UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION

In the Matter of	**PUBLIC**
NORTH CAROLINA BOARD OF DENTAL EXAMINERS,	DOCKET NO. 9343
Respondent.	

COMPLAINT COUNSEL'S OPPOSITION TO RESPONDENT'S MOTION TO STRIKE (IN PART) REBUTTAL REPORT OF PROFESSOR JOHN KWOKA

Pursuant to Commission Rules of Practice 3.22 and 3.31A, Complaint Counsel respectfully submits this opposition to Respondent's Motion to Strike (In Part) Rebuttal Report of Professor John Kwoka. Respondent's motion to strike is without merit, and should be denied.

Dr. Kwoka is an expert in industrial economics and the economics of professional regulation. Dr. Kwoka's Expert Report was served on November 26, 2010 (Attachment A). The Report of Respondent's economic expert, Dr. David L. Baumer, was served on December 20, 2010 ("Baumer Report") (Attachment B). And Dr. Kwoka's Rebuttal Report was served on January 8, 2011 (Kwoka Rebuttal Report) (Attachment C).

Respondent's motion cavalierly pronounces that various sections of the Kwoka Rebuttal Report are improper and should be stricken. Respondent provides this Court with no rationale, no explanation, and no analysis. For this reason alone, the motion should be denied.

An expert may properly include within his rebuttal expert report any information that will "explain, repel, counteract or disprove" the expert testimony offered by the opposing party.

United States v. Finis P. Ernest, Inc., 509 F.2d 1256, 1263 (7th Cir. 1975), *cert. denied*, 423 U.S. 893, (1975); *Crowley v. Chait*, 322 F. Supp. 2d 530, 551 (D.N.J. 2004); Wright & Miller, *Federal Practice and Procedure*, §2031.1 at 79 (2010). Measured by this standard, the Kwoka Rebuttal Report is proper in its entirety.

Below, we discuss the sections of the Kwoka Rebuttal Report that the Board proposes to strike.

1. **Page 1, all paragraphs under heading I**. Dr. Kwoka's Rebuttal Report begins with a brief summary of his initial report. This summary establishes the framework for all that follows. In the body of the Rebuttal Report, Dr. Kwoka explains where each of Dr. Baumer's arguments fits within this overall framework. Thus, the opening summary helps to **explain** Dr. Baumer's Report. Further, this framework assists the reader to understand the relevance and significance of Dr. Kwoka's specific responses to each of Dr. Baumer's arguments. (For example, answering the questions: Why is this issue important? How does it relate to the principal issues in this litigation?) In this way, the summary contributes toward Dr. Kwoka's overall effort to **repel, counteract, and disprove** the Baumer Report.[1]

The following paragraph of the Rebuttal Report previews Dr. Kwoka's assessment of the Baumer Report. Dr. Kwoka opines that "the Baumer Report is flawed in its reading of my Report, in its analysis of the issues, in its uncritical deference to the actions of the Board, and in its economic analysis." This paragraph, together with the detailed explanation that follows, **repels, counteracts, and disproves** the Baumer Report.

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[1] That this section of the Kwoka Rebuttal Report summarizes material included in the initial expert report is not itself improper. Rule § 3.31A(c) provides that a "rebuttal report . . . need not include any information already included in the initial report of the witness." The rule does not preclude the inclusion of such material in a rebuttal report where otherwise appropriate.

2. **Page 2, paragraphs 1 - 3 under heading II; Page 3, paragraph 2**. In these paragraphs, Dr. Kwoka discusses portions of the Baumer Report that are consistent with, or in agreement with, Dr. Kwoka's initial Report. This is permissible because Dr. Kwoka is **explaining** the Baumer Report, and is **explaining** how the contentions therein relate to Dr. Kwoka's economic analysis of the Board's conduct. Also, showing that Dr. Baumer concedes portions of Dr. Kwoka's analysis serves to **repel** and **counteract** Dr. Baumer's criticism of Dr. Kwoka's conclusions. Showing internal inconsistencies in Dr. Baumer's Report serves to **counteract** and **disprove** Dr. Baumer's analysis and reliability. Dr. Baumer uses the term "cross-elasticity." Dr. Kwoka **explains** the meaning of this term.

3. **Page 5, paragraph 1 and 2 under heading III**. In these paragraphs, Dr. Kwoka first identifies a major conclusion of his initial Report ("that the exclusion of kiosk/spa teeth whitening harms consumers"), and Dr. Baumer's responses thereto. This **explanation** of the Baumer Report is entirely proper. Dr. Kwoka then identifies an area of agreement between the two experts. As discussed above, identifying areas of agreement, including Dr. Baumer's concessions, serves to **repel** and **counteract** Dr. Baumer's criticism of Dr. Kwoka's conclusions.

4**. Page 7, last sentence of paragraph 4; Page 8, first paragraph**. The Baumer Report inaccurately attributes to Dr. Kwoka the view that the Dental Board is a cartel, and then proceeds to critique this contention. On pages 7 of his Rebuttal Report, Dr. Kwoka states that "[r]ather than the straw-man cartel model that the Baumer Report invents and then attacks, my economic framework is that of exclusion." Then, in a section of the Rebuttal Report that the Board proposes to strike, Dr. Kwoka describes the differences between a cartel model and an exclusion model. Dr. Kwoka explains how the exclusion of non-dental teeth whiteners can harm competition even though a large number of independent (non-cartelized) dentists are present in

the market. Read in context, this section of the Kwoka Reputtal Report **explains, repels, counteracts, and disproves** a central contention of the Baumer Report.

In sum, Dr. Kwoka's Rebuttal Report is fully within the scope of fair rebuttal, and is proper in all respects. Accordingly, Respondent's motion to strike (in part) should be denied.

Respectfully submitted,

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Dated: January 18, 2011

UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION

In the Matter of	)	
	)	DOCKET NO. 9343
NORTH CAROLINA STATE BOARD OF DENTAL EXAMINERS,	)	
	)	
Respondent.	)	

[PROPOSED] ORDER

It is hereby, ORDERED, that Respondent's Motion to Strike (In Part) Rebuttal Report of Professor John Kwoka is hereby, DENIED.

ORDERED:

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D. Michael Chappell
Chief Administrative Law Judge

DATE:

Attachment A

EXPERT REPORT OF PROFESSOR JOHN KWOKA

[FTC v. North Carolina Board of Dental Examiners; Docket No. 9343]

I. Introduction and Summary of Conclusions

My name is John Kwoka. I am the Neal F. Finnegan Distinguished Professor of Economics at Northeastern University. I have been asked by staff of the Federal Trade Commission to evaluate from an economic perspective two issues. The first concerns whether the North Carolina State Board of Dental Examiners ("Board") has a material interest in seeking to prohibit the provision of teeth whitening services by non-dentists in the state. The second issue concerns the harm to consumers from its successful efforts at prohibition.

Based on my economic analysis and review of the facts, I have come to the following conclusions:

- There are several methods of teeth whitening among which consumers may choose.

- New alternative methods have been developed to satisfy diverse consumer preferences.

- The Board has acted vigorously to prohibit non-dentist teeth whitening in North Carolina.

- The Board represents licensed dentists in North Carolina, who have a material interest in prohibiting teeth whitening by non-dentists.

- The exclusion of non-dentist teeth whitening is harmful to consumers because it denies some consumers options they prefer and likely increases the prices of the remaining options.

- Complete exclusion is not justified by any economic argument set forth by the Board.

- Respondent's claims of problems associated with kiosk/spa teeth whitening providers have little evidentiary support.

- If any such problems do exist, they can be resolved through remedies much less restrictive than exclusion.

In what follows I provide the bases for my conclusions.

II. QUALIFICATIONS

I received my PhD in Economics from the University of Pennsylvania in 1972. My career has been devoted to the study, teaching, and practice of antitrust economics, regulatory economics, and industrial organization generally. I have been on the faculty of Northeastern University since 2001, when I was appointed the first Neal F. Finnegan Distinguished Professor of Economics. Prior to this appointment, I was on the faculty of the Department of Economics at George Washington University for 20 years, during the last of which I was Columbian Professor, and prior to that at the University of North Carolina at Chapel Hill. I have also had visiting academic positions at Northwestern University and at Harvard University. My non-academic positions have been with the Bureau of Economics of the Federal Trade Commission, the Antitrust Division of the Department of Justice, and the Common Carrier Bureau of the Federal Communications Commission.

I am currently on the Board of Directors of the Industrial Organization Society, a member of the Editorial Board of the REVIEW OF INDUSTRIAL ORGANIZATION, and a Research Fellow and Board Member of the American Antitrust Institute. I have previously been President of the Industrial Organization Society, Vice-President of the Southern Economic Association, General Editor of the REVIEW OF INDUSTRIAL ORGANIZATION, editorial board member of the JOURNAL OF INDUSTRIAL ECONOMICS, a Research Fellow at the Brookings Institute, a Fellow at the Center for Business and Government at the Kennedy School, and a Guest Scholar at the Amsterdam Center for Law and Economics.

I teach antitrust, regulatory, and industrial organization economics at the PhD, Masters, and undergraduate levels, and lecture regularly on these subjects. My research covers a wide range of topics in these fields, including advertising, coordinated behavior among sellers, and the effects of restrictions on competition on price and other market outcomes. While at the Federal Trade Commission, I was one of the authors of the Bureau of Economics report THE EFFECTS OF RESTRICTIONS ON ADVERTISING AND COMMERCIAL PRACTICE IN THE PROFESSIONS: THE CASE OF OPTOMETRY, which examined the impact of such restrictions on the price and quality of optometric services.

My other publications include co-editorship of a leading book on the economics of major recent antitrust cases entitled THE ANTITRUST REVOLUTION, now in its 5th edition. I have also authored more than 70 scholarly articles on various issues in antitrust, regulatory, and industrial economics. These have appeared in such leading academic journals as the AMERICAN ECONOMIC REVIEW, the INTERNATIONAL JOURNAL OF INDUSTRIAL ORGANIZATION, the JOURNAL OF INDUSTRIAL ECONOMICS, the QUARTERLY JOURNAL OF ECONOMICS, and the REVIEW OF ECONOMICS AND STATISTICS, among others.

I have served as economic expert on numerous antitrust, regulatory, and international trade matters. As part of those activities, I have both filed written testimony and appeared in judicial, regulatory, and administrative proceedings in the U.S. and Canada.

My complete curriculum vitae is attached as Attachment A.

III. SCOPE OF WORK

In preparation for this testimony, I have reviewed both the empirical and the theoretical literature in economics concerning professional associations, examined documents and other evidence with respect to teeth whitening services, and reviewed the record of the North Carolina State Board of Dental Examiners with respect to non-dentist provision of teeth whitening services. I have reviewed business documents, transcripts, pleadings, and studies. A list of materials that I have considered and relied upon is attached as Attachment B, and the materials will be transmitted separately. Since fact discovery has only recently finished, I continue to review relevant materials and new submissions in this matter. Accordingly, I reserve the right to modify my conclusions based on these additional materials and submissions and the right to supplement this Affidavit based on any additional work that I may undertake.

The scope of my work includes consultation with staff, drafting of preliminary statements, and presentation of testimony at deposition and trial, as necessary. I am being compensated for my work at the hourly rate of $500.

IV. THE BUSINESS OF TEETH WHITENING IN NORTH CAROLINA

The North Carolina State Board of Dental Examiners has sought to prohibit the provision of teeth whitening by kiosks, spas, and other enterprises operated by nondentists. In order to analyze the economic issues raised by these actions, I begin with a brief overview of my understanding of the factual background.

There are several alternative methods of whitening teeth. One method, long used, is that provided by dentists in their offices. This procedure produces the greatest and quickest results but involves considerable office time and the highest cost. It requires "isolation" of gums and soft tissue by use of a rubber dam or painted-on protection, followed by application of a high concentration hydrogen peroxide gel and most often a light source accelerant.[1] This procedure is repeated in three or four 15-minute periods and provides immediate results. Dental office teeth whitening costs the patient on average about $400-$500, but ranges from $200 to $1000, depending on the exact product and dentist.

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[1] *See, e.g.* (Parker Dep. 20:15-21:7); AMERICAN DENTAL ASSOCIATION, COUNCIL ON SCIENTIFIC AFFAIRS, *Tooth Whitening/Bleaching: Treatment Considerations for Dentists and Their Patients*, NCBOARD4932-44, CX0392-002 (Sept. 2009); Web page titled, "Tooth Whitening How Does Bleaching Work and What Does it Cost?, NCBOARD7301.

All the other methods of teeth whitening involve a greater degree of control of the process by customers. A second method, also originating with dentists, involves sales by the dentist of take-home kits for teeth whitening. After an initial consult and tray fitting, and perhaps a follow-up, the remainder of the procedure including peroxide handling and application is left to the individual user. Take-home kits offer the consumer the convenience of whitening with a lower concentration of hydrogen peroxide, safe enough to use at home, as well as the consultation with the dentist. These take-home packs take longer and generally cost somewhat less than full dentist provision.[2]

An innovative and simpler process for whitening teeth involves the use of over-the-counter (OTC) strips that customers can purchase from drug stores and other merchants much as they purchase toothpaste. Strips contain lower-concentration peroxide, are placed directly on the teeth by the customer according to package instructions, and are to remain in place for some number of hours per day over the course of several days. OTC strips offer reasonable efficacy, ease of application, and at-home convenience, all at a cost of $25 to $75 a fraction of the cost of either dentist provision of teeth whitening or take-home kits.[3]

Kiosk/spa provision of teeth whitening the third and newest innovation offers consumers an additional alternative to OTC strips and dentist provision of teeth whitening. Kiosk and spa operators use kits containing bleaching trays filled with moderate peroxide solutions that are used on-site. Operators provide information, assist with preparation of the trays, and may administer a light source. Sessions of 30 to 45 minutes are typical and need not be repeated. Results may not be as great as dentist provision but are quicker than OTC strips. The cost is around $75-$150.[4]

V. ACTIONS AND POSITION OF THE BOARD

The record indicates that, beginning in 2004, the Board became aware of the emergence of the new kiosk/spa method of non-dentist provision of teeth whitening in North Carolina. The Board began to receive complaints about non-dentist teeth whitening in February of that year, and to date has received dozens of complaints. Notably, the first complaint came not from a consumer but rather from a practicing dentist. The first recorded consumer complaint did not

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[2] Holland Dep. 58:11-16 ($350); Oyster Dep.- 29:8-9 ($300).

[3] I would note that some OTC products now include light sources to be applied by the customer. Much as dentists' use of LED lights, these are intended to accelerate the whitening process. Kits with lights cost somewhat more, on the order of $50.

[4] Bleach Bright Advertisement for $99 Whitening, CX0043-005; Signature Spas of Hickory Advertisement for $199.99 Whitening, CX0054-006; Movie Star Smile Advertisement for $99 Whitening, CX0198-002; Complaint by Dr. Harald Heymann, CX0365-002 (Nov. 19, 2007).

occur until April 2008, more than four years later, by which time the Board had received nearly 30 complaints, primarily from dentists, but also from dental assistants and hygienists.[5] Of about 60 complaints up until March 2010,the Board received only four from consumers, covering exactly three episodes.

The Board has acted with speed and force in these matters. It began a process that often consisted of sending out its investigators, querying kiosk/spa operators, and issuing "cease and desist" letters to those kiosk operators. The letters stated that the Board had determined that the operators were providing teeth whitening services without dentist supervision in contravention of North Carolina law, and in two instances the Board went on to secure arrest warrants as well. Through March 2010, it would appear that the Board has issued about 40 cease and desist letters in addition to obtaining the arrest warrants.[6]

The Board supplemented these actions against kiosk/spa operators with letters issued to mall operators and owners of properties leased by spas and salons where it believed that non-dentist teeth whitening was offered. These letters advised the mall and property owners that unlawful activity was occurring on their properties and cautioned them against permitting any such activity. In addition, the Board sent letters to manufacturers and distributors informing them that teeth whitening services provided without dentist supervision were unlawful.

These actions by the Board were apparently effective. Kiosk/spa operations challenged by the Board ceased business.[7] Mall operators declined to renew leases and refused to rent to

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[5] First Complaint: CX0032 (Feb. 2004); First Consumer Complaint: CX0055 (April 11, 2008); Intervening Complaints: CX0030; CX0034; CX0035; CX0036; CX0411; CX0041; CX0045; CX0054; CX0092; CX0198; CX0245; CX0278; CX0281; CX0353; CX0365; CX0372; CX0404; NCBOARD232-33; NCBOARD404; NCBOARD816; NCBOARD1080; NCBOARD1094; NCBOARD1130-32; NCBOARD1133-34; NCBOARD1821-22; NCBOARD2780.

[6] Complaint Counsel's Motion for Partial Summary Decision, Tab 62; Warrant for the Arrest of Marcia Angelette, CX0034-007; Warrant for the Arrest of Brandi Tysinger Temple, CX0040-008-9.

[7] A non-exhaustive list includes: Electronic Mail to Hardesty from Dempsey: re: Amazing Grace Spa (07-021), NCBOARD2 (Jan. 16, 2008) (stating that Amazing Grace Day Spa stopped offering teeth-whitening after receiving a cease and desist letter from the N.C. Dental Board); Memorandum to Members of the Board from Friddle: re: Closed Investigative Files, NCBOARD1045 (July 16, 2007) (recounting that Champagne Taste/Lash Lady no longer provided teeth whitening services after being sent a cease and desist letter); Memorandum to Members of the Board from Friddle: re: Closed Investigative Files, NCBOARD1074 (Feb. 29, 2008) (stating that Savage Tan no longer offered teeth whitening after being sent a cease and desist letter); Letter to North Carolina State Board of Dental Examiners from Modern Enhancement Salon, CX0162 (Feb. 9, 2009) (Modern Enhancement salon owner stated that she

interested would-be tenants.[8] Customers of those providers either abandoned their efforts at teeth whitening or had to choose between more cumbersome OTC strips and more expensive dentist provision.

VI. THE BOARD HAS A MATERIAL INTEREST IN THIS MATTER

The first issue I was asked to consider is whether the North Carolina State Board of Dental Examiners has a material interest in the teeth whitening business in the State of North Carolina. I have concluded that they do. The Board reflects the interest of licensed dentists in the state. Licensed dentists earn income by offering teeth whitening services, and they stand to gain from the exclusion of competing non-dentist providers.

A. The Board Is Dominated by Licensed Dentists and Reflects Their Interests

By statute, the North Carolina State Board of Dental Examiners consists of eight members. Six are dentists, each elected for a three-year term by licensed members of the profession within the state. The additional members are a licensed hygienist and a "consumer representative" appointed by the Governor.

The dominance of the Board by licensed dentists ensures that Board decisions reflect the views and interests of licensed dentists in the State. Moreover, on matters involving the so-called "unauthorized practice of dentistry," the consumer representative may not vote at all, putting decisions on such matters even more firmly in the hands of licensed dentists.

Among these interests is the provision of teeth whitening services. According to the American Dental Association, "Over the past two decades tooth whitening or bleaching has become one of the most popular esthetic dental treatments."[9] It is an esthetic, or cosmetic, procedure since it is directed solely at the appearance of teeth rather than their health, maintenance, or repair.[10] Cosmetic dentistry overall is a rapidly growing field. A 2007 survey conducted for the American Academy of Cosmetic Dentistry reported that its 5500 members

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would "no longer perform this service as per your order to stop and will no longer perform teeth whitening services unless told otherwise by the NC Board of Dental Examiners.").

[8] *See, e.g.*, Letter from Brian Wyant to Steve Osnowitz, BXW-FTC-0002 (stating that due to N.C. Dental Board pressure Wyant was unable to renew his lease with one mall and was rejected for a lease at another).

[9] AMERICAN DENTAL ASSOCIATION, COUNCIL ON SCIENTIFIC AFFAIRS, *Tooth Whitening/Bleaching: Treatment Considerations for Dentists and Their Patients*, NCBOARD4933, CX0392 (Sept. 2009)

[10] PROCTOR & GAMBLE, *Report of a Scientific Advisory Group: Critical Assessment of Safety and Regulatory Status of Crest Whitestrips*, ADA-0558 to 86 (Nov. 28, 2003).

performed an estimated total of 389,000 bleaching and whitening procedures, generating about $25,000 in revenues per member per year.[11] Among dentists generally, a 2002 survey conducted by the ADA and Colgate reported that "dentists said the fastest-growing part of their business was teeth whitening, with a 25.1 percent growth rate."[12]

B. Competition Between Dentist and Non-Dentist Teeth Whitening

As discussed above, each method of teeth whitening is somewhat different. But as is well recognized in the economics literature, differentiated products or services can nevertheless be substitutes for each other in the eyes of consumers, and so they compete with each other. Those services that are more similar are closer substitutes and so compete more closely.[13] The Horizontal Merger Guidelines discuss this issue. Section 6.1 states "In differentiated product industries, some products can be very close substitutes and compete strongly with each other, while other products are more distant substitutes and compete less strongly. For example, one high-end product may compete much more directly with another high-end product than with any low-end product." U.S. Department of Justice and FTC Horizontal Merger Guidelines § 6.1 (2010).

The exclusion of any one service benefits providers of competing services, since some of the consumers who would have chosen the excluded service now shift to the alternative service. That in turn increases the volume and often the price of providers of the alternative service, to the detriment of consumers. The magnitudes of the provider benefit and the corresponding consumer harm are greater the more similar the products are to each other.

Knowledgeable parties from both within and outside the business recognize there is

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[11] American Academy of Cosmetic Dentistry, Press Release, *Cosmetic Dentistry Continues to Surge Market Estimated at $2.75 Billion* (December 13, 2007), http://www.aacd.com/index.php?module_cms&page_56 (last visited Sept. 24, 2010). On its website, Procter & Gamble, the maker of Crest White Strips as well as Professional White Strips for sale by dentists, suggests that dentists could increase practice revenue substantially by performing teeth whitening services: "Your esthetic practice could explode overnight." ("Practice Management Toolkit") http://www.dentalcare.com/en-US/practice/communic/infoage.jspx.

[12] CX0384-002.

[13] Models of product (and service) differentiation are also discussed in standard textbooks on the economics of industrial organization. *See generally* LYNNE PEPALL, GEORGE NORMAN & DANIEL J. RICHARDS, INDUSTRIAL ORGANIZATION: CONTEMPORARY THEORY AND PRACTICE ch. 7 (3 ed. 2005); J.R. CHURCH & ROGER WARE, INDUSTRIAL ORGANIZATION: A STRATEGIC APPROACH ch. 11 (1999); DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION ch. 7 (4th ed. 2004).

substantial substitution and competition between kiosk/spa providers and dental providers. The American Dental Association itself has stated, "The tooth whitening market has developed into four categories: professionally applied (in the dental office); dentist-prescribed/dispensed (patient home-use); consumer-purchased/over-the-counter (OTC) (applied by patients); and other non-dental options (e.g., mall kiosks, spa settings, cruise ships)."[14] Practitioners recognize consumer substitution and the competition among alternatives that it engenders. Non-dentist providers compare themselves to dental teeth whitening, emphasizing their lower cost and greater convenience.[15] They also compare themselves to OTC strips, noting their greater speed. Dentists recognize that the products share similar attributes,[16] and stress their training and the privacy of their services as competitive advantages relative to kiosks and salons.[17]

Dentist providers stand to benefit substantially from the exclusion of kiosk/spa operators as long as a substantial fraction of those consumers denied the kiosk/spa teeth whitening services would choose dentist provision as their alternative. The above evidence on substitution suggests that this is the case. This conclusion is corroborated by the many characteristics that kiosk/spa provision and dentist provision have in common, more so, it would seem, than kiosk/spa and OTC strips. Among these characteristics are the ability to have the service completed in one sitting, an attribute that appears to be important for some consumers;[18] the assistance of a live

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[14] AMERICAN DENTAL ASSOCIATION, COUNCIL ON SCIENTIFIC AFFAIRS, *Tooth Whitening/Bleaching: Treatment Considerations for Dentists and Their Patients*, NCBOARD4932-44, CX0392-002 (Sept. 2009).

[15] *See, e.g.*, SheShe Spa Advertisement, CX0096-0004; Signature Spas of Hickory Advertisement, CX0054-006.

[16] Complaint by Dr. Tal Link, CX0372-001 (Jan. 12, 2007) (dentist complaint about a non-dentist teeth whitening manufacturer distributing brochures in the area where the dentist provides teeth whitening: "From their website, the procedure is very similar or identical to the system we use in our office.").

[17] *See* AMERICAN DENTAL ASSOCIATION, *Talking Points: Whitening at a Salon or Mall Kiosk by Unlicensed Individuals*, CX0185 (Jan. 2010) ("To a dentist you are a patient - to whitening kiosk staff, you are a customer"); Electronic Mail to Luther from Williams, 002373 (May 20, 2008) (Talking points for ADA director for Good Morning America interview: "[T]here is the goldfish factor to consider. When you whiten at home or in the dental office, your privacy is respected. At a mall kiosk, people can stand around and watch you during the whole procedure.").

[18] As one Board member acknowledged, "for the next-day whitening you have basically two choices[,] . . go to a dentist for a treatment like Zoom or to go to a kiosk or a salon for a treatment."). Feingold Dep. 184:9-20).

person in answering questions and providing other benefits not present with OTC products;[19] and others.

I would note that the existence of a financial interest of dentists in the exclusion of kiosk/spa operators does *not* require that dentists be the only substitute for kiosk/spa operators, or even that they be the closest substitute for most consumers (though this is likely the case). It requires only that they compete with each other to a significant degree.

VII. ECONOMIC THEORY AND CASE-SPECIFIC EVIDENCE INDICATE THAT EXCLUSION OF KIOSK/SPA PROVIDERS HARMS CONSUMERS

A. Exclusion and Entry Barriers Harm Consumers

The second question I was asked to address is whether the full or partial exclusion of existing kiosk/spa operators, or the prevention of entry of new operators, causes harm to consumers of teeth whitening services in North Carolina. I have concluded that it does. My principal basis for this conclusion is that basic microeconomic theory and much empirical evidence demonstrate that the exclusion of providers of a competing product or service generally harms consumers. For example, a well-known textbook by Carlton and Perloff states that "ease of entry and exit plays a critical role in determining market structure and the subsequent performance of firms." They go on to observe, "In many industries, government or groups of firms collectively set licensing requirements that restrict entry," and that in taxicabs and other markets where this is the case, "entry restrictions transfer money from consumers to firms that were able to operate in this market" (pp. 73, 75). And ease of entry can be influenced by the behavior of incumbent firms. Another textbook, by Church and Ware, states that "incumbent firms can act strategically to raise the costs of a potential entrant, thereby putting them at a competitive disadvantage and reducing the profitability of entry." (p. 123).

This is among the most fundamental results of economic science. The result is so strong that horizontal exclusion of this kind, like other direct actions intended to blunt or eliminate competition are presumed in economics to be anticompetitive, absent some compelling justification. The reasoning behind this presumption in the present case is straightforward. Exclusion of non-dentist providers makes purchasers of kiosk/spa services worse off because they no longer have their first choice available to them. They must either switch to a less-preferred alternative (dentist-provided service or OTC strips) or they must forego teeth whitening services altogether.

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[19] A live provider may provide many services, including in person instruction, warnings of contraindications for safety, advice, clean up, work with someone who likely has done teeth whitening multiple times, responsibility for the entire process on someone else, choice of teeth whitening product left to someone else, reassurance, and a real person to complain to or to ask about problems.

Furthermore, as discussed above, the loss of competition between kiosk/spa services and dentist-provided services will likely cause the price of the latter to be higher than it otherwise would be. The result is harm to two groups of customers: those consumers who already preferred the dentist-provided service but now find its price to be higher, and those consumers who preferred kiosk/spa service but would have switched to the dentist-provided service at its original price. Both sets of consumers will have to pay a higher price, switch to OTC strips, or else forego teeth whitening services altogether.

A prohibition on kiosk/spa services would not only eliminate the obvious competition provided by existing kiosk/spa operations, it would also eliminate the prospective competition that would have been provided by operations that would have entered in the future. The loss of future entry and competition would have further adverse effects on consumers above and beyond those caused by the elimination of the existing kiosk/spa operators in North Carolina. Those include the loss of additional suppliers as well as the possible loss of new innovations in the delivery of teeth whitening services.

B. Claimed Problems with Kiosk/Spa Operators Either Do Not Exist or Can be Solved with Remedies that are Less Restrictive than a Total Ban

The argument in general favoring free competition is very strong and is broadly agreed upon among economists. Nevertheless, there can be circumstances in which unrestricted firm behavior can harm consumers, and in such cases remedial intervention may be appropriate. Respondent has made several claims regarding problems associated with kiosk/spa operators that they argue justify exclusion. I discuss these below.

In all cases, the evidentiary basis for the claims is weak. More importantly, none of the claimed problems, even if they were found to exist, requires exclusion of an entire class of providers/competitors as a remedy. The Board could have adopted or advocated less restrictive alternatives, alternatives that are in fact used to address such issues. This is what has happened when there have been problems with services provided by dentists. The practice of dentistry was not shut down due to these occasional lapses, nor should it have been.[20] The draconian strategy of outright exclusion destroys the benefits that consumers enjoy from the existence of an

[20] The Board itself admits, among other things, that "dental patients have received non-transitory injuries as a result of their dental treatment and required further treatment by another licensed dentist" (Board Admission 31), and "investigations have revealed that licensed dentists have on occasion engaged in unsanitary practices" (Board Admission 33). In these cases, the Board "investigated these matters and has taken appropriate disciplinary action" (e.g., Board Admissions 31, 33). More specifically, with respect to teeth whitening, the Board has indicated that at least one dentist's patient was injured during teeth whitening, while others may have received "non-physical injuries that could result from dishonesty or deception." Responses to Complaint Counsel's First Set of Interrogatories, No. 4 (Nov. 19, 2010).

additional choice, whereas appropriate remedies serve to correct problems that may exist, while preserving those benefits.

One Board claim is that kiosk/spa operators "sometimes pass[ing] themselves off as medical personnel" and consumers might mistakenly believe that the staff at those operations are dentists or others with medical training.[21] Respondent acknowledges that there have been no complaints along these lines,[22] but nevertheless claims that consumers may have this mistaken belief and even that it may be encouraged by the kiosk/spa providers. Even if this were shown to be a problem, it could be resolved by requiring kiosk/spa operations to disclose, in an appropriately prominent way, that their personnel are not trained dental professionals, and that they do not perform any functions that require such training. This is a feasible and much less restrictive alternative than outright exclusion of all existing and prospective kiosk/spa operations.

Another problem claimed by Respondent is that the kiosk/spa operations may endanger health, either because they are subject to "no sanitary restrictions,"[23] or because of direct harm to the teeth or gums caused by the treatments.[24] Respondent has offered little evidence that such dangers exist,[25] and it is difficult to conclude that they could be serious, given that countless unsupervised consumers with no training or experience have performed and continue to perform similar teeth whitening procedures, with significant peroxide concentrations, on themselves at home.

Products and services that harm their customers tend not to prevail in the marketplace for long, since consumers with unsatisfactory experiences communicate about them to others. Adverse experiences get disseminated to others who are then less likely to become customers. In addition, mall and spa owners have valuable reputations and therefore have every incentive not to allow harmful services to be performed on their premises. These market forces tend to reduce the likelihood of harmful services being sold.

Of course, in some instances these mechanisms may not work and potentially harmful services in fact persist in the marketplace, but even this would not justify the exclusion of those

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[21] Response to Complaint, ¶¶ 8, 12 (July 7, 2010) ("Response")

[22] Respondent's Objections and Responses to Complaint Counsel's First Set of Requests for Admissions, No. 29 (Oct. 27, 2010) ("Board Admissions") (admission that "Dental Board is unaware of any complaint by a consumer of nondental teeth whitening services to the Dental Board or any other consumer protection agency in North Carolina alleging that he or she believed, or was led to believe, that the services were being provided by a dentist.").

[23] Response ¶ 8.

[24] Burnham (Board member) Dep. 114:7-16; Wester (Board member) Dep. 145:19-23.

[25] Board Admissions ¶¶ 23-29, 38-39.

services so long as less restrictive alternatives are available. For example, if unsanitary conditions were found to exist, that could be remedied by appropriate regulation. If there was actual harm caused by the treatments themselves, this could be more serious. If such a service cannot be safely provided without professional supervision, then there may be grounds for banning its provision by providers who lack such supervision. But with respect to teeth whitening, I rely upon the sworn affidavit of Martin Giniger, which concludes that this is not the case for kiosk/spa teeth whitening.[26]

Another possible concern is asymmetric information between consumers and producers.[27] The original example of this problem, due to Akerlof, was the market for used cars. In the extreme case sellers know which cars are of high quality and which are "lemons," but buyers do not. As a result, each buyer can do no better than to assume that any particular used car is as good as the average of all available used cars and is prepared to pay only the corresponding price. But that average price causes sellers of the highest quality used cars to hold them off the market, so high-quality used cars disappear from the market and in the limit the entire market for used cars collapses.

The analogue to the used car story in the present matter would be if consumers could not distinguish purportedly higher quality teeth whitening services offered by dentists from low-quality service offered by kiosk/spa operators. If that were the case, the model predicts that dentists would cease providing teeth whitening services altogether. But many dentists in North Carolina obviously do offer teeth whitening services, so much as with the actual used car market, this scenario has not occurred. Indeed, Akerlof anticipated this outcome and discussed several methods by which consumers can get enough information to preserve the market. These include product warranties and firm reputations (a seller that wishes to preserve its reputation has an incentive to accurately convey the quality of the product). In the case of teeth whitening, if there was concern that kiosk/spa provision was lower quality, consumers who did not want that level of service (akin to better quality used cars) could avoid the problem by simply not going to non-dentist providers. Their manifest characteristics would prevent the "lemons" process from impairing market operation.[28]

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[26] Expert Witness Report of Martin Giniger, D.M.D., M.S.D., Ph.D., F.I.C.D. (Nov. 25, 2010).

[27] George Akerlof, *The Market for Lemons: Quality Uncertainty and the Market Mechanism*, Quarterly Journal of Economics, Vol. 84, p. 495 (1970).

[28] It should also be noted that there is nothing inherently harmful to consumer interests about a lower-quality service being provided in competition with higher-quality service. In many markets for example, autos, computers, haircuts, etc.--some consumers may legitimately prefer a lower-quality version of a product at a correspondingly lower price. The fact that these options are sometimes chosen by consumers indicates that they are sometimes the best choice, and depriving someone of their best choice is harmful to their interests.

VIII. EVIDENCE ON RESTRICTIVE REGULATION IN THE PROFESSIONS

Standard microeconomic theory indicates that eliminating a product generally harms consumers. In the previous section, I discussed possible problems associated with kiosk/spa teeth whitening operations, and on the basis of case-specific evidence concluded that none of them come close to justifying a ban. However, there is still value in examining the available evidence from other provider exclusions that have been advocated by professional associations in other contexts. If there were evidence that such restrictions were frequently beneficial to consumers, it would increase the need for especially strong arguments and evidence to conclude that such exclusion would be harmful in this particular case. On the other hand, if it is found that such exclusions generally harm consumers, it would reduce the case-specific evidence required to conclude that exclusion is likely to be harmful.

As discussed above, there are strong theoretical grounds for the conclusion that product exclusion and entry restrictions harm consumers of professional services, as they do for other goods and services. There is substantial empirical evidence of this in general, but as far as I am aware, there is no empirical research that addresses exactly the entire set of facts in the present case. That is, no study examines the effect of the exclusion of a service that is provided by both licensed professionals and nonprofessionals.

There are numerous studies that examine the effects of a range of restrictions on professional practice. These restrictions include the lack of licensing reciprocity between states, use of high fail rates on state licensing exams, restrictions on advertising, and scope-of-practice restrictions such as prohibitions on vertical integration between professional service providers and product retailers. There are two notable features of this body of research. First, all of the studied restrictions are less burdensome than the present issue, which involves the attempt at complete exclusion of an alternative method. Second, virtually without exception studies of these lesser restrictions find that they cause prices to increase but without systematic benefits in terms of quality of service.

Thus, while it is true that none of these studies addresses the precise issue in this matter, they do corroborate the general presumption that exclusion and restrictions harm consumers.

A. Restrictive licensing generally raises prices without harming quality

As early as 1980, Rottenberg summarized what he termed a "consensus" of "a fairly substantial literature on the economics of occupational licensing" in a series of statements.[29] Among them were the following:

- "Licensing has the effect of increasing earnings in the licensed occupations."
- "Occupational licensing checks entry into occupations by imposing additional costs of

[29] Simon Rottenberg, "Introduction," *Occupational Licensure and Regulation*, S. Rottenberg, ed. (1980).

entry."

• "The licensing of an occupation reduces the number who practice that occupation."

• "The licensing of occupations inhibits the movement of practitioners among the states..."

• "Whether licensing of occupations results in improvement in the quality of service offered is debatable."

More recent summaries by Svorny and by Kleiner come to similar conclusions. Svorny states that "[e]mpirical evidence supports the premise that earnings rise with restricted licensing policies, that supply declines, that mobility is restricted, that inputs are combined inefficiently, and that consumers lose access to low quality services."[30] Regarding quality generally, she concludes that the evidence "suggests that the effect of licensure on service quality varies across occupations."[31] Kleiner's results are consistent with these findings.[32] Along with others, he also notes that the higher prices being charged for services under licensing and related restrictions results in some potential consumers being forced to do without the service altogether.[33]

One of the more detailed studies of quality of service was that conducted by myself and three co-authors in 1977 while at the Federal Trade Commission.[34] We involved the optometry profession in a study of whether the presence of advertising, chain stores, and employment of optometrists by nonprofessionals (the latter generally termed "commercial practice") caused an Akerlof-type "lemons" process in which low quality service drives higher quality service from the market. Our study found that the average quality of optometric services was statistically identical in restrictive and nonrestrictive cities but that prices of all providers were more than 25 percent higher in the former. We also found that the basic service that optometrists perform refraction was provided with the same accuracy by all types of practitioners.

The findings of this study have been corroborated and in some respects strengthened by

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[30]Shirley Svorny, "Licensing, Market Entry Regulation," Encyclopedia of Law & Economics, Vol. III, The Regulation of Contracts, ed. by Boudewijn Bouckaert and Gerrit De Geest, Cheltenham, UK, Edward Elgar, pp. 296-328 (2000).

[31] Ibid, p. 314.

[32] Morris Kleiner, "Occupational Licensing," J. Econ. Perspectives, Vol.14, pp. 189-202 (2000).

[33] Ibid.

[34] Ronald Bond, John Kwoka, John Phelan, and Ira Whitten, *Effects of Restrictions on Advertising and Commercial Practice in the Professions: The Case of Optometry*, Bureau of Economics Staff Report, FTC (1980). See also, Ronald Bond, John Kwoka, John Phelan, and Ira Whitten, *Self-Regulation in Optometry: The Impact on Price and Quality*, Law and Human Behavior, Vol. 7 (1983).

subsequent work by myself,[35] by Haas-Wilson,[36] and by others. Two later surveys echo these conclusions. Citing ten studies, Love and Stephan conclude that "there is very little evidence to support the use of advertising restrictions to maintain quality standards, and a substantial amount of evidence to suggest that advertising does increase consumer information and can reduce fees as a result."[37] Conrad and Emerson state that "Empirical evidence and economic theory in combination suggest that restrictions on advertising typically result in increased prices, little or no effect on quality, and an increase in consumer search costs...An advantage of competition...is that trade-offs among price, quality, and the match of supply to the mix of services demanded are made in the marketplace by those providers and consumers with an immediate stake in the solution."[38]

B. Empirical studies of the dentistry profession come to the same conclusions

A number of studies of the economic effects of licensing and other restrictions have been conducted in the case of the dentistry profession. These studies examine mobility of dentists, service prices, access and quality. Their results are quite consistent with those described above for professions generally.

Some of the earliest economic studies of dental licensing examined the effects of restrictive licensing and lack of reciprocity between states. Boulier examined restrictions on interstate mobility of dentists and found them to be associated with higher dentists' fees and net income in states that restricted competition.[39] Shepard analyzed detailed data on specific dental services and found that 11 of 12 services had significantly higher fees in states without licensing reciprocity.[40] Conrad and Emerson reported that state limits on the number of dental offices, lack of reciprocity, restraints on the number of hygienists, and advertising prohibitions were each

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[35] John E. Kwoka, *Advertising and the Price and Quality of Optometric Services*, American Economic Review, Vol 74, pp. 211-16 (1984).

[36] Deborah Haas-Wilson, *The Effect of Commercial Practice Restrictions: The Case of Optometry*, Journal of Law and Economics, Vol. 29, p. 165 (1986).

[37] James Love and Frank Stephen, *"Advertising, Price, and Quality in Self-Regulating Professions: A Survey*," International Journal of Economics of Business Vol. 3 (1996).

[38] Conrad and Emerson, op. cit., p. 613.

[39] Bryan Boulier, "An Empirical Examination of the Influence of Lisensure and Licensure Reform on the Geographic Distribution of Dentists," in S. Rottenberg., op. cit.

[40] Lawrence Shepard, *Licensing Restrictions and the Cost of Dental Care*, Journal of Law & Economics, Vol. 21, 187-201 (1978).

related to higher fees and/or higher net incomes for dentists.[41] Liang and Ogur report similar effects in states that limited the number of hygienists per dentist or the specific functions that dental auxiliaries could perform.[42]

A similar study by Kleiner and Kudrle investigate whether more stringent licensing standards improve consumer information and quality choices, or whether they serve as a barrier to entry and service availability.[43] Using actual dental records of Air Force recruits matched to their states of residence, Kleiner and Kudrle find that state restrictions on entry and availability did not result in less untreated dental deterioration. Rather, the most restrictive states were found to have the fewest dentists per capita and the greater untreated dental deterioration. They did, however, have higher prices for dental services and higher salaries for dentists. Kleiner's previously-cited overview article examined earnings differentials due to licensing in several professions, including dentistry. His statistical analysis concludes that licensing raises dentists' earnings in excess of 30 percent, thereby reducing consumers' access to the service, particularly those consumers interested in basic service.[44]

Studies have identified other restrictions that reduce performance of the market for dental services. Statistical analysis lead DeVany and Gramm to conclude there is underutilization of hygienists in restrictive states, which in turn results in increased average cost and in price.[45] The

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[41] Douglas Conrad and Marie Emerson, *State Dental Practice Acts: Implications for Competition*, Journal of Health Politics, Policy and Law, Vol. 5, 610-30 (1981). Restrictions on the number of offices (or in the case of other professions, minimum hours per office) were used to ensure the dentist was present onsite, rather than (e.g.) allowing hygienists to operate without dentist supervision.

[42] J. Nellie Liang and Jonathan Ogur, *Restrictions on Dental Auxiliaries*, Bureau of Economics Staff Report, Federal Trade Commission (1987). In another study, Holen finds that stringent standards for the licensing of dentists results in higher prices and earnings, but she goes on to claim that licensing improves the quality of care. She concedes, however, that this effect is not generally statistically significant in her statistical work. Her study has been criticized on several grounds and does not appear to have been published in a peer-reviewed journal. See Boulier, op. cit.; Laing and Ogur, op. cit.; and Kleiner and Kudrle, op. cit.

[43] Morris Kleiner and Robert Kudrle, *Does Regulation Improve Outputs and Increase Prices? The Case of Dentistry*, NBER Working Paper 5869 (1997); Morris Kleiner and Robert Kudrle, *Does Regulation Affect Economic Outcomes? The Case of Dentistry*, *Journal of Law & Economics*, Vol 43, p. 547 (2000).

[44] Morris Kleiner, *Occupational Licensing,* J. Econ. Perspectives, Vol.14, pp. 189-202 (2000).

[45] Arthur DeVany and Wendy Gramm, *The Impact of Input Regulation: The Case of the U.S. Dental Industry*, Journal of Law & Economics, Vol 25, 367-81 (1982). These adverse

American Dental Association itself studied Colorado's practice of permitting the "unsupervised" provision of dental hygiene, by which is meant a licensed dental hygienist who does not operate in a dentist's office.[46] They found that independent hygienists had similar fees (though they were cheaper in two areas, especially for children), much shorter lead times for an appointment, and similar geographical pattern of location throughout the state. No evidence was developed or reported suggesting that the lack of "supervision" adversely affected either cost or quality of service.

Carroll and Gaston examine the effects of various state licensing restrictions on measures of service quality for seven professions.[47] For dentistry, they report statistical evidence that "strong forms of licensing restriction such as the requirement for U.S. citizenship or the lack of reciprocity agreements between states are associated with reduced numbers of practitioners, which in turn are associated with proxy measures for low quality dental care."[48] In short, restrictions reduce the numbers of dentists, which adversely affects care a result also found by Kleiner and Kudrle.

Muris describes an unpublished FTC study that compared the quality of dental care received from commercial and non-commercial dentists in Southern California.[49] They showed that, for more frequently provided services, commercial practitioners were more adept, while traditional practitioners specialized in more complex services such as surgery."[50] This finding is consistent with others that suggest that routine services can safely migrate to non-traditional or even consumer-based provision.

C. The empirical evidence does not support broad restrictions

Overall, empirical evidence on the economics of professional services indicates that restrictions on entry and scope of practice can significantly raise the price of service, creating unwarranted transfers from consumers to producers. With respect to quality, careful studies find

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effects from restrictions on entry and use of auxiliaries are corroborated in previously cited studies by Boulier, by Rottenberg, and by Liang and Ogur.

[46] L. Jackson Brown, Donald House, and Kent Nash, *The Economic Aspects of Unsupervised Private Hygiene Practice and its Impact on Access to Care*, ADA Health Policy Resources Center (2005).

[47] Sydney Carroll and Robert Gaston, *Occupational Restrictions and the Quality of Service Received*, Southern Economic Journal, Vol. 47, 959-976 (1981).

[48] Ibid., p. 967.

[49] Timothy Muris, *California Dental Association v. Federal Trade Commission: The Revenge of Footnote 17,* 8 Sup. Ct. Econ. Rev. 265 (2000).

[50] Ibid, p. 300

no tendency for lower-quality service to drive higher-quality service from markets for professional services. And indeed, some evidence indicates that simpler and more routine services are well provided by nonprofessionals or less traditional practitioners. Nothing in these studies gives support to the view that restrictions on products, providers, and practice benefit the consumer.

IX. CONCLUSIONS

I have examined the salient facts of this case as well as the relevant economic theory and empirical evidence. I have concluded that the North Carolina State Board of Dental Examiners has a material interest in this outcome. The Board is dominated by licensed dentists and reflects the views of licensed dentists throughout the state. Economic theory, evidence, and the facts of this case indicate that kiosk/spa teeth whitening substitutes for and competes with dentist provision, which means that dentists would benefit if it were excluded.

I have also concluded that the elimination of the kiosk/spa teeth whitening option would likely harm consumers in North Carolina who are interested in teeth whitening. Some consumers would lose their preferred method of teeth whitening, and would have to either switch to a less preferred alternative or forego the service altogether. This elimination of competition would likely raise the prices of the alternatives, further harming consumers.

Respectfully submitted,

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Books:

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Attachment B

UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION

In the Matter of	)	
THE NORTH CAROLINA [STATE] BOARD OF DENTAL EXAMINERS,	)	DOCKET NO. 9343
Respondent.	)	

EXPERT WITNESS REPORT OF DR. DAVID L. BAUMER

REPLY TO EXPERT REPORT OF PROFESSOR JOHN KWOKA

[FTC v. North Carolina Board of Dental Examiners; Docket No. 9343]

I. INTRODUCTION AND SUMMARY OF CONCLUSIONS

My name is David L. Baumer, Head of the Business Management Department at North Carolina State University, College of Management. I have been asked by Messrs. Noel Allen and Alfred P. Carlton, Esq., of the law firm of Allen & Pinnix, representing the North Carolina [State] Board of Dental Examiners (State Board), to review an "Expert Report by Professor John Kwoka," with regard to the aforementioned litigation. Following the format developed by Professor Kwoka, I will examine antitrust aspects of the actions of the State Board vis a vis unauthorized providers of teeth whitening services.

Dr. Kwoka states that he was asked by the staff of the Federal Trade Commission (FTC) to evaluate from an economic perspective two issues:

- Whether the State Board "has a material interest in seeking to prohibit the provision of teeth whitening services by non-dentists in the state." and
- The harm to consumers from its successful efforts at prohibition.[1]

With all due respect to Dr. Kwoka, the first issue is obvious, but largely irrelevant to this litigation; virtually every board (state, local, or federal) regulating various professions and occupations has a "material interest" in seeking to prevent non-professionals from practicing professions for which they are not qualified, or not authorized due to lack of a license required by state law. Note that Dr. Kwoka equates "material interest" with financial interest, whereas, if asked, most professionals would claim that they practice their professions, at least in part, to do good, that is to benefit the public. Limiting professional practice to those qualified and willing to abide by the rules of licensing boards is a "material interest" of professionals that extends beyond mere finances. A problem with Dr. Kwoka's entire analysis is that he seems to assume that professionals, including dentists and members of the North Carolina State Board of Dental Examiners, are motivated solely by profit maximization rather than using their professional skills to benefit clients or customers, while at the same time earning an adequate income.

Overall, Dr. Kwoka's Report is generic and mainly relies on dated economic studies that were illuminating at one time, but pertain to the worst abuses of licensing professions decades ago.[2] By and large the abuses associated with state licensing of professions were manifested in form of state-organized price-fixing schemes and barriers to entry for qualified professionals, such as lack of reciprocity with other states.[3] Many of the abuses of state regulation of professions through license

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[1] Kwoka Report, 1.

[2] Many of the articles and analyses relied upon by Dr. Kwoka were written decades ago when the regulatory landscape was very different.

[3] Goldfarb v. Virginia State Bar, 421 U.S. 773 (1975).

requirements have largely been eliminated or reformed as state legislators have responded to these studies and other commentators.[4]

Throughout this Report, many of the contentions made by Dr. Kwoka apply to state licensing of professions generally. The main contention advanced by Dr. Kwoka is that, on balance, licensing of professions by state boards harms consumers. It is only a slight exaggeration to say that Professor Kwoka views licensing of professions as simply state-operated cartels organized exclusively for the benefit of the professions they regulate.[5] The cartel model of state licensing boards that Professor Kwoka promotes ignores the original justification for professional boards, namely, that there is abundant evidence that unlicensed practitioners are often unqualified to practice and their lack of training threatens public health and safety.[6] In addition, there is copious evidence that licensing requirements curb fraud by practitioners against the public, which can occur when quality is difficult evaluate and operators are not required to be licensed.[7]

As to the second issue, the harm to North Carolina consumers, I am struck by the lack of evidence produced by Dr. Kwoka. According to Dr. Kwoka, the "harm" borne by consumers due to the elimination of unauthorized teeth whitening is manifested in the form of teeth whitening customers having to pay possibly higher prices and the inconvenience associated with having to choose from options provided by dentists and Over The Counter (OTC) products, both of which are safe according to the State Board. As to higher prices caused by enforcing the North Carolina Dental Practice Act, Dr. Kwoka provides no quantitative estimates at all.[8] The Kwoka Report contains only oblique references of the possible health consequences of allowing untrained and unlicensed operators to sell products and services that are clearly defined by North Carolina state law as dentistry. Several times in his report, Professor Kwoka launches "where there is smoke, there is fire" arguments to contend that because there have been some abuses of state licensing laws in the (often distant) past, that the actions of the State Board in North Carolina are presumed meritless by because of material conflicts of interest. Reading the Kwoka Report, one would assume that the actions of the North Carolina [State] Board of Dental Examiners are solely consistent with pecuniary self-interest of dentists and concern for health and safety of the public is not a factor in their decision-making.[9]

Based on my economic analysis and review of the facts, I have come to the following conclusions:

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[4] I am hoping that there are reforms of the State Board that I can point out.

[5] Infra, I provide a guide as to how to distinguish licensing regulation that promotes state-sponsored cartels versus state action that promotes public interest goals other than profit maximization of licensed professionals.

[6] In 1879, the N.C. General Assembly state: "The practice of dentistry in the State of North Carolina is hereby declared to affect the public health, safety and welfare and to be subject to regulation and control in the public interest." It is clear from the 1879 declaration, that health and safety are goals of the regulation, not maintenance of dentists' income.

[7] When practitioners are required to be licensed, fraud and unethical behavior can be reduced by the threat of revocation of the license to practice. See discussion of the fraud that appears in the construction industry when unlicensed contractors are allowed to operate at: http://articles.orlandosentinel.com/keyword/unlicensed-contractors.

[8] North Carolina Gen. Stat. § 90-29 et seq. Kwoka, 13.

[9] This contention is contradicted by affidavits signed by members of the North Carolina State Board who claim that their "paramount duty was to serve the public and to protect the health, safety, and welfare of the public.

- There is a rational basis for regulating the dental profession based on the health and safety of North Carolina citizens. To my knowledge, every state in the U.S. regulates the practice of dentistry through a state board that requires practitioners to possess licenses, which state boards issue to those who are qualified by education, training, passage of professional examinations, and willingness to abide by ethical standards.

- The people most knowledgeable about the practice of dentistry are practicing dentists, thus the requirement by North Carolina state law that a majority of State Board members are dentists has a rational basis.

- At federal, state, and local levels, boards regulating professions, including dentistry, require minimum standards that consist of education and training coupled with sanctions for those who violate professional ethical standards.

- Logically, reforms in what constitutes the practice of dentistry should take place through statutory changes in state law. It is illogical to expect the State Board charged with enforcing the North Carolina Dental Practice Act not to enforce the Dental Practice Act.[10]

- Restricting the unauthorized or illegal practice of dentistry is an obvious and desirable consequence of state regulation of dentistry.[11]

- There are numerous, safe, teeth whitening products available for sale over-the-counter (OTC) that offer consumers lower-priced alternatives to those offered by dentists.

- There is no empirical evidence provided in the Kwoka Report that prices charged by dentists were or are being affected by the non-availability of teeth whitening services offered by unauthorized practitioners.

- The Kwoka Report is a broad based challenge to regulating professionals generally, an old argument that has not been found persuasive by state lawmakers who must answer to voters when unlicensed professionals harm the public through unsafe practices and fraud.

- Numerous times in the Kwoka Report he quotes himself and other economists who consider professional licensing boards little more than government sponsored cartels.

- In order to survive, cartels must set minimum prices, have some means to discipline price cutters, and limit entry and output produced by members of the cartel. Since agreements among members of cartels harm the public, they often collude secretly.

- Cartels composed of private firms without an exemption are illegal under the antitrust laws of the U.S. and the State of North Carolina.

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[10] N.C. Gen. Stat. § 90-20.
[11] N.C. Gen. Stat. §§ 90-29 and 90-40.

- There are substantial differences between most state boards that regulate professions and government sponsored cartels.

- In the past, some state boards set minimum prices and sanctioned practitioners who charged lower than minimum prices. These abuses have largely been remedied.

- To my knowledge the North Carolina State Board of Dental Examiners does not set prices or promote price minimums. Furthermore to my knowledge the State Board does not discipline or discourage low prices by practitioners. In addition, the meetings and decisions of the North Carolina State Board take place in public.

- Modeling the State Board as a state sponsored cartel is not consistent with the facts that economists expect to see when the organization is a cartel. Seller concentration in most cities in North Carolina is minuscule compared to the highly concentrated markets where cartels have had significant impacts on price and other terms of trade.

- The limitations on entry imposed by the State Board are based on training, experience and education. To those qualified by training and education, there are no entry barriers imposed by the State Board.

In what follows, I provide the bases for my conclusions.

II. Qualifications

I received a Ph.D. in Economics from the University of Virginia in 1980 after being awarded a J.D. with honors from the University of Miami in 1979. In my Ph.D. program, one of my two areas of concentration was Industrial Organization, which includes the economics and law of antitrust. While at the University of Miami I took an Antitrust law course from Tim Muris who is cited by Dr. Kwoka and is the former Chairman of the Federal Trade Commission (FTC). My dissertation entitled, "Federal Regulation of the Dairy Industry: Costs, Benefits, and Legal Constraints," included economic analysis of the application the antitrust laws to dairy cooperatives. I began my academic career at North Carolina State University in 1979 as an Instructor and was promoted to Assistant Professor in 1980, Associate Professor in 1986, and Professor in 2005 and have been Head of the Business Management Department since 2006.

When I began my career at NC State, I was hired by the Department of Economics and Business. When that Department split into the Department of Economics and the Department of Business Management, I elected to become a member of the Business Management Department. I taught antitrust, regulatory, and industrial organization economics at the undergraduate level for the first 10 years of my career before the Department of Economics and Business split into constituent parts. Throughout my career I have taught Legal Environment of Business courses which include chapters on antitrust. I have written a legal environment textbook published by Prentice Hall in 2004 that included a chapter discussing antitrust as well as analysis of various regulatory statutes.[12]

[12] David L. Baumer and J.C. Poindexter, Legal Environment of Business in the Information Age, Prentice Hall, 2004.

My research is summarized by my vita.[13] In my work, I have been published on a number of topics in a large range of journals. Most of my work has dealt with government regulation and it has been published in law reviews, economics journals, engineering journals and accounting journals. I have written 36 refereed journal articles, along with a number of non-refereed articles, two textbooks, and over thirty presentations at academic conferences. I have been listed as "Senior Personnel" or "Co-Principal Investigator" on eight funded research projects, four from the National Science Foundation, including one that was entitled, "Market Power, Antitrust, and Regulation Policy: A Study of Milk Marketing."

As indicated in my vita, I have been an expert witness in approximately 100 cases in which litigation was possible or imminent. Many of these assignments involved antitrust and regulatory law issues. I have testified in several federal and state courts and have been designated as an economic expert in antitrust and valuation in both North Carolina State and federal courts. In addition to courtroom testimony, I have been deposed at least 25 times. I estimate that I have been hired by a roughly equal number of attorneys representing plaintiffs and defendants.

My complete curriculum vita is attached in Appendix II.

III. Scope of Work

In preparing for this assignment I was given a DVD that contained 83 separate files that included, but was not limited to, economic and law review articles, statements and studies of medical and dental experts, and various legal motions by the parties as well as pleadings. I received these files on December 2, 2010 in the late afternoon and was asked to compose and complete an analysis of Dr. Kwoka's Report by December 10, later extended to December 20, 2010. In preparation for this report, I have reviewed economic articles that examine professional associations and licensing, articles that describe teeth whitening services, and have reviewed various legal motions and pleadings. The articles and other materials that I relied upon are listed in Appendix III. Given the volume of materials that I was supplied with on December 2, I reserve the right to modify this Reply to the Expert Report of Professor John Kwoka based on discovery of pertinent material listed in Appendix III.

The scope of my work includes consultation with attorneys working for the law firm of Allen & Pinnix, including Mr. Noel Allen, Mr. Alfred P. Carlton, Jr., and M. Jackson Nichols, preparation of a Reply to the "Expert Report of Professor John Kwoka," and possible deposition and trial testimony. My compensation for this work is $400 per hour.

IV. The Business of Teeth Whitening in North Carolina

I agree with Dr. Kwoka that there are several alternative methods of whitening teeth. One method of teeth whitening not discussed is to brush frequently and refrain from using certain products such as coffee and tobacco. The teeth whitening process that produces "the greatest and quickest" results take place when a patient contacts a licensed dentist.[14] The procedure most often used by dentists involves isolation of the gums and soft tissue from a highly concentrated hydrogen peroxide solution that is most often accompanied by a light source accelerant.[15] This procedure, which produces immediate results, is repeated in three or four 15-minute treatments in a dentist's office under his or her supervision. Relying on the Kwoka Report, current prices for this treatment in a dentist's office

[13] See Appendix II.
[14] Kwoka Report, 3.
[15] Kwoka Report, 3 at note 1.

range from $200 to $1,000, while he estimates that average prices are in the approximately $400 to $500 range.[16] It should be apparent to any objective observer that there is a potential for significant injury as the aforementioned procedure makes use of powerful chemicals directly on patients' teeth during which sensitive gums and intra-mouth tissues must be shielded.[17]

According to the Kwoka Report, a second method of delivering teeth whitening services involves initial examination and treatment in a dentist's office, being fitted for a tray, and supplied with take-home kits for teeth whitening. Using this method, the patient is supplied with less powerful hydrogen peroxide, which Dr. Kwoka describes as "safe enough to use at home."[18] Not surprisingly, the cost of this procedure is lower, but the results take longer to achieve "than full dentist provision." A third method of whitening teeth is provided in the OTC market, where strips containing lower concentration hydrogen peroxide strips are sold. The OTC products are lower-price but the teeth whitening results take longer to achieve than the two methods described above. The costs of OTC products are stated to be in the $25--$75 range by Dr. Kwoka.[19]

Finally, a fourth teeth whitening option has emerged that has been often offered by kiosks and spas, which typically involve bleaching trays filled with "moderate hydrogen peroxide solutions that are used on-site."[20] Vendors of these sellers of teeth whitening services may offer "...information, assist in the preparation of trays, and may administer light sources."[21] The typical duration of sessions are 30 to 45 minutes and need not be repeated. Although the effectiveness of kiosk/spa teeth whitening treatments is greater than OTC strips, the prices are higher ($75--$150). The effectiveness of teeth whitening services provided by kiosk/spa operators is less than what dentists supply, but their prices are lower.

V. ACTIONS AND POSITION OF THE BOARD

Beginning in 2004, the State Board became aware of the emergence of the fourth teeth whitening method, described *supra*, offered by kiosks/spas. Numerous complaints were received by the State Board mainly from dentists, but it also received complaints from dental assistants, hygienists, and consumers. In the Kwoka Report it is claimed that by March 2010, the State Board had only received four complaints from consumers of the 60 total complaints.[22] Further, it is noted by Dr. Kwoka in his Report that the State Board moved with alacrity to enforce the state statute that it was created to enforce.[23] Among the State Board's enforcement actions were to dispatch investigators to kiosks and spa operators, asking questions of these operators, and later, sending out "cease and desist" letters. The cease and desist letters informed recipients that the State Board determined that these operators were violating North Carolina state law by offering teeth whitening services without the supervision of

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[16] Kwoka Report, 3.

[17] In Respondent's Separate Statement of Material Facts as to which There Are and Are not Genuine Issues, No. 44 contains references to numerous articles pointing out the dangers of tooth whitening, including titles such as, *What Are the Dangers of Teeth Whitening*?, *Special Report: Hidden Dangers of Teeth Whitening*. There are over 15 such articles nearly all with recent dates.

[18] Kwoka Report, 4.

[19] Kwoka Report, 4.

[20] Id.

[21] Id.

[22] Kwoka Report, 5.

[23] Probably need legal citation for the charge to State Board requiring them to enforce the state statutes regarding the practice of dentistry.

dentists. Apparently 40 or so cease and desist letters have been sent through March 2010 in addition to two arrest warrants.

It is not clear to the author that the State Board had a choice when confronted by complaints from numerous dentists and when it determined, upon investigation, that operators of teeth whitening services appeared to be engaging in the unauthorized practice of dentistry. The Kwoka Report appears to interject unnecessary drama into actions of the State Board that are consistent with its charge from state law. Section 90-29 of the North Carolina general statutes states that "(b) A person shall be deemed to be practicing dentistry in this State who does, undertakes or attempts to do or claim the ability to do any one or more of the following acts or things which, for the purposes of this Article, constitute the practice of dentistry: (2) Removes stains, accretions or deposits from the human teeth;" and furthermore that all persons practicing dentistry must be "a holder of a valid license or certificate of renewal of license duly issued by the North Carolina State Board of Dental Examiners." It follows that unless the State Board repudiated its charge from state law, it is required to enforce N.C. Gen. Stat. § 90-29, which specifically identifies removing stains from human teeth as part of the practice of dentistry for which a license from the State Board is required.

The Kwoka Report notes further that mall operators and property owners were advised by the State Board that non-dentists offering teeth whitening services on their premises were engaging in unlawful activity. Letters were sent by the State Board to manufacturers and distributors of products used by teeth whitening services advising them that they were enabling the unauthorized and illegal provision of dental services by non-dentists.[24] All of these actions are consistent with a regulatory board enforcing the state laws the board was created to enforce. The State Board would have been derelict in its duties had it ignored blatant violations of state law regarding the practice of dentistry. Not surprisingly, the actions of the State Board were effective and many kiosk and spa operated complied with state law by ceasing their actions that were clearly in violation of state law.[25] Mall operators cooperated by refusing to renew leases or rent to operators of teeth whitening services.

VI. THE BOARD HAS A MATERIAL INTEREST IN THIS MATTER

Professor Kwoka notes that he was asked to consider whether the North Carolina Board of Dental Examiners has a material interest in the teeth whitening business in the State of North Carolina, which he concludes, unsurprisingly, they do.[26] This is a banal conclusion in the extreme. All state boards charged with regulating professions have "material interests" in whether unlicensed, unauthorized, non-professionals can ignore state law and practice a profession where there is no showing of qualifications or integrity. Since licensed dentists offer teeth whitening services, Dr. Kwoka makes the obvious conclusion that "they stand to gain from the exclusion of competing non-dentist providers."[27] It is also obvious that medical doctors, who are required by state law to be licensed, stand to gain from the exclusion of untrained and unlicensed quacks who offer "cure-all" elixirs for treatment of cancer and joint pain. As with medical doctors, dentists have material interests, unrelated to financial gain, in preventing dental malpractice by untrained and unqualified practitioners whose practices may harm patients, who need the services of qualified dentists to repair the damage done.

A. The Board is Dominated by Licensed Dentists and Reflects Their Interests

[24] Stipulations, No. 62 and 63.
[25] Kwoka Report, 5.
[26] Kwoka Report, 6.
[27] Id.

The contention made by Dr. Kwoka that state boards benefit the professions they are organized to regulate is an old hackneyed contention that has been found unpersuasive by the public and elected officials. It is true that state regulatory boards can be used to exclude competition and augment incomes of licensed practitioners. Excluding competition from untrained and unlicensed quacks is precisely the reason that these boards were created and why they still enjoy support from the public and from legislators. There is no doubt that the potential for abuse exists, particularly when the boards seek to set minimum prices or create unreasonable criteria for obtaining a license, such as refusing to accept reciprocity from other states. These are old economic arguments that add little to the current controversy about teeth whitening services offered by those unauthorized to practice dentistry. The real issue today is whether it is safe for untrained and unlicensed providers of teeth whitening services to operate without supervision by licensed dentists.[28]

Professor Kwoka calls attention to the fact that six of the eight members of the State Board are dentists, though there is a consumer representative as well as a dental hygienist. It is an unremarkable fact that dentists are knowledgeable about the practice of dentistry and that they have a material interest policing the profession. Professor Kwoka maintains that, "The dominance of the [State] Board by licensed dentists ensures that Board decisions reflect the views and interests of licensed dentists in the State."[29] The insinuation that the numerical dominance of the State Board by licensed dentists ensures that the State Board is only concerned with the economic interests of dentists is an unsubstantiated canard.[30] The fact that teeth whitening is increasingly popular and generates income for dentists does not make decisions of state boards suspect. If these boards were solely concerned about competition from unlicensed providers they would challenge OTC remedies as well.

In short, Dr. Kwoka seems to assume that if the State Board takes actions to exclude teeth whitening at kiosks and spas that the sole reason for such actions is to benefit dentists financially. If that was true then it seems highly inconsistent for the State Board not to exclude some OTC products. A more plausible explanation is that the State Board has sought to shut down teeth whitening at kiosks and spas because they use high concentrations of chemicals that have the potential to harm patients and are operated by untrained staff with no supervision from licensed, trained professionals. Also it is probable that dentists on the State Board are familiar with the plethora of articles warning about the dangers of teeth whitening treatments offered by personnel with not medical or dental training.[31]

B. Competition Between Dentist and Non-Dentist Teeth Whitening

Professor Kwoka contends that the four methods of teeth whitening discussed above are differentiated products that are viewed as substitutes by consumers and thus compete with each other.[32] Undoubtedly, there is a high cross-elasticity between the various methods of whitening teeth.[33]

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[28] Again, it should be noted that there are an increasing number of articles that warn of the potential health hazards of teeth whitening, especially teeth whitening without the supervision of a dentist.

[29] Kwoka Report, 6.

[30] This insinuation that members of the North Carolina State Board of Dental Examiners are solely concerned with the net revenue exclusively, is in stark contrast to a Declaration by xxxxxxxxxxxx xxxxxxxxxxxxxxx who claims that "As a sworn member of the State Board, I am/was always aware that my paramount duty was to serve the public and protect the health, safety, and welfare of the public." Additionally, xxxxxx xxxxxx contends that, "Neither I nor, to the best of my knowledge, anyone with whom I have served as a State Board member has colluded to act in an anti-competitive matter."

[31] Stipulations No. 44.

[32] Kwoka Report, 7.

The contention that a group of differentiated products can be lumped together to comprise a single market, does not aid in deciding whether the provision of teeth whitening services by untrained staff is safe and should escape regulation.[34] The contention that excluding one differentiated product from the market will likely cause the prices of the remaining products to rise is a qualitative statement that is unedifying without quantitative estimates. If the facts show that less than 3% of the revenue generated by dentists in the State of North Carolina is due to teeth whitening services it suggests that the effect on prices charged by dentists for teeth whitening is likely to be *de minimus*. In any event, Professor Kwoka offers no estimates of the price effects on teeth whitening services by the exclusion of untrained kiosk or spa providers. His analysis does not contest the possibility that banning unauthorized teeth whitening services may have zero impact on prices charged by dentists. Professor Kwoka contends the magnitude of the effects of excluding unlicensed teeth whitening operators depends on volume, for which he supplies no quantitative data. Professor Kwoka does not offer even a ball park estimate of the impact preventing the unauthorized practice of dentistry by enforcing state law with regard to teeth whitening enterprises. He speaks of the "detriment" consumers in terms of price, which he admits may not change with the abolition of unauthorized teeth whitening services, but a full accounting of the effects of ignoring § 90-29 (b)(2) would also include the harm visited on consumers by untrained providers.

The fact that unauthorized teeth whitening operators compete with legal alternatives is not surprising. Numerous websites compete with legitimate vendors in distribution of pharmaceutical drugs, particularly pain medication that exceeds what is available on the OTC market.[35] The fact that legitimate pharmacies compete with website distributors that often substitute a questionnaire for an examination and prescription by a medical doctor, does not undermine drug regulation by the Food and Drug Administration.[36] Again, at the risk of offending the reader with redundancy, suppression of certain kinds of competition is precisely the goal of state (and federal) boards that regulate professions through licensing. Suppressing competition from unqualified and unauthorized practitioners enables a profession to earn a premium in the mind of the public based on their accurate perception that there is a measure of safety in dealing only with licensed professionals. In the private sector the same phenomenon operates as brand names perform a similar function, namely, in return for a guarantee of quality and safety, consumers are willing to pay premiums over cost for high quality products and services. This reputation effect is well-recognized in the economics literature.[37]

VII. Economic Theory and Case-Specific Evidence Indicate that Exclusion of Kiosk/Spa Providers Harms Consumers

A. Exclusion and Entry Barriers Harm Consumers

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[33] Cross price elasticity of products A and B is the percentage change in quantity of good A demanded divided by percentage change in the price of product B. The higher the cross price elasticity between A and B, the better substitutes A and B are for each other, indicating that products A and B compete with each other.

[34] Also unlawful products are not usually considered as part of the market.

[35] Baumer, David L., J.C. Poindexter, Julie B. Earp, "Can Regulation of Distribution of Pharmaceutical Products Coexist with Advances in Information Technology?" 11(2) Journal of Internet Law 1 (August 2007).

[36] Id. at xx.

[37] Klein, B. and Leffler, K, The Role of Market Forces in Assuring Contractual Performance, Journal of Political Economy, Vol. 89, no 4, p. 615 (1981).

The contention made by Dr. Kwoka that exclusion and entry barriers harm consumers (of teeth whitening services offered by unauthorized providers) is a fatuous statement unless qualified.[38] *Ceteris paribus* (other things being equal), restrictions of competition are generally associated with less choice and higher prices, as noted by Professor Kwoka. In other words, these restrictions harm consumers, *ceteris paribus*. Often, however, the *ceteris paribus* conditions are not present when regulatory exclusions of certain types of competition take place. For example, excluding distribution of counterfeit pharmaceutical drugs benefits consumers, because (1) it keeps counterfeit and often dangerous drugs off the market and (2) by excluding fraud and counterfeits, the public has more confidence in the remaining products on the highly regulated, pharmaceutical market. Professor Kwoka resorts to Econ 101 observations when he quotes a well-known textbook by Carlton and Perloff for the proposition that "ease of entry and exit plays a critical role in determining market structure and the subsequent performance of firms."[39] Although Carlton and Perloff go on to observe that, "In many industries, government or groups of firms collectively set licensing requirements that restrict entry," this incontestable observation is only valid, *ceteris paribus*. If government boards erect entry barriers through regulatory boards manned by licensed professionals, the public benefits if the excluded competition sells products or services that are dangerous in ways that are not apparent to the public. Although 100% assurance of safety is unobtainable, excluding sales of services by untrained and unauthorized practitioners is a commonly used method employed by regulatory boards, including the State Board, to enhance safety, reliability and accountability.[40]

The quotation of another textbook by Church and Ware that, "incumbent firms can act strategically to raise the costs of a potential entrant, thereby putting them at a competitive disadvantage and reducing the profitability of entry" again is another misleading Econ 101 observation.[41] By and large acting strategically (collusively) by incumbent firms is illegal under Section 1 of the Sherman Act, "absent some compelling justification" or other things not being equal.[42] Compelling justifications are precisely the reason for the creation of state boards regulating professions. In dentistry as with many other professions, the public does not have the capability to detect harmful products, but they can rely on licensing boards to ensure that practitioners have adequate training and educational qualifications and risk having their license to practice removed for unethical and fraudulent actions. Furthermore, licensing boards that have the power to remove licenses of those who engage in malpractice provide a remedy to consumers that is not available to customers of kiosks/spas that may take flight during the night after mistakes. The charges Dr. Kwoka makes against the State Board are applicable to boards regulating professions generally, in North Carolina and in all 50 states, as well as innumerable local jurisdictions.

The essence of the argument by Dr. Kwoka is that restrictions on competition by state licensing boards will likely cause prices for dentists providing teeth whitening services to be higher, but Dr. Kwoka provides no estimates of the magnitude of these alleged price increases. Thus the "harm" borne by consumers in the Kwoka world is possibly slightly higher prices and the inconvenience of having to go to a dentist or an OTC outlet. Professor Kwoka speculates that excluding kiosk and spa suppliers of teeth whitening services will likely retard innovation in delivery of teeth whitening services, but apparently

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[38] Kwoka Report, 9.

[39] Carlton, Dennis, W., and Jeffrey Perloff, MODERN INDUSTRIAL ORGANIZATION, ch. 7 (4th ed. 2004).

[40] Note further that there are numerous, recent articles indicating the dangers of teeth whitening services. It would be prudent for a state board charged with protecting the public health and safety dental procedures, to at least wait until there is a consensus among the scientists, commentators, and practitioners. Stipulation No. 44.

[41] Church, J.R. and Roger Ware, INDUSTRIAL ORGANIZATION: A STRATEGIC APPROACH, ch. 11 (1999).

[42] Kwoka Report, 9.

there is no evidence that he could cite which would validate this speculation. Again for every category of service excluded by state licensing laws, it is possible that excluding a group of competitors would retard innovation in production or distribution. For example, it is possible that the pharmaceutical market is deprived of innovation in distribution when Canadian-based websites that offer to re-import pharmaceutical drugs online are targeted by the FDA.

B. Claimed Problems with Kiosk/Spa Operators Either Do Not Exist or Can Be Solved with Remedies that are Less Restrictive than a Total Ban

Although Professor Kwoka concedes that there are some justifications for limiting competition due to possible harm to consumers, he focuses on instances in which dentists in North Carolina have rendered substandard and unsafe teeth whitening services.[43] The fact that licensed dentists have acted unprofessionally does not undermine the rationale for licensing, it strengthens it. Fear of losing one's license to practice incentivizes care and safety by licensed providers of dental services. Imagine the health problems and the lack of professionalism that would occur if teeth whitening services were routinely administered by non-professionals in a kiosk or spa, not near the medical equipment typically found in dentists' offices.[44] For the teeth whitening services offered by kiosk and spa operators in North Carolina, customers may have been under the impression that the staff had dental or medical training, which apparently was not disclosed.[45] The risks of infection caused by untrained kiosk/spa operators in the provision of teeth whitening services cannot be dismissed when dental dams are part of the treatment.

It is claimed by Dr. Kwoka that "products and services that harm customers tend not to prevail in the marketplace for long, since consumers with unsatisfactory experiences communicate about them to others."[46] This is precisely the reason for state regulation of professions and dental services in particular; the harm borne by the unlucky few who are injured by unsafe provisions is a high price to pay for service provided by untrained and unlicensed operators that may eventually be detected in unregulated markets. Again, this argument is applicable for all professions. I see no appetite among consumers or lawmakers to run the risks inherent in trusting market forces to be the only safeguard against allowing untrained and unlicensed staff to operate where health and safety are significant issues. This market remedy relies on consumer injuries to detect unqualified firms and operators.

Professor Kwoka admits that "in some instances these [market] mechanisms may not work and potentially harmful services in fact in persist in the marketplace..."[47] Given the weakness of his arguments offering only market mechanisms to protect consumers, Dr. Kwoka contends that exclusion of teeth whitening services offered by kiosks and spas would not be justified if less restrictive alternatives [to exclusion] are available. Dr. Kwoka contends that "if unsanitary conditions were found to exist, that could be remedied by appropriate regulation."[48] This is an amazing concession because the essence of the State Board's actions against unauthorized practitioners is that they are not regulated by minimum standards in terms of training and qualifications. Nowhere in his Report does Dr. Kwoka advocate examinations or licensing of kiosk/spa operators. Dr. Kwoka goes on to explain that "if such a

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[43] See FN 20 on page 10 of the Kwoka Report.
[44] No. 44 of the Respondent's Separate Statement of Material Facts As To Which There Are and Are Not Genuine Issues.
[45] It is my understanding that some kiosk/spa providers wore white medical gowns.
[46] Kwoka Report, 11.
[47] Kwoka Report, 11.
[48] Kwoka Report, 12.

service cannot be safely provided without professional supervision, then there may be grounds for banning its provision by providers who lack such supervision."[49] Indeed, Dr. Kwoka concedes and bases his entire Report on, "the sworn affidavit of Martin Giniger, which concludes that this is not the case for kiosk/spa teeth whitening."[50] One wonders whether there are knowledgeable, contrary opinions on this issue.[51] In any event, the State Board does not have the option to risk the health of North Carolina citizens; it is required by law to enforce N.C. Gen. Stat. § 90-29 which identifies stain removal from human teeth as included in the practice of dentistry and prohibits unlicensed persons from practicing dentistry.

Professor Kwoka cites a famous but old article authored by George Akerlof, "The Market for Lemons."[52] The article contends that if buyers are unable to evaluate quality, but sellers have perfect information, buyers will purchase the lowest quality products, assuming that if they pay a higher price, there is a good chance they would be cheated. Thus, under the assumed market facts, bad goods would chase out high quality goods. Since dentists' teeth whitening services are still in demand, Dr. Kwoka concludes that the "lemons" problem is not present in the teeth whitening market. For most economists, Akerlof's article was effectively challenged by a subsequent article by Klein and Leffler, which pointed out that low quality goods did not drive high quality products out of the market where sellers made use of advertising which operated as bond that is forfeited if buyers feel cheated after paying a high price for low quality goods.[53] Klein and Leffler analyzed how markets operated when the seller was a national name brand that spent much on advertising.

For markets such as dentistry where the sellers are small businesses, national name brand advertising is not an option. For professionals, not part of national chains, state licensing operates as alternative, guaranteeing high quality, justifying higher prices (in part to pay back the costs of dental education) that could not be maintained if the public was not assured of quality by the existence of a regulatory board. The market based remedies advocated by Akerlof, product warranties and firm reputations, are not realistic when sellers are small and cannot afford expensive advertising campaigns. On the other hand, it should be recognized that where poor quality is not apparent, Professor Akerlof advocates government intervention saying that it "may increase the welfare of all parties."[54] Not all consumers are careful and some take unwarranted risks in part due to financial exigencies. State Boards are designed to prevent impecunious from taking risks on low quality alternatives that may result in severe or non-severe harm, that are generally borne by more careful consumers. How would a consumer know whether a particular kiosk operator had left of trail of injured customers at other malls before he or she was chased out?

VIII. EVIDENCE ON RESTRICTIVE REGULATION IN THE PROFESSIONS

Citing standard microeconomic theory Professor Kwoka claims that "eliminating a product generally harms consumers."[55] Apparently he forgot include *ceteris paribus*, other things being equal.

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[49] Id.

[50] Kwoka Report, 12.

[51] Actually there is growing evidence of harm due to provision of teeth whitening services by nonprofessionals. Stipulation No. 44.

[52] George Akerlof, *The Market for Lemons: Quality Uncertainty and the Market Mechanism*, Quarterly Journal of Economics, Vol. 84, p. 488 (1970).

[53] Benjamin Klein and Keith B. Leffler, The Role of Market Forces in Assuring Contractual Performance, Journal of Political Economy, Vol. 89, no 4, p. 615 (1981).

[54] Akerlof, *The Market for Lemons:*, 488.

[55] Kwoka Report, 13.

Where the product or service is dangerous to consumers and where the danger is not apparent, prohibiting a dangerous product can benefit consumers as a class, even though average prices may be lower without the exclusion. Repeating arguments made *supra*, Professor Kwoka indicates that "there are strong theoretical grounds for the conclusion that product exclusion and entry restrictions harm consumers of professional services,..."[56] Again these arguments have been made by some economists for decades, but few legislators are willing to deregulate most professions where substandard services can harm consumers, in some cases grievously. Also where physical harm is less likely, licensing has been used to reduce unethical and fraudulent behavior.

Professor Kwoka admits that there is no empirical research that addresses exactly the entire set of facts in the present case. "That is, no study examines the effect of the exclusion of a service that is provided by both licensed professionals and nonprofessionals."[57] Further, for purposes of analysis, it is generally not appropriate to consider unlawful providers as part of the market. In essence, Professor Kwoka's entire argument is based on unsubstantiated speculation that he contends applies to state licensing boards generally, not empirical evidence. Apparently we are supposed to give more weight to the opinion of an economist paid for by the FTC than to the opinions of the State Board which is composed of actual practitioners of dentistry.

Professor Kwoka states that numerous studies show that lesser restrictions on competition enforced by professional licensing boards cause prices to rise, "but without systematic benefits in terms of quality of service."[58] Professor Kwoka cites high fail rates on state licensing exams as an example of a restriction created by professional licensing boards that apparently is not justified, except for the impact on raising prices for the licensed professionals. Firstly, operators of kiosks and spas that offer teeth whitening services need not pass any exam at all. Secondly, it is just possible that high fail rates for professional exams saves lives and injuries that could occur if professional standards are relaxed. What is the value of a life compared with having to go to a dentist for teeth whitening or using safe OTC products? Furthermore, teeth whitening is a cosmetic procedure that is not "needed" for health reasons or to ameliorate pain.

A. Restrictive licensing generally raises prices without harming quality

In his review of the economic literature regarding occupational licensing generally, Professor Kwoka cites an article dated 1980 by Professor Simon Rottenberg, which contends that licensing "has the effect of increasing earnings of licensed occupations."[59] Amazingly, there have been no moves to deregulate dentistry since that time in any of the 50 states. Maybe the impact of licensing on price is only part of the story. The other observations that Professor Kwoka gleans from the 1980 Rottenberg article are of the Econ 101 variety that licensing reduces the number of practitioners and mobility. Again, I would contend that since 1980 some of the worst abuses of licensing have been ameliorated as reciprocity among the states has become easier to achieve, setting minimum prices or price fixing has been generally abolished, and price cutters are no longer sanctioned by state boards. Quoting a more recent article by economist Shirley Svorny, she concludes that the evidence "suggests that the effect of

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[56] Kwoka Report, 13.
[57] Id.
[58] Kwoka Report, 13.
[59] Simon Rottenberg, "Introduction," Occupational Licensure and Regulation, S. Rottenberg, ed. (1980), Kwoka Report, 13.

licensure on service quality varies across occupations."[60] This tepid and weak conclusion would be cold comfort to a consumer whose gums significantly receded after being treated by an unlicensed kiosk operator who had no training in dentistry.

Professor Kwoka quotes a 1977 study coauthored by himself and others about quality of service in optometry.[61] The study found that in optometry the quality of services was statistically identical when comparing optometric services in what was termed restrictive and nonrestrictive cities, but the prices of all providers were higher in the "restrictive" cities. In this study, service was measured by refraction. The comparison in this study was between nonprofessional operators who employed optometrists and optometrists who were owner-operators, not the services offered by licensed and unlicensed optometrists.[62] Professor Kwoka again quotes subsequent work by himself and other authors about the impact of advertising restrictions, which he views as having no impact on quality but does raise average prices charged by practitioners.[63] To my knowledge, advertising restrictions are not at issue in this litigation. Professor Kwoka goes on to review a number of studies of the effects of advertising restrictions.[64] Although I do not have knowledge of advertising restrictions in dentistry, the prevalence of advertising by local dentists in Raleigh suggests to me that advertising restrictions are not an issue in North Carolina.

B. Empirical studies of the dentistry profession come to the same conclusions

The economic studies that Professor Kwoka cites regarding dentistry deal with the mobility of dentists, services prices, access and quality. These studies do not compare the quality of teeth whitening services offered by dentists versus the services offered by unauthorized providers. Professor Kwoka points to a study by Bryan Boulier, which was cited in the 1980 Rottenberg article that examined the effects of restrictive licensing and lack of reciprocity among the states.[65] Again these are relatively old studies that deal with restrictions that have in many states been modified or eliminated. The implication Professor Kwoka seems to be insinuating is that state licensing boards have been used in the past to enhance income of dentists. Professor Kwoka offers no proof that the instant case, the State Board acted to stop unauthorized, unlicensed, and untrained operators from providing teeth whitening services as a means of enhancing dentists' income without regard for the health and safety issues. Citations of other studies such as the study by Kleiner and Kudrle find that unspecified restrictions on entry and availability did not result in less untreated dental deterioration, but allegedly did result in

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[60] Shirley Svorny, "Licensing, Market Entry Regulation," Encyclopedia of Law and Economics, Vol. III, The Regulation of Contracts, ed. by Boudeqijn Bruckaert and Gerrit De Geest, Cheltenham, UK, Edward Elgar, pp. 296-328 (2000). Although there is language critical of licensing in Dr. Svorny's article, her study equivocates on the issue of abolishing licensing and carefully considers the issue of information asymmetries (buyers have a difficult time evaluating quality).

[61] Ronald Bond, John Kwoka, John Phelan, and Ira Whitten, Effects of Restrictions on Advertising and Commercial Practice in the Professional: The Case of Optometry, Bureau of Economics Staff Report, FTC (1980). See also, Ronald Bond, John Kwoka, John Phelan and Ira Whitten, *Self-Regulation in Optometry: The Impact on Price and Quality*, Law and Human Behavior, Vol. 7 (1983).

[62] Kwoka Report, 14.

[63] John Kwoka, Advertising and the Price and Quality of Optometric Services, American Economic Review, Vol. 74, pp. 211-16 (1984); Deborah Hass-Wilson, *The Effect of Commercial Practice Restrictions: The Case of Optometry,* Journal of Law and Economics, Vol. 29, p. 165 (1986).

[64] James Love and Frank Stephen, *"Advertising, Price, and Quality of Self-Regulating Professions: A Survey,"* International Journal of Economics of Business, Vol. 3 (1996).

[65] Byran Boulier, *"An Empirical Examination of the Influence of Licensure and Licensure Reform of the Geographic Distribution of Dentists,"* in S. Rottenbery., op. cit., Kwoka Report, 15.

higher salaries for dentists.[66] This is more of a "where there is smoke there must be fire" argument that does not provide analysis on the issue of whether unauthorized teeth whitening operators should be allowed to contravene a state statute.

More studies are cited regarding alleged underutilization of dental hygienists, when they are allowed to perform their services without being required to operate in a dentist's office under their supervision.[67] It is my understanding that dental hygienists are required to pass qualifying examinations, which are not required by teeth whitening staffs that operate kiosks and spas. The study by Muris cited by Professor Kwoka compares analyzes the impact of restrictions on price and service advertising for dentists in California.[68] In other words, this study analyzes an issue, that is not an issue in this case, restrictions on advertising.

C. The empirical evidence does not support broad restriction

Professor Kwoka contends that "overall, the empirical evidence on the economics of professional services indicates that restrictions on entry and scope of practice can significantly raise the price of service, creating unwarranted transfers from consumers to producers."[69] Again, this statement is an attack on professional licensing generally that does not really pertain to this case. It does not take a Ph.D. in economics to recognize that restricting those allowed to practice a profession to those with the training and education necessary to qualify for a professional license, and to those willing to abide by professional ethics, will result in higher average prices for consumers. The fact that prices are higher does not mean they are "unwarranted." The statement immediately above does not address the harms that can and do take place when untrained operators engage in treatments that can have serious health consequences as well as the increased fraud that is more common where a profession is unregulated. The statement does not address the charge to the State Board which is required to enforce § 90-29. It would violate state law to ignore a practice (removing teeth stains) that is clearly identified as the practice of dentistry, which requires possession of a dental license by providers.

In Appendix I, I discuss "bad" and "good" state regulation. I point out that "bad" state regulation, such as the North Carolina State Milk Commission, promotes government sponsored cartels by setting minimum prices, sanctioning price cutters, and limiting entry by out-of-state producers. Typically, government sponsored cartels take place in markets that exhibit high seller concentration. None of these characteristics are present in the regulation of dentistry in North Carolina. Seller concentration in dentistry in North Carolina is low by the standards used by the U.S. Department of Justice to measure competitiveness. The State Board of Dental Examiners does not set minimum prices, it does not punish low price providers of dental services, and its entry limitations are directed toward promoting public health and safety by limiting the practice to those qualified by reason of education, training, and willingness to abide by ethical standards. The North Carolina State Legislature has recognized the difference between "bad" and "good" regulation. In response to numerous critical articles by economists (including some by Dr. Kwoka and myself) and adverse court decisions repealing regulations of the Milk Commission that limited entry, it abolished the North Carolina Milk Commission

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[66] Kleiner, Morris M. and Kudrle, Robert T., *Does Regulation Affect Economic Outcomes? The Case of Dentistry*, "Journal of Law and Economics, Vol. XLIII (October 2000) Kwoka Report, 16.

[67] Douglas Conrad and Marie Emerson, *State Dental Practice Acts: Implications for Competition*, Journal of Health Politics, Policy and Law, Vol.5, 610-30 (1981), Kwoka Report, 17.

[68] Timothy Muris, *California Dental Association v. Federal Trade Commission: The Revenge of Footnote 17*, 8 Sup. Ct. Econ. Rev. 265 (2000), Kwoka Report, 17

[69] Id.

in 19xx.[70] The State Legislature has shown no inclination to do the same to the State Board of Dental Examiners.

None of the economic studies cited by Dr. Kwoka examine the issue of this case, which is comparing the services of licensed professionals with the services of unauthorized and untrained nonprofessionals in the provision of teeth whitening services. Most of these articles deal with the impact on price of restrictions on advertising and reciprocity by a professional licensing board. Some of the articles discuss quality, but the comparisons are between licensed professionals in areas that are deemed more or less restrictive. There are no studies that compare the quality of service by licensed professionals versus unlicensed providers. Some of the articles cited by Dr. Kwoka simply conclude that licensing is bad for consumers across the board and that there are no benefits associated with licensing.

IX. Conclusions

I do not contest Professor Kwoka's statement that the actions of the State Board enforcing state law also benefit dentists financially. I do reject the claim that because a majority of the State Board are dentists that its actions are solely fashioned to benefit dentists. Unless I see evidence to the contrary, I believe that the actions of the State Board should be presumed to promote the public interest, which demands that practitioners of dentistry have training and education and are constrained by professional ethics that entitle them to a license issued by the State Board.[71]

Given the weakness of his arguments and the evidence of harm to patients, Professor Kwoka makes the tepid claim that "elimination of the kiosk/spa teeth whitening option would likely harm consumers in North Carolina who are interested in teeth whitening." The "harm" to consumers that concerns Professor Kwoka is the inconvenience of using one of three other methods for whitening teeth that are safe. He claims that elimination of competition would likely raise prices, but offers no quantitative data to justify that claim. Overall, Professor Kwoka's Report is a broad based attack on professional licensing generally, an argument that is best made to state legislatures. It is clearly inappropriate to sue a State Board for enforcing a state law that it is charged with enforcing and about which there is no ambiguity.

Respectfully submitted,

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December 20, 2010

[70] For a more in-depth discussion of "bad" and "good" state regulation, see Appendix I.
[71] Cite the attestation by a member of the State Board.

APPENDIX I

Appendix I

Government Sponsored Cartels: State Regulation of Milk and Regulation of Dentistry

The discussion below about cartels is sparse, but it is consistent with most of the countless books that have been written about cartels and related topics: market concentration, government regulation, and antitrust.[1] This discussion is intended to make clear some of the major differences between legitimate state action by governments to advance the welfare of its citizens and government sponsored cartels, which the U.S. Supreme Court has said are not immune from federal antitrust laws.[2] To illustrate a government sponsored cartel, I discuss the North Carolina State Milk Commission, which was abolished by the North Carolina State Legislature in 2004.[3] The contrasts between the North Carolina State Milk Commission and the North Carolina State Board of Examiners are apparent when the factors associated with cartels are examined.

A. Private Sector Cartels:

In the private sector, cartels are organizations of sellers that exhibit many of the same characteristics and face similar challenges. Typically, cartels are found in markets where the number of sellers is few relative to the number of purchasers and the market shares of the leading firms are high indicating a highly concentrated market.[4] Markets are classified as **highly**

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[1] See e.g., Scherer, F.M. and David Ross, Industrial Market Structure and Economic Performance, 3rd ed. Houghton Miffin, (1990).

[2] Parker v. Brown, 317 U.S. 341 (1943).

[3] 2004 N.C. Session Law 199.

[4] The U.S. Department of Justice (DOJ) classifies markets according to the market share concentration of sellers. The most widely used measure of market concentration is the Herfindahl-Hirshman Index (HHI) which is calculated as:

$$HHI = \sum_{i=1}^{n} S_i^2$$

where n is the number of firms in the market and S_i is the Market Share of the i'th expressed as percentages.

According to the criteria used by the U.S. DOJ, they will sometimes challenge mergers among the leading firms because such mergers are likely to promote cartels and higher prices without offsetting efficiency gains. The U.S. DOJ classifies markets as **highly concentrated** if the HHI is over 1,800 and a merger takes place between two firms which adds more than 50 points to the HHI. The DOJ classifies markets with an HHI of between 1000 and 1800 as **moderately concentrated** and will challenge mergers that add 100 points or more to the HHI. The DOJ does not generally challenge mergers in markets that are **unconcentrated**, which are markets with HHI's of less than 1,000. According to the website http://www.dexknows.com/local/health_care/dentistry/general_dentists/geo/c-raleigh-nc/ there are 284 dentists operating in Raleigh, North Carolina, not counting those in Knightdale, Cary, Garner, and other surrounding areas. Needless to say, according to the criteria used by the U.S. DOJ to evaluate the

concentrated, and thus most likely to operate as a cartel, when most of the sales are made by a few large firms. Members of cartels in highly concentrated markets, such as OPEC (at least at one time), can raise prices significantly if they can agree on price and control output of members and non-members.

Although cartels can be vehicles for generating large profits for members, generally it is difficult to maintain cartels because they all face similar problems. In the U.S. under Section 1 of the Sherman Act it is illegal for competitive rivals in the same industry to agree on price, unless they qualify for an antitrust exemption. Given the general antitrust illegality of private cartels, members must meet secretly so that they can agree on (1) price and (2) how to deal with price cutters among their membership. In order to be successful, members of cartels must not only agree on price, but also must be able to control supply, both by members and by new entrants, who are attracted by high profits and prices. The larger the number of members of a cartel, the more difficult it is to agree on price. In addition, when the number of cartel members are large, it is more difficult to detect and prevent some members from realizing even larger profits by slightly undercutting the agreed upon price and not restricting output.[5] Bottom line is that cartels operate more effectively in highly concentrated markets, but they need to agree on price, be able to prevent price cutting by members, and control supply.

B. Impact of Government

Often cartels can be much more effective if they can enlist government help to deal with price setting, price cutters, and new entry from outside firms. In the past there have been instances in which state and federal regulatory boards set minimum prices and restricted entry by new firms.

Case Study: Dairy Industry

Both Professor John Kwoka and I have contributed to the economic literature regarding federal and state regulation of milk:

Kwoka, John, "Federal Milk Market Regulation: The Multiple Pricing System," Proceedings, Conference on Milk Prices and the Market System, Community Nutrition Institute, Washington, D.C., January 1976.

Kwoka, John, "Pricing Under Federal Milk Market Regulation," Economic Inquiry, July 1977.

Baumer, David L., "Federal Regulation of the Dairy Industry: Costs, Benefits, and Legal Constraints," Ph.D. Dissertation, University of Virginia, 1980.

Baumer, David L., "Review of Milk Regulation and Court Decisions in North Carolina and the Southeast," Economic Research Report No. 49, Department of Economics and Business, North Carolina State University at Raleigh, (Feb. 1985).

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[5] Cheating on the agreed upon price by members of a cartel is a well-recognized problem associated with the longevity of cartels.

Baumer, David L., Richard F. Fallert, and Lynn H. Sleight, "State Milk Regulation: Extent, Economic Effects, and Legal Status," U. S. Dept. of Agriculture, Econ. Res. Serv. Staff Report No. AGES860404, (April, 1986).

Baumer, David L., Robert T. Masson, and Robin A. Masson, "Curdling the Competition: A Legal and Economic Analysis of the Antitrust Exemption for Agriculture," 31(1) Villanova Law Review 183 (1986).

Most of the discussion below is directed toward examining the North Carolina Milk Commission and its economic effects, but some of the analysis applies to federal regulation of milk as well.

I believe that Professor Kwoka would agree with me that state regulation of the dairy industry beginning in the 1930s and through the 1980s was an egregious example of government sponsored cartels. Let me review the main features of the milk regulation in North Carolina through the North Carolina Milk Commission and compare this regulation to the North Carolina State Board of Dental Examiners. It is my contention that dairy regulation at the time that Dr. Kwoka and I wrote our articles was a government sponsored cartel. There were two forms dairy regulation at that time, state and federal. In both forms of milk regulation, government "milk marketing orders" set minimum prices for milk based on complicated formulae. Solving a crucial issue for all cartels, milk producers were not allowed to sell milk to processors (dairies, such as Sealtest and Borden) at lower than the minimum prices set by marketing order officials or members of a state milk commission, who were government employees.[6] At least during the 1970s and 1980s, there were no maximum prices, so dairy cooperatives could and did negotiate for prices over the minimums set by government officials.[7]

A feature of the milk regulation is the Capper-Volstead Act of 1922, which immunized dairy cooperatives from liability from Section 1 of Sherman Act.[8] In many instances the market shares of individual cooperatives in states or federal orders were over 90% and these cooperatives had contracts with all the processors in a state or federal order, thus shutting off outlets to non-members.[9] Milk produced outside the orders, or out-of-state, that was shipped in from other

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[6] Baumer, David L., Federal Regulation of the Dairy Industry: Costs, Benefits, and Legal Constraints, Ph.D. dissertation, University of Virginia, 1980.

[7] According to this website, dairy cooperatives continue to sell milk at prices above the minimum set by the marketing order: http://milk.procon.org/view.answers.php?questionID=000839. Id. note in my dissertation that positive and significant relationships were found between prices and the market shares of dairy cooperatives in the area after adjusting for other factors.

[8] Under the Capper-Volstead Act, individual cooperatives were also allowed to collude on price among each other.

[9] Baumer, Federal Regulation of the Dairy Industry: An "order" in milk regulation parlance is a discrete area in which all sales are subject the minimum prices set by milk regulators. In the

areas or states was subject to substantial tariffs, sometimes called "equalization charges or compensatory payments." In states, milk commissions, such as the North Carolina Milk Commission, enabled dairy cooperatives to operate as cartels with minimum prices established and maintained by government officials and potential supplies of milk from outside the state were subject to substantial tariffs that insulated in-state producers from competition.[10]

A number of factors led to the demise of state milk regulation.[11] At the state level, the tariffs imposed on out of state milk were ruled unconstitutional under the Interstate Commerce Clause of the U.S. Constitution in several cases.[12] In the wake of numerous critical studies by economists and others, eventually, the North Carolina State Legislature decided that it had seen enough and abolished the Milk Commission.[13] During their heydays, however, the North Carolina Milk Commission and other state milk commissions crucially served the needs of dairy cartels by setting and enforcing minimum prices and erecting barriers to the import of milk produced out of state.

There have been other government sponsored cartels, most notably the Interstate Commerce Commission (ICC), which regulated trucking by setting minimum prices and restricting entry and the Civil Aeronautics Board (CAB), which regulated the airlines, also a highly concentrated industry in which the government set minimum prices and blocked entry. In both cases, government regulatory boards set minimum prices for large firms in highly concentrated industries and effectively blocked entry, as did milk commissions. Other examples of government sponsored cartels could be cited. Again, responding to a number of convincing articles mainly written by economists, Congress abolished the CAB and vastly reduced the powers of the ICC.

C. North Carolina Board of Dental Examiners

Southeast, "orders" were generally coincident with state lines. Capper-Volstead Act (P.L. 67-146), the Co-operative Marketing Associations Act (7 U.S.C. 291, 292).

[10] The tariffs levied on milk imported from other areas were called an "equalization" fund. Appeal of Arcadia Dairy Farms, Inc., 289 N.C. 456, 223 S.E.2d 323 (1976).

[11] See my article, Baumer, David L., Review of Milk Regulation and Court Decisions in North Carolina and the Southeast, Economic Research Report No. 49, Department of Economics and Business, North Carolina State University at Raleigh (February 1985).

[12] Id. and Baumer, David L., Richard F. Fallert, and Lynn H. Sleight, "State Milk Regulation: Extent, Economic Effects, and Legal Status," U. S. Dept. of Agriculture, Econ. Res. Serv. Staff Report No. AGES860404, (April, 1986).

[13] The actual abolition of the North Carolina Milk Commission did not occur until 2004, but its impact was near zero after adverse court rulings and establishment of federal marketing orders in its place.

On the other hand, regulation of dentists in North Carolina by the State Board of Dental Examiners does not have the same features as government regulation of milk, trucking, or airlines described *supra*. State regulation of the dental profession differs from milk in part because the structure of the dental market, or profession, in North Carolina, does not resemble the market structure of other cartelized industries. The dental market is not concentrated and not dominated by a few sellers.[14] Furthermore, the State Board conducts its business publicly and its actions are subject to judicial review. Minimum prices are not set by the State Board and price cutters are not disciplined or sanctioned. There are entry barriers, but those barriers are strictly related to limiting the practice of dentistry to those qualified by training, education, and willingness to adhere to professional ethical codes. The limitations on entry are clearly based on health and safety, as there are no qualifications for those who provide teeth whitening services, which are defined by statute as part of the practice of dentistry.

In summary, the key variables discussed above that identify cartels, which have the potential for harming the public by raising prices without concomitant increases in quality, are high seller concentration, price agreements, disciplining of price cutters, and barriers to entry. Additionally, cartels generally collude secretly. With the exception of barriers to entry, which are directly related to health and safety, these factors are not part of the regulation of the dental profession in North Carolina. The market is not concentrated and the State Board does not set prices.

A more persuasive model of dental regulation in North Carolina is the "State Action" model. The two parts to the state action model are: (1) the regulation was enacted and is directed towards the accomplishment of a clearly articulated governmental objective and (2) the regulation is actively supervised.[15] As early as 1879, the N.C. General Assembly stated the objectives of regulation of the dentistry industry:

> The practice of dentistry in the State of North Carolina is hereby declared to affect the public health, safety and welfare and to be subject to regulation and control in the public interest. It is further declared to be a matter of public interest and concern that the dental profession merit and receive the confidence of the public and that only qualified persons be permitted to practice dentistry in the State of North Carolina. This article shall be liberally construed to carry out these objects and purposes.

Unlike the North Carolina Milk Commission and other forms of regulation that promoted cartels, reasonable or minimum prices or income to dentists are not listed among the objectives of regulation of the dentistry industry.

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[14] In the Raleigh area alone, the yellow pages list 284 individual dentists.

[15] Parker v. Brown, 317 U.S. 341 (1943) and California Retail Liquor Dealers Association v. MidCal Aluminum, Inc., 445 U.S. 97 (1980).

In the instances in which state regulation has failed the State Action test, and therefore the actions of the regulators were not immune from antitrust prosecution, on its face the regulation did not have a clear objective.[16] State regulation failed the active supervision test when the regulation provided a forum for price fixing and enforced sanctions against price cutters.[17] In the case of North Carolina, the Dental Practice Act does elucidate clear objectives, but does not authorize price setting. It is clear from the statute that the main purpose of the State Board is to make decisions that protect the health and safety of the citizens of North Carolina.[18] Income maintenance of dentists is not a stated goal of the Dental Practices Act. The actions of the State Board, however, are subject to judicial review and the North Carolina version of the Administrative Procedures Act. The Dental Practices Act is a statute that could be changed through normal channels, just as the North Carolina Milk Commission was abolished when it was clear that it could no longer control supply.

The bases upon which the FTC is challenging the State Board apply generally to every professional or occupation regulated by a state board in every state. Decisions to overturn the authority of state regulatory boards should not be made by a few FTC attorneys who are relying on dated economic analyses that are largely moot at this time. As stated in the declaration by the N.C. General Assembly above, the objectives of the North Carolina State Board of Dental Examiners are to promote public health and safety and to restrict the practice of dentistry to those qualified to practice so that the public will have confidence in the quality of services provided by dentists in the State of North Carolina.

Respectfully submitted,

David L. Baumer 12/20/10

David L. Baumer December 20, 2010

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[16] MidCal, 445 U.S. 97 (1980).
[17] Id. and Goldfarb v. Virginia State Bar, 421 U.S. 773 (1975)
[18] N.C. Gen. Stat. § 90-22.

APPENDIX II

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I. BRIEF RESUME:

Education

B.A.(economics)	1971	Ohio University,
J.D.	1979	University of Miami
Ph.D.(economics)	1980	University of Virginia

Professional Experience

Instructor	NC State University	1979
Asst. Professor	NC State University	1980
Assoc. Professor	NC State University	1986
Professor	NC State University	2005
Department Head	NC State University	2006-

Scholarly and Professional Honors

Graduated Cum Laude	Ohio University	1971
Graduated Cum Laude	U. of Miami	1979
Earhart Fellowship	U. of Virginia	1975
Thomas Jefferson Fellowship	U. of Virginia	1976
J. M. Olin Fellowship	U of Miami	1976-79
College of Management Teaching Award for Excellence		2003-04
Academy of Legal Scholars in Business: Distinguished Paper		2008
Academy of Legal Scholars in Business: Holmes-Cardozo Award		2008

Professional Licenses

Member of the North Carolina Bar

Professional Associations

- North Carolina Bar Association
- American Bar Association
- American Economic Association
- Western Economic Association
- Member of the Intellectual Property Section of the American Bar Association
- Member and Elected Officer in the Antitrust and Unfair Trade Practices Section of the North Carolina Bar Association (1992-1995).
- Member of the Board of the Lincoln Forum, an association of Republican attorneys in North Carolina (1995-1998).
- Member and Elected Officer in the Antitrust and Unfair Trade Practices Section of the North Carolina Bar Association (2000-2003).

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- Baumer, D.L., and J.C. Poindexter, CYBERLAW AND E-COMMERCE, McGraw-Hill (2002).

- Baumer, D.L., and J.C. Poindexter, LEGAL ENVIRONMENT OF BUSINESS IN THE INFORMATION AGE, McGraw Hill (2004).

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22. Baumer, D.L., Steve Markham and L.A. Smith, "Learning by Doing" A paper presented at the National Collegiate Inventors and Innovators Alliance annual Conference in Washington, D.C., March 1998.

23. Baumer, D.L., Young, G. "High Tech Firms: Networks, Attorneys, and Contract Flexibility," presented at the Western Economic Association, in Seattle, July 1997.

24. Kingon, S. Markham, G. Dickson, J. Jeck, D. Baumer, and M. Zapata, "The TEC Programme: Experience in Preparing Scientists and Engineers for Entrepreneurship." Published by the Ministry of Science and Technology of the Republic of Slovenia, Ljublijana, 1996 at a conference entitled, "Forum Bled, Transfer of Knowledge: Academia-Technology-Industry-Quality of Life."

25. Poindexter, J.C. , David L. Baumer and Katherine B. Frazier, "Policy and Practice in the Equitable Distribution of Defined Benefit Pension Plans," a conference to honor Roger Sherman sponsored by the Journal of Regulatory Economics, Charlottesville, Virginia 1996.

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27. Baumer, David L., "State Milk Regulation: Back to the Future," Presented at the Midwest Milk Marketing Annual Conference, Kansas City, KS, March 1993.

28. Baumer, David L., "Possible Liabilities Associated with Multi-Use Athletic Schools." Presented to the North Carolina Turf Grass Annual Conference, Winston-Salem, January 1993.

29. Baumer, David L., "Determinants of the Success of Athletic Programs at Universities with Major Sports Programs." Presentation to the Fifth Annual Sport, Physical Education, Recreation and Law Conference, Jeckyll Island, Georgia, March 13, 1992.

30. Baumer, David L., "Applications of the Rule of Reason in Antitrust Cases." Presentation to the North Carolina Antitrust and Trade Regulation Annual Meeting, Greensboro, NC, March 20, 1992.

31. Baumer, David L., "Identifying Efficient Contract Breaches," presented at the Western Economic Association in San Francisco, July 1992.

32. Baumer, David L., "Constitutionality of State Milk Regulation." Presented to the International Association of Milk Control Agencies, Harrisburg, PA, August 1992.

33. Baumer, David L., "Deregulation of Milk at the State Level," presented at the American Agricultural Economic Association Conference in East Lansing, MI, August 1987.

34. Faculty member at the Advanced Economics Institute for Public Interest Law Firm Attorneys, sponsored by Law and Economics Center, University of Miami. Topic: "The Use of Economic Testimony in the Courtrooms." February 1983.

35. Baumer, David L, "Antitrust Constraints of Dairy Cooperatives: Theory and Evidence," presented at Western Economic Association, Los Angeles, June 1982.

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Funded Research Project Record

1. North Carolina Agricultural Research Service. Title: Agricultural Cooperatives: An Analysis of Proposed Legal Changes and Equity Financing (1981).

2. National Science Foundation. SES-8111237 Title: Market power, Antitrust, and Regulation Policy: A Study of Milk Marketing. Principal Investigator: Robert T. Masson, Cornell University (1982).

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6. National Science Foundation. EEC: 9528410 Title: Technology, Education and Commercialization: Development of New Concepts in Integrated Education. Principal Investigators: Gary Dickson, Angus Kingon, and Steve Markham (1995).

Title: Collaborative Research: A Comprehensive Policy-Driven Framework for Online Privacy Protection: Integrating IT, Human, Legal and Economic Perspectives
Source: NSF Cyber Trust Program
Duration: September 15, 2004 - August 31, 2007
Amount: $ 1,194,000 (NCSU: $ 534,000)
NCSU Principal Investigators: Annie I. Antón and Ting Yu (NCSU)
Purdue Principal Investigators: Elisa Bertino, Ninghui Li, Melissa J. Dark, Victor Raskin and Robert W. Proctor
Senior Research Personnel: David Baumer, Michael Rappa
Graduate Research Assistant:
Abstract:
This project seeks to provide a comprehensive framework for protecting online privacy, covering the entire privacy policy life cycle. This cycle includes enterprise policy creation, enforcement, analysis and auditing, as well as end user agent presentation and privacy policy processing. The project integrates privacy-relevant human, legal and economic perspectives in the proposed framework. This project will develop an expressive, semantics-based formal language for specifying privacy policies, an access control and auditing language for enforcing privacy policies in applications, as well as theory and tools for verifying privacy policies. Additionally, experiments and surveys will be conducted to better understand the axes of users' privacy concerns and protection objectives. Results from this empirical work will be used to develop an effective paradigm for specifying privacy preferences and methods to present privacy policies to end users in an accurate and accessible way.

Title: ITR: Encoding Rights, Permissions and Obligations: Privacy Policy Specification and Compliance
Source: NSF Information Technology Research Program
Duration: August 2003 - July 2007
Amount: $ 920,000
Principal Investigators: Annie I. Antón and Colin Potts (Georgia Tech)
Graduate Research Assistant: Qingfeng He, Will Stufflebeam, Carlos Jensen (GT)
Undergraduate Research Assistant: Neha Jain (NCSU)
Senior Research Personnel: Lynda Aiman-Smith, David Baumer, Julie Earp
Abstract:
This research seeks to increase the trustworthiness from an online purchase to a database check can be proposed framework and tools. This work will help obligations set by organizations, individuals, or a how information is used. This research will also examine at large via the development of IT for system designers vulnerabilities that compromise individuals' personal governed by specific policies. Moreover, the results makers in determining the ramifications of policy conflicts and inconsistencies may be prevented.

III. REFERENCES

- Dr. Robert Clark, College of Management, North Carolina State University

- Dr. Steve Barr, Department of Management, Innovation and Entrepreneurship (MIE), North Carolina State University

- Associate Dean Steven Allen, Department of Economics, North Carolina State University

IV. TEACHING

Have taught the following courses:

- BUS 305 **Legal and Regulatory Environment**
- BUS 307 **Business Law I**
- BUS 308 **Business Law II**
- BUS 406 **Sports Law**
- BUS 432 **Industrial Relations**
- BUS 501 **Legal Environment**
- BUS 504 **Technology, Law and the Internet**
- EC 301 **Intermediate Price Theory**
- EC 413 **Industrial Organization**
- BUS 462 **Marketing Research**
- EC 512 **Law and Economics.**

During the past 5 years I have taught about 50 percent at the graduate level and 50 percent at the undergraduate level.

Student evaluations have averaged about 4.5 on a 5 point scale (at or above average).

Have taught in the auditorium in Room 3400 as well as on television. Make extensive use of computers in classroom presentations.

Courses Taught Recently

BUS 305 **Legal & Regulatory Environment**	In small (35-) sections, in the Nelson Hall Auditorium (180+ students per section) and on television through the Office of Instructional Telecommunications.
BUS 504 **Technology, Law and the Internet**	This course is essentially a Legal Aspects of the Management of Technology. The course is in the Technology Option in the MSM degree.
BUS 507 **Biotech and Pharma Law**	This course is as described, a biotech and pharmaceutical law course.

V. CONSULTING

Have been hired as an expert witness in over 100 antitrust, intellectual property, breach of contract, wrongful death, and personal injury cases.

Consulting in the Last Four Years:

David Guenzel v. Wesley Ash Davis. Personal injury case. Prepared a report (2004). Deposed in 2005.

Rivenbark and Carolyn Guyton v. Charlotte Buckley and Inter-Shop, Inc. Personal injury case. Prepared a report (2004).

Mann's Bait Company v. Pace Products, Inc., Patent infringement case. Prepared a report and was deposed (2004).

Ale House Management, Inc. v. Raleigh Ale House, Inc., Trademark infringement case. Prepared report and was deposed (2004).

Stetser v. TAP Pharmaceutical Products, Inc. et al. Prepared a report and was deposed (2004).

McQuiston v. Cary Reconstruction Co., et al. Prepared a report (2005). Was deposed.

Jennifer Jones Smith v. Jesus Bello. Prepared report (2005).

Karen Laperriere Cline, Plaintiff v. Jeffrey Todd Sisk, State of North Carolina, County of Brunswick, 05-CVS-73

Danny D. Frazier v. Cory Armstrong Vanhorn. Date of Loss: July 12, 2004 File No.: 426.0056. Prepared a report.

Terrence L. Gardner v. Rhonda K. Roberts, Wake County; 04 CVS 6556 Our File No.: 8030.1003 (2006). Prepared a report. Was deposed.

Stantec Consulting, Inc. v. Godley Group Holdings, Wake County File No. 05 CVS 9556 (2006) Prepared a report. Was deposed.

Phillip McConnell v. Emigdio Mendex-Huerta. Prepared a report and was deposed. (2006).

Teraforce v. VISTA Controls, Inc. and Curtiss-Wright Controls, Inc., Case No. 05-38756-BJH-11 (Jointly Administered). Prepared a report. Was deposed.

Johnson v. Shiller, Civil Action No. 3:06-cv-483. Prepared a report.

Tedder v. Carolina Power & Light Company, Superior Court Division 09 CVS 396. Prepared an Affidavit.

Old vs. xxxxx, Prepared a report.

Mooney v. Duke Medical Center

APPENDIX III

Documents that I have relied upon in Preparation of my Reply to Expert Report of Professor John Kwoka:

1. Expert Report of Professor John Kwoka

2. Respondent's Separate Statement of Material Facts As To Which There Are and Are Not Genuine Facts.

3. Memorandum in Support of Motion to Dismiss (Corrected)

4. Response to Complaint

5. Complaint & Motion for Preliminary & Permanent Injunction

Economic Articles:

1. Kwoka, John E., Jr., "Advertising and the Price and Quality of Optometric Services," American Economic Review, Vol. 74, pp. 211-216 (1984).

2. Bond, Ronald S., John E. Kwoka, Jr., John J. Phelan & Ira Taylor, "Self-Regulation in Optometry: The Impact on Price and Quality," Law and Human Behavior, Vol. 7, Nos 2/3, (1983).

3. Bond, Ronald S., John E. Kwoka, Jr., John J. Phelan & Ira Taylor Whitten, "Effects of Restrictions on Advertising and Commercial Practice in the Professions: The Case of Optometry," Economic Report, Federal Trade Commission, (September 1980).

4. Kleiner, Morris and Robert T. Kurdrle, "Does Regulation Affect Economic Outcomes? The Case of Dentistry," Journal of Law and Economics, Vol. XLIII (October 2000).

5. Kleiner, Morris, "Occupational Licensing, Journal of Economic Perspectives," Vol. 14 No. 4, pp. 189-202 (Fall 2000).

6. Brown, L. Jackson, Donald R. House, and Kent D. Nash, "The Economic Aspects of Unsupervised Private Hygiene Practice and Its Impact on Access to Care," ADA Health Policy Resources Center, Dental Health Policy Analysis Series, (2005).

7. Carroll, Sydney L. and Robert J. Gaston, "Occupational Restrictions and the Quality of Service Received: Some Evidence," Southern Economic Journal, Vol. 47, 959-976 (1981).

8. J. Nellie Liang and Jonathan D. Ogur, "Restrictions on Dental Auxiliaries: An Economic Policy Analysis," Bureau of Economics Staff Report to the Federal Trade Commission (May 1987).

9. Hass-Wilson, Deborah, "The Effect of Commercial Practice Restrictions: The Case of Optometry," Journal of Law and Economics, Vol . XXIX, pp. 165-186 (April 1986).

10. Conrad, Douglas A., and Marie L. Emerson, "State Dental Practice Acts: Implications for Competition," Journal of Health Politics, Policy and Law, Vol. 5 No. 4 (Winter 1981).

11. Shepard, Lawrence, "Licensing Restrictions and the Cost of Dental Care," Journal of Law and Economics, Vol. 21, pp. 187-201 (1978).

12. Svorny, Shirley, "Licensing, Market Entry Regulation, " Encyclopedia of Law & Economics, Vol. III, The Regulation of Contracts, ed. By Boudeqijn Bouckaert and Gerrit De Geest, Cheltenham, UK Edward Elgar, pp. 296-328 (2000).

13. Rottenberg, Simon, Introduction, "Occupational Licensure and Regulation, S. Rottenbery, ed. (1980).

14. Muris, Timothy, J., "California Dental Association v Federal Trade Commission: The Revenge of Footnote 17," 8 Sup. Ct. Econ. Rev. 265 (2000).

15. Akerlof, George, "The Market for Lemons: Quality Uncertainty and the Market Mechanism," Quarterly Journal of Economics, Vol. 84, p. 495 (1970).

16. Klein, Benjamin and Keith B. Leffler, "The Role of Market Forces in Assuring Contractual Performance, Journal of Political Economy, Vol. 89, No. 4 (1981).

17. Love, James H. and Frank H. Stephen, "Advertising, Price and Quality in Self-Regulating Professions: A Survey," International Journal of the Economics of Business, Vol. 3, No. 2 (1996).

CERTIFICATE OF SERVICE

I hereby certify that the undersigned has this date served copies of the foregoing upon all parties to this cause by electronic mail as follows:

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Dated: December 20, 2010

/s/ Alfred P. Carton, Jr.

Alfred P. Carlton, Jr.

Attachment C

REBUTTAL REPORT OF PROFESSOR JOHN KWOKA

[FTC v. North Carolina Board of Dental Examiners; Docket No. 9343]

I. Introduction and Summary

My name is John Kwoka. I am the Neal F. Finnegan Distinguished Professor of Economics at Northeastern University. My qualifications, including my areas of expertise, curriculum vitae, and prior consulting experience, are set forth in my Expert Report filed on November 26, 2010 ("Expert Report"). I incorporate that documentation by reference.

In my Expert Report, I made the following points:

I. The North Carolina State Board of Dental Examiners (the "Board") has a material interest in the exclusion of non-dentist teeth whitening in North Carolina. This conclusion is based primarily on the following facts:

a) The Board is dominated by, is selected by, and reflects the interests of licensed dentists.

b) Dentist provision of teeth whitening competes with non-dentist methods of teeth whitening.

c) Economic studies of professional self-regulation, and the history of antitrust enforcement in the professions, evidence efforts by professionals to restrict competition and exclude competitors, without offsetting benefits for consumers.

II. The exclusion of non-dentist teeth whitening harms consumers. This conclusion is based primarily on the following facts:

a) Economics teaches that exclusion of a product desired by consumers reduces choice and quantity, and raises price.

b) Claimed problems with kiosk/spa provision of teeth whitening are unsubstantiated, and in any event would not require or justify an outright ban.

c) Economic studies of the effects of restrictions on entry and scope of practice in the professions have generally found higher prices but no offsetting quality benefits from such restrictions.

d) Available studies of restrictions in dentistry come to conclusions consistent with the conclusions of other studies of the professions.

On December 20, 2010, Dr. David L. Baumer filed an Expert Report ("Baumer Report") that seeks to disprove my conclusions. I have been asked by Staff of the Federal Trade Commission to evaluate and comment on Dr. Baumer's Report. I have done so. I conclude that the Baumer Report is flawed in its reading of my Report, in its analysis of the issues, in its uncritical deference to the actions of the Board, and in its economic analysis. As a result, I believe that the economic analysis in my Report stands unchallenged, and that its conclusions are valid and correct.

In what follows I explain the various deficiencies of the Baumer Report, and the reasons that my conclusions remain unchanged.

II. THE MATERIAL INTEREST OF THE BOARD IN THIS MATTER.

My Report observed: (a) that the Board is dominated by licensed dentists who reflect the collective interests of the licensed dentists in North Carolina who elect the Board, and (b) that dentist provision of teeth whitening services competes with non-dentist provision. From this I concluded that the Board has a material interest in excluding non-dentist teeth whitening.

The Baumer Report acknowledges the two factual points underpinning my conclusion. The Baumer Report characterizes as "unremarkable," "banal," and "obvious" my statements that the Board is dominated by licensed dentists, that licensed dentists have "a material interest in the teeth whitening business in the State of North Carolina," and that licensed dentists "stand to gain from the exclusion of competing non-dentist providers."[1] Unsurprisingly, then, Dr. Baumer expressly concludes as follows: "I do not contest Professor Kwoka's statement that the actions of the State Board enforcing state law also benefit dentists financially."[2]

With respect to my contention that dentist and non-dentist teeth whitening services compete with one another, the Baumer Report agrees in full, stating: "Undoubtedly, there is a high cross elasticity between the various methods of whitening teeth."[3] A high cross-elasticity is a standard economic measure of the degree of substitution between goods or services. The Baumer Report thus acknowledges that dentist teeth whitening and non-dentist teeth whitening are competing services.

The Baumer Report goes on to claim that my "entire analysis . . . seems to assume that professionals, including dentists and members of the North Carolina State Board of Dental Examiners, are motivated solely by profit maximization."[4] This assertion is repeated several

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[1] Expert Witness Report of Dr. David L. Baumer [Baumer Report] at 7-8.

[2] *Id.* at 16.

[3] *Id.* at 8.

[4] *Id.* at 1.

times.[5]

In fact, this misreads and mischaracterizes my Report. I never make any statement or assumption that the Board or licensed dentists act *only* on the basis of their financial interests, nor do my conclusions depend on such a proposition. My position was and is that the Board and licensed dentists *do* have a material financial interest in teeth whitening, and that the Board *does* represent the interests of licensed dentists in North Carolina. In fact, both of my points are acknowledged by the Baumer Report to be accurate.

The Baumer Report also acknowledges the risk that the Board will pursue self-serving restrictions on competition. It states that "[i]t is true that state regulatory boards can be used to exclude competition and augment incomes of licensed practitioners. . . . There is no doubt the potential for abuse exists."[6] On this important point that the Board has both the incentive and the ability to harm competition and consumers the Baumer Report and my Report are in agreement.

Of course, the Baumer Report contends that this financial benefit is not the impetus for the Board's efforts to prohibit non-dentist teeth whitening. Rather, Dr. Baumer states that the Board seeks to prevent "dental malpractice by untrained and unqualified practitioners whose practice may harm patients, who need the services of qualified dentists to repair the damage done."[7] The "evidence" for this statement offered in the Baumer Report is as follows: It states that if anticompetitive exclusion were the Board's motive, then the Board would exclude over-the-counter teeth whitening products.[8] Further, the Baumer Report claims that it is "more plausible" that the Board is concerned that kiosks and spas "use high concentrations of chemicals that have the potential to harm patients and are operated by untrained staff with no supervision from licensed, trained professionals."[9] And finally, the Baumer Report asserts that it is "probable" that Board members are familiar with literature warning about non-dentist teeth whitening.[10]

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[5] On page 2, the Baumer Report states that "Reading the Kwoka Report, one would assume that the actions of the [Board] . . . are solely consistent with pecuniary self-interest of dentists . . . . " Page 8 references the "insinuation that the numerical dominance of the State Board by licensed dentists ensures that the State Board is only concerned with the economic interests of dentists" and states that "Dr. Kwoka seems to assume that . . . the sole reason for such [exclusionary] actions is to benefit dentists financially."

[6] *Id.* at 8.

[7] *Id.* at 7.

[8] *Id.* at 8.

[9] *Id.*

[10] *Id.*

This purported "evidence" is insubstantial, incorrect, and altogether unpersuasive. First, the Board views the sale of OTC whitening kits as outside its jurisdiction (much as the sale of toothpaste).[11] Therefore, the fact that the Board does not attempt to exclude OTC strips tells us nothing about the Board's motivation with regard to eliminating kiosk/spa providers. As for the "plausibility" and "probability" of other explanations, no support is offered beyond pure assertion and a footnote to some literature that is unrelated to the Board. In truth, Board members have admitted their unfamiliarity with the scientific literature regarding teeth whitening, and have acknowledged that they lack knowledge of adverse customer experiences.[12]

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[11] CX0475 (Board Statement on Unauthorized Practice of Dentistry) ("The mere sale of teeth whitening kits to the public, without more, does not constitute the practice of dentistry, provided the teeth whitening kits do not contain any prescription strength chemicals."); Brown Dep. 38:3-8 (Q. Your understanding of the law is that the sale of a product that whitens teeth is okay? A. If it's approved by the FDA and somebody sells it in a drugstore and all that sort of thing, I don't -- I don't have any problem with that.); Hardesty Dep. 108:12-20 (Q. . . . I understood you to say that -- that if I open a kiosk and I sell a product and I do absolutely nothing else, I am not engaged in the practice of dentistry; is that correct? A. That's correct. You're engaged in commerce.); Morgan Dep. 216:21-217:2 (Q. Do you regard the sale of Crest Whitestrips from a kiosk in a mall as the unlawful practice of dentistry? A. Just the sale of the product? Q. The sale of Crest Whitestrips at a mall kiosk. A. No.).

[12] Respondent's Objections and Responses to Complaint Counsel's First Request for Admissions [Response to RFA] ¶ 21 (Board "admits that it is not aware of studies comparing the safety of teeth whitening services as performed by dentists" versus non-dentists); Response to RFA ¶ 38 (Board not aware of "studies comparing the 'patient health issues' that might arise from teeth whitening services as performed by dentists" and non-dentists); Feingold Dep. 252:25-253:6 (Q. Are you aware of any empirical literature establishing that the practice of teeth whitening by nondentists leads to a higher incidence of adverse outcomes in the practice of teeth whitening by dentists? A. I'm not aware of any literature in either direction on that subject.); 254:19-23 (Q. Now I'm asking you whether you have any knowledge of empirical literature establishing that there even are a material number of adverse outcomes from tooth whitening by nondentists. A. I'm not aware of any.); Allen Dep. 96:3-7 (Q. And you're not familiar with a literature establishing that people have been subjected to significant nontransient harm from nondentist tooth whiteners, correct? A. No, I'm not.); Brown Dep. 98:8-99:1 (Q. The board did not undertake any systematic study to understand whether the effects of nondentist tooth whitening -- the adverse effects were more than temporary? A. Anything -- any time I had anything to do with this would be whether or not they -- they were practicing dentistry or not. Q. You're not aware of the board having conducted a systematic study-- A. Well, the law doesn't say anything about whether -- whether it has any effects or not. just says that they're not allowed to do it. Q. Dr. Brown, I'm simply inquiring-- A. No. I mean that's -- Q. -- as to whether the board -- A. That's my answer. Q. -- conducted a systematic study. A. No, not that I know and I don't think they would be required to.); Morgan Dep. 147:13-16 (Q. Are you aware of any empirical studies whatsoever of the safety of tooth whitening when practiced by nondentists? A. No.); Owens Dep. 122:22-25 (Q. Do you have a specific recollection of having read the results

In summary, there is good evidence of the Board's financial interest in excluding competitive teeth whitening services.

III. EXCLUSION OF NON-DENTIST TEETH WHITENING HARMS CONSUMERS.

The second major conclusion of my report is that the exclusion of kiosk/spa teeth whitening harms consumers. This conclusion is based primarily on two propositions: First, as a general economic matter, exclusion of a product or service desired by consumers in the marketplace reduces consumer options and raises the price of competing goods and services. And second, while there are some circumstances warranting exclusion of a product, these factors are not present in the case of non-dentist teeth whitening.

The Baumer Report offers two responses to my first proposition. First, the Baumer Report acknowledges that exclusion and similar restrictions can in principle be anticompetitive. Dr. Baumer states that: "*Ceteris paribus* (other things being equal), restrictions of competition are generally associated with less choice and higher prices, as noted by Professor Kwoka."[13] The Baumer Report further notes (as did I) that other factors may justify restrictions, but that absent a compelling justification, restrictions create "entry barriers,"[14] "harm consumers,"[15] and "result in higher average prices for consumers."[16] This is an important area of agreement between the Baumer Report and myself. It follows that any restriction on non-dentist teeth whitening should be based on convincing evidence of consumer harm from the service, and should not be predicated upon merely assumed or speculative concerns advanced by financially-interested competitors.

The Baumer Report's other response to my first proposition is less constructive. It consists of a thorough misreading of my Report followed by an admitted distortion of my views. The misreading is contained in passages such as the following: "The Kwoka Report is a broad

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of clinical studies involving teeth-whitening products? A. No.); Hardesty Dep. 55:5-11 (Q. Okay. And you're -- you're not aware of -- of any -- any sources of information that would enable me to understand the percent of nondental bleachings that resulted in harm to patients, correct? A. I don't know that any such information would even be kept for nondental.); Allen Dep. 95:25-96:2 (Q. Are you personally aware of any nontransient harm to someone who received tooth whitening from a nondentist? A. No.).

[13] Baumer Report at 10.

[14] *Id.*; Baumer Report, Appendix I, at 5.

[15] Baumer Report at 10.

[16] *Id.* at 15.

based challenge to regulating professions generally,"[17] and "is an attack on professional licensing generally."[18] But in reality, my Report is no such thing. My opposition to state regulation of the professions is limited to cases where such regulation is employed to unreasonably and unnecessarily limit competition and harm consumers. I state in my original Report that regulatory discretion is properly invoked when there are compelling health or safety or consumer protection issues that arise in the marketplace. I also note that professional licensing places in the hands of state boards considerable discretion over entry into a profession and modes of operation within the profession, and that this discretion can be and too often has been abused. Abuse occurs, for example, when a professional board uses its powers to protects suppliers (its constituents) at the expense of the public. Abusive and unjustified restraints on competition may take several forms, including limiting entry (by excessive failure rates on exams and by lack of reciprocity);[19] limiting the modes of operation (by prohibiting advertising and integration between professionals and nonprofessionals);[20] and limiting competition from alternative service providers, such as in this case, kiosk/spa operators.

Such anticompetitive practices have occurred in numerous professions, including optometrists, chiropractors, podiatrists, psychologists, physical therapists, obstetricians, gynecologists, veterinarians, anesthesiologists, dermatologists, accountants, lawyers, and notably dentists themselves.[21] Legal challenges to these abuses have resulted in numerous instances where restrictive practices have been banned or modified, with substantial consumer benefits in terms of lower prices, better information, and more alternatives from which to choose.[22]

The Baumer Report does not contend that these abusive practices never have occurred or

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[17] *Id.* at 3.

[18] *Id.* at 15.

[19] Reciprocity refers to permitting a person licensed in one jurisdiction also to practice in a second jurisdiction.

[20] By way of example, integration includes an arrangement in which an optometrist is employed by a chain store that principally sells eyeglasses.

[21] *E.g.*, *In re South Carolina Board of Dentistry*, Decision and Order (Sept. 7, 2007), *at* http://www.ftc.gov/os/adjpro/d9311/070911decision.pdf (restrictions on hygienists); *In re Louisiana State Board of Dentistry*, 106 F.T.C. 65 (1985) (advertising restrictions) (consent order).

[22] I have discussed these issues in *The Federal Trade Commission and the Professions: A Quarter Century of Accomplishment and Some New Challenges*, 72 Antitrust L.J. 997 (2005). The source data come from two articles by James Langenfeld and Louis Silvia. *See* James Langenfeld & Louis Silva, *Federal Trade Commission Horizontal Restraint Cases: An Economic Perspective*, 61 Antitrust L.J. 653 (1993); James Langenfeld & Louis Silva, *Federal Trade Commission Horizontal Restraint Cases: An Update,* 49 Antitrust Bull. 521 (2004).

never could occur. Rather, it asserts that, "*By and large* the abuses associated with state licensing of the professions were manifested in the form of state-organized price-fixing schemes and barriers to entry for qualified professionals . . . . *Many* of the abuses . . . have been *largely* eliminated or reformed . . . ."[23] Even this passage concedes that (a) abuses other than price fixing and entry barriers exist; (b) not all abuses have been addressed, and (c) not all those abuses that have been addressed have been completely eliminated. The historical record shows that professional boards in fact engage in competitive abuses less dramatic than price fixing, but nonetheless harmful to consumer interests while benefitting its professional members.

The Baumer Report goes on to state that: "It is only a slight exaggeration to say that Professor Kwoka views licensing of professions as simply state-operated cartels organized exclusively for the benefit of the professions they regulate."[24] Elsewhere the Baumer Report alludes to the "the cartel model of state licensing boards that Professor Kwoka promotes"[25] and asserts that I and others "consider professional licensing boards little more than government sponsored cartels."[26] The so-called "slight exaggeration" is no such thing, and even if it were, it would be objectionable. Dr. Baumer is not entitled to exaggerate my views not a lot (as he has done), and not even slightly (as he claims to have done). My Report should be read for what it manifestly says, not for a distorted version of what it says, and not even when Dr. Baumer acknowledges (but minimizes) the distortion.

Dr. Baumer's misstatement of my views is not just slight. It is fundamentally incorrect. I do not rely upon a cartel model for my analysis. I do not cite any literature on cartels or quote any sources to the effect that professional boards are cartels. Indeed, I do not use the term "cartel" anywhere in my Report. Dr. Baumer may have preferred that I rely upon a cartel framework, but since I did not, the very large portion of his report that discusses a cartel framework is irrelevant to my Report and to this case.

Rather than the straw-man cartel model that the Baumer Report invents and then attacks, my economic framework is that of exclusion. I analyze the Board's actions as efforts to exclude a rival mode of teeth whitening services where that rival mode is performed by non-dentists and represents an actual and potential threat to the income stream of incumbent licensed dentists. It is a matter of straightforward economics that licensed dentists have the incentive and the Board has the means to deter and prevent this rival service from gaining or maintaining a foothold in the marketplace.

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[23] Baumer Report at 1-2 (emphases added). See also the statements that "abuses have *largely* been remedied" (*id.* at 4, emphasis added) and that "since 1980 *some* of the worse abuses of licensing have been *ameliorated*" (*id.* at 13, emphases added).

[24] *Id.* at 2 (citation omitted).

[25] *Id.*

[26] Id. at 3.

This exclusion is not hampered by the existence of a large number of competing dentists. Nor is it likely to be undermined by cheating (as may sometimes be the case with cartels). In exclusion, all incumbents have a common interest in preventing encroachment into services that generate income to dentists. There is no risk of cheating since the exclusion is being carried out by a single board that exercises its powers, so there is no opportunity for cheating by individual competitors. In addition, no incumbent service provider has any individual incentive to cheat on the exclusionary conduct, since no individual dentist could gain any benefit by secretly sending consumers to a non-dentist provider.

The second part of my argument is that where intervention is required in the market for a product or service, that intervention should be reasonably tailored to address the specific problem that has been identified. A complete ban should be reserved for extreme cases that admit of no lesser policy response. In the case of teeth whitening by non-dentists, it is my understanding that there is no good evidence of a systematic problem at all, much less one justifying the draconian policy of a complete ban.

The Baumer Report response to this argument comes in two parts, the first unobjectionable but off the mark, and the second unsupported by the evidence. The unobjectionable statement is the claim that the Board has a legitimate interest "in seeking to prevent non-professionals from practicing professions for which they are not qualified, or not authorized due to lack of a license required by state law."[27] This contention is repeated in various forms and numerous times in the Baumer Report.[28]

There is no dispute as to whether the Board has the authority to initiate judicial proceedings against unqualified and unlicensed individuals who practice dentistry and cause adverse health consequences.[29] (My statement offers no opinion on the legal question of whether teeth whitening does or does not constitute the practice of dentistry under North Carolina law.) But this case is not about untrained individuals extracting teeth or filling cavities, nor is it about

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[27] *Id.* at 1.

[28] For example, the Baumer Report later states the issue to be "allowing untrained and unlicensed operators to sell products and services that are clearly defined by North Carolina state law as dentistry," (*id.* at 2) and further that "[t]he State Board would have been derelict in its duties had it ignored blatant violations of state law regarding the practice of dentistry" (*id.* at 7).

[29] How well professional boards actually do this is another matter. Boards have generally been more aggressive in limiting entry into a profession than making subsequent determinations of poor performance by licensed professionals. The Baumer Report somewhat inexplicably asserts that I "focus" on examples of substandard dental services, although my sole comment consists of one sentence plus a footnote, although I note these are only "occasional lapses," and although my point is that the Board does not routinely shut down dentists found to have provided substandard services even though it seeks to shut down nondentist teeth whitening provision on less substantiated grounds.

the Board suing such persons in court. Rather, the issue here is whether, without a reasonable public health basis and without independent supervision, the Board should be permitted to eliminate non-dentist teeth whitening through the use of self-generated letters ordering the non-dentists to "cease and desist." That is quite a different matter from the issue as stated in the Baumer Report.

Moreover, the sweeping position taken in this section of the Baumer Report advocating uncritical deference to the Board overlooks the indisputable fact (acknowledged in other parts of the Baumer Report) that the powers accorded to professional boards can be and often have often been used for anticompetitive purposes. Professional boards have both the incentive and the means to take actions that benefit incumbents, such as limiting entry, scope of practice, and advertising. As I made clear, these actions have been routinely defended by claims of benefits to consumers and the public interest, even where the principal result has actually been higher prices, lesser quantity, and more limited choices to consumers.

The Baumer Report dismisses this concern as an "old hackneyed contention."[30] In support of this position, it cites a 130-year-old declaration of the North Carolina General Assembly to the effect that regulation of dentistry should be in the public interest.[31] It further states that "if asked, most professionals would claim that they practice their professions, at least in part, to do good, that is to benefit the public."[32] I certainly do not question that individual dentists or all dentists, in North Carolina and elsewhere, generally practice their profession with honor and integrity. But boards and professional associations have made that very same public-benefit claim in cases where their actions have been found decisively to suppress competition and to harm consumers.[33] It is the actions of the Board and the effects of those actions that are the most convincing evidence of the exclusionary harm in this case. To address this issue is not to call into question the integrity of any individual dentist in North Carolina.[34]

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[30] *Id.* at 8.

[31] *Id.* at 5.

[32] *Id.* at 1.

[33] *See, e.g., FTC v. Indiana Federation of Dentists*, 476 U.S. 447, 463-64 (1986); *National Society of Professional Engineers v. United States*, 435 U.S. 679, 684-85, 695-96 (1978); *In re Massachusetts Bd. of Registration in Optometry*, 110 F.T.C. 549, 599, 607-08 (1988).

[34] Note that the exclusion of non-dentist teeth whitening is a threat to the pocketbooks of consumers, and not a threat to health and safety. This factor may make the exclusionary conduct more palatable to North Carolina dentists. And as discussed in Section IV, *infra*, there is a history of professionals acting to restrict competition in ways that harm the economic well-being of their patients/clients.

The more focused point made in the Baumer Report refers to "the possible health consequences" of nonprofessional provision,[35] nonprofessionals who "ignore state law,"[36] "untrained and unlicensed quacks,"[37] and "treatments that can have serious health consequences as well as . . . increased fraud."[38] The Baumer Report goes on to state that "unlicensed practitioners are often unqualified to practice and their lack of training threatens public health and safety."[39] Later, it speaks of the "harm visited on consumers by untrained providers,"[40] and dramatically asks: "What is the value of a life compared to having to go to a dentist for teeth whitening or using safe OTC strips?"[41]

In no case, however, does the Baumer Report identify any evidence whatsoever of actual adverse effects — much less threats to life — stemming from non-dentist teeth whitening. Rather, it simply asserts that kiosk/spa treatments "can have serious health consequences,"[42] and that we should "[i]magine the health problems and the lack of professionalism that would occur if teeth whitening services were routinely administered by non-professionals in a kiosk or spa."[43]

Speculation about what "can" happen and what can be "imagined" are not substitutes for evidence. As documented in my Report, the record evidence is that in a period of six years there have been only three instances in which kiosk/spa provision of teeth whitening has even triggered a consumer complaint to the North Carolina Board — and it is not clear that all of these complaints were valid.[44] Moreover, teeth whitening by non-dentists is commonly provided in

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[35] Baumer Report at 2.

[36] *Id.* at 7.

[37] *Id.* at 8.

[38] *Id.* at 15.

[39] *Id.* at 2.

[40] *Id.* at 9.

[41] *Id.* at 13.

[42] *Id.* at 15.

[43] *Id.* at 11.

[44] In contrast, the Board typically receives over 200 complaints per year about dentists. White IH 65:11-17; Goode IH 19:18-21; Hardesty IH 74:18-75:2.

other states,[45] without evidence of common or serious adverse health effects.[46] And of course, I cite the opinion of Dr. Martin Giniger, who states unequivocally, that "[t]eeth bleaching, by whomever provided, is safe and effective."[47]

Further with respect to possible adverse consequences, the Baumer Report extracts from my Report two specific concerns, namely, that customers may not realize that kiosk/spa operators do not have dental or medical training, and that there may be a risk of infection at kiosks and spas. But the Baumer Report does not address the point of that discussion in my Report. I raised these examples as possible concerns that, if valid, could be remedied by Board or state action far less draconian than the outright and complete prohibition of kiosk/spa provision. Thus, if there were evidence that customers misunderstand the credentials of kiosk/spa operators, then operators could be required to post a notice disclosing that staff has no medical or dental training. If there were valid concerns over sanitation, those could be addressed by specific requirements for on-site sanitation. These measures would seem well-suited in design and commensurate in scope to the hypothesized problems.[48] The Baumer Report, by contrast, seems to endorse outright prohibition of an entire business segment based on any imagined concern identified by financially-interested competitors, regardless of its scope and regardless of whether the concern can otherwise be alleviated.

Finally, the Baumer Report repeatedly touts the benefits of a licensing regime as the preferred method for protecting consumers from fraud and malfeasance. There are, however, various other legal and market mechanisms that also serve to protect consumers from unqualified service providers, including tort law, contract law, and reputational incentives. The Baumer

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[45] CX0649 (Ohio); CX0648 (Michigan); CX0651 (Wisconsin); CX0650 (Tennessee); 225 Ill. Comp. Stat. 25/17 (2010) (Illinois).

[46] Expert Witness Rebuttal Report of Martin Giniger at 1 ("What is important here is, as I indicated in my initial Report: teeth bleaching by non-dentists and by consumers themselves is safe and effective facts demonstrated through study and through millions upon millions of applications over a number of years without evidence of resulting harm.").

[47] Expert Witness Report of Martin Giniger at 5.

[48] The Baumer Report (at 11) terms this an "amazing concession" on my part. It is neither a concession nor amazing. Where any problems are found legitimately to exist, I make clear my view that they should be remedied in a reasonable manner. In this, I adhere to the antitrust standard for horizontal restraints, namely, that restraints should be no broader than necessary to achieve the legitimate goals. *See* Department of Justice and Federal Trade Commission, *Antitrust Guidelines for Collaborations Among Competitors* § 3.36(b) (April 7, 2000) ("*Collaboration Guidelines*") ("[I]f the participants could have achieved or could achieve similar efficiencies by practical, significantly less restrictive alternative means, then the Agencies conclude that the relevant agreement is not reasonably necessary to their achievement.").

Report offers no evidence that, with regard to teeth whitening, a licensing regime offers a comparative advantage. Indeed, the market's long and overwhelmingly benign experience with teeth whitening by non-dentists indicates that there is no sensible basis to reserve teeth whitening to licensed graduates of dental school, any more than the application of cosmetics should be reserved to licensed dermatologists or ear piercing to licensed surgeons. Consumers have themselves decided that it is not worthwhile to pay a licensed physician for low-risk, cosmetic services, and many consumers believe the same to be true of teeth whitening.

IV. PAST PRACTICES, STUDIES, AND POLICIES

The third major section of my Report discusses the substantial economics literature that demonstrates the adverse effects on consumers from restrictions on entry into and scope of practice by the professions. The evidence that I review comes from studies of several different professions beginning in the 1970s when actions by professionals first became matters for academic scrutiny, and extend to the present time. Not surprisingly, none addresses the precise circumstance raised by this case, but this literature does support and illustrate each of the two principal conclusions of my Report. With regard to financial interest, this literature shows numerous occasions in which professionals, given the means and opportunity, have adopted rules of practice that benefit the financial interest of the profession. With regard to competitive effects, the economic literature documents numerous occasions in which restrictions on competition have led to higher prices and reduced output without offsetting benefits in terms of quality or safety.

The Baumer Report dismisses this empirical evidence. It begins by contending that the studies simply examine an anticompetitive episode involving "the worst abuses of licensing professions decades ago,"[49] and that "since 1980 some of the worst abuses of licensing have been ameliorated as reciprocity among states has become easier to achieve, setting minimum prices or price-fixing has been generally abolished, and price cutters are no longer sanctioned by state boards."[50] As corollary to that, the Baumer Report argues that the studies that I cite are "dated" and only "illuminating at one time."[51]

But nothing in the Baumer Report demonstrates nor could it demonstrate that all anticompetitive practices are past history, so no one need worry today.[52] And while many of the

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[49] Baumer Report at 1.

[50] *Id.* at 13.

[51] *Id.* at 1.

[52] Indeed, the second cited article by Langenfeld and Silvia (*see supra* note 22) finds essentially the same number of FTC horizontal restraint cases in 1993-2003 as in 1980-1992. The percent in "ambulatory health care services" declined only from 49% to 43%. Langenfeld & Silvia, *Update*, *supra* note 22, at 534. Notably, even the example of unambiguously "bad

economic studies do date back to the 1980s, this is not a serious challenge to their validity or relevance. There is not a more recent study that comes to a contrary conclusion, and recent academic summaries and reviews continue to reference those studies and their conclusions as valid.[53] The fact that the academic community has not conducted similar studies in the past several years reflects the reality that the conclusions are well-accepted among economists, and no longer controversial. In sum, the Baumer Report provides no theoretical or empirical basis for disregarding the academic literature upon which I rely.

The Baumer Report also makes much of the fact that as I explicitly discuss in my Report no study has specifically examined the effect on the price of a service provided by licensed professionals (*e.g.*, dentists) from prohibiting provision of a competing service by unlicensed providers. But it is hardly surprising that not every possible combination of factors and forces has been investigated empirically. Economics permits drawing reasonable inferences from studies that cover factors closely related to the issues in this case, absent some relevant differences between the cases.[54] One obvious inference from the cited literature is that professional boards have a tendency to restrict competition in a manner that serves the financial interests of its constituents. A corollary, also not subject to serious dispute, is that the exclusion of rivals by professional boards is very likely to harm consumer welfare absent a compelling justification.

My Report cites studies that establish adverse effects on consumers from: (a) limitations on forms of professional practice, (b) reductions in the numbers of providers, and (c) prohibitions on provision of services by individuals licensed for other activities, among other factors. A ban on non-dentist teeth whitening is functionally equivalent to all three of these restraints rolled together. Since each of these competitive restrictions individually results in higher prices for consumers, it would defy reason and experience to suppose that limiting competition in all three ways somehow leads to lower prices.

The Baumer Report cites no studies which find zero price effect from the exclusion of a service that consumers desire, and I am aware of no such studies. The Baumer Report focuses on the absence from my Report of a specific quantitative measure of the increase in the price of dentist teeth whitening that results from the Board's prohibition on non-dentist teeth whitening. This does not mean that there is no effect on the price of dentist teeth whitening. Indeed, there

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regulation" chosen by Dr. Baumer state milk market regulation was not abolished in North Carolina until 2004. Baumer Report, Appendix I, at 1).

[53] See Morris Kleiner, "Occupational Licensing," J. Econ. Perspectives, Vol. 14 (2000), and S. Svorney, "Licensing, Market Entry Regulation," Encyclopedia of Law & Economics, Vol. III, The Regulation of Contracts, ed. Boudewign Bouckaert and Gerrit DeGeest, eds., Edward Elgar, Cheltenham UK (2000), both cited in my Report.

[54] Thus, for example, the general proposition that quantity demanded increases as price falls need not be proven in each and every case in order to apply it where appropriate.

most certainly is an anticompetitive price effect, and multiple anticompetitive non-price effects as well as my Report indicates.

The Baumer Report mischaracterizes my Report as saying that the consumer harm is simply "having to pay possibly higher prices and the inconvenience of having to choose from options provided by dentists and Over The Counter (OTC) products,"[55] and that my report "does not contest the possibility that banning unauthorized teeth whitening services may have zero impact on prices charged by dentists."[56] This is simply incorrect.

In fact, as I state in my Report, the adverse effects of a prohibition on non-dentist teeth whitening may manifest themselves in several possible and overlapping ways. Each of these effects involves consumer harm (*i.e.*, the loss of consumer surplus):

(a) the loss of an innovative product alternative favored by some segment of consumers,[57]

(b) the higher price paid by some prior consumers of kiosk/spa teeth whitening who now shift to dentist provision,

(c) the smaller consumer surplus realized by prior consumers of kiosk/spa teeth whitening who shift to less-favored OTC strips,

(d) the loss of consumer surplus by consumers of kiosk/spa teeth whitening who now simply do not purchase teeth whitening services at all, and

(e) the higher price now faced by some former consumers of dentist teeth whitening as a result of the increased demand for that service.

Overall, the loss of non-dentist teeth whitening services will necessarily result in some combination of higher price and reduced volume, both with adverse effects upon consumers. The exact balance between the price and quantity effects will depend on the shape of the demand curve: Lower demand elasticity will result in greater price effects relative to quantity effects, while higher elasticity produces the opposite combination. Consumers are adversely affected in all cases.

These effects follow from straightforward and elementary economics and are not in dispute. The magnitudes could readily be worked out if information were available about the

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[55] Baumer Report at 2. Emphasis in original.

[56] *Id.* at 9.

[57] The Baumer Report (at 10-11) terms my statement about the loss of innovation as "speculation," overlooking the fact that a ban on kiosk/spa provision would itself represent an example of regulatory retardation of innovation.

elasticity of demand and supply for teeth whitening services of various types, and the cross-elasticity of demand among those forms. I have searched for such information but not found it; it appears that Dr. Baumer also has not discovered this information.[58] For this reason, I am unable to quantify the precise price effect, but it surely exists, and it is surely in the direction of higher prices.

The Baumer Report attempts to dismiss the adverse effects both on price and on choice, but in each case its argument is based on incorrect economics. With respect to price, the Baumer Report states that "[i]f the facts show that less than 3% of the revenue generated by dentists in the State of North Carolina is due to teeth whitening services it suggests that the effect on prices charged by dentists is likely to be *de minimis*."[59] This is simply poor economics. The price effect does not depend on the percent of dentist income from teeth whitening, but rather on the relative amounts of teeth whitening done by dentists vs. kiosk/spa operators, and the relevant elasticities and cross-elasticity between the two types of provision (roughly, the extent to which consumers view the two as substitutes). If there is substantial cross-elasticity, as the Baumer Report elsewhere acknowledges,[60] and substantial kiosk/spa provision is eliminated, then more diverted consumers will shift demand toward and increase price for dentist teeth whitening. Contrary to the Baumer Report statement, this price effect will occur regardless of whether teeth whitening represents 1% or 10% or 100% of dentists' income.

With respect to choice, the Baumer Report states as follows: "There are numerous, safe, teeth whitening products available for sale over-the-counter (OTC) that offer consumers lower-priced alternatives to those offered by dentists."[61] The implication is that customers may simply opt for some OTC alternative, and should therefore be satisfied. This response contravenes the basic economic principle of consumer choice. Of course, consumers may have lower-price (and higher-price) alternatives. But since some customers distinctly prefer the combination of price, convenience, and effectiveness offered by kiosk/spa operators, consumer surplus is lost when consumers are denied access to that alternative.

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[58] This is unsurprising. Certain industries generate a wealth of computerized transaction data at a central point, for example, supermarket scanner data. There is no analogue for the teeth whitening industry. Antitrust enforcement must proceed in both data-rich and data-poor industries.

[59] *Id.* at 9.

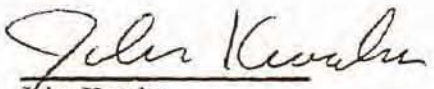
[60] *Id.* at 8.

[61] *Id.* at 3.

V. My Conclusions Are Unchanged

I have carefully considered the Baumer Report. Nothing in the Baumer Report affects the analysis or alters the conclusions of my initial Report. As I have stated, the North Carolina State Board of Dental Examiners has a material interest in teeth whitening. Its efforts to exclude non-dentist provision of such services harm consumers, without any demonstrable benefit. In this, the Board's actions are consistent with the well-documented and researched history of restrictions on competition imposed by professional boards.

Respectfully submitted,



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CERTIFICATE OF SERVICE

This is to certify that on January 8, 2011, I served via electronic mail delivery a copy of the foregoing document to:

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CERTIFICATE OF SERVICE

I hereby certify that on January 18, 2011, I filed the foregoing document electronically using the FTC's E-Filing System, which will send notification of such filing to:

Donald S. Clark
Secretary
Federal Trade Commission
600 Pennsylvania Ave., NW, Rm. H-159
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I also certify that I delivered via electronic mail and hand delivery a copy of the foregoing document to:

The Honorable D. Michael Chappell
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CERTIFICATE FOR ELECTRONIC FILING

I certify that the electronic copy sent to the Secretary of the Commission is a true and correct copy of the paper original and that I possess a paper original of the signed document that is available for review by the parties and the adjudicator.

January 18, 2011

By: s/ Richard B. Dagen
Richard B. Dagen