The Influence of Derrick T. Vail Sr, MD, and Edward M. Jackson, MD, on the Creation of the American Board of Ophthalmology and the Specialist Board System in the United States

Denis M. O'Day, MD; Mary R. Ladden, BA

The claim that Derrick T. Vail Sr, MD, was the innovator behind the formation of the American Board of Ophthalmology rests on an interpretation of a single paragraph in a speech he delivered in 1908. Using the technique of historical literary criticism, we identified fundamental flaws in this interpretation based on a misunderstanding of the context of the speech and his intent. Historical review of the period, including the writings and actions of others in leadership roles, supports our contention. Vail was an influential figure at the time but was only briefly involved in the activities that led to the formation of the American Board of Ophthalmology. On the other hand, Edward M. Jackson, MD, provided inspirational and persistent leadership during the 12 years needed to bring the board into existence. He should be considered the founder of the American Board of Ophthalmology.

The founding of the American Board of Ophthalmology (ABO) in 1916 signaled a decisive turn from the traditions that had guided the practice of medicine in Britain and Europe for 7 centuries. The principles on which the board was based placed the welfare of patients above other considerations and, in so doing, mitigated the conflict between the needs of the practitioner and the patient that was inherent in the medical guilds (Table 1). Effective education was now recognized as the key to quality. Voluntary certification was available to all who met admission criteria. Gradually, other specialties followed the example of the ABO, with the eventual formation of 24 specialty boards united under the umbrella organization of the American Board of Medical Specialties. That the sentiments expressed in these principles help guide the establishment of the board movement implies a broad degree of acceptance across medicine. How this change came about and the forces responsible for it are not just of historical interest; they have implications now for the assurance of quality as medicine becomes increasingly complex and fractionated.

In 2006, the American Board of Medical Specialties created an award recognizing extraordinary national or international contributions to the broad field of medical specialty education, evaluation, or certification, including American Board of Medical Specialties maintenance of certification. The award was named for Derrick T. Vail Sr, MD, considered by many to be the founder of the specialty board movement. Vail, a prominent ophthalmologist in the early years of the 20th century, was a cofounder of the American Academy of Ophthalmology and Otolaryngology (AAOO). In 1908, he delivered the presidential address. In 1939, Beach quotes from the speech as evidence for the pivotal role of Vail in the establishment of the ABO. Cordes and Rucker in 1962 repeat the claim. It seems that these 2 articles drew attention to Vail. What is curious is the complete lack of comment on...
Vail’s role in the period immediately following his presidential address and in subsequent decades until these 2 articles were published.

Among others involved in the deliberations that led to the formation of the ABO, one in particular, Edward M. Jackson, MD, stands out as a possible contender for the honor accorded Vail. Jackson left a voluminous literature and commentary in his wake. He also helped found the AAOM and, in 1904, delivered the presidential address. While Jackson’s immense educational contributions to ophthalmology have been often recognized, his role in the creation of the board system has received less critical attention.

In their presentations, both men addressed specialization, but they approached it from contrasting perspectives. The question is whether the principles incorporated in the development of the Specialty boards originated from Vail or Jackson or from other sources. Our objective is to attempt to answer this question through an examination of their distinctive views and the principles they espoused in the historical context of the early years of the 20th century. We believe that a clearer understanding of the circumstances surrounding the origins of the board system could be helpful in planning a way forward for the boards to participate in this era of health care reform.

PRELUDE TO CERTIFICATION, INCLUDING AMERICAN MEDICINE, OPHTHALMOLOGY, AND THE RISE OF SPECIALIZATION

By the last decades of the 18th century, medical guilds in England and Scotland were well established. They used close and harmonious relationships with governing authorities to insert themselves into the power structure and, in so doing, protected the guilds’ interests and preserved their authority over the practice of medicine. Acceptance as a guild member was dependent, among other things, on passing a rigorous examination. Failure rates were high. As the British Empire expanded, membership in the English and Scottish medical guilds, now known as Royal Colleges, was extended to physicians from the colonies as an opportunity to acquire an elite membership. Later, similar colleges were established in the former colonies. These developed the same power relationships, perpetuating the guild system. By the middle of the 20th century, colleges were well established in most of the English-speaking world as a means for maintaining quality, as well as furthering the interests of the members and regulating the medical marketplace.

In North America after the American Revolution, Canada as a loyal dominion maintained its relationship with Great Britain and its Royal Colleges. For the United States, the revolution disrupted cultural and organizational links then being developed throughout the British Empire. But perhaps most important, the medical guilds as constituted in the last decades of the 18th century with their hierarchical view and royal connection would have been offensive to the egalitarian spirit of the American Revolution even if it had been possible to maintain a relationship.

At the beginning of the 19th century, there was virtually no organization of medicine in the United States. The years after the War of Independence brought waves of new settlers from Europe. As Shaffer observed, these were the men from other vocations... who had deliberately acquired some minor medical skills in Europe to prepare themselves to be of use in the primitive life of the colonies. To earn a living they... dispensed medical advice on the side.29

As the century progressed, regulation of medical practice became a central issue. In 1846, the American Medical Association (AMA) was formed to “elevate the standard of medical education in the United States.”39 It quickly gained membership and influence as it plunged into a diverse set of issues, among them medical ethics, quack medical remedies, and legislation surrounding licensure. By the turn of the century, the AMA was a powerful force at all levels of American medicine and was beginning to make its presence felt among medical schools and medical educators. Gradually, as the number of those practicing medicine throughout the country grew, state legislatures took up the issue of physician licensure. At the same time, physician associations were forming in states and larger cities with a principal focus on improving medical care. They also saw their responsibility to work for issues of benefit to physicians. Therefore, the classic conflict of interest for professional groups as described by Krause was already evident, “that professionals and the professions act with a dual motive: to provide service and to use their knowledge for economic gain.”10(pix) Lacking the close ties to the power structure present in traditional guild-state relationships, they resorted to lobbying to further both aims.

Despite these efforts, much of medical care continued to be of low quality. Educational standards were virtually nonexistent. In addition to the handful of medical schools associated with some universities, so-called proprietary medical colleges were handing out degrees of questionable quality. This led eventually to the 1910 report by Flexner39

**Table 1. Characteristics and Principles Embodied in the American Board of Ophthalmology, the American Board of Medical Specialties, and Its Member Boards**

<table>
<thead>
<tr>
<th>Characteristic or Principle</th>
<th>Description</th>
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<tr>
<td>Primary commitment of the board is to patient welfare</td>
<td>Certification provides the public the means to gauge competence of specialists</td>
</tr>
<tr>
<td>Education is a core value for board certification</td>
<td>Certification is open to all who meet admission criteria</td>
</tr>
<tr>
<td>Board certifies qualifications of specialists</td>
<td>Board is an independent nongovernmental entity</td>
</tr>
<tr>
<td>Certification provides other physicians opportunity to gauge competence of specialists</td>
<td>Board is composed of peer physicians</td>
</tr>
<tr>
<td>Certification is voluntary</td>
<td>Board does not determine the ability to practice</td>
</tr>
<tr>
<td>Certification does not privilege specialist’s access to patients</td>
<td>Board directors serve without compensation</td>
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*From Proceedings of the American Ophthalmological Society*2 and from the American Board of Medical Specialties.3
on the investigation and fundamental reform of medical schools.

Early in the 20th century, specialization was generally frowned on. Physicians were expected to have a broad range of skills. Even the distinction between a surgeon and a physician was blurred. Ophthalmology was in particular disrepute. Friedenwald recalled a comment by S. Weir Mitchell, MD, a noted neurologist and educator, that "I can remember when older physicians refuse[d] to recognize socially a man who devoted himself to the eye alone." In fact, it would be unusual for a physician to practice only ophthalmology. However, that began to change with a series of advances that provided a scientific basis for ophthalmology and opportunities to practice the specialty more effectively. The invention of the ophthalmoscope by Helmholtz, work by Donders on refraction, and progress in ophthalmic pathology were significant contributions. In 1863, the AMA created a section for ophthalmology, otology, and laryngology and eventually separated ophthalmology from the other 2 specialties. In 1864, the American Ophthalmological Society (AOS) was organized as the first specialist medical society in America. In 1903, the AAOO, initially organized in 1896 as the Western Ophthalmic and Otalaryngologic Society, was formed. "Its purpose was to serve the interests of men who combined all three specialties in their practices." Given the antipathy toward specialization and the general disregard for ophthalmologists by the medical community, a pertinent question is how ophthalmology came to be the leading edge of specialization in the United States. In 1900, Shattuck identified the following 3 factors that contributed to the rise of specialization: first, the rapid increase in scientific knowledge about diseases and treatment; second, population growth, particularly in cities, that allowed for a concentration of patients with similar diseases; and third, the development of new skills and techniques among those practicing in narrower fields as technology and instrumentation advanced. These factors certainly can be found in the story of American ophthalmology and its rise as a specialty. Together, they underscore how a rapidly expanding knowledge and skill base challenged poorly educated ophthalmologists and other physicians practicing some or part of ophthalmology. However, because these same factors were common among the emerging specialties, they do not fully explain why ophthalmology retained the preeminent position. The answer may lie in another less noticed but fundamental change in ophthalmic practice.

In the first half of the 19th century, ophthalmic care was limited to treating some clinical conditions and performing a little surgery. The income from such a practice was not large, so few confined their practice to the eye alone. Therefore, ophthalmology was often part of a general physician's practice, as it was for Edward Delafield, MD, the first president of the AOS. Ametropia was poorly handled. Glasses were prescribed and fitted by opticians and by jewelers. Over the closing decades of the 19th century, the newfound ability to more precisely correct refractive errors became an integral part of an ophthalmologist's practice and a significant contributor to his income as well. This had the effect of pitting ophthalmologists against opticians and against nonphysicians also engaged in refractive practice. The issues were educational and financial. Allport, writing in 1896 on the relationships between oculists and opticians, comments that "many of you, practicing in more general lines of work... do not thoroughly... appreciate the importance and gravity of the situation... I refer to the alleged correction of errors of refraction by numerous varieties of opticians... [I]t may appear as a narrow and selfish complaint, originating from a diminished income, on my own part and that of my brother oculists..." Later in the same article, he quotes another physician who stated that "Every pair of lenses worn by every person in the world has medical and pathological significance." Allport accused opticians of practicing medicine without a license. His view that treating refractive errors was integral to the practice of medicine had obvious financial implications. However, it was the encroachment of not only nonphysicians but also general practitioners that was having an economic effect. As a result, there was considerable debate about what should be taught to medical students about the eye and refraction, what general practitioners should know, and even what approach should be made to state licensing boards.

The improved understanding of refraction had profoundly changed ophthalmic practice, so that an apparently menial task originally left to opticians and to jewelers now became of economic importance to the oculists. Despite the concerns about quality of care and training, as well as the effort devoted not only to distinguishing between oculists and opticians but also to ensuring that the public knew the difference, the underlying issue was one of competition and economic security. This had surfaced in 1905, when Spalding criticized his fellow oculists for unethical behavior but at the same time described a situation in which the "honest" oculist is financially hurt by the unethical oculist and by the unscrupulous optician. Like Allport, he maintained that vision testing is a medical act and should be performed only by those licensed to do so.

Opticians meanwhile were reorganizing themselves as optometrists and were seeking state licensure to perform refraction and other tasks. Optometry quickly emerged as a threat to ophthalmology, and efforts were stepped up in the AOS, in the Ophthalmic Section of the AMA (OSAMA), and in the newly formed AAOO to block its recognition in state legislatures. Preoccupation with optometry continued through the early years of the 20th century as plans for dealing with specialization began to crystallize.

It was realized that specialized education was urgently needed, as well as some means of differentiating those who had met standards of competence through quality education from others who were less well trained. This led to the acceptance of ophthalmology as a specialty and to board certification as a means to
recognize those competent to practice it.

THE MOVEMENT TOWARD ASSURING QUALITY IN EYE CARE

Vail's View

Derrick T. Vail Sr, MD (1864-1930), was a member of the AOS, AAOO, OSAMA, American College of Surgeons, and Oxford Ophthalmological Congress. His presidential address in 1908 to the AAOO, entitled “The Limitations of Ophthalmic Practice,” contained the passage that led to his being honored as the founder of the ABO and of the board system for certifying specialists. It read:

I hope to see the time when ophthalmology will be taught in this country as it should be taught. That day will come when we, as oculists, demand that a certain amount of preliminary education and training be enforced before a man may be licensed to practice ophthalmology. It should be no longer possible for a man to be called an oculist by himself or by the lathy, after he has spent a month or six weeks in some postgraduate school or after serving as assistant for six months or a year in some oculist’s office. It is a blot on our fair escutcheon that any man be so regarded after such short courses of attendance in any postgraduate school or even after six months’ service without the proper preliminary training. When we require students to qualify by years of study in general medicine or by a year or two of experience as an interne in a general hospital and then, after a sufficiently long time of service in an ophthalmic institution in America or abroad, he should be permitted to appear before a proper examining board, similar to any State Board of Examinations and Registration, for examination and if he is found competent let him then be permitted and licensed to practice ophthalmology.

The essential elements of his proposal are an MD degree, experience in general medicine, a period of service in an ophthalmic institution, evaluation by a board, and the granting of licensure to practice as an ophthalmologist. Several of these seem consistent with the characteristics and principles of the board system (Table 1). However, in an important difference, the proposal by Vail anoints the board with the power to restrict practice by virtue of its ability to deny licensure. The passage is part of a lengthy speech. In an attempt to understand Vail’s thinking and intent, we analyzed the entire presentation, including the setting, audience, and content. Our analysis is based on the copy published by the AAOO. We divided the text into 5 sections (Table 2). In the opening paragraph (section 1), he explains his purpose “to ascertain, if possible, what rightly constitutes the practice of ophthalmology... within which we may feel we are... not poaching on the preserves of other branches of medical and surgical sciences.”

Vail’s audience would have been ophthalmologists, otolaryngologists, and those practicing both specialties who were attending the meeting of the AAOO. Although we have not recovered direct evidence, the opening sentences of his presidential address strongly suggest that a conflict had arisen in the AAOO over access to particular patients. It is also clear that a charge of “poaching” is being leveled at the ophthalmologists. That he would devote his entire address to this suggests that the conflict is not trivial. Vail was actively involved in developing the AAOO and had been particularly effective in recruiting new members from among the estimated more than 2000 physicians practicing ophthalmology. The poaching charge, if not resolved, could have fatally damaged the new and still fragile professional organization formed by the alliance of these related but separate specialties. Therefore, Vail had to address the accusation forthrightly. Given the audience, the speech then is aimed at defusing the problem to the satisfaction of all parties.

The key word in the title of his presidential address is limitations. A limitation might be interpreted as the boundary between ophthalmic practice and that of other specialties and, by extension, how that boundary might be set. Another definition might be a restriction—potentially 2 very different meanings. At this point, it is unclear what Vail meant. His approach in section 2 of the presidential address is first to mount a spirited defense of the specialty as a field of study and of practice. He quickly dismisses any equivocation as to the former by asserting that ophthalmologists must know it all, “the heavens above, the earth beneath, the waters under the earth and all that is in them.”

Vail defines ophthalmic practice as therapeutic and surgical procedures that affect the eye alone. To defend against the accusation of poaching, he defines what constitutes “the eye alone,” making the point that dealing effectively with this entity requires practice in all areas of medicine, including internal medicine, general practice, neurology, laboratory, pathology, and ear, nose, throat, and rhinology. Therefore, competence in ophthalmology includes all these domains: “We soon convince ourselves that scarcely anyone nowadays practices within the narrow confines of the eye alone.” His characterization of the ophthalmologist’s domain is further evidence that ophthalmologists were being accused of working beyond their area of expertise. Vail concludes that the ophthalmologist must have the freedom to practice wherever his patient leads him. But he goes even further: “[H]ow can he separate the eye tissues from the adjacent tissues as if an impervious wall separated them, and cling to the hallucination that he can

Table 2. Pretexual Analysis of the Presidential Address by Derrick T. Vail Sr, MD, to the American Academy of Ophthalmology and Otalaryngology in 1908

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Position in Proceedings</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Page 1, lines 1-12</td>
<td>Purpose of the address</td>
</tr>
<tr>
<td>2</td>
<td>Defense of ophthalmic practice, part 1</td>
<td>Page 1, line 13; page 5, line 10.5</td>
<td>Field of study, field of practice</td>
</tr>
<tr>
<td>3</td>
<td>Quality assurance</td>
<td>Page 5, lines 10.5-28</td>
<td>Education, examination, licensure</td>
</tr>
<tr>
<td>4</td>
<td>Defense of ophthalmic practice, part 2</td>
<td>Page 5, line 29; page 6, line 28</td>
<td>Economic issues</td>
</tr>
<tr>
<td>5</td>
<td>Conclusion</td>
<td>Page 6, lines 29-31</td>
<td>Broader boundaries for ophthalmic practice</td>
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*Following pretextual analysis based on the address by Vail. As a preliminary step, we divided the address into 5 discrete sections.

Sources:


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successfully practice ophthalmology and never look into the nose, never examine into the ear, never consider the throat. . . . "5(p5) Indeed, Vail contends that ophthalmology is an expanding area of knowledge and practice that will inevitably but quite rightly encroach on other areas of practice: “The trend of modern literature on ophthalmology is growing rapidly towards a broader and more universal knowledge of the subject. ”5(p5)

How does section 3 (Table 2), containing the passage that attracted attention 30 years later, fit with the rest of the presidential address? 5(p5) It is crucial to recall that Vail, in defending the scope of ophthalmic practice, has just redefined what it means to be an ophthalmologist. The passage is portrayed as complete in itself without connection to what precedes and follows it. In fact, it does not stand alone. Instead, the text begins in the concluding paragraph of what we have provisionally designated as section 2 and is followed by a new paragraph with entirely different content (section 4). 5 Grammatically, its positioning signals a continuation of the thought addressed in the preceding sentences of section 2—Vail’s argument in defense of ophthalmic practice. Therefore, it is not a new topic. Without acknowledging the accusation but looking to the future, Vail is saying that “. . . a broader and more universal knowledge of the subject. . . . ”5(p5) (which he has already claimed will only continue to broaden) requires better teaching, as well as regulation of its practice. His invoking the creation of a board “similar” to any state board to permit and license practitioners much more than just the eye alone. To interpret it otherwise would require accepting the passage as a stand-alone statement on education and certification, essentially unconnected to the rest of his address. There is no evidence that Vail intended this. This interpretation is supported by his closing comment: “I would enter a plea for a broader field of study for oculists, which carries with it somewhat wider limitations of ophthalmic practice. ”5(p6) In this sentence, Vail clarifies his view. To him, a limitation is not a restriction but a flexible boundary: qualified ophthalmologists have a right and responsibility to practice more broadly.

This final statement further reinforces our conclusion that Vail’s topic has been a conflict among AAOO members from 2 different specialties over access to patients. Having reviewed the argument about the accusation of poaching, Vail decisively rejects it. We were able to find only one other relevant comment by Vail18 when, later at the same meeting, he chaired a session on ophthalmic education. It is likely that his audience would have been ophthalmologists. During the discussion following the presentations, the teaching of refraction came up. As he closed the session, Vail observed: “[M]y own idea is that refraction should not be permitted in the early course of ophthalmic teaching. It like surgery is the part of our work which brings us our fees. . . . ”18(p128)

This comment supports our interpretation of Vail’s presidential address. At the time, Vail was an eye, ear, nose, and throat specialist. This may partially explain his position because he might also be vulnerable to the charge. In 1916, Vail limited his practice to ophthalmology. As evidence of his personal commitment to improving the quality of ophthalmic care, a year later he was one of the first to obtain certification from the newly formed American Board for Ophthalmic Examinations (later named the American Board of Ophthalmology).

This deconstruction of the presidential address places the relevant passage in its proper context. It is now possible to evaluate Vail’s contribution. He was the first to suggest the formation of a board with a
formal educational pathway. However, our analysis suggests that this was not his main objective. Three other elements stand out, including (1) the defense of ophthalmic practice beyond its traditional boundaries to the advantage of ophthalmologists but without convincing evidence of benefit to patients, (2) the enabling of a gatekeeper role to practice by virtue of the board’s power to license and permit ophthalmologists to practice, and (3) the protection of physician income. Each is consistent with a guild in which the welfare of the member is primary, although there is a strong emphasis on education.

We believe that Vail intended primarily to defend the expansion of ophthalmology. His response to those threatened by this development is a defense of rigorous education and evaluation before the granting of licensure to practice. In other words, because of their education and licensure, qualified ophthalmologists will be permitted to practice beyond current boundaries into other specialist fields. Although Vail’s emphasis on education might seem to be in conflict with the idea that his principal concern is the welfare of those practicing the specialty, in fact it is consistent with the medical guilds, which coupled high educational requirements to a rigorous entrance examination with high failure rates. Successful candidates were likely to be highly skilled. However, the examination could be used to ensure that there was no oversupply of physicians, benefitting those already in the guild.

Economic loss as a result of lack of access to patients lies behind the charge of poaching, a problem that the guilds were adept in managing. Those outside of the guild had little or no access to patients. Therefore, the economic consequences for guild and nonguild physicians were significant. Vail seems very aware of this. His priority lay with the guild members (ophthalmologists). The needs of the public and those outside of the guild were secondary. In that sense, he was perpetuating the guild approach.

The lack of any contemporary response to Vail, despite intense discussion of the issues at the time, is puzzling. We can only speculate on the reasons. Perhaps the context was understood correctly as pertaining simply to a conflict within the AAOO or as granting a board the power to control licensing (and therefore practice was too unattractive). However, Hubbell made a similar proposal in 1909 without referring to Vail. The proposal led to passage of a resolution at the AMA, but no further action ensued.30 We discovered no other evidence of Vail’s involvement in the formation of the ABO, before or after his presidential address. All we have comes from the record of the annual meeting of the AAOO in 1908.

Jackson’s View

The contributions by Edward M. Jackson, MD (1856-1942), to ophthalmology have been well described by Liesegang et al. He was perhaps the most influential person in American ophthalmic history. A founder or major contributor to most major American ophthalmic organizations, Jackson was active in the OSAMA, a co-founder and early president of the AAOO, president of the AOS, and recipient of its prestigious Howe Medal. He had his greatest influence as an innovative educator and as a clinical observer.

In 1904, when Jackson delivered his presidential address to the AAOO, specialization in ophthalmology was becoming an important topic, along with the question of how best to educate physicians in ophthalmic care. At the same time, the emergence of refraction as an essential part of ophthalmic practice was raising serious questions about the competence of ophthalmologists to manage refractive errors. Jackson25 entitled his presidential address “Education for Ophthalmic Practice.” His framing of the issue as being primarily educational served to drive the debate over the next 12 years and to furnish the ultimate solution. He made several important points, including that (1) scientific knowledge of ophthalmic disease was expanding rapidly, (2) training in medical schools was inadequate to prepare graduates in general practice to take care of patients with eye problems, and (3) no provision existed in the current medical school curriculum for training ophthalmic specialists. In addition to the scourge of proprietary ophthalmic colleges offering brief courses for physicians and for laypersons, there was a proliferation of opticians and other nonphysicians offering eye care, particularly refraction and the provision of glasses. The result was widespread incompetent care.

Jackson’s plea to the medical schools was to take their obligations seriously by incorporating comprehensive education about ophthalmic disease in the curriculum. At this stage, he believed that the solution was to expand the curriculum to include more ophthalmic instruction. The situation was complicated by the need to educate not only those who aspired to be ophthalmologists but also those whose goal was general medical practice. Therefore, much of the debate in those early years of the 20th century focused on what general physicians needed to know about ophthalmology and whether they should be able to provide refractive services. The opinion ranged from a minimalist approach to the following recommendation favored by the OSAMA:

“Every general practitioner should have that training in ophthalmology which will enable him to manage infectious diseases of the eye and its simple refractive defects. To obtain this qualification, medical colleges should make such training obligatory and state boards of registration demand it as a condition for license.”

Despite this lack of agreement, Jackson continued on the same theme that education was the central issue. He urged medical schools to educate students sufficiently to enable them to deal with simple ophthalmic problems, while at the same time to provide adequate instruction to prepare those who wished to follow a career as an ophthalmologist.22 In discussing an article by Alleman21 in 1905, Jackson made a pre-scient observation:

There was a time when all were general practitioners. Now we might be designated as general practitioners and specialists. But there will come a time when all will be specialists, where the population is condensed enough. It will not be a generation until it is generally rec-
ognized that medicine is a group of specialities, and the medical education that will prepare men for their work will be the education that fits them to be specialists in one direction or another.\textsuperscript{24,25}

Jackson also warned that medical schools could become irrelevant to ophthalmology and by inference to other emerging specialties, so that specialists may be educated entirely outside of the medical sphere in proprietary colleges, with a consequent loss of the foundational component of medical training.

As the decade progressed, Jackson\textsuperscript{23} continued to argue on the importance of structured education for ophthalmic specialists. While insisting on the breadth of training necessary for an ophthalmologist, he acknowledged that “accurate measurement of refraction is a large part of the foundation of ophthalmic practice.”\textsuperscript{23} In this opinion, he was affirming the position of his colleagues at the OSAMA, AAOO, and AOS, where the discussion was increasingly dominated by concerns about refraction and the role of optometrists and non–ophthalmically trained physicians.\textsuperscript{28,34,35}

In a presentation to the OSAMA in 1911, Jackson\textsuperscript{30} delivered a full-throated attack on optometry, although he was careful to link his position to the fundamental question of ophthalmic education and its role in serving the public good. Jackson saw the following solution for the medical profession:

to provide for the adequate teaching of ophthalmology, including optometry in the medical schools; to meet the needs of the practitioner of other branches of medicine, and to build up a definite class of practitioners especially trained to recognize and treat the defects and disorders of the eye. It is the failure properly to perform this duty towards the public that is responsible for the optometry question and the larger issue of a division in the medical profession.\textsuperscript{30,32}

A year later in an article entitled “Supervised and Systematic Study of Ophthalmology,” Jackson\textsuperscript{37} revealed that his thinking had changed. After 8 years of trying to persuade medical schools to alter the curriculum, he had come to the conclusion that it was a lost cause. Medical schools would not provide for those desiring to be ophthalmologists, and a fresh approach was needed. His attention to the needs of general practitioners waned as he focused more specifically on the problem of specialty education. In this landmark presentation to the AOS in 1912, Jackson made a significant move forward by suggesting that specialized education should begin after completion of medical school and should be separate from it. Mindful of the concern that a medical degree could become irrelevant to the practice of ophthalmology, Jackson proposed an educational process in the following 3 stages: (1) preliminary education in basic sciences relevant to ophthalmology before medical school, (2) completion of a medical degree, and (3) a postgraduate structured experience in ophthalmology. This new third stage could only be entered after graduating from medical school and after completing an internship of at least 1 year.

During most of the 19th century, it was usual for physicians to enter the specialty only after a prolonged experience in general practice, and many continued to practice ophthalmology part-time. An objection raised against Jackson’s proposed accelerated training program was the loss of this experience based on the belief that it was an essential precursor to specialist training. However, as Jackson\textsuperscript{20} showed in a survey of the most illustrious and well-known ophthalmologists in the country who had trained in the latter decades of the 19th century, most had made a decision to pursue a career in ophthalmology while in medical school or shortly thereafter and had moved quickly to obtain the necessary training, so that their experience in general practice was limited or nonexistent but without apparent ill effect. Initially, Jackson’s proposal “that there should be no break between graduate and special studies”\textsuperscript{20} generated controversy, particularly among his more traditionally minded colleagues. What Jackson was advocating was a radical departure from the previous model that centered on medical school. To avoid the risk of proprietary colleges assuming this educational role, he recommended that high-quality university departments of ophthalmology should become the educator. Over the next 2 years, Jackson engaged his colleagues in discussions about this new approach, presenting papers at the AOS and the OSAMA. Eventually, he secured support of the leadership of the AAOO, AOS, and OSAMA.\textsuperscript{39,40}

As he argued for a rigorous education, Jackson continued to emphasize the overriding importance of reassuring the public and the medical profession about the competence of the ophthalmic specialist. In 1904, he had eloquently stated the plight of the public with regard to the plethora of qualified and unqualified individuals offering specialist eye care:

“the doctor of medicine who sets up as an ophthalmologist may be as ignorant of the actual work he is to do, as the counter prescribing opthalmic, who also founds his hopes of success on self-sufficiency. The public, gaining some notion of this, estimates the two as approximately equally valuable councillors, and goes to the cheapest.”\textsuperscript{20,41}

In a similar vein a year later, Jackson stressed the importance of other medical practitioners’ having confidence in the competence of specialists: in his words, “when the practitioner of internal medicine knows the oculist knows ophthalmology as the former knows internal medicine.”\textsuperscript{20,41}

This was obviously a difficult situation. The medical degree did not ensure competence in ophthalmology. State licensure to practice ophthalmology seemed an unattractive and unlikely alternative. Jackson, aware that the University of Oxford (Oxford, England) and the University of Liverpool (Liverpool, England) had established courses leading to a doctoral degree in ophthalmology, had recently implemented a similar course at the University of Colorado in Denver.\textsuperscript{2,63} However, his suggestion of bestowing a doctorate as a means of distinguishing those who had undergone proper specialty training generated considerable controversy. Nevertheless, Jackson’s overall approach met with approval. In 1913, the OSAMA and the AOS established committees to investigate the matter further. Jackson was a member of both.\textsuperscript{41} In 1914, the AOS committee recommended that class A medical schools should establish graduate courses in ophthalmology leading to a suitable degree.\textsuperscript{2,32,42} The OSAMA\textsuperscript{43} several months later adopted a similar report and recommendation. In 1915, a joint committee of the AOS, OSAMA, and AAOO...
met in Chicago, Illinois. Again, Jackson was a member. No minutes survive of this meeting, but Lancaster, who was a participant, reported a consensus that granting of degrees was a responsibility reserved for universities, while licensure was a matter for the states.

In the end, a certificate awarded by an independent board of examiners was agreed upon. Here again, Jackson had a critical role. To gain the acceptance of ophthalmologists, he persuaded the AOS and the AAOO to require board certification as a condition for membership. For the OSAMA, certification would be required of its officers. With these final steps, the framework of a process leading to proper education and certification of specialists in ophthalmology was completed.

CONCLUSIONS

Vail and Jackson were similar in several ways. Both were skilled ophthalmologists and educators, held in high regard by their peers. Both were among the founders of the AAOO, and each served as its president. That they filled this role so early in its history is testament to their contributions to the AAOO. Both were undoubtedly committed to the maturing of ophthalmology as a specialty. On the surface, both were focused on the topic of improving the quality of eye care.

Yet there were differences. For Jackson, his presidential address in 1904 was the beginning of a well-documented decade of effort to improve the quality of eye care. Unfortunately, the information on Vail is limited to the annual meeting of the AAOO in 1908.

Vail approached the problem primarily from the perspective of the practicing ophthalmologist. His proposal has the hallmarks of a guild. Because of his travels to England and his membership in the Oxford Ophthalmological Congress, we can infer that he was familiar with the way the Royal Colleges regulated specialty care. Because this was the only model extant at that time, it was not unreasonable for Vail to attempt to modify it for practice in the United States. While some elements contained in Vail’s 1908 presidential address are present in the ultimate design of the ABO, they found their way there by a tortuous route and only after years of discussion and modification.

Jackson saw it differently. He focused on enhancing quality for patients and on finding means to achieve it. For him, structured education was paramount. He and his colleagues also recognized that an authoritarian approach, coupled with the threat of loss of licensure and loss of income, was unlikely to be acceptable in the egalitarian United States. Therefore, Jackson abandoned this aspect and turned to the concept of voluntary certification as a marker of competence that was recognizable to patients and physicians alike.

The 2 approaches diverged most significantly with regard to the function of the ABO. Vail cast it essentially as a gatekeeper through its licensing and practice-restricting capabilities. In this guild-like role, the conflict between the welfare of patients and practitioners already certified is resolved in favor of the latter. Jackson put patients first in a voluntary process that was transparent to fellow physicians and to the public. It was Jackson’s concept that was ultimately adopted for the ABO, as well as subsequent specialty boards and the American Board of Medical Specialties.

We believe that Vail’s presidential address has been misunderstood. It is better positioned as an important contribution to the debate concerning the possible formation of a board of ophthalmology. Jackson was the guiding figure as various positions were taken up and then cast aside. A prime example is the power to be invested in the board. This was only settled at the joint committee meeting of the 3 organizations, AOS, OSAMA, and AAOO, in 1915, before establishment of the ABO the following year. It is Jackson’s vision and commitment that shines through. From the opening sentences of his presidential address in 1904 to the successful conclusion of the joint committee’s work in 1915, he persuaded, cajoled, debated, and discussed with his colleagues the principles that should underlie the development of a specialist and the means to achieve them. What is evident is the well-justified respect for Jackson’s intellect and integrity. In accomplishing this extraordinary feat of developing a new approach to specialty education that would prove to be more generally applicable than only to ophthalmology, he recruited leading ophthalmologists of the day, including such notable figures as de Schweinitz, Lancaster, Wilder, Standish, Todd, Duane, Howe, Weeks, and Risley. Finally, it was their commitment to Jackson’s vision that made the ABO a reality and enabled the paradigm shift toward the unique system for educating and certifying specialists. As Verhoeff wrote in 1948, “the father of this board was Edward Jackson; the mother was this section (i.e. the OSAMA) while the AAOO and the AOS were foster parents.” In 1926, the AOS awarded Jackson the Howe Medal: “We felt in the committee that we have in this country a man who perhaps has done more to advance ophthalmologic education than any other man that we know.”

A reasonable question is why try to resurrect events from 100 years ago, when present-day practice and the system of health care seem so different. The answer perhaps, as we struggle to reform health care, is that the issues of that era are just as relevant now. Underlying the struggle 100 years ago was an ethical dilemma presented by the fundamental conflict of interest to which professionals and their organizations are at risk. Vail and Jackson were on opposing sides. Today, the same dilemma confronts us. The well-being and autonomy of patients are under threat from so many entities that have entered the medical field in search of economic gain, too often without much evidence of benefit to patients. The specialty boards and the organizations that created them could, if they wish, enter the present debate on behalf of patients using the principles crafted by Jackson and his colleagues.

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