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Technology and Professionalism

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E. To improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient;
F. To encourage the free exchange of ideas and experiences in the interest of better service to the patient;
G. To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public;
H. To make visible to professional persons the extent of their responsibilities to the community as well as to the field of health service and to urge the acceptance of them;
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Technology and Professionalism

Forum

Departments

Cover image Evolving professionalism along with technology.

From the Editor

Gift Ethics

Should dentists give and receive gifts? Absolutely, abundantly. I believe most of you give to your church, the profession, and to your community. Dentists who donate their dental services to patients should be honored for their caring. Wouldn't it be a tragedy if willing professionals volunteered for the important work at component and state organizations but their colleagues refused to welcome these gifts?

I have not accepted an honorarium in years, but strangely, that has kept me off the circuit a bit. We have funny attitudes toward gifts. Quickly flashing the "disclosure" PowerPoint slide at the beginning of the presentation to transfer ethical responsibility from the sponsor to the participants is not the conversation we need to have. The issue is how exchanges are used to broker power.

By definition there can be no conflict of interest involving gifts. The meaning of the term is something given with no expectation of compensatory benefit. A gift is the consummation of a relationship, not an insinuation that something more is expected. An unwanted or inappropriate implied transaction can be an ethical issue. It is a false gift.

There is legitimate concern over accepting gifts from the wrong folks and for the wrong reasons, or if there is an appearance that this is so. False gifts create conflicts of interest when a new and unwelcome implied reciprocal arrangement intrudes on established and publically endorsed loyalties. When these are unacknowledged, the violation of professionalism is magnified.

Research is clear that prescribing patterns of physicians are influenced by free samples, lavish lunch and learns, and outsized honoraria to CE speakers. And these effects persist in the face of professionals acknowledging their existence and professionals claiming to be "above inappropriate influence." Even when motives are pure, the ethics meter begins to twitch if third parties can make out a plausible case that it appears that a gift might be construed as introducing suspicious incentives.

Reciprocity is deeply engrained in human nature. Only sociopaths fail to realize that when we get something, we are expected to give something in return. The continuing education program in Hawaii sponsored by the Stupendous Profit Company might be just fine if attending dentists offered free dental care to the company's executives. That would be about the right amount of quid for the quo.

Some professions have guidelines limiting the cash value of gifts. Occupational therapists, for example, can't go over $25. Many professionals manage this by requiring disclosure in publications or presentations. By federal law, gifts to physicians from pharmaceutical companies over a certain amount are now tracked and reported. If you are interested, you can go online and find out what your personal physician has received. There is a bill working its way through the California legislature that would limit the size of gifts from pharma to physicians.

Attempts to codify gifts in money terms are bound to fail. What is it worth when a satisfied patient tells his or her friends that a dentist is wonderful or posts five stars on Yelp? It is certainly a "gift."

Making rules about gifts is, on one hand, an appropriate ethical stance for a professional group. From another angle it smacks of playing power games. Often the real issue is who has the privilege of participating in the exchange process. One purpose of limitations on gifts is to exclude certain parties from having an influence. If professionals can keep money, technology, and political interests from being considered a part of health, there will be no other voice but theirs left in the market. It is a matter of getting home court advantage.

Naturally, political interests are the most troublesome. That is why ADPac spends upwards from $2 million on

lobbying politicians and is very proud and open about doing so. In the aftermath of hurricane Maria in Puerto Rico, some communities were denied available U.S. government aid because local officials wanted to receive the gifts and then redistribute them in their names. It matters who gets to give gifts.

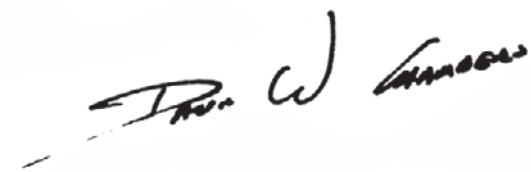
The potlatch society of the indigenous peoples of the Pacific Northwest is an extreme example. The ability to give gifts was the sign of power. Those who gave the most gifts were entitled to have their preferences respected in matters of common concern. But all gifts were not allowed, so controlling what counted as a gift was power. In the decline of the Roman empire the Pretorian Guard literally chose the emperor in public auctions based on the size of promised "contributions."

In ethical theory this problem is known as "ethical fading." When a moral matter is monetized, it transforms the nature of the issue: It makes an ethical relationship into a legal or economic transaction. Consent decrees are an example. Companies that have engaged in immoral behavior pay a fee for the privilege of erasing their transgressions. The market for gift-giving is confusing because it allows for trade-offs among legal, ethical, personal, financial, social, oral health, political, and other dimensions of professional care.

Here is the origin of the saying, "Don't look a gift horse in the mouth." As horses age, their upper anteriors proclinate in a very noticeable fashion. It would be bad manners, at least in the presence of someone who had gifted you a horse, to inspect the detention.

Here is the origin of the phrase "white elephant." A gift from an Indian maharaja was sometimes used as a sign of disfavor. Maintaining an elephant was a burden on the resources of many subordinate officials. If such a gift was so conspicuous that it would be noticed when the recipient attempted to get out from under the expense it might become a true inconvenience. An elephant that was white would certainly be noticed if neglected or regifted.

Much of the posturing about who can give gifts to whom is power-mongering. A true gift is a spontaneous expression of respect with no expectation of creating an obligation or changing our relationships with others. It should be welcomed with joy.



When an ethical matter is monetized, it transforms the nature of the issue: It makes a moral relationship into a legal or economic transaction.

Readers Respond

Letters to the Editor

Evidence-based Dentistry

Dear Dr. Chambers,

Seeing your critical appraisal of evidence-based dentistry (EBD) and pointing out the shortcomings, as you did in your editorial in the autumn 2017 issue of this journal, is nothing new to those of us who have followed the growth of EBD over the past 20 years. As you pointed out, dentistry has unique hurdles to overcome as compared to medicine.

Just Google John Ioannidis who wrote the famous 2005 article "Why most published research findings are false" and read his many papers on the strengths and limitations of EBM.

The proliferation of guidelines and their potential bias due to financial intrusion and reliance on "expert opinion" is truly worthy of an entire editorial. The use of EBD and guidelines are, as in medicine, works in progress.

Practitioners may have no clue about guidelines or won't follow them if they did know they existed and studies can be statistically significant but clinically worthless. And as is mentioned way too many times at the end of a systematic review, "more studies are needed." But this does not mean the attempt to improve our profession via EBD is an overreach.

In fact, these reasons and many more are why our profession needs EBD and National Dental Practice Base Research Networks.

To quote David Sackett, one of the "fathers" of EBM, the goal is "integrating individual clinical expertise with the best external evidence." Add to that the ADA extension of "patients' needs and desires" and you have a worthwhile goal to help achieve better healthcare outcomes.

Now I will be the first to admit we have a long road ahead of us, but your view, to me, seemed like throwing the baby out with the bath water. I get it that you were not happy with the conference organizers' reprimand in not pointing out ethical issues related to not using guidelines. From my perspective as a member of the National Dental Practice Base Research Networks, I see an overreach on your part to go from this "ethical" question to a barrage on EBD. EBD is not telling a practitioner how they should practice and neither are guidelines. If they told you that not following guidelines is unethical then your beef should be with these individuals who are off base and not with those of us who are trying to better inform our colleagues on how to critically appraise the evidence to help us make the best decisions for our patients' dental health.

The final decision on best practice for our patients, as the ADA definition says, integrates all three aspects: the patient, the best studies, and the clinician's expertise and knowledge.

In my humble opinion, EBD can help give us guidance when we are formulating our clinical judgment. Is there room for improvement? Absolutely! But EBD is leaps and bounds above how I was taught 45 years ago to decide on the most appropriate treatment.

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Dr. David Chambers,

Your recent article titled, "Evidence-Based Overreach" was excellent.

Although I was in the first ADA Evidence-Based Dentistry Champions program many years ago, I have never completely practiced, followed, nor understood their version of EBD.

After reading your editorial I felt compelled to write to you and say thank you!

You were able to state what I have felt and understood, yet was unable to always articulate.

To me, it would be wonderful if dental organizations and some "expert" dental speakers, along with most dental academicians would read, understand, and incorporate your comments in their EBD worlds of preaching and teaching.

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To the Editor,

I have a few comments about your editorial article, "Evidence-Based Overreach," in the volume 84, number 4 (2017) issue of the *JACD*. I applaud the excellence of the editorial in confronting what has become a nearly "sacred cow" challenge: "Is it evidence-based?" Worse, we hear chanted by dental educators and by CE course gurus that "What we teach is all evidence-based!" The assumption seems to be that such utterances are absolute truth, and that the very conveyance of such an imprimatur is beyond challenge of any kind. Good clinical practice is more nuanced than the best meta-analyses suggest.

The EBD apologists have a point that good evidence is necessary. But it would be overreach to say it is sufficient. As I understood your essay, you are calling our attention to the critical and understudied issue of integrating the elements of sound clinical practice.

The EBD apologists have a point that good evidence is necessary. But it would be overreach to say it is sufficient. As I understood your essay, you are calling our attention to the critical and understudied issue of integrating the elements of sound clinical practice.

The current standards for clinical reports often reinforce the clinicians' intuitive convictions that there is poor evidence for nearly everything they do, and that they therefore need only pay selective attention to the literature. The large number of "insufficient evidence for" articles may create an impression that the true need is for better clinical research rather than complaints about how clinics interpret the literature.

While, as you have pointed out, clinicians might have chosen to ignore the guidelines for unethical reasons related to desired financial gains, or may simply not be aware of guidelines. There are many other reasons for which clinicians might be unwilling or unable to follow published guidelines. The clinicians might disagree with the guidelines based upon their own assessments of evidence (i.e., upon their personal clinical experiences) and/or upon their convictions that the guidelines are based upon studies that are so controlled that they do not generalize to the unique patient in the chair.

I have seen very little attention to education toward such sociological organizational efficiency within the dental profession. Many clinicians seem to be locked into a mentality which operates on the theme of: "If you directly or implicitly challenge any portion of a procedure, then get out of my operatory."

Ironically, many clinical researchers attempt to eliminate all professional judgement factors from their studies in the zeal to standardize and simplify their protocols. This is despite the likelihood that such factors (which can represent optimal interlace of the two thinking systems of each clinician) may be predominant determinants of success or failure of most clinical materials and techniques.

Perhaps we should emphasize and champion research that examines the most successful clinicians for a given procedure or material application and compares them to clinicians who are achieving the poorer results. This might involve specific interview and survey data gathering and could be quite revelatory for a broader base of information about the makeup of clinical judgement processes. This might introduce a foundation of research which alters our approach to dental education, both for undergraduate/graduate studies and for continuing education.

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Introduction to Theme Issue

Technology and Professionalism

Professionalism is being pushed to the side by technology. Those who doubt the accuracy of this generalization should reflect on the content of conventions sponsored by the professions.

Barron Lerner is an internist and medical ethicist in New York. In his book, *The Good Doctor,* he uses the clinical and personal notes of his deceased father, also a physician, to explore how the profession has changed in one generation. The senior Dr. Lerner was intuitive, dedicated and hard-working, paternalistic, and revered, or at least not to be questioned. The younger doctor has access to better technology, works as part of teams, follows more closely hospital protocols and the science base, and maintains a slightly more distanced and compartmentalized relationship with patients. These differences are not the result of temperament or personal preference. This is something that has happened to medicine generally. The field is responding to a context of new technology, new economic conditions, new societal expectations.

The naïve view of technology is that it makes individuals able to do faster, cheaper, and better what they have always done. It increases the power of those who already have it. The first years of automatic typewriters and computerized word processing showed the narrowness of this notion. Productivity did not go up during the first half decade. The reason was that we initially retained the work pattern grounded in the old technology. It is inherently inefficient to separate the person who is good as composing correspondence from the one who is good at converting it to readable text. Even inefficient non-specialists such as myself have driven the expert keyboarders out of business. Voice and image-based communication will bring about further changes of many orders of magnitude, principally because it is changing what message *consumers* do.

Sociologists tell us that the car created the teenager. Prior to the general availability of personal transportation, kids were tied to home and the routines of their parents. The car made personal gatherings in age-specific groups, and even boy-and-girl trysts, possible. The experts are saying now that the cell phone has created a new identity, the preteen, complete with its own market potential, social issues, and a parent-chauffeur class. Technology changes those who use it and how they use it; it allows new persons to use it and it changes the relationship among users. It redistributes power.

There are some aspects of dentistry completely under the control of individual practitioners. The controversies over CR and CO or mercury-free restorations can be 100% controlled by each dentist in his or her own practice. There are some issues that the profession works to manage in a general way across the profession. These include relations with those who pay for care, regulations, and state practice acts. There is also a domain of scientific, technological, and societal forces that move somewhat independently from the traditions and hopes of the profession. Dentists, for example, are pleased with tooth whiting and other cosmetic

interventions that they alone can deliver in their offices. But OTC options in this area are problematic. Teledentistry has the potential for changing what care is provided, by whom, and where.

In areas where dentistry does not have complete or dominant control over innovations or how they are used, choices must be made—locally and profession-wide—about how to respond to and use these changes for the betterment of oral health. The options range from being intentionally oblivious or willfully in denial, to devoting time and money to protect the established order, to experimenting and testing potential opportunities, and even to engaging as partners and agents promoting worthwhile change. What is not on the table is preventing the emergence of new technologies or freezing society, business, and government from moving forward with their agendas.

William Sullivan directed the recent Carnegie Foundation for the Advancement of Teaching study of the professions of medicine, nursing, engineering, law, and the clergy. Although teams looked at these professions independently, the general picture to emerge was remarkably similar. Professional training is dominated by mastering technical know-how and the pace of innovation is causing the professionals to lose control. Learning how to practice gets some attention, largely from the parent professional organizations seeking to maintain standards and from consultants who make a living importing social and business techniques to change those standards. Ethics, patient relationships, societal impact in general, service, and human standards of care get short shrift. Professionalism is being pushed to the side by technology. Those who doubt the accuracy of this generalization should reflect on the program content of conventions sponsored by the professions.

Sullivan's chapter from his book on integrity in the professions reprinted here is a detailed account of the broad changes that have taken place in North American society since the Second World War. At first glance, this has little to do with dentistry. On reflection, it is clear that dentistry cannot be practiced effectively when moving contrary to the directions of social and technological change any more than it can be practiced in contradiction to the best science reported in the literature. Sullivan argues that we need a new definition of professionalism. He worries that the default is becoming a salaried form of employment defined by the expert use of technology.

The drivers of innovation from 1950 through 1980 were clearly the government and its sponsorship of universities and industry. The new trend includes start-ups, entrepreneurial ventures, and product development teams that assume the risk for testing innovations. These are small ventures intended to prove a concept rather than achieve a position in the market. Most are time and money sinks, and a few hit it big and cash out to those who scale the technology commercially. Investors provide financial backing in hopes of picking up the winners. Even technology innovation itself is now playing by rules with new risks and rewards. The paper by the MATTER group in Chicago describes an oral healthcare incubator.

Orthodontics has been especially impacted by technology. Imaging and digital systems have advanced further in this field of dentistry than in others. Invisible aligners have made dentists part of the distribution system (much like car dealerships) for the companies that provide this technology. The traditional role of the dentist as the consumer of a product that he or she uses to provide services to patients is being bent by this technology as by DSOs. The dental supply chain is getting longer and now has more layers. Some dentists are going DIY and creating their own aligners with 3D printers. Direct marketing of aligners to patients would clearly further alter the relationship between dentists and patients. The Ackerman article raises the question of how the profession will choose to respond to a technology that it does not control.

There is an old bit of wisdom that says, it is easier to ride a horse if you are facing the same direction the horse is going. The technology horse is beginning to gallop. ■

David W. Chambers

Work and Integrity

The Crisis and Promise of Professionalism in America

William M. Sullivan, PhD

Abstract

What it means to be a professional in America has changed since the end of World War II. This is a response to changes in the country. Sullivan traces the rise of the cult of the expert, fostered first by government, then universities, and finally by business and then entrepreneurial consultants. The mark of the expert is technology, and that is replacing the culture of service that formerly defined professionalism. Most fellows of the College have lived through the changes Sullivan describes. More than one-quarter of Americans now identify themselves as professionals.

Dr. Sullivan directed the recent Carnegie Foundation study of the professions.

Republication of this chapter from his book, *Work and Integrity: The Crisis and Promise of Professionalism in America*, was made possible by a gift from an anonymous donor.

Chapter 4: No Center to Hold

The Era of Expertise

"Thus in the beginning," wrote John Locke, "all the world was America."

Locke was referring to the Americas before the European conquest, when he imagined an abundant nature appropriated by native peoples unencumbered by civil government. However, Locke also believed that labor, the willingness and ability to turn nature to productive use, established a right in property for the industrious and the able. Locke thereby installed the conquest of the world through tools and work, together with the individual's secure appropriation of the resulting abundance, as the basis of human happiness. This idea has been an essential aspect of the spirit of the United States throughout its life, but at no time more centrally than during and after World War II.

At that time, it would have been only a slight exaggeration to say that all the world wanted to be America. Even her enemies envied the undeniable prosperity and strength of the United States. At that zenith of power and prosperity, which lasted a quarter of a century, from 1945 into the early 1970s, the nation seemed Locke's vision updated, a uniquely modem and successful society, built on the basis of heroic labor in the form of advancing technology. America's ingenuity, our ability to "roll up our sleeves" and "solve problems," had triumphed over the ideological fanaticism of the Axis powers. Victory had gone not only to the more virtuous cause, but to the more resourceful and flexible kind of society.

ln postwar America, expertise took on a charismatic power. To possess it, to be linked to it, simply to bask in its wonderful effects, made life sparkle with promise. The radiance was signaled by the triumph of American scientific and organizational know-how in the war. Aircraft engineering, radar, computers, the world's greatest industrial output, construction projects that dwarfed the pyramids, the atomic bomb—these were the visible tokens of a people's power and pride. Beyond the military gains of the war, science and engineering daily demonstrated their capacity to control nature for human benefit. Advances in military medicine drastically improved the odds of survival outside the battle zone for combatants and civilians alike, as wonder drugs such as penicillin loosened the grip of pestilence. Medicine, now firmly anchored in the research institute and teaching hospital, went on to achieve such stunning breakthroughs as the eradication of polio, promising successful future wars on the old enemies of infirmity, mental illness, perhaps mortality itself.

Not only technology but systems of social control and management appeared to have taken a quantum leap as a result of the prodigies engendered by the wartime marriage of science and administration. At the climax of the postwar era, the space program of the 1960s would bring to the world its most attractive symbol of Promethean technology: the astronaut out for a walk on the surface of the moon. Accidentally, that same mission would also bring a reminder of the fragility and connectedness of the human world, our "spaceship earth," through the stunning scenes of an "earth rise" broadcast live from space. That image, itself the direct result of rocketry and electronics integrated through modern management techniques, helped touch off a powerful reverberation of concern about the effects of those systems of technology and organization on the human habitat.

But those sentiments grew strong only toward the end of that postwar era. Its predominant tone was captured in the advertising copy of Madison Avenue and television. There American industry, more and more guided by expert management, was translating scientific knowledge into the marvels of synthetic materials, while automobiles and jet aircraft delivered new opportunities of mobility. By the 1960s, in a kind of parallel to the technological glory of the space age, the destructive business cycle seemed to have been tamed by expertise, banishing depressions and opening hope that longstanding social problems such as poverty and racial discrimination were on the verge of solution. Under the banner of expert problem solving, the professional knowledge class seemed to have at least come into its own.

War is among the most revolutionary agencies in human experience. By focusing the energies of a population upon the single goal of victory over the enemy, war can generate a profound sense of common destiny and purpose. World War II instilled in the American population at large the belief that its national purposes embodied moral righteousness in an invincible collective power. At the same time, war also brings to the fore instrumental rationality in all its sublime, ruthless power. Instrumental thinking concerns itself with means rather than ends or final values. It asks, relentlessly: How well is this approach working? Could it be improved? What kinds of improvement will be most effective for the least cost?

The achievement of a balanced and sustainable form of cooperative life, if not collective purpose itself, can only coexist tensely with the indiscriminate pursuit of instrumental rationality. The latter, as modern experience has shown, often works to undercut the former. The use of war and preparation for war as a unifying strategy is thus for any nation a dubious and dangerous strategy over the long run.

Under the banner of expert problem solving, the professional knowledge class seemed to have at least come into its own.

Without the overwhelming pressure of mortal threat, most societies have striven to contain the inherently disruptive effects of unrestrained instrumental thinking within constraining customs, the social equivalent of the lead shields in which American technicians learned to shroud atomic reactors. War may or may not be the "health of the state," as social critic Randolph Bourne put it. But for the United States it certainly proved an ideal forcing house for instrumental thinking and its near kin, technical problem-solving rationality.

In World War II, the practice of "total war" demanded mobilization of the resources of whole continents, human, and natural. This process accelerated the economic and technological trends that had long been pushing the world's leading nations toward a new kind of human

society, one conferring historically unprecedented importance on figures who could combine a high level of technical expertise with organizational skill.

These global developments also set the stage for the postwar American achievement of historically unprecedented prosperity. This context, in which enormous economic growth and technological progress took place against the backdrop of actual or "cold" war, was both the cause and the consequence of an enormous expansion of the professions. It brought professionalism, with its capacity to deploy technical and organizational ingenuity in defining and solving social problems, to the top of the agenda.

Already during the war, governmental and business leaders were busy discussing and planning the basic direction American society should take after victory. Their immediate motive was to prevent another massive economic downturn on the scale of the Great Depression following the sudden demobilization of the economy and population that victory would bring. Not surprisingly, then, the focus of the discussion was almost entirely on economic issues in the narrow sense. What emerged was remarkably clear-sighted about the economic and technological features of the postwar world. But the experiences and challenges of American city planning had little impact on that historic discussion.

The dominant postwar conception of the good society would prove very different from the vision of twentieth-century democracy proposed by the pragmatist progressives Jane Addams and Herbert Croly, drawing on the pragmatism of John Dewey. Their vision of a metropolitan nation rested upon developing the social capacities by which interdependent but dispersed and anonymous citizens could recognize each other and themselves as members of a public and so organize for action to achieve a rich, shared form of life. In that vision, professionals were to assist and support the nascent publics in developing the understandings and institutions that could make the modern public viable.

It brought professionalism, with its capacity to deploy technical and organizational ingenuity in defining and solving social problems, to the top of the agenda.

By contrast, postwar reality defined professionalism in predominantly technical rather than civic terms, as rightly concerned only with improving the means by which individuals and groups could pursue their opportunities in an expanded economy. Rather than the civically active metropolis of the pragmatist Progressive vision, there emerged a dispersed, suburban America in which the good life was remarkably uniform yet narrowly individual and private in orientation. The increasingly influential patterns of professional life were organizational in form and focused on applying technical knowledge to the material environment (as in engineering) or the human (as in medicine and management).

Consider, for example, the Sunbelt of the southwestern United States, including California, Arizona, New Mexico, and Nevada. Beginning with the Hoover Dam on the Colorado River during the New Deal and increasingly during the war, the region became the beneficiary of vast federal outlays for military installations, weapons plants, water projects, highways, and other features now called infrastructure. (These infusions of governmental subsidy continued throughout the postwar era, especially through the close government and industry cooperation practice in the defense-oriented aerospace industry.) During the war years, a report by the Pacific Southwest Office of the National Resources Planning Board, a New Deal institution later scrubbed by a hostile Congress, noted that "technological progress," by promoting an "ever widening flow of employment opportunities," had enabled California and nearby states to absorb "huge population increases decade after decade." After the war, the council predicted, "a new frontier will be awaiting exploitation—an economic frontier opened by technology."

The report stressed the role that private enterprise would have in exploiting this new frontier, though it also highlighted the needed partnership between industry and government that the wartime experience had fostered. The report concluded with the prescient observation that the region needed to prepare for a long-term decline in the proportion of the workforce employed in agriculture and industry, with growth in the service and distribution areas. These admonitions were taken to heart, with the key role to be played by private industry in generating new jobs and government working to

provide the needed assistance. The institutional patterns that emphasized private enterprise and individual mobility were mostly taken for granted, even as they generated the dispersed suburban workplaces and automobile suburbs (with decaying older cities), segregated by race and social class, that have become the American norm. The long-term effects of these patterns on the land and on quality of life were hardly imagined or considered.

The society envisioned amid the stress of war and later etched in the physical and institutional structure of the nation contained three major components. First, as the emphasis on jobs in the Pacific Southwest Region's planning report indicates, it was a society focused, beyond all other values, on provision of economic opportunity for individuals. For most Americans this meant two interrelated but increasingly distinct spheres of life: work and leisure. Jobs were instruments, affording the means. The goals for economic activity were set by the expectation of a rising level of comfort and consumption. On the macro scale, this relationship was echoed in the economists' preoccupation with keeping demand high so as to create a continuing incentive for expansion in provision of goods and services, and therefore expanding opportunities for profitable investment. As the planners' reports indicated, the progress of technology was the key to this system; in practice this came to mean large private and public outlays for education, research, and management of the whole process.

Second, this was the economy of corporate capitalism in its mature form. It was an institutional order in which the great corporations and their investors played the starring role, with a vital but ancillary role for government, a legacy of the bitter experience of the Depression. The social philosophy of the New Deal was by no means universally embraced, but government was confirmed in its role of regulator and honest broker, whose task it was to ensure that as the economy expanded its opportunities and benefits continued to spread as well. The postwar period saw the highest proportion of the workforce ever organized by unions. Not coincidentally, those decades were marked by high wages and a steady rising standard of living. Buoyed by great increases in productivity, the era was also characterized by expansion of administrative regulation and governmental intervention throughout society, which worked to finance housing for returning veterans and college education for the children of wage earners and aided tendencies toward greater equality, helping finally to enfranchise African Americans as full citizens. Often working in government or institutions associated with it, professionals came to be valued instrumentally, as key enablers of this vision of progress, which in fact they often were.

The third feature of postwar society involved maintenance of the larger context within which the intermeshing corporate and governmental arrangements flourished. The postwar era saw a great burst of institutional creativity, as the United States took the lead in establishing the United Nations, the World Court, the World Bank, and an international currency regime guaranteed by the American dollar. Here both private and governmental agencies played important roles, but the major hand was that of the state. For the first time in its history, the United States found itself not only inextricably tied into the international order but the single dominant power. A sense of historical mission to accompany this new role had already been enunciated before the nation entered World War II in publisher Henry Luke's famous declaration of the "American Century."

These beliefs could launch great constructive enterprises such as the Marshall Plan of 1947. They were also easily pressed into service to sustain the long period of mobilization against the Soviet Union that came to be known as the Cold War. This permanent, partial war economy ensured that the instrumental bent of war planning would continue to exercise a powerful—and in the long run distorting—influence on all sectors of American life. Everything from educational expenditure to the gigantic interstate highway program were justified on the basis of "national defense." These developments created a need for broad policies for managing so vast an enterprise, and for the expert personnel who could conceive and implement them. It was precisely the moment for the forceful touch of an expert elite. This core institutional order linked the corporation economy closely, though not necessarily smoothly, with government at every level. Though the United States was the giant of the postwar world, and in many ways the successor to the power of the British Empire, it did not stand in isolation. The smooth functioning of the postwar order depended on maintaining a favorable balance in its interactions both with wider global economic and social forces and with the cultural and political life of American society itself. The system

also depended upon the natural resources and physical conditions of the nation and its partners in trade. At the beginning of the postwar era, the balance of power and benefit in each area was highly favorable to that corporate order.

By the late 1960s, the very success that the American order had engendered in Europe and Japan nurtured mature economic rivals in some ways more efficient than the United States itself. The cost of sustaining the united front against the Soviet menace continued to rise, especially thanks to the Vietnam War, putting the squeeze on the nation. That is, the patterns of interchange turned seriously against the good functioning of the postwar order. In domestic affairs the civil rights, students', and women's movements; in natural resources, rising prices and the beginnings of environmental protest; in international affairs, the Vietnam War, consequent inflation, and the weakening of the dollar all produced serious dysfunctions that ate into both the economic growth and the social confidence that had been the mainstay of the affluent society of the postwar decades. With these sea changes there would also begin a corresponding erosion of confidence in the professional enterprise.

The Anatomy of a Professional Society

At the height of American postwar success, social investigators began calling attention to the consequences of these developments for the basic structure of the society. Many believed they were witnessing the rise of a new social formation. It was characterized as the organizational, information, or service society, but most lastingly as the postindustrial society. By the early 1970s, social analyst Daniel Bell succeeded in making the term popular when he announced that the nation had reached takeoff into a new kind of society, one based less upon the extraction of natural resources and the "fabrication" of goods typical of the industrial era than upon "processing," a society in which the key to wealth is knowledge, the command of the techniques by which things and people can be shaped and reshaped.

Bell's abstract generalization described what was different about the new industries and services of the postwar society, as compared to the smokestack industries of the past. The new economy relied upon expert knowledge and skills of social communication to a vastly greater degree than any previous social system. Compared to the establishment of the corporate capitalist order at the turn of the century, the knowledge class of professionally trained workers had bled as a percentage of the American workforce. By the 1970s, the proportion of professionals in the labor force had risen to 13 percent and Bell was forecasting a further increase, approaching a full 25 percent in the year 2000. The numbers understated, if anything, the influence of these workers because of the range of their involvement in all sectors of society.

In Bell's account, the success of the postwar society marked nothing less than a new phase of social evolution. This change of phase was being heralded by the momentous change from goods production to "services" and the new practical value of theoretical knowledge. The kind of knowledge produced in universities and scientific institutes became the key source of innovation, as in the electronics industries, and was, in the social sciences and management, the key resource for governing an increasingly complex society. Bell went on to locate four distinct "estates" within the "professional and managerial class." First came the pioneers of innovation, scientific researchers. Then came the technological estate, peopled by those who applied scientific knowledge: engineers and health care professionals. They were followed by the administrative and managerial professionals. Fourth and last came the "cultural, artistic, and religious professionals" whose major concerns were with the elusive but critical goods of value and meaning.

For Bell, the crux of the issue posed by the coming of postindustrial society was that this growth in the number and technical quality of professionals was not in itself enough to make so complex a social order viable. (He was, after all, writing in the wake of the troubles of the late 1960s.) The very scale and complexity of the new society would make it imperative to "define some coherent goals for the society as a whole and, in the process, to articulate a public philosophy which is more than the sum of what particular …social groups may want." In saying this, Bell defined the need without suggesting how it was to be filled.

Recently, British historian Harold Perkin described the long-term evolution of Great Britain toward what he calls Professional Society, one sharing many features with Bell's conception of the postindustrial society. In Perkin's account, as in Bell's, this new social form is gradually succeeding the early capitalist order

that was based around the undisputed power of the property-owning class. This order is market-oriented and class remains an important shaping power, but it is no longer all-pervasive. Instead of a horizontal organization by class, Perkin argues that modem nations have come to resemble the Giant's Causeway in Northern Ireland. Rather than a field of class polarization, the social landscape is dominated by many competing hierarchies of power, each jealous of the others and each based upon a distinctive and unequal combination of ownership (class power) and expertise (professional power).

A cultural formation that Perkin calls the professional social ideal has come to counterbalance the dominance of specialized, technical processes in modern societies. Perkin argues that this social ideal, almost a kind of public philosophy, has during the twentieth century been spreading throughout modern societies, though at different rates and to differing degrees. Class society is permeated by the "entrepreneurial ideal based upon active capital and competition"; professional society is characterized by a rival emphasis upon human capital "based upon trained expertise and selection by merit" and exercised through cooperation. In the conflict among social ideals, Perkin notes, the professional ideal tends to displace the old working-class ideal of common labor and cooperative endeavor, though certain features of professionalism—especially its concern for serving the community—also resonate with working-class solidarity in a way entrepreneurialism does not. The professional social ideal prizes mutual service, efficient use of resources, and responsible use of knowledge for the larger good. It also has some considerable fit with postindustrial trends and suggests a way to humanize the austere qualities of most depictions of the postindustrial world.

The larger implications of the professional social ideal received powerful restatement in the postwar period in Britain in the work of T. H. Marshall. In a famous essay of 1950, "Citizenship and Social Class," Marshall argued that although the dominance of entrepreneurialism weakened the old notion of social solidarity implicit in the idea of the body politic, public provision of important goods, such as health care, education, and culture, could be used to offset the power of money in order to nurture a more integrated society, one that guaranteed a civilized life for all its members.

The British debate over the welfare state, which took place at roughly the same time as the postwar planning discussion was proceeding in the United States, forms an interesting contrast that emphasizes the strongly technical and utilitarian quality of the American professional era. The British debate, focused by the report of the Beveridge Commission, was explicitly about the moral requirements of citizenship and the social goals of a victorious, postwar Britain. In the United States, not only was the discussion in almost exclusively technical economic terms, with little or no moral criticism; the whole process was far less unified and focused. There was simply less real discussion and debate. The American plans for a postwar order were far less examined and debated than Britain's, and ours rather than theirs were more decidedly couched in nationalistic, even imperial terms, as in Henry Luce's declaration of the coming American Century.

Postwar reality defined professionalism in predominantly technical rather than civic terms, as rightly concerned only with improving the means by which individuals and groups could pursue their opportunities in an expanded economy. The increasingly influential patterns of professional life were organizational in form and focused on applying technical knowledge to the material environment (as in engineering) or the human (as in medicine and management).

In the 1960s, many of the worldwide developments Perkin described were affecting thinking in the United State. In one of the most influential books of the decade, *The New Industrial State*, economist John Kenneth Galbraith hailed the consolidation of the "new industrial state," with the judgment that "power has, in fact, passed to the association of men of diverse technical knowledge, expertise, or other talent which modern industrial technology and planning require." Galbraith explicitly noted that the expert-guided economy was weakening the traditional appeal of labor unions to solidarity in favor of individual upgrading, leading workers to urge upon their children education rather than joining the union. The professional social ideal was perhaps about to be extended and realized in the world's most advanced industrial nation.

With these sea changes there would also begin a corresponding erosion of confidence in the professional enterprise.

The University at Center Stage

The American confidence in technical expertise echoed Louis Brandeis's Progressive Era enthusiasm for scientific management as the key to resolving social conflicts. Unlike Brandeis, however, the most vocal proponents of organizational professionalism rarely combined this technical emphasis with attention to the practical and moral dimensions of professional intelligence. But this was largely because they could still feel supreme confidence that the moral foundations of American society were secure and effective in guiding the events of their time. Those moral foundations, they tended to assume, once laid by the religious and civic authors of American culture, formed a kind of inexhaustible resource of hope, moderation, and fairness that could be counted upon tacitly to undergird social progress. The confidence many Americans felt in the nineteenth century that their system of laissez-faire economics would lead to automatic progress still clung to the national imagination.

This moral confidence, combined with an enthusiasm for scientific technical progress, was extended by sociologist Talcott Parsons to the professions. From an influential position at Harvard University, Parsons articulated the professional enterprise in a way that summed up the hope and confidence postwar America placed in professionalism. Parsons was emphatic in stressing the central importance of professional expertise. He called the "professional complex" the most important "component in the structure of modem societies," going on to declare that it was this and not "the special status of capitalistic or socialistic modes of organization" that was the "crucial structural development in twentieth-century society."

What led Parsons to so strong and striking an evaluation of what he knew was a "set of occupations which has never figured prominently in… ideological thinking"? It was his conviction that the modern professions represented an evolutionary social advance in the direction of a greater rationality in human affairs.

The professions, according to Parsons, gave special prominence to the intellectual component of cultural life, a quality he termed "cognitive rationality." By emphasizing formal training in technical thinking, professional education produced experts who could bring greater efficacy in suiting techniques to advance goals. These capacities were certified by educational testing and state licensing. But professional life, particularly for the modern organizational professions, also developed the "institutional means of ensuring that such competence will be put to socially responsible uses." This is to say that through the professional complex, the United States solved the moral problem posed by the differentiation and inequality induced by division of labor; professionalism was advancing the technical efficiency of particular social functions while it simultaneously directed that efficiency into socially beneficial channels. The spearhead of these developments, in which Parsons suggested the United States was leading the world, was the modern research university.

There, in the universities that were expanding enormously thanks to government expenditure of unprecedented scope, Parsons described the cultural generator of these advances. It was the graduate school of arts and sciences,

increasingly well-funded and dedicated to pure research, on the analogy of technological progress through scientific investigation. In these faculties, Parsons noted, "the typical professor now resembles the scientist more than the gentleman-scholar" of the older American college, and the researcher is motivated by the need to achieve a "reputation in a national and international cultural forum" rather than relying upon "locally defined status."

Thus, specialization and differentiation of function permitted technical rationality fuller application, freeing it from the constraints of the more "diffuse social responsibility within a collective system" that traditional academics, like their clerical progenitors, carried. To balance the situation, Parsons noted that this older, more diffuse culture of responsibility was actually being extended as more preprofessional students had to enroll in undergraduate college programs.

The concrete meaning of all this became clear when Parsons described how the new system worked. He took medicine as the pioneer in "marrying the university to professional practice and education," citing the Flexner Report of 1911 and Johns Hopkins as the key points at which medicine developed, through the teaching hospital, a flexible vehicle for "working out the application of research to practice." The same model was being extended, Parsons noted, to field after field. Thus law, the venerable agency for implementing the moral consensus of society, had since Oliver Wendell Holmes and Louis Brandeis come to center its own thinking around the university-based social sciences. Similarly, education, social work, and psychotherapy were becoming branches of applied psychology, while engineering found its equivalent of the teaching hospital in industry and the military. Management, from guidance of the national economy to control of local organizations, was similarly the application of the social sciences and the new information processing field of cybernetics.

The common theme was that the university and credentialing system allowed American society to specialize more functions, improving each of them through application of technical rationality, while making them work in concert toward both a better material life and a society of greater inclusiveness and fairness. There runs throughout the discussion the presupposition that somehow the basic moral values of individual opportunity, fairness, and social harmony will prevail throughout the increasingly differentiated professional system. For Parsons, as for most American liberals of the era, there was little need to worry about nurturing that basic moral matrix. Shrill calls for "moral rearmament" could be left to benighted conservatives.

This peculiar moral optimism showed up in Parson's claim that the clergy, though they were recognized as the distant progenitors of professionalism, could not be considered professionals in the full modern sense. The problem, for Parsons, was that they lack a specific technical competence and held diffuse social responsibility within a collective system. "Artists and intellectuals (those concerned with general social understandings as opposed to specialized sciences) were similarly disqualified" because of their rootedness in social interests outside the research university.

By contrast, no question was raised about how the progress of technical rationality, the assimilation of the university to the paradigm of scientific research and the practitioner to the role of technician, might affect the value orientation of the professional complex itself, not to mention its implicit moral base. The organizational society was institutionalizing the professions as ever more efficient extensions of the purified specialized technical rationality of the research institute into the messy world of daily life. What neither Parsons nor other proponents of the new order questioned was whether this development was compatible with the long-run social purposes the professions were expected to serve. Was, in fact, the professional enterprise, seen as the cutting edge of the whole society's line of development, humanly sustainable? Or did it rest upon a seriously flawed intellectual, moral, and institutional premise? The events of the late 1960s made such questions hard to avoid, as they made the benign confidence of the previous period hard to sustain.

Crisis of the Professional Era

If any one figure summed up in character and career the shocks and tragic turns taken by American society during the climax of the postwar era, the decade of the 1960s, it was perhaps Robert McNamara. During that fateful period, McNamara rocketed to fame as standard bearer of the capacity of expert management to solve problems. He served as secretary of defense in the Kennedy and Johnson administrations and was a chief architect of

the American strategy in Vietnam, a strategy that was in many ways designed and executed according to the most technically advanced theory of expert control then available. The disastrous outcome of the strategy for the nation, both abroad and at home, stands to this day as the most poignant symbol of a turning point in contemporary history.

McNamara's career was, like those of so many other American leaders of that time, given effective direction by the events of World War II. Early in the war, Robert Lovett, a Wall Street insider who generously responded to the call to government service, recruited McNamara from his teaching post at Harvard Business School into his operations planning group in the Army Air Corps. This operation was an experiment, designed to test the potential of the emerging field of statistical control techniques for improving the combat readiness of American air power. McNamara arrived confident in the power of advanced statistical techniques to give managers a new level of command over the factors of production, human as well as material. It was simply a matter of adapting and fine-tuning the powerful new techniques of systems theory.

With the aid of early data processing machines just becoming available, McNamara helped Lovett's team to calculate precisely the life expectancy of its air crews and even how many planes could be counted upon each day in each theater of the war. *Fortune* magazine played up the new operation, describing this achievement of modern systems thinking as the application of "proven business methods to war." After the war, McNamara and his associates were recruited in turn by Henry Ford II to turn around the floundering automotive giant. As the "Whiz Kids," they were to reapply those same methods to reproduce at Ford Motor Company a dramatic, much-imitated reorganization and turnaround into profitability.

In 1960, McNamara responded to John F. Kennedy's call to Washington to join his new administration. It had pledged itself to "get America moving again" by revitalizing the nation's sense of purpose. Here all the themes of America's postwar development reached a kind of crescendo. McNamara was to be a leading player in this development. He quickly became the star on the New Frontier's team of university-recruited experts, the then-celebrated "best and brightest." As secretary of defense, McNamara's application of proven business methods to war fit well with the administration's confidence that expert thinking could lead to improved control over events. McNamara proved a great innovator. He extensively reorganized the Department of Defense and the procedures of the military services around the sort of Whiz Kid principles that had so catalyzed Ford Motor. Where possible, the theme was to substituted procedure for individual judgment and quantitative measure for personal assessment.

This policy was to have dramatic, and fateful, consequences on the conduct of the war in Vietnam. One effort sought to bypass the usual methods of subjective assessment by military and intelligence officers in the field. Instead, during the war McNamara's staff developed a complicated and sophisticated set of quantitative indicators such as "body counts" and "kill ratios" in an ill-fated effort to quantify and so objectify judgments about the progress of the fighting.

The organizers of the new procedures, however, overlooked the propensity of the human parts of the system to modify their behavior to accord with their own interpretations of the directives handed down in apparently objective form from above. In time, commanders of combat troops began to organize their field activity around the indicators themselves, as distinct from traditional military objectives. From there, the forces in the field slid into manipulating or even falsifying their data. Promotions and whole careers came to depend upon the quantitative measures demanded by the new systems of control. The outcome was that military operations were often directed toward fulfilling strategically meaningless but objectively important kill and body count goals. The results, of course, were both monstrous and tragic.

McNamara's program was designed to modernize the organization of the military services themselves, to bring them into line with the latest management theory and practice. The goal, that is, was to recast the military profession as something more like, and more amenable to, civilian management on the business model. But by establishing a new system of quantified incentives and assessment, the program worked to play down or extirpate just those structures of tradition, loyalty, and esprit de corps that had given the armed forces their distinctive ethos and much of their effectiveness. With bitter irony, those efforts to "rationalize" war making contributed substantially to the breakdown in military effectiveness suffered by American forces in Indochina through their unintended but quite devastating effects upon morale. In short, the systems approach

Professional society is characterized by a rival emphasis upon human capital "based upon trained expertise and selection by merit" and exercised through cooperation.

ran afoul of just those aspect of human society that it proponents ignored or believed could be reduced to formula and procedure.

In the end, despite the disaster of Vietnam, as a citizen and as a professional Robert McNamara showed himself to be better than his theories. Once he concluded that his judgment about the Vietnam War was tragically wrong, he resigned in early 1968 from the Johnson administration. To his credit, McNamara later reentered debate over defense policy by arguing that nuclear deterrence was a counterproductive policy at a time when it was not popular in Washington to say so. Still, the moral of this tale is the one a professional military officer become secretary of state preached at the beginning of the era of American predominance. George C. Marshall, in urging support for his plan to aid war-ravaged Europe (and in the process our own economy), argued eloquently that there is finally no way to ensure success through pure technique, and that the chief threat to any successful people is always its own hubris. In the American case, this proved to be above all else the hubris of technique. For thoughtful Americans, the self-inflicted wounds suffered by American government and society during the Vietnam conflict posed disturbing questions about the premises of the whole postwar structure of expertise. Could that order of affluence have raised expectations it could not fulfill, and that it in fact seriously undercut? For many troubled citizens, it seemed for a moment that American society in general, and the university-centered professional complex in particular, was chiefly producing, in a way ironically different from Marx's famous adage, its own grave diggers.

The sixties were indeed a time of major questioning of the direction in which the nation was moving. During that decade a powerful polarization began to divide the previously broad "consensus" about the generally benign course of American development. On the one hand, many were determined to press ahead with the postwar agenda, eager to continue the patterns of economic and technological expansion, culturally powered by utilitarian individualism and nationalism, that had proved so successful for nearly two generations. Questioning and protest, however, stripped the veil of moral innocence from these hopes. By the end of the sixties, the leadership of this tendency passed from the consensus-seeking establishment figures represented in the postwar administrations of both political parties to more contentious representatives of the ambitious economic powers of the Sunbelt states who, though themselves major beneficiaries of governmental intervention and subsidy, strove to recall the nation to a banner of renewed anticommunism and *laissez-faire*.

This ideology by no means prevented the enactment of reforms in the areas of civil rights, occupational safety, and environmental quality—all areas of administration in which professional expertise played a central role. The inclination of these predominantly Republican leaders and their supporters, however, took a rather hostile stand toward the earlier equation of social progress with the prominent role of university-educated experts. By the 1970s, influential intellectual pundits styling themselves "neoconservatives" would single out the professional experts as a New Class, responsible for sowing seeds of amoral skepticism about national purpose.

The other great tendency of the times proved no friendlier, though for quite different reasons, to the professional complex Robert McNamara embodied and Talcott Parsons praised. This tendency sprang directly out of the moral idealism of the New Frontier and the burgeoning movement for black civil rights that was taken up by the Great Society of the Johnson years. Particularly attractive to the young, the religious liberal, and the university-educated, this movement sought to lay claim to core values of the American moral center that had been overwhelmed by the rush to affluence, especially justice

The common theme was that the university and credentialing system allowed American society to specialize more functions, improving each of them through application of technical rationality, while making them work in concert toward both a better material life and a society of greater inclusiveness and fairness.

and social responsibility. The upsurge of the sixties idealism, like that of the Progressive Era half a century earlier, criticized virtually all institutions; like its Progressive predecessor, it was generally critical of big business, but its sharpest attacks were leveled at the very institutional sphere in which it came to self-consciousness: the university.

Talcott Parsons was right to emphasize the new centrality of educational institutions to modern societies. He seriously misjudged, however, the pedagogical effects of the postwar system of education on the nation's youth. As student movements erupted across America's campuses, starting at the University of California in Berkeley in 1964, the themes of civil rights, equality, and opposition to the war in Vietnam mingled with a generalized outrage at the kind of specialized, achievement-oriented education that had settled into place in school and campus. As the postwar university was being expanded and rationalized to become a more integral component of the economic growth system, the nation was undergoing great social change. The student population, though much expanded compared to anything in previous history, was still overwhelmingly upper-middle-class, male, and white, with a preponderance of native-born Protestants. They were typically the children of the expanding professional middle class. The social movement set in motion by these "privileged" students, however, greatly accelerated efforts to open higher education to women, minorities, and the less privileged. The generation of sixties students themselves proved to be suffering not only from bad conscience about their privileges but also from a severe case of one of the most characteristic disorders of modernity: alienation.

The era of the multiversity and affluent class- and income-segregated suburbia, from which the students most came, was beginning to make a series of discomfiting discoveries about itself. It was the time when "the organization man" was criticized as a cultural ideal by claiming that organizations were the enemy of genuine individuality. It was also the time in which "juvenile delinquency," "identity crisis," and widespread poverty were "discovered," while the "feminine mystique" came to define the life of postwar suburban housewives, alone all day with the kids. Above all, it was the time in which the injustice of racial discrimination and the drama of the civil rights struggle were brought into living rooms through television. In this climate of generalized self-questioning, the university seemed to many students to represent a suddenly obsolete culture of smug obtuseness. The culture of the specialized graduate and professional schools was spreading throughout the undergraduate curriculum, ousting older humanistic culture at nearly every turn. This institutional ethos of the university gave students a permissive context in which to experiment, yet it seemed (and in many ways was) closed to their deeper doubts and ideals.

The American research university embodied a faith in specialized, scientific, secular reason and was as ill-suited as the liberal political order to address issues involving foundational matter of identity and purpose. At Berkeley, Clark Kerr, the chancellor of the University of California system, was hailing the knowledge industry as society's more valuable instrument for "the production, distribution, and consumption of knowledge in all its

forms." Against utilitarian emphasis upon competitive success and individual achievement, which were the typical working values of the system, the students raised their banner of self-discovery and general understanding, of individual empowerment and social solidarity. It would prove a heady though unstable mixture. New prophets such as social critic Ivan Illich attacked the whole professional system as a threat to the nurturing of "autonomous individuals" which was subjecting them "to the domination of constantly expanding industrial tools." The result, Illich wrote, was that "people tended to relinquish the future to a professional elite." The very tendencies that the proponents of the professions had been celebrating, the "antiprofessional" critics demonized and damned. An older populist suspicion of experts and elites lived again, now on the political left, as it would rise shortly on the political right in the neoconservative attacks on the New Class.

The tragedy of the times was that neither the romantic world of student rebellion nor the professional ethos of the technically-oriented universities proved to have the needed imagination or commitment to invent a better form of life. The desire of the idealistic young for a life marked by wholeness, authenticity, and community collided with the widely perceived social fragmentation and personal conformism of American affluence, whose sources lay in the narrowness of division of labor generally and the technical focus of so much of professional life more specifically. Yet the modernity the students protested as alienation and dehumanization also opened new possibilities. Still, it proved beyond anyone's capacity at the time to grasp those possibilities coherently.

The reforms of that era began to correct some of the worst inequities of the postwar order, especially in regard to race and sex, but the criticisms of fragmentation and alienation went largely unaddressed, while the postwar marriage of private consumption and a militarized economy continued. Increased emphasis upon social justice and individual fulfillment helped promote growing concern about the quality of life, as opposed to a merely economic standard of living, paving the way for the rise of "postmaterialist values" such as concern about the natural environment. However, the postwar economy had grown beyond the moral patterns of the family firm and local community. The informal controls of the old gentry ethic in the professions was being superseded by the bureaucratic structures of organizational settings. The suburbanized, postindustrial social patterns offered few integrating practices to replace the old ones. The substitution of rule and procedure failed to impart the decided sense of orientation and participation.

For a time in the early 1970s, the country saw efforts to translate some of the concerns of the movements for reform both into national legislation and into the professions themselves, as some theorists of the student movement were urging. Finally, however, even though the basic structure of the postwar order held, there was too little institutional experimentation and reform to revitalize the nation's self-confidence about the future. The abiding result was that most established ways of life lost legitimacy. Regrettably, though predictably, the consequence was a rising tide of cynicism, within as well as about the professions, plus ever more bitter culture wars fought over the unresolved divisions that surfaced during the turbulent sixties. The cynicism about institutions and those cultural conflicts soon acquired massive power, thanks to economic and social changes that began to engulf the United States during the 1970s.

Professionalism Under Stress

Beginning in the early 1970s the dynamic stability that had characterized the postwar economic picture was replaced by a series of rapid and often violent shocks. Whole occupations, industries, and regions suddenly found themselves overtaken by foreign competitors and made obsolete overnight. Economic security became a subject of everyday worry and anger, creating the perception of rising stress throughout the population, including the momentarily secure. The root cause of these distressing events was the increasing disorder of the international economic system, a disorder that reverberated domestically with the breakdown of the informal social contract that had underpinned the interest-group bargaining typical of postwar politics. In this climate, the fragile social contract that had led labor and business to moderate their demands on each other reverted to a sharply oppositional stance. A similar tone of suspicion and hostility spread through much of American society.

During the years of these changes, the 1970s and 1980s, professionalization continued to grow in the United States, but the distribution of the growth shifted markedly. Resources and applicants shifted away from the public-sector fields that flourished before 1970, such as education and social services, toward fields directly related to business, military, and technological institutions. These shifts were partly due to conscious governmental policy and spending

and partly resulted from changes in society itself, such as the educational effects of the decline in the number of school-age children. Professional growth occurred mostly in areas where technical understanding of professionalism was least likely to be broadened by the intrusion of moral and political concerns. Again, the causes and the results were mixed. Thanks to governmental policies of affirmative action to correct past patterns of discrimination, professional education was far more open to women and minorities than before. At the same time, professional life within such economic and social circumstances itself became more competitive and constrained to focus on economic success, or at least survival. The expansive professional era of previous decades did not return.

Within the tightening squeeze of economic pressure, work life—even for the professional middle class—became increasingly constrained by the imperatives of economic efficiency and organizational growth. This forced to the margins the traditional professional concern with the intrinsic purposes of work. The focused life seemed more than ever a luxury to be indulged in during leisure time. This period saw increasing assimilation of medicine and law, the core free professions, to the model of organizational professions. Law firms found themselves under growing pressure to emulate the standards of business. The ever-more complicated and expensive world of high-technology medicine slowly catalyzed government and third-party insurers to take steps to bring physicians increasingly under the control of large healthcare corporate entities.

There was more at work in these trends than ideology. As the economy found itself exposed to unexpected shocks from abroad, the social bonds that the conflicts of the 1960s had strained began to give way. During this time the American economy found itself in an intensifying competition with Europe and Japan. The apparent prosperity of the nation during the 1980s was largely funded by massive military spending, the last gasp of the Cold War era, which abruptly ended with the collapse of the Soviet empire at the end of the decade. During those years, American business was finding itself pressed to compete effectively in the now global economy. In the press, major organizational citizens, from banks to corporations to public agencies, defaulted on longstanding bonds of trust with their workers, their clients, communities, and the public at large. The result was an interdependence without mutual trust—the precondition for generalized hostility and fear. All sectors of the population possessing the means sought to defend their newly perceived vulnerability by organizing in their own interest.

This strategy of secession from the social contract was pursued most aggressively and successfully by affluent groups, including the professional middle class. In an economy that no longer enjoyed rapid productivity growth, the advance of some now had to occur at the expense of others. The prediction that the nation was becoming a "zero-sum" society was, by the 1990s, confirmed; the "culture of contentment" enjoyed by the rich and the professional middle class improved gratifyingly, but the economic misery of the many worsened. The postwar institutional order was in tatters, and with it the good conscience and social esteem of professionalism.

The appearance of the yuppie phenomenon during the 1980s gave these large-scale social trends an immediate and none-too-lovely human face. The young, urban professionals of the acronym were "discovered" in 1984, their reality certified by a *Newsweek* cover story and a great deal of additional media attention. Like so many social discoveries, this one called attention to a certain style, a way of pulling life together, more than it described a clear statistical category. The term referred to a lifestyle concentrated upon occupational success, often in the recognized professionals and particularly in fields tied to business, which sought proper reward for hard work in private acquisition and display of status goods. In outline, the yuppie phenomenon simply advertised the basic goals of the postwar economic order in heightened and streamlined form. What made the yuppiedom of gentrified urban neighbor hoods stand out against typical American middle-class life was the apparent willingness of yuppies of both sexes to subordinate all other life goals, including family and child rearing, to career success and consumption. The yuppies were, as Barbara Ehrenreich put it, "exemplars not of their generation but of their class, the same professional middle class that had produced the student rebels." Alienation had not gone away. Instead, a new generation found another, less publicly oriented promise of a cure.

Beneath the envy and moral indignation stirred by the preening of yuppyism lay the continuing,

All sectors of the population possessing the means sought to defend their newly perceived vulnerability by organizing in their own interest.

unsettling presence of economic disorder. The most powerful and affluent professions became very much a part of the sclerotic condition of American society. This situation emphasized the often contradictory results of earlier efforts to amend the postwar order. For example, legislative reforms of the early 1970s opened political campaigns and the regulatory process to more direct public involvement. They also allowed, if unwittingly, well-organized and highly funded publics to assemble smaller versions of the powerful lobbying arrangements President Dwight D. Eisenhower had dubbed "the military-industrial complex." A medical industrial complex soon grew up, along with specialized law firms whose entire clientele consisted of one agency or another of the federal government. In these highly politicized organizational contexts, the old client-centered, paternalistic ethics of the free professions proved to be a less-than-adequate guide to maintaining professional integrity amid severe economic strain.

By the beginning of the twenty-first century, the wracking changes in the economy were undermining old conceptions of professional identity and responsibility. In an era of radical economic instability, when investment capital shifted rapidly around the globe seeking the highest return, organizations themselves began to implode. In a mad effort to attract or retain investors—or to prevent hostile takeover from outside—business firms intensified their efforts to squeeze more out of their employees, professionals as well as others. The technical focus that had dominated postwar professionalism now tended to blur into a self-interested economic strategy for taking advantage of shifting market winds. In this swirl of uncertainty—the "casino capitalism" of the United States in the 1980s—whole new professional enterprises were born, with the rise of consultant firms.

The established professions were becoming domesticated for organizational life, but the consultant firms adopted, as often as not, the swashbuckling outlook of old-time entrepreneurial capitalism. The organizational push for predictability and efficiency has long worked to isolate technical proficiency from concerns with institutional responsibility. The intensified economic focus of the professional consultant reduced the civic dimensions of professionalism still further. The combined effects of these developments, however, has been sadly similar. They weakened integrity of function and public service, which are the special attributes of professional occupations—this at a time when the entire economic order was suffering from a breakdown of mutual confidence, the systemic consequences of pushing self-regarding instrumental rationality to the limit.

Under these circumstances, de Tocqueville's democratic paradox has returned with a vengeance. Observing the more dispersed and far less integrated civil society of the nineteenth century, de Tocqueville stressed that the long-term viability of free institutions, and thus of individual freedom, required some means whereby the intrinsic values of activities essential to the common welfare could be protected from meltdown into the cash nexus. At a moment when the unregulated cash nexus of the market threatens to implode upon the social order it should serve, the reinvigoration and institutionalization of the ideals of integrity of function and public responsibility that professionalism represents would fill an essential need.

We need a new professionalism adequate to the changed circumstances of American life. The first step toward this reinvention of professionalism, however, requires that professionalism be understood as a public good, a social value, and not the ideology of some special interest. To make good on this claim, the positive features of professionalism must be extended to all work in the modem economy. By combining the dignity and security of occupational identity with the integrity and competence of social function, professionalism can be a major resource for rebuilding not just a dynamic economy but a viable public order as well. The chapters that follow are concerned with reinventing professionalism as a civic art, to reform the professional enterprise and extend its goods more broadly while helping to spark the renewal of the larger society. The succeeding chapters argue that, although it may seem idealistic, this cause will in the long run prove the most realistic strategy by which to address not only the crisis of professionalism but also the problems of work and meaning. ■

Innovating Beyond Patient Treatment

Jacob Drucker
Scott Drucker, DMD
Paige Edmiston

Abstract

Consumers are changing the way they expect to interact with those who provide goods and services. This is inevitably changing what it means to be a patient in dentistry. Because dentists buy supplies and increasingly buy services as well, this is changing what it means to practice. The changes are rapid, but not yet clear. MATTER is a Chicago-based innovation incubator for the healthcare industry and Supply Clinic is an online service interfacing between dentists and those firms that sell dental supplies. This article mentions a range of emerging technologies dental practices will be using from the front end, upstream for patient recruitment and management, to back end services such as teledentistry and DSOs.

Jacob Drucker is CEO and **Scott Drucker** is president of Supply Clinic. **Paige Edmiston** is Marketing Manager at MATTER. All are in Chicago.

New companies and technologies are revolutionizing dental practice efficiency. We are living in an age of unprecedented technological innovation. Today's communication technologies were science fiction just a few short years ago. Companies like Uber and Lyft have reshaped local transportation, and food shopping and delivery may soon make the grocery store as we know it obsolete. Digital-native brands have cropped up across industries, from eyewear to men's grooming to costume jewelry. And, of course, commerce continues its seemingly inexorable march online as e-commerce increasingly dominates sales. Voice-assisted operating systems and machine learning technologies are on the rise, promising even greater change in the coming decade.

Health care is not immune to this digital transformation.

Thanks to new technologies, broad stroke policy changes, and boots-on-the-ground innovators, the healthcare system is moving from one where people interact with care episodically and reactively—when something is wrong, they might go see the doctor—towards proactive, predictive, and personalized care. New tools are helping practitioners and service providers be more efficient and effective within the office, clinical, and hospital settings. One day, health care will come to patients before they even know they have a problem, and it will do so far more efficiently than today.

Numerous entrepreneurs are tackling these business innovation challenges. They are building new products and services to help traditional healthcare providers adapt to the quickly changing healthcare landscape, leading to better patient care as well as patient and provider cost savings.

Many of these startups are part of MATTER, the Chicago-based healthcare technology incubator. MATTER opened its doors in 2015 with the thesis that new products and technologies in the healthcare space can be developed and commercialized faster if the right people from across the industry (and beyond) work together. The MATTER community now includes more than 200 cutting-edge startups from around the world working together with 70 hospitals and health systems, universities, and industry-leading companies.

MATTER equips entrepreneurs with the tools they need to be successful, including a curriculum built for healthcare innovators and mentoring programs designed to help startups solve complex problems. The incubator also helps clinicians and innovators from established organizations think and problem-solve like entrepreneurs, so they are better able to collaborate with startups and rapidly adopt new ideas and technologies.

Last year alone, MATTER startups —with new solutions spanning the

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MATTER is home to Supply Clinic, the online marketplace for dental supplies that's bringing online shopping and price comparing to the industry.

healthcare ecosystem—generated $71 million in revenue and raised more than $146 million in financing.

Virtually every sector of health care is changing, and dentistry is no exception. MATTER is home to Supply Clinic, the online marketplace for dental supplies that is bringing online shopping and price comparing to the industry. Dr. Scott Drucker (one of the authors of this piece) realized there was a problem in the market when he first needed to buy dental supplies as a periodontics resident. After comparing "discounted" prices quoted by the large distributors' sales representatives to the prices available online, Dr. Drucker realized that the average dentist could save thousands of dollars a year if only there were a way to shop more efficiently. And so Supply Clinic was born: Authorized sellers can list their products on the site, and customers can compare products and pricing and buy from multiple sellers in a single checkout. Sellers ship their products directly to the customer.

Supply Clinic is only one of many newcomers bringing efficiencies to the dental offices. Discussions about dental innovation tend to center on the companies and technologies focused on new patient treatments: the Pinhole Surgical Technique, Millennium Dental Technologies laser, and intraoral digital scanners are just a few examples of the many paradigm-shifting technologies that promise to dramatically improve patient care.

Amidst this focus on more procedure-impacting innovations, novel front-end (patient-facing) and back-end (operations-oriented) technologies are often overlooked. But these improvements can have more immediate effect on the finances of a dental office, and can do so for far less than a $30,000 or $100,000 piece of equipment.

Front-end Innovations

Innovative new companies have emerged in the past decade to streamline patient acquisition, patient retention, and patient treatment financing. These startups are all helping small, independent practices become more efficient and maximize profit without sacrificing patient care.

The first challenge for any office is getting patients to walk in the door to seek healthcare services. In a highly commoditized and increasingly competitive business such as dentistry, this challenge is more poignant than ever. A number of companies have arisen in recent years to tackle this precise issue. Two notable solutions in the dental space are Patient Prism and Banyan. Patient Prism employs artificial intelligence to identify failed opportunities on the phone, helping to minimize phone leakage and

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maximize the pool of patients that walk in the door. Banyan helps create a tailored online impression of dental practices, and build patient trust online via social media.

Acquiring a patient is just the first step toward a long and successful dentist-patient relationship. Other technologies assist with patient retention, ensuring that patients follow up to receive any necessary care and continue to take proper care of their teeth, including receiving preventive cleanings from their dentist. Customer engagement and retention is hardly a challenge unique to dentistry, so these solutions are often non-industry specific. Email services such as Constant Contact and MailChimp lead the pack in follow-up email campaigns. Social media staples from Facebook to Snapchat facilitate patient engagement. Solutions like Banyan (mentioned above) and BirdEye (which also facilitates a practice's online presence and patient engagement) further minimize patient churn. Banyan, for instance, automatically pings current patients for Google and Facebook reviews, further strengthening a practice's online presence and increasing patient engagement post-visit.

Once a patient is in the door, dental offices need to maximize the patient's visit, from both a customer and practice perspective. Developments in treatment modalities for patients are best left to another standalone article dedicated to them; they are numerous and groundbreaking in their own right. Nonetheless, once patients are seen, they must pay for their visit, and be able to afford any follow-up treatment that is required based on the dentist's diagnosis and suggested treatment plan. And all too often, the high price tag of dental treatment scares patients away from signing up for the treatment they so desperately need.

This is precisely why some companies have developed new patient financing solutions. Patients may not be able to afford a several-thousand-dollar dentist visit at once, but can do so if put on a tailored, individual financing plan. CareCredit was the first to make an impact for dental patients and now other competitors like LendingClub and GreenSky have emerged in the space. Each takes a unique approach to commission structure (for dentists) and payment plans (for patients), but all provide patients with access to third-party financing, which generally allows for higher treatment plan acceptance and ultimately better dental care.

Back-End Developments

The back end of a dental office has similarly seen a plethora of new technologies crop up. The most high-profile of these cutting-edge solutions aim to improve practice management software, offer teledentistry, and lower the cost and effort of acquiring supplies.

Dental practices have come to rely on practice management software for everything from marking which teeth need further attention to properly billing patients and their appropriate insurance. Most practices rely on one of the two dominant software solutions, owned respectively by one of the two largest dental supply distributors. But these solutions have not aged with grace, opening the door to a host of startups building newer, more holistic solutions. CareStack is a prime example. It is an all-in-one platform on the cloud that combines

dental practice management, patient engagement, practice marketing, and data analytics.

Even more radical changes are underway in the dental office. Many dental offices of the future will not have a brick and mortar office where patients are seen and treated. Tens of millions of patients across the United States simply cannot access in-person care with the regularity they need for truly preventive care. (And hundreds of millions, if not billions, of individuals across the globe lack access to in-person dental care.) The solution may very well lie in teledentistry.

Teledentistry typically involves hygienists or midlevel providers traveling to underserved areas with mobile clinics. These providers perform a preliminary examination, take radiographs and photos, and screen their patients for oral cancer. Often, patients are treated on the spot with cleanings and fluoride varnish (unless more substantial periodontal treatment is necessary) and given oral hygiene instruction. The patient data is sent to a dentist working remotely, who may then make a treatment plan for the patient, which may be completed by the on-site provider, depending on local laws and regulations. Companies like Virtudent are paving the path in the teledental world, and this treatment modality is gaining in popularity throughout the country.

Even seemingly staid back-office tasks are not immune to disruption. Dental supplies purchasing, for instance, is being revolutionized by nontraditional online channels. As mentioned, Supply Clinic is an online marketplace for dental supplies. The site brings together more than 100 distributors and manufacturers, who compete on price and service for dentists' business. Dental offices can order from a number of sources in a single checkout, experiencing the convenience of one-stop shopping while paying the prices that discount distributors typically charge. Other features further streamline supply ordering and management far beyond what large distributors offer. And, of course, Supply Clinic allows only authorized sources, meaning dentists can rest assured they are not purchasing gray market products on the site.

Even though dozens of new technologies offer increasing efficiency and savings for the average dental office, too many offices do not make adequate use of them. This is where Dental Service Organizations (DSOs) may help. DSOs typically take over the business management of a dental practice (often buying them in the process), and increase office efficiency while allowing dental professionals to continue treating patients. While some DSOs are controversial for potentially lowering the quality of care to maximize profits, most of them do successfully incorporate new technologies in the back office to increase efficiency.

Dental offices are not the only ones collaborating with companies to adopt new solutions to operational challenges. In the MATTER community, startups are also helping clinics, hospitals, and health systems become more patient-friendly. TapCloud's mobile platform connects patients and care teams between visits, making providers more operationally efficient; Fibroblast's platform allows hospitals and other provider systems to better manage referrals and prevent patient leakage; and Ascendco Health's technology helps hospitals efficiently manage their surgical inventory.

Technologies to help improve practice and patient management are flourishing. In an increasingly competitive environment, practices would be wise to assess and utilize these tools to improve operations while shifting their attention back to providing excellent care to patients. It is now easier than ever to optimize new patient flow into the office, facilitate treatment plan acceptance, and retain patients during and after treatment, all while simultaneously cutting overhead costs.

Find out more about MATTER or Supply Clinic at matter.health or www.supplyclinic.com. We can also be reached personally at paige@matter.health or scott@supplyclinic.com ■

Reimagining Clinical Practice

Teleorthodontic Technology and Its Impact on Workflow, Workforce, and Access to Care

Marc Ackerman, DMD, MBA, FACD

Abstract

The dental profession has experienced significant technologic innovation in the first two decades of the 21st century. Clinicians on the advancing edge no longer speak about going digital but instead speak about breaking free of the physical tethers in conventional practice and truly going wireless. This does not just refer to using wireless digital scanners or tablets chairside, but deploying wireless technology to physically relocate the office to each individual consumer. Teledentistry is in its infancy but has already lowered costs and provided greater access to care for many consumers. This paper discusses how teleorthodontics is not only leveraging technology to deliver care but it is making the dental profession rethink elective orthodontic treatment itself.

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Critical evaluation of the transition from analog to digital in healthcare delivery that occurred over the past two decades has taught us many lessons. First and foremost, technologic innovation adds value only if it improves clinical efficiency and patient outcomes. In the case of the electronic health record (EHR), the jury is still out on whether or not the large cost and effort spent on developing and deploying this technology has translated to any significant improvement in quality of care and treatment outcome. It could be argued that the EHR is merely a more cumbersome carbon copy of the paper chart. The EHR's potential was not in its ability to alter the process of capturing and recording clinical data but in how that data could be accessed and analyzed.

Dr. Robert Wachter, chair for the department of medicine at the University of California, San Francisco School of Medicine, in his keynote address at the 25th annual conference of the American Telemedicine Association, discussed why health care is just beginning a meaningful transformation post-digitization. In his book, *The Digital Doctor: Hope, Hype, and Harm at the Dawn of Medicine's Computer Age* (Wachter, 2015), he describes the four stages of health IT: digitizing the record; connecting the parts, such as third-party applications to enterprise systems; deriving meaningful insights from the data; and translating those insights into a plan to improve value. We have been successful at completing the first two stages but are only beginning to crunch the data and change processes. Healthcare IT has been mired in a productivity paradox (Brynjolfsson, 1993). That is to say that the anticipated benefits of technology use are not being seen. The explanation for this is that many tech tools were built for the purpose of delivering care in the same manner as before rather than rethinking the work itself. Wachter (2015) argues that the two keys for unlocking the productivity paradox are improvements in technology and reimagining the task at hand.

Reimagining Orthodontics

Variation in teeth and jaws negatively affect appearance: It is not a disease or a pathologic process (Ackerman & Burris, 2017). Society has perceived some naturally occurring biological and physiological processes, such as skin wrinkling, as ailments or disease. Wrinkles will invariably affect every man and woman in the world at some point in their adult lives. A normal process has essentially become medicalized.

Medicalization is the process of making a condition a disease or disorder: people suffer it (patient-hood), the causes are physical, it requires and demands treatment aimed at cure or relief of symptoms by persons licensed in the healing arts, and this model of the condition will be

accepted by society out of interest in the health of its people (Ackerman, 2007). The idea that any deviation in occlusion from the theoretical ideal is abnormal represents the medicalization of orthodontics. Malocclusion becomes a condition in need of therapy.

Enhancement in contemporary society is to change the naturally occurring states of the individual's body or mind in the hope of increasing their inherent capacities beyond normal. Enhancement is qualitative and cannot be measured by model gauges or cephalometric superimpositions. It is very subjective and is measured by the individual. In orthodontic practice, therapy and enhancement are overlapping classifications. All therapies with successful outcomes are enhancing, even though not all enhancements with successful outcomes are therapeutic. The problem with trying to separate enhancement from therapy is that they both need to be included in the definition of orthodontic health.

Orthodontic health should be defined as the attainment of those desired dentofacial traits that the consumer perceives to be consistent with a state of complete physical, mental, and social wellbeing (Ackerman & Burris, 2017). Ninety-eight percent of orthodontic patients are undergoing treatment that is elective and just two percent of patients are receiving "medically necessary" orthodontic treatment. It is our job as professionals to make the consumer aware of which group they fall into when discussing need. Elective care should not be viewed as necessary if it's not medical in nature but rather important from a sociocultural perspective. We must not be paternalistic when it comes to a consumer's desire to become better.

Orthodontics and Its Love of Analog

As an orthodontic resident 20 years ago, I was required to take ten sets of alginate impressions, pour them up in plaster, trim the bases to exacting standards (American Board of Orthodontics Trim), and then polish and soap them. This process lasted for several months and, much like most of dental education, the mechanical took precedence over the intellectual. Somewhere in a cardboard box in the archive of my residency program those ten models sets are in some stage of decay. While we tinkered in the plaster lab, the digital model revolution had begun prior to graduation. It was now possible to send your alginate impressions to be scanned and then via electronic transfer you could receive a digital analogue of study models. Before I left residency, plaster trimming had already become outdated. The interesting thing about digital models is that they are created with American Board of Orthodontics bases attached and mounted in occlusion on the

Elective care should not be viewed as necessary if it's not medical in nature but rather important from a sociocultural perspective. We must not be paternalistic when it comes to a consumer's desire to become better.

Value in health care is only increased when technologic innovation forces the rethinking of workflows, induces a necessary reduction of the workforce, and lowers costs to increase access to care.

computer screen. Rather than orienting the casts as they would sit naturally oriented within the craniofacial complex, the electronic models are "trimmed" with the bases parallel to the occlusal plane, mimicking their analog predecessors.

Orthodontists are halfway free from the productivity paradox. High resolution intraoral digital scanners are replacing alginate impressions and the images of the arches can be oriented in the position in which they occupy in the craniofacial complex. However, most orthodontists have not reimagined the workflow and how digital models fit into clinical practice. Digital models today add value by simultaneously giving the clinician diagnostic data while at the same time serving as a working model for appliance fabrication.

The Birth of Teleorthodontics

More than 60% (1,972) of the counties in the United States do not have an orthodontist's office (U.S. Dept. HHS, 2017). A significant disparity exists between the economically advantaged and disadvantaged population's access to orthodontic care in the United States. From 2006 to 2015, Medicaid expenditures and reimbursements have decreased (Minick et al., 2014). This has led to many orthodontists not accepting patients from this social program. Orthodontic care continues to be rationed in state Medicaid programs through the use of arbitrary scoring indexes which favor treatment of more complex conditions. Orthodontic treatment that is deemed not "medically necessary" is not approved. Many of the indices used to determine orthodontic need do not consider the esthetic component of poorly aligned teeth. This is despite the 2017 World Health Organization's definition of oral health which includes being free of diseases or disorders that impact an individual's ability to smile and their psychosocial wellbeing.[1]

The access to care crisis in orthodontics for patients who desire limited tooth straightening continues when they age of out of the Medicaid program. A national orthodontic practice study found that the average cost of adult orthodontics was $5963 in 2015, an increase of nearly $1000 from a decade before (Keim et al., 2015). The American Association of Orthodontists released a white paper on access to orthodontic care in 2006 acknowledging that the cost of orthodontic care is a major barrier.[2] The proposed stop-gap solution was to encourage more of their members to donate free orthodontic services to the less advantaged. Twelve years later there has not been a more robust and sustainable solution offered by AAO.

Technologic advancements in the delivery of clinical orthodontic care have lowered practice overhead, shortened treatment time, and placed less of a burden on the orthodontist. Most orthodontic practices can see far more patients per day than ever before. However, in a recent survey of orthodontists no participant was "too busy" to treat all persons requesting appointments (Keim et al., 2015). Two leading factors that have created excess capacity in the contemporary orthodontic delivery model are cost of treatment and the burden of time away from work or other activities for the patient.

There is ample evidence in the scientific literature that confirms the efficacy of teledentistry and how it increases access to care for the patient (Irving, M. et al., 2018). The new orthodontic delivery model of doctor-directed at-home clear aligner treatment facilitated by teleorthodontics has the potential to bridge the gap in the access to care divide. Patients who for many different reasons had been previously denied access to orthodontic care now have a viable option for addressing front-tooth alignment issues and improvement in their social smiles. The American Teledentistry Association, in a recent position paper on teleorthodontics, concluded that it is a low-risk, effective method of orthodontic delivery that increases access to care and reduces costs for the patient.

There are a few technology advancements which make teleorthodontics possible:

Software like uLab allows doctors to easily, efficiently, and effectively

start using it with minimal training; the majority of the interface is touch-based and is very intuitive.

The cloud and internet, especially 5G technology, enables instant sharing and cases can be treated from afar.

The most portable devices, like portable x-rays and oral scanners, make dental record acquisition more possible in hard to reach areas than ever before.

Fast shipping logistics powered by internet companies can deliver any device around the world in just a few days.

Barriers to Teleorthodontics

There has been a great deal of confusion about the definition of teleorthodontics which has unfortunately negatively influenced orthodontists, state dental boards, and the lay public.[3] Teleorthodontics is the delivery of health information and orthodontic care across distances using information technology and telecommunications. Teleorthodontics encompasses diagnosis, treatment, monitoring and prevention, continuing education of providers and consumers, and research. Do-it-yourself orthodontics has been used synonymously with both teleorthodontics and dentist-directed at-home clear aligner treatment (Kravitz et al., 2016), when in fact, do-it-yourself orthodontics refers to a consumers' self-directed efforts to move teeth without the supervision of a dentist.

Conclusion

Value in health care is only increased when technologic innovation forces the rethinking of workflows, induces a necessary reduction of the workforce, and lowers costs to increase access to care. The nascent practice of teleorthodontics is already lowering costs and providing greater access to care for many consumers. Unfortunately, this mode of practice allows individual clinicians exponential capacity in their practices which in turn has the potential to cause a busyness problem in the current saturated orthodontic market. Organized dentistry has yet to understand this reimagination of limited, elective orthodontic treatment, and their knee-jerk reaction has been to legislate against it. As clear aligner tooth-moving technology continues to improve at a rapid pace and more stakeholders in delivery and receipt of orthodontic care continue to seek this type of elective care, orthodontics will free itself from the productivity paradox. ■

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Disciplined Dental Licenses

An Empirical Study

David W. Chambers, EdM MBA, PhD, FACD

Abstract

The records of 255 dentists with recent disciplined licenses from four states were read and various characteristics were coded. These were compared with 196 randomly selected records of dentists without disciplinary actions. Disciplinary actions were about evenly divided across those stemming from technical irregularities (principally diagnostic bad practice), mismanagement of patients such as overtreatment, and drug use, DUIs, felonies, and other personal issues. Disciplinary issues were significantly underrepresented among younger dentists but overrepresented among those with multiple offices and fictitious business names. Dentists practice in communities with higher median household income, but those with disciplined licenses are more prevalent in low-income communities. Rate of discipline, sanctions, and access to records varied widely across states. Although there was a slight tendency for dentists with disciplined licenses to not be members of the ADA, this may be a result of those with disciplined licenses to distance themselves from the organized profession. Complaints come from patients and law enforcement and not from dentists or benefits carriers. Dental licensure is a state issue, under the management of departments such as consumer affairs, and because a small number of bad actors damage the reputation of the entire profession, organized dentistry should engage as partners with those responsible for regulating licensure.

This project is intended to describe the mechanisms used by state departments of consumer affairs, or agencies with different names but similar responsibilities, to ensure the safety of the public with respect to licensed dentists. Although dentists are expected by their colleagues and by the public to adhere to a higher standard of care called professionalism, they are licensed and regulated by states to conduct a business that meets minimal commercial standards for public safety. Investigation and enforcement of behavior that does not meet these standards may result in revocation or conditions placed on dentists' privilege to conduct business in the state. Licenses can be maintained only under conditions set forth in state regulations, and curbing of these privileges in proper fashion is referred to as disciplining a license. State dental boards operate as agents of executive branches of government and must, according to the most recent interpretation of the United States Supreme Court, function within that structure.[1]

Procedure

This project is empirical, in the sense of describing representative behavior that has led to disciplined licenses and their consequences. It is not meant to comment on whether these mechanisms are just or whether they function well.

Disciplined licenses were investigated in four states: California, North Carolina, Ohio, and Oklahoma. These states have participated in the ACD Gies Ethics Project in other respects, such as having had focus groups of dentists, dental leaders, and patients provide opinions about professional ethics generally.

An attempt was made to access all records of disciplinary actions arising during the 24-month period September 2015 through July 2017. In most states a list is maintained by profession of practitioners whose licenses are under investigation for possible inappropriate commercial behavior. These lists are online under the various state agencies, such as the dental board of the state. Cross-links are provided to sites where various demographic information about the licensee is given, along with further links to documents containing the accusations and actions taken against the licensee, as well as amendments and appeals. The records of disciplinary action contain the name of the practitioner, but the identities of patients are protected, usually by using initials. Such records are public, and may be required by law in all states to be made available to the public as a means of facilitating the public's participation in their own safe seeking of care. This information was available online in California and North Carolina. It was not available directly to the public in Ohio or Oklahoma, but personal appeals to those in responsible positions in those states

did produce what is believed to be a full record of the disciplinary actions taken there during the time period studied.

The disciplinary documents are multiple and lengthy. They contain a good deal of boilerplate, such as establishing the authority of the board to take action in specific cases and affirmations that the practitioner is a fully informed and competent participant in the process. The narrative description of the case is detailed, often containing dates and dosages of medications and technical description of clinical findings and procedures. When multiple patients are involved, these descriptions can run well over 20 pages. In situations where a court case is involved, as in public assault or DUI, the summary court ruling is incorporated. The action taken by the board is contained in a separate document from the accusation, and usually follows after several months of investigation. Appeals for shortening of probationary periods may also be included in the documentation. Much of the content of the action is also standard. In the case of revoked but stayed licenses, the conditions can number more than a dozen and often occupy as many pages. Demographic information, such as year of initial licensure in the state, special permits, zip code, fictitious names, etc., are contained in the records or can be found on the web paths leading to the records.

The process for capturing data was as follows. Six months of records were retrieved and reviewed. Based on this reading, a 26-item scoring sheet was created. Eight new months of records, just over 50 cases, were coded, and some adjustments were made in the scoring form. Finally, 255 records were reviewed in their entirety, some multiple times, and were read and scored. The results were entered into a database on an Excel spreadsheet for analysis.

A question arose regarding the economic level of patients treated by dentists with various types of disciplined licenses, as well as those treated by dentists who had no disciplinary actions against them. The analysis described in this paragraph was conducted only for California dentists because compete data of the type required were only available for that state. Software was used to determine the median household income of individuals living in the zip codes where the dentist had his or her office.[2] (When multiple offices were listed, one address was chosen at random using a shuffled deck of cards.) Because a comparison was to be made between dentists with disciplined licenses and those without, a mechanism was needed to sample the incomes of patients in zip codes of dentists generally. Dentists are given license numbers sequentially by date of initial licensure. For each dentist with a disciplined license, a match was found for an undisciplined dentist by

Although dentists are expected by their colleagues and by the public to adhere to a higher standard of care called professionalism, they are licensed and regulated by states to conduct a business that meets minimal commercial standards for public safety.

TABLE 1. **Characteristics of disciplined licenses by type of inappropriate behavior.**

Behavior	Technical	Practice Management	Personal
N	*86*	*98*	*71*
	%	%	%
Diagnosis	64	27	4
Treatment	65	25	4
Overtreatment	9	38	3
Case management	24	20	0
Incomplete records	42	26	3
Informed consent	27	16	1
Overbilling	7	39	6
Abandonment	0	6	1
Unlicensed practice	1	20	1
Overprescribing	0	13	7
DUI	0	1	18
Drugs	0	4	32
Cognitive impairment	0	0	17
Sexual misconduct	0	1	13
CE/Paper work	1	4	20
Other crimes	0	3	14
Deaths	7	1	0
Multiple patients	17	33	11
Court records	0	18	38
Out-of-state	1	0	10
Repeat offenders	7	10	25
ADA membership	40	37	35

advancing the identification number by one until a match was found of an undisciplined dentist actively practicing in the state. This procedure had the added advantage of matching the two samples by age since numbers are assigned sequentially by date of licensure.

The entire sample contained 255 dentists with disciplined licenses and 139 with no disciplined license.

Type of Commercially Inappropriate Behavior

Disciplinary actions were classified as being (a) technical in nature (faulty diagnosis or treatment), (b) involving practice management (overtreatment, poor records, patient abuse, unlicensed practice), or (c) personal (impairment due to alcohol, drugs, or cognitive function and criminal activity such a tax evasion). See Table 1.

Technique Problems

One-third of the disciplinary cases were classified as technical, being principally matters of poorly performed dental procedures. The most prominent faulty behavior was incomplete diagnosis, including performing periodontal procedures without recording pocket depths, extractions with incomplete records, failing to take diagnostic radiographs, overlooking patients' medical conditions, incorrect design of implants, and performing restorative work with no characterization of the disease condition. Some technical faulty behavior involved inadequate performance of the procedure. Here, issues included removing the wrong tooth, poorly aligned implants, ill-fitting dentures, and poor technique during surgical procedures. One or both (diagnosis and treatment) were involved in all cases of misconduct classified in the technical category.

There was a single case reported of an open margin and another of incomplete root planning. The impression was of "piecemeal" care, or procedures performed out of sequence rather than of technical incompetence. In some cases it was clear that dentists just did several procedures because they seemed convenient. Much of the "incompetence" might better have been described as deviation from comprehensive patient treatment.

There were three secondary faults that often accompanied technical difficulties. These included poor case management, incomplete records, and lack of informed consent. Case management refers to sequencing and monitoring of patient progress between treatments or following surgical cases. None of the seven deaths recorded in this sample occurred in the dental office or immediately after treatment. They followed dismissal and were associated with improper case monitoring. Incomplete records were consistent with the advantageous nature of treatment planning in this category.

Failure of informed consent followed the same pattern of appearing that the dentists modified procures and treatments "on the fly."

The records are insufficient to know who registered the complaint, but the narratives in cases in the technical quality category support an impression of being patient-initiated. These appeared to be patients who were dissatisfied with both the care received and the way in which the dentist managed the complaints. Typically, they involved repeated office visits and responses that were deemed below the standard for commercial transactions. In about one in six cases, a pattern was discovered either among the complaints or by investigators involving multiple patients.

There was no association between ADA membership and disciplined licenses due to technical issues, compared with other types of misconduct. Chi-square = 1.449. Penalties for problems of a technical nature were much lighter than for cases involving practice issues or personal issues. Sixty-six percent of technical cases resulted in license revocation or stayed revocation. When the matter was for other reasons, 82% of cases resulted in revocation or stayed revocation (chi-square = 14.376, $p < 0.001$). In other words, technical shortcoming were not considered to be as blameworthy as other faults committed by dentists.

Figure 1 shows disciplined licenses for technical matters by age. There are two peaks in this curve: one for practitioners in their early forties and another in their late fifties. The dashed lines represent the distribution of active dentists in the United States by age. Where the columns are above the dashed line, this represents a concentration of technical license difficulties in these age categories. Dentists under 40 years of age are marginally less likely to practice at a technical level that causes concern. Chi-square = 2.381, $p = 0.080$.

Practice Management

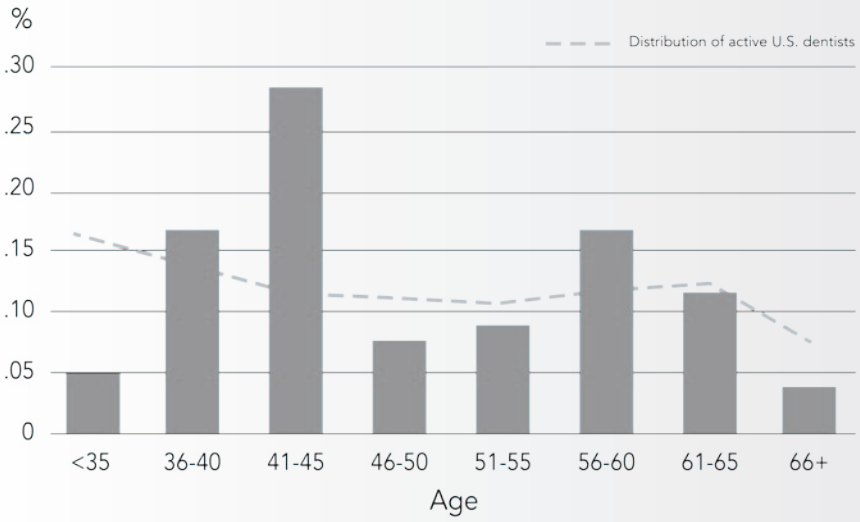
Thirty-seven percent of the cases were classified as principally involving practice management, the most common type of disciplinary problem. Issues here included overtreatment and overbilling. Common parts of this pattern were poor case management, incomplete records, and care provided by unlicensed individuals. Less frequent, but still part of the picture, were failure to inform the patient of treatments performed, prescribing unnecessary controlled substances to patients, and patient abandonment.

The difference between the treatment and practice management categories is a judgment call, dependent on the overall patterns of complaints in the disciplinary records. Practice management cases involved multiple appointments and featured overtreatment, overbilling, and performing work the patient had not been informed of. Although there were cases of diagnostic and treatment issues, these were not major concerns, and it appeared to be the case that three-quarters of practice management issues did not entail technically deficient dentistry. The impression was that dentists in this group were pursuing their own economic interests rather than patient oral-health goals.

There was little overlap between patient management problems and general problems such as impaired dentists. This category did, however, have a tendency for a habit or pattern, with one-third of the cases involving multiple patients and 10% of the disciplinary actions being repeat offenders.

There was no association between ADA membership and engagement in practice management types of poor practice. Chi-square = 0.354, NS. However, dentists judged guilty of such poor practices were penalized by having revoked or revoked and stayed licenses almost three time as often as

FIGURE 1. **Technical Practice Difficulties by Age.**



were those involved in technical matters. Chi-squared = 12.213, p = 0.007.

Figure 2 shows the distribution of problems with practice management categorized by age of practitioner. The most conspicuous trend is that young practitioners (under age 40) are underrepresented. Chi-square = 8.180, p = 0.004.

Personal

Just over a quarter of the cases involving disciplined licenses were classified as personal issues. These generally involved problems outside the dental office. The most common problem was use of drugs by the dentist. Other common impairments included alcohol use, generally identified in DUI convictions, and cognitive challenges. Sexual misconduct was reported nine times. Other crimes included spousal abuse, tax evasion, and impersonating a state dental board officer for the purpose of harassing fellow dentists. There were two cases of Medicaid fraud. Also included in this category were "paperwork" violations, such as being short on CE hours or filing transfer papers from other states after the deadline. Cases in the personal category were often supported by court records. There were usually multiple infractions, and one-quarter of the individuals in this category were repeat offenders for the same offence. Difficulties in this category tended to be independent of technique or practice management issues.

Dentists with life issues were marginally less likely to be ADA members. Chi-square = 3.574, p = 0.06. They were also more likely to receive light penalties. Chi-square = 20.478, p < 0.001. A public reprimand was more common than having the license revoked. The strongest penalty (revoked license) was, in most cases, a voluntary surrender of license taken by very senior practitioners.

Figure 3 shows that personal difficulties leading to disciplined licenses are clearly associated with age. Older practitioners are much more likely to be impaired by using drugs or alcohol and to have committed crimes. Chi-square = 15.735, p < .001.

FIGURE 2. **Practice Management Difficulties by Age.**

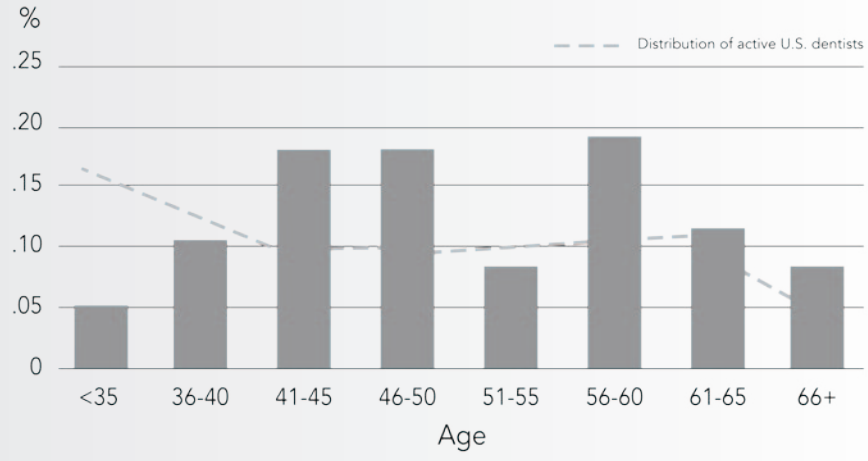
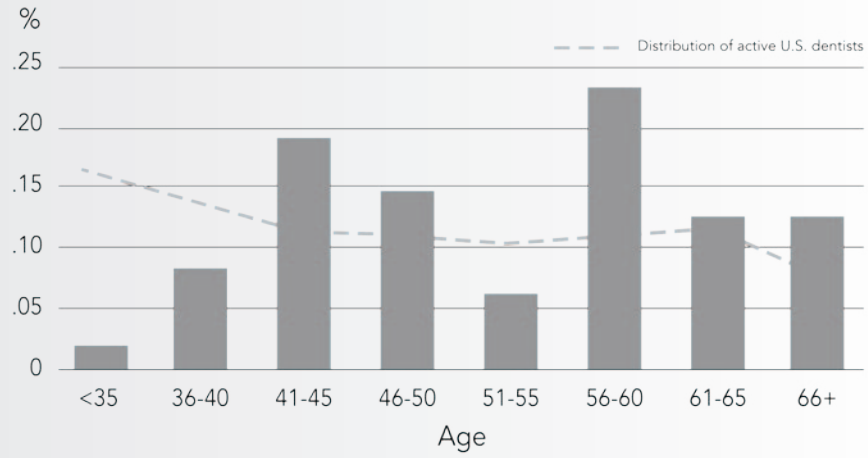


FIGURE 3. **Personal Difficulties by Age.**



Practice Environment of Dentists with Disciplined Licenses

While it is impossible to assemble a detailed picture of the circumstances surrounding the disciplining of dental licenses from public records, there are two types of information that provide some insight. The zip codes where practices are located and whether

TABLE 2. **Median household income in zip codes of dentists with various characteristics of disciplined licenses and percentage having multiple offices and fictitious business names.**

	N	Mean	SD	Multiple Offices	Fictitious Name
No discipline	139	$79,094	$29,939	0.146	0.254
Technical Faults	83	67,361	25,471	0.276	0.395
Practice Management	88	61,924	24,575	0.392	0.667
Personal	51	80,478	20,717	0.421	0.421

dentists have multiple offices and fictitious business names are part of the public record.

Table 2 shows the average income of all individuals living in the zip code where California practices were located in 2015. The median household income in California in 2015 was $61,818. The chart below shows that dentists provide more services to patients in locations with higher average incomes. The concentration of dentists in more affluent communities is statistically significant at $p < .001$ for all categories except dentists who have licenses disciplined for practice management reasons. This includes overtreatment, overbilling, and lack of comprehensive care. Poor-quality technical work—improper diagnosis or faulty treatment —was slightly more likely to be experienced by poor patients, but not as common as taking advantage of patients by misleading treatment. The differences just summarized are statistically significant by a one-way ANOVA at $p < .001$. Both Schaffé and Duncan multiple-range tests identified the same clusters of dentist types: Practice management problems formed one group; clean practitioners and those with personal problem formed another. Dentists with disciplined licenses as a result of technical problems shared some of the characteristics of each group.

This pattern was repeated with respect to having multiple offices and a fictitious business name. The historical family dentist was known by his or her personal name, had an established and long-term location, and waited for patients to come for care. Those with disciplined licenses of all types were more than twice as likely to have multiple offices and much more likely to use a fictitious business name. This was especially noticeable in the case of dentists whose licenses were disciplined for such behavior as overtreatment and overbilling. The chi-square test found that these differences were statistically significant beyond $p < .001$.

It was not possible to determine from the case narratives or other records which dentists were employees, associates, or independent contractors, itinerate or otherwise.

Membership in Organized Dentistry

Dentists with disciplined licenses are somewhat less likely to be members in the tripartite structure of organized dentistry. The online ADA directory of members was searched by name (with cross-checks for state and first name) and membership was recorded. Overall, 39% of dentists with disciplined licenses were members of the ADA when the data were checked. This is significantly less than the 65% current ADA membership for active dentists. Percent membership by type of disciplinary action, considering just California and North Carolina, was technical = 44%, practice management = 42%, and personal = 29%. Membership in both California and North Carolina is 67%.

There is some uncertainty in these numbers. For example, only one of the 45 dentists with North Carolina disciplined licenses was found in the ADA online membership registry. Staff at the North Carolina Dental Association performed a hand check of their records for the past five years. This search revealed that 15 of the 45 disciplined licenses were for dentists who had been members of organized dentistry during the past three years, and that four dentists listed as members of organized dentistry in North Carolina currently were not in the ADA database. It is possible that the data reported here understate the proportion of dentists with disciplined licenses who are members of organized dentistry.

Another possibility is that dentists withdraw from organized dentistry when they are under investigation or that states de-list dentists who have disciplined licenses. This would be in line with the fact that dentists who have experienced personal issues are

TABLE 3. **Likelihood of various sanctions by type of professional misconduct.**

	Reprimand	Suspension	Revoke-Stayed	Revocation
	%	%	%	%
Technical issues	44	0	38	18
Practice management	12	11	56	25
Personal	5	3	44	47

less likely to be ADA members. Those with revoked or surrendered licenses often retire or move to other states seeking to begin a new career. As a follow-up exercise, 100 dentists from the pool of disciplined licenses were sent a customized letter containing a very short survey of attitudes toward ethics. Twelve of the 100 were returned because of a "bad address"; none of the dentists with disciplined licenses responded to the ethics survey. It is easier to defend the notion that dentists who have problems in practice pull away from organized dentistry than the alternative that organized dentistry prevents dentists from engaging in unprofessional behavior.

Sanctions

In Table 3, the sanctions given for each of the types of professional misconduct are listed. Reprimand or public reprimand is a finding of misconduct with no further sanctions against the practitioner other than the fact that the public can locate and read the matter, either online or by requesting documentation of the state dental board. Nineteen percent of the cases reviewed resulted in reprimands. Suspension is seldom used (5%) and involves prohibition from practice for a stated period of time, often with no other requirement, except perhaps for court costs. In Ohio, there were a number of cases of 14-day suspensions, including a case involving a death.

Stayed revocation, the most common penalty (46%), is the board's attempt to rehabilitate dentists. Dentists are prohibited from practicing during this period that may last from one to five years. Multiple requirements are imposed, such as closing one's office and having minimal contact with patients (as in charity work or teaching). Dentists must also notify others, such as representative of other boards if the dentist moves to another state, and obey all laws (generally), inform the board of changes of address, and arrange for transfer of patients. Ethics courses, remedial course work, psychological evaluations and biological testing and monitoring are typically required to address specific issues. Court costs and costs of monitoring are normally included, and sometimes community service is expected. Failure to adhere to any of these requirements, especially not complying with monitoring in the case of substance abuse, can result in removing the stay and having the license permanently revoked. A revoked license means the dentist can no longer practice, absent a successful appeal for reinstatement.

Table 3 shows the association between type of misconduct and actions. Faulty diagnosis or treatment of the technical type most typically result in public reprimands. Practice management issues such as over-treatment, overbilling, prescribing drugs for patients, or otherwise failing to render continuous comprehensive care in the patients' best interests are most likely to result in a stayed revocation of the license. Personal issues such as crimes or substance abuse and impairment lead to revocation, with stays in about half of the cases. This category also includes voluntary surrender of one's license. Often, older dentists or those with severe impairments retire or move to other states.

Identifying Issues

The records do not contain sufficient information to classify or even characterize factors that initiate disciplinary inquires. Although state dental boards say that they are "complaint driven," it is unclear where these complaints come from. The information below is anecdotal.

It is usually said that complaints come from patients. Because of limited resources, the investigative branch of the departments of consumer affairs usually focuses their investigatory efforts in response to multiple complaints about a dentist. The case reports of unprofessional care of a technical or practice management nature involved descriptions of mistreatment of more than one patient in 40% of the cases. Complaints from fellow dentists and from office staff are rare to unheard of.

There are no national reports of the system for monitoring dentists against state practice acts. In 2006 the U.S. Department of Health and Human Services published a study for the medical field.[3] There is wide variety among the states examined. Of complaints received, 14% were not followed up because there was no jurisdiction and 65% were not followed up because of insufficient evidence. Nineteen percent were settled or dropped and 2% went to hearing. The investigator and prosecution cost of disciplining a license was generally between $50,000 and $100,000.

There are several sources of information about unprofessional conduct that come automatically to state dental boards. One involves the board's own procedures. Failure to meet CE hours or irregularities in applications are known immediately. There were several such cases in this dataset. Other routine sources of information about misconduct involve other governmental agencies. It is federal law that deaths must be reported to professional boards if a professional is associated with the case. There were seven such examples in this dataset. Another case of mandatory reporting is state statutes regarding felonies. This typically involve DUI convictions for repeated offenses, dispensing of drugs, and criminal matters such as aggravated assault. There were 44 such cases in this dataset. Together, about a quarter of incidents in this study would have been unavoidable knowledge to the boards.

The relationship between insurance companies and boards is unclear. Carriers have vast amounts of detailed knowledge regarding treatment and billing patterns, activities that bear on the practice management category of professional misconduct. Careful reading of the narratives left the impression that problems of this nature were initiated only by patients, disgruntled over what they regarded as unfair billing. There have been reports that insurance companies prefer to manage practice management issues themselves as commercial rather than professional matters. When patterns of inappropriate behavior are detected, carriers contact the provider and threaten to terminate the contract unless the behavior stops. There were just two cases reported here involving prosecuted Medicaid fraud, and those involve the government.

It is also unclear what the relationship is between malpractice actions and disciplined licenses. Malpractice is a civil action (a harm to a specific person) whereas licenses are disciplined involving damage against the public. It is unknown whether carriers or courts alert dental boards of actions or whether boards feel inclined to follow up on such matters.

There is also a somewhat parallel disciplinary track involving organized dentistry. Virtually all states have a mediation mechanism for disputes between dentists and patients called peer review. This mechanism is available only to members of the tripartite structure, and the issues typically involve disputes over fees. Generally, it is a condition for participation in this process that information disclosed or discovered in peer review is not available to malpractice attorneys or to state dental boards. A few states have a judiciary function through a committee of the state dental association for independently investigating and sanctioning members who have been disciplined by the state dental board. The grounds for such action are the code of professional conduct (enforceable) language in the state's ethical code. Independent fact finding and hearings are possible, and continued membership in organized dentistry may be revoked or conditioned.

Differences across States

There are significant differences across states in their enforcement of professional conduct. Table 4 shows the number of disciplinary actions taken per 1,000 licensed dentists.

The two states with low percentage rates of disciplined licenses are likely

TABLE 4. **Disciplined licenses per 1,000 active dentists.**

	Dentists	Action/year *(per 1000 dentists)*
California	20,150	5.25
North Carolina	3,241	6.94
Ohio	4,131	1.09
Oklahoma	1,306	1.15

Although certain types of information are available as public record, even that is sometimes difficult to access. Cost of investigation, enforcement, and litigation are chilling factors. It may also be the case that the profession is slightly reluctant to shine a light on the less exemplary aspects of dentistry.

the result of different investigatory and enforcement standards rather than the level of dental care provided. For example, of the 12 total cases in a two-year period in Ohio and Oklahoma combined, ten of them were unavoidable by the board, including court actions, patient deaths, or board paperwork. Just two cases resulted in licenses being revoked. Neither state supports a computer verification for patients to check on the status of their provider. The records used in this study were obtained by direct contact with officers in the states. One of the officers on the board of dentistry explained that the state budget has been severely cut and that only those cases involving drugs or deaths were given priority.

Seventy percent of problems with cognitive impairment of practitioners were identified in North Carolina, a state that had just 17% of the dentists in this sample. This is most likely the result of the state's contracting with the North Carolina Caring Dental Professionals Program.

Reflections

This report will not contain recommendations. This is a field of study where very little is known regarding trends, so policy would be premature. However, it is possible to offer a few reflections.

First, this is an understudied area. Although certain types of information are available as public record, even that is sometimes difficult to access. Cost of investigation, enforcement, and litigation are chilling factors. It may also be the case that the profession is slightly reluctant to shine a light on the less exemplary aspects of dentistry.

State dental boards deserve respect and appreciation from both the public and the profession. They volunteer to engage in difficult work. The responsibility for commercially inappropriate behavior by dentists should extend to more than this small number.

Secondly, bad behavior is a process. The age and zip code income data combine to paint a picture of dentists who grow into inappropriate habits. It is indefensible to characterize dentists who engage in commercially inappropriate behavior as "born bad," or "bad by nature or nationality," or even as becoming bad by taking a one-time conscious decision. As one colleague who has reviewed the data remarked, "It seems to take a number of years for them to learn how to become dishonest dentists."

There seems to be support for the view that dentists "learn" either good or bad habits and perfect them over time and that practice circumstances interact with care patterns. To the extent that this is true, there is an imperative in the entire profession to interact with all its members, not just those who share similar values. Physical isolation and psychological distancing—"They are just the uncorrectable bad ones, end of story." —are not the answer. If dentists can learn bad habits, they can learn good ones as well.

As a third point, it may be unsound for the leadership of organized dentistry to shun the small number of unprofessional practitioners. If there were two classes of dentists—the good and the bad—the age curve for disciplined licenses would have a spike as soon as practitioners were allowed to function independently. Instead,

young practitioners are underrepresented among the bad actors. The two peaks correspond with the Baby Boomer and the Gen-X generations, although there may be a confounding with stages in dental practice. The younger of these groups is concerned with practice debt (not educational debt) and the older group contains many superannuated practitioners who have extended their careers to a point that involves increasing life challenges and more limited capabilities. The fact that dentists without disciplinary actions treat populations that are almost 30% wealthier than the population at large gives them some cushion for freedom of behavior that those engaged in overtreatment, overbilling, and other shady practices do not enjoy.

In the fourth place, the reputation of dentistry, which is tarnished by some, cannot be controlled by the profession at the national level. The ADA Code of Professional Conduct applies to the voluntary members of that organization and penalties for violating the code extend only as far as discontinuing membership. Dental professionals, per the ADA code, are urged to belong to a professional association, but there are alternatives. Licensure is not controlled by the profession, but by branches of state government charged with ensuring a level playing field between providers of all services and those they serve. This process exists at the state level, and there are notable differences across states, even in the case of dentistry. The profession must partner with a number of autonomous organizations to elevate the level of care provided to the public.

Finally, dentists are human. In any population there will be a range from the outstanding to those who are having difficulty leading the kinds of lives to which we all aspire. Most of those who read this report will find it difficult to relate to the world of dentists with disciplined licenses. For that we should all be grateful. This report focuses on a very small segment of the profession, but its size and strangeness should not be an excuse to ignore it. Both patients and the dentists themselves are hurt by the behavior described in this report. Large segments of the public see this behavior, and not knowing otherwise, mark this as the way dentists behave. About one-third of the American public, according to the Gallup poll, do not trust dentists to have their (the public's) best interests at heart.[4] This is the lowest level of public trust of any of the health professions regularly surveyed.

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The profession has more conspicuously engaged indirectly with this issue at the policy level than through direct action by individual dentists being proactively involved with their colleagues or by reporting unprofessional behavior. This is an issue for the entire profession, working with others. ■

Online Sources

1 www.acd.org/_jacd/JACD-84-2.pdf
2 www.incomebyzipcode.com
3 aspe.hhs.gov/basic-report/state-discipline-physicians-assessing-state-medical-boards-through-case-studies
4 news. gallup.com/poll/1654/honesty-ethics-professions.aspx

Submitting Manuscripts for Potential Publication in JACD

Manuscripts for potential publication in the *Journal of the American College of Dentists* should be sent as attachments via e-mail to the editor, Dr. David W. Chambers, at dchambers@pacific.edu. The transmittal message should affirm that the manuscript or substantial portions of it or prior analyses of the data upon which it is based have not been previously published and that the manuscript is not currently under review by any other journal.

Authors are strongly urged to review several recent volumes of *JACD*. These can be found on the ACD website under "publications." In conducting this review, authors should pay particular attention to the type of paper we focus on. For example, we normally do not publish clinical case reports or articles that describe dental techniques. The communication policy of the College is to "identify and place before the Fellows, the profession, and other parties of interest those issues that affect dentistry and oral health. The goal is to stimulate this community to remain informed, inquire actively, and participate in the formation of public policy and personal leadership to advance the purpose and objectives of the College."

There is no style sheet for the *Journal of the American College of Dentists*. Authors are expected to be familiar with previously published material and to model the style of former publications as nearly as possible.

A "desk review" is normally provided within one week of receiving a manuscript to determine whether it suits the general content and quality criteria for publication. Papers that hold potential are often sent directly for peer review. Usually there are six anonymous reviewers, representing subject matter experts, boards of the College, and typical readers. In certain cases, a manuscript will be returned to the authors with suggestions for improvements and directions about conformity with the style of work published in this journal. The peer-review process typically takes four to five weeks.

Authors whose submissions are peer-reviewed receive feedback from this process. A copy of the guidelines used by reviewers is found on the ACD website under "How to Review a Manuscript for the *Journal of the American College of Dentists*."

An annual report of the peer review process for JACD is printed in the fourth issue of each volume. Typically, this journal accepts about a quarter of the manuscripts reviewed and the consistency of the reviewers is in the phi = .60 to .80 range.

Letters from readers concerning any material appearing in this journal are welcome at dchambers@pacific.edu. They should be no longer than 500 words and will not be considered after other letters have already been published on the same topic. [The editor reserves the right to refer submitted letters to the editorial board for review.] Where a letter to the editor refers specifically to authors of previously-published material or other specific individuals, they are given an opportunity to reply.

This journal has a regular section devoted to papers in ethical aspects of dentistry. Manuscripts with this focus may be sent directly to Dr. Bruce Peltier, the editor of the Issues in Dental Ethics section of *JACD*, at bpeltier@pacific.edu. If it is not clear whether a manuscript best fits the criteria of Issues in Dental Ethics, it should be sent to Dr. Chambers at the e-mail address given above and a determination will be made.

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