Exploitation by design—could tobacco industry documents guide more effective smoking prevention and cessation in women?

In the 1970s, the rising tide of lung cancer in women led to predictions that by the 1980s it would eclipse breast cancer as a leading cause of death (US DHHS 1980). Those predictions were based on the parallel, but approximately 2–3 decades delayed increase in lung cancer deaths, which accompanied rising rates of smoking. Sadly, the predictions were true in the United States of America: lung cancer surpassed breast cancer deaths in the mid 1980s (US DHHS 2001). Globally, the World Health Organization (WHO) reported that rising smoking rates in women were matched by devastating increases in lung cancer relative to other cancers (WHO 1992). With this grim epidemiological experiment in progress, health authorities, researchers, and clinicians worked to reduce smoking in women through education and reports targeted toward women (US DHHS 1980; WHO 1992, 2001). Some of the forces driving smoking in women were obvious: social forces linking expanded freedom and independence with smoking, and pervasive advertising and marketing by tobacco companies which reinforced social trends and bathed countries with smoking-associated images of health, glamour, independence, beauty and thinness (US DHHS 1980, 2001; WHO 1992, 2001). This issue of *Addiction* reveals another force used to counter health efforts, used against women, and used to foster tobacco industry profits, namely—cigarettes designed to addict women (Carpenter *et al.* 2005).

So called 'light' and 'reduced tar' cigarettes were designed to undermine prevention and cessation efforts in men and women alike by addressing smokers' concerns about the health effects of smoking—but not by reducing the adverse health effects (Wilkenfeld *et al.* 2000; National Cancer Institute 2001). Some of the hardest hitting marketing targeted women with images such as healthy, slim, beautiful female athletes 'choosing' the new light brands rather than quitting smoking (National Cancer Institute 2001).

Carpenter and colleagues reveal an even more pernicious force, i.e. how the tobacco industry conducted extensive research on the smoking patterns, needs, and product preferences of women in guiding their modification of the cigarette's design to promote cigarette smoking among women. They document how the industry masked its ultimate deception by manufacturing and marketing products that exploited mistaken health notions about the relative 'safety' of smoking 'light' cigarettes. The industry's own studies of gender-based differences in smoking behaviors point out that 'Women use nicotine to reduce stress, negative affect, and body weight . . .' How unfortunate that the industry used these findings to exploit women and not help them. Cigarette designs and ingredients were manipulated in an effort to make cigarettes more palatable to women and to complement advertising allusions of smooth, healthy, weight-controlling, stress-reducing smoke.

The Carpenter *et al.* paper is a call to action on many fronts. It reminds us of C. Everett Koop's question: 'Where is the Outrage?' in response to revelations about reprehensible behavior by the tobacco industry to promote its products (Koop 1998). The paper challenges researchers and regulators to consider the science base for restricting tobacco product designs and ingredients that are used to foster addiction in general as has been discussed elsewhere (Henningfield *et al.* 2004). It is a call for prevention and cessation efforts to more effectively counter the efforts of tobacco industry product designs and marketing (Canova *et al.* 2001; Shiffman *et al.* 2001; Wilkenfeld 2001). For example, should pharmacological treatment aids be promoted more aggressively on the basis that they can reduce smoking cessation associated weight gain (Fiore *et al.* 2000; US Department of Health & Human Services. 2000)? How can prevention programs more effectively counter images promised by the tobacco industry, when those images are reinforced by products that actually deliver on some of those promises – albeit with a lethal side-effect? Also, it should not be forgotten that tobacco strategies aimed at changing social norms and promoting stronger policies have a strong influence on women's smoking behavior and must be promoted (Stillman *et al.* 2003).

Finally, and perhaps most pressing from a global health perspective, we need to ask how findings such as those of Carpenter *et al.* can be used to counter the rising tide of smoking in women in developing countries so that the epidemiological demonstration that smoking deaths can rise to exceed presently more common forms of death will not be repeated?

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JACK E. HENNINGFIELD & PATRICIA B. SANTORA
The Johns Hopkins University School of Medicine
550 North Broadway, Suite 203
Baltimore
MD 21205
USA
E-mail: jhenning@pinneyassociates.com

FRANCES A. STILLMAN
The Johns Hopkins Bloomberg School of Public Health
Baltimore
MD
USA

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