WHERE DO WE GO FROM HERE?

The next wave in Canadian tobacco control

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June 2006

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I Introduction

Is Canadian tobacco control obsolete? At first glance, the question is absurd. Never before have so many qualified, motivated people worked so hard to reduce tobacco use. Never before have we had so many political victories in quick succession: smoke-free workplaces, marketing restrictions, tax increases, health warnings on packs. And yet, outside the tobacco control community, the perception is common that tobacco is yesterday's issue. Reporters who previously reported eagerly on the latest revelation about underhanded industry tactics now fail to see the news value in such stories. For politicians, going to bat against the tobacco industry no longer looks particularly heroic or courageous; tobacco control is becoming a 'boy scout' issue, on which almost all politicians are (apparently) on the same side.

The Canadian tobacco control community has grown impressively in numbers, depth and expertise, which is how things should be when a country faces a health problem that is large and complex. But with size comes also the danger of group think: it is now possible to spend one's entire professional life in tobacco control, interacting primarily with other tobacco control professionals, mutually reinforcing various assumptions about the nature of the tobacco problem and the range of possible solutions. We may end up simply tinkering with strategies that were developed long ago. Alternatively, we may find ourselves promoting new approaches that make lots of sense within the universe of tobacco control, but look outrageous to decision-makers outside our community.

Canadian tobacco control was built on *realistic radicalism*. The pioneers of the 1970s and 1980s were *radical* in the etymological sense (the word "radical" is derived from the Latin word for root): they looked for the political and economic roots of the tobacco problem, rather than spending all their time merely treating the symptoms. But they also recognized the limits of their own influence, and concentrated on ambitious but achievable steps on the road to major reforms. Though the social and political context has changed dramatically since then, and there is power in our substantial numbers, it is crucial to retain this spirit of realistic radicalism.

If we are able to think clear-headedly about what is possible, and willing to question assumptions that may have served us well in the past but are holding us back now, Canadian tobacco control will not become obsolete. Until, that is, we have brought tobacco-caused death and disease down to negligible levels.

Where we were...

Cast your mind back to the situation in Canada in the mid-1970s, the Stone Age of tobacco control:

- Almost half of adults smoked.
- They smoked almost anywhere: at their desks, in restaurants, on buses, in elevators, even in doctors' offices and hospital rooms.
- There were no legally binding restrictions on marketing, and cigarette manufacturers were major advertisers in magazines and newspapers, and on billboards.
- The health 'warnings' on cigarette packs were possibly the most absurd in the world, encouraging smokers to 'avoid inhaling'.
- As for tax policy, there was none: since the early 1950s, federal and provincial governments had let tobacco taxes lag far behind inflation, allowing cigarettes to get cheaper year by year, even as average incomes rose sharply and made tobacco products increasingly affordable.

The prospects for change were not encouraging. Though there was a scientific consensus that smoking caused cancer, the tobacco industry was politically well-connected and the few tobacco control advocates were marginalized. Government 'action' on tobacco took the form of friendly meetings with manufacturers to discuss the finer points of the industry's voluntary advertising code. An advertising ban had been seriously discussed in the late 1960s, but the idea was allowed to die when manufacturers withdrew direct TV and radio advertising.

Despite cigarette manufacturers' steadfast denials that their products caused disease, more and more smokers were realizing that cigarettes were harmful. But, starting in the mid-1970s, the industry managed to turn even this trend to advantage, by launching so-called 'light' cigarettes, combining the 'taste' and 'satisfaction' (read: nicotine) of 'regular' cigarettes with lower levels of whatever chemical stuff those doctors keep nattering on about. In just a few years, 'lights' came to dominate the Canadian market.

By the early 1980s, heavy advertising, low prices and lack of regulation gave Canada the sorry distinction of having one of the highest levels of per capita cigarette consumption in the world — two decades after cigarettes had been definitively shown to cause cancer.

Where we are...

Three decades on, the picture has improved dramatically. Though the international competition is not particularly fierce in this regard, Canada is now widely regarded as a world leader in tobacco control, and with good reason:

- Self-reported daily smoking is down to about 15%[1], and per capita consumption has been cut roughly in half.
- In most of Canada, smoking is banned from all enclosed public places and all workplaces, including restaurants and bars.
- Direct cigarette advertising has virtually disappeared, and even the display of cigarettes at point of sale is now being banned, province by province.
- Cigarette packs feature large, picture-based warnings, a measure pioneered in Canada that is now rapidly spreading around the world (Brazil, Venezuela, Singapore, Thailand, Australia etc.).
- The real price of cigarettes has tripled, thanks to large tax increases in the 1980s and early 1990s, and again in the 2001-2004 period.
- Smoking cessation treatment is now widely available, though there are considerable variations in the quality of care.
- **Thanks to widespread knowledge of their lack of truthfulness and their cynical marketing practices, tobacco companies are now political pariahs. Imperial Tobacco, the dominant manufacturer, has decided**

[1] Canadian Tobacco Use Monitoring Survey [CTUMS], 2004. (Full-year results for 2005 not available at time of publication.)

to move all its production out of the country and slash its purchases of Canadian tobacco, thereby waving goodbye to whatever residual political clout it might have had.

- Governments are regularly in court against manufacturers, either defending tough tobacco control legislation or suing companies for involvement in smuggling or to recover tobacco-related health care costs.
- The tobacco control community is large, professional and includes many media-savvy advocates. Tobacco control is now mainstream.

In short, though it took 30 years of extremely hard work, the tobacco control movement has scored a resounding political, legal and social victory over the tobacco industry, despite the latter's money and power. But all is not well:

- Tobacco remains the leading preventable cause of death in Canada. In absolute numbers, it has never killed more people per year than it does at present, though these numbers should begin to fall soon. In part, this is simply the time lag between prevalence trends and disease trends: teenagers who start smoking will not see a noticeable increase in mortality rates over non-smoking peers until they are into

How does Canada measure up?

It is difficult to compare smoking rates between countries because of differences in survey methodology, response rates and demographics. However, the Organisation for Economic Co-operation and Development (OECD) does compile daily smoking rates for member countries, where data are available.

According to the OECD's most recent numbers, for 2003, Canada had the lowest daily smoking rate, at 17%, a whisker ahead of Sweden and the United States (tied at 17.5%).

Canada can also reasonably lay claim to being the 'most improved' country, in terms of daily smoking rates. Comparing 1980 and 2003, Canada showed the biggest percentage decline in prevalence rates (-50.6%), ahead of the United States (-47.8%), Sweden (-46.0%), Australia (-45.0%) and Denmark (-44.6%).

On other measures, however, Canada does not look nearly as good. For example, our per capita consumption of cigarettes is roughly twice as high as in New Zealand, thanks to a consistent high-tax policy in that country. Sweden, Norway and Finland also have lower cigarette consumption levels. Most developing countries also have much lower per capita consumption levels (reflecting lower purchasing power).

Lung cancer rates in Canada are significantly higher than in other countries. The incidence rate of lung cancer amongst Canadian males is about twice the rate found in Sweden, which no doubt reflects the fact that smoking prevalence and cigarette consumption peaked at significantly higher levels in this country.

In the policy arena, no country can claim to be significantly ahead of Canada — except possibly Sweden, in the view of harm reduction advocates. However, there is a significant cluster of countries (e.g., Australia, New Zealand, Ireland, South Africa, Thailand) with a comparable mix of policies, and a larger number of countries that are catching up fast (Uruguay, India, France etc.).

The United States is an interesting anomaly because it has pioneered some tobacco control measures at the state level, but has very weak federal legislation.

their 30s, so conversely, preventing teenagers from smoking this year has no impact on death rates for at least 20 years.

- Roughly half of smokers report having made at least one quit attempt in the last 12 months.[2] Presumably the proportion making quit attempts in the next 12 months will be similar; unfortunately, the vast majority of these attempts fail. **Particularly for the most heavily dependent smokers, the odds of ever successfully quitting are probably less than even, in the existing situation. Those who fail to quit face a 50% chance of tobacco-caused death.**
- Fewer and fewer non-smokers are exposed to second-hand smoke. While this is good for public health, it also means they have less personal motivation to support tobacco control. Moreover, as the percentage of smokers drops, particularly amongst more educated Canadians, the proportion of people who are no longer in regular contact with *any* smokers is rising. The political salience of tobacco control is likely to go down.
- Despite their loss of political influence, cigarette manufacturers remain wildly profitable — indeed, the tax increases of the last two decades have allowed companies to boost their profit margins to levels that would be inconceivable for other products. The incentive to regain lost markets remains strong.

Perhaps the most important reason for concern is this: Virtually all items on the 'to-do' list that a tobacco-control advocate could have drawn up 30 (or even 15) years ago have now been checked off, and some measures that no one had even conceived of have since been developed, promoted and implemented (e.g., picture-based warnings, display bans). Yet we have only succeeded in eliminating *about half* of the tobacco problem (as measured by per capita consumption). What could we possibly do for an encore that could match the impact of all the obvious and not-so-obvious measures we have already taken?

Where we might go

Simply doing more of existing types of policy measures, such as taxes, smoke-free spaces, marketing restrictions, and various types of education (including package messaging), is unlikely to lead to the elimination of tobacco use or bring tobacco deaths down to 'acceptable' levels quickly. For example, tax increases account for the biggest chunk of the drop in cigarette demand we have seen in Canada since the 1970s: prices have roughly tripled. But this is a hard act to follow: tripling cigarette prices again would push the average price of a pack of 25 cigarettes to about $27, or about $10,000 per year for a pack-a-day smoker.

Similarly, there can be little doubt that mandating smoke-free workplaces has a significant impact on smoking rates. But there are few spaces left that governments are likely to regulate: possibly inside cars, particularly if children are present. Some advocates have suggested legislation on smoking in apartment buildings, or in any home where children live, but neither would be easy to enforce or politically attractive to governments.

How about further marketing restrictions? Once point-of-sale displays are eliminated, the main marketing tool that cigarette manufacturers will have left is the cigarette pack itself. The half of cigarette packs that is not devoted to warning messages is, in essence, a colourful lifestyle advertisement that reaches all smokers and many non-smokers. Requiring generic packaging in Canada — that is, packaging stripped of brand colours and logos, with a standard typeface for all brand names — would eliminate pack-based glamorization of cigarettes and set a useful precedent for the rest of the world. As it happens, existing marketing restrictions and increased price competition have already created a large 'no-name' market: less glamorous discount brands, which were virtually unknown a few years ago, now account for more than 40%

[2] CTUMS, 2005, 1st half.

of Canadian sales.[3] Thus, the impact of generic packaging would likely be smaller in this country than in other markets where advertising is still widespread.

In short, though generic packaging, higher taxes, hard-hitting media campaigns and the like are all worth doing, if these and similar measures are the *only* things we add to our existing tobacco control repertoire, we will be taking a high-risk gamble: that with a few extra boosts, our existing tobacco control momentum is enough to let us 'coast' downward to acceptable levels of tobacco-caused death. If this is the case, our job is largely finished, and we are now in the mop-up phase of tobacco control; we simply need to be patient and let some of our effective but slow-acting measures (such as marketing restrictions) take effect. But it is difficult to justify waiting around for a couple of decades to find out whether we've already done enough. And, as we will see later in more detail, assuming that an incremental approach to tobacco control can get the job done may stem from mistaken perceptions of what motivates tobacco use.

Fortunately, there are whole sets of policies that we have so far barely tried:

- Our regulatory attention has so far focused exclusively on what is *outside* the cigarette pack — from the advertising to the packaging. The product itself, cigarettes, remains virtually free of regulation. A manufacturer could add chocolate, sugar, ammonia or even cow manure to cigarettes without running afoul of the federal *Tobacco Act* (the law that restricts tobacco marketing and gives the government the power to regulate the contents and characteristics of tobacco products).

  The shape, density and filter of the modern cigarette have been carefully designed to maximize attractiveness and (hence) addictiveness, without any regulatory restraints to speak of. This is an anomaly: the most hazardous consumer product in widespread use is subject to less regulation than foods, cars, or toys. Yet, all other things being equal, reducing the hazardousness of cigarettes by 20% could have as much impact as reducing the number of smokers by 20%.

- Over the last 30 years, policy makers and advocates have discovered that tobacco companies can be expected to oppose virtually any effective tobacco control measure. For example, when the first studies were published showing second-hand smoke caused lung cancer, the industry pumped millions of dollars into a campaign of scientific misinformation, public relations and legal obstruction — all because of the expected impact of the issue on cigarette sales.

  We have made great strides in regulating tobacco industry *behaviour,* but have barely even debated what policies might cause the tobacco industry to be less obstructionist. It is easy to forget that, from the industry's point of view, tobacco-caused death is an unfortunate side-effect of the pursuit of profits, not the industry's core mission. **Yet we have allowed an incentive structure to remain in place that richly rewards the 'hook them young' strategy: make brands attractive to teenagers, addict them young, and keep them in the market as long as possible.**

- Though the tobacco industry describes itself as 'heavily regulated', it is quite easy to become a manufacturer or a distributor, and virtually any retailer can sell tobacco products. No training or particular safety measures are needed. Licensing conditions are rudimentary, where they exist at all. This is in contrast to the way we treat other major drugs, such as alcohol or cocaine.

  Moreover, despite the multiplication of smoke-free legislation, the legal constraints on nicotine use, except in pharmaceutical products, are less than on any other major drug (apart from caffeine).

[3] See British American Tobacco, Quarterly Report to 31 March 2006. 'Premium' brands (i.e. full-priced, established brands) accounted for only 57% of the Canadian market, down from more than 95% in 2001.

- Cigarettes have been in widespread use for about one century; nicotine has been in widespread use for millennia. **There are many ways to take nicotine: patches on the skin, powder that is snorted, sachets in the mouth, inhaled smoke, even injection. The risk profile varies widely depending on delivery vehicle. Inhaled smoke is probably the most hazardous way of getting nicotine.** Few nicotine users are aware of this basic fact, and under the right circumstances, such knowledge could save many lives.

With these four ideas alone — product standards, incentive structures, regulation of availability and supply, and product substitution — we can develop a wide range of possible policies, from the highly plausible to the completely outlandish.

But before we look at these in detail, let us look at some elements of group think in tobacco control that may be holding us back. It's worth emphasizing that these are unspoken, operational assumptions, not necessarily codified beliefs that people are taught when they enter tobacco control.

II Unspoken assumptions

1. In the absence of marketing, tobacco use would eventually disappear

One of the most important battles of the past 30 years of tobacco control has been to protect smokers, ex-smokers and, most crucially, potential smokers from tobacco industry marketing. From the 1920s through the 1990s, manufacturers developed highly effective techniques to associate cigarettes with glamour, adventure and rebellion. Clearly this slick marketing is one important reason why consumption rose even into the 1980s and why smoking is still seen as 'cool' in some teenage circles. Comparative studies between countries with and without tobacco advertising bans have shown drops in consumption where bans were in effect.

But it is wrong to jump to the conclusion that advertising, product placement and other glamorization strategies are the *only* reasons why people start to smoke. Tobacco has been in widespread use in this part of the world for millennia, long before the rise of advertising. Contrary to a widespread misconception, aboriginal use of tobacco was not confined to ceremonial or religious occasions; French missionaries encountered widespread, regular tobacco smoking. In the 19th century, even in the absence of most modern forms of marketing, tobacco use was widespread (primarily pipe-smoking and snuff). It is not until the 20th century that we saw the tobacco industry transformed into highly centralized, slick marketing machines.

Perhaps one reason the 'marketing is everything' assumption is widely made is that it isn't obvious to casual bystanders what smokers actually get from their cigarettes. They show few of the signs of intoxication that we associate with drugs and that were long assumed to be a defining feature of addiction. They do not slur their speech, laugh inappropriately or lie around discussing their hallucinations. Nor do they beat their children, abandon their jobs to go on binges, or prostitute themselves to get their next 'hit'. Moreover, smokers have some difficulty articulating what it is they like about cigarettes. Many report that it 'soothes their nerves', 'helps them concentrate' or simply 'goes well with' a coffee, a glass of wine, a telephone conversation, etc. — but much of this can be plausibly explained by temporary relief from nicotine deficit. Presumably if you never use nicotine regularly, you don't need relief from nicotine deficit.

As noted nicotine specialist John Hughes has pointed out, the absence of intoxication does *not* preclude other subjective benefits from nicotine.[4] In particular, nicotine users report improved mood and concentration, as well as decreased appetite. There are numerous studies of the effect of nicotine on the brain that provide plausible explanations of how these positive effects might arise, even in people who are not (yet) habitual users.

And, particularly for many adolescents, mood and weight control and heightened concentration are an attractive combination. (Particularly if they have attention disorders, weight control problems, or are prone to depression or big mood swings.) Moreover, the *absence* of visible intoxication may actually be one of the attractions of nicotine, since it makes its use less obvious and less objectionable to others.

This may explain in part why the percentage of occasional users of nicotine who progress to daily use and addiction is higher than for other major drugs — including alcohol, which is almost as easy to obtain. In the interval between first use and full-fledged addiction, what exactly keeps teens smoking?

The upshot of this brief overview of a very complicated topic: nicotine is an inherently attractive drug, at least to a percentage of people.

[4] Hughes JR, Why does smoking so often produce dependence? A somewhat different view. *Tobacco Control* 2001;20:62-64.

Demand for it is unlikely to disappear simply because we stop companies from actively promoting it. Prospective users would need strong, convincing reasons *not* to experiment with it.

2. The tobacco industry can never be reformed, only eradicated

Tobacco-control advocates often refer to the 'scream test' for proposed tobacco-control measures: if the tobacco industry protests loudly, it must be good; if the industry says nothing, or agrees with the measure, it must be ineffective or even counter-productive. Unfortunately, the scream test is no paranoid delusion. In the last 30 years, manufacturers have reliably opposed tax increases, marketing restrictions and smoke-free spaces legislation, while promoting school-based programmes, retailer 'education', youth possession penalties and similar nonsense.

Many industries oppose regulations, of course. Car manufacturers initially fought the requirement to include seatbelts in cars; smokestack industries claim emissions limits will put them out of business; breweries chafe at attempts to clean up beer advertising. But car safety regulations do not threaten the existence of car manufacturers, industries find ways to drastically reduce their emissions, and even breweries can make money without targeting underage drinkers. The business plan of cigarette manufacturers, on the other hand, is fundamentally illegitimate and arguably even illegal:

1. Since most smokers start in their teens, make your brands as attractive as possible to this age group, by talking about anything except the dangerous nature of your product. Hook them young!
2. Provide health reassurance and rationalizations to addicted smokers, to minimize leakage to quitting.
3. Deny the reality of addiction and present smoking as an 'adult pleasure' and a voluntarily assumed risk.
4. Make your products as visible and easily accessible as possible, both for the advertising effect with children and to encourage relapse amongst ex-smokers.
5. Present yourself as the defender of "smokers' rights" and tolerance, even if this means exposing non-smokers to tobacco smoke, so as to prevent quitting and/or reduced consumption amongst smokers in workplaces that go smoke-free.

In short, the cigarette business is built on trickery and addiction. Moreover, the victims of this trickery — the children who become addicted and stay addicted through adulthood — have a 50% chance of dying as a result.

But where does this reliance on deadly trickery come from? It is unlikely to be simply a random character flaw shared by tobacco company executives, and passed on from generation to generation. The 'Big Lie' approach to scientific and media reports about the harmful effects of tobacco and the reality of addiction goes back at least to the legendary Plaza Hotel meeting in New York in 1953. Since then, hundreds of executives have moved into tobacco from more banal tasks like selling more breakfast cereal, chocolate or canned fruit. They were not required to design and market addictive cereals or cyanide-laced fruit before being allowed into the cigarette business.

The crucial distinguishing feature is the peculiar nature of the cigarette market. Virtually all regular cigarettes are smoked by unwilling consumers — 90% of smokers report that they wished they had never started smoking[5] — and virtually all cigarettes are smoked by daily smokers. Selling cigarettes thus resembles a chemical extortion racket, with a high probability of a fatal outcome.

Contrast this with a product like beer. No doubt alcoholics account for a disproportionate share of alcohol sales, but they account for only a small share of regular drinkers. Brewers can and do position their brands to appeal to 'binge drinkers' (e.g. through some youth-oriented

[5] Fong GT et al., The near-universal experience of regret among smokers in four countries: Findings from the International Tobacco Control Policy Evaluation Survey. *Nicotine & Tobacco Research* 2004; 6 (supp. 3): S341–S351.

sponsorships), which is a public health issue, but it is possible to build a profitable niche selling distinctive, premium beer to middle-aged professionals who are moderate drinkers. At least in recent memory, nobody has successfully pursued this type of strategy in the Canadian cigarette market. Even the so-called cigar craze is a statistically marginal phenomenon compared to the rise of micro-breweries.

Caffeine also provides an interesting comparison. The overwhelming majority of North Americans are regular caffeine users (80-90%, according to a 2004 study of caffeine withdrawal symptoms).[6] For many of the heaviest users, avoidance of withdrawal symptoms (drowsiness, headaches etc.) appears to be an important motivator of consumption. Yet apart from worries about cola marketing to children, there has been virtually no suggestion that caffeine sellers' business plans are fundamentally immoral. This is because the health effects of chronic caffeine intake do not appear to be all that significant.

The point of these two examples is that it is at least theoretically possible to be an ethical seller of addictive drugs — either by selling a product that is addictive but not outrageously hazardous (caffeine), or by pitching a brand at older, moderate users (micro-breweries).

Clearly there are major challenges transferring either of these examples to tobacco, not the least of which is that tobacco is much more addictive for most users than either caffeine or alcohol. However, if we simply throw up our hands and assume that the tobacco industry is essentially, unchangeably evil, we give up any hope of changing the rules so as to get at least part of the industry helping rather then hindering public health objectives.

This is not a plea to be 'nice' with tobacco companies and accept at face value their claims that they have become socially responsible and recognized the errors of their past ways. **Indeed, analysing the forces that led the industry executives of yesteryear to opt for a strategy of fraud and deception provides a much more solid basis for questioning the motives of today's manufacturers than simply repeating, "The tobacco industry is and always will be irremediably bad."**

3. Tobacco users are addicted, and can't make real choices. We sometimes have to withhold information and make choices for them.

Most people who have worked in tobacco control for a while have probably had the experience of talking to smokers who are in despair over their inability to quit. They've tried everything — patches, gum, hypnosis, laser therapy, cold turkey, Zyban — and after a few days or weeks, something happens and they just can't take it any more and relapse. They feel guilty and powerless, and worry whether they'll be around to see their children grow up.

After a few such conversations, it is easy to become furious when tobacco industry representatives start giving hypocritical sermons about 'free choice', 'risky adult pleasures' and the dangers of 'health paternalism' — what does free choice mean to the 40-year-old heavily addicted smoker who started when she was 12 years old?

One of the unfortunate side-effects of addiction is that it causes us to be less than truthful with addicts. When a pack-a-day smoker announces that he quit cold turkey a week ago and feels great, it would seem almost criminal to point out to him that his odds of avoiding relapse are less than 10%. Instead, we congratulate him, perhaps give a tip or two about handling cravings, avoiding alcohol and throwing out ashtrays.

Similarly, we know that young people often discount warnings about the long-term health effects of cigarettes because they don't expect to smoke for more than a few years and will stop before doing themselves lasting damage. Few

[6] Juliano LM and Griffiths RR, A critical review of caffeine withdrawal: empirical validation of symptoms and signs, incidence, severity and associated features. *Psychopharmacology* 2004;176(1):1-29.

tobacco control professionals would dare publicly agree that short-term use might indeed be of little long-term consequence, since they know the odds of successfully quitting after a few years are poor.

Such 'motivational omissions' can lead to ethical problems, however — in particular when it comes to providing information about *relative* risk, i.e. whether one tobacco product is more or less hazardous than another.

To illustrate, let us imagine a Canadian anthropologist discovers a village of tobacco users in a remote corner of the Guatemalan highlands. The villagers do not smoke their tobacco; instead they mix it with some local herbs, crush the mixture into a paste which is then sun-dried into pellets that are used as nicotine-laden earplugs. The anthropologist notes very low rates of respiratory diseases and heart attacks in the village of the earplug wearers, but also quite a number of brain cancer cases and degenerative neurological diseases. She brings the earplugs to Health Canada, which after careful study estimates the life-time risk from using the tobacco earplugs is 25%, or about half that of cigarettes.

Extensive consumer research shows that the earplugs are as 'satisfying' as cigarettes for smokers — and just as addictive — but that virtually none would be interested in switching unless they were told their risk of tobacco-caused death would be cut in half. Surveys and focus groups indicate that if Health Canada does publicize the risk reduction:

- 1,000,000 smokers would switch to the earplugs (for a theoretical gain of 250,000 lives[7]);
- 1,000,000 ex-smokers would try the earplugs, even at the risk of relapse into addiction (for a loss of 250,000 lives);
- a small but not negligible percentage of teenagers would try the earplugs.

What is the ethical thing to do? Simply warn potential users of the many health problems caused by the earplugs? Or should the estimates on risk reduction also be publicized?

This is not simply a mathematical issue. If Health Canada sits on the relative risk information, but it later leaks, many smokers who contracted lung cancer or emphysema in the interim will likely be extremely upset — and the math about the forecast negative impact on ex-smokers and non-smokers probably won't calm them down much. "You didn't even give us a choice," they might say. "Ex-smokers who got themselves killed by starting up on tobacco earplugs — nobody put a gun to their head. But I kept trying to quit and failed, and the earplugs might have saved my life. Who are you to play God?"

The earplug example is imaginary, of course, but the issue it raises is not. **One of the fiercest and most divisive debates in tobacco control in recent years has been about smokeless tobacco** (oral snuff). Smokeless comes in many different forms, though the Canadian market is dominated by one manufacturer, UST (maker of Skoal and Copenhagen). Smokeless is addictive and contains various carcinogens, though their concentration varies widely between brands and according to how long and at what temperature the tobacco is stored. Not surprisingly, given that smokeless users do not inhale anything, smokeless is not a significant cause of lung cancer or chronic obstructive pulmonary disease (COPD). It is a cause of mouth cancer, though the extent of the risk varies greatly by type and brand. There is contradictory evidence on various other health effects (e.g. cardiovascular). Though it is clear that smokeless is not harmless, the fact that it is not burned means that all the toxins in cigarette smoke created by burning (such as carbon monoxide) are absent.

Thus, with the possible exception of some South Asian forms of smokeless that have extraordinarily high levels of carcinogens, smokeless is almost certainly less harmful than cigarettes — and by a considerable margin. Should people be given this relative risk information? What if it causes some ex-smokers to go back to using

[7] For the purposes of argument, we'll assume unrealistically that smokers who switch to earplugs see an immediate halving of their risk.

tobacco? What if teens who would otherwise be scared off by the dangers of cigarettes decide that smokeless is an acceptable risk to take? And what if, once their brains are hooked on nicotine, they graduate to cigarettes?

Because of these worries, the general approach in North America has been to leave out any relative risk information when discussing the (real) health risks of smokeless. Educational materials list some of the carcinogens commonly found in smokeless. Frequently they mention that a regular smokeless user can ingest as much or more nicotine than a heavy cigarette smoker. And almost invariably, they include the statement that smokeless "is not a safe alternative to cigarettes" — a phrase that is also found in health warnings on tins of smokeless.

As Lynn Kozlowski and others have pointed out, such statements are technically true (smokeless is not a "safe" alternative to cigarettes — but then, neither is skateboarding) but nonetheless violate tobacco users' right to "health relevant information", that is, information that might allow them to make an informed choice that could have an important impact on their health. To quote Kozlowksi and Edwards:

> Tobacco addicts need to be treated as stakeholders in their own health. We grant that addiction can involve impaired judgment, particularly in decision making about addictive substances, but we disagree that deceptive health information is a proper or in the long run even an effective tool for helping addicts... Despite concerns about the unintended consequences of more detailed health messages, ultimately, the right to health relevant information is not contingent upon how an individual makes use of that information[8].

In other words, we are not allowed to play God. Though we need to think carefully about the impact of any relative risk information we release, and in particular about how we present it, tobacco addicts have a right to full disclosure of relevant information.

Indeed, empowering tobacco users to make choices — even if we know that many will make unhealthy choices — is part of our job. This is true whether or not we think product substitution/harm reduction, which we will discuss in detail later, is a viable or important future direction for tobacco control.

[8] Kozlowski LT and Edwards BQ, "Not safe" is not enough: smokers have a right to know more than there is no safe tobacco product. *Tobacco Control* 2005; 14(suppl_2):ii3-ii7.

III Unexplored Territory

Questioning the unspoken assumptions of the tobacco control movement — on the inherent attractiveness of nicotine, on the roots of industry wrongdoing, and on our ethical obligations towards smokers — opens the doors to innovation in the largely unexplored policy areas mentioned previously: product standards, eliminating perverse incentives, regulating availability and supply and encouraging product substitution.

Product standards for cigarettes

Cigarette smoke contains upwards of 4,000 identifiable compounds, of which more than 60 are considered carcinogens and a host of others cause or contribute to cardio-vascular or respiratory problems. **Yet nobody buys cigarettes in order to get a dose of carbon monoxide, benzo(a)pyrene or 2-toluidine: people smoke for the nicotine, and possibly some other psychoactive compounds in cigarette smoke, and the rest is just unwanted excess baggage.**

So why not simply require manufacturers to eliminate or drastically reduce levels of all these nasty chemicals? The *Tobacco Act* already gives Health Canada the power to do so by regulation, yet nine years after the Act was adopted, nothing has happened, beyond recent regulations reducing the fire hazard from smouldering cigarettes. Why?

The simple answer is that nobody is quite sure yet how to write product standards that actually make things better rather than worse. Tobacco smoke is a complicated mixture that changes rapidly from the time it is created, in the burning tip of a cigarette at around 900 °C, to the time it makes contact with the smoker's respiratory tract and cools down to body temperature. It is a mixture of gases and particles, and its disease-causing potential depends not just on its chemical make-up, but also on how small the particles are and where exactly they are deposited (in the mouth, throat, deep in the lungs etc.). So, for example, if the method used to reduce levels of one class of carcinogens resulted in smaller particles that were deposited deeper in the lungs, the change could actually make cigarettes more harmful.

An added complication is that cigarette toxicity can change depending on smoker behaviour. A design change that reduces the percentage of nicotine, for example, will likely cause smokers to inhale more deeply and take bigger and more frequent puffs. Some studies attribute the recent rise in rates of the adenocarcinoma form of lung cancer to the widespread use of so-called 'light' cigarettes, which cause smokers to inhale more deeply.

A good indication of the technical difficulty of reducing cigarette toxicity is that cigarette manufacturers haven't done it on their own, despite considerable research efforts from the 1950s onwards. When a panel of experts reviewed the 'light' cigarette issue in 2001 for the US National Cancer Institute, they concluded not only that 'lights' provided no benefit, but that *none* of the "changes in cigarette design and manufacturing over the last fifty years" could be shown to have had a health benefit. That includes the shift from unfiltered to filtered cigarettes in the late 1950s.

The 'light' cigarette fiasco points to another obstacle to establishing product standards that actually make cigarettes safer: manufacturers have a massive interest in promoting the appearance of improved safety, whether or not it is real. What's more, they have the scientific means to run circles around regulators, in terms of churning out research 'demonstrating' that a particular design change makes cigarettes less harmful. But it can take 40 or 50 years to verify these claims by looking at how many smokers of which brands actually got sick.

The verification issue is less of a problem if product standards seek not to reduce the disease risk for *continuing* smokers, but instead to reduce the *number* of smokers. This could include

standards to make cigarettes less palatable for starters, for example by making it harder to inhale smaller amounts of nicotine, or by making smoke harsher. Another interesting option would be to reduce the addictiveness of cigarettes, for example by adjusting the pH of cigarette smoke to reduce the amount of nicotine available in free-base form. (Free-base nicotine reaches the brain more rapidly than bound nicotine, and speed of uptake is a major factor in determining addictiveness.)

Standards to reduce attractiveness and/or addictiveness are worthy of serious discussion and study. However, there is one formidable obstacle: because they would threaten the long-term viability of cigarette manufacturers, the industry would be constantly looking for ways to get around them. In particular, regulations that prevent one particular way of boosting addictiveness would not have much effect if manufacturers simply found a different way of achieving the same effect.

Thus, pursuing product standards in a serious way means at least one of three things has to happen:

- There needs to be a strong consensus on specific small steps (for example capping nitrosamine levels in smoke) that experts are reasonably certain can be achieved without causing some other dangerous component of cigarette smoke to increase;
- Canada needs to spend enough on scientific and regulatory capacity to be able to reliably evaluate industry claims about product composition and design, and to test the likely impact of different regulatory approaches. At the moment, though we probably have the largest tobacco control programme in the world (at the federal level), we are still not able to 'compete' with the R&D teams of the tobacco multinationals. Moreover, under the existing system, regulations take years to draft and enact, making it hard to respond promptly to changes in the cigarette market.
- If we could get at least part of the tobacco industry working in support of public health, product regulation could be done much more rapidly and with more confidence. This involves giving companies an incentive to develop and produce products that are actually less hazardous (as opposed to merely manufacturing the *appearance* of reduced hazard); requiring full and honest disclosure to regulators and the general public of the evidence of hazard; giving companies good reason to 'rat' on competitors who violate these principles; and making it extremely expensive (or otherwise unattractive) to exaggerate the benefits of any particular design change, new filter, miracle additive etc.

An adversarial regulatory system (that is, imposing product regulation on an unwilling and unreformed industry) would require a large budget and sustained political commitment to reducing the hazards for continuing smokers. This raises several questions. Are there other things in tobacco control that we could do that would have more impact, or that would cost less? Would gradually reducing the toxicity of cigarettes undermine motivation to quit and stay quit, or even encourage teenagers to start? Would the industry be able to use the fact of government regulation as a marketing tool? ("Our cigarettes meet the most stringent product standards in the world"; "Government of Canada approved as a less hazardous cigarette".)

Despite considerable debate about product standards, particularly in the UK and in the US, it is so far unclear whether product regulation will play a big part in reducing mortality from tobacco in Canada — unless there are more fundamental changes in the rules of the game, to which we turn next.

Eliminating perverse incentives

As former Non-Smokers' Rights Association lawyer David Sweanor has long pointed out, tobacco companies who claim to be shocked and saddened by the sight of youth smoking are in the same position as umbrella salesmen who claim to be unhappy when it rains. Every teen or pre-teen who begins smoking represents a long-term profit centre for the tobacco industry, and since very few people begin smoking in adulthood, youth smoking is the only significant source of new customers.

Similarly, manufacturers increasingly claim they want to protect the health of smokers. In the United States, Philip Morris even includes cessation information prominently on its website, and refers smokers to the American Cancer Society, the American Lung Association, the American Heart Association and various government agencies for help. But at the end of the day, every smoker who successfully quits represents a monetary loss to Philip Morris, and every ex-smoker who relapses is a gain.

If, instead, tobacco companies actually lost money when a child began smoking, or were rewarded when an adult smoker quit, their considerable marketing expertise and intimate knowledge of smokers' behaviour and motivations could suddenly become assets for public health.

Financial penalties for youth market share

The least interventionist and apparently simplest approach to the issue of perverse incentives is to fine companies when their brands are smoked by children and teens. (A version of this approach was included in the 'McCain Bill', one of the major tobacco bills that was debated but never passed by US Congress in the early 1990s.) This could involve conducting periodic surveys of 11–18-year-olds, finding out what percentage smoked and which brands they smoked. The corresponding fine would have to be quite large — large enough to ensure that even if manufacturers jacked up their prices in future decades, they would still end up losing money on any underage smoker who joined the market now. One could imagine manufacturers radically changing their distribution strategies to avoid accidentally selling to teens.

There are some problems with this approach:

- Main-line manufacturers would still have a strong interest in encouraging relapse amongst ex-smokers, unless a system of financial penalties could be designed here also.
- Major manufacturers could shift their marketing efforts to young adults (19–24-year-olds, for example). The deterrent system might delay the development of brand loyalty by a few years, but even this would depend on the resilience of the resale market.
- Sales to teens would still initially be profitable, until these sales were reflected in surveys and fines were imposed. Fly-by-night operators might decide to target the teenage market, but dissolve their companies every few months and re-start with new brands. To avoid this, governments would need to require hefty deposits from any start-ups.
- Smuggling would obviously be an issue.
- Manufacturers would no doubt argue that the 'natural' attractiveness of nicotine, and the normal curiosity of adolescents, is at least as important in explaining youth smoking as marketing is, and that they should not pay a financial penalty because of features of human nature that they are not in a position to change.

The counter-argument to this last point is that manufacturers can influence the attractiveness of their products, not just by changing the way it is marketed, but by modifying the product itself. For example, modern cigarettes with ventilated filters make it easy for addicted smokers to get their normal, large hit of nicotine, while allowing beginners to ingest much smaller doses without making a big effort to avoid inhaling. Unventilated filters would probably discourage starters.

How much are new young smokers worth to the industry?

In November 2003, as part of a regulatory submission about fire-safe cigarettes, Imperial Tobacco provided a breakdown of its price structure at the time. It showed that out of a pre-tax price of $13.77 for a carton of 200 cigarettes, operating costs accounted for $6.36 and profits (before income taxes) accounted for $6.88.

Since there are eight packs of 25 cigarettes in a carton, that means each pack is worth 86¢ in pre-tax profits for Imperial Tobacco. Let's assume that income taxes take 36¢ of that — that leaves about 50¢ per pack as post-tax profit.

A pack of cigarettes roughly corresponds to a daily dose for a 'normal' addicted smoker. That means one smoker-year is worth 365 x 50¢ = $142.50 to Imperial Tobacco.

A smoker who starts at age 15 and smokes until his or her untimely death at age 65 is thus worth 50 x $142.50 = $7,125 to Imperial Tobacco.

However, a substantial part of those profits won't come for many years. Even in the absence of inflation, people and companies prefer to have a dollar today than a dollar tomorrow. To account for this, economists use a *discount rate* to calculate the present value of future payments or benefits.

At a discount rate of 5%, our hypothetical new smoker is worth $2,631 to Imperial Tobacco.

Of course, one of the beauties of addiction is that manufacturers can boost their profit margins periodically without losing too many customers. If Imperial Tobacco was forecasting a 2% profit increase per year, in inflation-adjusted dollars, then the discounted value of a new smoker is $3,644.76. If the company thought it could manage an annual profit boost of 4%, the discounted value would rise to $5,381.

There is a small problem, from the manufacturers' point of view: though cigarettes are highly addictive, a significant proportion of smokers eventually do succeed in quitting, and hence stop generating profits for the industry.

Nevertheless, to be absolutely certain that a newly recruited smoker was a net loss to manufacturers, governments would need to fine companies a multiple of the estimated value of the new recruit to the industry — for convenience's sake, let's say $10,000 per new recruit.

Somewhere between 100,000 and 120,000 young Canadians start smoking every year. Hence, the total fine for new recruits would need to be roughly $1–1.2 billion per year.

This is more than twice the annual profits of Imperial Tobacco, which at latest report has more than half of the Canadian market.

Profit controls

Cigarettes are extraordinarily cheap to produce, on the order of a few pennies per pack. They are relatively expensive to market, and manufacturers typically employ large numbers of lawyers to defend themselves against regulatory threats and litigation, as well as a bevy of scientists, engineers and marketers to perfect brands, maximize the 'attractiveness' of products and the like. Despite all these expenses, profit margins are exceptionally high: until recently, Imperial Tobacco was making roughly $1 in profit for every $2 in pre-tax sales.

The recent rise of small manufacturers demonstrates that by dispensing with major marketing and product development budgets, companies can still make money with lower-priced, generic products. Such barebones companies are likely to be considerably less effective in glamorizing cigarettes, in marketing to young people, or in finding crafty new ways to reassure worried smokers that the risks of smoking have been exaggerated.

Given the obvious damage to public health that occurs when cigarette companies are let loose with multimillion-dollar marketing budgets, how could governments intervene to make cigarette manufacturing less of a licence to print money?

The federal government already imposes a surcharge on tobacco companies' income tax. However, profit taxes are notoriously difficult to enforce on large multinationals, who have all sorts of ways of transferring profits to lower-tax jurisdictions, and certainly the Canadian surtax has not prevented the growth of industry profits.

As Rob Cunningham of the Canadian Cancer Society has pointed out, governments could simply regulate a maximum pre-tax price for cigarettes. Alternatively, a steeply progressive percentage tax on pre-tax price could have much the same effect. For example, if $2 per carton is the approximate cost of producing a carton of cigarettes, any portion of the pre-tax price between $3 and $5 could be hit with a 100% tax, any portion between $5 and $7 with a 200% tax and so on. Manufacturers would still be free to charge any price they liked for their cigarettes, but would quickly price themselves out of the market if they attempted to capture the kind of profit margins they have long been used to.

This type of profit control would not *eliminate* the incentive to recruit new smokers, to encourage ex-smokers to relapse, to maximize addiction and so on, but it would certainly *muffle* it: companies simply wouldn't have the money to throw around to do much more than manufacture cigarettes.

Fixed-fee supply contracts

Under the existing system, cigarette companies make more money with each additional pack of cigarettes sold, giving them an incentive to seek more customers and to maximize how much each customer buys.

Taking a page from many of the discussions that have occurred about how to control health-care costs, governments could seek to reverse this incentive, while still keeping cigarette companies as profit-seeking entities. For example, imagine that manufacturers were awarded contracts to be sole suppliers for a given region (or perhaps for the whole country). They would be contractually required to provide as many cigarettes as people wanted to purchase, at a specified price. But rather than earn money by keeping a portion of this sales price, companies would have to turn 100% of receipts over to the government, which in turn would pay a flat fee to the companies to cover manufacturing, distribution and an appropriate mark-up.

The point of this system is that manufacturers would lose money each time they sold an extra pack of cigarettes — the sale would not increase the flat fee they received from government, but would increase their costs. Companies might respond by packaging their cigarettes as unattractively as possible; selling through special outlets in hard-to-reach locations, staffed by rude clerks;

modifying their cigarettes to make them as disgusting as possible; running marketing campaigns to mock smokers; and encouraging as many smokers as possible to try quitting.

Indeed, probably the biggest problem with this type of proposal is that the government would have to enforce some fairly strict rules to ensure that (legal) manufacturers remained competitive with smuggled and illegal product and treated their customers with a minimum level of decency. Moreover, existing companies would do everything possible to stop the system from ever getting off the ground, and might refuse to even bid on a supply contract, in the hopes of forcing governments to back off from the scheme.

Marketing monopoly

An even more ambitious idea, promoted in particular by Ron Borland, would break all links between cigarette companies and consumers by setting up a publicly controlled marketing monopoly.[9] Borland's insight is that cigarette companies are as much marketing machines as they are actual producers of physical product. They spend more on advertising, promotion, focus-group testing, legal costs etc. than they do on the task of buying tobacco leaf, chopping it up and making cigarettes out of it. Yet it is the marketing function, combined with the research and development that goes into product design and branding, that is most problematic.

If only a public monopoly had the right to provide cigarettes to retailers, and if this monopoly had full control over all aspects of marketing, branding and technical specifications of products, then manufacturers would become simply contractors, dealing with a single, knowledgeable customer (the monopoly), rather than with millions of individual smokers.

Manufacturers would be legally prohibited from advertising or promoting their products in any way. To reduce the incentive to try to get around this ban, the monopoly could choose to rotate brands between manufacturers. So Brand X would be produced by Imperial Tobacco one year, by Rothmans, Benson & Hedges the next, and by some Chinese company the next — all to a set of clear specifications drawn up by the monopoly. Any attempt to build up a brand would end up benefiting competitors, rather than the advertiser.

There are other advantages also. Rather than impose product changes through cumbersome regulations, which require lengthy consultation periods and are subject to even lengthier legal challenges, the government could simply change the specifications for next year's contract manufacturing. This would allow great flexibility, and would avoid manufacturers' exploitation of product modifications as a marketing tool.

As for the retail level, Borland does not propose a monopoly (along the lines of provincial liquor stores, in many provinces). Rather, he suggests a flat-fee arrangement with private retailers, so that being an outlet for tobacco products would be profitable, but increased tobacco sales would not be.

One potential problem with the new monopoly is that it might gradually morph from a tobacco-control institution into a revenue-generating, tobacco-promoting monopoly. Provincial liquor control boards were originally set up to minimize alcohol consumption, after the collapse of Prohibition. Over time, they became significant sources of revenue and now run fancy wine shops, offer special prices at various times of years, and show at least some of the traits of profit-maximizing retailers. The analogy with Borland's proposed tobacco products monopoly is imperfect, however: he is proposing a marketing monopoly, while liquor control boards operate downstream, as distribution and retail monopolies.

It's worth noting that revenue generation is not the only 'corrupting' influence on monopolies, whether of alcohol distribution or tobacco marketing: all other things being equal, all organizations try to maintain their size or even grow. Staff at a tobacco monopoly would be aware they would be out of a job if they were too effective at

[9] See Borland R, A strategy for controlling the marketing of tobacco products: a regulated market model. *Tobacco Control* 2003; 12:374-382.

their work, so great care would need to be taken to ensure that the monopoly stayed on mission (i.e. of reducing deaths from tobacco).

Having said that, it is difficult to imagine that a monopoly could be as effective a promoter of tobacco addiction as the existing private companies. If nothing else, transferring control of marketing to a risk-averse, public-sector bureaucracy would have a positive impact.

A more fundamental difficulty with Borland's proposal is political: **how would one go about convincing politicians to re-structure the tobacco sector in such a radical way, to fend off the inevitable NAFTA challenge, to resist pressure from other corporations who might see tobacco as the first step towards nationalization of other industries. (First tobacco, then potato chips?)**

Tobacco-control advocates would need to demonstrate that there are specific, important things governments could do in the Borland model that would *not* be possible, or would be substantially more difficult to achieve, using existing tools — aggressive forms of product modification or harm reduction, for example.

Full nationalization/elimination of the profit motive

The maximalist approach to the incentives issue would be to nationalize the entire tobacco industry, from manufacturing through marketing all the way down to retail. The issue is not so much *who* owns the tobacco industry as *what mission* the industry has: to make money, to minimize harm from tobacco, or to seek to phase out tobacco use entirely.[10] Seizing control of the industry in its entirety and defining the mission of each of its components by law would, in theory at least, ensure that everybody in the 'tobacco sector' — the producers, the sellers, but also the public health authorities and the doctors — would be singing from the same hymn book.

Imagine, for example, if tobacco products were sold only by people who had training in providing cessation help. Every visit to a tobacco shop could be a 'teachable moment', to encourage addicted smokers to quit and provide suggestions about how to do so.

However, the practical and political obstacles to this type of wholescale nationalization are enormous. It has been a long time since any Canadian government has nationalized an entire, highly profitable industry. Indeed, throughout the industrialized world, governments have been privatizing many state-owned corporations, including core industries such as coal, steel, railways, telecommunications, airlines, banks, national broadcasters and electrical utilities. This has been done both to pay off government debts and with a view to encouraging innovation and lowering prices through competition.

It is easy to argue that tobacco is a special case: we wish neither to encourage innovation in selling more of it, nor to lower prices through increased competition. But even if politicians accepted this argument, they would still worry about the impact on investors: would capital markets assume that the Canadian government was prepared to expropriate any unpopular industry, as a form of punishment?

Moreover, international trade agreements would oblige Canada to pay compensation to multinationals for their expropriated Canadian subsidiaries at 'fair market value'. In 1999, when British American Tobacco decided to buy out all smaller shareholders of Imperial Tobacco, that company alone was valued at $9.2 billion.[11] Imperial's profits continued to increase in the following years, though in the last couple of years the company's position has deteriorated sharply. Nevertheless, federal and provincial governments would probably need to sacrifice roughly two years' worth of tobacco tax revenues to buy out manufacturers.

To put this into perspective, the total federal investment in tobacco control announced in April 2001 was $480 million over five years. (In practice, the projected amounts were reduced considerably.) Thus, **even if the cost of the**

[10] For a much longer discussion of these issues, see Callard C, Thompson D [no relation to author], Collishaw N, *Curing the Addiction to Profits: A supply-side approach to phasing out tobacco.* Ottawa: Canadian Centre for Policy Alternatives, 2005.

[11] Mid-point of valuation range ($8.8-9.6 billion) in: Newcrest Capital Inc., Imasco Limited: Valuation and Fairness Opinion. Annex to Imasco Management Proxy Circular, Dec. 14, 1999.

expropriation was spread out over five years, it would still amount to something like a 30-fold increase in the federal tobacco control budget.

This does not include the cost of taking tobacco products out of private retail outlets and setting up a new retail system. (Unless the liquor store system could be expanded to include tobacco, though this would be a huge problem for recovering alcoholics who still smoke, or ex-smokers who want to purchase alcohol.) Retailers would presumably demand compensation for the loss of what, in the case of convenience store sector, is the largest single product category.

Despite all these practical difficulties, there is one plausible scenario under which the government might take control of the tobacco sector. If provincial health care cost-recovery suits are successful, it is not clear that Canadian manufacturers can generate enough cash to pay the multibillion-dollar bill. Their foreign owners might simply decide to walk away from the Canadian market and offer their subsidiaries to the government in lieu of payment.

Thus, it may make sense to think further about how a nationalized industry might work, to be ready in the event the present companies are swept away by a legal storm.

Managed competition

If there were only one tobacco/nicotine company in Canada, it would clearly have an interest in getting as many people as possible addicted to nicotine for as long as possible. But under the right circumstances, individual companies may be more interested in trying to attract existing users to a new product than in recruiting new users into the nicotine market. If the new product is less hazardous than the old one, or less addictive, the net result could be positive for public health.

Indeed, there is an interesting precedent for health-based competition: the so-called 'tar derby' period of the late 1950s and early 1960s, when manufacturers attempted to gain market share by talking up the 'revolutionary' new filters each company had developed that supposedly reduced tar levels and the risk of cancer. The derby was particularly fierce in the United States, where it led to regulation by the Federal Trade Commission and the requirement that manufacturers report smoking-machine tar yields.

Though the 'tar derby' involved many fraudulent claims about filter technology, it also meant many cigarette ads were about tar and disease risk, rather than glamour and lifestyle. This constant reminder of the 'unpleasant' side of smoking bothered the industry so much that manufacturers eventually decided to sign formal agreements to prohibit such competition.[12]

At present, the Canadian tobacco/nicotine market is overwhelmingly dominated by a single product, cigarettes. For competition to have any impact, governments would need to adopt effective policies to break this quasi-monopoly and encourage tobacco addicts to move to less harmful products. We will discuss the mechanics of how this might be done in the product substitution section.

A managed competition approach would have two big advantages over nationalization, or a Borland-style marketing monopoly. First, it could be introduced gradually, through a series of incremental measures designed to penalize the most harmful nicotine products and favour less harmful ones. Second, it would be politically much easier to "sell" to decision-makers outside tobacco control, both because it is closer to the prevailing economic orthodoxy and because it would not require a big, up-front investment.

However, there are numerous potential pitfalls in a managed competition approach, which we will look at in more detail in the product substitution section.

[12] In the Canadian case, see form signed by Imperial Tobacco, dated Oct. 12, 1962, available on www.pmdocs.com at Bates number 2024994263.

Regulation of availability and supply

If children and teenagers do not have access to tobacco products, they can never become addicted. If ex-smokers have no easy source of supply, they may be able to avoid relapse when cravings strike. And if existing smokers have to go out of their way to obtain cigarettes, this may provide further encouragement to quit. For all these reasons, reducing the availability of tobacco products appears at first glance to be a great idea.

However, our experience to date with attempting to limit sales of cigarettes to minors has not been very encouraging. Federal and provincial governments spend millions of dollars each year running compliance checks on retailers, in an attempt to catch those that supply teenagers. While compliance rates have substantially increased, we still appear to be well below the level at which, according to advocates of the compliance-check approach, this type of enforcement might have an effect on youth smoking rates.[13] Even if only a small number of outlets sell to teens, teen smokers will likely find out their location quite rapidly. Moreover, it is very difficult to stop informal re-sale of cigarettes purchased by adults.

The economics of compliance checks would change radically if the number of outlets were reduced. Compare beer and cigarettes, for example: in Ontario and several other provinces, beer is available primarily in a small number of single-purpose beer stores. The city of Ottawa, for example, has many hundreds of outlets where cigarettes can be purchased, but only 21 beer stores. Governments could easily afford to run weekly compliance checks at every beer store, if commercial sales to minors were felt to be a problem. In the case of cigarettes, one or two compliance checks per outlet per year represent a major expenditure.

It's unlikely this type of arrangement would eliminate underage smoking, however: there would be far too much profit to be had buying a few cartons of cigarettes in the cigarette store and re-selling them in the schoolyard. Purchasing and possession of cigarettes would still be legal, so police would actually have to catch schoolyard 'cig pushers' in the act.

In the case of ex-smokers, a smaller number of retail outlets would decrease the chances of an impulse purchase under the influence of a sudden craving. Nicotine cravings often subside within a few minutes. This is a particularly good argument for prohibiting cigarette sales in some high-risk locations, such as bars, as Québec has now done.

Despite these positive effects, there are two problems with more general measures to reduce the number of retail outlets. First, as a matter of principle, such measures shift attention from the behaviour of cigarette companies, which have the means, motive and opportunity to encourage youth smoking and relapse, to the behaviour of retailers, who are minor players in the tobacco epidemic. The individual retailer does not derive much benefit from supplying cigarettes to teens, since it's unlikely a newly recruited smoker will continue to purchase cigarettes from the same store for years and decades to come.

Second, retailers are numerous and are perceived to have political clout. Most can get by without the promotional allowances for cigarette power walls — these can be replaced by other promotional displays — but many would find it much harder to stay in business without cigarette sales. Politicians are unlikely to confront such a lobby head-on.

A more likely scenario is that tobacco-specific licensing fees will gradually be increased, licensing conditions tightened, and further categories of outlets prohibited from selling tobacco (e.g. stores on college and university campuses), leading to a gradual decline in the number of outlets.

[13] Cf. [Canadian Federal] Ministerial Advisory Council on Tobacco Control, Challenging Conventional Wisdom on Youth Access to Tobacco: Redefining Youth Access Interventions. 2002. On-line at: http://www.hc-sc.gc.ca/hl-vs/pubs/tobac-tabac/ccwyatp-rqipatjp/index_e.html .

Other sales controls

A more radical approach would be to restrict sales to registered, adult users. Smokers who wished to quit could cancel their registration, thus ensuring they were no longer entitled to legal supply.

The practical difficulty would be how to prevent leakage from such a system: a non-smoker could register and sell his or her quota of cigarettes to others. In methadone and heroin maintenance programmes, the usual way to prevent re-sale is to force users to take each dose in a controlled location (clinic, pharmacy etc.), in front of a health worker. But a methadone dose lasts 24 hours, and a heroin dose about 8, whereas nicotine users often leave less than an hour between doses. A registration system would require a truly colossal network of cigarette dispensaries and smoking rooms.

Prohibition

Why not dispense with all these problems of controlled distribution, and simply ban tobacco products altogether? The topic is frequently mentioned in open-line radio shows, and health organizations are often accused of being prohibitionists. But, in practice, no major group has yet come out in favour of tobacco prohibition.

The unhappy experience of alcohol prohibition, in the first three decades of the 20th century, casts a long shadow. Prohibition was backed by a large and well-organized temperance movement, which at its peak was a much more significant social force than tobacco control has ever been. The movement attracted the support of a substantial portion of the population, but prohibition was not accepted by many drinkers and a large black market developed. Eventually, jurisdictions in North America and the Nordic countries that had tried prohibition decided the negative consequences, in terms of widespread disrespect for the law, bootlegging and organized crime, were not worth the gains (i.e. a decrease in alcohol consumption and public drunkenness).

In the United States, where Prohibition lasted longer than most other places, one of the key arguments that won the day for supporters of relegalization was that an illegal industry is an uncontrolled industry.[14] Speakeasies opened whenever they liked, served whatever they wanted — nobody could yank their licence. Prohibition caused a switch from beer to hard liquor, which was easier to transport illegally. Moonshine laced with contaminants or diluted with poisonous methanol was common.

Though it is difficult to imagine illegal tobacco products being more dangerous than existing cigarettes, the illegal product certainly would not include warnings labels or quitting information. The government would have no direct influence on the price of the product, but would have to depend on enforcement activity to maintain high prices. Revenues from illegal sales would all flow to the (illegal) tobacco industry, so none could be used to pay for health-care costs or tobacco control. Most importantly, millions of addicted users would suddenly find themselves on the wrong side of the law, with all the social havoc this would cause.

The minority of tobacco control advocates who support prohibition might also wish to reflect on the conclusions of Senators Pierre Claude Nolin and Colin Kenny, two politicians with an ongoing interest in both tobacco control and other drug issues. In the 2002 report of the Senate Special Committee on Illegal Drugs, which Nolin and Kenny chaired, the senators challenged the appropriateness of pursuing a drug-free world:

> However much we might wish good health and happiness for everyone, we all know how fragile they are. Above all, we realize that health and happiness cannot be forced on a person, especially not by criminal law based on a specific concept of what is morally 'right'. No matter how attractive calls for a drug-free society might be, and even if some people want others to stop smoking, drinking alcohol, or smoking joints, we all realize these activities are part of our social reality and the history of humankind.

[14] For an interesting history from a strongly anti-prohibitionist viewpoint, see Levine HG and Reinarman C, Alcohol Prohibition and Drug Prohibition: Lessons from Alcohol Policy for Drug Policy. 2004. On-line at: http://www.cedro-uva.org/lib/levine.alcohol.html.

> Consequently, what role should the State play? It should neither abdicate responsibility and allow drug markets to run rife, nor should it impose a particular way of life on people. We have opted, instead, for a concept whereby public policy promotes and supports freedom for individuals and society as a whole. For some, this would undoubtedly mean avoiding drug use. However, for others, the road to freedom might be via drug use. For a society as a whole, in practice, this concept means a State that does not dictate what should be consumed and under what form… This concept of the State is based on the principle of autonomy and individual and societal responsibility. Indeed, it is much more difficult to allow people to make their own decisions because there is less of an illusion of control.[15]

Product substitution

Possibly no other issue has provoked such fierce debates within tobacco control as the issue of product substitution or harm reduction — the idea that moving people off cigarettes and onto other tobacco/nicotine products is a viable public health strategy. For supporters of the concept, it's straightforward: **we have millions of addicted smokers who are unlikely to quit any time soon; they smoke cigarettes for the nicotine, but it is primarily other substances in tobacco smoke that kill them. If they obtain nicotine in some other form, they will still be addicted, but they are less likely to die from it.** This may mean higher nicotine use overall, but if it means lower death rates, how can we oppose it? Moreover, product substitution potentially has other benefits: it makes it politically and practically easier to raise cigarette taxes, and reduces the harm from second-hand smoke, particularly in hard-to-regulate areas such as the home.

Opponents of product substitution have varying concerns. Points typically raised include:

- What if lower-risk products become gateways *into* cigarette use — starter products for teens — rather than a way for addicted cigarette smokers to reduce harm?
- With the possible exception of pharmaceutical nicotine products, all cigarette substitutes are hazardous — how can we in public health be seen to recommend use of a hazardous product?
- A widespread shift to alternative tobacco/nicotine products could re-legitimize tobacco use in the eyes of society, rolling back the anti-tobacco norm change we fought so hard to obtain.
- There are insufficient studies of the long-term health effects of alternative tobacco products. They could be a lot worse than we think.
- In Canada, no alternative product is likely to be popular enough with smokers to make a material difference. This isn't Sweden, where *snus* (moist oral snuff) is part of the culture and more popular than cigarettes among men.
- We can worry about harm-reduction strategies when we're down to a much smaller percentage of smokers. In the meantime, there are more effective measures we can take.
- Promoting alternative products for smokers who can't quit puts us at risk of being co-opted by manufacturers of those products. We could wind up providing marketing support for tobacco companies.

On the other hand, the potential risk reduction from shifting users from smoked to unsmoked forms of tobacco is huge. For example, a panel of epidemiologists recently compared the risk of dying from cigarette use with the risk of dying from using low-nitrosamine smokeless tobacco (such as Swedish *snus*). They estimated that for users over the age of 50, the risk from smokeless was 5% — 20 times smaller — than the risk for smokers of the same age.[16]

If this estimate is correct, the case for product substitution is overwhelming. If all Canadian smokers switched over to low-nitrosamine smokeless, and *every last non-smoker* in the country also began using it, tobacco-caused deaths in this country would nonetheless be reduced by two-thirds.

[15] Senate of Canada. Cannabis: Our Position for a Canadian Public Policy: Report of the Senate Special Committee on Illegal Drugs. Summary report, p. 38.

[16] Levy DT et al. The Relative Risks of a Low-Nitrosamine Smokeless Tobacco Product Compared with Smoking Cigarettes: Estimates of a Panel of Experts. *Cancer Epidemiology, Biomarkers & Prevention* 2004; 13(12): 2035-2042.

The math is even more positive for (so far hypothetical) 'clean' nicotine products designed to mimic the dosage and speed of uptake of cigarettes. Existing pharmaceutical nicotine products provide relatively low nicotine doses with slow uptake, which relieves some withdrawal symptoms but provides few of the subjective benefits of quick-uptake, high-dose cigarettes. At present, it is unlikely a pharmaceutical company would ever apply for permission to market such a product. It would likely be highly addictive and would make sense for long-term nicotine maintenance, rather than for cessation, and so would probably not pass muster under the existing drugs approval system. When separated from tobacco, nicotine is regulated as a therapeutic drug; when sold in a tobacco product, nicotine is regulated by the *Tobacco Act*.

What would a product substitution strategy look like? There are several possibilities, depending in particular how the issue of perverse incentives is dealt with.

One scenario: product substitution through managed competition

Cigarettes have at least three advantages over every other nicotine product on the market:

- They are the most widely available;
- They are the most effective, in terms of drug delivery;
- They have been more heavily promoted, are much better known, and are much more widely used than any competing product.

Indeed, cigarettes have a 'mental monopoly': most smokers have never even considered other tobacco products. Since, unfortunately, they are also one of the most hazardous nicotine products on the market, product substitution is only likely to work if there is a concerted effort to break this monopoly. Health Canada, or a future nicotine products regulatory agency, is in the same position as the CRTC originally was when the telecommunications market was opened to competition: incumbent monopolies had such a strong advantage that would-be competitors needed assistance to get into the game.

The first issue is information about relative risk levels. To actually affect usage patterns, these would need to be communicated in ways that are simple to understand. For example, one could imagine a skull-and-crossbones rating system: cigarettes would get five skulls, pipe tobacco four, high-nitrosamine smokeless tobacco three, low-nitrosamine smokeless one, and pharmaceutical nicotine products zero. No doubt there would be long discussions about the accuracy of the system, and manufacturers would try to get a reduced number of skulls for modified cigarettes. But if product substitution is to work, users need clear advice — a difficult balancing act for regulators, since there will always be uncertainty about the relative risk levels of different products.

Health professionals would also need to think carefully about what advice to give tobacco-using patients. They would need to walk the line between drawing attention to lower-risk products and not undermining motivation to quit.

Another tool to break the cigarette monopoly is pricing. Through taxation, governments largely determine the relative prices of different tobacco products. At present, the tax system implicitly assumes that all tobacco is smoked: smokeless and pipe tobaccos are taxed by weight, at the same rate as roll-your-own tobacco for smoking. A more sensible way to set tax rates would be to look at how much tobacco the average user consumes per day, and then include some kind of 'hazard multiplier' to make more dangerous products more expensive. On the pharmaceutical side, governments would presumably need to negotiate with manufacturers to bring down prices, since taxes are a minor factor.

There is also the issue of availability. With the notable exception of pharmacies (in most provinces) and bars and restaurants (in Québec, as of May 31, 2006), cigarettes can be sold in almost any kind of retail establishment. There is no legal impediment to selling smokeless tobacco wher-

ever cigarettes are sold, but in practice, many shops do not carry smokeless products. As for pharmaceutical nicotine, rules vary by province, with many theoretically allowing the sale of NRTs in convenience stores and other non-pharmacy settings. In practice, however, NRT sales are largely restricted to pharmacies. **Why not require all retail outlets that carry any tobacco products to carry NRT as well — possibly along with a display with quitting information and relative risk information?**

Also, it might be possible to force cigarette companies to use some of their marketing talent to shift their customers towards less dangerous products. Cigarette brands would require a licence; one licensing condition would be progressively larger market shares for less hazardous (i.e. non-cigarette) products — du Maurier nicotine gum, say. If the government was willing to introduce price controls (such as those that exist for telecommunications, cable television and various utilities), these could be use to nudge manufacturers towards less hazardous products: the profit margin on cigarettes could be progressively squeezed, for example.

Finally, **regulators should think seriously about developing product standards for tobacco products that are not smoked.** Levels of nitrosamines, the main carcinogens in oral snuff, vary widely between brands and manufacturers and often increase with time, depending on the temperature at which the snuff is stored.[17] For smokeless products sold in Canada, manufacturers are already legally required to report nitrosamine levels (which are also printed on packs). It would be a fairly simple matter to simply prohibit all brands above a certain level. This would reduce the risk that a product substitution strategy might inadvertently lead to a spike in oral cancer cases. Smokers' leeriness about an unfamiliar product like snuff might also be reduced by knowing that it, unlike cigarettes, had to meet some kind of product standards.

A specialized agency for nicotine and tobacco products?

In 2002, the Royal College of Physicians in London, England published a report recommending the creation of a new agency, the Tobacco and Nicotine Regulatory Authority, outside of the British Department of Health.[18] It compared the Authority with that country's Food Standards Authority (annual budget: more than £130 million, or more than $250 million Can.) and with the Medicines Control Agency (£38.4 million), and pointed out that tobacco products killed far more people than either tainted food or medicines.

The Authority would have jurisdiction over many of the regulatory issues that are covered by the Canadian *Tobacco Act*, such as emissions and content disclosure. It would have a large research staff to formulate proposals for regulating emissions and contents, and would also conduct marketing surveillance and take legal action against companies engaging in misleading communications about risk levels.

Similar recommendations have been made at the European level, in the 2004 ASPECT Consortium report to the European Commission, *Tobacco or Health in the European Union: Past, present and future.*[19]

[17] Cf. Brunnemann KD, Qi J, and Hoffman D. Aging of Oral Moist Snuff and the Yields of Tobacco-Specific N-Nitrosamine (TSNA). Report for the Massachusetts Tobacco Control Program, 2001. This study compared popular US brands of smokeless with a sample of Swedish snus. Nitrosamine levels in Skoal (the most widespread brand in Canada) were 20 times the levels in the Swedish product.

[18] Royal College of Physicians, Protecting smokers, saving lives: The case for a tobacco and nicotine regulatory authority. 2002. On-line at: http://www.rcplondon.ac.uk/pubs/books/protsmokers/ProtSmokers.pdf .

[19] On-line at: http://www.ensp.org/files/tobacco_exs_en.pdf .

How might a managed competition approach to product substitution go astray?

First, there is a significant danger of regulatory capture. The success or failure of a novel product (a 'clean nicotine' inhaler, say) would depend in large part on how regulators viewed its relative risk level, creating a huge incentive not only to minimize the risks and pay 'independent' researchers to say nice things about them, but also to get as friendly as possible with regulators. Moreover, regulators looking for qualified, specialized staff to make scientific determinations might tend to recruit from amongst manufacturers' employees. Marginally safer products might get passed off as harmless.

Second, though manufacturers of lower-risk products would appear to have more-than-adequate growth potential by targeting existing cigarette smokers, they would also have an incentive to target new users (i.e. teens and pre-teens), unless ways are found to penalize them for such approaches. UST, the smokeless company that dominates the North American market, has a long record of pitching its products in much the same way as cigarette manufacturers, with lifestyle advertising around rodeos and race-car driving. And beyond the issue of intentional targeting of teens, there is no way to ensure that information about relative risks ("If you must use nicotine, try this new nasal spray — 1/100,000th the risk of cigarettes") goes only to already addicted users and not to impressionable children.

Third, it is possible that managed competition would turn out to be much expensive ado about nothing: addicted users simply might not opt for new-fangled lower-risk products. Sweden is the only Western country that has experienced a significant migration from cigarettes back to less hazardous tobacco products. Unlike Canada, even at the high point of cigarette smoking, Sweden still had a substantial core of traditional smokeless users. Unfortunately, there is no way to predict with certainty how users would react to a concerted product substitution push.

Despite all these worries, a managed competition approach deserves a serious look. If manufacturers could be convinced that the road to success was to offer ever-less-risky products to the shrinking but still substantial base of addicted users, product substitution could radically reduce death rates from tobacco.

Other approaches to product substitution

Several of the potential pitfalls of managed competition could be avoided with more interventionist approaches. In the 'Borland model' of a state-controlled marketing monopoly, for example, there would be little reason to worry that marketers would consciously pitch lower-risk products at non-users — the monopoly itself would be the only marketer in the country. The Borland model would also make it far easier to adjust the availability, price and labelling of tobacco products as scientists gathered new information about their relative risk, since the monopoly could make these changes by administrative decision rather than by regulation or legislation.

A marketing monopoly might also be more effective than managed competition at gradually shifting the market towards less addictive and less attractive products. No private manufacturer will ever have an incentive to produce the least addictive or least attractive product in their class (say, least addictive nicotine inhaler), though reduced addictiveness compared to other product categories might sometimes be a selling point. ("Use this nicotine inhaler to beat cigarette cravings, and increase your chances of beating nicotine addiction.")

The uneven playing field

In Canada as in many other countries, there are two distinct sets of rules for nicotine/tobacco products. The Food and Drugs Act applies to all products containing nicotine, except in 'natural substances'. In practice, this means it applies to pharmaceutical products. The *Tobacco Act* applies to all nicotine-containing products not covered by the Food and Drugs Act, such as cigarettes, pipe tobacco, cigars or chewing tobacco.

Of course, nicotine in pharmaceutical products is derived from tobacco. And so-called 'reconstituted tobacco', used in many cigarettes, can hardly be called a natural substance. Thus, the distinction between the two categories is fuzzy, and marketing sometimes blurs the line further, as with oral tobacco products that are intentionally packaged to look like pharmaceutical nicotine products.

But the differences in regulatory treatment are significant. A startling example is the contrasting advice given with respect to using the two types of product during pregnancy.

All nicotine gum must include the warning: "Do not use if... you are pregnant or nursing a child. Avoid becoming pregnant while using nicotine gum. If you think you are pregnant, stop using nicotine gum at once and see your doctor." [20]

In contrast, only 1/16th of cigarette packs carry a warning specifically about pregnancy. (Though unlike the nicotine gum warning, it is prominently displayed, with an illustration.) It reads: "Cigarettes hurt babies. Tobacco use during pregnancy reduces the growth of babies during pregnancy. These smaller babies may not catch up in growth after birth and the risks of infant illness, disability and death are increased." One of the 16 information messages included in rotation inside the pack mentions that babies born to smoking mothers are "more likely to need hospital care" and that "the best solution is to stop smoking."

It does not take tremendous imagination to picture a reader of the nicotine gum warning throwing away her pack of gum in horror when she discovers she is pregnant and relapsing back to smoking, which is clearly much worse for the baby than nicotine gum. In a rational universe, both cigarettes and nicotine gum would include some relative risk information — nicotine gum is not recommended during pregnancy, but it's a lot less risky than cigarettes.

Manufacturers of over-the-counter pharmaceutical nicotine products can advertise their products on television, which is closed to cigarette manufacturers. On the other hand, new nicotine products — even new flavours of existing products — are subject to a relatively lengthy approvals process. Tobacco products, in contrast, can be introduced without any approval at all, though contents have to be reported to Health Canada.

Pharmaceutical nicotine products also include the instruction to not use for more than six months without consulting a doctor. Tobacco products include motivational messages ("You CAN quit!").

If governments wished to encourage long-term product substitution — i.e. use of pharmaceutical nicotine products as a long-term replacement for cigarettes, rather than as a short-term cessation aid — there would need to be a concerted effort to ensure a more level playing field between the two types of products.

[20] See Labelling Standard: Nicotine Gum, at http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb-dgpsa/pdf/prodpharma/nicoting_e.pdf .

On the other hand, a marketing monopoly might be less successful than managed competition at generating product innovation, particularly innovations that may reduce risk. Under managed competition, a company that came up with a 'clean' nicotine product that was truly competitive with cigarettes would expect to make a bundle selling the product for many decades. Under a marketing monopoly, sales would last only as long as the supply contract with the monopoly. Thus, the monopoly itself would have to generate the new product ideas (or copy from foreign markets) and invest in sometimes highly speculative research and development — not tasks for which monopolies are necessarily known.

What about a fully nationalized system? On product substitution issues, such a system would have many of the same advantages and disadvantages as a Borland-style marketing monopoly.

Banning one product category

One other approach deserves a mention: outright prohibition of the most hazardous tobacco products. If and when less hazardous sources of nicotine are available and are widely seen as acceptable alternatives, banning the production and sale of cigarettes and other smoked products deserves serious consideration. It is probably easier to enforce a prohibition on a *single form* of a drug than to ban the drug entirely. At about the same time as North America was struggling to enforce alcohol prohibition, France and Switzerland were successfully enforcing a ban on what, in the early years of the 20th century, had been one of the most popular drinks in both countries: absinthe. (An interesting irony of history: the distinctive ingredient in absinthe, the chemical thujone, does not appear to be nearly as hazardous as was widely believed at the time of the ban,[21] and absinthe has now been effectively re-legalized throughout Europe.)

Leaving aside the technical details, it is clear that there are many possible ways to pursue a product substitution strategy, from a tightly controlled monopoly model to a more market-oriented approach. Perhaps one of the keys to reducing the level of acrimony in the harm reduction debate will be to clearly distinguish between objections to particular approaches to implementing product substitution — limited forms of co-operation with smokeless manufacturers, for example — and objections to the *principle* of product substitution per se.

Final comments

As we have seen, we face a veritable smorgasbord of policy options in tobacco control. Choosing the right combination of measures involves finding the right balance between daring and caution. This means thinking afresh about the extent and the limitations of the tobacco control movement's social and political power.

First, there is a pressing need to move beyond the 'underdog complex'. For most of the history of the tobacco control movement, we were a small, embattled group trying to score small victories against an unbelievably rich, politically well-connected and socially well-entrenched tobacco industry. But that was yesterday; today, we are the ones with the more credible spokespeople and the deeper roots throughout the country, even if the industry still has more money. Politicians now want to be seen to be doing as much as reasonably possible to reduce tobacco use, not balancing the interests of public health and tobacco multinationals.

If ever there was a time to move beyond chipping away at little bits of the tobacco industry's marketing systems and to look instead to make fundamental changes in how products are designed, marketed and sold, this is it. In 1999, the federal government raised, and almost immediately dropped, the concept of having some regulatory restrictions on the size of retail displays. By 2005, Ontario and Québec were able to pass legislation banning the display of cigarette packs altogether with barely a murmur of pro-

[21] Cf. European Commission Scientific Committee on Food, Opinion of the Scientific Committee on Food on Thujone. 2003. Reference code: SCF/CS/FLAV/FLAVOUR/23 ADD2.

test from the industry. Manufacturers' inability to mount serious opposition to recent legislation suggests we can afford to be more ambitious in our proposals.

On the other hand, we must continue to be realistic in our suggested policy prescriptions. The default option in any area of policy is the status quo, or the smallest change necessary to deal with whatever problems need to be dealt with. Until governments have at least got their feet wet with more conventional means of encouraging switching to less hazardous products and of reducing the toxicity and addictiveness of existing products, grand schemes such as overnight nationalization are unlikely to appeal to policy makers. Indeed, it is likely conventional regulatory approaches would have to be repeatedly tried and demonstrably fail before governments would seriously consider taking direct control of the tobacco/nicotine market.

The final psychological obstacle to the next wave of tobacco control measures is the 'illusion of control' to which the Senate report on illegal drugs refers (see above): the unverifiable hypothesis that if we simply had the perfect mix of policies, all tobacco and nicotine use would stop. For many issues — such as whether generic packaging is a good idea, or whether cigarette sales in bars should be banned — it is irrelevant whether zero use is a plausible objective. However, on issues of product substitution and product regulation, it makes a tremendous difference whether substitute or reduced-harm products are seen merely as temporary half-way houses on the road to total, society-wide abstinence, or as more or less permanent fixtures.

Though one can argue endlessly about the correct proportions, a realistically ambitious long-term plan for the Canadian tobacco market could look something like this:

- One-third of existing smokers quit tobacco and nicotine entirely, thanks to traditional demand-reduction measures (such as tax increases and smoke-free places legislation);
- One-third of existing smokers remain in the nicotine market but shift to less hazardous products, ranging (at the most hazardous end) from low-nitrosamine smokeless tobacco to a yet-to-be developed nicotine inhaler. These 'switchers' are likely joined by some ex-smokers who re-lapse to nicotine, and possibly by some new users.
- One-third of existing smokers continue to smoke, and probably smoke cigarettes. However, they smoke modified cigarettes with substantially lowered risk levels — perhaps 25% or 30% risk of tobacco-caused death, rather than today's 50% risk.

This would reduce tobacco-caused mortality by 75-80%, to about the level of alcohol.

Can we accept something less than perfection as a long-term objective? Can we afford not to?

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