Objective: To describe tobacco industry consumer research to inform the development of more “socially acceptable” cigarette products since the 1970s.

Methods: Analysis of previously secret tobacco industry documents.

Results: 28 projects to develop more socially acceptable cigarettes were identified from Philip Morris, RJ Reynolds, British American Tobacco, and Lorillard tobacco companies. Consumer research and concept testing consistently demonstrated that many smokers feel strong social pressure not to smoke, and this pressure increased with exposure to smoking restrictions. Tobacco companies attempted to develop more socially acceptable cigarettes with less visible sidestream smoke or less odour. When presented in theory, these product concepts were very attractive to important segments of the smoking population. However, almost every product developed was unacceptable in actual product tests or test markets. Smokers reported the complete elimination of sidestream smoke was necessary to satisfy non-smokers. Smokers have also been generally unwilling to sacrifice their own smoking satisfaction for the benefit of others. Many smokers prefer smoke-free environments to cigarettes that produce less sidestream smoke. These data suggest that educating smokers about the health dangers of sidestream smoke and promoting clean indoor air policies has been difficult for the tobacco industry to counter with new products, and that every effort should be made to pursue these strategies.

Conclusions: Concerns about secondhand smoke and clean indoor air policies have a powerful effect on the social acceptability of smoking. Historically, the tobacco industry has been unable to counter these effects by developing more socially acceptable cigarettes. These data suggest that educating smokers about the health dangers of sidestream smoke and promoting clean indoor air policies has been difficult for the tobacco industry to counter with new products, and that every effort should be made to pursue these strategies.

Abbreviations: BAT, British American Tobacco; FDA, Food and Drug Administration; PREPs, potentially reduced exposure products; RJR, RJ Reynolds; SHS, secondhand smoke
Figure 1  Timeline of introduction of potentially more socially acceptable cigarette products.

METHODS
We analysed tobacco industry documents focusing on the tobacco industry’s attempt to “solve” the problem of social acceptability by developing new products. To address these issues, we collected marketing research on social acceptability, consumer concept testing of socially acceptable product concepts, consumer testing of prototype socially acceptable products, the history, success, or failure of these products in the marketplace, and strategic plans addressing social acceptability future strategies in this arena.

Initial searches were performed using tobacco industry document archives from the Legacy Tobacco Documents Library (legacy.library.ucsf.edu) and the British American Tobacco Documents Archive (bat.library.ucsf.edu) at the University of California, San Francisco. Tobacco industry documents internet sites (Phillip Morris, www.pmdocs.com; RJ Reynolds (RJR), www.rjrtdocs.com; Lorillard, www.lorillarddocs.com), Tobacco Documents Online (www.tobaccodocuments.org), and the Minnesota Select Set (outside.cdc.gov:8080/BASIS/nccld/web/mnimages) were searched for supplemental information.

Searches were conducted between June 2003 and October 2004. Initial search terms were related to social acceptability, such as “social accept”, “less smoke”, “low sidestream”, or “low odor”, combined with search terms that identify research, such as “study”, “research”, or “marketing report”. Initial searches yielded thousands of documents; documents containing consumer research related to more socially acceptable cigarette products were selected. Searches were repeated and focused using standard techniques.

Further searches for contextual information on relevant documents were conducted using “snowball” searches on names, project titles, locations, dates, and reference (Bates) numbers. This analysis is based on a final collection of approximately 1225 research reports, presentations, memorandums, and plans. We sought to include any tobacco industry consumer research on socially acceptable cigarettes that tobacco companies proposed, funded, completed, or used to guide their marketing plans.

The consumer research and testing from all identified projects were collected and analysed to answer the following questions: (1) How does the social acceptability of smoking affect smoking behaviour? (2) What is the size of the market for “socially acceptable” products, and is it important? (3) What are the demographic and psychographic characteristics and motivations for smokers interested in more socially acceptable products? (4) What types of cigarette products and benefits have been developed, and which concepts are most attractive to smokers? (5) Which of these products been successful in the marketplace, and how does the tobacco industry account for its successes and failures?

Documents were analysed using repeated iterative reviews to construct coherent accounts of the marketing projects identified. Common principles, strategies, and themes that were replicated over several studies, and duplicated by several tobacco companies were identified and discussed by both authors. Questions were resolved by gathering additional data, and by triangulation with outside sources such as advertising archives, tobacco company websites, former employees, annual reports, news coverage, and trade press.

RESULTS
Scope of documents analysed
Tobacco companies recognised the importance of social acceptability in numerous countries worldwide, monitored the public perception of social acceptability in different countries, and pursued political and public relations strategies to combat growing unacceptability of smoking internationally, including “Operation Berkshire” and the Social Acceptability Working Party arm of the International Committee on Smoking Issues formed by international tobacco companies. However, this analysis focuses on consumer research and consumer testing of potentially more socially acceptable cigarette products, most of which was conducted in the USA or Canada. Unless otherwise stated, the research results we present were from US studies. We identified research on the social acceptability of smoking and its implications for new product development beginning in the 1970s, but most actual product testing with consumers was conducted after 1980. Figure 1 presents a time line of the introduction of different potentially more socially acceptable products identified in this study.

How social acceptability affects smoking behaviour
Brown and Williamson has conducted research on the growing “socially concerned smoker segment” since at least 1976 and recognised social concern as one of the “two key forces” driving brand switching in 1977. Philip Morris reviewed the origins of decreasing social acceptability in a brief discussion paper written in 1977. RJR planned to develop a research programme on social acceptability in 1978 and found that the decline in social acceptability of...
smoking was accelerating during the early 1980s.\textsuperscript{19, 40} Consumer research on passive smoking was conducted for Lorillard in 1979, and the company considered developing a socially acceptable cigarette.\textsuperscript{41, 42}

A 1983 presentation by RJR director of new brands and strategic research summarised the importance of social acceptability to smokers:

\begin{quote}
...we identified social interaction as one of the primary benefits people receive from smoking. Cigarettes are used by people to make themselves feel comfortable around others. They're used in those situations when smokers are trying to make friends, and as an aid in feeling more mature and attractive to others. Thus, as social acceptability declines, it threatens this primary benefit of smoking.\textsuperscript{43}
\end{quote}

Philip Morris researchers also recognised the eroding social acceptability of smoking in the 1980s; according to a report the manager of business development and consumer research, Jan Jones, prepared for Dr Ed Gee, director of consumer research:

\begin{quote}
In the first half of the century smoking was not only accepted, it was expected... The majority of society's leaders and role models smoked. Screen stars used the cigarette as an effective stage prop to convey confidence, sexuality, mystery, or a variety of moods ... By the latter half of the century, the social environment had reversed its position... the individual is more likely to experience cognitive conflict from taking up smoking or continuing to smoke than from abstaining.\textsuperscript{44}
\end{quote}

Declines in social acceptability were linked to the spread of clean indoor air policies. Smokers exposed to smoking restrictions viewed smoking as much less socially acceptable. Even more disconcerting to the industry were the facts that smoking restrictions were increasingly popular among both non-smokers and smokers and that support for these restrictions was greater among the smokers who lived in regulated areas than smokers living in unregulated areas.\textsuperscript{45}

Philip Morris conducted a “Consumer Needs Study” in the late 1980s which described four different ‘smokestyles’ among smokers, based on smoking patterns or routines: “casual”, “committed/minimal restrictions”, “committed/work restriction”, and “constrained”.\textsuperscript{46} With the exception of “casual” smokers, all of these “smokestyles” were daily smokers who experienced different degrees of external restriction.

“Committed/minimal restrictions” smokers did not experience home or work restrictions. Nonetheless, these smokers felt significant social pressure from non-smokers:

\begin{quote}
They said cigarettes were most enjoyable when they felt that their smoking was not bothering other people. Since they smoked constantly they found themselves in uncomfortable social situations. We heard comments like “Smoking is the only thing in life I feel odd about,” “I feel weird... nonsmokers have more rights,” “Smoking is getting to be a real drag,” “Smoking is not as easy because of fewer places to smoke and the attitudes of nonsmokers are less tolerant.” “I break the rules but this is getting harder.” Typically, they had a real concern about infringing on nonsmokers.\textsuperscript{47}
\end{quote}

These smokers experienced primarily external restrictions in limited situations (restaurants, airplanes, but not at work or home) and did not internally restrict their smoking. In fact, the “lack of [internal] restrictions was a major factor affecting their sense of guilt and contributed to their feeling of being ‘out of control’.”\textsuperscript{48}

“Committed/work restrictions” smokers were primarily affected by restrictions at work. These smokers felt that work restrictions were positive because they helped them cut down and reduced conflict with non-smokers: “No smoking in the office helps me cut down on the number of cigarettes.”\textsuperscript{49} The study found that “smoking restrictions actually helped reduce smokers’ guilt and helped many feel ‘in control’.”\textsuperscript{50}

“Constrained” smokers were “restricted at home by family members”. Some bought by the pack to control their consumption, and “because packs required less cash out lay on a ‘habit’ which was not typically supported by the family. These were factors in helping them to reduce their guilt about smoking.” Constrained smokers also recognised their smoking as an addiction, and felt significant guilt about it.\textsuperscript{51} The study noted that: “one possible psychological reason that smokers are adapting to or supporting restrictions is because they want to feel ‘in control’. External and internal, self-imposed restrictions help them to get this feeling.”\textsuperscript{52}

Socially pressured smokers were an important target for tobacco marketers because they were more likely to quit. One of the reasons why smoking restrictions may encourage and support quitting is because they reduce the number of environmental cues inducing smoking. The importance of environmental cues is discussed in the same 1988 study, which was conducted when airline flights under two hours in length had just been made smoke-free.\textsuperscript{53} The report noted that under increased smoking restrictions, “fewer cues will elicit smoking behavior and more situations will be associated with refraining from smoking.”\textsuperscript{54}

For example, a smoker on a non-smoking flight used to be accustomed to smoking but now if the flight is under two hours the “no smoking” signs stay lit. Initially it is difficult for the smoker not to smoke but not smoking becomes easier as this new situation or cues “extinguish” the smoking response.\textsuperscript{55}

Additional memos written by Philip Morris researcher Page Callaham to Dr Ed Gee in 1988 and 1990 described how smokers increasingly looked for smoking cues or refrained from smoking until someone else around them lit a cigarette.\textsuperscript{56, 57}

A 1989 draft report for Philip Morris on “smokers affected by legal restrictions and bans” states that smokers who changed the times and places they smoked because of restrictions tried to quit more frequently.\textsuperscript{58} While most of the quitters cited their own health as the primary reason they tried to quit, they also acknowledged that annoyance at being dependent on cigarettes, pressure from family and friends, concern about the effects of their smoke on others, and price all contributed to their decision. The report also stated that these smokers felt considerably more pressure from others to quit smoking, and that this pressure had increased in recent years.\textsuperscript{59}

Another 1988 report written by Jan Jones to Dr Ed Gee hypothesised that socially acceptable products might successfully win back quitters:

\begin{quote}
It appears that a number of smokers have considered quitting. Smokers who buy by the pack rather than by the carton often explain their choice as “not knowing when I might quit.” If a socially acceptable product became available, the change in behavior may be slightly a change of brand. The top ranking of any new product concept
\end{quote}
Jones calls for Philip Morris “to develop a select group of brands designed to negate social pressures” to win back these quitters:

We already have Marlboro as the brand of choice for young smokers entering the market. We do not have a product that meets the needs of the growing population of ex-smokers. Many of these ex-smokers will resume smoking, and the product that they choose could cause a swing in market share. These quitters (and those who are soon to become quitters) are dissatisfied with certain aspects of a product that previously met their needs...a textbook example of a market opportunity." [emphasis added]

Jones goes on to review scientific literature addressing social influences on quitting. She concludes that these studies support the development of socially acceptable products that could “extend the social circle of smokers”, alter the stigma associated with smoking, and “thereby significantly alter the product life cycle of cigarettes.”

An understanding of the needs of “socially concerned” smokers and their propensity to quit led tobacco companies to pursue numerous research projects to develop more socially acceptable tobacco products (table 1).

Many smokers are interested in “socially acceptable” products

Studies conducted for Philip Morris, British American Tobacco (BAT), and RJR all demonstrated that substantial numbers of smokers held negative views of smoking, felt uncomfortable smoking around others, and were concerned about the health effects of secondhand smoke on other people (table 2). BAT conducted extensive studies on the social acceptability of smoking starting in the early 1980s. In 1983, BAT found 79% of smokers reported they tended to smoke less when around non-smokers, and awareness of the health dangers of passive smoking was on the rise. During the 1980s Philip Morris conducted several segmentation studies on smokers and non-smokers, separating them by how strongly they felt about “smoking issues” such as the health hazards of smoking, acceptance of restrictions on smoking, and (for smokers) smoking patterns and motivations. These US studies consistently found that about half of smokers felt ambivalent or negative about smoking; two of six segments felt substantial pressure from others not to smoke (fig 2). Additional studies by Philip Morris and RJ Reynolds found that smokers were feeling more pressure from others to quit smoking, and that the percentage of smokers feeling “social guilt” was growing. RJR identified the “social guilt” mindset as approximately 24% of the market in 1988, and projected that it would grow to 32% of the market by 1990 and 52% of the market by 1995. In 1987, RJR’s research showed over 80% of smokers modified their smoking behaviour around others. Philip Morris’s tracking studies showed the number of smokers who believed they might quit soon was rising in the late 1980s and remained at about 30% in the early 1990s.

Demographic and psychographic characteristics of smokers interested in more socially acceptable products

Women

Philip Morris tracking studies between 1986 and 1992 consistently reported that women were more likely to report they frequently felt uncomfortable about smoking and had more interest in a low sidestream product concept. They also found Spanish speaking, more affluent, and ultra low tar consumers were most uncomfortable with smoking.

While one 1981 RJR study found that women may be less susceptible to anti-smoking social pressures, most of the subsequent RJR research found that women were more sensitive to social pressure than men and more interested in more socially acceptable cigarettes. A 1987 RJR report outlining strategic plans to develop new cigarettes, including more socially acceptable cigarettes, noted that women smokers were especially interested in these products. Another RJR report from 1985 explains why this might be so:

- Women take social pressures and affronts much more personally; men are more likely to accept the issue, find a way to cope, and not let it bother them.
- Women to a greater extent than men have internalized guilt over smoking, and immediate smoke odor as well as smoke odor aftereffects dredged up this guilt.

The same report stated that young women were more interested in “cosmetic” changes in cigarettes (improved breath, less odor, less tooth stain), while older women responded to new cigarettes that offered cleanliness or enhanced self esteem.

Young adults

There is some evidence that younger smokers were especially vulnerable to social pressures. One report written by Jan Jones for Philip Morris noted, “Considering the ‘drive’ for social acceptance experienced by most people, particularly young adults, where strong anti-smoking pressures are exerted there is potential for intense cognitive dissonance.” An RJR study from 1982 also notes that young adults exert some of the most intense social pressure:

Younger adults (18–34) are the most active anti-smokers. Younger adults are more likely to do the following anti-smoking activities than older adults.
- Ask someone to give up smoking
- Not put out ashtrays in home
- Cough or make some sign when someone is smoking too close
- Move away when someone smokes near them

RJR’s 1983 social acceptability of smoking report also found adults age 18–34 years were the most active anti-smoking age group, and a 1981 RJR plan reported that younger males felt that social acceptability was a more important problem than older males. However, a report prepared for RJR in 1983 noted that “women, people over 25, and white collar workers tend to be most sensitive to social acceptability issues, while young adults and blue collar men are more inclined to insist on their rights as a smoker.”

RJR’s marketing plans for the low smoke cigarette, Salem Pianissimo, in Japan noted that social acceptability was a concern of primarily younger adults and women.

Blue collar versus white collar

In general, higher socioeconomic status smokers appeared to be more attracted to socially acceptable products. A review of RJR’s research conducted for Project CC (a reduced sidestream product) summarised:

The working environment of blue versus white collar workers has much to do with their attitudes toward social
### Table 1: Socially acceptable cigarette projects

<table>
<thead>
<tr>
<th>Company</th>
<th>Project title</th>
<th>Product (if developed)</th>
<th>Dates</th>
<th>Benefit and product innovations</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJ Reynolds</td>
<td>Project CC</td>
<td>None</td>
<td>1980–83</td>
<td>Less sidestream smoke; used magnesium hydroxide treated (Ecusta) paper</td>
<td>Discontinued after found weak market potential; later transferred into new products division</td>
</tr>
<tr>
<td></td>
<td>Project RP</td>
<td>Now CC</td>
<td>1983</td>
<td>Less visible smoke and low tar; improved magnesium hydroxide (Ecusta) paper, special filtration system, new (less dense) tobacco</td>
<td>Considered as New line extension; terminated 1983</td>
</tr>
<tr>
<td>Project VRP</td>
<td></td>
<td>Vantage Excel</td>
<td>1985–89</td>
<td>&quot;Smokeless&quot;; does not burn tobacco</td>
<td>Vantage Excel test markets 1989; discontinued 1990</td>
</tr>
<tr>
<td>Project SRP</td>
<td></td>
<td>Salem Excel</td>
<td>1991</td>
<td>&quot;Smokeless&quot;; does not burn tobacco</td>
<td>Test markets 1988, pulled in 1989</td>
</tr>
<tr>
<td>Project SPA</td>
<td></td>
<td>Winston/Salem line extension</td>
<td>1990–92</td>
<td>Less sidestream. Dual wrap system: tobacco paper inner wrap with Ecusta or aluminium granules carry tobacco extract, new papers developed</td>
<td>Test markets 1989; discontinued 1990</td>
</tr>
<tr>
<td>Project SA (social acceptability)</td>
<td>Chelsea</td>
<td>Pleasant aroma cigarette for women</td>
<td>1989–90</td>
<td>Ethyl vanillin glucose (EVG) applied to cigarette paper, spearmint pellets added, low sidestream papers tested</td>
<td>Test markets 1989; discontinued 1990</td>
</tr>
<tr>
<td>Project FAT (fresh after taste)</td>
<td>Horizon</td>
<td>Pleasant aroma; appeal to broader market than just young women</td>
<td>1990–92</td>
<td>Increased EVG level, woodpulp cigarette paper</td>
<td>Test markets 1990; discontinued 1992</td>
</tr>
<tr>
<td>Project SC (socially conscious)</td>
<td>&quot;Prism&quot; used as test name</td>
<td>1993–94</td>
<td>50% less sidestream smoke. Concept testing only; no product tested</td>
<td>Tested in 1993; unclear if product went to market</td>
<td>Test markets 1990; discontinued 1992</td>
</tr>
<tr>
<td>Project SS</td>
<td>Salem Pianissima</td>
<td>1995–present</td>
<td>Less sidestream; used new &quot;carbon scrubbing&quot; filter (designed to reduce carcinogens), new tobacco blend with no burley tobacco, considered adding EVG and LSS paper, reduced tar</td>
<td>Launched in Japan 1995; still on market</td>
<td>Test markets 1990; discontinued 1992</td>
</tr>
<tr>
<td>PRISM I and PRISM II</td>
<td>Eclipse</td>
<td>Less sidestream smoke, less odour, safer</td>
<td>1992–present</td>
<td>New filters; tar modification, new tobacco blend with no burley tobacco, inert fillers. Eventually developed engineered product with heat source as assembly, substrate, tobacco roll, new filters, papers</td>
<td>First test markets in 1994; subsequent tests through 1998; national distribution 2003</td>
</tr>
<tr>
<td></td>
<td>B&amp;H Less Visible Smoke and Select Thins</td>
<td>Benson &amp; Hedges LVS</td>
<td>1986–1988</td>
<td>Low sidestream; smaller circumference, low sidestream paper</td>
<td>Consumer and advertising tests; test market planned for October 1988; No subsequent documents</td>
</tr>
<tr>
<td></td>
<td>Virginia Slims Superslims</td>
<td>Virginia Slims SuperSims</td>
<td>1989–present</td>
<td>70% less sidestream; two ply cigarette paper using Kimberly Clark low sidestream paper with various additives, acid coating, modified inner liners, smaller circumference</td>
<td>Launched without test market 1989</td>
</tr>
<tr>
<td></td>
<td>Project Ambrosia I</td>
<td>Sienna</td>
<td>1988–90</td>
<td>Pleasant aroma; similar to VS Superslims added vanillin compounds (Aramatek 245, 245, others) to adhesive, paper coating</td>
<td>Tested as response to Chelsea; put on hold when Chelsea was discontinued</td>
</tr>
<tr>
<td></td>
<td>Project Ambrosia II</td>
<td>Vista</td>
<td>1990–92</td>
<td>Pleasant aroma, low odour, low smoke. Added vanillin (Aramatek 245, CR 2858) compounds to new low sidestream paper</td>
<td>Tested as response to Horizon; never went to market. Horizon was discontinued 1992</td>
</tr>
<tr>
<td></td>
<td>Project Nectar (also part of Ambrosia II)</td>
<td>Monterey Vista</td>
<td>1991–1992</td>
<td>Pleasant aroma; added vanillin</td>
<td>Direct response to Horizon; Horizon discontinued 1992</td>
</tr>
<tr>
<td>British American Tobacco</td>
<td>Project VISA</td>
<td>Viso/Capri</td>
<td>1984–87</td>
<td>Low smoke, for women. Smaller circumference; considered using low sidestream (coated) paper but taste unacceptable</td>
<td>Eventually chose to emphasise femininity and not low smoke, launched as Capri 1987</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1987–89</td>
<td>Low smoke, for women. Smaller circumference; considered using low sidestream (coated) paper but taste unacceptable</td>
<td>Project VISA revived in late 1987 after Passport failed; research done on low sidestream but no product went to market</td>
</tr>
<tr>
<td>Company</td>
<td>Project title</td>
<td>Product (if developed)</td>
<td>Dates</td>
<td>Benefit and product innovations</td>
<td>Status</td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
<td>------------------------</td>
<td>-------</td>
<td>---------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Project Trout/Eel</td>
<td>Trend/Breeze</td>
<td>1982-86</td>
<td>Low sidestream; cigarette paper treated to be slow burning; shorter rod length, magnesium oxide or chalk filler in Ecusta papers</td>
<td>Did not find enough consumer demand or acceptable product. Partially continued as part of project LESS</td>
<td></td>
</tr>
<tr>
<td>Project Polla</td>
<td>Trend/Breeze</td>
<td>1985</td>
<td>Low sidestream; new cigarette paper “Du Maudit DAC” and different tobacco blend</td>
<td>Same as project Trout, but for Finland. Consumer testing disappointing; no product went to market</td>
<td></td>
</tr>
<tr>
<td>Project Greendot, also project NOVA</td>
<td>Trend/Breeze</td>
<td>1988-90</td>
<td>Law tar, normal nicotine, less sidestream. Modified cigarette that still burned tobacco. Tried new tobacco blends, sheets containing tobacco, other materials. Added humectants, new filters, low sidestream papers</td>
<td>Tar and nicotine was main focus. Project terminated; not innovative enough</td>
<td></td>
</tr>
<tr>
<td>Project Airbus</td>
<td>Trend/Breeze</td>
<td>1987-89</td>
<td>“Smokeless” device similar to Premier that heated but did not burn tobacco. Explored “Ellis design”; series of concentric tubes and nicotine aerosol. Experiments with new flavours, heating devices, substrate materials</td>
<td>Answer to Premier; terminated after Premier failed</td>
<td></td>
</tr>
<tr>
<td>Project LESS</td>
<td>Trend/Breeze</td>
<td>1985-92</td>
<td>Less sidestream – reduce circumference, reduce amount of tobacco (use fillers or dilute tobacco with inorganics), slow burning papers, add odour masking agents</td>
<td>Consumer and product tests completed; project transferred to Barclay (Project Nero)</td>
<td></td>
</tr>
<tr>
<td>Project Nero</td>
<td>Barclay Ultra, Barclay Vision</td>
<td>1992-96</td>
<td>Less sidestream; low tar cigarette with reduced weight tobacco rod, slow burning low sidestream paper, and new dual filter</td>
<td>Consumer tests in Finland and Switzerland completed; not currently on the market</td>
<td></td>
</tr>
<tr>
<td>Ralhams</td>
<td>Passport, Claremont</td>
<td>1984</td>
<td>Less sidestream; used Ecusta low sidestream paper</td>
<td>Test marketed in Ontario, Canada 1984. No repeat purchase; pulled</td>
<td></td>
</tr>
<tr>
<td>Lorillard</td>
<td>NSS</td>
<td>1980-81, 1988</td>
<td>Less sidestream; double wrapped paper, Ecusta magnesium hydroxide papers. Later added glucosides to papers and charcoal Filtrona filters</td>
<td>Concept and focus group testing; no product went to market</td>
<td></td>
</tr>
<tr>
<td>Advanced</td>
<td>Favor</td>
<td>1985-86</td>
<td>“Smokeless”; did not burn or contain tobacco. Cork tipped polymer tube packed with nicotine soaked material, flavouring</td>
<td>Introduced in Austin, Texas; expanded to seven states, poor sales, withdrawn. FDA considered it a drug delivery device</td>
<td></td>
</tr>
</tbody>
</table>
acceptability issues. Many blue collar workers are employed in unconfined environments or even outdoors. Others have occupations which, for safety reasons, prohibit smoking on the job. In either case, the blue collar worker may be confronted less frequently than the white collar worker with nonsmoker’s objections to smoking in a confined environment. In addition, blue collar workers are often more adamant about their right to smoke.70

A 1989 report written for BAT including research conducted in Germany and Switzerland also noted low sidestream products could be targeted at the upper classes.74 Philip Morris’s tracking studies also found more affluent consumers were more uncomfortable with smoking and more interested in the low sidestream concept.61–63

Psychographics: the “mindset”
Equally if not more important than the demographics of the target was the common “mindset” and set of values and interests that motivate the socially pressured smoker. Research conducted in 1977 for Brown & Williamson described the socially concerned smoker psychographic as “very emotional and social person, a joiner with faith in luck” who “see themselves as disciplined, having common sense, and believe they are a little harder to impress”.75 A 1981 report prepared for RJR found the following qualities made smokers who “see themselves as disciplined, having common sense, and believe they are a little harder to impress”.75 A 1981 report prepared for RJR found the following qualities made

Table 2 Tobacco industry studies documenting social unacceptability of smoking

<table>
<thead>
<tr>
<th>Company</th>
<th>Date of study</th>
<th>Title</th>
<th>Findings related to social acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philip Morris</td>
<td>1988</td>
<td>Smoker/non-smoker segmentation studies55–57</td>
<td>Half of six smoker segments had some negative views of smoking:</td>
</tr>
<tr>
<td></td>
<td>1992</td>
<td></td>
<td>“Socially and financially concerned” (aka guilt laden smokers)</td>
</tr>
<tr>
<td></td>
<td>1994</td>
<td></td>
<td>“Self conscious” (aka considerate smokers)</td>
</tr>
<tr>
<td>British American</td>
<td>1978</td>
<td>Operation Aquarius53</td>
<td>Number of smokers who believed they might quit soon on the rise</td>
</tr>
<tr>
<td>Tobacco (BAT)</td>
<td>1980–81</td>
<td>Project LIBRA54</td>
<td>Smokers were feeling more pressure from others (friends, co-workers, and strangers) to quit</td>
</tr>
<tr>
<td></td>
<td>1980–84</td>
<td>Project ARIES (Attitudes Restricting Individuals</td>
<td>Surprising depth of feeling against smoking expressed by non-smokers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enjoying Smoking51–53</td>
<td>As non-smokers realise they are in the majority, social acceptability of smoking will decrease</td>
</tr>
<tr>
<td></td>
<td>1982–85</td>
<td>Project Taurus56 215</td>
<td>Children are particularly effective at carrying anti-smoking message to parents</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Concept of cigarette with less sidestream attractive to non-smokers, but met with some scepticism from smokers</td>
</tr>
<tr>
<td>Imperial Tobacco</td>
<td>1988</td>
<td>Project VISA46</td>
<td>55% of smokers frequently or occasionally felt uncomfortable smoking around others</td>
</tr>
<tr>
<td>Canada (BAT)</td>
<td></td>
<td></td>
<td>7.4% of non-smokers and 47% of smokers agreed that it was probably hazardous to be around people who are smoking</td>
</tr>
<tr>
<td>RJ Reynolds</td>
<td>1980s</td>
<td>Project RP50</td>
<td>94% of smokers agreed or strongly agreed that they “try to show consideration for others when I smoke”</td>
</tr>
<tr>
<td></td>
<td>1990</td>
<td>Project XA59</td>
<td>79% of smokers agreed or strongly agreed that they tended to smoke less when non-smokers were around</td>
</tr>
<tr>
<td></td>
<td>1995</td>
<td>Prism II Review77</td>
<td>73% of smokers agreed or strongly agreed that they were concerned about the effects of their smoking on the health of others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Awareness of passive smoking among smokers rose from 52% in 1986 to 71% in 1988</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Of those smokers aware of the issue, 21% believed passive smoking is one of the most serious health hazards, up from 13% in 1986</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Almost half of all smokers were confronted with workplace restrictions, up from 1/3 in 1986</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82% of smokers altered their smoking behaviour in the presence of non-smokers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The “social guilt mindset” identified as target for a low sidestream smoke product</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“social guilt” mindset estimated to be approximately 24% of the market in 1988, and projected to grow to 32% of the market by 1990 and 52% of the market by 1995</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eclipse product target profile</td>
</tr>
</tbody>
</table>

60% of all full price, non-menthol smokers.71

62% of smokers altered their smoking behaviour in the presence of non-smokers.

82% of smokers altered their smoking behaviour in the presence of non-smokers.

The “social guilt mindset” identified as target for a low sidestream smoke product.

“social guilt” mindset estimated to be approximately 24% of the market in 1988, and projected to grow to 32% of the market by 1990 and 52% of the market by 1995.

Eclipse product target profile:

Smokers who possess the following combination of traits are highly predisposed to accept the concept:

- Females 35+ who are restricted at work
- College graduates who face no restrictions at home
- Children in household (HH) and restricted at work
- Children in HH and non-smoking spouse
- 35+ low tar without children in HH and smoking spouse
- 21–34 low tar without children in HH and non-smoking spouse
- Any single parent
- Live alone females
- Have non-smoking spouse and restricted at work

Smokers with this profile represented “About 60% of all full price, non-menthol smokers.”

• Concerned with other people’s opinion of them
• Dislikes offending others
coping and achieving, and feeling
the highest level of purchase intent of
RJR states that the low smoke product was likely to appeal to
and being active in
www.tobaccocontrol.com

smoke, and one segment, “image driven” feels ambivalent about their
attitudes about smoking. Two of the segments “self conscious” and
“socially and financially concerned” feel pressure from others not to
smoke, and one segment, “image driven” feels ambivalent about their
smoking.8 Redrawn from figure in original document.

- Concerned with the Comfort/Health of others
- Concerned about their children
- Personable Clean/Meticulous
- Not “Macho” but still manly
- Outdoorsy Type
- Somewhat white collar
- Not for “Image Conscious” smoker
- Sociable, not a Loner

A 1982 profile developed for RJR reiterated characteristics
such as: intelligence, sensitive to the needs and approval of
others, reserved, and practical.7 A 1991 report written for
RJR states that the low smoke product was likely to appeal to
smokers for whom “adapting to the changing smoking world and
being active in coping and achieving, and feeling successful are important. [emphasis in original]”.5

Types of cigarette products and benefits that have
been developed and their appeal to smokers

Table 1 summarises the major efforts to develop socially
acceptable cigarettes. While tobacco companies
conducted research on this concept during the 1970s,
we did not find actual consumer tests of new products before the
1980s.

RJ Reynolds efforts

RJR launched several of the first efforts to develop new
socially acceptable cigarettes, and appears to have been the
company most interested in developing new products to
address social acceptability. These efforts focused on ciga-
rettes that would have less SHS. A business opportunity
analysis prepared for RJR in 1980 stated: “The consumer
benefit is basically social security. That is, the ability to enjoy
smoking without displeasing other people. As with all strong
selling messages, this one is simple to communicate... [emphasis in original]”.7 Concept testing and focus groups for “Project CC”, an early low sidestream product, in 1981
revealed that the concepts were perceived as highly accept-
able, with high purchase interest, importance, difference,
and overall ratings.76–80 The concept also appeared to appeal
broadly to both men and women, younger and older smokers,
as well as low tar and full flavour smokers.80 RJR also found
several of its advertising executions for the product had
higher than normal recall.41

The benefits of most low sidestream products were felt to
be primarily psychological and social:

- The smoker is more comfortable smoking in an enclosed
  area where others are present. This cigarette is more
  socially acceptable.
- The smoker feels less “dirty” about his smoking behavior.
The cigarette is more elegant.
- The smoker is putting less “pollution” in the air. He feels
  less subject to attack by non-smokers. This cigarette
  reduces internal “guilt.” It gets others “off his back,”
  and it gets himself off his own back.
- The smoker feels like a more responsible, aware, 
  considerate individual, even if others do not take notice
  of the low side-stream. He knows he has taken a positive
  step.82

Early product prototypes were generally unacceptable to
smokers. RJR’s product tests showed the CC prototypes were
inferior in taste, and the research and development team felt
that the major taste adjustments required could not be made
in the short term.84

RJR’s Premier is probably the best known low sidestream
smoke product brought to market. “Project SPA” (which
culminated in Premier) consumer tests from 1986–88 showed
that, while the product concept generated a high level of trial
interest, the actual product tests showed major taste
deficiencies.84–87 Nonetheless, the high levels of consumer
interest and some indications that the product acceptability
was improving apparently led RJR to continue to develop it.
RJR’s advertising research indicated “the recommended
campaign generated the highest level of purchase intent of
any RJRT new brand advertising ever tested” and RJR
planned to spend $196 million on introductory marketing in
its first year.88 RJR introduced Premier on 17 October 1988,
and pulled it from the market on 29 February 1989. RJR
attributed the poor performance in the market to negative
publicity regarding the product’s taste/ aroma, “anti-smoking
activists’” efforts to encourage Food and Drug Administration (FDA)
invention in the marketing of Premier, and poor
product performance.89

Following Premier’s failure, excitement about new low
sidestream brands waned. However, tobacco companies
continued to pursue the idea of introducing a low sidestream
product as a line extension of an established brand. RJR
planned to launch a low sidestream product as a Vantage line
extension, “Vantage Excel”, that went to test market in 1989
and was discontinued in 1990.90–92

RJR also pursued several products that offered a pleasant
aroma as the primary benefit. Chelsea, advertised as a “good
smelling” cigarette for young women, was introduced in 1989
and discontinued in 1990.93–94 Later, in 1990, the same
product was resurrected as Horizon, “the first and only
cigarette that can effectively reduce complaints from others,
and provide an improved lingering aroma via the delivery of a
pleasant aroma from the lit end”.95 However, RJR focus
groups revealed that advertising the “less odor” benefit
tended to emphasise the problem:

Telling smokers that Horizon will make them and/or their
surroundings smell better implies they currently smell
unpleasant and offensive. Smokers may privately
Socially acceptable cigarettes

Both these products were pulled from the market shortly after their introduction. Imperial Tobacco Canada conducted focus groups with smokers and non-smokers in Canada that included reactions to the Chelsea concept. In general, smokers were uninterested in the product; at worst, the masking vanilla scent was viewed as deceptive:

To use a well-liked food aroma to mask a health hazard seemed highly deceptive...

[quoting smokers verbatim] “People will object to secondhand smoke whether it’s vanilla or chocolate or whatsoever.”

“It seems somewhat unethical, because everyone knows about secondhand smoke. They’re just trying to disguise it.”

Smokers said they would rather not smoke than smoke a “highly compromised” product such as Chelsea: “smokers seemed a good deal more willing to resolve potential conflict problems by avoiding smoking than by smoking in an unappealing way.”76 Philip Morris focus groups also found smokers were more likely to quit or refrain from smoking than to switch to a scented product.77

RJR resurrected the idea of a low sidestream smoke cigarette (referred to occasionally as a new version of Premier) in the mid 1990s in a series of projects called “PRISM” and “PRISM 2”, which eventually led to the development of the low sidestream product, Eclipse.78 RJR research in 1985 suggested that products that combined several benefits were more appealing than products touting a single benefit.66 RJR began to combine multiple benefits in the new PRISM product in 1993–94.79 RJR also paid increasing attention to non-smokers’ reactions, and recognised that non-smokers could potentially become advocates for the new product. RJR had tested the concept of a low sidestream product among non-smokers, and found that “‘Virtually all the respondents indicated they would try to persuade the smokers they are associated with to try this product. Many of the spouses of smokers said they would even buy a pack if it was available, to bring home for their husbands or wives’”. 80 Focus groups in 1993 found that non-smoking female spouses might encourage males to try the new product, and that some viewed the product as an aid to stop smoking.81

Philip Morris efforts

Philip Morris’s research on smokeless cigarettes also found the main benefits were: social benefits, potential health benefits, and improved hygiene/cleanliness.82 During the 1980s, Philip Morris’s potentially more socially acceptable products appeared to have been developed as a defensive response to new product introductions by RJR or other tobacco companies, and these projects may have been put on hold when the new products on the market failed. Philip Morris conducted consumer tests on low sidestream products in the 1980s (Merit LS, Ambassador, Benson & Hedges LYS), but did not introduce them to market. However, in 1988 Philip Morris planned to launch two ultra thin, low smoke, ultra low tar products: Virginia Slims Elan Thins for young fashionable women, and Benson and Hedges Select Thins for young men and women.83 84 The advertising for Select Thins tested well in a series of 1988 interviews,85 and test markets for Select Thins and Elan were planned,86 but products appear not to have advanced beyond test markets. In 1989, Philip Morris launched Virginia Slims Superslims, a line extension that originally advertised 70% less sidestream smoke, using slogans like “Fat Smoke is History” or “Fat Smoke Just Went Up In Thin Air”, and featuring a side-by-side graphic comparing the smoke from Superslims to a regular cigarette87 (fig 3A). Philip Morris launched Virginia Slims Superslims in 1989 without a test market. While Superslims is still on the market in 2005, its introduction did not increase Virginia Slims’s overall market share88 and its advertising stopped emphasising the “less smoke” product benefit (fig 3B).

Philip Morris also tested several scented products in response to RJR’s Chelsea and Horizon, but these also appeared to have been put on hold when Chelsea and Horizon were withdrawn. In contrast to RJR’s Premier and Eclipse non-burning products, Philip Morris spent several years developing a device to reduce SHS. In late 1997, Philip Morris announced limited consumer testing of Accord, a cigarette smoked with a battery powered device that reduced sidestream smoke.89 Philip Morris tested Accord with 176 adult smokers, and found that 92 chose not to take the kit home with them, 50 tried it for one week, 19 tried it for at least two weeks, and 15 continued to smoke it at the end of the study. The main characteristic that distinguished those who continued to use Accord was they tended to be the lone smoker in a non-smoking household.90 Philip Morris planned to continue to test Accord through at least 2002,91 and although Accord is still available in limited markets, it has been described as a “minimal success.”92 93 Philip Morris also attempted to develop a low smoke cigarette as a response to Eclipse in “Project Gamma” in 1996; the product later evolved into a ceramic or foil sleeve that could be placed over

www.tobaccocontrol.com
a regular cigarette to reduce sidestream smoke.\(^{115-117}\) Although testing continued through at least 1999, we did not find any subsequent marketing plans or advertisements for this product.

**BAT/Brown & Williamson efforts**

BAT (and its US subsidiary, Brown & Williamson) conducted research on numerous new low sidestream products, as well as tests on its competitors’ new low sidestream products (table 1). However, most of these studies did not result in products going to market, as consumers often found the prototypes to be unacceptable. For example, Brown & Williamson researchers noted “Dis-satisfaction with magnesium oxide papers due to off-taste” was a persistent problem in 1985 and recommended reconsidering whether to proceed on low sidestream products.\(^{118}\) BAT experimented with a non-burning tobacco heating device similar to Premier in the late 1980s, but did not bring the product to market. BAT also tested a low sidestream Barclay line extension for introduc-

**Other tobacco companies**

Small tobacco companies introduced some of the earliest products that aimed to be more socially acceptable. The first “smokeless cigarette” introduced to market in 1984 was Advanced Tobacco Product’s Favor, which was not lit and actually contained no tobacco. This device was essentially a polymer tube packed with nicotine soaked filter material that delivered a nicotine aerosol. The product was widely tried at first, but subsequent sales were low, and consumer responses were disappointing. Favor was withdrawn after the FDA notified the company it regarded Favor as a drug delivery device, not a cigarette. Other early low sidestream products, such as Rothmans’s Passport introduced in Canada in 1984, or Claremont in Switzerland were also pulled due to poor taste, messy ash, and lack of sales.\(^{120,121,127,134}\)

**Tobacco industry explanations for the failures of ‘‘socially acceptable’’ cigarette products**

Almost every attempt to develop “socially acceptable” cigarettes has failed (table 1), except for a few new products still available on the market (such as Eclipse and Accord) and some low smoke products sold with success in Japan.\(^{27,130}\)

Consumer research related to actual product testing by several tobacco companies reveals several common reasons why socially acceptable products have failed in the marketplace (table 3). Tobacco companies consistently found that the social acceptability promised in advertising was an ideal that was impossible to achieve with actual cigarette products.\(^{120,124,126}\) As early as 1985 RJR found that “94% of smokers believe that non-smokers will remain annoyed with smoking in spite of cigarette improvements”.\(^{127}\) Finally, smokers may have found that the social benefits they expected did not follow actual use of the product, as was apparent in a series of tests conducted for RJR on “Project XA” in 1993:

---

**Table 3** Why “socially acceptable” cigarettes failed

<table>
<thead>
<tr>
<th>Reason</th>
<th>Source studies</th>
<th>Company</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is impossible to make smoking truly socially acceptable</td>
<td>Product Tests “Project CC”(^{116})</td>
<td>RJR</td>
<td>1981</td>
</tr>
<tr>
<td></td>
<td>Report on Smoking Issues (^{47})</td>
<td>RJR</td>
<td>1985</td>
</tr>
<tr>
<td></td>
<td>Research on Vantage Excel (^{117})</td>
<td>RJR</td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td>“Project XA” prototypes tests (^{77})</td>
<td>RJR</td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td>Focus Groups on Smoking and Social Acceptability (^{118})</td>
<td>RJR</td>
<td>1981</td>
</tr>
<tr>
<td></td>
<td>Focus Groups Project CC (^{119})</td>
<td>RJR</td>
<td>1985</td>
</tr>
<tr>
<td></td>
<td>Reports summarising learning on low sidestream products Allen &amp; Bolduc (^{99,100})</td>
<td>RJR</td>
<td>1986</td>
</tr>
<tr>
<td></td>
<td>Report on market share potential for low sidestream products (^{120})</td>
<td>RJR</td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td>Advertising Tests for Merit LS (^{101})</td>
<td>PA</td>
<td>1986</td>
</tr>
<tr>
<td></td>
<td>Research on B &amp; H Select Thins consumer tests (^{102})</td>
<td>PA</td>
<td>1987</td>
</tr>
<tr>
<td></td>
<td>“Project VISA” focus groups on low sidestream products (^{103})</td>
<td>Imperial</td>
<td>1989</td>
</tr>
<tr>
<td></td>
<td>Research on Project XA (^{104})</td>
<td>RJR</td>
<td>1988</td>
</tr>
<tr>
<td></td>
<td>Research on Passport (^{105})</td>
<td>BAT</td>
<td>1986</td>
</tr>
<tr>
<td></td>
<td>Virginia Slims Super slims tests (^{106})</td>
<td>PA</td>
<td>1990</td>
</tr>
<tr>
<td></td>
<td>Tests on Advance Tobacco Product’s Favor (^{107})</td>
<td>RJR</td>
<td>1986</td>
</tr>
<tr>
<td></td>
<td>Research on Passport (^{108})</td>
<td>BAT</td>
<td>1984</td>
</tr>
<tr>
<td></td>
<td>“Project CC” focus groups Allen &amp; Bolduc (^{109,116,117})</td>
<td>RJR</td>
<td>1983–87</td>
</tr>
<tr>
<td></td>
<td>Vantage Excel research (^{118})</td>
<td>RJR</td>
<td>1989</td>
</tr>
<tr>
<td></td>
<td>Research on Passport (^{119})</td>
<td>BAT</td>
<td>1984</td>
</tr>
<tr>
<td></td>
<td>Research on low sidestream products (^{120})</td>
<td>BAT</td>
<td>1990</td>
</tr>
<tr>
<td>Low smoke alone is not a compelling reason to buy the product</td>
<td>Total Proposition Tests on Vantage Excel (^{120})</td>
<td>RJR</td>
<td>1980</td>
</tr>
<tr>
<td></td>
<td>Memo on Virginia Slims Super slims (^{106})</td>
<td>PA</td>
<td>1990</td>
</tr>
<tr>
<td></td>
<td>“Project CC” prototype tests (^{121})</td>
<td>RJR</td>
<td>1980</td>
</tr>
<tr>
<td></td>
<td>Report on Socially Acceptable Products (^{116})</td>
<td>RJR</td>
<td>1985</td>
</tr>
<tr>
<td></td>
<td>“Project XA” product tests (^{122})</td>
<td>RJR</td>
<td>1986</td>
</tr>
<tr>
<td></td>
<td>“Project VISA” focus groups (^{123})</td>
<td>RJR</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>Report for “Project VISA” (^{124})</td>
<td>Imperial</td>
<td>1989</td>
</tr>
<tr>
<td>Safety concerns: chemical additives or more toxins for the smoker?</td>
<td>“Project CC” research (^{125})</td>
<td>RJR</td>
<td>1981</td>
</tr>
<tr>
<td></td>
<td>“Project CC” consumer tests (^{126})</td>
<td>RJR</td>
<td>1985</td>
</tr>
<tr>
<td></td>
<td>Research on Premier and Favor (^{120})</td>
<td>BAT</td>
<td>1990</td>
</tr>
<tr>
<td></td>
<td>“Project XA” qualitative research (^{120,126})</td>
<td>RJR</td>
<td>1990–93</td>
</tr>
<tr>
<td></td>
<td>Research on PRISM (^{127})</td>
<td>RJR</td>
<td>1993</td>
</tr>
</tbody>
</table>

BAT, British American Tobacco; PM, Philip Morris; RJR, RJ Reynolds.

---

www.tobaccocontrol.com
...the concept of "less smoke" is so attractive that both Salem and XA(a low smoke prototype product) smokers wanted to believe it, and did believe it for a while. However, about equal numbers of smokers in each cell gradually lost interest. One XA smoker summed it up by saying, "if this is what less smoke means, it isn't such a big deal."

In addition, drastic reductions in sidestream smoke were necessary to attain a benefit for smokers. Early tests for RJR's Project CC conducted in 1981 demonstrated that smokers could not readily detect the reduction in sidestream smoke in products that reduced less than 85%, and studies for RJR and PM in the late 1980s found a reduction of up to 80% still did not affect purchase intent. Even though smokers might notice the difference with 85% less sidestream smoke, many of them noted that to satisfy non-smokers, anything less than an 100% reduction was unacceptable.

In 1989 qualitative research conducted for BAT, non-smokers also reported that they would prefer to avoid cigarette smoke completely, rather than be exposed to a reduced sidestream product.

Tobacco companies were required to modify cigarettes significantly to meet these expectations; most of the products that resulted tasted bad, or were so different from regular cigarettes that smokers found them unacceptable. RJR's attempts to develop socially acceptable cigarettes during the 1980s and early 1990s found the prototypes' harshness, poor aftertaste, and offensive aroma made them inferior to existing cigarettes. Philip Morris also struggled with the taste characteristics of low sidestream products.

Imperial's study of Passport in 1984 (test marketed by its director of new product development, noted shortly after RJR memo from PM brand manager S Alter to Louis Suwarna, market led tobacco companies to bring these products to the market despite this discouraging research. However, as a memo from PM brand manager S Alter to Louis Suwarna, director of new product development, noted shortly after RJR announced Premier:

So a lot of hoopla over a remarkable new discovery touted to have no smoke and no tar, and which in fact tastes bad, will only reconfirm what everybody already knows about 'cleaner' cigarettes - there ain't no such thing that's worth a damn to smoke.

Several memos and reports for RJR emphasise that smokers were not willing to sacrifice taste for less sidestream smoke, a feature that primarily benefited others. By 1989, RJR's research on Vantage Excel found that as anti-smoking pressures increased, smokers were even less likely to sacrifice taste, "if I can't smoke when or where I want to, at least when I do smoke I want a cigarette that I really enjoy". Similarly, 1990 BAT research also concluded that smokers' unwillingness to sacrifice taste for social acceptability explained the failure of both Passport and Vantage Excel.

RJR's tests during the 1980s demonstrated the low sidestream smoke benefit was not compelling enough to motivate purchase or to compensate for taste deficiencies. The "low smoke" benefit Philip Morris used when it introduced the Virginia Slims Superslims line extension in 1989 was eliminated in subsequent advertising campaigns for the brand because most of those interested in trying Superslims were attracted because friends smoked it or due to promotions/coupons. The "low smoke" benefit "did not appear to have a major effect on consumer behavior".

A report for RJR on project XA also concluded that the increase in smoking restrictions was decreasing consumer demand for socially acceptable products.

Finally, low sidestream products generally did not address smokers' concerns about exhaled smoke or increased toxicity for the smoker. Reduced sidestream products generally focused on reducing the amount of smoke from the lit end of the cigarette, not exhaled smoke. RJR research on socially acceptable products noted that because products with reduced lit-end smoke still did not reduce exhaled smoke, total smoke did not appear to have been reduced sufficiently to provide a meaningful benefit.

Imperial Tobacco Canada's focus groups for "Project VISA" also found that the prototype that had the least sidestream smoke was problematic because "the extinction of one of the visual cues to smoking, sidestream smoke, focused greater attention on the remaining visual cue, exhaled mainstream smoke". Consumers in these focus groups (erroneously) felt exhaled smoke was the main source of SHS. We did not find any products that claimed to reduce exhaled smoke.

Smokers were also concerned about the possibility that less sidestream smoke led to more toxins for the smoker. For example, one RJR study for Project CC in 1983 found the following smoker comments:

"They are letting less of it escape and channeling more of it into the end that goes in your mouth."
"If they are trapping it in there, then it comes to me. If I have my choice of sharing it or keeping it, then I'd rather share it."

RJR's consumer tests for low sidestream products in 1985 and 1993 found that some who did not purchase the product were concerned about what "the manufacturer added to the tobacco or paper to produce less smoke" and that this would make the cigarette either less satisfying or more hazardous. These studies also found that smokers perceived prototypes with "black pieces in the blend and the black inner liner" to be artificial and less appealing than "natural" appearing products. However, when the black substance was compared to the charcoal in water filters, smokers' concerns were alleviated.

In December 2004, advertising on the Eclipse website included a cross section of the cigarette (none of the parts are black). The explanation offered was, "Eclipse works much like a coffeemaker, which passes hot water through coffee grounds to release the flavor."
public places. We asked people if they would vote for legislation that would restrict public smoking. Of all adults, 66% agreed they would vote for such legislation. Even 44% of smokers agreed with this statement. What was even more surprising for us to find was that smokers who live in regulated areas want restrictions more than do smokers who live in non-regulated areas.12 [italic emphasis added]

While these smokers represent a major—and difficult to address—problem for the tobacco industry, it represents an attractive and straightforward opportunity for intervention by public health programmes. In response to these pressures, tobacco companies invested heavily in numerous efforts to develop more socially acceptable tobacco products. These efforts were encouraged by consumer research showing the concept of such a product was extremely popular among smokers, particularly women, higher income, and possibly young adults. More important, these products appealed to the large and increasing numbers of smokers who felt uncomfortable smoking around others. In their efforts, tobacco companies found the power of suggestion created by advertising was very strong. For example, RJR’s product tests in 1993 comparing a low sidestream “Project XA” prototype to a “control” Salem cigarette (with its usual amount of sidestream smoke) revealed that after viewing advertising participants perceived both products to have less smoke:

The power-of-suggestion was very strong and resulted in about equal numbers of people in each cell recognizing “less smoke” benefits. There were people in both the Salem and XA cells who subjected their cigarettes to rigorous tests and were absolutely convinced that they had less smoke.121

Despite the persuasive effect of advertising, tobacco companies were not able to develop new “socially acceptable” products that translated into significant consumer purchase.142 When actual products were tested, enthusiasm for these products was universally waned. Most low sidestream products tasted or smelled inferior to regular cigarettes, and smokers were unwilling to sacrifice their smoking experience to benefit others. In addition, the new products did not actually confer social acceptability on smokers; only a completely smokeless product (eliminating both sidestream and exhaled smoke) might achieve this. Smokers were also concerned about the safety of these products (table 3).76 126 131 The numerous faults and limitations of these products also provides an opportunity for public health campaigns to educate the public about these problems, which may undermine the marketing campaigns designed to drive demand for these products as an alternative to quitting.

While the bulk of the consumer research in this analysis took place in the USA, tobacco industry concerns about the social acceptability of smoking are evident in many different countries. While it cannot be assumed that the smoking dynamics observed in the North American markets can be readily transferred to all international contexts, transnational tobacco companies have monitored social acceptability in numerous countries worldwide, and have investigated how to introduce new products where it seems viable. For example, BAT planned to test more socially acceptable products in Europe in response to growing recognition of environmentalism in Finland, and potential for low sidestream products in Switzerland.125 While European consumers may have had the same problems with the product that were found in North American studies, this was not universally true. Although RJR’s low sidestream products failed in the USA, they were able to introduce the low sidestream product, Salem Planissimo, with fair success in Japan in 1995, and in 1996 and 1997 both Philip Morris and Japan Tobacco followed with low smoke/low odour products such as Virginia Slims One, or Bevel Flair in Japan.148–150 The potential success of socially acceptable cigarette products, as well as the potential success of clean air policies, warrants additional international attention.

The tobacco industry’s research yields strong guidance for public health professionals designing tobacco control programmes. A focus on SHS and the right of non-smokers to clean air will decrease the size of the markets for potentially more socially acceptable products, particularly since most socially concerned smokers are very supportive of smoking restrictions, and generally favour them over new products. Both smokers and non-smokers prefer clean air policies to “socially acceptable” products, and the more widespread clean air policies, the stronger the support for these policies.

ACKNOWLEDGEMENTS
The authors would like to thank Drs Jeffrey Wigand, Michael Cummings, and Pascal Diethelm for their helpful comments on the manuscript.

Authors’ affiliations
P M Ling, Department of Medicine, Division of General Internal Medicine, Center for Tobacco Control Research and Education, University of California, San Francisco, USA
S A Glantz, Department of Medicine, Division of Cardiology, Center for Tobacco Control Research and Education, Institute for Health Policy Studies, Cardiovascular Research Institute, University of California, San Francisco, USA

This work was supported by National Cancer Institute Grants CA-87472 and CA-61021 and the Flight Attendant Medical Research Institute

Competing interests: none declared

REFERENCES