Blow Some My Way: Passive Smoking, Risk and American Culture

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The Rise of the Cigarette

The cigarette is one of the most remarkably successful products of twentieth-century American life. Less than a century ago, it was but an idiosyncratic and stigmatized use of tobacco. In a relatively short time, it would become phenomenally popular. In 1900, per capita cigarette consumption among American adults stood at approximately 50. By 1930, per capita consumption had reached almost 1,500; and by 1960 it would near 4,000. By the time the first Surgeon-General's Report on Smoking and Health was released in 1964, almost half of all adult Americans were regular smokers.

A fuller history of the changes in consumption and social behaviours that accompanied the rise of the cigarette is beyond the scope of this essay. Suffice it to say, the very characteristics of the cigarette made it the ideal form of tobacco consumption for the modern world. By the early twentieth century several popular forms of tobacco use were falling into disrepute. Chew required spitting poorly suited to the office and factory environment. Pipes and cigars required leisure – and they were sometimes difficult to light (and keep lit); they were ill-suited to the time-discipline of urban, industrial life.

Unlike other forms of tobacco, cigarettes were defined by their public nature. They became a fundamental and highly ritualized prop in a full set of complex social interactions. From coffee breaks to the seminar room, from the bar and restaurant to the boardroom and the bedroom, the cigarette was a constant presence on the

American cultural landscape. The cigarette became an icon of twentieth-century American life – it signalled attractiveness, glamour and sexual allure. It became a mark of independence, strength and autonomy. Ironically, sophisticated marketing and advertising made the cigarette a symbol of independence at the same time it represented conformity. By the middle of the twentieth century cigarette smoking had become the ultimate symbol of a democratized consumer ethic. In the United States cigarettes cut across the boundaries of socio-economic difference, of gender, race and ethnicity.²

The Risks of Smoking

The cigarette has been transformed since mid-century. From its widespread recognition as one of the most popular products of the twentieth-century, the cigarette has come to be recognized as one of the most dangerous products of all time. Its popular appeal during the first half of the twentieth-century is now rivalled by the carnage in morbidity and mortality that has followed. Beginning at mid-century, a series of path-breaking epidemiological studies began to alter radically the meaning of the cigarette. Although there had always been concern about the impact of cigarette smoking on health, these studies demonstrated authoritatively that smoking caused lung cancer and other serious diseases.

These studies prompted action by both the government and the public to control cigarette smoking. Interventions in the United States ranged from the Surgeon-General's Reports, to Congressional legislation to label packages, to a ban on broadcast advertising. Although cigarette smoking was widely recognized as the most significant preventable cause of disease and death in the United States, federal legislative efforts to restrict the use of cigarettes have remained relatively modest.5 None the less, as a result of these interventions, and broader changes in American culture regarding the nature of health risks, smoking began to decline in the United States. Today, approximately 26 per cent of adult Americans smoke, down from 46 per cent in 1964. This revolution ultimately transformed the cigarette from an object of pleasure, consumption, autonomy and attraction to a symbol of personal disregard for health, addiction and weakness. Cigarette smoking declined as its fundamental meanings came to be recast.

By the early to mid-1970s, this first revolution – the revolution that transformed the cigarette for smokers – was reaching its endpoint. Indeed, in spite of the overwhelming evidence of the

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health risks of the cigarette, its status as a public health issue in the United States was becoming increasingly suspect. In American culture questions were raised as to whether cigarette smoking constituted a risk to the public's health in any traditional sense. Since the cigarette was widely perceived as a so-called 'voluntary' health risk, and the risks incurred were to the individual – the authority to regulate and restrict smoking was highly contested. The tobacco companies and the Tobacco Institute – their well-funded lobby and public relations arm – aggressively and effectively presented the case for smoking as a voluntary risk. According to this view, there was a 'debate' about the risks of smoking, and Americans had now been fully apprised of the arguments on both sides. They should have the right to make up their own minds about whether to smoke or not. As the saying goes, 'It's a free country.'

The precise nature of the State's interest in the behaviour and health of individuals (as opposed to populations) constrained the future of campaigns against tobacco. 'It's my body and I'll do what I please', an American individualist credo, cast a bold shadow over further anti-smoking initiatives. Unlike many Western developed nations that had established national health insurance programmes and, therefore, could logically maintain an interest in the health and disease of their communities, in the US there was a strong disposition to individuate risks and to hold individuals strictly accountable for the risks they took.7 American culture held that citizens must take responsibility for their own health; this meant making sensible decisions about risk and behaviour based upon available information. Moreover, this perspective typically negated arguments about the pooling of health risks. Sharing health risks, it was suggested, encouraged individuals to shirk their responsibility to maintain their health.

In this context, Big Brother was frequently invoked, as was the Prohibition debacle, to point out how over-reaching, paternalistic government interventions distorted the basic American values of independence, autonomy and the right to take risks. Dictating other people's behaviour, even in the name of health, crossed a basic divide in the American political culture. It was, for example, one thing to educate the public about seat belt use, and quite another, as American radio talk show hosts consistently clamoured, to require Americans to buckle up. Once Big Brother entered your car, he would, inevitably, follow you down the slippery slope into your home. The results, in the minds of some critics, were ominous and explicit. These themes began to characterize the discussions of

further regulation of cigarettes by the mid-1970s. Consenting adults, so the argument went, informed of the cigarette 'debate', should now be left alone. Spurred by the well-oiled tobacco interests, critics proudly decried the so-called 'health and safety fascists' telling Americans how to live and denying all sense of individual responsibility. Cigarette smoking had become the pre-eminent 'voluntary' health risk. This cultural idiom, then, marked the essential limits of the early anti-cigarette movement of the 1960s and 1970s.

The 'Discovery' of Passive Smoking

But was cigarette smoking truly 'voluntary'? The addictive qualities of tobacco were now in the process of coming under intensive investigation. But more importantly, concerns about the effects of smoke on the non-smoker began, in the 1970s, to re-energize the anti-tobacco movement.' Rising social concerns about the environment, pollutants, and especially carcinogens pushed forward a process of re-evaluating the smoke produced by cigarettes and its health implications for those exposed.

Although some had always experienced cigarette smoke as an annoyance, few attempts had been made prior to the 1970s to fully characterize it as a risk. And indeed, from a historical perspective, if the cigarette had been such a popular and successful product in the first half of the twentieth-century, then, in a sense, so too had been the smoke it produced. Smoke-filled offices, homes, bars and restaurants, trains and planes, had come to characterize the twentieth-century indoor environment. Smoke not only failed to evoke protest, it was often deemed positively appealing. Smoke became alluring, seductive and a basic element of what came to be called 'atmosphere'. One need only look at the role smoking and smoke played in midcentury American films. What better way to mark the consummation of a sexual liaison than to share a cigarette, enveloping new lovers in billows of smoke. Today, as I will argue, the same scene evokes radically different meanings and cultural implications.

The 'discovery' of the health risks of environmental tobacco smoke revolutionized the anti-tobacco movement in the United States. Smokers, it was argued, assumed the risks of the cigarette. But what about the risks smokers imposed on others? Even if cigarette smoking itself were not a public health 'problem' for smokers, did not cigarette smoking create an environmental risk – did it not 'pollute' the air, creating nuisances, if not risks of profound public consequence? At a moment in which the industrial smokestack was viewed as belching impurities into the common environment,

individual smokers were increasingly portrayed as belching themselves – a population blowing potent pollutants into the air.

The smoke produced by cigarettes has been labelled with a range of terms – each with different social and cultural implications. 'Passive smoking' contrasted with active smoking; 'secondhand smoke' contained the ominous implication that someone else had used it first; 'involuntary smoking' assumed that the practice of smoking was indeed a 'voluntary' act. And, of course, 'environmental tobacco smoke' or E.T.S., invited public concern as an 'environmental' hazard.¹⁰ Each of these terms had alternate and reinforcing qualities in spurring this second antitobacco revolution.

The first Surgeon-General's Report to raise explicitly the possibility of the harms of passive smoke appeared in 1972.11 Subsequent reports focusing on cancer in 1979, and chronic obstructive lung disease in 1984, devoted somewhat more attention to the issue of possible harm to non-smokers, but generally noted a lack of conclusive data.12 In 1986, two major reports on the issue appeared, one from Surgeon-General Koop, the other from the National Academy of Sciences.13 Vigorously contested by the tobacco industry, these two authoritative scientific reports tipped the balance in the ongoing debate about the implications of passive smoke, transforming the meaning of cigarette smoke for the non-smoker from an annoyance or nuisance into a verifiable, quantifiable health risk.

These reports clearly distinguished between the two sources of environmental tobacco smoke. So-called 'mainstream smoke' was the aerosol mixture inhaled from the cigarette by the smoker, filtered in the lungs, and exhaled into the environment. This smoke mixed with the 'sidestream smoke' released directly from the burning end of the cigarette. Both types of smoke contain oxides of nitrogen, nicotine, carbon monoxide and a number of known carcinogens. 'Sidestream smoke', it was found, has a higher concentration of carbon monoxide. Experts estimated that approximately 85 per cent of the non-smoker's intake is sidestream smoke.'

Obviously, non-smokers are exposed to considerably less of the chemicals known to cause adverse health effects among active smokers. Indeed, most estimates suggested that even heavy exposure to environmental tobacco smoke was equivalent to smoking less than two cigarettes per day. None the less, studies of low-dose active smoking confirmed that even this level of exposure increased the risks of lung cancer. Such studies confirmed the

plausibility of linking E.T.S. to lung cancer and other diseases, and as I will argue, drove public policy.

Estimating the number of deaths attributable to E.T.S. was crucial in determining the impact at the policy level. The National Academy of Science's study estimated that E.T.S. caused between 2,500 and 8,400 lung cancer deaths per year in the United States. Surgeon-General Koop placed the number at approximately 3,000 in his report.' These numbers, seized by the media, transformed complex statistical calculations – odds, ratios, relative risks, issues of statistical significance, and complex debates about validity and statistical inference – into a basic social truth: passive smoking causes cancer; passive smoking causes deaths.

If studying the risks of active smoking in the 1950s had proven complex from an epidemiologic perspective, the problem of specifying the risks of E.T.S. were even more daunting. Only one of four prospective studies cited by the Surgeon-General and the National Academy of Science reported results statistically significant at the five per cent level. Although 10 of 15 case-control studies found an increased risk of lung cancer for non-smoking spouses (as compared to non-smokers married to non-smokers), four studies found no increased risk. Critics of these studies identified a wide range of methodological and technical obstacles to definitive observations. This included a number of opportunities for respondent bias; improper matching of cases and controls; as well as inconsistencies in reporting room size and ventilation. These studies typically indicated the universality of exposure to tobacco smoke. Researchers found it impossible to identify groups of completely unexposed individuals. This had the effect of reducing the distinction between control groups and exposed groups and precluded an absolute measure of the risk of lung cancer from a clearly-specified level of exposure. Nonetheless, as additional studies were conducted virtually all results pointed in the direction of risks associated with consistent exposure.

In 1992 the Environmental Protection Agency added passive smoke to its list of Class A carcinogens, thereby subjecting it to a range of federal regulatory requirements. Passive smoking, in addition to being seen as cause of lung cancer and respiratory diseases in children, also came to be identified as a serious risk factor for heart disease in adults. According to some reports, passive smoking was implicated in more than 50,000 deaths per year in the US, making it the third leading cause of mortality behind active smoking and alcohol use. Obviously such estimates had powerful implications for public policy.

Thresholds

Many epidemiologists, statisticians, tobacco company publicists and anti-tobacco activists vigorously debated the quality and significance of the findings regarding the health impact of passive smoking. Arguing from a perspective of objective science and a fully rational relation between the nature of such conclusions and public policy, some suggested that the process of determining the risks of passive smoking had been perverted by an aggressive anti-

Clearly, public-health and anti-tobacco interests spurred the investigation of the health implications of passive smoking. But the relationship of the epidemiologic and toxicologic data regarding the risks of passive smoking to regulatory action is best understood as a complex, dialectical social process. The data generated by the new studies legitimated and energized the interests that had called for the investigations. The notion that such studies would be free of a range of powerful social and political interests reflected a selective naiveté on the part of tobacco interests who had worked so diligently – if unsuccessfully – to shape the scientific debate about the risks of smoking since early in the twentieth-century.

The social process of identifying and regulating risk, though resting fundamentally on scientific discourse, was powerfully influenced by a range of social and moral factors that mobilized the public-health and anti-tobacco movement. In the context of a deeply risk-averse society especially concerned about imposed risks, how conclusive did the data need to be? In the context of rising concerns about environmental contaminants and especially carcinogens, how long would local governments and businesses wait to regulate public smoking? How good did the data need to be when many businesses perceived that there would be additional cost savings from regulating smoking and insignificant costs from taking action? How significant did the data need to be when social conventions were already moving quickly to condemn smokers as irrational, stigmatized and vulgar? How persuasive did the data on passive smoking need to be, when the harms that were identified were typically inflicted on 'non-consenting' women and children? Early regulatory initiatives drove the research agenda. In turn, research results - even of a preliminary nature - drove the regulatory process. The Surgeon-General's Report of 1986 and the NAS Report gave new credibility and legitimacy to an ongoing

Innocent Victims

Nothing spurred the effectiveness of this new anti-cigarette movement so powerfully as the recognition of the so-called 'innocent victim'. The old ambivalence about preaching to smokers about their self-regarding behaviour disappeared as the focus of concern shifted to the impact their self-destructiveness had on others. The identification of 'innocent victims' - typically nonsmoking women married to smokers or children with smoking mothers - radically reconfigured the moral calculus of cigarette smoking in the United States. If Americans were highly tolerant of risks assumed by individuals, they were also aggressively intolerant of risks imposed on individuals. If there were innocent victims of cigarette smoke, then, of course, smokers were in fact guilty perpetrators in an increasingly moralized scenario - imposing risk, disease and even death on unsuspecting women and children (the classic historical victims). The same culture that celebrated individual risk-taking strongly condemned the imposition of risk. Both perspectives rested fundamentally on a historically and culturally-specific view of the individual in American life. 'While people can choose to smoke or not, and to leave rooms or restaurants to avoid cigarette smoke,' explained one observer, 'children and the unborn are defenseless.'

Even though the population of smokers had declined significantly by the 1980s, the population at risk of passive smoke was enormous. Almost everyone was periodically exposed. Approximately 70 per cent of children in the United States live in homes where there is at least one adult smoker. Efforts to identify the innocent victims of passive smoke have only intensified in recent years. A recent meta-analysis of some 100 studies published over the last 40 years concluded that 53,000 low-birth-weight babies are born each year in the United States; 22,000 require intensive

care at birth. The authors further estimated that smoking by pregnant women causes 115,000 miscarriages, and the deaths of 5,600 babies each year. 'The magnitude of the mortality inflicted on foetuses and infants by smoking tobacco is a poignant reminder that use of tobacco products affects many innocent individuals who have not assumed the risks involved' argued the study's authors.²¹ Smokers, in this view, became an oppressive and dangerous minority.

Parental smoking has become the basis for custody battles for children between divorced parents in the United States. Tobacco activist John Banzhaf III recently claimed, 'Parents exposing their children to second-hand smoke is the most common form of child abuse in America.'22

The identification of innocent victims is a fundamental aspect of the adjudication of risk and responsibility concerning disease in the late twentieth-century. Innocent victims engage social interest in the behaviour of the 'other,' previously regarded as within an individual's 'rights'. Innocent victims heighten regulatory and State interests in controlling behaviours previously viewed as outside the aegis of the State. And finally, the identification of innocent victims unleashes moral fervour for redress and justice. Risk-imposing behaviours must, at a minimum, be regulated – in many instances they may become subject of punishment. The new focus on innocent victims became the entering wedge for the moral recalculation of the meaning and nature of the cigarette in the last two decades of the twentieth-century.

Regulating Public Smoking

Even before systematic data was available demonstrating the risk of passive smoke, grass-roots anti-smoking organizations began to push successfully for the public regulation of cigarette smoking in the 1970s, demanding their right to a smoke-free environment. In the United States, groups such as Action on Smoking and Health (ASH) and Group Against Smoking Pollution (GASP), often modelled themselves on environmental activists, lobbying local governments and city councils for smoking regulations in offices, public buildings and restaurants. Employing spot-zoning measures, these activists successfully called for special sections for smokers in buildings and restaurants. By the mid-1990s, more than 500 local communities and 40 states had enacted such measures.

Increasingly, policies setting aside non-smoking and smoking areas gave way to regulations requiring smoke-free buildings and workplaces. A number of communities have, for example, adopted ordinances completely eliminating smoking in restaurants and

workplaces. Not surprisingly, official reports of epidemiological findings have typically spurred more aggressive regulation of public smoking. Just as the first anti-tobacco revolution rested fundamentally on epidemiological and statistical science, so too did this second revolution rely on modern epidemiological investigation. The reports had the effect of dramatically accelerating an ongoing process of regulating and restricting smoking in public spaces.

California – not surprisingly – led the way. Oakland Coliseum, an outdoor baseball stadium, banned all smoking in 1991. A representative for the baseball team explained: 'It was more of a social decision than a medical one. We did not consult a panel of seventeen experts about the dangers of secondhand smoke ... Our goal was to be the most affordable, safe, clean, family attraction in Northern California.'²⁴ Smoking had become more than a simple health risk – it was dirty, defiling and polluting. Social convention increasingly defined public smoking as taboo, a violation of social norms and communal 'civility.'

Airline Bans

In 1987, Congress, heavily lobbied by a vigorous anti-tobacco coalition, banned cigarette smoking on all domestic flights of two hours or less. A smoking ban on all domestic flights followed two years later. 'People choose to smoke, but there is no choice about breathing,' noted conservative Republican Senator Orrin Hatch of Utah, who supported the legislation. 'People who smoke cigarettes have a right to,' explained Senator Jesse Helms of North Carolina, 'but they are going to have no choice.' 'I doubt the studies show you anybody dying on an airplane from smoking.' explained Ernest F. Hollings, Democratic Senator from South Carolina. 'The Indians were smoking when we got here.'

There are crucial ironies embedded in the history of passive smoking. Most opportunities for the regulation of public smoking are, of course, not the same locales in which risk has been demonstrated. The distinctions between a health risk and a nuisance were at times blurred. Most of the epidemiologic data demonstrating the harms of passive smoke had been generated from homes in which family members were consistently exposed _ sometimes over long periods _ to the cigarette smoke of another family member. This is not, of course, to suggest that there were no health risks in public and work places, but rather that the logic of regulation reflected the feasibility of where and how smoking could be regulated.

The precise manner in which public space and behaviors are organized and regulated reveals core cultural and moral values. In less than a decade, American public space was radically subdivided on the basis of the harms of passive smoke. To gather some notion of the significance of this as a social movement one might consider the radical division of public space that followed the American Civil War during the era of segregation and Jim Crow; not since that time have efforts been made to regulate public space and activity so fundamentally. Obviously, the issues are today radically different. Nonetheless, they are powerful and reflect late twentieth century values regarding health, risk, and the nature of public space.

Compliance, enforcement, and the new 'social code' of smoking

Although many observers in the media and among tobacco interests predicted a war between smokers and non-smokers as the public regulation of smoking became more aggressive in the 1980s and early 1990s, levels of compliance with smoking restrictions and bans have been remarkably high, in spite of little or no official mechanisms of enforcement. A number of studies monitoring compliance with increasingly strict regulatory policies have noted few complaints, debates and conflagrations. Whether it be McDonalds going smoke-free, the federal ban on airline smoking, or industry anti-smoking policies, regulations were generally respected. The thousands of smoking regulations enacted reflected changing social conventions about the cigarette perhaps more than they generated such change. Smoking regulations stayed just ahead of prevailing social conventions, helping to generate legitimacy for new social norms.

As a result of the identification of the risks of passive smoking, the non-smoker came to be empowered – on the basis of both scientific and moral claims – to act as an agent of enforcement. Individuals who a decade ago would not have dreamed of asking a smoker to stop became emboldened in a new cultural environment. The non-smoker was 'deputized' as an agent of the State. Further, it seems increasingly clear that smokers themselves came to view violation of these new norms as inviting personal humiliation and embarrassment, if not hostility. In short, smokess came to internalize a new set of ethics about public smoking, just as non-smokers developed new and heightened sensitivities to smoke. Peer pressure and social conformity – critical aspects of the popularity of the cigarette in the twentieth-century – were now effectively employed to limit smoking.

Smoking as a Rights Issue

Increasingly, the smoking debate has been framed in American culture as a conflict in rights. Non-smokers have insisted on their 'right' to a smoke-free environment. At the same time, smokers invoke their right to smoke unencumbered by 'health fascists' who refuse to mind their own business. While cigarette companies called for mutual respect, ASH and GASP called for the end of the cigarette. Business-oriented magazines claimed that the 'health police are blowing smoke', while consumer-oriented publications increasingly emphasized the impact of passive smoking on non-smokers. Reader's Digest, for example, entitled a review of the issue, 'Mind if I Give you Cancer?' 28

The tobacco interests did not take such measures lightly.

At the behest of tobacco interests, several states passed smokers' rights laws that precluded public regulations of smoking. About half the states passed laws guaranteeing that smokers would not be discriminated against in hiring decisions. Although the tobacco companies have attempted to counter the grass-roots anti-smoking movement with a smokers' rights movement all their own, such efforts have fallen on deaf ears. It has been difficult to sustain an effective public movement in support of smoking. And indeed, although the media and the industry consistently pointed to coming civil strife between smokers and non-smokers, the predicted inflight fights, civil disobedience and open conflict between warring smokers and non-smokers all failed to come to pass.²⁹ Smokers have conformed to the new social ethic. For all their independence and autonomy, smokers were cowed by the moral opprobrium of an aggressive no-smoking campaign.

Efforts by the tobacco companies to generate sympathy for their aggrieved constituents by claiming the language of rights – most baldly visible in Philip Morris's promotion of the 200th anniversary of the Bill of Rights – were typically viewed as but a new form of postmodern humour. The thinly-veiled self-interest of the industry and its historic hypocrisy on the health issue left little room to manoeuvre.

None the less, it is impressive that try though the industry might to identify some cultural 'space' for the smoker through smokers' rights and other campaigns, smokers in the United States literally had no place to hide by the 1990s. The fact that most regulation came from grass-roots efforts at the local level blunted the economic and political clout of the tobacco lobbyists centred in Washington.

Culturally Specific Norms of Risk

The cigarette in the late twentieth-century United States reveals fundamental and culturally-specific norms regarding risk and risk perception, risk aversion, attitudes towards pleasure and issues of moral agency. The aggressive regulation of passive smoke reflected a particularly American construction of risk. Consider, if you will, the following scenario:

I am sitting at an outside cafe on the St Germain De Pres. My Parisian compatriot at the next table is running through his pack of Gauloise. I lean over, politely, but earnestly to explain that not only is the cigarette smoke bothering me, but it is very bad for him.

He glares at me through the veil of smoke: 'You stupid American, I could step off the corner this afternoon and be killed by a bus, and you would deny me my one pleasure.'

Captured in this fiction are powerful notions of culturally specific constructions of risk in late twentieth-century life. No doubt, in the late twentieth-century. Americans have become intensely risk-averse, especially in instances where the risks appear to be externally imposed. Americans share a powerful cultural belief in the ability to identify, regulate, control and eliminate risks. Every risk comes from somewhere and, therefore, can be identified, measured and eliminated. Those risks that are imposed by others invite fervent claims of moral superiority as well as policy intervention.

Conclusion

In the last half-century the cigarette has been transformed. The fragrant has become foul; an emblem of attraction has become repulsive; a mark of sociability has become deviant; a public behaviour now is virtually private. The recognition of the risks of passive smoke serves to explain this radical change. Not only has the meaning of the cigarette been transformed, but even more, the meaning of the smoker.

In the last years of the twentieth-century, the American smoker has become a pariah in a powerful moral tale of risk and responsibility – the object of scorn and hostility. The pleasurable aspects of smoking have been demonstrated to be historically contingent. A social climate inhospitable to smoking has changed the very experience. Some smokers today simply report giving up, given the limited and hostile space in which they can

still smoke. Smokers in the United States are today typically found in doorways and on stoops, huddled masses yearning to breathe smoke.

What then are the social and public health implications of making smokers the object of infamy and disgust? According to many in the anti-smoking movement, more aggressive restrictions on smoking – stigmatization and ostracization – will lead more smokers to relinquish their cigarettes. This may well be the case.

But it is worth considering that policies that make smokers villains in a century-long public health disaster may well obscure the social, economic and biological forces that have driven this behaviour in the twentieth century. American culture has little sympathy for the smoker, the addict, or other sufferers who incur disease as a result of behaviours deemed personally irresponsible. When we add to this perspective that the smoker is also the cause of disease in others, we run the risk of doubly distancing the smoker. Strong insistence on personal responsibility may be a double-edged sword. It may encourage a heightened sense of individual control over health. But at the same time, it may alienate and distance those who become ill.

I cite a common scenario: 'I have a friend in the hospital with lung cancer.' First question: 'Did he smoke?' 'He smoked two packs a day – tried to quit and failed.' Response: a shrug of the shoulders: 'What did he expect?'

If the smoker is pariah and criminal, we may well forget that it is truly the smoker who is the victim, inevitably suffering the double jeopardy of inhaling both active and passive smoke. The cigarette, we might remind ourselves, is indeed a formidable enemy.

Notes

- US Public Health Service, Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service (Washington, DC: GPO, 1964), 45.
- Brandt, Allan M., 'The Cigarette, Risk, and American Culture', Daedalus, 119 (4), (1990), 155-76; idem., 'Recruiting Women Smokers: The Engineering of Consent', Journal of the American Women's Medical Association, (JAMWA), 51, (Jan./Apr. 1996), 63-6.

3. Webster, Charles, 'Tobacco Smoking Addiction: A Challenge to the National Health Service', British Journal of Addiction, 79, (1984), 7–16; Brandt, op. cit., (note 2), 155–76.

- 4. US Public Health Service, op. cit., (note 1); Public Health Cigarette Smoking Act of 1969, P. L. 91–222; Warner, Kenneth E., Selling Smoke: Cigarette Advertising and Public Health, APHA Public Health Policy Series (Washington, DC: American Public Health Association, 1986).
- Fritschler, A. Lee, Smoking and Politics: Policy Making and the Federal Bureaucracy (Englewood Cliffs, NJ: Prentice Hall, 1989).
- 6. Whiteside, Thomas, Selling Death: Cigarette Advertising and Public Health (New York: Liveright, 1971).
- 7. Brandt, Allan M. and Rozin, Paul (eds), *Morality and Health* (New York: Routledge, 1997). See the special volume on Risk, *Daedalus* 119 (4), (1990).
- Leichter, Howard M., Free to be Foolish: Politics and Health Promotion in the United States and Great Britain (Princeton, NJ: Princeton University Press, 1991).
- Schmeltz, I., Hoffmann, D. and Wynder, EL., 'The Influence of Tobacco Smoke on Indoor Atmospheres', Preventive Medicine, 4, (1975), 66–82; Bridge, Dennis P., and Corn, Morton, 'Contribution to the Assessment of Exposure of Non-smokers to Air Pollution from Cigarette and Cigar Smoke in Occupied Spaces', Environmental Research, (1972), 192–209; Hoegg, Ulrich, R., 'Cigarette Smoke in Closed Spaces', Environmental Health Perspectives, (Oct. 1972), 117–28.
- 10. US Department of Health and Human Services, The Health Consequences of Involuntary Smoking: A Report of the Surgeon General (Washington, DC: GPO, 1986); US Environmental Protection Agency Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders (Washington, DC: US Dept. of Health and Human Services, 1993); National Research Council Committee on Passive Smoking Environmental Tobacco Smoke: Measuring Exposures and Assessing Health Effects (Washington, DC: National Academy Press, 1986).
- 11. US Public Health Service. Office of the Surgeon, Services US. Health, Administration Mental Health, Education US, *The Health*

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Consequences of Smoking: A Report of the Surgeon General, 1972 (Washington DC: GPO, 1972).

12. US Department of Health, Education and Welfare, Smoking and Health: A Report of the Surgeon General, (Washington, DC: GPO, 1979); US Office of the Assistant Secretary for Health, Chronic Obstructive Lung Disease: A Report of the Surgeon General (Rockville, Md.: US Dept. of Health and Human Services, 1984).

 US Department of Health and Human Services, The Health Consequences of Involuntary Smoking: A Report of the Surgeon General (Washington, DC: GPO, 1986); National Research Council. Committee on Passive Smoking, op. cit., (note 10).

14. Ibid., 28-31.

- US Department of Health and Human Services, op. cit., (note 10);
 National Research Council. Committee on Passive Smoking, op. cit., (note 10).
- Bartecchi C., MacKenzie T. and Schrier, R. (1994) 'The Human Costs of Tobacco Use (part 1)', New England Journal of Medicine, 330 (13), 907–12.
- Luik, John C., 'Pandora's Box: The Dangers of Politically Corrupted Science for Democratic Public Policy', *Bostonia*, (Winter, 1994), 50–60.
- Wildavsky, Aaron and Dake, Karl, 'Theories of Risk Perception: Who Fears What and Why?', *Deadalus*, 119 (4), (1990), 41–60.
- 19. Weiss, S. T., 'Passive Smoking and Lung Cancer. What is the Risk?', American Review of Respiratory Diseases, 133, (1986), 1-3.
- DiFranza. Joseph R. and Lew, Robert A., 'Effect of Maternal Cigarette Smoking on Pregnancy Complications and Sudden Infant Death Syndrome', Journal of Family Practice, 40 (4), (1995), 385–94.
- 21. Anon., '5,600 Infant Deaths Tied to Mothers' Smoking', New York Times (13 Apr. 1995), A 23.

- 22. Sachs, Andrea, 'Home Smoke-Free Home', Time (25 Oct. 1993), 56.
- 23. Fritschler, op. cit., (note 5), 116-17.
- Rabin, Robert L., 'A Sociolegal History of the Tobacco Tort Litigation', Stanford Law Review, 44, (1992) 853–78.
- Anon., 'Senator Weighs Ban of Flight Smoking', New York Times (14 Sept. 1989), A 23.
- Morgan, Dan, 'Airline Smoking Ban Takes Off in Senate', Washington Post (8 Sept. 1989), A3.
- 27. Kagan, Robert A. and Skolnick, Jerome H., 'Banning Smoking: Compliance without Enforcement', in Rabin, Robert L. and Sugarman, Stephen D. (eds), Smoking Policy: Law, Politics and Culture (New York: Oxford University Press, 1993), 69–94; Kirn, Timothy F., 'More "No Smoking" Signs seen in Hospitals', Journal of the American Medical Association, 259 (19), (1988), 2814; Kales, Stephen N., 'Smoking Restrictions at Boston-area Hospitals, 1990–1992', Chest, (Nov. 1993), 1589–91.

29. Friedrich, Otto, 'Where there's Smoke', Time, (23 Feb. 1987), 22-3.

 Conroy, Sarah Booth, 'Fired up over Philip Morris', Washington Post, (10 Nov. 1989), D 1.

References

- Anon., Smoking and Health (Washington: Government Printing Office, 1964), New York Times (12 Jan.).
- Aronow, W. S., 'Effect of Passive Smoking on Angina Pectoris', New England Journal of Medicine, 299, (1978), 21–4.
- Ballweg, J. A. and Bray, R. M., 'Smoking and Tobacco use by US Military Personnel', Military Medicine, 154, (1989), 165–8.
- Becker, D. M., et al., "The Impact of a Total Ban on Smoking in the Johns Hopkins Children's Center', Journal of the American Medical Association, 262, (1989), 799–802.
- Bergman, A. B. and Wiesner, L. A., 'Relationship of Passive Cigarette-smoking to Sudden Infant Death Syndrome', *Pediatrics*, 58, (1976), 665–8.
- Biener, L., et al., 'A Comparative Evaluation of a Restrictive Smoking Policy in a General Hospital', American Journal of Public Health, 79, (1989), 192-5.
- Blake, G. H. and Parker, J. A., 'Success in Basic Combat Training: the Role of Cigarette Smoking', *Journal of Occupational Medicine*, 33, (1991), 688–90.
- Blot, W. J. and Fraumeni, J. F., 'Passive Smoking and Lung Cancer', Journal of the National Cancer Institute, 77, (1986), 993–1000.
- Boyle, P., 'The Hazards of Passive and Active Smoking', New England Journal of Medicine, 328, (1993), 708–1709.
- Breo, D. L., 'Kicking Butts AMA, Joe Camel, and the Black-Flag War on Tobacco', Journal of the American Medical Association, 270, (1993), 1978–84

- Bridge, D. P. and Corn, M., 'Contribution to the Assessment of Exposure of Non-Smokers to Air Pollution from Cigarette and Cigar Smoke in Occupied Spaces', Environmental Research, 5, (1972), 192–209.
- Brigham, J. et al., 'Effects of a Restricted Work-Site Smoking Policy on Employees Who Smoke', American Journal of Public Health, 84, (1994), 773–8.
- Brownson, R. C. et al., 'Passive Smoking and Lung Cancer in Non-Smoking Women', American Journal of Public Health, 82, (1992), 1525–30.
- Burch, P. R. J., 'Smoking and Lung Cancer: The Problem of Inferring Cause', Journal of the Royal Society of Statistics, (A) 141, (1978), 437–77.
- Burns, D. M., 'Environmental Tobacco Smoke: the Price of Scientific Certainty', Journal of the National Cancer Institute, 84, (1992), 1387–88.
- Burrows, B. et al., 'Quantitative Relationships between Cigarette Smoking and Ventilatory Function', American Review of Respiratory Disease, 115, (1977), 195–205.

- Byrd, J. C., Shapiro, R. S., Schiedermayer, D. L., 'Passive Smoking: A Review of Medical and Legal Issues', American Journal of Public Health, 79, (1989), 209–15.
- Cameron, P., The Presence of Pets and Smoking as Correlates of Perceived Disease, Journal of Allergy, 40, (1967), 12-5.

Cameron, F. et al., 'The Health of Smokers' and Non-Smokers' children', Journal of Allergy, 43, (1969), 336-41.

 Carmelli, D. et al., 'Genetic Influence on Smoking – A Study of Male Twins', New England Journal of Medicine, 327, (1992), 829–33.

 Chapman, S. and Woodward, S., 'Australian Court Rules that Passive Smoking Causes Lung Cancer, Asthma Attacks, and Respiratory Disease', British Medical Journal, 302, (1991), 943-5.

 Colley, J. R. T. and Holland, W. W., 'Social and Environmental Factors in Respiratory Disease', Archives of Environmental Health, 14, (1967), 157-61.

 Colley, J. F. T., 'Respiratory Symptoms in Children and Parental Smoking and Phlegm Production', *British Medical Journal*, 2, (1974), 201-4.

 Colley, J. R. T., Holland, W. W. and Corkhill, R. T., 'Influence of Passive Smoking and Parental Phlegm on Pneumonia and Bronchitis in Early Childhood', *Lancet*, ii, (1974), 1031–4.

 Comstock, G. W. et al., 'Respiratory Effects of Household Exposures to Tobacco Smoke and Gas Cooking', American Review of Respiratory Disease, 124, (1981), 143–8.

The Murky Hazards of Secondhand Smoke', Consumer Peperss, (Feb. 1985), 81-4.

'Secondhand Smoke: Is It A Hazard?', Consumer Reports, (Jan. 1995), 27-33.

 Copeland, K. T. et al., 'Bias Due to Misclassification in the Estimation of Relative Risk', American Journal of Epidemiology, 105, (1977), 488-95.

 Cornbieet, J., 'Mexico! It's Marlboro country', Journal of the American Medical Association, 267, (1992), 3286.

 Cronan, T. A. and Conway, T. L., 'Is the Navy Attracting or Creating Smokers?', Military Medicine, 153, (1988), 175–8.

 Cuddeback, J. E., Donovan, J. R. and Burg, W. R., 'Occupational Aspects of Passive Smoking', American Industrial Hygiene Association Journal, (May 1976), 263–7.

 Dahms, T. E., Bolin, J. F. and Slavin, R. G., 'Passive Smoking: Effects on Bronchial Asthma', Chest, 80, (1981), 530–4.

Davis, R. M., Boyd, G. M. and Schoenborn, C. A., "Common courtesy" and the Elimination of Passive Smoking', Journal of the American Medical Association, 263, (1990), 2208-10.

 Davis, R. M., 'Current Trends in Cigarette Advertising and Marketing', New England Journal of Medicine, 316 (12), (1987), 725–32.

- de Haas, J. H., 'Parental Smoking: Its Effects on Fetus and Child Health', European Journal of Obstetric and Gynecologic Reproductive Biology, 5, (1975), 283–96.
- DiFranza, J. R. and Lew, R. A., 'Effect of Maternal Cigarette Smoking on Pregnancy Complications and Sudden Infant Death Syndrome', *Journal of Family Practice*, 40, (1995), 385–94.
 'Setting the Record Straight: Secondhand Smoke is a Preventable Health Risk', EPA, 402-F-94-005, (June 1994).

 Fergusson, D. M. et al., 'Parental Smoking and Lower Respiratory Illness in the First Three Years of Life', Journal of Epidemiology and Community Health, 35, (1981), 180-4.

 Fielding, J. E., 'Smoking: Health Effects and Control', New England Journal of Medicine, 313, (1985), 491–8; 555–61.

 Fielding, J. E. and Phenow, K. J., 'Health Effects of Involuntary Smoking', New England Journal of Medicine, 319, (1988), 1452–60.

 Fiore, M. C. and Jorenby, D. E., 'Smoke-Free Hospitals: A Time for Universal Action', Chest, 102, (1992), 1317–18.

 Foliart, D., Benowitz, N. L. and Becker, C. E., 'Passive Absorption of Nicotine in Airline Flight Attendants', New England Journal of Medicine, 308, (1983), 1105.

 Friedman, G. D., Petiti, D. B., Bawol, R. D., 'Prevalence and Correlates of Passive Smoking', American Journal of Public Health, 73, (1983), 401-5.

 Fritschler, A. Lee, Smoking and Politics: Policymaking and the Federal Bureaucracy, (New York: Appleton-Century-Crofts, 1969).

 Garfinkel, L., 'Time Trends in Lung Cancer Mortality Among Non-Smokers and a Note on Passive Smoking', *Journal of the National Cancer Institute*, 66, (1981), 1061-6.

 Glantz, S. A. and Begay, M. E., 'Tobacco Industry Campaign Contributions are Affecting Tobacco Control Policymaking in California', Journal of the American Medical Association, 272, (1994), 1176–82.

 Glantz, S. A. and Parmley, W. W., 'Passive Smoking and Heart Disease', Circulation, 83, (1991), 1–12.

"Passive Smoking Causes Heart Disease and Lung Cancer', Journal of Clinical Epidemiology, 45, (1992), 815-9.

Passive Smoking and Heart disease', Journal of the American Medical Association, 273, (1995), 1047-53.

 Greeman, M. and McClellan, T. A., 'Negative Effects of a Smoking Ban on an Inpatient Psychiatry Service', Hospital and Community Psychiatry, 42, (1991), 408–12.

 Greenland, S., 'The Effect of Misclassification in the Presence of Covariates', American Journal of Epidemiology, 112, (1980), 564-9.

 Gunby, P., 'Military becomes Smoke-Free Work Site this Week', Journal of the American Medical Association, 271, (1994), 971-2.

Hagey, A., 'Implementation of a Smoking Policy in the United States

Hammond, E. C. and Selikoff, I. J., 'Passive Smoking and Lung Cancer with Comments on Two New Papers', Environmental Research, 24, (1981), 444-52.

Heath, C. W. Jr, 'Environmental Tobacco Smoke and Lung Cancer', Lancet, 341, (1993), 526.

Hinton, A. E. et al., 'Parental Cigarette Smoking and Tonsillectomy in Children', Clinical Otolaryngology, 18, (1993), 178-80.

Hirayama, T., 'Passive Smoking and Lung Cancer: Consistency of Association', Lancet, (Dec. 17 1983), 1425-6.

Ho, A. M. H., 'Reducing Smoking in Hospitals: A Time for Action', Journal of the American Medical Association, 253, (1985), 2999-3000.

Hoegg. U. R., 'Cigarette Smoke in Closed Spaces', Environmental Health Perspectives, (Oct. 1972), 117-28.

· Hudzinki, L. G. and Frohlich, E. D., 'One-Year Longitudinal Study of a No-Smoking Policy in a Medical Institution, Chest, 97, (1990), 1198-202.

 Hugod, C., Hawkins, L. H., Astrup, P., 'Exposure of Passive Smokers to Tobacco Smoke Constituents', International Archives of Occupational and Environmental Health, 42, (1978), 21-9.

· Hurt, R. D., In the AMA, Policy Follows Science: A Case History of Tobacco' (editorial). Journal of the American Medical Association, 253, (1985), 3001-3

'Toward Smoke-Free Medical Facilities', Chest, 97, (1990), 1027-8.

- 'Revealing the Link Between Campaign Financing and Deaths Caused by Tobacco' (editorial). Journal of the American Medical Association, 272, (1994), 1217-8.

Iglehart, J. K., 'Smoking and Public Policy', New England Journal of Medicine, 310, (1984), 539-44.

— The Campaign Against Smoking Gains Momentum, New England Journal of Medicine, 314 (16), (1986), 1059-64.

Janerich, D. T. et al., 'Lung Cancer and Exposure to Tobacco Smoke in the Household', New England Journal of Medicine, 323, (1990), 632-6.

 Jensen, R. G., 'The Effect of Cigarette Smoking on Army Physical Readiness Test Performance of Enlisted Army Medical Department Personnel', Military Medicine 151, (1986), 83-5.

Jorres, R. and Magnussen H., Influence of Short-Term Passive Smoking on Symptoms, Lung Mechanics and Airway Responsiveness in Asthmatic Subjects and Healthy Controls', European Respiratory Journal 5, (1992), 936-44.

Joseph, A. M. and O'Neil, P. J., 'The Department of Veterans Affairs Smoke-Free Policy', Journal of the American Medical Association 267, (1992), 87-90.

• Joseph, A. M., 'Is Congress Blowing Smoke at the VA?', Journal of the

American Medical Association 272, (1994), 1215-6. Kales, S. N., 'Smoking Restrictions at Boston-Area Hospitals, 1990-1992: A Serial Survey', Chest 104, (1993), 1589-91. Kirn, T. F., 'More "No Smoking" Signs Seen in Hospitals', Journal of the American Medical Association, 259, (1988), 2814. Klonoff-Cohen, H. S. et al., 'The Effect of Passive Smoking and Tobacco Exposure through Breast Milk on Sudden Infant Death Syndrome', Journal of the American Medical Association, 273, (1995), 795-8.

Kottke, T. E., 'The Smoke-Free Hospital: A Smoke-Free Worksite', New York State Journal of Medicine 89, (1989), 38-42. Kriz, M., 'Where there's Smoke...', National Journal, 26, (1994),

1056-60.

Krouth, L. A., Bray, R. M., Marsden, M. E., 'Cigarette Smoking in the US Military: Findings from the 1992 Worldwide Survey', Preventive Medicine, 23, (1994), 521-8.

Lashner, B. A. et al., 'Passive Smoking is Associated with an Increased Risk of Developing Inflammatory Bowel Disease in Children', American Journal of Gastroenterology, 88, (1993), 356-9.

Lee, P. N., 'Passive Smoking', Federal and Chemical Toxicology, 20, (1982), 223-9.

— 'Effects of Passive Smoking', Journal of Clinical Epidemiology 46, (1993), 409-10.

Leone, A., 'Cardiovascular Damage from Smoking: A Fact or Belief?', International Journal of Cardiology 38, (1993), 113-7.

Luik, J. C., 'Pandora's Box: The Dangers of Politically Corrupted Science for Democratic Public Policy', Bostonia (Winter 1993-1994) 50-60.

Mantel, N., 'Dubious Evidence of Heart and Cancer Deaths due to Passive Smoking', Journal of Clinical Epidemiology, 45, (1992), 809-13. Marsden, M. E., Bray, R. M. and Herbold, J. R., 'Substance Use and Health among US Military Personnel: Findings from the 1985 Worldwide Survey', Preventive Medicine, 17, (1988) 366-76. Mattson, M. E. et al., 'Passive Smoking on Commercial Airline Flights', Journal of the American Medical Association, 261, (1989), 867-72.

Moore, S. et al., 'Epidemiology of Failed Tobacco Control Legislation', Journal of the American Medical Association 272, (1994), 1171-5.

Murray, A. B. and Morrison B. J., 'Passive Smoking by Asthmatics: Its Greater Effect on Boys than on Girls and on Older than on Younger Children', Pediatrics 84, (1989), 451-9. Nelson, H., 'USA: EPA Passive Smoking Report', Lancet, 340, (1992), 360-1.

Noonan, G., 'Passive Smoking in Enclosed Public Places', Medical Journal of Australia (2 July 1976), 68-70.

- Pimm, P. E., Silverman, F. and Shephard, R. J., 'Physiological effects of Acute Passive Exposure to Cigarette Smoke', Archives of Environmental Health, (July/Aug. 1978), 201–13.
- Rantakallio, P., 'Relationship of Maternal Smoking to Morbidity and Mortality of the Child up to the Age of Five', Acta Paediatrica Scandinavia, 67,(1978), 621-31.
- Radecki, S. E. and Brunton, S. A., 'Going Smoke-Free in the 1990s: Lessons Learned at a Teaching Hospital', American Journal of Public Health, 84, (1994), 1689-91.
- Rennie, D., 'Reporting Randomized Controlled Trials: An Experiment and a Call for Responses from Readers', Journal of the American Medical Association 273, (1995), 1054-5.
- Sapolsky, Harvey M., 'The Political Obstacles to the Control of Cigarettes in the United States', Journal of Health Politics, Policy and Law, 5 (2), (1980), 277–90.
- Schilling, R. S. F. et al., 'Lung Function, Respiratory Disease, and Smoking in Families', American Journal of Epidemiology, 106, (1977), 274–83.
- Schmeltz, I., Hoffmann, D. and Wynder, E. L., 'The Influence of Tobacco Smoke on Indoor Atmospheres', Preventive Medicine 4, (1975), 66–82.
- Shaham, J., Ribak, J. and Green, M., 'The Consequences of Passive Smoking: An Overview', Public Health Reviews, 20(1-2), (1992-93), 15-28.
- Shephard, R. J., Collins, R. and Silverman, F., 'Passive Exposure of Asthmatic Subjects to Cigarette Smoke', Environmental Research 20, (1979), 392–402.
- Siegel, M., 'Involuntary Smoking in the Restaurant Workplace. A
 Review of Employee Exposure and Health Effects', Journal of the
 American Medical Association 270, (1993), 490–3.
- Smith, W. R. and Grant, B. L., 'Effects of a Smoking Ban on a General Hospital Psychiatric Service', Hospital and Community Psychiatry, 40, (1989), 497–502.
- · Sobel, R., They Satisfy (New York: Doubleday, 1978).
- Speer, F. and Mission, S., 'Tobacco and the Non-Smoker: A Study of Subjective Symptoms', Archives of Environmental Health, 16, (1968) 443-6.
- Spengler, J. D. and Sexton, K., 'Indoor Air Pollution: A Public Health Perspective', Science, 221, (1983), 9–17.
- Steenland, K., Passive Smoking and the Risk of Heart Disease. Journal of the American Medical Association 267, (1992), 94–9.
- Stockwell, H. G. et al., 'Environmental Tobacco Smoke and Lung Cancer Risk in Non-Smoking Women', Journal of the National Institute of Cancer, 84, (1992), 1417–21.
- Surgeon General's Report, Reducing the Health Consequences of Smoking. Twenty-five Years of Progress US Department of Health and

- Human Services (Washington, DC: Public Health Service. DHHS Publication No. (CDC) 90–8411, 1989).
- Tager, I. B. et al., 'Effect of parental cigarette smoking on the pulmonary function of children', American Journal of Epidemiology 110, (1979), 15–26.
- Tager, I. B., "Passive Smoking" and Respiratory Health in Children
 Sophistry or Cause for Concern? American Review of Respiratory
 Disease 133, (1986) 959–61.
 - "Health Effects of "Passive Smoking" in Children', Chest, 96, (1989), 1161-4.
- Tredaniel, J., et al., 'Environmental Tobacco Smoke and the Risk of Cancer in Adults', European Journal of Cancer, 29A, (1993), 2058–68.
- Trichopoulos, D. et al., 'Active and Passive Smoking and Pathological Indicators of Lung Cancer Risk in an Autopsy Study', Journal of the American Medical Association, 268, (1992), 1697–701.
- Uberla, K., 'Lung Cancer from Passive Smoking: Hypothesis or Convincing Evidence?', International Archives of Occupational and Environmental Health, 59, (1987), 421–37.
- · Wagner, S., Cigarette Country (New York: Praeger, 1981).
- Warner, K. E., 'Cigarette Smoking the 1970s: The Impact of the Antismoking Campaign on Consumption', Science, 211 (13 Feb. 1981): 729–31.
- Weber, A. and Fischer, T., 'Passive Smoking at Work', International Archives of Occupational and Environmental Health, 47, (1980) 209-21.
- White, J. R. and Froeb, H. F., 'Small-Airways Dysfunction in Non-Smokers Chronically Exposed to Tobacco Smoke', New England Journal of Medicine, 302, (1980), 720-3.

- Whiteside, T., Selling Death: Cigarette Advertising and Public Health (New York: Liveright, 1971).
- Zadoo, V., Fengler, S. and Catterson, M., 'The Effects of Alcohol and Tobacco Use on Troop Readiness', Military Medicine, 158, (1993), 480-4.
- Zhang, J. and Ratcliffe, J. M., 'Paternal Smoking and Birthweight in Shanghai', American Journal of Public Health, 83, (1993), 207–10.