absence of physical dependence and hence of an abstinence syndrome;
(4) Detrimental effect on the individual and on society.	(4) Detrimental effects, if any, primarily on the individual.

The foregoing is purely of historical interest today. Not long after the SG's report, the World Health Organization dropped this distinction between addiction and habituation, as well as eventually going all the way off the deep end regarding the "global epidemic" of smoking-caused diseases as the antismokers, most of whom were and are Americans, began exerting overweening influence in the organization. However, it was to be another 24 years before one of Terry's successors effectively put the kibosh on the notion that smoking is merely a habit.

But one statement from Chapter 13, innocent at the time, now appears to have been more frighteningly prophetic than Dr. Seevers could have imagined (assuming he wrote it):

> Even the most energetic and emotional campaigner against smoking and nicotine could find little support for the view that all those who use tobacco, coffee, tea, and cocoa are in need of mental care even though it may *at sometime in the future* be shown that smokers and non-smokers have different psychologic characteristics.[9] [Emphasis mine.]

The future has arrived. Today we *know* that the chief psychological characteristic differentiating the smoker from the nonsmoker is that

the former is sick in the head. Anyway, that's what I hear from a doctor named William Van Horn, an M.D. who "specializes in the brain" and conducts a daily call-in program on an Atlanta radio station. Anybody who smokes, he says, has some kind of underlying emotional problem.

(I also can't resist quoting one other, curious, sentence from Chapter 13, from a paragraph on organ tolerance to nicotine: "Animal studies indicate considerable tolerance to small [doses of nicotine] but little if any to convulsant or lethal doses."[10]

(Although I am not a physiologist, I would state without reservation that a dose of nicotine high enough to cause an animal to go into convulsions or to kill it outright is an unambiguous indication of *zero* tolerance to that amount of nicotine.)

IT WAS IN SURGEON General C. Everett Koop's 1988 Report, *The Health Consequences of Smoking*, the seventh to be issued during his unfortunate incumbency, that the 1964 report's distinction between addiction and habituation was officially repealed.[11] (I almost typed "Surgeon General Kook" but I stifled myself.)

The 1988 report's major conclusions:

1. Cigarettes and other forms of tobacco are addicting.
2. Nicotine is the drug in tobacco that causes addiction.
3. The pharmacological and behavioral processes that determine tobacco addiction are similar to those that determine addiction to drugs such as heroin and cocaine.[12]

So what is our modern, up-to-date definition of addiction? According to a 1995 pamphlet from the Centers for Disease Control and Prevention's Office on Smoking and Health in Atlanta, the indicators are:

- The drug-seeking or -taking behavior is driven by strong, persistent and often irresistible urges.
- The substance is mood-altering and enters the brain through the blood stream.
- The drug is reinforcing—that is, the effects of the drug are so rewarding that the user continues to take it.
- There are regular patterns of use, continued use despite

harmful effects, relapse following an abstinent period, and recurrent cravings for the drug.

- Dependence-producing drugs often create a tolerance, physical dependence and pleasant effects.

For "substance" or "drug," substitute "activity" or "hobby" and these criteria could apply to any number of things. Consider for only one example the "runner's high" experienced by the dedicated jogger, who may continue to run despite the pain of shin splints and the possibility of permanently disabling injury if he doesn't stop.

But nicotine is even worse than illicit drugs, according to the CDC pamphlet. It notes that:

- Eighty-three percent of cigarette smokers smoke every day, but only 10 percent of drug users are daily users.
- Eighty-five percent of people who have ever tried an illicit drug have quit using that drug, but only 63 percent of people who have ever tried a cigarette have quit smoking.

This is transparently naïve, if not deliberately deceptive. Cigarettes are a legal and easily obtainable product (though who knows for how long?) while the procurement of a hard drug can require driving into a dangerous area of town in the dark of night to deal with a type of person you wouldn't want to invite into your home. Illicit drugs are also a lot more expensive than cigarettes. Moreover, you can smoke a cigarette while going about everyday activities—talking on the telephone or working at your desk (if smoking isn't banned), strolling through the park (if smoking isn't banned), after a good meal (if smoking isn't banned), etc., etc.—and smoking doesn't interfere with the performance and enjoyment of those activities (unless it's banned). Can the same be said of hard drugs? The fact that 83 percent of cigarette smokers smoke every day testifies not only to the easy availability of cigarettes but to the absence of anything comparable to the mental and physical consequences of using narcotics. In fact, it proves the absolute harmlessness of nicotine in this respect. And what about the 17 percent of smokers who don't smoke every day? Aren't they addicted to nicotine? If not, why not?

The consequences of narcotic drug use on one's health and per-

sonality and ability to function in the world are so much more profound than the consequences of smoking that I am simply amazed that anyone could seriously equate the two. Yet that is what Dr. Koop did and in so doing actually trivialized the problem of hard drugs. The only word for this is—*insanity*.

Equally as amazing is that in the face of all the evidence to the contrary, many people go beyond Koop and believe that smoking is even *more* addicting than hard drugs. Psychologist and addiction expert Stanton Peele says that whenever he speaks before groups of addiction counselors and other audiences, he always asks them which is the most difficult addiction to quit.

> The response is overwhelmingly "Smoking." I then ask how many people have quit smoking—usually from a third to half of the audience respond affirmatively. I then ask how many of these quit because of Smokenders or any other treatment program. The greatest percentage I ever got was 10 percent once; more often, *no one* had quit through treatment, even in audiences with 50 or more ex-smokers.[13] [Emphasis in original.]

This confirms once again that most people who quit smoking do so on their own without clinical assistance. It also tells me that the audiences Peele speaks to have never used hard drugs, thus the only "addictive" drug they are familiar with is nicotine. Only when tobacco is put on a par with hard drugs—that is, outlawed—will we be able to make fair comparisons between the two. Incidentally, it may surprise many people to learn that the label "drug addiction" is no longer generally used by the experts. Dr. Koop explained:

> The terms "drug addiction" and "drug dependence" are scientifically equivalent: Both terms refer to the behavior of repetitively ingesting mood-altering substances by individuals. The term "drug dependence" has been increasingly adopted in the scientific and medical literature as a more technical term, whereas the term "drug addiction" continues to be used by NIDA [National Institutes on Drug Abuse] and other organizations when it is important to provide information at a more general level.[14]

When it is important to provide information at a more general level ?! Maybe I am overskeptical, but what this says to me is that when the experts talk (down?) to us peasants about drugs, including and prob-

ably especially nicotine, they don't use the term "dependence" because that sounds a tad soft. They use the stronger term "addiction" because it carries a lot more semantic freight for the ordinary person. Imagine the furor if some politician were to charge that everyone dependent upon public assistance was welfare-addicted.

What about all those millions of former smokers who have successfully quit smoking, whom Bob Dole was referring to when he made the statement during the 1996 presidential campaign—for which he was thoroughly raked over the coals—that he thought tobacco might be an addiction for some people but not for everyone (and, in my opinion, was simply voicing the commonsensical obvious)?

Dr. Koop acknowledged them in his 1988 Report:

> Many smokers have quit on their own ("spontaneous remission") and some smokers smoke only occasionally. However, spontaneous remission and occasional use also occur with the illicit drugs of addiction, and in no way disqualify a drug from being classified as addicting.[15] [Parentheses and quotation marks in original.]

This is the only time I have ever seen the term "spontaneous remission" used in this sense. Most people, I think, understand it to mean the sudden, and usually temporary, disappearance of disease symptoms in a patient which the doctors can neither predict nor explain. To use it as Koop did is to imply that people don't stop smoking, or limit their smoking, as a matter of choice or will power but that it is something that "just happens."

To members of a group called "Nicotine Anonymous," kicking the smoking habit doesn't "just happen" but requires the assistance of a "Higher Power." Like many other self-help groups, NicAnon, formed in Phoenix, Arizona, in 1990, follows a quasi-religious 12-step program modeled after that of Alcoholics Anonymous (emphases below are theirs):

1. We admitted we were powerless over nicotine—that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God *as we understood Him.*
4. Made a searching and fearless moral inventory of ourselves.

5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God *as we understood Him*, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to nicotine users and to practice these principles in our affairs.[16]

How the members of Nicotine Anonymous identify those they have harmed (with secondhand smoke?), or how they make amends to them, or how making amends to them might injure them, is not clear. No doubt they also believe that if they ever took one puff from a cigarette again they would be sent back down the road to ruin, even as AA teaches alcoholics that they will be alcoholics for the rest of their lives.

"It is an odd program in self-esteem that rewards people for calling themselves helpless, childish, addicted and diseased and punishes them for claiming to be healthy," says Wendy Kaminer in her book *I'm Dysfunctional, You're Dysfunctional*, a critique of 12-step programs and the self-help movement.[17]

Peele calls it the "disease theory" of addiction:

> Disease theories of life have struck on a fundamental truth: everything that humans do—eating, drinking, sleeping, drug taking, loving, raising children, learning, having sex, having periods, feeling, thinking about oneself—has a healthy and unhealthy side, sometimes both at the same time or often alternating one with another. By elevating the unhealthy side of normal functioning to the status of disease state, therapists and others who claim the mantle of science now *guarantee* the preeminence, pervasiveness, and persistence of sickness in everyday life.[18] [Emphasis in original.]

Antismokers also point to certain "withdrawal symptoms" many people experience when they quit smoking—nervousness, headaches, vague aches and pains and, yes, the craving for a cigarette that for some may never go away—as proof that nicotine is as addictive as any hard drug. But consider one doctor's description of what a true drug addict goes through when he doesn't get his fix:

> Symptoms include insomnia, marked anorexia, violent yawning, severe sneezing, weakness and depression, nausea and vomiting, intestinal spasm and diarrhea. Heart rate and blood pressure are elevated; there is a marked chilliness, alternating with flushing and excessive sweating. The addict experiences waves of gooseflesh, his skin resembling that of a plucked turkey, which is the basis of the expression "cold turkey." Abdominal cramps and pains in the bones and muscles of the back and extremities are characteristic, as are muscle spasms and kicking movements that may be the basis for the expression "kicking the habit." Other signs include ejaculations in men and orgasm in women. The failure to take foods and fluids, combined with vomiting, sweating and diarrhea, results in marked weight loss and dehydration. Occasionally, there is cardiovascular collapse.[19]

Not only do smokers who stop smoking *never* experience anything *remotely* approaching this, not only do they *never* check into detox facilities, but the American Heart Association reports that 85 percent or better of them break the habit completely on their own.[20] And interestingly enough, those who have smoked the longest and the heaviest have the easiest time quitting, at least according to a study of 4,000 smokers by the Addiction Research Foundation in Canada. It found that people age 44 and older who smoked 25 or more cigarettes a day had a better chance of quitting than younger people who smoked fewer cigarettes.[21]* Yet we are told and told and told yet again that "nicotine is every bit as addictive as heroin, etc."

THE PERSON MOST vigorously pushing the nicotine-addiction connec-

*The same may also be true for many so-called alcoholics. Another Canadian study, based on two surveys involving 12,000 people, found that 77 percent who had recovered from an alcohol problem for a year or more had done so without formal help or treatment and that 38 percent in one survey and 63 percent in the other had resumed moderate social drinking.[22]

tion in recent years was former Food and Drug Administration Commissioner David A. Kessler. In a statement before the U.S. House of Representatives Subcommittee on Health and the Environment on March 25, 1994, he presented another indication of addiction to tobacco:

"When a smoker sleeps, blood levels of nicotine decrease significantly . . . Experts in the field tell us that smoking the first cigarette of the day within thirty minutes of waking is a meaningful measure of addiction."[23]

I'm glad to know that, by this measure at least, I am not a nicotine addict and never have been. Since beginning to smoke 53 years ago, I never have had a cigarette until at least an hour or two after waking; I simply don't want one earlier. I also seldom smoke in the evening because I spend that time with my wife reading or watching TV and she objects. (To my smoking, not to me. I think.) This is no hardship for me. After a day of heavy smoking at the computer, I have no desire to smoke in the evening.

She on the other hand "had to have" a cigarette immediately upon arising, even before she dressed. Yet I fully believe that her onetime need for that first cigarette was purely psychogenic, just as Dr. Seevers maintained, for she quit cold turkey on the day of her heart attack. Not that her 47 years of smoking were ended just like that; for a long time she would carry a pencil around in her fingers in place of a cigarette. That strong tactile association with cigarettes was surely not unusual, as witnessed by another successful quitter: "What surprised me was that the addiction was not as difficult to overcome as the habit of having something in your hand."[24]

There is no end to the misinformation published about the nicotine-addiction connection. Philip J. Hilts wrote in *The New York Times* that "They [cigarettes] not only create dependence among users but also elicit a high degree of tolerance, *the need for more and more of the drug* to satisfy a craving.[25] [Emphasis added.]

This is another attempt to equate nicotine with hard drugs and is simply not true. Yes, smokers do develop a tolerance (or a need, if you insist) for nicotine, and it can be a high degree or a low degree. But unlike the craving for cocaine or heroin it reaches a certain level and stays there. Dr. Kessler himself illustrated that in his testimony before the House subcommittee when he quoted from a document from an unspecified tobacco company which tested a group of European

smokers with cigarettes having different levels of nicotine content or "impact":

> It is clear that consumers are less tolerant of decreases than they are of increases in nicotine delivery. By the time nicotine level falls to approximately 0.34 milligrams,* fifty percent of consumers will be saying that the level of impact is so low they would reject the product. To reach the equivalent state of fifty percent of consumers rejecting the product as having too high an impact level, a nicotine level of approximately 5.0 milligrams would be required. Again, it is important to note that *there is a clear upper as well as lower rejection limit* for nicotine in smoke.[26] [Emphasis mine.]

Maybe the unidentified company was Philip Morris. According to former Philip Morris scientist turned whistleblower Ian L. Udess, in a sworn affidavit before the FDA, "Nicotine levels were routinely targeted and adjusted . . . Knowledge about the optimum range for nicotine in a cigarette was developed as a result of a great many years of investigation . . . Philip Morris clearly understood . . . [that] they would have trouble sustaining the sales of a good-tasting product that was too low in nicotine."[27]

Well, shame on Philip Morris. Obviously, if it had a speck of civic-mindedness it would have used its "secret" knowledge to market such a product anyway, even if nobody wanted it.

That smokers become accustomed to a certain level of nicotine is also shown by experience with so-called low-tar/low-nicotine cigarettes. According to Dr. Jack E. Henningfield, chief of clinical pharmacology at the National Institutes on Drug Abuse, the smoking machines used to arrive at the figures for particular brands are meaningless because the tests don't take into account a smoker's compensating behavior, such as covering up the tiny air holes around the filter with his fingers, taking deeper puffs and holding them longer and, perhaps most important of all from a health standpoint, smoking more cigarettes in order to get his accustomed level of nicotine.[28]

Incidentally, Dr. Henningfield is not impressed that more than 40 million people have quit smoking over the past 30 years. "That amounts

*A milligram is one one-thousandth of a gram, or about one twenty-eight-thousandth of an ounce.

to a lot of lives saved," he granted on the Public Broadcasting Service television program "Frontline." "The bad news is that that only amounts to about 2.5 percent—2.5 percent only that have been able to quit smoking per year, on average. That is a lousy rate of quitting by oneself, when we compare that to what we know about heroin addiction, cocaine addiction and alcoholism."[29]

Either Dr. Henningfield didn't explain "what we know" about hard drug addiction or alcoholism or it was left on the cutting room floor. But 40 million ex-smokers doesn't prove anything, evidently; we need more aggressive "intervention" (name your favorite method) against smoking. Two years later, Dr. Henningfield was again shown on television saying that nicotine addiction is "ten times worse" than heroin or cocaine addiction.[30]

Commissioner Kessler also put in a cameo appearance on the same "Frontline" program. In an audio segment from National Public Radio's "Talk of the Nation" he fielded a telephone call from a listener.

> **1st Caller:** Hi. Many years ago, I was addicted to cocaine for about two or three years. When I realized what I was doing to myself, I stopped and I stopped cold turkey. I'm still smoking. I've been smoking since I'm 16. I'm 52 years old and I can't stop smoking. I smoke about a pack, a pack and a half of cigarettes a day.
>
> **Kessler:** And it was harder to stop—it's harder to stop smoking?
>
> **1st Caller:** Yes.
>
> **Kessler:** I mean, ask smokers whether the nicotine is addictive in cigarettes. And I think—just listening to smokers—I mean, they tell you unequivocably [*sic*] how addictive it is.

Maybe I am just too cynical (or maybe it's my "addiction" to cigarettes talking) but I tend to wonder if people like "1st caller" don't sometimes tell people like the commissioner what they think he wants to hear, or what they themselves want to believe. I still maintain that it is less a matter of addiction to a hard drug versus alleged addiction to nicotine than a matter of cost and availability and convenience. For a trivial example (but the best I can do), I find it much easier to quit eating cashews, which I love, than to quit eating peanuts. The reason is

that peanuts are a lot cheaper than cashews and I'm a tightwad. (Make that "frugal.") I don't know what I will do when the antis succeed in raising the price of a carton even of generic cigarettes to 30 or 40 dollars, payable either to federal and state tax collectors or, more probably, to reinvigorated organized crime. I may have to switch to marijuana, which, paradoxically, seems to be on the way to being legalized even as tobacco heads for outright prohibition (see Chapter 12).

On the other hand, "1st caller" may have truly believed what he told the commissioner. As Richard J. De Grandpre wrote in *Reason* magazine:

> As any former smoker could tell you, ex-smokers crave cigarettes at certain times and in certain situations for months, even years, after quitting. In these cases, the desire to smoke is triggered by environmental cues, not by withdrawal symptoms. This is one reason why people who overcome addiction to illicit substances such as heroin or cocaine say they had more difficulty breaking the cigarette habit. Because regular tobacco users smoke in a wide array of circumstances (when bored, after eating, when driving) and settings (home, work, car), the cues that elicit the urge are more ubiquitous than for illicit drug use.[31]

Because of smokers' compensating behavior with low-nicotine cigarettes, at least one scheme for gradually eliminating smoking would be doomed to failure. Dr. Neal Benowitz, professor of medicine at the University of California-San Francisco, has proposed that the Food and Drug Administration dictate the maximum allowable level of nicotine in cigarettes and then lower this level every year. The idea is that smokers would be gradually weaned off nicotine until eventually there would be no more addicts.[32]

If the FDA ever did put such a scheme into practice with the hope of saving smokers from themselves, it would be placing itself in the curious position of forcing them to *increase* their consumption of cigarettes in order to obtain the same amount of nicotine. The cigarette manufacturers would love that. And, of course, smoking more cigarettes would expose smokers to more of the suspected carcinogenic chemicals contained therein. In short, ultra low-nicotine cigarettes might end up killing *more* smokers than current brands allegedly do.

Somehow this simple fact seems to escape those urging a crackdown on nicotine. For example, my favorite source of (mis)information

about smoking, *The Atlanta Journal-Constitution*, echoed Dr. Benowitz in calling for the FDA to ban high-nicotine cigarettes and "gradually force the industry to lower nicotine levels. In the next century, only nicotine-free cigarettes ought to be sold."[33]

If this didn't kill more smokers it would certainly result in a thriving black market in "real" cigarettes and demands that Congress appropriate more funds to a beefed-up Bureau of Alcohol, Tobacco and Firearms. As for zero-nicotine cigarettes, Philip Morris tried to market one, a brand called "Next." Nobody bought it. I also remember that years ago somebody brought out a cigarette made of lettuce leaves that was even less satisfactory than the time-honored cornsilk.*

Dr. Benowitz is mistaken on another count. He told "Frontline" that "About six to 12 milligrams of nicotine are contained within most commercial cigarettes."[35] The actual figures range from 0.1 milligrams in a Carlton cigarette to 1.5 milligrams in Winston and Camel unfiltereds, with the average (in 1994) at 0.8 milligrams per cigarette, compared to 2 milligrams per cigarette in the 1950s.[36] Of course, as we have seen, the determined smoker can magnify the amount of nicotine he gets from his favorite brand by his compensating behavior.

(In the interest of thorough research for this chapter, I bought a carton of Carltons. They reminded me of those "Indian stogies" I tried to smoke as a boy, they were so hard to draw on. My "compensating behavior" was to snip off the bottom half of the filter at the line of little air holes. Then they were a decent smoke, although they were so loosely packed they burned down very quickly. My experience with Carltons suggests to me that it is not just more *nicotine* that people are trying to get when they use various methods to increase the output from such low-tar, low-nicotine cigarettes but also simply more *smoke*.)

Perhaps what Dr. Henningfield was thinking of when he alluded to "what we know" about heroin, cocaine and alcohol is a scale he and Dr. Benowitz came up with that ranks the addictive qualities of these drugs, along with nicotine, caffeine and marijuana, according to five

*Shortly after I wrote this, a pharmaceutical chemist named Puzant Torigian started marketing a cigarette made of lettuce leaves called Bravo. Torigian said his goal is to help those addicted to tobacco smoking kick the habit by giving them a nicotine-free alternative that looks and burns like a cigarette, even though the taste, he admitted, is not exactly the same.[34]

criteria. On his Internet page, "Essays on the Anti-Smoking Movement," Joe Dawson lists these criteria with his explanation of what they mean:[37]

1. Withdrawal: refers to the severity of symptoms experienced upon ceasing the use of the drug.

2. Reinforcement: refers to the tendency to self-administer the drug, as observed in laboratory rats.

3. Tolerance: refers to an increase in the amount of a drug necessary to experience the same effect.

4. Dependency: not rigorously defined but appears to refer to the determination of the subject to continue using the substance in question, or perhaps simply to the pleasure experienced.

5. Intoxication: refers to the degree to which (mental) functionality is impaired.

On only one of these criteria—Dependency—did Henningfield and Benowitz place nicotine higher, i.e., worse, than the other drugs. On every other criterion they ranked nicotine either much lower than most of the others or at the bottom. But since, as we have learned from Dr. Koop, scientists now consider the term drug dependence to be the equivalent of the term drug addiction, on that one criterion alone nicotine is alleged to be as "addictive" as heroin or cocaine.

However, prior to this report, says Dawson, addictiveness had been assessed solely upon the first three and the fifth criteria. While those four can be quantified to some extent, "Dependence" is a new criterion that is purely subjective and based upon the doctors' personal opinions and experience. The fact is that people are "dependent" upon smoking for a number of reasons other than merely to obtain nicotine and I'll quote from Dawson again in that regard later in this chapter.

Thus the very definitions of "addiction" and "addict" have been changed, he says, not only in order to apply it to nicotine but to characterize it as one of the most addictive drugs of all. Dawson's new definitions, which a latter-day Ambrose Bierce might well put in an updated *Devil's Dictionary*, are:

Addiction — a condition entitling those not affected by it control those who are.

Addict — one expected to surrender to the ministrations of those who despise him.

* * *

BUT LET'S LEAVE THE subject of addiction for a moment. What about nicotine itself, that powerful, mysterious drug so pervasive in our culture for the past 400 years? Is it as harmful as it is claimed to be? Or is it possible it may even have some benefits?

Antismokers like to point out that nicotine is a poison, powerful enough to be used in pesticides. (But any substance can kill you, even pure water, if ingested in sufficient quantity.) According to Action on Smoking and Health (ASH), "one-fortieth of a gram of nicotine usually gives rise to toxic symptoms in a nonsmoker."[38]

No doubt it does. That much nicotine could make even a chain-smoker of unfiltered Camels queasy, to say the least. One-fortieth of a gram is 25 milligrams—twice as high as even the inflated upper level of nicotine Dr. Benowitz said is contained in most commercial cigarettes.

Nicotine is named in honor(?) of Jean Nicot, the French ambassador to Portugal, who sent seeds of the newly discovered tobacco plant to the Queen Mother, Catherine de Medici, in 1561 or thereabouts and who extolled its medicinal benefits. For the next couple centuries after its introduction to the West, tobacco was claimed to be a cure or preventative for every disease then known, with as little scientific basis for such claims as for later ones blaming it for every disease.

The scientific name of the plant itself is *nicotiana*, given to it in the 18th century by the great Swedish botanist Karl von Linné, better known by his Latinized name, Carolus Linneaus, who identified two species: *nicotiana rustica* (a wild-growing, nicotine-rich form) and *nicotiana tabacum* (the stuff causing all the trouble today). Nicotine, the pharmacologically active ingredient in *nicotiana*, has been known to chemists as an alkaloid $C_{10}H_{14}N_2$ since 1828, when two Heidelberg medical students, Ludwig Reimann and Wilhelm Posselt, announced its chemical composition and called it a dangerous poison. (Interestingly enough, nicotine is also naturally present in some vegetables, such as eggplant, potatoes and tomatoes, although in far lesser amounts than in tobacco.)

But even as early as Columbus's time, long before nicotine was identified, the habit-forming (or, if you insist, the addictive) quality of the tobacco plant was recognized, at least anecdotally. Writing in *The New Republic*, Thomas W. Laquer recounts the testimony of Bartoleme de las Casas, who accompanied Columbus on his first voyage to the

New World. When the good friar admonished some sailors for smoking rolled up leaves of tobacco, they replied that "they were not able to stop taking them."[39]

This could have meant simply that the guys *liked* the weed, but let it go. The first health warnings about tobacco date back at least to the 18th century. In 1701, one Nicholas Andryde Boisregard reported that excessive tobacco use by young people caused them to have trembling hands, staggering feet and to suffer a withering of "their noble parts." In 1761, John Hill of England warned snuff users that they risked cancer of the nose.[40]

On the first page of his *Primer of Physiology and Hygiene*, published in 1895, William Thayer Smith, M.D., claimed that the cigarette "so seriously undermines the power of self-control that persons once addicted to its use very often find it impossible to break up and abandon the habit." Garry Trudeau, that indefatigable antismoking satirist, had his Mr. Butts displaying a reproduction of that page in a Sunday "Doonesbury" cartoon strip for "kids" to show "next time someone tries to 'educate' you with the latest research. Just say, 'Hey, get a life—that's ancient history!'"[41]

Trudeau's satirical sword has two edges, however. His discovery of this old medical manual would seem to undermine claims that the cigarette companies have been "hiding the truth" about nicotine from the medical community for all these many years.

Indeed, the effects of nicotine on the brain were described more than 100 years ago by British scientists. By the 1930s many authorities accepted tobacco use as habitual or addictive. In 1942, researcher L. M. Johnston successfully substituted nicotine injections for smoking.

"The publication of this historic experiment wasn't suppressed by Philip Morris; it was reported in *The Lancet*, an internationally renowned British medical journal," writes Brad Rodu, chairman of the oral pathology department at the University of Alabama (and no friend of smoking).[42]

Conducting a search using "Medline," the National Library of Medicine's computerized data base, Rodu found that nicotine was the focus of 1,500 medical research articles between 1976 and 1984, with Philip Morris alone publishing 250 of them. Almost 4,000 additional studies were published in the following decade.[43]

For good reason did Laquer comment in his *New Republic* article:

"That tobacco contains a drug, or is a drug, is without doubt the most ludicrous 'discovery' of our day . . . Our own FDA's sudden 'discovery' that tobacco is addictive is another anticlimax."[44]

But amazingly no one seems to have paid any attention to these thousands of studies. Otherwise the antis wouldn't be continually coming up with tobacco company whistleblowers bearing revelations of "secret" and "suppressed" industry research into nicotine. Would they?

Even the American Medical Association never heard about them. Otherwise, it wouldn't have announced in July 1995 that it planned to publish in its *Journal* summaries of certain papers that had been anonymously sent to antismoking activist Stanton Glantz describing activities of the Brown & Williamson Tobacco Company and its parent, British American Tobacco Company (BAT), which papers "suggest that these companies recognized the harmful and addictive properties of cigarettes as much as 30 years ago."[45] Would it?

Otherwise, an FDA advisory panel wouldn't have announced in August 1994 its discovery that nicotine is an addictive substance, would it? And Commissioner Kessler wouldn't have called it "a very significant finding." Would he?[46]

All that aside, the important fact is that no one has ever demonstrated that nicotine is physically harmful in the amounts smokers are accustomed to. A drug—yes. Habit-forming—yes. Zapping into the brain within seconds of the first puff—definitely. Producing typical and measurable physiological effects on heart rate and psychological effects on mood—undeniably. But in and of itself injurious to the body in the amounts smokers obtain—no. The fact that the Food and Drug Administration has okayed the over-the-counter sale of nicotine in the form of chewing gum and skin patches is proof of that. (The patch delivers 15 milligrams of nicotine per day through the skin, or about the same amount a smoker takes in from 15 cigarettes.[47])

(As I was writing this, TV ads for nicotine patches and gum were starting to rival automobile ads in frequency. In one commercial, actor James Garner exclaimed that after 50 years of smoking he was finally able to kick the habit in only six weeks, thanks to Nicotrol skin patches. The harm that 50 years of smoking had done to his health was not apparent on the screen, not did he mention any.

(Nicotine gum was treated humorously in a comic strip called "Rhymes With Orange." In the first panel were the words: "The Chang-

ing Face of Romantic Literature." The next panel showed a man and woman on a porch looking off into the distance. The words, in typewriter-style print, read: "Chapter One—Sunset, after a fabulous meal. We sit out on the front porch, stuffed and happy. My love leans down to pass me a piece of nicotine gum, and we chew in silence as the liquid orange ball disappears behind the horizon."[48] And if the couple later had sex, no doubt another stick of nicotine gum would be in order in the afterglow.)

Around the same time the FDA approved sale of gum and patches over the counter it approved the prescription-only use of a nicotine-containing nasal spray, which it said was more effective than either gum or patches, although the spray only helped about 25 percent of those trying to quit. The agency also cautioned that the spray might have side effects, such as causing nasal sores, and that smokers could become as addicted to that form of nicotine delivery as they are to cigarettes. It suggested that the spray was best used for only three months and should never be used for more than six months.[49]

It is interesting that the violently antismoking group, Action on Smoking and Health, approves the use of these sources of nicotine for smokers trying to quit, yet when R. J. Reynolds announced plans to test-market Eclipse, a low-nicotine and virtually smokeless cigarette (in which the tobacco is not burned but is heated by a glowing carbon tip) ASH immediately petitioned the FDA to prevent its being marketed in the United States. Their grounds: Eclipse was not a real cigarette but a "drug-delivery device."[50] But what are nicotine patches and gums if not drug-delivery devices that the FDA has approved for nonprescription over-the-counter sale?

That raises a question: if obtaining nicotine from a spray or a patch or chewing gum can help a smoker stop smoking, why wouldn't obtaining nicotine from a cigarette help a smoker stop smoking? Well, it probably would—if the smoker set a definite stop-smoking date and had enough determination to gradually diminish his daily consumption of cigarettes down to the vanishing point over that period of time. The trouble is, it is not only a matter of weaning oneself from nicotine but also from all the other pleasurable little habits that accompany smoking—and these, in truth, are the hardest to give up.

Kaiser Permanente in Atlanta uses a weaning approach in its six-week "Be Smoke Free" class. "For the first three weeks, each week, [the

class enrollees] change brands to a lower nicotine level," explains Malbea Britton, the class instructor. "By the third week, everyone's smoking an extra-light brand. Finally comes quit day. "That's when they go cold turkey."[51]

But even assuming that the step-down brands the participants gradually switch to actually do contain less nicotine than the brands they start with, we've seen that smokers have a way of maintaining their accustomed nicotine intake no matter what brand they smoke. Moreover, the body's "need" for nicotine is far from the only factor involved in smoking. (As Ms. Britton is aware: "Most people find it's sheer habit—that it goes with talking on the telephone, drinking coffee, or driving.") Smoking is accompanied by a whole host of deeper, psychological satisfactions that spray or gum or patches can't replace, which is why there is a high relapse rate among smokers trying these nicotine substitutes and why the most successful quitters are those who one day simply stop cold turkey—which, as Ms. Britton says, is what the Kaiser Permanente patients finally do, after psyching themselves up for it over a period of weeks.*

If the Coalition on Smoking OR Health, composed of the American Heart Association, American Lung Association and American Cancer Society, had its way, smokers wouldn't even be able to obtain low-tar or low-nicotine cigarettes—not without the government's permission or a doctor's prescription. In 1992 the coalition petitioned both the FDA and the Federal Trade Commission to classify low-tar or low-nicotine cigarettes as drugs and to control their sales on the ground that such cigarettes carried an implied claim that they were safer or less addictive than regular cigarettes.[53] What would be the purpose of this? Well, one thing it would do would be to give Those Who Know Best another way to control the behavior of those of us who don't know what's best for ourselves or refuse to do what's best.

*The poor success rate of most smoking cessation programs pleases John Banzhaf, executive director of Action on Smoking and Health. He cites a $45-million National Cancer Institute program which produced no significant declines in smoking rates, especially among heavy smokers. The reason: "the tremendous strength of the addiction to nicotine." "Ironically," he says, "the NCI's failure among heavy smokers may help plaintiffs to win in class-action suits now being brought on behalf of smokers. Nicotine addiction is a key issue both offensively and defensively."[52] That's why he's pleased.

No, it isn't nicotine that is the problem from a health standpoint; it's all those other nasty chemicals, or some unknown one or several of them, that unfortunately accompany nicotine in tobacco smoke. Yet it is nicotine and the industry's alleged "manipulation" of it in cigarettes that consumes the FDA and is the subject of virtually every antismoking article printed.

This is another example of how the failure to define a term precisely causes confusion and misunderstanding. *Of course* the tobacco companies "manipulate" the content of nicotine in their products. So do dairy companies "manipulate" the fat content of the milk or cottage cheese they sell. Does anyone think the cigarette manufacturers simply take a bunch of tobacco leaves and indiscriminately throw them into a hopper and whatever comes out comes out? How can one brand of cigarettes contain more or less nicotine than another brand if somewhere along the line the nicotine content is not "manipulated"?

(For that matter, I assume that the makers of nicotine gum, patches and sprays get their nicotine from tobacco. How do they put precise doses of nicotine in their gum, patches and sprays unless they "manipulate" it?)

There is nothing sinister or nefarious about it. Different varieties of tobacco, and even different parts of the same plant, contain different levels of nicotine, as well as "tar." Burley is higher in nicotine than flue-cured tobacco. The companies create a blend using these different plants and parts of plants, along with what is called "reconstituted" tobacco, or tobacco sheet, made from bits and pieces of leaf and stalk and stems (and for all I know, sweepings off the floor). Because some nicotine is lost in the process of making the sheet, nicotine extract is added to it. (If "tar" is the real culprit, there are methods for reducing it in the final product, but fortunately these methods also reduce the levels of nicotine. Apparently you can't have one without the other.)

In any case, the companies do not artificially increase the nicotine content above naturally occurring levels. In fact, according to Tobacco Institute spokeswoman Brennan Dawson, "There is less nicotine in every finished cigarette in America than in the leaf you start off with."[54] Unfortunately, the antis either have no independent means of verifying that or they don't want to verify it. The FDA knows this is true, yet it encourages the public to conceive the image of glazed-eyed tobacco company executives standing over vats of tobacco and pouring nico-

tine into them. Actually, according to one writer, "The FDA's position . . . does not turn on the issue of adding extra nicotine to tobacco. Since tobacco companies have technology available to take nicotine out of tobacco, FDA officials have said, the inclusion of any significant amount of nicotine in the final product *could be interpreted* as manipulation."[55] [My emphasis.]

In other words, the tobacco companies can't win for losing.

There is certainly *no more* nicotine than what you start off with, as the ABC television network was forced to concede when, after Philip Morris and R. J. Reynolds sued it for $10 billion for claiming on its "Day One" program that the cigarette manufacturers "spike" their cigarettes with nicotine, ABC issued a retraction and apology.[56]

It was an ignominious retreat by the network, and it caught a lot of flack for it. "Not since NBC apologized to General Motors for a 1992 program featuring a staged truck explosion has a television network backed down in such a public way in the face of a corporate lawsuit," said a column in *The Atlanta Journal-Constitution*.[57]

At the very least, this would suggest that PM and RJR must have had the facts on their side. Yet tobacco industry critics seldom allow facts to color their opinions. Harvard law professor Laurence Tribe called it "a disgraceful settlement." Mike Wallace, CBS correspondent, ex-smoker and onetime star in television cigarette commercials, was "utterly bewildered as to why they settled."[58]

New York Times reporter Philip Hilts, who is also a fellow at Harvard University's School of Public Health, wasn't bewildered: "ABC went out and did a report, and they got a $10-billion lawsuit, which the lawyers felt they were doing rather well on, they got good discovery [documents from plaintiffs PM and RJR] and so on, but then, as a corporate decision, when ABC merged with Disney, they decided they didn't need this on board and jettisoned the suit and settled it."[59]

For once Hilts may not be entirely off the mark. The sudden multibillion-billion-dollar merger between ABC and Disney apparently was a precipitating factor in the network's capitulation. (We know it certainly couldn't have been from want of moral conviction on ABC/Disney's part; only the tobacco industry lacks integrity.)

From the transcript of another "Frontline" program, anchored by reporter Daniel Schorr:[60]

Schorr: . . . ABC was marshaling its legal forces to contest the $10-billion libel suit that Philip Morris had filed over the original "Day One" reports about the manipulation of nicotine content . . . But ABC was worried about trying the case before a judge and jury in Richmond, Virginia, where tobacco means jobs, so they came to test their case here in Raleigh, North Carolina, a tobacco town like Richmond. Two mock juries were assembled to hear the arguments for Philip Morris and for ABC and the proceedings were videotaped . . . The results were encouraging . . . Juror Carlos Ector:

Ector: Most of the people voted for ABC. Even some of the people [who] were die-hard smokers, they said even though they smoked, they still believed that what the tobacco industry was doing was wrong. They were not going to stop smoking, but they still believed they were wrong.

Schorr: After 16 months of preparation, ABC's lawyers moved to dismiss the case, claiming that documents in their possession—quote—"eliminated any factual dispute as to whether Philip Morris adds significant amounts of extraneous nicotine during the production of reconstituted tobacco. It does."

But still preparing for trial, ABC attorneys asked the former surgeon general, Dr. C. Everett Koop, to be their lead-off witness. Their letter said, "We are as confident of victory as any prudent trial lawyers should be."

Then, just six days later, a bombshell.

Diane Sawyer: [Clip from ABC "World News Tonight," August 21, 1995] The $10-billion lawsuit filed against ABC News by Philip Morris and R.J. Reynolds was settled this evening with a statement. ABC News agrees that we should not have reported that Philip Morris and Reynolds add significant amounts of nicotine from outside sources. That was a mistake that was not deliberate on the part of ABC, but for which we accept responsibility and which requires correction. We apologize to our audience, Philip Morris and Reynolds . . .

Interviewer: [To Paul Friedman, Executive Vice President, ABC News] In view of the fact that you had the former surgeon general of the United States in your corner, there had been mock jury trials which upheld the network position, how do we account for the—the willingness to—to—to sort of back down at a time when you seemed to have all the cards in your hand?

Friedman: You've used the words "backed down." I don't—

> **Interviewer:** And I use the words—
>
> **Friedman:** —accept them.
>
> **Interviewer:** Well—
>
> **Friedman:** I don't accept them. It's the policy of ABC News to apologize when we make a mistake. We made a mistake. We also said that the principal focus of that piece was to talk about whether cigarette companies control the amount of nicotine in the cigarettes to keep people smoking and we have not backed away from that central focus or from the people who did the work.

Which is an excellent example of how to use doublespeak to make the best of a bad situation. Translated: "It was a mistake for us to claim that the cigarette makers add extra nicotine to their products and we apologized, but that doesn't mean we backed down from our 'central focus,' which is whether or not they control nicotine content." This is as safe and nonlibelous a statement you could make. As we have seen, *of course* the companies control the nicotine content of cigarettes. How else could they make them?

Also appearing on "Frontline" was Ron Motley, an attorney specializing in suing tobacco companies.

> **Motley:** The reason they settled the case, as far as I'm concerned, is very simple. It's clear as the big nose on my face. They—they had a concern about the jury, had a concern about the judge, but they thought they would prevail eventually, four or five years down the line, in the U.S. Supreme Court. That was a factor, but the overriding factor was the immediacy of the takeover of ABC by Disney.

According to Schorr, the sale of ABC was quite financially beneficial to the network's top executives. News president Eric Ober received almost a million and a half dollars in stock options and chief counsel Ellen Kaden more than $1 million in stock options and $3.7 million more from a salary buyout and other benefits.

So we are asked to believe that after all the trouble ABC had gone to in preparing for trial, the brass at newly merged ABC/Disney simply decided to forget the whole thing as a matter of corporate convenience. Even though the network had "documents" in its possession proving its case, the brass decided they had bigger fish to fry. In other words,

business imperatives took precedence over exposing the truth about how those deceitful tobacco companies play fast and loose with the health of Americans.

It's interesting that no other news organization has since taken up ABC's deserted cause. Is it from fear of a similar lawsuit, which can indeed be enormously expensive even if you eventually win, or the knowledge that ABC was simply wrong?

The whole idea behind ABC's "revelation" was based on the superficially logical but faulty reasoning that because nicotine is "addictive," the more there is of it in a cigarette, obviously the more "addicted" the smoker will be and the more cigarettes he will smoke. Thus the allegation that cigarette makers "spike" their products to increase that addiction.

The following year, *Wall Street Journal* reporter Alix Freedman was awarded a Pulitzer Prize for her coverage of the tobacco industry, which included an article based on confidential company documents that showed how cigarette companies use ammonia-based chemicals to "boost" the potency of nicotine. Her editor praised her "relentless reporting" that had "changed the terms of debate on one of the greatest public-health issues of our time."[61]

But the "terms of the debate" weren't changed; they were the same old ones the media had been using for years, as for example in an editorial in *The Atlanta Journal-Constitution* which spoke of the "mounting evidence that cigarette makers have been boosting the nicotine content of their products."[62]

All of which prompts me to suggest another entry in our updated *Devil's Dictionary*:

Mounting evidence — When used in connection with tobacco or smoking, this term does not refer to an actual increase in any evidence but rather to the mounting number of repetitions of the *claim* that such evidence exists. Cf. **"mountain of evidence**." Cf. "**irrefutable proof**."

Yet for one reader of the AJC, there was no doubt in her mind that she was a tool of the cigarette makers:

> I recently became a nonsmoker . . . Smoking was one of my closest friends. Always there when I needed it, always listened, was unjudgmental, accepted me for who I am. I, in turn, embraced

> it every chance I got . . . Am I happier? Of course. I am in control of my life. I am not angry with my friend; it was as innocent as I was. What pushes my button is hearing how I might have been manipulated by an industry that regulated nicotine levels to sucker me in. I resent when my choice to smoke is threatened. Do not take my right of choice away by doctoring a product.[63]

I am still trying to figure out what the writer was saying in that last sentence. That if the industry hadn't (allegedly) doctored their product with nicotine she would have freely chosen to smoke? Or would freely have chosen not to? Or that she wouldn't have chosen to stop smoking? Or that if they stopped (allegedly) doctoring their product with nicotine she would start smoking again?

THE "DAY ONE" FLAP came a little more than a year after the FDA's Kessler made a second appearance before the House Subcommittee on Health and the Environment. In June 1994, three months after the appearance mentioned above, he revealed a project undertaken by the Brown and Williamson Tobacco Company to develop a variety of tobacco, code-named "Y-1," with a nicotine content "significantly higher than any normal variety of tobacco grown commercially."[64]

The story began, he said, with the FDA's discovery of a Brazilian patent for this new variety. In 1983, B&W contracted with a company called DNA Plant Technology, in whose laboratories, greenhouses and fields much of the developmental work on Y-1 took place. In 1991, B&W filed an application with the U.S. Patent Office and deposited sample seeds of Y-1 with the National Seed Storage Laboratory in Fort Collins, Colorado. In 1994, however, the FDA learned that the company had withdrawn both the application and the seeds. DNA Plant Technology also told the FDA that Y-1 was never commercialized.

Ah, but by dint of assiduously digging through a mountain of invoices filed with the U.S. Customs Service, FDA sleuths discovered two invoices revealing that more than half a million pounds of Y-1 had been shipped to B&W from Brazil in 1992. And only four days before Dr. Kessler's appearance before the subcommittee, B&W told him that three and a half million pounds of Y-1 were currently being stored in company warehouses in the United States. Even more damning, B&W admitted that Y-1 had in fact been used in five brands of cigarettes in

1993—Viceroy King Size, Viceroy Lights King Size, Richland King Size, Richland Lights King Size and Raleigh Lights King Size.

When asked by the FDA why they were interested in developing a high-nicotine variety of tobacco, B&W officials said they wanted to reduce tar while maintaining nicotine levels. However, Dr. Kessler didn't say whether the FDA had ascertained what the actual nicotine levels were in those five brands, or if they were higher than usual.

Skip ahead three years. Like Inspector Javert, the Food and Drug Administration doesn't give up in its relentless pursuit of the tobacco industry. On January 7, 1998, hit with a "criminal information" filed against it by the FDA, DNA Plant Technology agreed to plead guilty to conspiring to violate the Tobacco Seed Export Law (which, incidentally, had been repealed in 1991). An unnamed tobacco company (guess who) was cited as an unindicted co-conspirator.[65]

Thus once again, as far as newspaper readers knew, another cigarette company had been caught "spiking" nicotine in its cigarettes in order to hook smokers.

(Interestingly, all the while he was busily sleuthing out Brown and Williamson, Administrator Kessler was also nickel-and-diming the American taxpayer with padded expense-account vouchers. An Associated Press review of some $17,377 in federal reimbursements that Kessler claimed on travel vouchers from mid-1990 through spring 1995 found them riddled with inflated claims. No really big stuff, though. More than a third, for example, were for taxicab fares for which he had no receipts and which were often two or three times higher than actual costs. Kessler said the errors were unintentional and that he had written a check for $850 to cover anything he owed the government.[66])

Back to 1994. Having informed the congressmen of the Y-1 "plot," Kessler moved on to another issue, the chemical manipulation of nicotine.

He noted that when six major American tobacco companies released a list of ingredients added to tobacco, nicotine was not among them. "But Mr. Chairman," he said, "a number of chemicals on that list increase the amount of nicotine that is delivered to the smoker." One of the "most striking" ways is the use of ammonia. He quoted from one tobacco company's 1991 handbook on leaf blending and product development:

> [Ammonia] can liberate free nicotine from the blend, which is associated with increases in impact and "satisfaction" reported by smokers . . . This means that at the same blend alkaloid content, a cigarette incorporating [ammonia technology] will deliver more flavor compounds, including nicotine, into smoke than one without it.

Skip ahead four years again. TRIAL REVEALS HOW AMMONIA FUELED CIGARETTE SALES was the banner headline in the middle of page one of the February 9, 1998 *Atlanta Journal-Constitution.* The story by Steve Karnowski of the Associated Press told readers how Brown and Williamson found out why Philip Morris's Marlboro brand started surging ahead of B&W's Winston brand in the 1970s. "The secret of Marlboro is ammonia," said a subpoenaed B&W document revealed at the trial of Minnesota's lawsuit against the industry (more on that suit in Chapter 12.)

A Mayo Clinic authority on nicotine addiction and a Stanford University chemical engineering professor testified that the purpose of ammonia was to boost the addictive power of "free nicotine" while lowering tar and actual nicotine content in cigarettes. "What the industry was concerned with, in the face of lowering tar, is the problem they would face if nicotine levels dropped" below the level needed to keep smokers hooked, said Channing Robertson of Stanford.

Well, shame again on Philip Morris for trying to produce a cigarette with reduced tar that still delivered satisfaction to smokers. Readers of this shocking story had no way of knowing that the FDA was well aware of ammonia at least as early as 1994 or that an industry handbook, which was hardly a secret and suppressed document, had described its use three years before that. Nor did the AJC remind readers that in 1994 it had reported ammonia as an ingredient in cigarettes (see below).

Back to 1994 again and Dr. Kessler:

"Why spend a decade developing through genetic breeding a high-nicotine tobacco," Dr. Kessler rhetorically asked the subcommittee, "if you are not interested in controlling and manipulating nicotine? Why focus on enhanced delivery of free nicotine to the smoker by chemical manipulation if you are not interested in controlling and manipulating nicotine?"

Beats me, commissioner. All I can say is, the people who run

tobacco companies are obviously nothing but a bunch of rotten, dirty rats. It couldn't possibly be because they wanted to enhance the delivery of nicotine in cigarettes—which, after all, is what people smoke them for—while minimizing the bad stuff that goes along with the nicotine. I can, however, pose a question of my own to Dr. Kessler, as well as to Drs. Henningfield and Benowitz, John Banzhaf, Michael Pertschuk, Stanton Glantz and the whole host of antis who are so concerned about the well-being of their fellow Americans:

Why in the name of sanity, gentlemen, are you not encouraging the tobacco companies to produce cigarettes with the highest consumer-acceptable levels of nicotine so that we "addicts" could smoke fewer *of them to receive the same effect while ingesting* less *of the allegedly harmful toxins in tobacco smoke?*

Yet here again, despite the evidence Dr. Kessler presented to the subcommittee on March 25 showing that different people require different levels of nicotine in their smokes—*and stay at that level*—he and the other antis continue to promote the myth that the more nicotine there is in a cigarette, the more addicted the smoker becomes.

It is also worth asking why Dr. Kessler was so worked up about nicotine addiction but never, so far as I know, criticized the pharmaceutical companies for the way they push habit-forming drugs on millions of people through aggressive advertising in medical journals that doctors read. According to one authority, "More than 20 million Americans take Prozac, Ritalin, Xanax, Valium, or other potent psychotropic drugs prescribed on the basis of DSM labels [the American Psychiatric Association's 'Diagnostic and Statistical Manual'] . . . In short, doctors are beginning to treat normal life problems with drugs—exactly what drug users do."[67]

Or why he never worried over the fact that a million and a half children and young people ages 5 through 18 are being doped with Ritalin for so-called "Attention Deficit Disorder (ADD)," a psychiatric term for "hyperactivity" or sometimes simply fidgetyness.[68*]

*"Fifteen years ago, no one had ever heard of ADD. Fred A. Baughman, Jr., a California pediatrician, contends that ADD 'was invented, in committee, at the American Psychiatric Association in 1980.' In its brief history it has been called Hyperkinetic Child Syndrome, Hyperactive Child Syndrome, Minimal Brain Damage, Minimal Brain Dysfunction in Children, Minimal Cerebral Dysfunction and Minor Cerebral Dysfunction."[69]

Says one physician: "I have seen so much psuedo-ADD that I have be-

As for that list of once-secret ingredients in cigarettes (whatever the number of them is; I've seen it given as anywhere from 599 to as high as 800) that Dr. Kessler referred to and which the companies, under pressure from Congress, released on April 13, 1994, tobacco opponents still weren't happy. They complained that the cigarette makers "continued to hide" how much of those chemicals a smoker gets in each puff.[76]

One has to sympathize with the antis for the difficulties they labor under. Apparently they have no research facilities of their own with the ability to analyze the chemical content of cigarettes but are utterly dependent upon what the tobacco industry tells them (or, more usually, what some disgruntled industry whistleblower "reveals").

The FDA evidently has the same problem. Of those 599 (or whatever) ingredients, eight of them are most questionable as to safety but the FDA apparently has formed no opinion about them, according to a

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gun to question attention deficit disorder as a diagnosis whenever I have a new patient who hasn't shown significant improvement on Ritalin, or other type of stimulant."[70]

According to Dr. Mark Riddle, director of the division of child and adolescent psychiatry at the John Hopkins Medical Institutions, anxiety disorders, including "separation anxiety, generalized anxiety and social phobia," are more widespread in children than pediatricians had thought and can be treated pharmacologically. Unfortunately, he adds, Ritalin can actually increase nervousness and anxiety in many children.[71] So what's a shrink to do? Why, look for another magic pill. The National Institute of Mental Health, in conjunction with Solvay Pharmaceuticals of Marietta, Georgia, launched a study using 200 children to assess the effectiveness of the drug fluvoxamine to treat anxiety disorders in children.[72]

An even more serious problem with Ritalin, in at least one city, is that it "is increasingly being snorted or injected by metro Atlanta schoolchildren in search of a quick high . . . Because the drug is legally prescribed to many of their classmates, kids mistakenly think Ritalin cannot harm them. But when abused, the drug produces stimulating effects similar to those of amphetamines," said Dr. Gaylord Lopez, director of the Georgia Poison Center. According to the Drug Enforcement Administration, Ritalin overdoses in children ages 10 to 14 went from 40 in 1990 to 400 in 1995.[73]

Interestingly, Utah, which has the lowest percentage of smokers, has four times the national level of Ritalin consumption and nearly twice that of the next highest state.[74] Nationally, Ritalin is prescribed *250 times as frequently* in the United States as in Western Europe.[75]

list published by *The Atlanta Journal-Constitution*[77] (all emphases added):

— **Megastigmatrienone**. A flavoring that tobacco companies contend is found naturally in grapefruit juice and is considered safe by the food industry. *The FDA couldn't confirm that.*

— **Dehydromenthofurolactone**. A flavoring that tobacco companies say is found in peppermint and is considered safe by the food industry. *The FDA couldn't confirm that.*

— **Ethyl furoate**. Found naturally in coffee, kiwi fruit and peanuts. The food industry considers it safe. *The FDA hasn't formally ruled on it.*

— **Maltitol**. A sweetener used in chewing gum and candy for diabetics. The food industry considers it safe, but *the FDA hasn't ruled.* on a petition questioning its safety.

— **Sclareolide**. A synthetic form of a naturally occurring tobacco element. The food industry considers it safe.

— **Tobacco extract**. Used to boost the flavor of reconstituted tobacco. Contains a small amount of nicotine.

— **Ammonia**. A processing aid. The FDA considers certain forms of ammonia safe in food but *couldn't comment* on the type used in cigarettes.

— **Methoprene**. An insecticide that toxicologists say is biodegradable. Tobacco companies say the FDA allows it in dried fruit, but *the FDA couldn't confirm that.*

"The FDA couldn't confirm." "The FDA hasn't ruled." "The FDA couldn't comment." Obviously, the agency needs a bigger budget so it can hire more investigators.

Something not so curious happened when R. J. Reynolds launched an advertising campaign telling smokers that it had reformulated its Winston brand to remove any and all of the chemicals, flavorings and other compounds normally used in mass-market cigarettes. The company was immediately attacked by John Garrison, chief executive of the American Lung Association, who foamed: "We demand evidence

to substantiate the claim that these cigarettes are safer than other cigarettes. Smokers will grab for anything they think might be less harmful, and Reynolds has an obligation to its customers to prove these new Winstons are any less dangerous than other cigarettes."[78]

The company of course had made no such claim. Commented *The Wall Street Journal*:

> Three years ago [1994] the anti-smoking triumvirate [American Lung Association, American Heart Association and American Cancer Society] denounced the use of additives in cigarettes, claiming that they were a toxic soup of carcinogens. Now a tobacco company has done nothing less than to heed their advice and remove the additives. But there is no rejoicing among the triumvirate's pooh-bahs. Instead, they are demanding that the tobacco companies come up with evidence that the additive-free cigarettes are less dangerous than the toxic-soup variety.
>
> If there is no proof that the additives are harmful, then why did the triumvirate denounce additives three years ago? Are they now suggesting that they had no evidence for their claims? Or is it that, having used the issue of additives as a wedge, they aren't about to let Big Tobacco get off the hook with any additive-free nonsense?
>
> If additives are harmful, then the pooh-bahs should be happy that smokers have an option that reduces their risks, if only marginally. If the additives are not harmful, then the pooh-bahs should apologize for having suggested that they were.[79]

Anybody who expects antismokers to ever apologize about anything, let alone require them to use logic, has a very long wait. For what it's worth (about $12 in 1997), I tried a carton of the new Winstons and couldn't detect anything at all different about them.

To close this topic, the following is a cute poem a letter writer sent to *The Atlanta Journal-Constitution*:

> The manufacture of tobacco products
> Is easily the greatest miracle yet:
> They cram 700 additives
> Into one little cigarette.
> It all seems kind of whacko [*sic*].
> Is there still room for the tobacco?[80]

If some doctor or medical researcher might in a weak moment con-

cede that nicotine is *maybe* a wee bit less harmful to the human body than a number of other drugs that could be named, would any doctor be so crazy as to suggest that nicotine, or possibly something else in tobacco smoke, might actually be beneficial?

Smokers are fond of pointing out that nobody has ever rammed a car into a crowded school bus under the influence of nicotine. Nobody has ever beaten his wife in a nicotine-induced rage. Nobody has ever checked into the Betty Ford Clinic for nicotine detoxification. And certainly nobody has ever employed nicotine addiction as a defense in a criminal trial, much less won the sympathy of the court with such a stratagem.

(It's happened, though, with another popular mood-altering "drug"—sugar. The most notorious example is the murder of Harvey Milk, a member of the San Francisco Board of Supervisors and one of the first openly gay elected public officials in the United States. Milk, along with San Francisco Mayor George Moscone, was shot to death on November 18, 1978 by a disgruntled and apparently antigay former supervisor and former police officer, Dan White. To the shock and amazement of many, a San Francisco jury found White guilty not of murder but of manslaughter, judging him to have acted out of "diminished capacity" partly from having eaten too much junk food—the so-called "Twinkie Defense." The enraged San Francisco gay and lesbian community reacted with one of the worst civil disturbances in the city's history, known as the "White Night" riots.[81])

(More recently, a judge in Florida ruled that one Wesley Shaffer could use a defense plea of insanity caused by cotton candy after the accused burglar claimed that skyrocketed blood sugar caused him to break into a home in Boca Raton and steal a bag of jewelry.[82])

It may be stretching a little to call the absence of an intoxicating effect from nicotine a "benefit," yet it ought to be legitimate to pose this fact as a counter to those who lump nicotine into the same category as the narcotic drugs. Incidentally, although we call the pathological dependence on alcohol "alcoholism," I have never seen the corresponding word "nicotinism" used in connection with tobacco, even by the antismokers, although there is such a term, coined at the end of the last century. Perhaps it has fallen into disuse because, like another 19th-century affliction, "spermatorrhea," which doctors warned was a consequence of masturbation, the term is now recognized as unscientific and useless.

Smokers have also frequently claimed that smoking increases their mental alertness. This is not just their subjective impression; numerous studies have backed them up.

For example, in 1995, three researchers presented a paper before the annual meeting of the Canadian Society for Brain, Behavior and Cognitive Science in Halifax, Nova Scotia, which stated:

> Smokers' reports of increased mental alertness due to smoking are supported by the findings of improved performance on a host of cognitive tasks following smoking . . . This enhancement is generally attributed to the pharmacological effects of nicotine. The types of tasks in which smoking/nicotine improves performance include rapid visual information processing, memory tasks, motor tasks and choice reaction-time (RT) tasks. The varied nature of these tasks indicates that smoking/nicotine has positive effects on performance through its actions on several neural systems.[83]

Unfortunately, two of the three authors were associated with the R. J. Reynolds Tobacco Company, so we'll have to throw out their report, along with 21 supporting studies they cited. (Antismoking researchers, of course, are *never* influenced by anything other than the facts.)

But the previous year a team of research scientists from the Medical College of Georgia had concluded from clinical studies that nicotine enhances both short-term and long-term memory, at least in rats trained to solve a test involving opening a door to receive a reward, and may offer potential for treatment of degenerative diseases like Alzheimer's.[84]

The goal of such research, said team leader Dr. Alvin Terry Jr., was to find a way to help Alzheimer's patients by delaying progression of the disease, if not the actual onset of it. Although nicotine is known to be addictive, it would be much better to be hooked on a drug than to keep losing memory, he said.

Others have located the cellular mechanism in the brain that is activated by nicotine. Nicotine stimulates the release of a chemical that transmits signals from one cell to another in many parts of the brain, a team of researchers at Columbia-Presbyterian Medical Center in New York told readers of the August 8, 1996 issue of *Science*, the journal of the American Association for the Advancement of Science.[85] Anyway, it did in chicken brain cells the researchers kept alive in test tubes.

"[Nicotine] produces a profoundly more active connection. It en-

hances interaction between cells," wrote Lorna Role, senior author of the study, adding that this may also explain why smoking is such a difficult habit to break. "The brain has a way of saying, 'That was good, do it again.'"

(The brain likes a lot of things. For example, chocolate, "which temporarily helps relieve symptoms such as mood swings and anxiety," says Cindy Deversa, a dietitian at St. Jude Medical Center in Fullerton, California. "Simple sugars make it easier for the amino acid tryptophan to cross the blood-brain barrier. Trytophan is a precursor to serotonin, a neurotransmitter that gives you a calm, sedated feeling."[86])

Unlike the Georgia researchers, however, those in New York weren't looking for therapeutic uses for nicotine. Rather, they hoped their finding would aid development of a drug that blocks nicotine's addictive effects and thus help smokers kick the habit.

According to an article in the British journal *New Scientist*, epidemiologists began to find "apparently beneficial effects of smoking " in the late 1960s, when a study of American military veterans found that those with Parkinson's disease were less likely to be smokers. "The weight of evidence suggests that smokers are 50 percent less likely* to develop Parkinson's disease than those who have never smoked."[87]

That claim was later confirmed by Dr. David Morens of the University of Hawaii Medical School who reported in the June 1995 issue of the journal *Neurology* that he found cigarette smokers are half as likely to develop Parkinson's disease as nonsmokers. Parkinson's, which affects some one million Americans, is a neurological disorder that causes tremors, impaired motion, stiffness and difficulty in breathing.

Morens was honest enough to say that he was skeptical going into the study but was finally persuaded because the data "were overwhelmingly in favor of a protective association." He suggested that "It could be that something in the smoke stimulates an enzyme to break down chemicals in the smoker's brain that causes Parkinson's."[88]

*Fairness requires me to warn readers that a 50 percent "*less* likely" risk (or relative risk of 0.5) in a study favorable to smoking is subject to the same reservations as a 50 percent "*more* likely" risk (relative risk 1.5) in a study not favorable to smoking. The same goes for other percentage benefits of smoking cited in this chapter. It bears repeating that relative risks so close to 1, whichever side of it they are on (below 1, less risk; above 1, more risk) are not considered to be statistically significant.

Could it possibly be nicotine itself? One bit of evidence that it might be is that when someone with Parkinson's chewed nicotine gum, Morens found, "a transient [less than half-hour] suppression of diagnostic Parkinson's disease signs" occurred.

There have been other studies suggesting (which is really all that research into smoking usually does) that "something" in cigarette smoke may also prevent or delay or ameliorate the effects of the dreaded Alzheimer's disease. Still other studies suggest that that "something" may also help prevent ulcerative colitis.

But if medical science on rare occasion giveth a bit to tobacco, it quickly taketh it away. Researchers at the Brookhaven National Laboratory in Upton, New York, don't think cigarette smoke directly prevents Parkinson's. Rather, they reported in the February 22, 1996 issue of the British journal *Nature*, "something" in the smoke, other than nicotine, breaks down an enzyme called monamine oxidase B, or MAO B, which destroys dopamine. (Dopamine is a pleasure-enhancing chemical that is activated by a lot of things, including cocaine, heroin, sex, chocolate bars and a raise in salary.) Smoking thus increases the amount of dopamine in a smoker's brain, intensifying addiction, they say.[89]

Their study found that smokers have about 40 percent less MAO B than nonsmokers. As a result, they have more dopamine, and since Parkinson's is aggravated by a shortage of dopamine, that, the researchers suggest, may be why smokers may have a lower risk of developing that disease. But far from recommending that Parkinson's victims take up smoking, the Brookhaven folks believe that other drugs currently being used to treat this disease could help smokers quit smoking by reducing the drop in dopamine that results from quitting.

Interestingly, the previous week's issue of *Nature* reported that researchers had found "a statistical link" between dopamine receptors in the brain and whether a person acts detached and cold. Testing all of 24 people, they discovered that the lower the density of a type of receptor called D2, the higher the likelihood that the person would avoid closeness and warmth in relationships with people.[90] (Maybe that explains why smokers are such friendly, outgoing people.)

Yet another team of researchers, this time at the University Hospital of Wales in Cardiff, reported in *The New England Journal of Medicine* (NEJM) that nicotine appears to relieve the symptoms of ulcerative colitis, a chronic inflammation of the colon. They studied 72 pa-

tients with the affliction, half of whom wore a nicotine patch for six weeks and the other half wore a dummy patch. For about half of those using the real patches, symptoms of ulcerative colitis—bloody diarrhea and abdominal pain—went away. (But that was also true for a quarter of those with the dummy patches. The "placebo effect"?)[91]

Lest anything good be said for nicotine, however, an accompanying editorial in the NEJM criticized the study for not taking "objective data" from the patients instead of relying solely on their reports. It also questioned whether the "mood-altering" effect of nicotine could change their perceptions of symptoms. In other words, because the researchers didn't personally examine the stools of the 18 patients who reported that their symptoms disappeared, it could have been just a nicotine-induced illusion in the minds of those patients. I'm not aware of the NEJM ever criticizing any of the thousands of studies linking smoking to this or that disease because they relied on the subjective reports of the subjects studied.

That wasn't the first time the NEJM had reported on a possibly beneficial nicotine-ulcerative colitis connection. According to the American Smokers Alliance, both that journal and *The Journal of the American Medical Association* ran articles in 1981 and 1983 on studies which found that colon cancer and ulcerative colitis seem to be about 30 and 50 percent respectively less frequent among smokers. The latter journal also reported in 1985 that endometrial cancer of the womb in smokers occurs at around 50 percent of the rate among nonsmokers. And the government's first Health and Nutrition Examination Survey found that osteoarthritis is five times less likely to occur among heavy smokers than nonsmokers.[92]

PARKINSON'S DISEASE shares a number of pathological and neurochemical characteristics with the even more harrowing scourge of the elderly, and sometimes not so elderly—Alzheimer's disease. According to *New Scientist,* in the United States Alzheimer's affects 20 percent of people over 80 and 10 percent of those between 60 and 80, "which is, in absolute numbers," says one researcher, "far more than cancer and atheroma deaths related to smoking."[93] (Atheroma is fatty deposits on arterial walls.) In the case of this disease there is again evidence of the beneficial effects of smoking.

The *New Scientist* article cited above went on to say that in the mid-

1980s a nicotine effect similar to that for Parkinson's was spotted for Alzheimer's. Some studies found that smokers were 70 percent less likely to develop the disease than nonsmokers, while other studies found no advantage for smokers. The most consistent finding is a reduced risk for smokers in inherited Alzheimer's disease. The article quoted Peter Whitehouse, director of the Alzheimer's Center at University Hospitals in Cleveland, Ohio:

> The epidemiological evidence suggests that there is something in cigarette smoke, in the nicotine, that directly relates to the manner in which brain cells die. It's not just supporting the cells that are there . . . but preventing the cells from dying in the first place.

Up to April 1992, 17 studies on Alzheimer's disease and smoking had been reported (which is really infinitesimal compared to the multitude of studies of other diseases allegedly caused by smoking). Thirteen found a reduced risk among smokers and the remaining four found no difference between smokers and nonsmokers. None found an increased risk among smokers compared to nonsmokers.[94]

According to Elaine Perry of the MRC Neurological Pathology Unit at Newcastle General Hospital, also quoted by *New Scientist*, if you administer nicotine to a damaged animal brain, it recovers much faster. "This backs up the notion that nicotine prevents the degeneration in Alzheimer's disease."

Here again, "suggestions" that nicotine or "something" in cigarette smoke could have medical benefits of great importance to millions of people. "Some free citizens might prefer to take the smoking risk of cancer and of atheroma rather than that of Alzheimer's disease," says one scientist.[95] They might if they knew the facts, or if the medical establishment were more devoted to finding out the facts about nicotine.

Why, the *New Scientist* article asks, should medical researchers be so reluctant to study the apparent positive effects of smoking? It quoted Jeffrey Gray, professor of psychiatry at the Institute of Psychiatry in London: "If the same information was available about any other compound, it would have been headline news a decade ago."

One reason for the "reluctance" is that epidemiological studies are often conflicting. But that is an argument for more research into the possible benefits of nicotine or smoking, not less.

Another reason—excuse, rather—used by those who dismiss the potential benefits of nicotine for Parkinson's patients is the claim that smokers die of smoking-related diseases before developing Parkinson's. But Parkinson's typically occurs at a much younger age than smoking-related deaths.[96]

The argument that smoking would kill you before it helped you might have some superficial validity when it comes to Alzheimer's, which is most often a disease of old age, and smokers aren't supposed to reach that stage in life. But if that's so, one wonders where anyone was able to find enough elderly smokers to compare them with elderly non-smokers, as they did in those 17 studies referred to above.

The real reason medical science has been "reluctant" to investigate the possible beneficial effects of smoking and why the general public has been told little about those studies which have been conducted is, purely and simply, antismoking bias. Again quoting from *New Scientist*:

"When the first results appeared everybody bent over backwards to find reasons it couldn't be true." —Dr. Gray again on the Alzheimer's-smoking link. He likens the efforts of medical researchers to disprove the benefits of smoking to attempts by the tobacco industry to destroy the link between smoking and heart disease. (But only the tobacco industry is accused of suppressing the facts about smoking.)

"When I speak to neurologists handling Parkinson's patients about nicotine they cannot believe it. They cannot imagine prescribing what to them is a dirty drug." —Karl Olov Fagerström, a nicotine researcher and consultant to the Swedish drug company Kabi Pharmacia.[97] (This is not necessarily an expression of abhorrence of nicotine, although it probably is in this case. I've read that in pharmaceutical parlance, a "dirty drug" is one that is so exasperatingly complex and has so many different effects that it can't be easily pinned down.)

So millions of human beings may be needlessly suffering from Parkinson's and Alzheimer's diseases or, at the least, are being denied potentially alleviating treatment because of the dogma that tobacco and nicotine are unmitigated evils. It could be rather a costly sacrifice to be placing on the altar of political correctness.

I have known only one person afflicted with Alzheimer's, a colleague at Newspaper Enterprise Association who later went into public relations. (Despite that defection, we remained close friends.) He was a

heavy smoker and heavier drinker, but gave up both habits some 15 years before he died. After he was diagnosed with the disease, its progression was rapid and devastating, taking only a few years to cause his death in his early 60s. His physical death, that is; his mind and everything that had made him what he was had deteriorated beyond retrieval well before that merciful end. I'm sure he would have taken up smoking again had he been aware of any studies into the possible benefits of nicotine. Yet it must be conceded that 30 or more years of prior smoking did not prevent the onset of Alzheimer's in his case.

The hysterical war against tobacco has also either hampered or not encouraged investigations into other valuable uses for the weed. For example, according to John Diana, director of the University of Kentucky's Tobacco and Health Research Institute, "the prospects for developing new products and technology [from tobacco] is enormous." He says tobacco could be used to produce a vaccine for malaria and a tobacco enzyme could be used in paper processing and the food industry. Some 30 other substances, such as pharmaceuticals and food products, have been produced as a result of genetic engineering of the tobacco plant.[98]

Researchers at Virginia Polytechnic Institute have also succeeded in genetically engineering a tobacco plant to create an enzyme, glucocereborsidase, to treat Gaucher's disease, a rare inherited metabolic disorder. The enzyme is currently so difficult to produce that a year's supply for a patient costs up to $300,000.[99]

TO WIND UP THIS chapter on nicotine and addiction, let's ignore the fact that it is not the most dangerous drug in the world. (You can buy it at your local pharmacy without a prescription, remember, and even the famous 1964 surgeon general's report dismissed it as a factor in lung cancer.*) Let's even ignore those studies suggesting that it may actually

*Even so, many people, and at least one scientist, believe or want to believe that nicotine causes cancer. Stephen Hecht, director of research at the American Health Foundation, says that an ingredient in watercress called phenethyl isothiocyanate, or PEITC, has prevented tumors in rats. He found that 11 smokers who ate two ounces of watercress three times a day for three days had a 30 percent decrease in "detoxified" nicotine excreted in their urine.[100] That was evidence, he said, that the PEITC in watercress had

have some useful place in the medical armamentarium. Let's simply agree that (shudder) it causes addiction (leaving aside whatever different meanings different people may attach to that word). Is it still possible that Dr. Kessler and the nicotine-bashing gang are barking up the wrong tree? That just maybe, in their passionate absorption with the physical aspects of nicotine "addiction," they are ignoring the whole panoply of possibly beneficial psychological components involved in smoking?

The antis can trot out any number of ex-smokers who will testify that even 20 years after quitting they still miss cigarettes, proving, they argue, what a powerful hold nicotine has on people—long, long, long after the last of it has been cleared from their systems.

Writer George Autry, who was partially quoted at the beginning of this chapter, went on to say that even after he freed himself from his "slavery" to cigarettes, "I still miss cigarettes, especially when I leave church or the dentist's office. But I also miss them while writing, after a good dinner, and after making love and many of the times in between."

Another writer said that almost seven years after he finally stopped, "[E]very day I want a cigarette. Every day on my way to work I pass a billboard that reminds me of something I want but must not have."[101]

But if it's nicotine and nicotine only these former smokers still crave, I've not heard of them lining up at the drugstore counter to buy nicotine-laced chewing gum or patches.

For their part, smoking defenders can trot out witnesses who will maintain that things are just not that simple. The pleasure of tobacco goes far beyond what nicotine does to the system, says Joe Dawson:

> It's a way of life. What the smoker enjoys is the whole experience, the routine of handling the pack and the cigarette, lighting up, gazing into the flame, the oral satisfaction of drawing, the taste and the smell. Eating and drinking are synergistic with smoking; they each enhance the taste of the smoke, and smoking enhances the contemplation of food and drink.
>
> Nicotine plays a part, but a small one. It can no more substitute for a smoke than No-Doz tablets could replace a good cup of

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prevented the nicotine from metabolizing and becoming cancer-causing. I've never seen anything more about this "discovery" and it remains the only reference I have ever come across alleging a carcinogenic effect in nicotine.

coffee. That's why nicotine patches and chewing gum aren't very effective when it comes to quitting. Of *course*, it's hard to give it up. [Emphasis in original.] So are many other things which are not physiologically addicting. Your right arm, for example. Or your spouse. If either is taken away you will experience a severe psychological withdrawal. Using "dependence" as a criterion, millions of people are addicted to Monday Night Football.

In the not-too-distant past, smokers would freely admit that they were addicted and even joke about needing a "fix." Now, however, the most many of them will admit to is a habit. Whether it's a habit or an addiction would be merely a semantic argument, except that most anti-smokers seem to think that addiction gives them the moral right to step in and pass laws or otherwise control the "addict's" behavior without his consent. It doesn't.[102]

This is of course a smoker's opinion. However, a report by the Congressional Research Service, a branch of the Library of Congress which works exclusively for Congress by analyzing legislation and providing information to congressional committees and their staffs, says much the same thing:

[T]he fact that individuals engage in hazardous or dangerous activities does not mean that they are making bad choices. Individuals are presumed to choose activities, in accordance with their subjective tastes and preferences, that make them the happiest. This choice does not necessarily mean that they will maximize their health or their lifespan. Individuals engage in all sorts of behaviors that impose some danger in exchange for benefit (driving small cars or riding motorcycles, working in risky jobs, eating unhealthy diets, engaging in risky sports). Thus, nothing in economy theory precludes the notion that individuals smoke because their enjoyment of the activity outweighs the sum of the actual costs of purchasing cigarettes and the internal health costs . . .

[S]imply because individuals engage in behavior that involves habit formation or addiction does not mean they are making a mistake, as long as the individual recognizes the difficulty of modifying behavior in the future and the possibility of a need for such modification. Individuals make many decisions that are difficult to change (and that they are probably aware are difficult to change)—marriage, job, purchasing a home, locating in a given area—*without those decisions being seen as bad choices and appropriate targets for government intervention* . . . [Emphasis added.]

That smoking is habit forming is essentially beyond dispute. There is also a substance in tobacco, nicotine, that is physically

> addictive to some degree. A very large number of smokers say they would like to quit, and quitters experience a high rate of recidivism . . . Other observations suggest, however, that *addiction is not serious enough to make smoking decisions significantly different from many other decisions in which the government does not intervene.*[103] [Emphasis added.]

So much common sense exhibited by "faceless bureaucrats" is as refreshing as it is uncommon.

A fact of life that seems obvious to me but which I have seldom seen pointed out anywhere is that no one becomes addicted to, or a habitual indulger in, something that does not give him pleasure or some kind of reward, whether that something is a substance or an activity. The pleasure may be only transitory; there may be unpleasant consequences, such as the binge drinker's next-morning hangover or the drug user's comedown from his "high." But *no one* becomes addicted to that which provides *no* pleasurable benefits whatsoever.

Lest that be dismissed as merely my own uninformed opinion, let me quote someone who is probably as much of an expert on the subject as Drs. Koop or Kessler. Referring to a statement by Atlanta Braves pitcher Greg Maddux that he would like to quit his chewing-tobacco habit, especially after fellow player/chewer Brett Butler was diagnosed with throat cancer, but couldn't because "it's an addiction," Mark A. Moore wrote: "Having conducted a number of stop-smoking seminars for a national organization, I am convinced that people who *can't* quit actually *choose* to continue because they like tobacco and are not willing to pay the price of quitting, which is surprisingly cheap if one analyzes the venture . . . The cost of quitting is some temporary discomfort. The benefits make a lengthy list."[104] [Emphases his.]

To put it another way, many smokers who make the socially obligatory statement that they would like to quit but are unable to because their addicted bodies won't let them really don't *want* to quit.

Moore's opinion might possibly be dismissed too, for he is a retired professor of economics at Georgia Tech, not a physician or shrink. But if only members of the medical profession were considered qualified to make pronouncements regarding tobacco, the ranks of the antismoking movement would be barren. Stanton Glantz, for example, was trained as a mechanical engineer, although the media always refer to him as a "professor of medicine." John Banzhaf, the founder of Ac-

tion on Smoking and Health, is a lawyer, as is Michael Perchuk of the Coalition on Smoking OR Health. It's too bad the latter two didn't go into medicine instead of law, considering all the antitobacco litigation they have fomented. Banzhaf is the Jesse Jackson of the antismoking movement; he pops up everywhere he can get his name or his organization in the news.

That there are many simple pleasures associated with smoking (or other uses of tobacco) and that it is not purely a matter of "addiction" to or "dependence" upon nicotine or an indication of some personality problem is a fact which seems to elude many members of the research community. They keep dreaming up studies to probe the psyches of smokers.

For example, maybe smokers are too smart (or think they are) for their own good. Psychologists at Iowa State University tested 174 smokers to try to find out why they persist in the habit despite "overwhelming evidence" that it is dangerous. The researchers rated the subjects on a self-esteem scale and interviewed them before, during and after an attempt to quit smoking. Those who were assessed with having very high self-esteem and who relapsed reported a significant decline in their perception of the risks of smoking.

Dr. Frederick Gibbons, lead author of the study published in the *Journal of Personality and Social Psychology*, concluded (based on this purely anecdotal evidence) that people who consider themselves smarter than the average bear and who have high self-esteem "have difficulty admitting that their behavior has been unhealthy and/or unwise."[105]

But on the other hand (there's always at least one other hand), high self-esteem can lead to healthier, longer lives, a group of researchers at the University of Wisconsin in Madison reported (also on the basis of anecdotal evidence). The authors of a study published in *Archives of. Family Medicine*[106] surveyed 154 patients at a midwestern family practice clinic on their perceptions of themselves and then compared those perceptions with health and behavioral histories.

In men, low self-esteem was "related to personal loss, *smoking*, alcohol use, and exposure to dangerous situations," the researchers discovered. In women, a low self-image was "related to weight, *smoking*, and alcohol use." [Emphases added.]

"Self-esteem was positively related to seatbelt usage, perception of overall health, greater social support, life satisfaction, and projected

longevity. Those with greater self-regard were predicted to live longer, while those with poorer self-esteem achieved shorter predicted longevity."

They "achieved" longer or shorter "predicted" longevity? Since none of the subjects had actually died, were the longevity predictions based simply on the presence or absence of certain perceived "risk factors," such as smoking? If nobody had yet fulfilled the predictions, and wouldn't for a number of years, of what real validity was this study?

Indeed, the authors inadvertently rendered useless their own findings by cautioning that it is still not clear which comes first—self-esteem or physical well-being. Furthermore, "It can be assumed neither that individuals who choose to smoke do so because they have low self-esteem, nor that they have poor self-esteem because they smoke."

So much for the smoking/self-esteem question. Obviously more research is needed. But hey, what's the good of all that grant money lying around if it isn't used for something?

IN THE SOMEWHAT more distant past, specifically 1947, before smokers became the object of society's opprobrium (and before all that grant money was available to study them), Ernest Dichter, a pioneer in the field of "motivational psychology," wrote a book called *The Psychology of Everyday Living*, one of whose chapters was titled "Why Do We Smoke Cigarettes?"[107]

One of the first facts he discovered in talking to several hundred people was that advertising played little role. "None of the much-flaunted appeals of cigarette advertisers, such as superior taste and mildness, induces us to become smokers or to choose one brand in preference to another . . . Smoking is as much a psychological pleasure as it is a physiological satisfaction. As one of our respondents explained: 'It is not the taste that counts. It's that sense of satisfaction you get from a
cigarette that you can't get from anything else.'" Dr. Dichter then listed some 17 categories of satisfaction. Among them (comments in brackets are mine):

<u>Smoking is fun.</u> "You sometimes get tired of working intensely," said an accountant, "and if you sit back for the length of a cigarette, you feel much fresher afterwards."

Smoking is a reward. The first and last cigarette of the day are especially significant rewards. The first one, right after breakfast, gives the smoker a little consolation prize in advance and at the same time manages to postpone the evil hour when he must begin his hard day's work. The last cigarette of the day is like "closing a door." It is something quite definite. "I nearly always smoke a cigarette before going to bed," said one smoker. "That finishes the day. I usually turn the light out after I have smoked the last cigarette and then turn over to sleep."

Smoking is oral pleasure. Oral pleasure is as fundamental as sexuality and hunger and functions with full strength from earliest childhood. There is a direct connection between thumbsucking and smoking. "Whenever I try to stop smoking for a while, I get something to chew on, either a pipe or a menthol cigarette," said another smoker. "You just stick it in your mouth and keep on sucking. And I also chew a lot of gum when I want to cut down on smoking . . . " [Or today when you're forced to cut down because of the increasing number of situations where you aren't allowed to smoke, as one heavy TV advertiser of chewing-gum-as-consolation is aware.]

The satisfied expression on a smoker's face when he inhales is ample proof of his sensuous thrill. The immense power of the yearning for a cigarette, especially after an enforced abstinence, is acknowledged by habitual smokers. Said one, "When you don't get a cigarette for a long time and you are kind of on pins, the first drag goes right down to your heels."

The cigarette is a modern hourglass. Frequently the burning down of a cigarette functions psychologically as a time indicator. A smoker waiting for someone who is late says to himself, "Now, I'll smoke one more cigarette, and then I am off." A cigarette not only measures time, but also seems to make time pass more rapidly. That is why waiting periods almost automatically stimulate the desire to smoke. Cigarettes may also have a psychotherapeutic effect on nervous anxiety. Soldiers, waiting for the signal to attack, sometimes value a cigarette more than food.

"With a cigarette I am not alone." The companionable character of cigarettes is reflected in the fact that they help us make friends. [Don't forget, this was back in 1947!] In many ways, smoking has the same effect drinking has; it helps to break down social barriers. One middle-

aged lady related how, "a long time ago" during a steamer cruise, she wanted to meet a boy but there was no one to introduce them. "The second day out, he was sitting at a table right next to me, and I was puffing away at my cigarette. The ashes on my cigarette were getting longer and longer, and I had no ashtray. Suddenly he jumped up and brought me one. That's how the whole thing started. We are still happily married." [Today, of course, any right-thinking young man would disgustedly turn his back on a young woman who smoked.]

<u>"I like to watch the smoke."</u> In mythology and religion, smoke is full of meaning. Its floating intangibility and unreal character have made it possible for man to see therein mystery and magic. Even for us moderns, smoke has a strong fascination. Just as most people like to watch their own breath on cold winter days, so they like to watch cigarette smoke, which similarly makes one's breath visible. "Smoke is fascinating," said one person. "On a rainy day, I sort of lie in a haze in the middle of the room and let my thoughts wander while I smoke and wonder where the smoke goes." [Well, today we know where the smoke goes—it goes right through the walls and into the lungs of the neighbors in the next apartment, dooming them to an early death. (See Chapter 7. For another kind of fascination with cigarette smoke, see Chapter 9.)]

Other satisfactions smokers mentioned to Dr. Dichter included: the friendly gesture of lighting another's cigarette; memories of certain moments in their lives closely linked with cigarettes; expressing one's mood through smoking mannerisms—the way the cigarette is lit and held and the smoke blown out; smoking as an aid to thinking and relaxing.

But enough already. If some of the statements above could be cited by the antismokers as proof of the addictive or compulsive nature of smoking, they also illustrate aspects of human psychology the antis seem totally incapable of understanding or appreciating.

As could have been expected back in 1947, Dr. Dichter's respondents seemed little concerned about the potentially harmful effects of smoking, yet at the same time all of them worried about smoking too many cigarettes. This is shown, he said, by the fact that nearly everyone has tried, at one time or another, to "cut down" on smoking. Some

give it up entirely for a period of weeks or months. "Periodic abstemiousness of this kind indicates an underlying feeling of guilt," he wrote. "Such individuals really think that constant smoking is not only harmful, but also a bit immoral. Efforts to reduce the amount of smoking signify a willingness to sacrifice pleasure in order to assuage their feeling of guilt." Much of this guilt, he adds, can be traced directly to one's first cigarette, "which the older generation remember as a forbidden and sinful thing."

Thou shouldst be alive today, doctor. This sense of guilt weighs on the current generation of smokers more heavily than ever. Indeed, in the art of confessing to sins, the graduates of a Communist "re-education" program have nothing over smokers.

"I am a smoker," someone wrote to Dear Abby. "It's not something I'm proud of, and yes, I'm aware of the damage I may be doing to my health. I also live with the guilt of possibly hurting others with my smoke."[108]

"Smokers establish associations: a cigarette with coffee, a cigarette after meals, so forth," wrote *Atlanta Journal-Constitution* television critic Phil Kloer. "For some of us, smoking goes with guilt. Guilt for the few times I've been out walking with Amanda [his daughter] and I try to exhale the smoke away from her but the wind whips it around into her face. Guilt for the tiny burn marks in the front seat of the car . . . And the big one: guilt that this addiction will take its inevitable toll and leave Heather [his wife] without a husband and Amanda without a dad before it might otherwise have been."[109]

Guilt. It's this feeling of self-condemnation for harming not only themselves but others that the antis have so successfully instilled in the minds of many smokers that, in my opinion, goes a long way toward explaining why they have meekly let themselves be pushed around, not only figuratively but quite literally, by the moralists and healthists. But even guilt has its limits.

Dichter's words closing that chapter of his book bear repeating in full to close this chapter of this book:

> During the seventeenth century, religious leaders and statesmen in many countries condemned the use or tobacco. Smokers were excommunicated by the Church and some of them were actually condemned and executed. But the habit of smoking spread rapidly all over the world. The psychological pleasures derived

> proved more powerful than religious, moral, and legal persuasions. As in the case of the prohibition experiment in the United States, repressive measures seem to have aroused a spirit of popular rebellion and helped to increase the use of tobacco.
>
> If we consider all the pleasure and advantages provided, in a most democratic and international fashion, by this little white paper roll, we shall understand why it is difficult to destroy its power by means of warnings, threats, or preachings. This pleasure miracle has so much to offer that we can safely predict the cigarette is here to stay. Our psychological analysis is not intended as a eulogy of the habit of smoking, but rather as an objective report on why people smoke cigarettes. Perhaps this will seem more convincing if we reveal a personal secret: We ourselves do not smoke at all. We may be missing a great deal.

Dr. Dichter's next-to-last sentence underscoring the objectivity of his research into the reasons people smoke is a little curious, for on a television program about the history of public relations and "motivational psychology" I caught sometime in 1997 on, I think, the A&E channel, he was shown in an old clip from an interview holding a pipe in his hand. Maybe it was just a prop; pipes are, or used to be, associated with professorial intellectualism. Whatever, everything he reported about smoking and smokers back in 1947 remains true today.

Notes

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"In my view, drug addiction—that is, the habitual use and craving for a drug—is not something that happens to a person unwittingly, against his will; it's something he does to himself, generally by practicing assiduously how to use—and enjoy—a particular substance. The idea that a single experience with a drug . . . makes one a 'slave' to it, makes one unable to exist without it, is simply not true." — Psychiatrist Dr. Thomas Szasz in an interview in *Reason*, October 1974.

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