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**Analysis of Consumer Survey Evidence Relevant to the
UK Department of Health Consultation on the Future of
Tobacco Control**

Submitted by:

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Exhibits

- Exhibit 1—Relevant Studies
- Exhibit 2—Qualifications of Dr. Keegan
- Exhibit 3—Resume of Dr. Keegan
- Exhibit 4—Publications of Dr. Keegan

Summary of Assignment

I have been asked to review publicly available consumer survey studies and papers which are expressly referred to by the UK Department of Health (DoH) *Consultation on the Future of Tobacco Control*, May 2008 (“FTC Document”), and other similar studies which might be relied upon by the DoH in support of restrictions on the display of tobacco products in retail environments and plain packaging for tobacco products.

I have reviewed these studies to confirm the extent to which they provide credible and methodologically sound evidence (which I will refer to in this report as “reliable evidence”) regarding the effectiveness of plain packaging in reducing smoking uptake by young people.¹

On the issue of display, I have considered the extent to which the studies provide reliable evidence regarding the effectiveness of restricting retail display with respect to:

- Protecting children and young people from the promotion of tobacco at retail display;
- Providing an environment at retail display that supports smokers who are trying to quit;
- Denormalizing tobacco use;
- Ensuring that health messages about the dangers of tobacco use are not undermined.²

These objectives are consistent with the policy objectives listed in the FTC Document.

¹ See FTC Document, Question 10, p. 40.

² Ibid, paragraph 3.23.

I have also been asked to identify, in light of my expertise, experience, and knowledge of industry best practices and commonly accepted norms for conducting consumer surveys, the limitations, if any, of the consumer survey studies that I have considered.

My findings and conclusions are presented in the sections that follow. Because the issues of plain packaging and retail display typically are not commingled in the same study, I have addressed these topics separately in this report.

Executive Summary of Findings

In conjunction with the policy objectives stated in the Summary of Assignment section above, I undertook a review of primary research studies focusing on the plain packaging and retail display ban issues.

Based on my review, I have found no reliable evidence to suggest that plain packaging will lead to a reduction in youth smoking uptake.

Additionally, based on my review, I have concluded that there is no reliable evidence to suggest that a ban on retail display will lead to a reduction in youth smoking uptake or an improved environment for those trying to quit smoking. Likewise, I have found no reliable evidence to support the introduction of a retail display ban to denormalize tobacco use or ensure that health messages regarding tobacco use are not undermined.

Qualifications

Included as exhibits to this report are a full description of my expert qualifications (Exhibit 2), my current resume (Exhibit 3) and a listing of my publications (Exhibit 4).

Studies Reviewed

I have reviewed all studies cited in the FTC Document which relate to the issues I have been asked to consider. I have based my opinions and conclusions on studies that presented original survey research. Studies that did not concern consumer survey evidence relating either to the effectiveness of plain packaging or retail display restrictions were not considered in the formulation of my opinions. I have conducted my own literature review on the topics at issue, and am satisfied that my review has included all relevant studies.

The studies, reports and other documents I have considered in reaching my conclusions on the issues addressed in this report are available as Exhibit 1. The listed documents include all studies that are cited in the FTC Document relating to the policy measures I have been asked to address as well as additional studies I have identified which are relevant to these issues.

Evaluation Criteria

The criteria I used to gauge the relevancy of each study are discussed below.

Research Issue Addressed

I have reviewed all available studies, whether cited in the FTC Document or identified elsewhere, that related to the impact of plain packaging of cigarettes and display at point of sale. I have been asked to evaluate whether there is consumer survey evidence which provides support for the introduction of legislation to prohibit the display of tobacco packaging and mandate plain packaging.

In the course of my review of consumer survey studies in the field of retail display, it has become apparent to me that the research falls into three general categories. First, those studies, especially older studies, that focus on various forms of promotional marketing and advertising.³ Second, those relating to retail marketing which test the effects of display in conjunction with the effects of in store advertising and marketing in general. And third, those that address specifically the display of tobacco products at the point of sale.

In my opinion, the studies in the first category are not applicable to my assignment. I have therefore assigned no weight to these studies in formulating my opinions. My reason for doing this is that packaging and product display are two elements of the much broader field of integrated marketing communications (or “IMC”) and are not “promotional marketing or advertising” as it is generally understood in academic writing or practice.

It is true, of course, that packaging and product display constitute elements of IMC for fast moving consumer goods (FMCG). Indeed FMCG integrated marketing communications usually comprise a whole range of activities, including advertising, sponsorship, branding, direct marketing, graphic design, packaging, promotion, publicity, public relations, sales, and sales promotion. Packaging and product display are two forms of IMC and are distinguished from other forms of IMC such as promotional marketing and advertising. Various studies that I have

³ For example, Pierce et al., *Journal of the American Medical Association* (1991); Klitzner et al., *British Journal of Addiction* (1991); Pierce et al., *Journal of American Medical Association* (1998); Pierce et al., *American Journal of Preventative Medicine* (2002); Smee et al., *Department of Health, London* (1992); Lovato et al., *The Cochrane Library, Issue 2* (2004).

reviewed support this distinction.^{4,5,6} Studies which exclusively assess promotional marketing and advertising will not assist in determining whether retail display would achieve the stated policy objectives. I make no comment on the reliability of either the methodologies or findings of these studies.

While I have therefore excluded those studies from this report, I have considered all publicly available studies in the second and third categories identified above, even though studies in the second category should be treated with considerable caution. My assessment of these studies is set out in this report.

Reliance

Another factor that I considered when gauging the importance of a study was the degree to which the study has been relied upon by the academic or policymaking community. Studies that have played a larger role in the discussions regarding plain packaging and retail display were afforded special attention. Full consideration was given to studies that have been relied upon by others when discussing plain packaging or retail display issues, even if significantly hampered by the criteria discussed herein.

Study Age

Studies regarding consumer tobacco consumption can date back 50 years or more. Many of the studies reviewed in this report are consumer-based experiments addressing behavior and attitudes, not laboratory experiments. The social and cultural context of these studies is relevant and must be considered.

For example, a study done 18 years ago that asks respondents if they think their friends will continue to smoke if cigarettes are sold in plain packages⁷ is of little relevance to the analysis of

⁴ Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. *Health Education Research*, 21, 338-347.

⁵ Expert Panel. (1995). *When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products*. Prepared at the Request of Health Canada, p. 68-69.

⁶ Donovan, R.J., Jancey, J., & Jones, S. (2002). Tobacco point of sale advertising increases positive brand user imagery. *Tobacco Control*, 11, 191-194.

⁷ Beede, Lawson & Shepherd (1990). *The Promotional Impact of Cigarette Packaging: A Study of Adolescent Responses to Cigarette Plain-Packs*. Dept. of Marketing, University of Otago, New Zealand.

plain packaging today. Eighteen years ago, tobacco advertising was prevalent and package health warnings were generally smaller. Contemporary attitudes toward cigarette smoking are significantly different than those held almost two decades ago.

The consumer retail environment for tobacco in most jurisdictions is very different today than in the past due to increasing advertising restrictions and health warnings regarding smoking. Therefore, the environment in which the research was conducted is directly associated with the applicability and relevance of the research findings to the current regulatory condition in the UK, which has been called the “post adban era.”⁸ The particular policy landscape in place when a study was conducted can change significantly in a period of just a few years. The older the study, the more likely it is reflective of influences that are no longer present. Beliefs and behaviors measured in this past environment have limited relevance to today’s reality and cannot be viewed as predictive.

When considering the applicability of an older study, I sought to identify any changes in external conditions (influencers) since the study was conducted. If the environment in which the study was conducted was materially different from today’s environment then the applicability of the study findings are limited. Each study was evaluated in this context to confirm its relevance to today’s consumer environment.

Methodological Limitations

The methodological rigor of a study must be confirmed prior to considering the results. It is the responsibility of the researcher to identify and address any methodological issues that arise in the design and execution of a study. The researcher conducting the study should be afforded a reasonable degree of deference as to the particular design decisions made, as reasonable variations in study design do not necessarily negate the results and, indeed, no study is perfect.

This is not to say, however, that methodological weaknesses do not affect the quality of results attained in a study. Often, methodological abnormalities are considered as a factor when evaluating the weight of the evidence proffered by the researcher. In more egregious cases the methodology is so severely flawed the results cannot be relied upon for any purpose.

⁸ Grant, I., Hassan, L., Hastings, G., MacKintosh, A.M., & Eadie, D. (2007). The influence of branding on adolescent smoking behaviour: exploring the mediating role of image and attitudes. *International Journal of Nonprofit and Voluntary Sector Marketing*, p.2

Methodological Limitation 1: Compliance with International Standards

In order to promote research of acceptable integrity and reliability, international research organizations have developed standards of practice which researchers follow. These standards are developed by professional associations and codified as best practices to which executions of research projects can be evaluated.

The organizations which proffer standards of survey research include the Market Research Society (MRS),⁹ the American Association for Public Opinion Research (AAPOR),¹⁰ the World Association for Public Opinion Research (WAPOR),¹¹ the Council of American Research Organizations (CASRO),¹² the International Statistical Institute (ISI),¹³ and the European Society for Opinion and Marketing Research (ESOMAR).¹⁴

The standards upheld by these organizations set guidelines for all aspects of the research process, including study design, selection and treatment of subjects, data collection procedures, data integrity, statistical analysis, and data interpretation and presentation. Consistent across these standards are the principles of forthrightness in designing and execution of research as well as clarity in the presentation and interpretation of data.

For example, the UK-based MRS sets out standards of sound questionnaire design, stating that researchers should ensure:

⁹ Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>

¹⁰ American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>.

¹¹ World Association for Public Opinion Research, *WAPOR Code of Professional Ethics and Practices*, <http://www.unl.edu/WAPOR/ethics.html>.

¹² Council of American Research Organizations, *Code of Ethics and Standards for Survey Research*, (2008). <http://www.casro.org/pdfs/CodeVertical-FINAL.pdf>

¹³ International Statistical Institute, *Declaration on Professional Ethics* (1985). <http://isi.cbs.nl/ethics.htm>.

¹⁴ European Society for Opinion and Marketing Research, *ICC/ESOMAR International Code on Market and Social Research*. http://194.38.169.84/uploads/pdf/professional-standards/ICESOMAR_Code_English_.pdf.

- that questions are fit for [the] purpose [being researched];
- that the design and content of questionnaires are appropriate for the audience being researched;
- that respondents are able to answer the questions in a way that reflects the view they want to express;
- that respondents are not led towards a particular answer;
- that answers are capable of being interpreted in an unambiguous way;¹⁵

The ISI warns against data misuse and misrepresentation in its *Declaration on Professional Ethics*:

*The statistician should consider the likely consequences of collecting and disseminating various types of data and should guard against predictable misinterpretations or misuse...[He/she] should also not engage or collude in selecting methods designed to produce misleading results, or in misrepresenting statistical findings by commission or omission.*¹⁶

The AAPOR *Code of Professional Ethics & Practices* mirrors this, stating that researchers should:

Exercise due care in developing research designs and survey instruments, and in collecting, processing, and analyzing data, taking all reasonable steps to assure the reliability and validity of results.

In addition, the AAPOR code specifies that “good professional practice” obliges the researcher to provide complete information about his/her research design, including the exact wording of the questions asked, description of the sampling frame, sample sizes, eligibility criteria, and a discussion of the precision of the findings. By following these and the other standards proscribed in its code, the AAPOR states that researchers can “support sound and ethical practice in the

¹⁵ Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.14

¹⁶ International Statistical Institute, *Declaration on Professional Ethics* (1985). <http://isi.cbs.nl/ethics.htm>.

conduct of public opinion research and in the use of such research for policy- and decision-making in the public and private sectors.”¹⁷

In analyzing the studies included in my review, I have given full consideration to whether the researchers followed international standards of survey research as outlined by the professional organizations described above.

Methodological Limitation 2: Question Design

A question should not cue or influence a respondent’s response, i.e. “beg the answer.” Questions should not make assumptions about a respondent’s knowledge or experiences. Questions should also be clear, and the researcher should confirm that respondents have understood the questions before offering answers. Ensuring proper question design is a requirement that is reflected across internationally accepted research standards.¹⁸

The most commonly encountered flaw among the studies I examined is biased survey question design. Rather than objectively measuring a variable of interest (e.g., the effect of retail display on youth smoking uptake behaviors), the presentation of leading questions yields a biased result. Examples of factors that contribute to leading questions include unclear wording, the suggestion of an unrealistic hypothetical, and assumption of facts, among others.

In the worst cases, findings based on leading question(s) are invalid and unreliable and cannot be used to draw any conclusions about the sample population or to make predictions about the wider population in general.

Another example of flawed question design is observed in studies that present respondents with misguided or off-point questions. Such questions do not measure the variable that the researcher intends to measure, but due to their poor design, actually measure something else. Conclusions drawn from such questions must also be analyzed with caution.

¹⁷ American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>.

¹⁸ See, for example, Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.14; American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>, paragraph 1A.

Methodological Limitation 3: Interviewer/Respondent Bias

To the extent that it may bias the results, neither respondents nor persons responsible for the data collection should be informed as to the sponsor or purpose of the study.¹⁹ This ensures that respondents do not try to give “correct” answers and that those interfacing with respondents do not influence the results. This reduces potential sponsor and observer bias.

Methodological Limitation 4: Researcher Objectivity

The power of the researcher to influence the results is great. Therefore, professionalism and objectivity must be paramount. A researcher, whatever his/her views or opinions on a topic, must ensure that the study design is impartial and not designed to yield any particular result.²⁰ To the extent that an author’s advocacy influences the study design, the study’s reliability and validity suffers.

Methodological Limitation 5: Recall Reliability

Recall reliability is also an important methodological consideration. Observing what people do is a better predictor of behavior than recording how people respond to questions about what they think they will do, or what they think others will do, or what they report they have done.²¹ In consumer research, the gold standard is to get as close as one can to observing behavior. For example, in shopping behavior, the greatest insights into what people do when shopping has come from hidden cameras in retail environments, not from what people say they have done or will do.

The gradient of research reliability, from most reliable to least reliable, is generally as follows:

- Direct observation
- Recent recall of behavior (“exit interview”)
- Recall of non-recent past behavior

¹⁹ World Association for Public Opinion Research, *WAPOR Code of Professional Ethics and Practices*, <http://www.unl.edu/WAPOR/ethics.html>, paragraph II.A.10.

²⁰ International Statistical Institute, *Declaration on Professional Ethics* (1985). <http://isi.cbs.nl/ethics.htm>, paragraph 1.3; American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>, section IA;

²¹ Churchill, (1995). *Marketing Research: Methodological Foundations*, 6th Edition, The Dryden Press, Orlando, FL, p. 343-345, 347-350.

- Prediction of future behavior
- Prediction of others' future behavior

I have applied this scale to the studies reviewed herein. In the course of my review, I have found only one study that employed direct observation or made use of exit interviews.²² As a general observation, therefore, I have found that the body of literature on cigarette packaging and retail display relies upon subjects' recollection of their behaviors and predictions regarding their own and others' behaviors. The lack of studies in this area utilizing the highest tiers of reliability (i.e., direct observation and recent recall of behavior) is a limitation on the reliability of the body of research that is available.

Methodological Limitation 6: Age of Respondents

It is important to note that studies addressing the uptake issue are typically conducted among young people. Many of the studies that I examined surveyed young respondents,²³ some being as young as 11 years old.²⁴ Conducting research among minors presents particular issues that must be accounted for to ensure the reliability of the data collected.²⁵

It is the researcher's responsibility when interviewing minors to design studies that are capable of yielding reliable and valid results. One can ask a child a factual question—for example, "What is

²² There is one exception to this which is discussed in the "University of Toronto" section of Plain Packaging Findings below. See page 17.

²³ See, for example, Schooler, C., Feighery, E.C., & Flora, J. (1996). Seventh Graders' Self-Reported Exposure to Cigarette Marketing and Its Relationship to Their Smoking Behavior. *American Journal of Public Health*, 86, 1216-1221; Donovan, R.J., Jancey, J., & Jones, S. (2002). Tobacco point of sale advertising increases positive brand user imagery. *Tobacco Control*, 11, 191-194; Henriksen, L., Feighery, E.C., Wang, Y., & Fortmann, S.P. (2004). Association of Retail Tobacco Marketing With Adolescent Smoking. *American Journal of Public Health*, 94, 2081-2083; J. Gottheil Marketing Communications, Inc. (2005). The Influence of Tobacco Powerwall Advertising on Children; Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. *Health Education Research*, 21, 338-347; Slater, S., Chaloupka, F., Wakefield, M., Johnston, L. & O'Malley, P. (2007). The Impact of Retail Cigarette Marketing Practices on Youth Smoking Uptake. *Archives of Pediatrics & Adolescent Medicine*, 161, 440-445.

²⁴ J. Gottheil Marketing Communications, Inc. (2005). The Influence of Tobacco Powerwall Advertising on Children.

²⁵ Churchill, (1995). *Marketing Research: Methodological Foundations*, 6th Edition, The Dryden Press, Orlando, FL, p. 675-679.

your age?”—and be confident, within a degree of reason, that the recollection of the respondent is accurate and therefore reliable and valid.

It is much more difficult to ask a minor a difficult policy question and have an acceptable degree of confidence that the information collected will have any resemblance to the effect that would be observed if the policy were actually enacted.

Additionally, some of the questionnaires administered to the young respondents in the studies I reviewed were quite lengthy—one taking a full 50 minutes to complete.²⁶ Respondent fatigue becomes an increasingly important factor in surveys of this length, and this is compounded due to the age of the respondent.

Other Study Limitations

In addition to methodological limitations, some of the studies I reviewed suffered from additional weaknesses.

Unsupported Results and Conclusions

It is imperative that authors refrain from projecting results that are not statistically significant to general populations or markets.²⁷ It is sometimes the case that an author, in the effort to prove a hypothesis, will suggest a causal relationship or correlation by highlighting results that statistical analysis has deemed not significant. This is a misleading practice, as it is widely recognized in the research community that statistical significance is a necessary requirement in determining that a causal relationship is an observed result and not caused by chance or error.

It is also misleading when an author draws conclusions that are not supported by the research.²⁸ In interpreting study results, authors sometimes make “leaps” between the data yielded by the

²⁶ Schooler, C., Feighery, E.C., & Flora, J. (1996). Seventh Graders' Self-Reported Exposure to Cigarette Marketing and Its Relationship to Their Smoking Behavior. *American Journal of Public Health*, 86, 1216-1221.

²⁷ The use of unsupported results is cautioned against by internationally accepted research standards, See International Statistical Institute, *Declaration on Professional Ethics* (1985). <http://isi.cbs.nl/ethics.htm>, paragraphs 1.3, 3.1;

²⁸ International standards urge researchers not to draw unsupported conclusions. See American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>, paragraph I.A.2, I.A.3.

study and the conclusion the author puts forth. Researchers must be careful to only draw those conclusions that are supported by the data; conclusions that stray beyond this are speculative.

Focus Groups

Focus group studies are exploratory. They generate hypotheses rather than findings that can be generalized to a wider population.²⁹ The reported findings of focus groups have no statistical significance due to the small sample size and informal nature of the responses. There is also significant opportunity for the moderator to influence the discussion, which, if not designed properly, can generate misleading results. When properly conducted, the information gained from a focus group setting can assist in coloring a discussion on a particular issue, but should not be used as a basis to discuss the broader applicability of the results.

²⁹ Churchill, (1995). Marketing Research: Methodological Foundations, 6th Edition, The Dryden Press, Orlando, FL, p. 153-163.

Plain Packaging Findings

As defined in the FTC Document, plain packaging requires that:

the attractive, promotional aspects of tobacco product packages are removed and the appearance of all tobacco packs on the market is standardised. Except for the brand name (which would be required to be written in a standard typeface, colour and size), all other trademarks, logos, colour schemes and graphics would be prohibited. The package itself would be required to be plain coloured (such as white or plain cardboard) and to display only the product content information, consumer information and health warnings required under the law.³⁰

The purpose of the plain packaging component of my review is to determine whether there is consumer survey evidence that requiring the plain packaging of cigarettes will influence youth smoking behaviors. Specifically, in the context of the studies I examined, I addressed whether plain packaging of cigarettes would reduce smoking uptake among young people.

My review of the literature shows no reliable evidence to suggest that plain packaging will lead to a reduction in youth smoking uptake.

My review focused on several key primary research studies which addressed the impact of plain packaging (as previously noted, a full list of relevant studies is available at Exhibit 1). Where noted, these studies are cited in the FTC Document. The studies are presented below in chronological order, from oldest to most recent.

- Beede, Lawson & Shepherd (1990). The Promotional Impact of Cigarette Packaging: A Study of Adolescent Responses to Cigarette Plain-Packs. Dept. of Marketing, University of Otago, New Zealand. Hereinafter referred to as “Beede (1990).”
- Beede, P., & Lawson, R. (1991). Brand image attraction: the promotional impact of cigarette packaging. *The New Zealand Family Physician*, 176-177. Hereinafter referred to as “Beede (1991).”
- Beede, P. & Lawson, R. (1992). The Effect of Plain Packages on the Perception of Cigarette Health Warnings. *Public Health*, 106, 315-322. Hereinafter referred to as “Beede (1992),” cited at paragraph 3.69 in the FTC Document.

³⁰ See FTC Document, paragraph 3.64.

- Centre for Health Promotion, University of Toronto. (1993). Effects of Plain Packaging on the Image of Tobacco Products Among Youth. Hereinafter referred to as “University of Toronto (1993),” cited at paragraph 3.68 in the FTC Document.
- Rootman, I., Flay, B., & Phil, D. (1995). A Study on Youth Smoking, Key Figures and Findings. A Joint Research Project by: University of Toronto, University of Illinois at Chicago, York University, Ontario Tobacco Research Unit, Addiction Research Foundation. Hereinafter referred to as “Rootman (1995),” cited at paragraph 3.70 in the FTC Document.
- Expert Panel. (1995). When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products. Prepared at the Request of Health Canada. Hereinafter referred to as “Health Canada (1995),” cited at paragraph 3.66 in the FTC Document.
- Goldberg, M.E. et al. (1999). The Effect of Plain Packaging on Response to Health Warnings. American Journal of Public Health, 89. Hereinafter referred to as “Goldberg 1999,” cited at paragraph 3.69 in the FTC Document.

None of the plain package studies cited in the FTC Document were conducted in the UK and therefore have limited applicability to a discussion of plain packaging in the UK. Additionally, the relevance of the studies cited by the FTC is further limited by the age of these studies, which range in age from 9 to 18 years old.

Studies focusing on plain packaging that were not cited in the FTC Document but which are considered to merit analysis are discussed in Appendices 1 through 3.

Beede (1990, 1991, 1992)

Beede 1990, Beede 1991 and Beede 1992 (together referred to as the “Beede Study”) are based on the same data and reach similar conclusions. Only Beede 1992 is cited in the FTC Document. For completeness, I discuss all three Beede studies in this section.

The Beede Study suffers from an unreliable data collection method and its conclusions are unsupported. Both of these limitations are inconsistent with internationally accepted research standards.³¹

³¹ Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.53-B.58; American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>, paragraph I.A.2, I.A.3.

In the Beede Study, 80 focus groups ranging from three to eight participants in eight different schools were conducted with children (80 percent were age 13, 17 percent were age 12) in New Zealand. The study yielded 568 total participants.

In each group, a discussion was moderated by interviewers while participants viewed plain and branded packages of cigarettes. The researchers then removed the packages from view and recall of those packages displayed was measured by administering a questionnaire.

As discussed above, it is difficult to produce reliable quantitative results from focus group-based interviewing because of the opportunity for the moderator or the other participants to bias any particular subject's responses. This is especially true for younger, more impressionable subjects. Focus groups are traditionally limited to qualitative feedback and probing of respondents.

In this case, the data collection process was methodologically unsound and did not support quantitative findings. The moderators were involved in the study, knew of its purpose and hypothesis, and (intentional or not) had significant opportunity to influence the results. For example, a 20 minute discussion preceded the data collection. The children interfaced with an adult, the moderator, who was placed in an authority role leading the group discussion. Subjecting impressionable respondents to a biased interviewer is a methodological recipe for disaster.

Regardless, the results of the data collected from the questionnaire after the group discussion were unremarkable. Essentially, these young respondents scored branded packs as having more differentiated profiles as compared to plain packs.

There was a reported consensus that respondents believed plain packs would reduce uptake. However, opinions regarding the implications of a public policy change—i.e., the impact of packaging design on consumer behavior—solicited from a 13 year old, especially when collected within the biased environment of this study, cannot be given any weight.

To conclude, the authors link brand differentiation (resulting from branded packs) and uptake behavior, yet the study does not support this. The authors state that: “brand images which are perceived to be similar with a person's self image is [sic] more likely to be evaluated positively and may serve to induce brand trial.”³² This amounts to completely unsupported speculation—

³² Beede, Lawson & Shepherd (1990). The Promotional Impact of Cigarette Packaging: A Study of Adolescent Responses to Cigarette Plain-Packs. Dept. of Marketing, University of Otago, New Zealand, p. 20.

there is no data in this study or cited that permits this conclusion. We simply do not know from the results of this study if there is any connection between uptake, either increasing or decreasing, and the perception of branded packs among these non-smokers.³³

University of Toronto (1993)

The University of Toronto study, published in 1993, conducted 20 youth focus groups in Ontario.³⁴ There were a total of 129 participants. Respondents were grouped according to age (12-15 year olds and 16-17 year olds), gender, and nonsmokers (but contemplating smoking) or smokers.³⁵

Respondents were shown a mock-up of plain packs and branded packs and then completed a questionnaire.

The sample size of this study is extremely small. Therefore, any data extracted from these results cannot be generalized to any broader population. For example, among 16-17 year old females, only four did not smoke.³⁶ The authors base major conclusions on the responses of very few teenagers.

There was a component of this study that actually included direct observation research, the only data of this type that I have seen reported on the subject of plain packaging. As discussed above, direct observation research, when done correctly, yields some of the most reliable and predictive data concerning consumer behavior.³⁷ The following behavior was observed:

The study pilot tested a procedure which provides a direct measure of the effect of packaging on product choice. [The 16 and 17 year old participants] were offered a choice of products as payment for participating in the research. The choices included a compact disk of choice, four free passes to a movie of choice,

³³ Eighty-nine percent of respondents did not smoke at all.

³⁴ Prior to conducting the focus groups, the authors conducted a literature review and 27 expert interviews. This research is not quantified or presented in this study.

³⁵ Centre for Health Promotion, University of Toronto. (1993). Effects of Plain Packaging on the Image of Tobacco Products Among Youth, p. 3.

³⁶ Ibid, p. 8.

³⁷ Churchill, (1995). Marketing Research: Methodological Foundations, 6th Edition, The Dryden Press, Orlando, FL, p. 343-345, 347-350.

or four packages of cigarettes. Half...were offered cigarettes in plain packages and half were offered cigarettes in brand packages. If cigarettes in plain packages are less appealing to youth, we would expect fewer people in the “plain package payment” condition to choose cigarettes as compared to those in the “brand package payment” condition. No significant difference was found, although for males, the results were opposite in direction to those expected. That is, more males chose the plain package cigarettes as their payment option than did males offered the brand packaged cigarettes.³⁸

The authors attribute the finding that plain packs are not less appealing than branded packs, which is contrary to their conclusions, to the novelty of the plain packs.³⁹ Whatever the reason that plain packaging was actually favored by respondents in these conditions, it reinforces the criterion that less weight should be given to research that asks respondents to predict what they may do in a hypothetical situation, as compared to observing what respondents actually do. The researchers in this study did not expect respondents to favor plain packaging when presented with an actual choice. Yet this result emphasizes the importance of direct observation research as the results may not be as expected.

Additionally, the authors interpret the finding that participants think their peers would not be willing to pay as much for the plain packs compared to the branded packs to mean that they have less appeal and would therefore stimulate decreased demand. This is a key error for two reasons. First, this conclusion assumes that there is a choice being made between plain and branded packs. This is an unrealistic evaluation that was not and would not occur where the only product for sale is unbranded. While these subjects may have perceived that a plain pack would not command as high a price when compared to a branded pack, this may not be the case when plain packaging is the only available type of product. We do not know what the perception, or the impact of that perception, would be in the non-comparison environment of only plain packages.

³⁸ Centre for Health Promotion, University of Toronto. (1993). Effects of Plain Packaging on the Image of Tobacco Products Among Youth, p. 6-7.

³⁹ Ibid, p. 6.

Second, the conclusion reached in this study assumes a link between the perception of what customers would be willing to pay and the behavioral intent to smoke. This is simply not established.

Rootman (1995)

The Rootman study is limited to the selective reporting of data and verbatim responses and is written in strong advocacy language. Therefore, it is not reliable, objective science.⁴⁰

This study consisted of focus groups in Canada and Chicago with a total of 339 participants and also a classroom survey of 2,132 students in Ontario and Chicago.

This study, as in the University of Toronto study discussed above, asked respondents to compare plain packaged cigarettes to cigarettes in branded packs. This is a false comparison. In an actual plain pack environment, where the only product for sale is unbranded, this comparison would not be made. At best, this study tells us how these respondents rate plain packs when comparing them to regular packaging, not how respondents would rate plain packaging in the absence of regular packaging. Indeed, the rating that a youth might give a plain pack—if that was the only type available—could be very different to what was measured in this study. Again, we simply do not know from this research what that more realistic measurement would be.

Regardless, the ratings that a youth gives to a cigarette package design, e.g., whether “cool kids” would smoke those cigarettes, do not inform us of the behavioral impact of that design and are therefore not informative as to youth uptake.

This study also found that, for the most part, respondents think fewer people will smoke if cigarettes are sold in plain packages. The perceived impact of this significant package design change among this group of youths is unreliable predictive data from 12-14 year olds. This is not a reliable foundation upon which to project the sales impact of a packaging change.

⁴⁰ International survey research standards clearly state the importance of objectivity in conducting research. See European Society for Opinion and Marketing Research, *ICC/ESOMAR International Code on Market and Social Research*. http://194.38.169.84/uploads/pdf/professional-standards/ICCESOMAR_Code_English_.pdf, Introduction section, Article 4(e); International Statistical Institute, *Declaration on Professional Ethics* (1985). <http://isi.cbs.nl/ethics.htm>, paragraphs 1.3, 2.4.

Health Canada (1995)

The Health Canada study consists of six sections: focus group, national survey, word image, visual image, recall recognition, and conjoint analysis. All sections attempt to address issues related to plain packaging.

Focus Group

The focus group is insightful regarding known predictors of youth smoking such as peer influence. This is discussed in detail in the Known Predictors section below (see page 24). Otherwise, the focus group findings are considered simply exploratory by the authors and are not used as support for any particular findings.

National Survey

The national survey, word image, and visual image sections are all based on the interviews of 1,200 respondents aged 14-17 from across Canada who are smokers or indicated that they may begin smoking. All three of these sections ask the respondents about their beliefs regarding plain packaging when presented in various circumstances discussed below.

Prior to discussing the results, the authors note the significant limitation of this type of research.

No single study or research method by itself can provide definitive answers to the research question, “What will consumers do if?” Without the benefit of field experiments, such research can only determine what consumers would “say they would do if.”

Therefore when reviewing the results from these three sections one should always be aware that at their best, the findings are merely the opinions of 14-17 year olds and are not necessarily behavioral predictors.

The national survey also suffers from methodological flaws. Early in the survey, teens were shown pictures of cigarette packs and asked to identify the brand. The respondents were then asked, “What does this cigarette company do to make you notice this brand?” Having just seen the packaging, it came as no surprise that a majority of these teens mentioned package related factors.

This is what is known as a conditioned response.⁴¹ Since a conditioned response is the result of the survey design and not the respondent's actual beliefs, such results are not reliable.

The age of this study should also be considered when evaluating the national survey results. As the study notes:

*Any survey can only measure what respondents wish to report about their attitudes and behaviours; and the youths in the survey responded from a point of view anchored in the current world—that of well-known branded and differentiated packages.*⁴²

The “current world” referred to here is 1995. I understand that significant regulatory changes regarding cigarette advertising and promotion have been implemented since this study was conducted. Taking this into consideration in conjunction with the ever shifting trends of teenagers, it should be noted that the findings of this study could be markedly different if conducted today.

Many of the findings of the national survey are the results of comparing plain, generic, and regular packages to each other. As I have discussed in other studies of the same design, this comparison is a false one that is not reflective of the current or proposed consumer condition. It is problematic to attempt to apply findings from this scenario to one that is materially different—that is, a comparison of various pack types on the one hand to only a single pack type being available on the other.

The results of the national survey indicate that these respondents rank plain packaging as the least likely to have an impact on teen uptake.⁴³ Further, the national survey found that:

Sizable numbers of teens said that they would not be bothered very much by [plain and generic] packaging (62.7%), and that it would not change the number who would start smoking (45.5%), the amount smoked (58.8%) or the number

⁴¹ Conditioned responses are a result of poor question design, a flaw that is cautioned against by international survey research organizations. See Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.14

⁴² Expert Panel. (1995). *When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products*. Prepared at the Request of Health Canada, p. 71.

⁴³ *Ibid*, p. 75.

*who would stop (45.2%). Also very few respondents (5.6%) believe that making cigarette packages less colorful would be the best way to keep young people from smoking.*⁴⁴

Although merely the opinions of teens, this data does not support the author's conclusion that plain and generic packaging will have "a slight to moderate impact effect on smoking uptake among Canadian teens."⁴⁵ The methodological limitations of this research are such that it cannot be said to add to the discussion of the potential impact of plain packaging. The findings do not show that plain packaging will have any impact on youth smoking uptake.

Word Image

The word image section of the Health Canada study measured respondents' perception of hypothetical smokers of various brands of cigarettes on 15 traits such as lazy/hardworking, secure/insecure, and wussy/tough. This section concludes that these respondents perceive smokers of currently packaged cigarettes differently than those smoking plain packaged cigarettes on most of the factors measured. This section also concludes that smokers of different brands of regular packaged cigarettes are perceived differently.

The authors then conclude that "plain and generic packaging might lessen the ability of the package to convey positive differentiated images to Canadian teens..."⁴⁶ This is indeed the case, and we know this independent of these study results. The less branding that is done on a package, the less opportunity there is for the manufacturer to differentiate its product.

This conclusion continues: "...To the extent that teens attempt to use a particular cigarette brand as a badge of their own self-image, a particular brand would become a less useful instrument" (emphasis added). This is the key finding in this section and it is unsupported. It has not been shown that teens use cigarette packs as a badge of their own self-image. And even if a teen were to do this, we do not know if plain packs, in today's environment, would serve the same purpose.

⁴⁴ Expert Panel. (1995). When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products. Prepared at the Request of Health Canada, p. 76.

⁴⁵ Ibid, p. 76.

⁴⁶ Ibid, p. 86.

Visual Image

The visual image survey is similar to the word image survey just discussed. The visual image survey measured the perceived “person-types” among three brands shown in regular, plain and generic versions.⁴⁷ The authors conclude that “denuding cigarette packages of major elements of their brand markings (other than their name) appears to limit teenagers’ capacity to associate specific images with specific brands.”⁴⁸ This is, of course, true. Package branding contributes to a consumer’s ability to associate a particular brand with a product.

The authors then conclude, “*When these characteristics represent key motivators in teenagers’ decisions to smoke*, then it seems reasonable to conclude that plain and generic packaging can be a useful strategy in attempting to demarket cigarettes to teenagers” (emphasis added).⁴⁹ This is the causal conclusion in this section, yet it is unsupported. We do not know from this study that a reduced capacity to associate plain packs with specific images is a key motivator in a teenager’s decision to smoke. All we can glean from this section is the obvious—branding is correlated to a consumer’s ability to recognize a brand.

Recall and Recognition

The recall and recognition section of the Health Canada study exposed 400 teenagers to three separate images on a computer screen for four seconds each and asked about their recall of items shown in the images. Each image featured four items on a table: a can of soda, a bottle of headache pills, a magazine, and a cigarette pack. Half the respondents were exposed to ordinary cigarette packs, half were exposed to plain packages.

Recall was low for most of the items displayed. The authors recognized that “the four second exposure to the images was not sufficient.”⁵⁰ Not surprisingly, “recall of the particular brand names appeared to be dependant upon the specific learned associations the teenagers had

⁴⁷ Expert Panel. (1995). *When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products*. Prepared at the Request of Health Canada, p. 94.

⁴⁸ *Ibid*, p. 101.

⁴⁹ *Ibid*, p. 101.

⁵⁰ *Ibid*, p. 108.

[previously] developed.”⁵¹ Specifically, the recall of a more popular brand was higher in the regular pack than in the plain pack.

Remarkably, the authors conclude from this that teenagers will pay less attention to plain packages and “over the long run they may lose some interest in the brand.”⁵² This is then qualified to say that “these extrapolations to the long term and to variables other than attention and recall can only be suggestive and not definitive.”⁵³ I agree with the difficulty of extrapolating this data as a predictor of future behavior and do not find it to be supportive of the stated conclusion.

Conjoint Analysis

The final section of the Health Canada study is the conjoint (or trade-off) study. This approach attempts to measure the relative utility to a consumer of various attributes of a product such as brand, price, type of package, and peer influence.

The 400 Vancouver teenagers that took part in the conjoint study had all just completed the recall and recognition study discussed previously. The recall and recognition experiment exposed these subjects to plain and generic packaging. It is therefore likely that the respondents in the conjoint study were, as the authors discuss, “able to surmise the purpose of the experiment.”⁵⁴ This is a material methodological shortcoming. It is important to mask the purpose of a study whenever possible to thwart the tendency of respondents to attempt to “please the interviewer.”

The data reporting in this section also calls into question the care with which the study was conducted. Table 8 in the report is titled “Teenage smokers” with N=155. Table 10 is titled “Adult smokers” with an N=71. Yet the data in both tables is identical—an obvious reporting error. It cannot be determined from the report which table is correct.

The results of the study are inconclusive as to any impact of plain packaging on teen uptake. Yet the authors conclude that:

⁵¹ Expert Panel. (1995). *When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products*. Prepared at the Request of Health Canada, p. 108.

⁵² *Ibid*, p. 109.

⁵³ *Ibid*, p. 109.

⁵⁴ *Ibid*, p. 117.

These findings suggest that plain and generic packaging will, to some unknown degree, encourage non-smokers not to start smoking and smokers to stop smoking. The absolute extent of this influence cannot be validly determined by research that is dependent on asking consumers questions about what they think or what they might do if all cigarettes were sold in the same plain and generic packages.⁵⁵

This limitation and the other issues discussed above prevent this data from being capable of supporting a connection between plain packaging and youth smoking uptake.

Goldberg (1999)

The Goldberg 1999 study is a later analysis of the data collected for the recall and recognition component of the Health Canada study discussed in detail above. It provides no new data or evidence. Goldberg's focus was on the recall of warnings, and found there to be variance in the recall rates for different warnings. The study concludes: "Further research is needed to determine exactly what accounts for these differences in response."⁵⁶

Known Predictors

The studies that I have reviewed indicate that teens believe peer influence is the main supporting factor regarding their decision to smoke.⁵⁷ Indeed, the FTC Document sets out the known predictors of smoking among young people. These predictors include:⁵⁸

- Age and sex
- Home environment
- Drug use & drinking alcohol

⁵⁵ Expert Panel. (1995). When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products. Prepared at the Request of Health Canada, p. 129.

⁵⁶ Goldberg, M.E. (1999). The Effect of Plain Packaging on Response to Health Warnings. American Journal of Public Health, 89, p. 1434.

⁵⁷ Populus. (2008). Tobacco Alliance Results Summary; Report of the Senate Community Affairs References Committee (Australia). (1995). The Tobacco Industry and The Costs of Tobacco-Related Illness; Expert Panel. (1995). When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products. Prepared at the Request of Health Canada.

⁵⁸ See FTC Document, paragraph 3.8.

- Truancy and exclusion from school

Absent from this list is cigarette packaging.

The studies that I have reviewed suggest that there are many factors that may contribute to a young person's decision to smoke. "Prevalence rates are determined by a constellation of individual, social, and environmental factors, including other policy measures as well as 'secular' trends in marketing and pricing."⁵⁹ The impact of these factors appears to vary depending on the age group discussed, further complicating the issue.

The Health Canada report⁶⁰ focus group findings may be helpful in understanding predictors of smoking uptake. From these 10 focus groups, the researchers made the following observations:

- "These teenagers view the process of starting to smoke as being largely unaffected by the brand, package, or promotional activities of cigarette sellers."⁶¹
- "It appears that in most first trials of smoking, there are few package, brand, or brand promotion elements present."⁶²
- "The issue is 'to smoke or not to smoke.'"⁶³
- "When teens do make their first purchase, they will most likely choose the brand that their friends smoke."⁶⁴

Additional findings from the Health Canada study further illuminate the issue of youth smoking uptake. In the National Survey section of the report, the authors report that "practically one hundred percent (99.7 percent) said that the reason they might start smoking or would smoke is to be cool or fit in."

⁵⁹ Hammond, D., Fong, G., Borland, R., Cummings, M., McNeill, A., & Driezen, P. (2007). Text and Graphic Warnings on Cigarette Packages, Findings from the International Tobacco Control Four Country Study. *American Journal of Preventative Medicine*, 32(3), 202-209, p. 216.

⁶⁰ Expert Panel. (1995). *When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products*. Prepared at the Request of Health Canada.

⁶¹ *Ibid*, p. 40.

⁶² *Ibid*, p. 41.

⁶³ *Ibid*, p. 41.

⁶⁴ *Ibid*, p. 41.

This finding supports the conclusion that packaging has not been shown to be a factor influencing young peoples' initiation into smoking uptake. Respondents claimed that they started smoking because their friends did or that they were experimenting.⁶⁵

The factors contributing to smoking uptake, like any behavioral decision, are likely to be complex and manifest at an individual level. The goal of a researcher is to probe that individual decision process and attempt, by carefully isolating the influence of other variables, to identify behavioral causes and group the results into generalizable findings. The complexity of individual behavioral decisions necessitates rigorous study design and limits the inferences and conclusions which can be drawn from the results.

Plain Packaging Conclusions

The research I have reviewed is not supportive of a link between package design and youth smoking uptake. On the contrary, my review of the literature shows no reliable evidence to suggest that plain packaging will lead to a reduction in youth smoking uptake.

⁶⁵ Expert Panel. (1995). When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products. Prepared at the Request of Health Canada, p. 61-62.

Retail Display Findings

In addition to examining the plain packaging issue, I have assessed whether restricting retail display would (1) protect children and young people from the promotion of tobacco; (2) provide an environment that supports smokers who are trying to quit; (3) denormalize tobacco use; and (4) ensure that health messages about the dangers of tobacco use are not undermined.

I have conducted a thorough review of available consumer survey studies addressing these issues. Based on this review I have concluded that there is no reliable evidence to suggest that a ban on retail display will lead to a reduction in youth smoking uptake or an improved environment for those trying to quit smoking. Likewise, I have found no reliable evidence to support the introduction of a retail display ban to denormalize tobacco use or ensure that health messages regarding tobacco use are not undermined.

The treatment of retail display across the studies I reviewed is varied, and in large part misguided. Many studies test the effects of retail display in conjunction with the effects of in-store advertising and/or use the terms interchangeably,⁶⁶ or use inconclusive results regarding the effect of retail display on smoking behaviors in conjunction with positive in-store marketing results to advocate for increased restrictions on both.⁶⁷ In studies where authors group retail display with in-store marketing, it is often impossible to determine any particular effect that is associated with the retail display alone.

My review focused on several key primary research studies which addressed the impact of a retail display ban (as previously noted, a full list of relevant studies is available at Exhibit 1). Where noted, these studies are cited in the FTC Document. The studies are presented below in chronological order from oldest to most recent.

- Henriksen, L., Feighery, E.C., Wang, Y., & Fortmann, S.P. (2004). Association of retail tobacco marketing with adolescent smoking. *American Journal of Public Health*, 94, 2081-2083. Hereinafter referred to as “Henriksen et al. (2004),” cited at paragraph 3.27 and in Annex 2, p. 77 in the FTC Document.

⁶⁶ See for example, Henriksen, et al. (2004). *American Journal of Public Health*; Braverman & Aaro (2004). *American Journal of Public Health*; MacFadyen et al. (2001). *BMJ*; Henriksen et al. (2002). *Journal of Applied Social Psychology*; Weiss et al. (2006). *Nicotine & Tobacco Research*; Lovato et al. (2007). *Canadian Journal of Public Health*.

⁶⁷ Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. *Health Education Research*, 21, 338-347.

- Corporate Research Associates, Inc. (2005). 2005 National Baseline Survey on the Tobacco Retail Environment. Hereinafter referred to as “2005 National Baseline Survey on the Tobacco Retail Environment.”
- Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. *Health Education Research*, 21, 338-347. Hereinafter referred to as “Wakefield et al. (2006),” cited at paragraph 3.30 in the FTC Document.
- Wakefield, M., Germain, D., Henriksen, L. (2007). The effect of retail cigarette pack displays on impulse purchase. *Addiction*, 103, 322-328. Hereinafter referred to as “Wakefield et al. (2007),” cited at paragraphs 3.33 and 3.34 in the FTC Document.
- Populus (2008). Tobacco Alliance Results Summary. Hereinafter referred to as “Populus (2008).”

Additional materially significant studies focusing on retail display that were not cited in the FTC Document but which are considered to merit analysis are discussed in Appendices 4 through 14. As previously noted, studies that were cited by the FTC Document that address only promotional marketing and advertising were not applicable to my review. These are also listed in Exhibit 1.

Henriksen et al. (2004)

In spring 2003, Henriksen et al. surveyed 2,125 middle school students in Tracy, California. Respondents were shown pictures and addresses of 12 “tobacco outlets” close to the school that were identified by school focus groups as popular places for students to buy snacks. To gauge students’ exposure to “tobacco marketing,” the authors recorded how frequently students visited convenience, liquor, or small grocery stores, making a distinction between those who visited at least once per week and those who did so less frequently.

The study purports to show that students who visit such stores more frequently are at an increased risk of ever smoking. An examination of the survey methodology, however, shows that this was a predetermined result stemming from a biased survey procedure. This is a fatal flaw and renders this study unreliable and invalid.

The first methodological limitation of this study is that it has no direct relevance to retail display. The authors speak only of “tobacco marketing” which they do not define. In the context of the study, however, it is plausible that the authors intend the reader to interpret tobacco marketing to mean tobacco advertising that appears outside and inside of stores. If this is the case, this study cannot be used to comment on the effect of retail display on teen smoking behaviors, as the authors have grouped retail display into a category to which it does not belong (i.e., advertising).

Another severe limitation hampers this study. The authors simply assume that teens who visit stores of the type studied are exposed to tobacco marketing. They did not test the extent to which respondents notice tobacco marketing—let alone the retail display—if at all, and the extent to which tobacco marketing and retail display are present in the stores identified, if at all. For the authors’ purposes, a trip to a store equates to exposure.

This is a departure from the way the authors measured other variables. Although the questionnaire is not provided, it can be determined by examining Table 1 of the study that students were asked how often they “see cigarette advertisements in magazines” and how often they “see smoking on television or in movies.”⁶⁸ For these variables, the authors do not automatically equate engaging in an activity—e.g., reading a magazine which might contain cigarette advertising—with actual exposure to the advertisements in the magazine.

In contrast, students were not asked how often they see tobacco marketing in stores. It is simply assumed that if a student visits a store, he/she is “exposed.”

The authors did not test the extent to which such elements influence smoking behaviors, if at all. In reality, the authors have not measured exposure or impact, but the frequency of students’ visits to stores. The data shows that students who visit one of the identified “popular” stores more than once per week are more likely to have “ever smoked.”⁶⁹ However, the authors do nothing to tell us why. By categorizing this variable as “exposure to retail marketing,” the authors seek to establish that a correlation exists between more frequent store visits, and therefore more exposure to the tobacco advertising in the store, and an increased likelihood of smoking. We do not know, however, that this is the case.

A hypothetical scenario helps to explain this point. Assume that the authors had tested whether children who ride their bicycle to school are more likely to have ever smoked, and they found this to be true. Would it make sense in this situation to ban bicycles, or advertisements for bicycles? Of course, the answer to this question is no. Simply finding a correlation between two variables does not provide the necessary information to take action—indeed, correlation is not causation.

⁶⁸ Henriksen, L., Feighery, E.C., Wang, Y., & Fortmann, S.P. (2004). Association of Retail Tobacco Marketing With Adolescent Smoking. *American Journal of Public Health*, 94, 2081-2083, p. 2082.

⁶⁹ “Ever smokers” are defined as respondents who have had a puff or more of a cigarette in their lifetime. See Henriksen et al. (2004), p. 2081.

Such is the case in the study at hand. A finding that youth who make frequent store visits are more likely to be “ever smokers” reveals too little about the complex interactions between the numerous variables in play. It is possible that there are fundamental differences between those youths who are “ever smokers” and those who are non-smokers that are not controlled for in this research. The data simply do not provide enough information to weigh in on the retail display discussion.

Additionally, the authors of this study make no distinction between retail display and other forms of tobacco marketing. As a result, the data from this study cannot be used to discuss the specific effect, if any, of retail display on smoking behaviors.

Finally, this study was conducted in California—an environment with substantially different cigarette advertising regulations as compared to the UK—among a largely Hispanic sample. These factors limit the extent to which the results can be applied in the UK, where stricter regulatory provisions prevail and a different ethnic composition exists.

For these reasons, this study must be dismissed, and cannot be applied to the UK as proposed in the FTC Document.⁷⁰ As discussed above, the study does not directly measure the effect, if any, of tobacco marketing on smoking behavior, but uses the frequency of store visitation as a proxy. It is impossible to draw any conclusion about the possible effect of restricting retail display on teen smoking behavior based on the Henriksen study because this relationship simply has not been studied.

2005 National Baseline Survey on the Tobacco Retail Environment

This study surveyed 4,048 respondents of legal smoking age (18 or 19, depending on location) in Canada via telephone. The authors intended to measure the attitudes among Canadians regarding tobacco sales and smoking behaviors.

The study is notable in that it provides numerous examples of misguided and confusing questioning in a survey.⁷¹ For example, the authors presented former smokers with the following question:

⁷⁰ See FTC Document, p. 77-78.

⁷¹ The importance of proper question design is stressed in international standards of survey research. See for example, Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.14

When you enter a store and see a wall of cigarettes displayed behind the counter, does this make you want to

- Start smoking again*
- Does it confirm your decision to quit smoking, or*
- Does seeing such a display have no impact on your purchase behaviour*
- I never see such displays*
- Don't know/No answer*

This question is problematic in that the answer categories presented to the respondent mix urges with behaviors. For example, the respondent could answer that seeing a retail display “makes them want to smoke again” (urge) or that it has “no impact on [their] purchase behaviour” (reflection on behavior). Thus it is impossible to know whether this question is measuring respondents’ impressions or perceptions or their actual behaviors.

Furthermore, a respondent that selects an “urge” or perception answer to this question does not reveal anything about his/her actual behavior. For instance, if a person responds that, upon seeing a retail display, it makes them want to “start smoking again,” this does not mean that they have or ever will start smoking again. There can simply be no connection drawn between this answer and actual smoking behavior.

Nevertheless, the authors use this question to comment on the retail display’s effect on respondents’ “purchase behaviour.”⁷² This is an error because, as per the question design, the data is reflective of something other than purchase behavior. Such misguided questions severely hamper the study’s overall validity.

Other questions asked of respondents amount to little more than public opinion research:

⁷² Corporate Research Associates, Inc. (2005). 2005 National Baseline Survey on the Tobacco Retail Environment, p. 13.

In general, would you say that seeing displays promoting cigarettes in a retail location encourages young people to be [READ RESPONSES IN ORDER] to smoke?

1 More likely

2 Less likely, or

3 Neither more nor less likely

The data yielded from this question does not add to the discussion of the potential effectiveness of a retail display ban. It simply reflects the opinions of the respondents and does not measure the actual effect of the retail display on smoking uptake among young people.

The authors also ask questions of inappropriate subgroups of respondents. For example, the following question is asked of both smokers and former smokers:

In general, would you say that seeing displays promoting cigarettes in a retail location make you [READ RESPONSES IN ORDER] to buy cigarettes?

1 More likely

2 Less likely, or

3 Neither more nor less likely

It is nonsensical to ask this question of former smokers. By definition, former smokers no longer smoke, and therefore no longer purchase cigarettes. Therefore, this is a product category from which they no longer make purchases. A person who is not purchasing a product at all cannot be “less likely” to do so; likewise, it is impossible to be “more likely” to engage in a purchase for a product which one does not use.

In summary, this study suffers from multiple weaknesses. The questionnaire is unfocused and therefore yields unreliable data. The study does not follow an experimental design, and therefore amounts to public opinion research. Such data cannot be relied upon for the purpose of determining the potential effects of a ban on the retail display of cigarettes. I therefore find it difficult to assign any weight to this study.

Wakefield et al. (2006)

In this study, Wakefield and colleagues tested 605 ninth grade students (aged 14-15 years) in Victoria, Australia. Subjects were randomly assigned to 3 groups and shown a photo of a

convenience store with 1) no cigarette pack display or advertising visible; 2) cigarette pack display visible; or 3) cigarette pack display and advertising visible. Respondents then took a self-administered survey which asked questions regarding their perceptions of cigarette purchase and cigarette brand recall.

This study has limited applicability because it measures beliefs, not behaviors. The authors point this out, saying their study measures “students’ smoking-related perceptions, beliefs and intentions” as opposed to actual behaviors.⁷³ As discussed earlier in this report, the most reliable way to gather information about subjects’ purchasing behavior is to observe them in a retail environment. This study’s design falls much lower on the gradient of reliable research and must be weighted accordingly.

Prior to the execution of the questionnaire, the authors engaged in a branding discussion with the respondents: “Before the experimental manipulation, all students took part in a discussion designed to increase the salience of general brand advertising and display.”⁷⁴ This is a potentially biasing factor—such a conversation sends the respondent into the interview situation thinking about branding in an immediate, vivid manner that is not consistent with a normal state of awareness.

The authors began the experiment by exposing students to one of three conditions (described above) in the form of a photograph. The difficulty with this design is that it does not mimic very closely actual retail shopping behavior. In a brick and mortar store, a shopper may ignore stimuli that are not of interest to him. However, when asked to look at a picture, the subject may consider everything, whether it would interest him or not in an actual retail environment.

Students were then asked how difficult they thought it would be for them and children their age to buy tobacco at the shop they viewed. This is a perception question that is not grounded in reality. It is unknown whether childrens’ beliefs about policy enforcement have any correlation to their ability to purchase this product at retail.

⁷³ Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. *Health Education Research*, 21, p. 338.

⁷⁴ *Ibid*, p. 340.

Aside from the methodological limitations of the questionnaire, the authors' findings as related to the retail display condition often lacked statistical significance. For example, students were asked about the likelihood they would be asked for proof of age if they tried to purchase cigarettes at the shop they viewed. The authors found no statistically significant difference in response between the "no cigarette" and "display" conditions.⁷⁵

Students were then asked to estimate the number of shops in their neighborhood that would sell tobacco to them and students their age. Once again, this is a perception question that found no statistically significant difference between the "no cigarette" and "display" conditions for either the students themselves or students their age.⁷⁶

Students were also asked to estimate how many out of 100 classmates in their grade they thought smoked cigarettes at least once a week. The authors reported that "on average, students thought 30% of students their age smoke cigarettes at least once a week, with no significant differences between the experimental conditions." In other words, the display condition had no effect on students' perceptions of peer smoking behavior.

The authors observed a similar finding when they asked students to estimate smoking prevalence among adults. In fact, students in the "no cigarette" group perceived a higher prevalence of smoking among adults than students in the "display" group, with a result that "trended" toward significance.⁷⁷ The display was therefore not associated with an increased perception among students regarding adult smoking prevalence.

The authors then asked students how much they agreed or disagreed with the following words describing smokers—cool, smart, healthy, athletic, and popular. They were also asked if students

⁷⁵ Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. *Health Education Research*, 21, p. 342.

⁷⁶ *Ibid*, p. 342.

⁷⁷ Wakefield et al. (2006) report that the observed results "trend towards a significant difference ($P < 0.1$) between the [display] condition." Although it could be argued that this is a not significant result and that there is no statistical difference between the two groups, the authors present it as marginally significant. Regardless, it is notable that respondents in the "display" condition did not perceive a higher rate of smoking among adults than students in the "no cigarette" condition.

their age and high school students think it is “ok to smoke cigarettes once in a while.” The authors reported that:

There was little variation between experimental conditions and students’ approval of smoking ($p > 0.10$). Students also disagreed with statements attributing positive characteristics to teenagers who smoked, with no significant differences between experimental conditions.⁷⁸

In other words, these results are not significant—students exposed to the display condition were no more likely to assign positive attributes to smokers or approve of smoking “once in a while” than students in the “no display” condition. Approval was the same regardless of group, and students universally rejected positive labels being applied to smokers.

Next students were asked if they agreed or disagreed that “smoking can harm your health” and whether they thought it was dangerous to smoke less than ten cigarettes a day and one or two cigarettes occasionally. The authors comment that “regardless of survey condition, most students agreed that smoking can harm your health.” There was no significant difference between the “no cigarettes” and the “display” condition.⁷⁹

Students were then asked what brand they would be likely to smoke if they were a smoker and what brands were popular among students. There were no significant differences for the brand the subject would likely smoke or brands popular among students between the three groups.⁸⁰

Finally students were asked if they thought they would smoke a cigarette during the next year. Non-smokers were asked if they would try a cigarette soon and if a friend offered them a cigarette whether or not they would smoke it. There were no significant differences between the “display” group and the no cigarettes group.

⁷⁸ Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. *Health Education Research*, 21, p. 343.

⁷⁹ *Ibid*, p. 343.

⁸⁰ *Ibid*, p. 344.

Despite these results, the FTC document cites the Wakefield et al. (2006) study in support of the following statement: “Recent research from the Australian state of Victoria found that cigarette advertising and bold displays in stores predisposed young teenagers to smoke.”⁸¹

The Wakefield et al. (2006) study does not support the conclusion that retail display alone predisposes youths to smoke, and in fact, provides evidence (albeit of limited methodological reliability) to the contrary. Specifically, the authors report that among youths that had never tried smoking, “no significant exposure effects existed for never-smokers’ intentions to try a cigarette ‘soon’ or during the following year ($p > 0.1$).” In other words, there were no significant differences in never-smokers’ intentions to smoke across all groups (i.e., “no cigarette,” “display” and “advertising”).

Also, as noted above, this study measures beliefs not behaviors. It does not provide evidence that students’ current beliefs will correlate with their actual future behaviors.

To the extent that the statement in the FTC Document is addressing retail display specifically, this study is not supportive and should not be cited as evidence. The results obtained by the authors simply do not show any effect of retail display on teens’ future intentions to smoke, beliefs regarding teen smoking behaviors, and smoker attributes.

Wakefield et al. (2008)

This study is a random-digit-dial phone survey of adults in Victoria, Australia. The authors excluded from the sample any respondent who indicated that they never went to a “supermarket, milk bar/convenience store or petrol station.” Questions were asked of all respondents and the following sub-groups: smokers, smokers who have tried to quit in past year, and former smokers that have quit. Respondents were asked about their prior cigarette purchasing behaviors and the influence of point of purchase cigarette packages and displays.

⁸¹ FTC Document, paragraph 3.30.

The questioning used in this study is leading, suggestive, and conditions the respondents to provide answers that support the conclusions the authors wish to reach. This design is in conflict with the international research standards outlined above, particularly ensuring that “respondents are not led towards a particular answer” as stated in the MRS Code of Conduct.⁸²

All Respondents (2,996 Completed Interviews)

The authors begin by asking all respondents: “When you are in a supermarket, milk bar/convenience store or petrol station, how often do you notice the cigarette pack display near the cash register?”⁸³

The question, as phrased, assumes that a cigarette pack display exists at the wide array of store types presented, and tells the respondent that they have noticed this display and that the researcher would simply like to know how much they have noticed it. This presentation makes it very difficult to answer this question in the negative, i.e. that the respondent does not notice the display that he/she is being told exists. The question, therefore, 1) assumes the existence of something that the respondent has not established, and 2) further assumes that it has been noticed to some degree. Thus, it is unknown whether the respondent’s answer is based on an accurate recollection of their experience or is influenced by the information presented in the question.

Smokers (N=526, 17.6%)

Next, smokers were asked: “Thinking about you personally, do you agree or disagree that removing cigarette packs from view in stores would make it easier for you to quit smoking?”⁸⁴

This was asked of all smokers, and assumes all smokers have tried or have the desire to quit. If the respondent is a smoker that has not tried to quit or has no desire to quit, the question is nonsensical. Answers collected from such respondents should not have been included in the authors’ analysis.

⁸² Market Research Society, *MRS Code of Conduct* (2005).
<http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.14

⁸³ Wakefield, M., Germain, D., Henriksen, L. (2008). The effect of retail cigarette pack displays on impulse purchase. *Addiction*, 103, p. 323.

⁸⁴ *Ibid*, p. 323.

Smokers were then asked: “When shopping for something other than cigarettes, how often do you decide to buy cigarettes as a result of seeing the cigarette pack display in the store—would that be always, often, sometimes, rarely or never?”⁸⁵

This is a leading question that “begs the answer.”⁸⁶ By putting the respondent into the hypothetical situation, the interviewer primes the respondent to picture himself/herself performing the action described under the circumstances described. This may not be reflective of reality—for example, it is unknown how many respondents ever notice the cigarette pack display when shopping for something other than cigarettes. Combined with the fact that three out of five of the answer choices presented to the respondent are affirmative, this question is skewed to yield positive answers.

Additionally, by not assigning a timeframe to the question (e.g., How many times *in the past year...*) this question asks the respondent to mentally summarize the whole of their lifetime shopping behavior for cigarettes. The result is a high likelihood of recall bias.

Smokers Who Tried to Quit

Next, smokers who had tried to quit in the past year were asked a series of three questions.⁸⁷

First, the authors asked: “When you tried to quit smoking, did you ever avoid going to places where you used to buy cigarettes in case you might be tempted to buy them?”

This question says nothing about retail display in stores. It is possible that responses to this question cover a broader spectrum of sales venues—e.g., tobacconist shops, bars, cigarette vending machines—that are irrelevant to the retail display issue. The poor design of this question makes it impossible to parse out this detail.

The authors then asked: “When you tried to quit smoking, was there ever a time when seeing the cigarette pack display in the store gave you an urge to buy cigarettes?”

⁸⁵ Wakefield, M., Germain, D., Henriksen, L. (2008). The effect of retail cigarette pack displays on impulse purchase. *Addiction*, 103, p. 323.

⁸⁶ Leading questions are cautioned against in accepted international research standards. See Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.14

⁸⁷ Wakefield, M., Germain, D., Henriksen, L. (2008). The effect of retail cigarette pack displays on impulse purchase. *Addiction*, 103, p. 323.

This question erroneously assumes the respondent saw a cigarette pack display in a store while trying to quit. As such, it is a leading question.

Next, respondents were asked: “As a result, did you ever buy cigarettes even though you were trying to quit?”

This is a nonsensical question. We know, based on the fact that the authors are asking this question of smokers who tried to quit, that their quit attempt(s) was/were not successful—hence, they are still a smoker. As such, it follows that presumably they have purchased cigarettes even though they tried to quit. Therefore I would expect nearly 100 percent of those asked this question to say ‘yes.’ It is a poorly designed question that can only yield a particular result.

Former Smokers Who Quit

After being asked (and given the information embedded in) the All Respondents question above, those that had quit smoking in the past year were asked: “Thinking about where cigarettes are sold, since you quit smoking, was there ever a time that seeing the cigarette pack display near the cash register gave you an urge to buy cigarettes?”⁸⁸

Again, the authors erroneously make the assumption that all respondents notice the cigarette pack display near the cash register. This is far from certain, and should be measured appropriately.

Those that had quit smoking were then asked: “Since you quit smoking, did you ever avoid going to place where you used to buy cigarettes in case you might be tempted to buy them?”⁸⁹

As with the question asked of those who had tried to quit, this question does not ask respondents where they used to buy their cigarettes, and hence does not specifically address the retail display issue.

In summary, the question design of this study is leading and suggestive, and does not satisfy international standards of quality research. As a result, the data collected from respondents are not reliable. It is impossible, given the unclear and unfocused nature of the question design, to ascertain the reasons why a particular respondent answered the questionnaire in the way they did. For this reason, the study cannot be relied upon.

⁸⁸ Wakefield, M., Germain, D., Henriksen, L. (2008). The effect of retail cigarette pack displays on impulse purchase. *Addiction*, 103, p. 323.

⁸⁹ *Ibid*, p. 323.

Populus (2008)

This study is a telephone survey conducted among a random sample of 1,008 adults (aged 18 and over) in Great Britain. The authors found that respondents believed that retail displays and cigarette packaging have very little influence on youth uptake of smoking. Other factors—e.g., having friends that smoke, having family members that smoke, the “coolness” of smoking—are reported as being much more influential. Ex-smokers and those who have tried to quit were asked about situations that tempted them to smoke again. Being in a shop where tobacco was sold was the most tempting for only one percent of those who tried quitting, ranking at the bottom of the list presented.

A methodological limitation of this study is the fact that respondents were presented with multiple choice lists from which they were required to select their answers. Multiple choice is not the best format when asking a question for which there are potentially many answers. For example, the survey asked respondents:

What do you think is the main reason under 18s start smoking? What do you think is the second greatest contributing factor for under 18s starting smoking?⁹⁰

Respondents were provided with the following answer options to the question above:

Friends smoking

Perceived to be ‘cool’ / Part of rebelling

Family members smoking

Celebrities smoking

Seeing tobacco on display in shops

Tobacco packaging

The data yielded from this question—and others that provided respondents with a set list of responses—merely ranks the multiple choice options against one another. The answers given, therefore, only reflect the *relative* importance of the available answers to each other, and do not reflect answers that respondents may have given if an open-ended response was permitted.

For example, we know that the “Friends smoking” answer was the most popular answer offered in response to the question of why youths start smoking. However, the only conclusion that can

⁹⁰ Populus. (2008). Tobacco Alliance Results Summary, p. 1.

be drawn from this is that, *among the six available answers provided*, “Friends smoking” was most often selected as the main reason.

In the example above, there may have been other reasons that a respondent might think under 18s start smoking (e.g., socio-economic status), but because they were not presented as answer options, these answers are not represented in the data. Hence data from this question is incomplete.

Additionally, only one behavioral question was asked of respondents: “When you were trying to quit smoking, which situation caused you to be the most tempted to smoke again?” Further, this question was only asked of the 157 respondents who tried to quit smoking recently, making the base much smaller than the 1,008 in the overall study and therefore much less reliable.

The other two relevant questions amount to public opinion research. They are questions regarding difficult policy issues that are asked of the general public. The respondents in the study sample were not specifically trained or informed regarding these issues and their responses, therefore, should be given little weight for the purpose of informing a policy change.

Retail Display Conclusions

I have found that the body of literature on the retail display issue suffers from such weaknesses as to prevent any meaningful determination as to retail display’s effect, if any, on smoking behaviors. There is simply no reliable evidence that would lead me to conclude that a ban on the retail display of cigarettes would have any effect on youth uptake of smoking or on the efforts of smokers to quit smoking. Likewise, I have found no reliable evidence to support the introduction of a retail display ban to denormalize tobacco use or ensure that health messages regarding tobacco use are not undermined.

The body of research on the effects of the retail display of cigarettes on the smoking behaviors of youth and smokers is, by a large degree, marred by methodological limitations and unsubstantiated and tangential findings. These limitations are frequently of such severity as to not simply affect the weight of a given study as related to others, but disqualify the study’s findings as altogether unreliable. Combined with the fact that the relevance of some studies is invalidated by age—several were published 10 or more years ago⁹¹— it is impossible to draw reliable

⁹¹ See Schooler, C., Feighery, E.C., & Flora, J. (1996). Seventh Graders' Self-Reported Exposure to Cigarette Marketing and Its Relationship to Their Smoking Behavior. *American Journal of Public Health*,

conclusions from the body of literature as to the effect of retail display of cigarettes on the behaviors of the populations of interest.

I have seen nothing in the literature that suggests that restricting retail display will serve to protect children and young people. Studies that attempt to make this connection ultimately fail to support the position when carefully evaluated. Peer influences are cited by teens as a primary factor in their decision to begin smoking. Similarly, we know that new smokers typically do not purchase their own cigarettes, but obtain them from friends and family.⁹² When examined in the context of the retail environment, these factors dictate that retail display has no impact on youth smoking uptake.

I have found no reliable evidence to suggest that a ban on retail display would have any effect on the efforts of smokers to quit smoking. Many of the studies I reviewed neglected to ask this group about their actual behaviors upon viewing a retail display (i.e., whether they actually purchased cigarettes), but rather asked them about whether the retail display caused them to experience urges or desires to smoke. This is an important distinction.

Moreover, not one study interviewed respondents contemporaneously as they left the retail environment, with their experiences fresh in their minds. Indeed, every study I reviewed placed smokers and ex-smokers in an after-the-fact interview condition and asked them to think about prior shopping experiences over the course of their lives in which a retail display was present. Such studies do not accurately measure the actual effect, if any, of the retail display among this group.

86, 1216-1221; White, D., Kelly, S., Huang, W. & Charlton, A. (1996). Cigarette advertising and onset of smoking in children: questionnaire survey. *BMJ Journals*, 313, 398-399.

⁹² Expert Panel. (1995). *When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products*. Prepared at the Request of Health Canada., p. 40; Report of the Senate Community Affairs References Committee (Australia). (1995). *The Tobacco Industry and The Costs of Tobacco-Related Illness*, p. 61, para.3.21.

In conducting my review, I have sought to identify all potentially relevant materials using the resources available to me. I have conducted the most objective review possible in accordance with the international research standards outlined above. However, to the extent that there are additional relevant materials that I have failed to identify and review, or which become available in the future, I reserve the right to supplement and revise this report.



September 2, 2008

Dr. Warren J. Keegan

Appendices

Studies on the topic of plain packaging that were not cited in the FTC Document but which are considered to merit analysis are discussed in Appendices 1 through 3.

Studies on the topic of retail display that were not cited in the FTC Document but which are considered to merit analysis are discussed in Appendices 4 through 14.

Appendix 1: Plain Package Study Evaluation—Health Warnings and Contents Labeling on Tobacco Products

Study Title	Health Warnings and Contents Labeling on Tobacco Products, Paper 13: adolescents' reactions to cigarette packs modified to increase extent and impact of health warnings.
Author	Centre for Behavioural Research in Cancer
Author's Position/Affiliation	
Publication Date	1992
Publication Name	
Sponsored By	Report prepared for the Ministerial Council on Drug Strategy Tobacco Task Force, Anti-Cancer Council of Victoria, Melbourne, Australia

This study conducted interviews among a convenience sample of 22 groups of teenagers (66 total respondents) at various public locations around Melbourne. Responses to two types of packs—one with limited branding and three plain packs—were recorded.

This study amounts to little more than a street corner focus group. Those that appeared to be teens were approached in groups and an attempt was made to record their responses. The respondents do not even appear to have been taken to a controlled environment.

Interviewing under these uncontrolled circumstances is a hopeless data collection exercise and is generally not done. Respondents assembled together have a prior group dynamic that can be difficult for the researcher to overcome. Respondents' answers are being recorded within this setting, which makes true individual responses unlikely.

This group dynamic effect is evidenced by the finding: "Two groups did not like either versions, and one group liked the extra information but not the warning." It is statistically unlikely to have this uniformity within a random group of individual respondents. This finding is evidence that the group dynamics were controlling, not individual beliefs.

It also appears that the facilitators were aware of the purpose of the study. Within the open-response environment created by this study there is a high degree of opportunity to influence the respondents, intentional or not. Additionally, even what is recorded by the facilitators, e.g. that

multiple people within the group responded in some way, is subject to observational bias or “selective hearing.”

The study concludes that teens would read the package health messaging more if implemented on plain packs. However, the study design—handing the group a pack to inspect—lends itself to this result.

Additionally, this study concludes that plain packs will reduce the brand imagery as compared to a regular pack. This is as expected.

Appendix 2: Plain Package Study Evaluation—The Tobacco Industry and The Costs of Tobacco-Related Illness

Study Title	The Tobacco Industry and The Costs of Tobacco-Related Illness
Author	
Author's Position/Affiliation	Report of the Senate Community Affairs References Committee (Australia)
Publication Date	December 1995
Publication Name	
Sponsored By	Australian Senate Community Affairs

This paper is an expansive evaluation of the health effects and costs of tobacco, industry regulation, adolescent smoking, and a socio-economic discussion.

A broad overview of the causes of adolescent smoking is discussed. The review found that young people smoke for a variety of reasons. Peer pressure, both social and family, is considered here to be the number one reason.

This review also reports that the motivations to begin smoking are always related to social influences, such as curiosity, doing something forbidden, and friends.⁹³

In the discussion of plain packaging, this review found that there was no conclusive evidence that plain packaging decreases consumption among young people and recommends more research on the issue. “There is not sufficient evidence to recommend that tobacco products be sold in generic packaging.”⁹⁴

⁹³ Report of the Senate Community Affairs References Committee (Australia). (1995). *The Tobacco Industry and The Costs of Tobacco-Related Illness*, p. 57.

⁹⁴ *Ibid*, p. 70.

Appendix 3: Plain Package Study Evaluation—The influence of branding on adolescent smoking behaviour

Study Title	The influence of branding on adolescent smoking behaviour: exploring the mediating role of image and attitudes
Author	Grant et al., International Journal of Nonprofit and Voluntary Sector Marketing (2007)
Author's Position/Affiliation	
Publication Date	2007
Publication Name	International Journal of Nonprofit and Voluntary Sector Marketing
Sponsored By	Cancer Research UK

This study looks at data from the third wave of a UK longitudinal study to determine the impact of the 2003 Tobacco Advertising and Promotion Act which banned advertising, among other promotional activities. The sample consisted of 926 British adolescents, most ranged in age between 11 and 16. To qualify for this study, the respondents recognized a brand when shown a picture of a cigarette package.

A conceptual model is used which purports to show the relationship between brand familiarity and brand image as well as peer influence and attitude toward smoking. According to the authors, these relationships lead to a stated intention to smoke.

This study found the strongest correlation between those who thought smoking was attractive and worth the money and a tendency to say that they would smoke by the time they are 18.

This study equates a correlation with a one-way effect. It is not know from this analysis, however, which came first. Does having a positive attitude toward smoking (it's attractive and worth the money) lead to a stated intent to smoke, or does an intent to smoke lead to a positive attitude toward smoking? The authors here assume the former, but the correlation could just as likely be the latter.

Of course, the measurement of a respondent's intent to smoke is inherently difficult. "[The] intention to smoke was assessed by one item capturing whether they think they will be smoking when they are 18 years old. Responses given ranged from 'definitely will be' to 'definitely will

not be' on a 4-point response scale.”⁹⁵ This does not inform us of whether a respondent will smoke or not. The response given here is simply what each respondent thought he or she may be doing at some future date. That date for some respondents was a full seven years away. As a researcher we must ask, does an 11-year old have any idea what behavior he or she will be engaged in several years from now?

⁹⁵ Grant et al., International Journal of Nonprofit and Voluntary Sector Marketing (2007). International Journal of Nonprofit and Voluntary Sector Marketing, Data Measures section.

Appendix 4: Retail Display Study Evaluation—Community Mobilization to Reduce Point-of-Purchase Advertising of Tobacco Products

Study Title	Community Mobilization to Reduce Point-of-Purchase Advertising of Tobacco Products
Author	Todd Rogers, PhD, Ellen C. Feighery, RN, MS, Elaine M. Tencati, MPH, CHES, Judith L. Butler, MS, Linda Weiner
Author's Position/Affiliation	
Publication Date	November 1995
Publication Name	Health Education Quarterly
Sponsored By	

This study is largely irrelevant to my analysis. It addresses tobacco advertising and does not specifically address retail display, and therefore in large part will not be reviewed herein.

However, this study is cited by the FTC Document⁹⁶ in support of the following statement: “Research has shown that tobacco impulse purchases increase by as much as 28% when there are displays of tobacco products at point of sale.” This is an inappropriate citation for several reasons.

First, the passage that is cited by the FTC Document is not a finding from the Rogers et al. study. Rogers states, “Tobacco impulse purchases increase by as much as 28% when displays are present.”⁹⁷ This statement, however, cites the Point of Purchase Advertising Institute (POPAI)⁹⁸ as a source. Therefore the Rogers study is a secondary rather than a primary source.

⁹⁶ See FTC Document, paragraph 3.33.

⁹⁷ Rogers et al. (1995). Community Mobilization to Reduce Point-of-Purchase Advertising of Tobacco Products, *Health Education Quarterly*, 22, p. 429.

⁹⁸ According to Rogers et al. the 28 percent figure appears in the following: Point of Purchase Advertising Institute (1992). *The Point-of-Purchase Advertising Industry Fact Book*. Englewood, NJ.

A review of the POPAI study cited by Rogers et al.⁹⁹ revealed no additional information. The POPAI study states that “tobacco and accessory impulse purchases are increased by as much as 28 percent by displays.”¹⁰⁰ However, the POPAI study simply references another POPAI study as a source.¹⁰¹ Hence, the FTC citation is even further removed from the original data.

In addition, it is noted that the POPAI is a trade group for the retail marketing industry. It is unknown whether the data offered by the POPAI on tobacco sales at point of purchase is objective, accurate, and by what means it was collected. Without this evaluation, it is impossible to accept this reference.

What is known is that the POPAI reference is invalidated by its scope and its age. The 28 percent figure is reflective of the point of purchase environment in the United States in 1992. The reference is not applicable to the UK. Indeed, I have seen no reliable evidence to suggest the extent to which, if at all, retail display influences point of purchase tobacco sales in the UK. For these reasons, the POPAI citation is not supportive of the statement that retail display will impact impulse tobacco purchases.

⁹⁹ Point of Purchase Advertising Institute (1992). *The Point of Purchase Advertising Industry Fact Book*.

¹⁰⁰ *Ibid*, p. 50.

¹⁰¹ POPAI Supermarket Consumer Buying Habits Study.

Appendix 5: Retail Display Study Evaluation—Seventh Graders' Self-Reported Exposure to Cigarette Marketing and Its Relationship to Their Smoking Behavior

Study Title	Seventh Graders' Self-Reported Exposure to Cigarette Marketing and Its Relationship to Their Smoking Behavior
Author	Caroline Schooler; PhD, Ellen Feighery, MS, and June A. Flora, PhD
Author's Position/Affiliation	Stanford Center for Research in Disease Prevention. Stanford University School of Medicine.
Publication Date	Sept. 1996
Publication Name	American Journal of Public Health
Sponsored By	

This study consisted of a paper and pencil questionnaire administered to 571 seventh graders across five middle schools in San Jose, California. Participants were shown two magazine advertisements for cigarettes, pictures of two cigarette promotional items (a lighter and coasters), actual examples of six cigarette promotional items, and catalogs and mailings for three cigarette brands. The authors tested whether respondents who were exposed to tobacco marketing and/or owned tobacco promotional items were more likely to experiment with smoking.

One cannot use this study to evaluate the retail display issue. The study tests the effects of various forms of cigarette marketing as well as cigarette promotional items on youth smoking behavior; however, retail display is not specifically addressed. Although the authors tested the effect of “In-Store Marketing”—in which they include banners, posters, and free-standing signs—this cannot be used as evidence to report upon retail display. For these reasons, the study is irrelevant to my review.

Appendix 6: Retail Display Study Evaluation—Cigarette advertising and onset of smoking in children

Study Title	Cigarette advertising and onset of smoking in children: questionnaire survey
Author	David White, Sheila Kelly, Wenyong Huang, Anne Charlton
Author's Position/Affiliation	CRC Education and Child Studies Research Group, School of Epidemiology and Health Sciences, University of Manchester, Manchester M13 9PT
Publication Date	August 17, 1996
Publication Name	BMJ Journals
Sponsored By	Cancer Research Campaign (Grant No CE 1055/0102) and the Sino-British Council for funding

This study consisted of a self-administered questionnaire given to 1,450 11 and 12 year olds in the north and south of England in June 1993 and June 1994. The authors tested whether awareness of certain brands of cigarette was linked to an increased risk of smoking uptake among youth.

This study does not address retail display. The authors discuss cigarette advertising as a factor influencing youth recall of cigarette brands; however, cigarette advertising has been severely restricted in the 15 years since the data was collected. As this study does not add to the discourse on the retail display issue, it is irrelevant to my analysis.

Appendix 7: Retail Display Study Evaluation—Tobacco point of sale advertising increases positive brand user imagery

Study Title	Tobacco point of sale advertising increases positive brand user imagery
Author	R J Donovan, J Jancey and S Jones
Author's Position/Affiliation	Centre for Behavioural Research in Cancer Control, Division of Health Sciences, Curtin University of Technology, Hayman Rd, Bentley, Western Australia, Australia
Publication Date	2002
Publication Name	Tobacco Control
Sponsored By	

The authors of this study surveyed 100 grade six and seven students in Australia. Participants were assigned randomly to one of two conditions: the control cell was shown a photo of a pack of cigarettes, and the test cell was shown an ad for cigarettes “typical of point of sale advertising posters.” Participants then rated the brand user on a set of 12 adjectives. The brands tested were Marlboro and Benson & Hedges.

This study evaluates the effect of advertisements—not retail displays—so it is irrelevant to my analysis. That said, it suffers from serious methodological flaws.

The authors started by asking students to match 12 brand names to the types of products they represent. A variety of household products were listed (several cigarette brands, McDonalds, Coca-Cola, etc). It then presented students with a photograph—a pack of cigarettes of one brand (control) and an advertisement of the other brand (test). Students were then asked what type of people would buy the brand and were presented with 12 sets of adjectives (rich—poor, unhealthy—healthy, etc.) from which to select. A final section of the questionnaire collected information about where students see cigarettes advertised, their smoking habits and attitudes about smoking.

The authors report that between 81-88 percent of subjects could identify the cigarette brands and that “this is a high level of awareness for adult products supposedly not marketed to the survey group.” However, the authors did not link brand awareness to actual behavior. Indeed they found that a very small portion of their sample had ever smoked. Indeed only 11 students in the sample reported “ever smoking” and only one reported smoking in the “last seven days.”

Without the link to actual behaviors, the students' awareness of cigarette a brand is inconsequential.

In addition, the authors report that "In a majority of the brand user descriptions, the cigarette advertisements increased brand user imagery in a positive way."

However, this is misleading as they only report the positive associations. The absence of the results for the negative associations is a glaring omission.¹⁰²

Moreover, in their discussion of the positive attributes, the authors present data that proved not significant and attempt to use it to bolster their position. This is misleading.¹⁰³ Any result that is not statistically significant means that there is no difference between the two groups. For example, the authors report:

Relative to the Marlboro pack only, those viewing the Marlboro ad were more likely to rate the Marlboro user as adventurous (42% v 24%, $p = 0.0884$), interesting (26% v 18%, ns), and relaxed (26% v 14%, ns).¹⁰⁴

In this example, two out of the three results presented are not significant (ns) and the remaining result has a p-value ($p = 0.0884$) that is outside of the most often accepted level of significance.¹⁰⁵ Use of non-significant results such as those presented in this example is extremely misleading because it suggests that the data support a result that is not actually observed. When such a situation occurs, one must question whether advocacy has been substituted for objective science.

¹⁰² Professional research organizations stress objective presentation of results. See International Statistical Institute, *Declaration on Professional Ethics* (1985). <http://isi.cbs.nl/ethics.htm>, paragraph 1.3; Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.49

¹⁰³ International survey research standards stress proper presentation of data. See European Society for Opinion and Marketing Research, *ICC/ESOMAR International Code on Market and Social Research*. http://194.38.169.84/uploads/pdf/professional-standards/ICESOMAR_Code_English_.pdf, Introduction section, Article 4(e); International Statistical Institute, *Declaration on Professional Ethics* (1985). <http://isi.cbs.nl/ethics.htm>, paragraphs 1.3, 3.1. <http://isi.cbs.nl/ethics.htm>, paragraph 1.3; Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.49

¹⁰⁴ Donovan, R.J., Jancey, J., & Jones, S. (2002). Tobacco point of sale advertising increases positive brand user imagery. *Tobacco Control*, 11, p. 193.

¹⁰⁵ The *a priori* significance level set by most researchers is $p = 0.05$.

In summary, this study does not provide any evidence regarding the role of retail display specifically, and suffers from significant methodological flaws.

Appendix 8: Retail Display Study Evaluation—Reaching youth at the point of sale: cigarette marketing is more prevalent in stores where adolescents shop frequently

Study Title	Reaching youth at the point of sale: cigarette marketing is more prevalent in stores where adolescents shop frequently
Author	L Henriksen, E C Feighery, N C Schleicher, H H Haladjian and S P Fortmann
Author's Position/Affiliation	
Publication Date	2004
Publication Name	Tobacco Control
Sponsored By	

In this study, the researchers observed and quantified the tobacco-related marketing and cigarette shelf space in 50 stores in Tracy, California in February 2002. As reported by the authors, “shelf space for cigarettes was measured by counting product facings, defined as space allocated to cigarette packs on the front row of shelves and displays.” Students (N=2,125) were then asked to identify stores in the area that they visit frequently. The authors attempt to link the popularity of stores with teens with the amount of cigarette marketing materials displayed at those stores.

This study relies on the coders’ assessment of the volume of point of sale materials and tobacco shelf space in stores. While objectivity may have been the goal of the coding exercise, this is not a perfect process—tests comparing the coders’ results showed that the most disagreement occurred on the subjective measures (i.e., shelf facings and number of marketing materials).

It is unclear how the authors determined “popular” vs. “unpopular” stores. The methodology described lacks the necessary detail to convey to the reader the procedures that were employed.¹⁰⁶ The determination of “popular” vs. “unpopular” stores is essential because it determines the two

¹⁰⁶ International survey research organizations stress the importance of clarity in presenting a study’s methodology. See World Association for Public Opinion Research, *WAPOR Code of Professional Ethics and Practices*, <http://www.unl.edu/WAPOR/ethics.html>, section C; <http://isi.cbs.nl/ethics.htm>, paragraph 1.3; Market Research Society, *MRS Code of Conduct* (2005). <http://www.mrs.org.uk/standards/downloads/code2005.pdf>, paragraph B.53-B.58

groups that are ultimately compared. It is vital that this step be completed correctly and without bias; without clarification of the methodology, this cannot be confirmed.

Additionally, it is curious that teens identified liquor stores as among the most popular stores. Presumably, teens are not permitted to enter liquor stores unaccompanied. This casts further doubt on the process used to determine “popular” vs. “unpopular” stores.

The authors comment that for larger stores with multiple registers and displays, the number of facings was “typically” divided by the number of registers. There is the potential for powerful manipulation of the results in this step. Dividing by the number of registers effectively reduces the number of facings. If this is done more heavily in “unpopular” stores, it could be partially or wholly responsible for the author’s main result—i.e., that stores that are popular with teens devote more shelf space to cigarette brands popular among young smokers. Without knowing exactly how this step was executed, it is impossible to accept the results.

This study does nothing to measure the extent to which students are aware of the retail display, if at all, and whether it influences their purchasing behaviors. The authors simply assume that if the retail display is present it is affecting behavior, and the greater the proportion of display dedicated to teen brands, the greater the impact. This is an unsupported conclusion¹⁰⁷ that cannot be made based on this study.

¹⁰⁷ International standards of survey research caution against authors drawing unsupported conclusions. American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>, paragraph I.A.2, I.A.3.

Appendix 9: Retail Display Study Evaluation—The Influence of Tobacco Powerwall Advertising on Children

Study Title	The Influence of Tobacco Powerwall Advertising on Children
Author	J. Gottheil Marketing Communications
Author's Position/Affiliation	
Publication Date	March 2005
Publication Name	Independent study
Sponsored By	"A report for the Non-smokers' Rights Association and the Smoking and Health Action Foundation"

Overview Section

Published in 2005, this study contains a variety of errors. Notably, this study contains an example of a fatal methodological flaw: presenting a respondent with a question that he/she is unqualified to answer. The authors of this study presented the following question to children ranging from age 11 to 18:

Do you think other kids your age will try smoking if they see cigarette displays in convenience stores, variety stores, or corner stores?¹⁰⁸

This question asks the impossible of the respondent—to provide an answer for which they have no factual basis or training to formulate an informed response. Any answer provided to this question can be regarded as nothing more than a guess. Such data cannot be relied upon as an accurate predictor of the behavioral implications of cigarette retail display.

Complex questions such as the example listed above are debated among educated professionals, who often have vastly different opinions about the expected outcomes. As such, it is difficult to assign much, if any weight to data offered by school-aged children in response to questions of this type. The reliability and validity of a study of such design must be carefully considered.

¹⁰⁸ J. Gottheil Marketing Communications, Inc. (2005). The Influence of Tobacco Powerwall Advertising on Children.

This study is comprised of three sections, the first of which is an overview section. This section is a review of existing studies. The authors also make references to their own data, collected in two surveys (discussed below).

The authors do not include any footnotes or other references to the data and statistics to which they refer, so it is impossible for the reader to know which pieces of information are offered by the authors (i.e., findings from their surveys) and which are attributable to other sources. Even when they mention a source, the lack of footnotes or citations makes it impossible to know which particular study or article they are referencing. The list of sources at the end of the section is wholly inadequate—it lists the titles of the publications which the authors considered (e.g., *Wall Street Journal*), but makes no reference to actual articles or dates. This lack of forthcoming information makes it impossible to review the veracity of the support for some of the cited statements in this report.

The authors offer many statements that lack any support whatsoever. For example:

US studies have found that retail displays increase average tobacco sales by 12% to 28%. Conversely, 4% to 6% of cigarette volume is lost when the counter doesn't communicate price or special products to smokers.¹⁰⁹

It is impossible to accept such statements without being informed of the source.

Kid's Survey Section

Questionnaire

The authors conducted a study of children and asked them six questions directly or indirectly related to tobacco. The questions asked are rife with problems. Upon placing a call, the interviewer asked to speak with an adult. After ascertaining that it was a smoke-free household, the parent was told:

Our survey is to determine whether tobacco displays in convenience stores are influencing kids who live in non-smoking families.

¹⁰⁹ J. Gottheil Marketing Communications, Inc. (2005). *The Influence of Tobacco Powerwall Advertising on Children*, p. 20.

This is a major flaw. It is desirable in survey research to ensure that the purpose of the study is shielded from participants to the greatest extent possible. It would be easy for a parent to relay the purpose of the study to their child, thereby influencing that child's responses.

After obtaining permission from the parent, the interviewer asked to speak with a child. When the child took the phone the interviewer asked about the child's age and then asked:

What types of stores have you ever seen cigarettes in?

Convenience/Corner/Variety Store

Food Store/Grocery Store/Supermarket

Gas Station

Other [Specify]

DK

This question makes an assumption that the child has seen cigarettes in a store. The interviewer has no idea 1) whether or how often the child visits "stores" of any type, let alone those that sell cigarettes; or 2) whether the child has ever seen or noticed cigarettes being sold at a store. By asking this question, the interviewer has potentially planted an idea in the child's head that might not have previously been there.

The next question is as follows:

How often do you go into convenience stores, variety stores or corner stores?

Never

Once a week

Twice a week

More than twice a week

OTHER [SPECIFY]

DK

While this question is not problematic in itself, the authors later use the results to draw flawed conclusions (see Conclusions section below).

The interviewer then asks:

Which names or types of cigarette products can you think of?

PROBE: Any other names of cigarettes you remember seeing in a store?

This is a flawed question set. First, the initial question is a general question. It asks the child to recall any products that they have ever seen anywhere. Any answer to this question cannot be tied to retail displays because we have no idea where the child was exposed to the brands or products given as answers.

Second, the probe asks a different question than originally posed. The probe asks the child about “names of cigarettes [they] remember seeing in a store.” This is a much more specific question than originally asked. Any answers in response to this probe cannot be combined (as the authors appear to have done, although the methodology here is not explicitly explained) with the answers to the original question, as they address different issues.

The interviewer then asks the child whether he/she knows anyone their age who smokes cigarettes, and then asks:

Do you think other kids your age will try smoking if they see cigarette displays in convenience stores, variety stores, or corner stores?

This is a leading question. This question is phrased in such a way that it is easy to determine the answer desired by the interviewer.

Additionally, the answer categories are listed as “Yes, Maybe, No.” This answer structure favors an overall positive response (two positive options vs. one negative option). There is no indication that the answers were rotated, so there is also a potential position bias that favors a positive response.

Kid's Survey - Conclusions

The authors use the data collected by this flawed questionnaire to draw many conclusions relating to the effects which result from kids' brand awareness of cigarettes¹¹⁰ even though they did not ask about actual behaviors and established no link between brand awareness and actual behavior.

The authors conclude that "C-store displays of cigarettes are influencing kids in Ontario. Furthermore, kids believe that these displays are a factor in kids' smoking."¹¹¹ The first statement here is presumably drawn from the brand awareness data. This conclusion is not supported. The second statement relies on data from a flawed question; furthermore, the question asked a difficult policy question and one must question the weight that should be afforded to answers given by children.

The authors also conclude that "Having peers who smoke is not a consistent factor in cigarette brand awareness among kids. Therefore, other factors (including c-store displays) must be affecting kids."¹¹² This conclusion suggests that whether or not young non-smokers have peers who smoke, they have knowledge of cigarette brands. It has not been shown that this awareness results from c-store displays.

The Overview section contains this summary of the Kids' Survey:

In one survey, we focused on nearly 200 Ontario kids aged 11 to 18 who live in households where nobody uses tobacco products. (This removes smoking parents or siblings as a possible influence on the kids' knowledge of tobacco products.)

Among these kids:

- 85% spontaneously name c-stores as a place that sells cigarettes. In addition,

- 16% know that gas stations sell cigarettes, and 30% name food stores.

¹¹⁰ J. Gottheil Marketing Communications, Inc. (2005). The Influence of Tobacco Powerwall Advertising on Children, Kids Survey, p. 4.

¹¹¹ J. Gottheil Marketing Communications, Inc. (2005). The Influence of Tobacco Powerwall Advertising on Children, Kids Survey, p. 4.

¹¹² Ibid, p. 4.

- 77% go to c-stores at least once a week
- 41% can spontaneously name cigarette brands; half of these kids can name more than one brand (up to 7).
- 63% believe that cigarette displays in c-stores might influence kids to smoke.¹¹³

Although the authors attempt to position these results as somehow indicative that children are at risk and that cigarette displays contribute to this risk, we have seen that 1) these results were obtained through the use of a flawed data collection instrument; 2) brand awareness does not equal an affinity or propensity to purchase; and 3) respondents were conditioned to please the interviewer.

Adults' Survey

Questionnaire

The authors conducted a study of Ontario smokers and former smokers. Respondents were asked up to five questions (depending on answers given). The interviewer asked several questions to ascertain whether the person 1) had smoked more than 100 cigarettes in his/her life; 2) is a current or former smoker; 3) had ever attempted to quit smoking. Smokers who had attempted to quit smoking were asked the following open-ended question:

I'd like you to think back to the last time you tried to quit smoking. Now, what do you remember about the occasion when you started smoking again? PROBE
When was it, where, who you were with, what were you doing?

Finally, all respondents were asked the following question:

¹¹³ J. Gottheil Marketing Communications, Inc. (2005). The Influence of Tobacco Powerwall Advertising on Children, Kids Survey, p. 7.

Do you feel that the tobacco product displays in convenience stores or variety stores encourage people like you to continue smoking? Would you say: READ

LIST

Very strongly

Fairly strongly

Not strongly

Not at all

DK

REF

OTHER (SPECIFY)

This is a fatal flaw in the authors' design. First, it assumes that respondents 1) visit convenience/variety stores and 2) are familiar with tobacco displays in these retail locations. In fact, the authors have no idea what proportion, if any, of the respondents actually satisfy both of these criteria.

In addition, this is a leading question. It is not worded neutrally and the answer categories are not rotated, with the most favorable appearing first in the list.

Finally, and most importantly, it makes no sense to ask the last question of the former smokers in the group. Asking if the displays "encourage people like you to continue smoking" of former smokers is a nonsense question – people "like them" (i.e., former smokers) do not smoke, so how could they "continue smoking"? Such a nonsensical question cannot yield meaningful data.

Adults' Survey - Conclusions

The authors draw the following flawed conclusions¹¹⁴ regarding retail displays:

- Nearly one fifth of these smokers who have tried to quit believe that power walls in c-stores encourage them to continue smoking.

¹¹⁴ International standards of survey research caution against authors drawing unsupported conclusions. American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>, paragraph I.A.2, I.A.3.

- One-quarter of former smokers believe that power walls in c-stores encourage them to continue smoking.¹¹⁵

The first conclusion was drawn from data collected using a flawed, leading question which included an incorrect assumption. The second conclusion is based on flawed data—former smokers should never have been asked the question.

¹¹⁵ J. Gottheil Marketing Communications, Inc. (2005). The Influence of Tobacco Powerwall Advertising on Children, Adult Survey, p. 31.

Appendix 10: Retail Display Study Evaluation—Adult smokers’ use of point of sale displays to select cigarette brands

Study Title	Adult smokers’ use of point of sale displays to select cigarette brands
Author	Wakefield, M. & Germain, D.
Author’s Position/Affiliation	
Publication Date	2006
Publication Name	Australian and New Zealand Journal of Public Health
Sponsored By	

In this study, Wakefield & Germain conducted a telephone survey of 3,001 adult smokers in Victoria, Australia. Smokers were asked: “When you go to buy cigarettes, how often do you decide what brand or type of cigarettes you buy, based on the cigarette pack display in the store?”

The interpretation of the study result by the authors is not supported by the data. They use the data from this study to suggest that the retail display is not targeting adult smokers:

Contrary to the assertions made by the tobacco companies that the prime purpose of point of sale advertising and pack displays is to provide information to adult smokers about alternative brands, our findings suggest that smokers virtually never make use of this information in deciding which brand to purchase.¹¹⁶

The authors go on to suggest that the display of tobacco is intended to influence the smoking behaviors of adolescents. This is an unfounded assertion that is completely unsupported by their data. In fact, adolescents were not even interviewed in this study. Although unsupported, the authors conclude that if adult smokers do not use the display to make purchase decisions (which the data reveals a meaningful percentage of them do), then the presence of a display must be intended to initiate youth uptake. Citing multiple studies that explore the relationship between tobacco marketing and youth smoking behavior—the quality and reliability of many of which is

¹¹⁶ Wakefield, M., & Germain, D. (2006). Adult smokers; use of point-of-sale displays to select cigarette brands. Australian and Nw Zealand Journal of Public Health, 30(5), p. 483.

questioned herein—the authors attempt to bolster this position. The result is a completely unsupported conclusion which cannot be accepted.¹¹⁷

¹¹⁷ International standards of survey research caution against authors drawing unsupported conclusions. American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>, paragraph I.A.2, I.A.3.

Appendix 11: Retail Display Study Evaluation—An evaluation of four measures of adolescents' exposure to cigarette marketing in stores

Study Title	An evaluation of four measures of adolescents' exposure to cigarette marketing in stores
Author	Ellen C. Feighery; Lisa Henriksen; Yun Wang; Nina C. Schleicher; Stephen P. Fortmann
Author's Position/Affiliation	Stanford University School of Medicine, Stanford Prevention Research Center, Stanford, CA
Publication Date	01 December 2006
Publication Name	Nicotine & Tobacco Research
Sponsored By	

The authors of this study attempt to link students' smoking behaviors to four "measures of exposure to retail cigarette marketing" using data from two surveys. One survey was administered to 2,063 sixth, seventh, and eighth graders in three California schools. The other survey collected observational data regarding cigarette marketing collected in stores in which the students shop. This was done to gauge the students' exposure to tobacco marketing.

The authors estimated adolescents' exposure to tobacco marketing in four ways: (a) frequency of shopping in the stores categorized as carrying more cigarette advertising than other store types, (b) frequency of shopping in specific stores that sell cigarettes in the study community (c) cigarette brand impressions per week and (d) perceived exposure to cigarette advertising in stores.

It is impossible to determine if retail display has any impact on the measured variables from the reporting in this study. The authors grouped all in-store marketing materials to compute the respondents' cigarette advertising exposure. Further, the authors equate visiting a store with advertising present as the equivalent to exposure to tobacco marketing. They did not measure the extent to which the respondents notice such marketing, if at all.

Nevertheless, there is no specific testing or discussion of retail display in this study—therefore the effect, if any, of the retail display upon youth uptake or those trying to quit smoking is unknown.

Appendix 12: Retail Display Study Evaluation—The Impact of Retail Cigarette Marketing Practices on Youth Smoking Uptake

Study Title	The Impact of Retail Cigarette Marketing Practices on Youth Smoking Uptake
Author	Sandy J. Slater, PhD; Frank J. Chaloupka, PhD; Melanie Wakefield, PhD; Lloyd D. Johnston, PhD; Patrick M. O'Malley, PhD
Author's Position/Affiliation	
Publication Date	May 2007
Publication Name	Archives of Pediatric Adolescent Medicine
Sponsored By	

This study is an analysis of data collected from 26,301 eighth, tenth, and twelfth grade participants in the February 1999 through June 2003 Monitoring the Future surveys conducted in the United States. The authors constructed a scale of youth smoking involvement and conducted analyses to see how various variables—advertising, price, presence of promotions, and self-service access—affected subjects' movement across the scale of smoking involvement.

The authors used data from the survey including the subject's smoking status, grade, sex, and race, and cross-analyzed these variables with data that the researchers collected regarding various aspects of tobacco advertising in stores near the subjects' schools. The researchers observed a sampling of stores in the sample communities over a five year period. Stores were inspected for five types of tobacco advertising: outdoor property, exterior building signage, interior, functional object, and low-height advertising.

The authors did not report on the effects of the specific types of advertising individually, only collectively. More importantly, this study did not consider the effect of retail display, if any.

Additionally, rather than asking students specifically about tobacco marketing and its effect on their uptake of smoking, they simply asked them about their smoking status. The researchers then went to the retail locations in the respondents' geographic location and gathered information about the marketing materials present. The researchers did not measure whether and to what extent the students notice such materials, if at all. The assumption was simply made that when the

materials are present they are noticed. This is an unsupported conclusion¹¹⁸ and a key methodological flaw.

¹¹⁸ International standards of survey research caution against authors drawing unsupported conclusions. American Association for Public Opinion Research, *AAPOR Code of Professional Ethics & Practices* (2005). <http://www.aapor.org/aaporcodeofethics>, paragraph I.A.2, I.A.3.

Appendix 13: Retail Display Study Evaluation—Evidence and arguments on tobacco retail displays: marketing an addictive drug to children?

Study Title	Evidence and arguments on tobacco retail displays: marketing an addictive drug to children?
Author	George Thomson, Janet Hoek, Richard Edwards, Heather Gifford
Author's Position/Affiliation	
Publication Date	20 June 2008
Publication Name	The New Zealand Medical Journal (Journal of the New Zealand Medical Association)
Sponsored By	The Cancer Society of New Zealand; ASH New Zealand

This study can be classified as a meta-analysis. It is a qualitative review of international studies on the topic of retail display and a focus group of 27 New Zealand subjects examining the pros and cons of the retail display ban issue.

Although this article reviews the literature in the area of retail display, it is primarily a policy paper in which the authors' advocacy against cigarette smoking and the tobacco industry is thinly veiled. The authors support their points with focus group research, which is anecdotal and cannot be generalized to the wider population.

Appendix 14: Retail Display Study Evaluation—Effects of tobacco retail displays on exsmokers and lapsed quitters

Study Title	Effects of tobacco retail displays on exsmokers and lapsed quitters
Author	Janet Hoek: Massey University; Heather Gifford, Gill Pirikahu: Whakauae Research Services; Richard Edwards, George Thomson: University of Otago, Wellington
Author's Position/Affiliation	
Publication Date	
Publication Name	Independent Study
Sponsored By	Report for the Cancer Society of New Zealand and ASH New Zealand

This study reported on focus group interviews of 20 former smokers and lapsed quitters. The authors asked questions regarding the effect of the retail display on participants smoking behaviors. It is not a representative sample and cannot be generalized to a wider population.

The three group moderators in this case are the authors of this paper and therefore knew the purpose of the study. Although they followed a research protocol that they detailed in the study, the report states that “probing questions were widely used to clarify and extend the answers participants provided.” This along with the fact that this was a face-to-face interview would have given the interviewers ample opportunity, whether intentional or not, to influence the respondents’ answers).

This report reads as a vehicle to present individuals’ open-ended responses selected by the researcher. Statements in this study are often supported by an open-ended response. This is a potentially misleading technique. For any particular point that the authors would like to make, they need only one respondent to offer a response that provides support. However, it is unknown how the rest of the sample—or more importantly, a representative sample—would have responded regarding that particular issue.

Although it is the case that the results cannot be generalized, it is interesting to note that the authors’ findings regarding retail displays had a mixed effect on smokers and lapsed smokers.

In short, this focus group research is not applicable to the wider population and conclusions regarding retail display can not be drawn from it.

Exhibit 1—Relevant Studies

Plain Packaging

Citation	Year
Beede, Lawson & Shepherd (1990). <i>The Promotional Impact of Cigarette Packaging: A Study of Adolescent Responses to Cigarette Plain-Packs</i> . Dept. of Marketing, University of Otago, New Zealand.	1990
Beede, P., & Lawson, R. (1991). Brand image attraction: the promotional impact of cigarette packaging. <i>The New Zealand Family Physician</i> , 176-177.	1991
Beede, P. & Lawson, R. (1992). The Effect of Plain Packages on the Perception of Cigarette Health Warnings. <i>Public Health</i> , 106, 315-322.	1992
Centre for Health Promotion, University of Toronto. (1993). <i>Effects of Plain Packaging on the Image of Tobacco Products Among Youth</i> .	1993
Expert Panel. (1995). <i>When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging of Tobacco Products</i> . Prepared at the Request of Health Canada.	1995
Rootman, I., Flay, B., & Phil, D. (1995). <i>A Study on Youth Smoking, Key Figures and Findings</i> . A Joint Research Project by: University of Toronto, University of Illinois at Chicago, York University, Ontario Tobacco Research Unit, Addiction Research Foundation.	1995
Report of the Senate Community Affairs References Committee (Australia). (1995). <i>The Tobacco Industry and The Costs of Tobacco-Related Illness</i> .	1995
Goldberg, M.E. (1999). The Effect of Plain Packaging on Response to Health Warnings. <i>American Journal of Public Health</i> , 89.	1999
Grant, I., Hassan, L., Hastings, G., MacKintosh, A.M., & Eadie, D. (2007). The influence of branding on adolescent smoking behaviour: exploring the mediating role of image and attitudes. <i>International Journal of Nonprofit and Voluntary Sector Marketing</i> .	2007
Cooney, G. <i>Health Warnings and Contents Labelling on Tobacco Products, Report on Research Conducted by the Centre for Behavioural Research in Cancer</i> . Sydney, Australia: Macquarie University, School of Behavioural Sciences.	No Date

Retail Display

Citation	Year
Rogers et al. Community Mobilization to Reduce Point of Purchase Advertising of Tobacco Products. <i>Health Education Quarterly</i> . 22, 427.	1995
Schooler, C., Feighery, E.C., & Flora, J. (1996). Seventh Graders' Self-Reported Exposure to Cigarette Marketing and Its Relationship to Their Smoking Behavior. <i>American Journal of Public Health</i> , 86, 1216-1221.	1996
White, D., Kelly, S., Huang, W. & Charlton, A. (1996). Cigarette advertising and onset of smoking in children: questionnaire survey. <i>BMJ Journals</i> , 313, 398-399.	1996
Donovan, R.J., Jancey, J., & Jones, S. (2002). Tobacco point of sale advertising increases positive brand user imagery. <i>Tobacco Control</i> , 11, 191-194.	2002
Henriksen, L., Feighery, E.C., Wang, Y., & Fortmann, S.P. (2004). Association of Retail Tobacco Marketing With Adolescent Smoking. <i>American Journal of Public Health</i> , 94, 2081-2083.	2004
Henriksen, L., Feighery, E.C., Schleicher, N.C., Haladjian, H.H., & Fortmann, S.P. (2004). Reaching youth at the point of sale: cigarette marketing is more prevalent in stores where adolescents shop frequently. <i>Tobacco Control</i> , 13, 315-318.	2004
J. Gottheil Marketing Communications, Inc. (2005). <i>The Influence of Tobacco Powerwall Advertising on Children</i> .	2005
Corporate Research Associates, Inc. (2005). <i>2005 National Baseline Survey on the Tobacco Retail Environment</i> .	2005
Wakefield, M., & Germain, D. (2006). Adult smokers' use of point-of-sale displays to select cigarette brands. <i>Australian and New Zealand Journal of Public Health</i> , 30(5), 483-484.	2006
Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. <i>Health Education Research</i> , 21, 338-347.	2006
Wakefield, M., Germain, D., Durkin, S., & Henriksen, L. (2006). An experimental study of effects on schoolchildren of exposure to point-of-sale cigarette advertising and pack displays. <i>Health Education Research</i> , 21, 338-347.	2006
Feighery, E.C., Henriksen, L., Wang, Y., Schleicher, N. & Fortmann, S. (2006). An evaluation of four measures of adolescents' exposure to cigarette marketing in stores. <i>Nicotine & Tobacco Research</i> , 8, 751-759.	2006
Slater, S., Chaloupka, F., Wakefield, M., Johnston, L. & O'Malley, P. (2007). The Impact of Retail Cigarette Marketing Practices on Youth Smoking Uptake. <i>Archives of Pediatrics & Adolescent Medicine</i> , 161, 440-445.	2007

Wakefield, M., Germain, D., Henriksen, L. (2008). The effect of retail cigarette pack displays on impulse purchase. <i>Addiction</i> , 103, 322-328.	2008
Thomson, G., Hoek, J., Edwards, R., & Gifford, H. (2008) Evidence and arguments on tobacco retail displays: marketing an addictive drug to children? <i>The New Zealand Medical Journal, Journal of the New Zealand Medical Association</i> , 121, 87-98.	2008
Populus. (2008). <i>Tobacco Alliance Results Summary</i> .	2008
Hoek, J., Gifford, H., & Edwards, R. <i>Effects of tobacco retail displays on exsmokers and lapsed quitters</i> . New Zealand: Massey University, New Zealand: University of Otago.	No Date

Other Studies

Citation	Year
Pierce et al. (1991). Does Tobacco Advertising Target Young People to Start Smoking? Evidence from California. <i>Journal of the American Medical Association</i> , 266, 3154-3158.	1991
Klitzner et al. (1991). Cigarette Advertising and Adolescent Experimentation with Smoking. <i>British Journal of Addiction</i> . 86, 287-298.	1991
Point of Purchase Advertising Institute (1992). The Point of Purchase Advertising Industry Fact Book.	1992
Smee et al. (1992). <i>Effect of Tobacco Advertising on Tobacco Consumption: A Discussion Document Reviewing the Evidence</i> . Department of Health, London.	1992
Annan, Trade Marketing Solutions (1995) <i>Consumer Communication at the Pop</i> .	1995
Pierce et al. (1995). Tobacco Industry Promotion of Cigarettes and Adolescent Smoking. <i>Journal of the American Medical Association</i> , 257, 511-515.	1995
Pierce et al. (2002). Does Tobacco Marketing Undermine the Influence of Recommended Parenting in Discouraging Adolescents from Smoking? <i>Journal of the Preventative Medicine</i> , 23, 2.	2002
Carter. (2003). New frontier, new power: the retail environment in Australia's dark market. <i>Tobacco Control</i> , 12.	2003
Feighery, et al. (2003). How tobacco companies ensure prime placement of their advertising and products in stores: interviews with retailers about tobacco company incentive programmes. <i>Tobacco Control</i> , 12.	2003
Lovato et al., (2004). Cochrane Review: Impact of Tobacco Advertising and Promotion on Increasing Adolescent Smoking Behaviours. <i>The Cochrane Library</i> , Issue 2.	2004
Blau & Greaves. (2005). Saskatchewan Coalition for Tobacco Reduction: Evidence to Ontario Standing Committee on Finance and Economic Affairs.	2005
Health Canada. (2006). <i>A Proposal to Regulate the Display and Promotion of Tobacco Products at Retail: Consultation Document</i> .	2006
Lavack & Toth. (2006). Tobacco point-of-purchase promotion: Examining tobacco industry documents. <i>Tobacco Control</i> , 15.	2006
Harper. (2006). Why the tobacco industry fears point of sale display bans. <i>Tobacco Control</i> , 15.	2006
LACORS. (2006). Report on the implementation of the point of sale regulations.	2006

Pollay. (2007). More than meets the eye: on the importance of retail cigarette merchandising. <i>Tobacco Control</i> , 16.	2007
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Exhibit 2—Qualifications of Dr. Keegan

Warren J. Keegan, DBA

Biographical Sketch

Dr. Keegan is Distinguished Professor of Marketing and International Business at the Lubin School of Business, Pace University, New York, and Visiting Professor at ESSEC, Cergy–Pontoise, France.

His educational background includes a B.S. (1958) and M.S. (1959) in Economics from Kansas State University, and a Master of Business Administration (1961) and doctorate (1967) from the Harvard Business School.

During a leave of absence from the Doctoral Program at Harvard, Dr. Keegan was employed by the Boston Consulting Group. He worked with the founders of the firm on major strategy assignments and participated in the early stage development of the first major strategy boutique firm in the global consulting industry.

After obtaining his doctorate, Dr. Keegan was appointed Assistant Professor at Columbia Business School in New York City, taught in the MBA program, served on the doctoral faculty, and was promoted to Associate Professor. Professor Keegan then joined the faculty of Baruch College in New York where he taught in the MBA program, served on the doctoral faculty of the City University of New York, and was promoted to full Professor.

In 1976, Dr. Keegan was appointed full Professor at The George Washington University. After four years at The George Washington University, he returned to New York as a visiting professor at the Stern School of Business, New York University. In 1982, he was appointed Professor of Marketing and International Business at Pace University in New York.

Dr. Keegan has taught MBA and doctoral courses at the University level for over 35 years at these schools and has been a visiting professor and lecturer at leading business schools in the U.S., Europe, Africa, Asia and Latin America. He teaches in the marketing, international business, organization strategy and strategic management areas and was the founder and director of the Center for Global Business Strategy at Pace University.

Dr. Keegan has extensive experience in the area of research design and methodological analysis. As a member of the doctoral research faculty, he directed and participated in seminars on research methodology and design at Harvard University, Columbia University, George Washington University, and New York University. At Pace University he offers a special research methodology seminar as part of the research methodology curriculum in the doctoral program. Over the course of his career he has supervised and advised hundreds of students on research design and methodology.

As a faculty member, he has engaged throughout his career in discussion and collaboration with faculty colleagues about research methodology and design. As a member of editorial review boards, and as an author of articles that have been published in refereed journals, he has engaged in ongoing dialog and discussion of research design and methodology best practices.

Additionally, Dr. Keegan has taken numerous graduate and doctoral level courses in research methodology and design including statistical analysis. His consulting assignments have included

the design and implementation of nationwide field surveys of consumer awareness and purchase interest in client consumer products.

He has published in the leading business journals in his field including the Journal of Marketing, Harvard Business Review, Administrative Science Quarterly, Journal of International Business Studies, the Columbia Journal of World Business, and many others. He is on the editorial advisory board of the Cranfield School of Management and Financial Times Management Monograph Series and on the editorial review board of leading marketing and international business journals.

Dr. Keegan has published over thirty books including *Offensive Marketing*, *Global Marketing Management*, now in the Seventh Edition; *Marketing Plans that Work*, now in the Second Edition; *Global Marketing*, now in the Fourth Edition; *Marketing*, now in the Second Edition, *Globales Marketing-Management: Eine Europäische Perspektive* and *Judgments, Choices and Decisions: Effective Management through Self-Knowledge*.

In his consulting practice, Dr. Keegan has focused on marketing and business strategy. He is the founder of Warren Keegan Associates, Inc., a consulting consortium of experts in marketing and global strategic management. The firm is affiliated with MarkPlus, a leading marketing consulting firm in Indonesia and East Asia. Dr. Keegan is co-founder of Keegan & Company LLC, a firm specializing in marketing and research litigation support. He has prepared reports and testified as an expert on a variety of issues in federal and state courts, in arbitration, and before the International Trade Commission.

Exhibit 3—Resume of Dr. Keegan

Dr. Warren J. Keegan

Fellow, Academy of International Business

Education

- Doctor of Business Administration, Harvard University
- Master of Business Administration, Harvard University
- MS, Economics, Kansas State University
- BS, Economics, Kansas State University

Academic Appointments—Full Time

- Distinguished Professor of Marketing and International Business, Pace University, Lubin School of Business. Teach in MBA, Doctoral, and Executive programs; Supervise research design and methodology of doctoral dissertations.
- MarkPlus Global Institute, Singapore, Chairman. Responsible for professional post graduate education program of the Institute.
- New York University, Graduate School of Business Administration, Visiting Professor of Marketing. Taught in MBA, PhD and Undergraduate programs. Supervised research design and methodology of doctoral dissertations.
- The George Washington University, School of Government and Business Administration, Professor of Business Administration. Taught in MBA, Doctoral, and Executive programs. Supervised research design and methodology of doctoral dissertations.
- Baruch College, City University of New York, Associate Professor of Marketing; Professor. Taught in MBA and PhD programs. Supervised research design and methodology of doctoral dissertations.
- Columbia University, Graduate School of Business, Assistant Professor; Associate Professor. Taught in MBA, PhD and Executive programs. Supervised research design and methodology of doctoral dissertations.
- Harvard Business School, Research Associate, Multinational Enterprise Research Project. Project Director: Professor Raymond Vernon.
- University College, Dar es Salaam, Tanzania, Lecturer in Public Administration.
- Sloan School of Management, MIT, Research Assistant.
- IMD formerly IMEDE, (Institute pour l'Etude des Methode de Direction de l'Enterprise)), Lausanne, Switzerland. Research Associate. Assisted Professor David S. R. Leighton in teaching in IMEDE Executive Program and on consulting assignments. Wrote 14 cases, published in D.S.R. Leighton, International Marketing, McGraw Hill.

Other Academic Appointments—Visiting, Current and Former

- Cranfield University School of Management (UK), Visiting University Professor; CEIBS (China European International Business School), Shanghai, Professor of Marketing and International Business.
- ESSEC, Cergy - Pontoise, France. Visiting Professor of Marketing and International Business.
- CEIBS (China European International Business School) Shanghai
- The Wharton School of the University of Pennsylvania, Visiting Professor, Aresty Institute of Executive Education.
- Columbia Business School, Adjunct Professor of International Business, Executive Degree Program for Managers.
- Stockholm School of Economics, Visiting Professor.
- Emmanuel College, Cambridge (UK). Visiting Professor. International Marketing Program.
- University of Hawaii, Advanced Management Program. Professor.
- INSEAD, Fontainebleau, France. Visiting Professor of Marketing; Director European Marketing Program.

Business Experience

Warren Keegan Associates, Inc. (current)

Consultants to senior management in strategic management and global business and marketing strategy. Confidential strategic advisor to CEO's. Author of trade and textbooks discussing strategic management, marketing, marketing research, and international business.

Keegan & Company LLC (current)

Litigation consulting and expert testimony in state and federal courts and before administrative agencies.

MarkPlus Global Institute, Singapore, Chairman

Responsible for professional post graduate education program of the Institute.

Douglas A. Edwards, Inc., Chairman

Leadership responsibility for formulating and implementing business strategy that positioned firm as a unique provider of corporate real estate services in the New York market.

Arthur D. Little

Staff consultant and faculty member of ADL Institute.

Boston Consulting Group

Client assignments in corporate strategy development and implementation. Worked closely with founding partners: Bruce Henderson, Jim Abegglen, Si Tillis and Art Contas.

Government of Tanzania, MIT Fellow in Africa

Assistant Secretary, Ministry of Development Planning and Executive Secretary, Economic Development Commission. Member of team which prepared a national Five Year Economic and Social Development Plan.

General Motors Corporation

Marketing Staff, Pontiac Motor Division. Reported to national sales manager.

Professional Association & Editorial Activities

Academy of International Business—Fellow of the Academy (a lifetime appointment), former officer, active Board Member, and National Program Chairman. Chairman of the Membership Committee of the AIB Fellows.

American Marketing Association—Former Officer, active in national program planning.

Editorial Advisory Board—Cranfield School of Management and Financial Times Management Monograph Series.

General Advisory Board—International Business and Investing in Russia, The Haworth Press.

Marketing Science Institute—Former Co-chairman of research workshops on Global Product Management.

Editorial Advisory and Review Boards (former and current)

- Journal of International Marketing
- Journal of Marketing
- Journal of Segmentation in Marketing
- Journal of International Business Studies
- The Global Economic Quarterly
- Columbia Journal of World Business
- Journal of Business
- Journal of Asia-Pacific Business
- Journal of Marketing Practice
- Applied Marketing Science
- Detroit Journal of Multinational Business

- International Journal of Medical Marketing
- The Academy of Marketing Science Journal

Directorships and Advisory Boards (Current and Former)

Independent Commissioner: PT Indofood Sukses Makmur (Jakarta), Director: The S. M. Stoller Corporation; The Cooper Companies, Inc.; Inter-Ad, Incorporated; American Thermal Corporation, Inc.

Member, International Advisory Board of École des Hautes Études Commerciales (HEC), Montreal and the Talaga Bestari Learning Center, Jakarta, Indonesia. Board of Governors, World Trade Council of Westchester, Director, Wainwright House, Rye, NY, Director, Harvard Club of Westchester, Director, Rye Historical Society, Member, Financial Advisory Board, City of Rye, NY.

Honors & Awards

- Distinguished Professor, Lubin School of Business, Pace University. This Presidential appointment is based on the recommendation of the graduate faculty and Dean of the Lubin School of Business and approved by the University Provost. The appointment is based on global academic reputation in strategic marketing and international business and exemplary performance and outstanding contributions to the University and School.
- Fellow of the Academy of International Business. One of 50 scholars in the world recognized for outstanding contributions and significant development of knowledge in the field of international business.
- Individual Eminent Person (IEP) Appointed by Asian Global Business Leaders Society (Other awardees include: Noel Tichy, Rosabeth Moss Kanter and Gary Wendt). Inducted February 2000.
- International Marketing Author of American Marketing Association Dictionary of Marketing Terms, First and Second editions, American Marketing Association.
- Honorary member, Indonesian Marketing Association and Asian Marketing Federation.
- “Multinational Product Planning: Strategic Alternatives” (cited as one of the 150 books and articles that have had the most impact on the marketing discipline) in Larry M. Robinson and Roy D. Adler, Marketing Megaworks, New York: Praeger Publisher, 1987, pp. 86-87.
- First Prize in Pace University’s Annual Contest for Best Faculty Publication for Judgments, Choices, and Decisions, John Wiley & Sons.

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Exhibit 4—Selected Publications of Dr. Keegan

Selected Publications of Dr. Warren J. Keegan 1965-2008

Keegan, Warren J. and Mark C. Green. *Global Marketing, Fifth Edition*. Englewood Cliffs, NJ.: Pearson Prentice Hall, 2008. Graduate-level textbook focusing on the global marketing environment, the global marketing mix, designing and conducting consumer research on a global scale, principles of strategy and leadership.

Global Marketing Management, Seventh Edition, Prentice Hall, Inc., part of Prentice-Hall series in marketing, Philip Kotler, Editor, 2002. Graduate-level textbook focusing on identifying global market opportunities, including designing global marketing information systems and conducting consumer research, creating global marketing programs, managing global marketing programs.

Marketing Plans That Work: Targeting Growth and Profitability, Second Edition, with McDonald, M. H. B, Butterworth-Heinemann, 2002. Graduate-level textbook focusing on the marketing process, marketing objectives and strategies, marketing research and forecasting, marketing communications.

Marketing, Second Edition, with Sandra Moriarty and Tom Duncan, Prentice Hall, Inc. 1995. Undergraduate-level textbook focusing on marketing strategy and planning, marketing information and research, marketing communications.

Offensive Marketing: An Action Guide to Gaining the Offensive in Business, First Edition, with Hugh Davidson. Elsevier, Butterworth Heinemann, 256 pages, 2004. Graduate-level textbook focusing on the offensive marketing approach, strategy, communications, fundamentals of market research, designing and implementing offensive marketing research.

Keegan, Warren J. and Mark Green, *Global Marketing, Fourth Edition*, Chinese Simplified Translation, China Renmin University Press, Hong Kong, Pearson Education Asia Ltd, 2005.

Keegan, Warren J. *Global Marketing Management, Seventh Edition*, Portuguese Translation, Prentice Hall, 2005.

Global Marketing, Fourth Edition, with Mark C. Green, Upper Saddle River, NJ, Prentice Hall, Inc., 2004.

The New Landscape of Global Marketing: Winners and Losers in the 21st Century. Special World Marketing Association Edition, Singapore Nanyang Business Review, Vol. 2 No. 1 January–June 2003.

Global Income and Population 2002 Edition: 2002 and Projections to 2010 and 2020, Center for Global Business Strategy, Lubin School of Business, Pace University, New York, New York, 2002.

Global Marketing Management: A European Perspective, with Bodo Schlegelmilch, Harlow, England: Pearson Education, 2001.

Global Marketing, Second Edition, with Mark C. Green, Prentice Hall, Inc., 2000.

Princípios de Marketing Global, with Mark C. Green, São Paulo, Brasil: Editora Saraiva, 1999.

Fundamentos de Mercadotecnia Internacional, with Mark C. Green (Primera edición ed.)
Naucalpan de Juárez, Edo. de México: Prentice-Hall Hispanoamericana, S.A., 1998.

Principles of Global Marketing, with Mark C. Green, Upper Saddle River, New Jersey: Prentice Hall, Inc., 1997.

Global Marketing Management, Canadian Edition, with F.H. Rolf Seringhaus, Scarborough, Ontario: Prentice-Hall Canada Inc., 1996.

Marketing, Canadian Edition, with Sandra E. Moriarty, Thomas R. Duncan and Stanley J. Paliwoda, Scarborough, Ontario: Prentice-Hall Canada Inc., 1995.

The Global Observer, A Weekly Column in "International Business" a core content feature of The Prodigy On- Line Interactive Service, April 13, 1993 to June 30, 1994.

Marketing Sans Frontières, with Jean-Marc De Leersnyder, Paris: InterEditions, 1994.

Advertising Worldwide, with Marieke de Mooij, Prentice Hall, Ltd, 1991.

Judgments, Choices and Decisions: Effective Management Through Self-Knowledge, New York, John Wiley & Sons, 1984.

Keegan Type Indicator and Guide to Type, Warren Keegan Associates Press, 1983.

Case Studies in the Management of Economic Development, Oxford University Press. 1968.

Numerous articles in the Harvard Business Review, Journal of Marketing, Administrative Science Quarterly, Journal of International Business Studies, Columbia Journal of World Business, Executive, Long Range Planning, Planning Review, International Marketing Review, and other magazines and journals.